

# Recirculated Initial Study/Mitigated Negative Declaration

## Curtner Road Booster Station Upgrade Project

Prepared by



ALAMEDA COUNTY WATER DISTRICT

In Consultation with



**DAVID J. POWERS**  
**& ASSOCIATES, INC.**  
ENVIRONMENTAL CONSULTANTS & PLANNERS

**August 2021**





## ALAMEDA COUNTY WATER DISTRICT

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# MITIGATED NEGATIVE DECLARATION

**Project Title:** Curtner Road Booster Station Upgrade Project

**Project Location:** The project area is located on Curtner Road (between Klamath Street and Paseo Padre Parkway) in the City of Fremont, California.

**Project Proponent:** Alameda County Water District

**Project Description:** The Alameda County Water District (District) is proposing various civil, mechanical and electrical improvements at existing Curtner Road Booster Station for increased reliability, maintainability, and worker safety with a lifecycle of 25 years or greater.

**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 and the City of Fremont.
- 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-3.1:** During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction

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

**MM AIR-3.2:**

The project shall use equipment that has low Diesel Particulate Mater 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. EPA particulate matter emissions standards for Tier 4 or use engines that include particulate matter emissions control equivalent to 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:** Construction activities, such as vegetation removal, grading, or initial ground-disturbance, shall be scheduled to avoid the nesting season. The nesting season for most birds, including most raptors in the San Francisco Bay area, extends from February 1st through August 31st, inclusive.
- MM BIO-1.2:** If project activities must be conducted during the nesting season, a pre-construction nesting bird survey shall be conducted by a qualified biologist no more than 14 days prior to vegetation removal or initial ground disturbance. The survey will include the project area and surrounding 250 feet to identify the location and status of any nests that could potentially be affected either directly or indirectly by project activities.
- If active nests of native nesting bird species are located during the nesting bird survey, a work exclusion zone shall be established around each nest by a qualified biologist. Established exclusion zones will remain in place until all young in the nest have fledged or the nest otherwise becomes inactive (e.g., due to predation). Appropriate exclusion zone sizes shall be determined by a qualified biologist and will vary based on species, nest location, existing visual buffers, noise levels, and other factors. An exclusion zone radius may be as small as 50 feet for common, disturbance-adapted species, or as large as 250 feet or more for raptors. Exclusion zone size shall be reduced from established levels by a qualified biologist if nest monitoring findings indicate that project activities do not adversely impact the nest, and if a reduced exclusion zone would not adversely affect the nest.
- MM BIO-2.1:** The project shall obtain a Lake and Streambed Alteration Agreement from the CDFW to proceed with proposed impacts to CDFW jurisdictional riparian habitat. All compliance measures included in these permits will be adhered to.
- MM BIO-2.2:** The Project shall replant coast live oak trees within the riparian corridor at a mitigation ratio of 3:1 to offset the removal of coast live oak trees from the California sycamore woodlands habitat. A replanting plan and a mitigation and monitoring plan shall be submitted to the CDFW prior to implementation.
- MM BIO-5.1:** To avoid and minimize damage to the remaining trees surveyed, the following measures would be implemented during construction:
- All construction activity (grading, filling, paving, etc.) shall respect the root protection zone (RPZ) around all trees within the vicinity of the project area that are to be preserved. The RPZ should be a distance of 1.0 times the dripline radius measured from the trunk of the tree. Exception to this standard could be considered on a case-by-case basis, provided that it is demonstrated that an encroachment into the RPZ will not affect the root system or the health of the tree, and is authorized by an ISA-Certified Arborist or comparable specialist.
  - Temporary protective fencing shall be installed around the dripline of existing trees prior to commencement of any construction activity conducted within 25 feet of the tree canopy. The fence shall be clearly marked to prevent inadvertent

encroachment by heavy machinery. Drainage shall not be allowed to pond around the base of any tree.

- Drainage shall not be allowed to pond around the base of any tree.
- An ISA-Certified Arborist or tree specialist shall be retained to perform any necessary pruning of trees during construction activity. Roots exposed as a result of construction activities shall be covered with wet burlap to avoid desiccation, and should be buried as soon as practicable.
- Roots exposed, as a result of construction activities, shall be covered with wet burlap to avoid desiccation, and should be buried as soon as practicable.
- Construction materials or heavy equipment shall not be stored within the RPZ of preserved trees.
- Only an ISA-Certified Arborist, or comparable specialist, shall make specific recommendations as to where any existing trees can safely tolerate some level of fill within the drip line.
- Trenching within RPZ shall be done under the field supervision of an ISA-Certified Arborist and shall be hand dug as much as possible in addition to using auger or drill.
- Construction materials shall be properly stored away from existing trees to avoid spillage or damage to trees.

#### C. Cultural Resources

**MM CUL-2.1:** 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. If buried or previously unrecognized archaeological deposits or materials of any kind are inadvertently exposed during any construction activity, work within 50 feet of the find shall cease until a qualified archaeologist can assess the find and provide recommendations for further treatment, as warranted. Construction and potential impacts to the area(s) within a radius determined by the archaeologist should not recommence until the assessment is complete and any mitigation measures warranted are implemented.

**MM CUL-2.2:** 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 project applicant shall immediately notify the Alameda County Coroner/ Medical Examiner's Office. 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 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 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 Native American Heritage Commission 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 landowner or his 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-6.1:** 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. ACWD 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-2.1:** The project would be required to implement the following measures to reduce impacts due to the presence of ACMs and/or 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 asbestos-containing materials (ACMs) and/or lead-based paint (LBP).
- During demolition activities, all building materials containing lead-based paint shall be removed in accordance with Cal/OSHA Lead in Title 8, California Code of Regulations (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 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 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 lead-based paint.
  - 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.
  - 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.

#### F. Noise

**MM NOI-1.1:** During construction of the project, the district shall implement the following measures 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 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, 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. (Ord. 27-2016 § 37, 12-6-16; Ord. 23-2018 § 41, 10-2-18.)

- Construct temporary noise barriers which block the line of sight between the project and the nearest residential land uses. Acceptable temporary barriers include Sound Seal STC-27 to 37 Sound Curtains, Environmental Noise Control STC-25 Acoustical Barrier/Absorber Blankets, Pacific Sound Control STC-33 Noise Soaker Acoustical Barriers, or equivalent. This type of barrier may be set up on a supporting structure, such as a cyclone-type fence or on guy-wire strung between temporary supports.

**Initial Study Prepared by:** Alameda County Water District

I, Rekha Ippagunta, 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: *Rekha Ippagunta*  
Rekha Ippagunta  
Acting Director of Engineering and Technology Services

Date: 8/26/2021



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## **SECTION 1.0 INTRODUCTION AND PURPOSE**

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### **1.1 PURPOSE OF THE INITIAL STUDY**

The Alameda County Water District (District), as the Lead Agency, has prepared this Initial Study for the Curtner Road Booster Station Upgrade project in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines (California Code of Regulations §15000 et. seq.).

The project proposes booster station<sup>1</sup> rehabilitation including the replacement of pumps, electrical equipment, and civil site improvements to provide safe and reliable worker access to the Curtner Road booster station site and equipment. The project does not propose to increase capacity or change the operations of the booster station. This Initial Study evaluates the environmental impacts that might reasonably be anticipated to result from implementation of the proposed project.

### **1.2 RECIRCULATION OF INITIAL STUDY**

The proposed project and associated Initial Study and Mitigated Negative Declaration (MND) were circulated for public review from June 2 to July 1, 2021. Based on comments received from San Francisco Regional Water Quality Control Board (RWQCB), the District as lead agency has revised the Initial Study to disclose additional project impacts related to biological resources and additional mitigation measures to offset those impacts. As a result, new information about the project is being disclosed, and per CEQA Guidelines Section 15073.5, the Initial Study is being recirculated for public comment in order to disclose this new information. This Initial Study is an updated copy of the previously circulated version from June 2021. Changes to the project description and environmental impacts will be shown in ~~striketrough~~ with new information added in underline. All other text will remain the same as previously written.

### **1.3 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  
Engineer  
Alameda County Water District  
43885 South Grimmer Blvd.  
Fremont, CA 94538  
Carlos.Sempere@acwd.com

### **1.4 CONSIDERATION OF THE INITIAL STUDY AND PROJECT**

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<sup>1</sup>Booster Station is used to push water through the water mains and increase water pressure at points where the water flow naturally decreases.

Following the conclusion of the public review period, the District will consider the adoption of the Initial Study (IS)/Mitigated Negative Declaration (MND) for the project at a regularly scheduled meeting. The District will consider the IS/MND together with any comments received during the public review process. Upon adoption of the MND, the District may proceed with project approval actions.

## **1.5 NOTICE OF DETERMINATION**

If the project is approved, the District will file a Notice of Determination (NOD), which will be 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)).

## **SECTION 2.0      PROJECT INFORMATION**

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### **2.1              PROJECT TITLE**

Curtner Road Booster Station Upgrade Project

### **2.2              LEAD AGENCY CONTACT**

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

### **2.3              PROJECT PROPONENT**

Alameda County Water District

### **2.4              PROJECT LOCATION**

The project area is located on Curtner Road (between Klamath Street and Paseo Padre Parkway) in the City of Fremont, California. The project site is located approximately 500 feet north of the intersection of Curtner Road and East Warren Avenue.

The project site is shown on the following figures:

Figure 2.4-1: Regional Map

Figure 2.4.-2: Vicinity Map

Figure 2.4-3: Aerial Photograph and Surrounding Land Uses

### **2.5              ASSESSOR'S PARCEL NUMBER**

APN 519-1601-5

### **2.6              GENERAL PLAN DESIGNATION AND ZONING DISTRICT**

General Plan Designation:      *Public Facilities*

Zoning District:                      *Open Space*

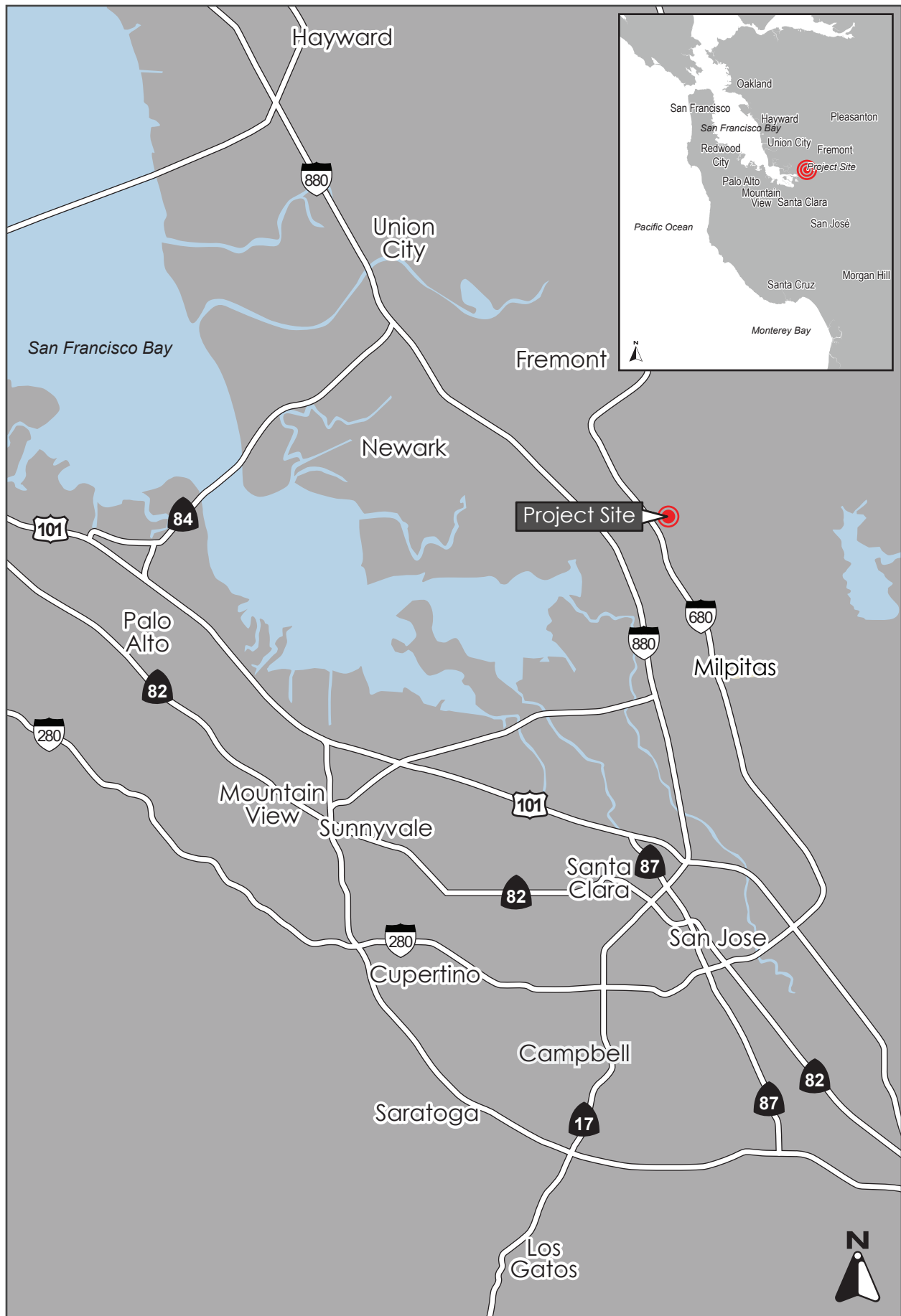
### **2.7              PROJECT-RELATED APPROVALS, AGREEMENTS, AND PERMITS**

The District is the Lead Agency under CEQA. This IS would provide City of Fremont, other public agencies, and the general public with relevant environmental information to use in considering the project. The District anticipates that discretionary approvals by the City of Fremont, including but not limited to the following, will be required to implement the project addressed in this IS:

- Encroachment Permit

The District as the lead agency, anticipates that discretionary approvals by responsible agencies, including but not limited to the following, may be required to implement the proposed project addressed in this IS:

- California Public Utilities Commission
- California Department of Fish and Wildlife (Section 1602 Lake and Streambed Alteration Agreement)



REGIONAL MAP

FIGURE 2.4-1



FIGURE 2.4-2

VICINITY





AERIAL PHOTOGRAPH AND SURROUNDING LAND USES

FIGURE 2.4-3







## **SECTION 3.0 PROJECT DESCRIPTION**

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### **3.1 PROJECT BACKGROUND**

The Alameda County Water District (District) proposes to implement the Curtner Road Booster Station Upgrade Project (Project) in the City of Fremont, California, which is located approximately 500 feet north of the intersection of Curtner Road and East Warren Avenue. The project area is approximately 0.43 acre in size and includes a portion of Curtner Road and the Agua Fria Creek. The Curtner Road Booster Station provides the needed pressure boost to overcome the static pressure differential and the additional pressure needed to move water from low pressure to high pressure distribution system.

The station was added to an existing a concrete vault constructed in 1972 to house an altitude valve which controls the inflow and outflow from the Alameda Reservoir. The structure is an approximately 12-feet wide by 12-feet long concrete structure that extends approximately 37 feet below grade. The station was placed into service in 1984. The structure contains five main pumps, two sump pumps, various equipment associated with pumping operation (valves, piping, access grating platforms, etc.), and a 24-inch inlet/outlet pipe connected to the Alameda Reservoir. The existing motor control center (MCC) is located exterior to the vault structure, cantilevered off the north side of the structure. The station is served by an existing transformer located approximately 40 feet northeast of the station. A small amount of storm water enters the station through several pipes that collect water from the under drainage system of Alameda Reservoir. The storm water from this underdrainage system accumulates in the sump structure at the station and is pumped to the adjacent Agua Fria Creek via two sump pumps. The sump pumps currently discharge into the creek via a 4-inch pressurized pipe which penetrates the wall of the structure and outfalls into the creek.

The District has a total of 14 operating booster stations which transport water to upper pressure zones in order to meet customer demands.

The District proposes various improvements at existing Curtner Road Booster Station for increased reliability, maintainability, and worker safety with a lifecycle of 25 years or greater. At the station, the District proposes the following improvements:

There are five pumps located within the Curtner Road Booster Station, each equipped with a 75 horsepower motor. Pumps #1 and #2 have lower flow capacities than pumps #3, #4, and #5. In order for pump 3, 4, or 5 to operate, either pump 1 or 2 must be running. The pumps will be modified

- To eliminate this operational restriction,
- Improve lighting at the station,
- Improve pump and valve access for maintenance,
- Improve the ventilation system,
- Replace corroded piping,
- Improve working space for maintenance personnel behind the MCC, and
- Mitigate the risk of flooding within the station,

### **3.1.1            Project Overview**

The approximately 0.10-acre portion of the 0.43-acre project area includes booster station rehabilitation including the replacement of pumps, electrical equipment, and civil engineering site improvements to provide safe and reliable worker access to the site and equipment, as described in detail below. The project would not increase the capacity nor change the operations of the booster station.

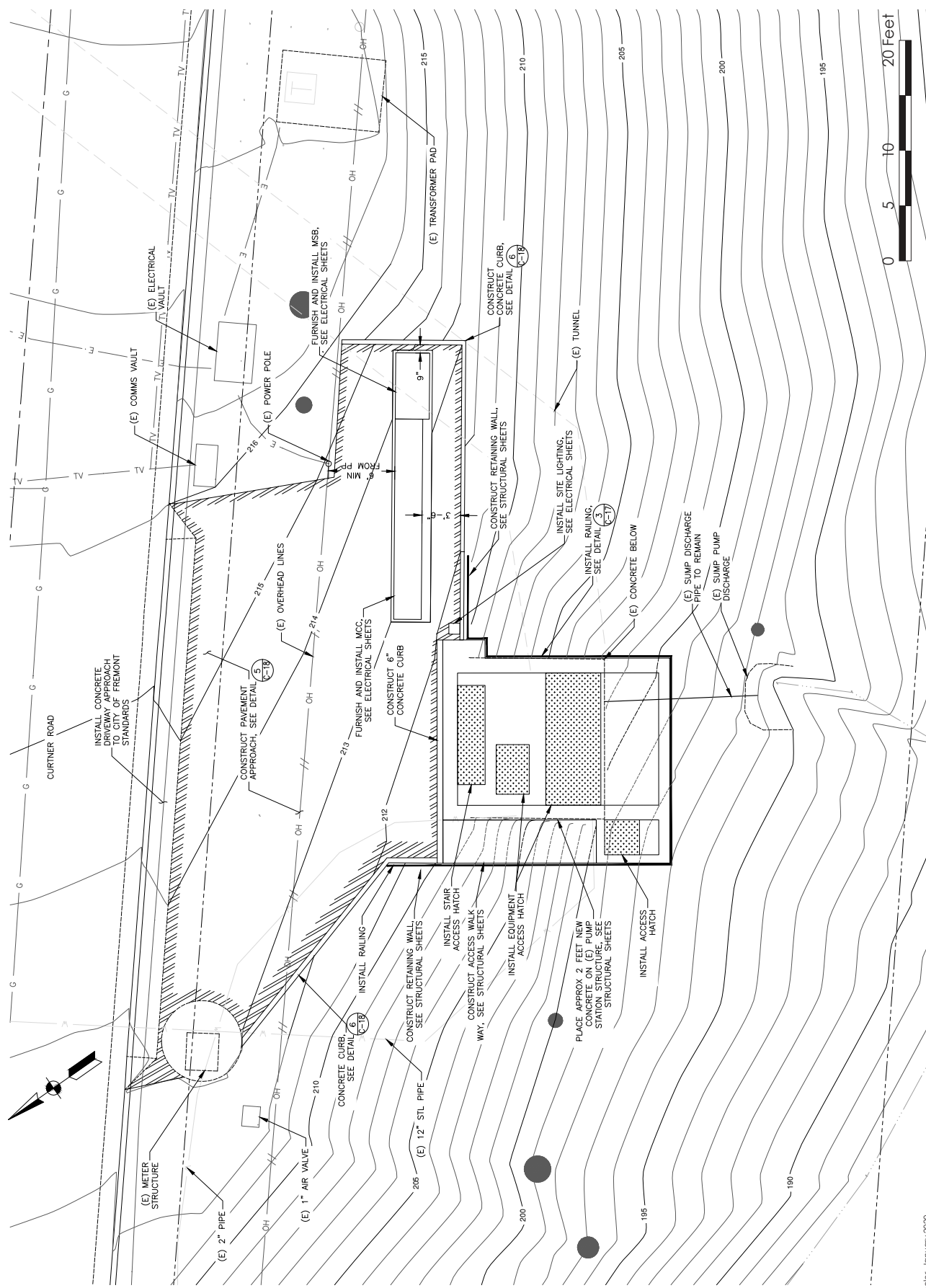
Work that is proposed to occur includes: the removal of old pumps and associated infrastructure, the installation of new pumps, pumping equipment, and piping; the installation of new stairs, a walkway, and access platforms; the installation of new access hatches and lighting, the installation of a MCC and switchboard on the southeast side of the project area, the regrading of the southeast portion of the project area, the installation of a new retaining wall, and the regrading and repaving of an existing driveway approach to reduce steep grade.

### **3.1.2            Project Components**

#### **3.1.2.1        *Civil Engineering Site Improvements***

Civil engineering site improvements would include the necessary grading, paving, retaining wall installation, and other needed improvements to support the electrical and mechanical improvements of the station. The existing driveway from the road is a steep decline into the station making access to the station difficult. The existing driveway, curb, and landing ramp would be demolished. The top slab of the pump station would be demolished as well. A new top slab would be constructed approximately two feet higher than the existing slab to allow the new driveway, constructed in the same location as the existing driveway, to maintain a more gradual slope from the road to the top slab of the booster station. Grades on either side of the station would be raised to the level of the driveway and would be gradually sloped to the existing grades or retained with a retaining wall where grading is not achievable. New electrical panels would be constructed to the east of the booster station between the station structure and the existing transformer. This area would include new electrical equipment and associated concrete pads. The area proposed for this work is currently not developed and a retaining wall would be required, along with grading the area to match proposed grades. All work would occur within the Alameda County Water District's property.

~~Three~~ Two coast live oak trees would be removed from the ~~ornamental woodland~~ California sycamore woodlands to create space as required for equipment clearances. The existing platforms and stairs inside the station would be demolished. New stairs and platforms would be installed at the level of the motors and at the base of the station to allow for operations and maintenance staff to work. A new ventilation system would be installed with two fans, one for intake and one for exhaust, to replace the existing system that only has an intake fan. The western wall of the station would be demolished to the first below grade floor of the station structure to accommodate the new cantilevered structure. The proposed structure allows for access to the back of the pumps on the first level and does not require any additional earthwork to accommodate. An additional cantilevered walkway would be added to access the personnel hatch.



## CONCEPTUAL SITE PLAN

FIGURE 3.1-1

### **3.1.2.2      *Mechanical Equipment Improvements***

The existing pumps in the station will all be demolished and replaced to meet the existing flows of the booster station. Currently, there are five pumps to serve the District's water system and two sump pumps to remove water drained to the station from the underdrain system of a nearby reservoir, all of which would be demolished. Four new vertical turbine style pumps would be installed to meet the same demand to the system. Two new sump pumps would be installed to match the capacity of the existing sump pumps. The sump pump discharge would be routed to the existing discharge piping outside of the station to discharge to the existing outlet at the creek.

### **3.1.2.3      *Electrical Improvements***

As described above, under *Section 3.1.2.1 Civil Site Improvements*, new electrical equipment pads would be installed in an area east of the booster station. The new MCC would be installed on equipment pads in this area, to replace the existing MCC located on the top slab of the existing structure. Miscellaneous improvements would be installed within the station as required to maintain adequate operations, including but not limited to float switches as pressure sensors. Lighting within the booster station would be removed and replaced, and site lighting for maintenance staff would also be installed in the new electrical pad area.

### **3.1.3      Construction Details**

Construction would take place in multiple phases and is anticipated to occur over a period of approximately one year. Construction activities would include demolition and earthwork to prepare the site in the first phase. Installation of mechanical improvements and sealing the station temporarily for weather would occur in the second phase. Removing the temporary weather-sealing, and installation of the permanent structure would occur in the third/final phase. Earthwork would primarily be fill to decrease the slope of the approach and accommodate the installation of the electrical panels. The project would implement Best Management Practices that include stormwater inlet protection, the use of fiber rolls, sandbags, and earthen berms to prevent erosion and siltation during construction.

Curtner Road would not be fully closed during construction, but would have a full lane closure at the entrance of the study area, which would extend beyond the site as needed for construction staging.

## SECTION 4.0 ENVIRONMENTAL SETTING, CHECKLIST, AND IMPACT DISCUSSION

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As discussed in Sections 4.2, 4.11, 4.12, 4.14, 4.15, 4.16, the project would have no impacts on agriculture and forestry resources, land use, mineral resources, population and housing, public services, and recreation. The project would have less than significant impacts with implementation of mitigation measures on all other resource areas.

This section presents the discussion of impacts related to the following environmental subjects in their respective subsections:

4.1	Aesthetics	4.12	Mineral Resources
4.2	Agriculture and Forestry Resources	4.13	Noise
4.3	Air Quality	4.14	Population and Housing
4.4	Biological Resources	4.15	Public Services
4.5	Cultural Resources	4.16	Recreation
4.6	Energy	4.17	Transportation
4.7	Geology and Soils	4.18	Tribal Cultural Resources
4.8	Greenhouse Gas Emissions	4.19	Utilities and Service Systems
4.9	Hazards and Hazardous Materials	4.20	Wildfire
4.10	Hydrology and Water Quality	4.21	Mandatory Findings of Significance
4.11	Land Use and Planning		

The discussion for each environmental subject 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.

**4.1 AESTHETICS**  
**4.1.1 Environmental Setting**  
**4.1.1.1 *Regulatory Framework***

**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. Interstate 680 from Mission Boulevard to the City of Fremont boundary is an officially designated a State Scenic Highway.<sup>2</sup> This segment of Interstate 680 is approximately 0.3 miles west of the project site.

**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, including the following:

<b>City of Fremont 2030 Relevant Aesthetics Policies</b>	
<b>Policies</b>	<b>Description</b>
<b>Policy 4-4.6</b>	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.
<b>Policy 4-5.1</b>	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.

<sup>2</sup> California Department of Transportation. "Scenic Highways." Accessed December 10, 2020.  
<https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>.

**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.

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**4.1.1.2      *Existing Conditions*****Project Site**

The project is located on an approximately 0.43-acre site approximately 500 feet north of the intersection of Curtner Road and East Warren Avenue in the City of Fremont. The project site includes a portion of Curtner Road and the Agua Fria Creek. The project site is at a lower elevation than Curtner Road and the surrounding neighborhood, but above the bank of Agua Fria creek. The station is surrounded by heavy vegetation including mature trees and is accessed via a sloping vehicular access driveway. The project site, riparian corridor area, and adjacent portion of Curtner Road are shown in photos 1 and 2, below.

**Surrounding Area**

The surrounding area is mostly residential in use, with several single-family homes visible from the project site. The project area also includes the Alameda Reservoir and open space along the Agua Fria creek riparian corridor. The surrounding neighborhood and open space are shown in Photos 3, 4, and 5.

**Scenic Resources**

Paseo Padre Parkway (from State Route 84 to East Warren Avenue) is designated as a Scenic Corridor in the Fremont General plan. The project site is approximately 500 feet north of Paseo Padre Parkway at East Warren Avenue terminus. This designation expresses an intent to maintain or improve visual quality, but it does not limit the abutting uses. Mission Boulevard is a scenic route in the Fremont General Plan. The segment of Mission Boulevard (from Union City border to I-880/Warren Avenue Interchange) is considered a scenic corridor. The project site is located approximately 0.3-miles east of Mission Boulevard.





**Photo 1:** Southwest facing view of project site from across Curtner Road shows lower site elevation. Residences on the far side of the creek are visible behind and above the project site.



**Photo 2:** South facing view of project site shows trees on-site, ACWD structures downslope of roadway (to the left) and upslope of Agua Fria Creek (to the right).





**Photo 3:** North facing view from project site along Curtner Road, vegetation of Agua Fria Creek riparian corridor visible (to the left), and single-family homes visible (to the right). Intersection of Curtner Road and Klamath Street is visible.



**Photo 4:** Northeast View from project site across Curtner Road, single-family homes nearest the project site.





**Photo 5:** South facing view from project site along Curtner Road. Vegetation of Agua Fria Creek riparian corridor visible (to the right), and single-family homes visible (to the left).

#### 4.1.2

#### Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
1) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? <sup>3</sup> If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Impact AES-1: The project would not 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. Due to the project site's location at and below the creek bank, it is generally lower than the surrounding development. In addition, views of the on-site facilities from the approach along Curtner Road are partially hidden by vegetation. For these reasons, the proposed project would not block and scenic vistas from area residences. **(No Impact)**

**Impact AES-2: The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (No Impact)**

As described in *Sections 4.1.1.1* and *4.1.1.2*, the location of the proposed project site is not within or visible from a designated state scenic highway. Upon project completion, the visual appearance of the project area would be similar to existing conditions, except for the removal of ~~three~~ two mature trees and addition of an electrical equipment pad. None of the impacted trees are landmark trees or designated in the General Plan as a primary historic resource. 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 Impact)**

<sup>3</sup> Public views are those that are experienced from publicly accessible vantage points.

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**Impact AES-3:      The project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. The project would not conflict with applicable zoning and other regulations governing scenic quality. (Less than Significant Impact)**

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The project would replace the components of an existing booster pump station on-site, and would, therefore, not introduce an aesthetic element that would be inconsistent with the exiting visual character in the project area. Upon project completion, the visual appearance of the project area would be similar to existing conditions, except for the removal of ~~three~~ two trees and addition of an electrical equipment pad. None of the impacted trees are landmark trees or designated in the General Plan as a primary historic resource. Construction impacts, including the use of construction equipment, would be temporary and thus would not have a significant impact on the visual quality of the surroundings. **(Less than Significant Impact)**

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**Impact AES-4:      The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. (Less than Significant Impact)**

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As proposed, the project would add surface lighting at the station exterior to illuminate the proposed electrical pad area. While the lighting would be designed to provide improved visibility of the electrical equipment on the proposed pad rather than wider area lighting, this would create a new source of light in the project area. However, the project site is located on a residential street which already features nighttime street lighting. In addition, vegetation surrounding the project site would reduce the light impacts from on-site lighting on surrounding residences. For these reasons, the proposed project lighting would not adversely affect day or nighttime views in the project area. **(Less than Significant Impact)**

## 4.2 AGRICULTURE AND FORESTRY RESOURCES

### 4.2.1 Environmental Setting

#### 4.2.1.1 *Regulatory Framework*

##### State

##### 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.<sup>4</sup>

##### 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.<sup>5</sup>

##### 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.<sup>6</sup> 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.<sup>7</sup>

#### 4.2.1.2 *Existing Conditions*

The project site is located in a developed, residential area of Alameda County, and is not used for agricultural or forestry purposes. 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*. Common examples of Urban and Built-Up Land include urban residential, industrial, and commercial uses;

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<sup>4</sup> California Department of Conservation. "Farmland Mapping and Monitoring Program." Accessed November 20, 2020. <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx>.

<sup>5</sup> California Department of Conservation. "Williamson Act." <http://www.conservation.ca.gov/dlrp/lca>.

<sup>6</sup> 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)).

<sup>7</sup> California Department of Forestry and Fire Protection. "Fire and Resource Assessment Program." Accessed November 20, 2020. <http://frap.fire.ca.gov/>.

golf courses; landfills; airports; sewage treatment; and water control structures. The project site is not subject to a Williamson Act contract.

#### 4.2.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3) 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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Result in a loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Note: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

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**Impact AG-1:      The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. (No Impact)**

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As stated in Section 4.2.1.2, the project area is designated Urban and Built-Up Land, not Farmland on the *Alameda County Important Farmland 2016 map*.<sup>8</sup> 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. **(No Impact)**

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**Impact AG-2:      The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. (No Impact)**

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Refer to Impact AG-1. 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. **(No Impact)**

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**Impact AG-3:      The project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. (No Impact)**

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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. **(No Impact)**

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**Impact AG-4:      The project would not result in a loss of forest land or conversion of forest land to non-forest use. (No Impact)**

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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. The proposed project would, therefore, not impact forest land or timberland. **(No Impact)**

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**Impact AG-5:      The project would not 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)**

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As described above under Impact AG-1 through AG-4, the project would not result in the conversion of forest or farmlands to other uses. **(No Impact)**

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<sup>8</sup> Farmland Mapping and Monitoring Program. *Alameda County Important Farmland 2016*. August 2018.

## 4.3 AIR QUALITY

The following discussion is based on an Air Quality Assessment completed for the project by *Illingworth & Rodkin, Inc.* in November 2020. The report is included in this document as Appendix A of this Initial Study.

### 4.3.1 Environmental Setting

#### 4.3.1.1 *Background Information*

##### **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 ozone (O<sub>3</sub>), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM), carbon monoxide (CO), sulfur oxides (SO<sub>x</sub>), and lead.<sup>9</sup> Criteria pollutants are regulated because they result in health effects. An overview of the sources of criteria pollutants and their associated health are summarized in Table 4.3-1. The most commonly regulated criteria pollutants in the Bay Area are discussed further below.

<b>Table 4.3-1: Health Effects of Air Pollutants</b>		
<b>Pollutants</b>	<b>Sources</b>	<b>Primary Effects</b>
Ozone (O <sub>3</sub> )	Atmospheric reaction of organic gases with nitrogen oxides in sunlight	<ul style="list-style-type: none"><li>• Aggravation of respiratory and cardiovascular diseases</li><li>• Irritation of eyes</li><li>• Cardiopulmonary function impairment</li></ul>
Nitrogen Dioxide (NO <sub>2</sub> )	Motor vehicle exhaust, high temperature stationary combustion, atmospheric reactions	<ul style="list-style-type: none"><li>• Aggravation of respiratory illness</li><li>• Reduced visibility</li></ul>
Fine Particulate Matter (PM <sub>2.5</sub> ) and Coarse Particulate Matter (PM <sub>10</sub> )	Stationary combustion of solid fuels, construction activities, industrial processes, atmospheric chemical reactions	<ul style="list-style-type: none"><li>• Reduced lung function, especially in children</li><li>• Aggravation of respiratory and cardiorespiratory diseases</li><li>• Increased cough and chest discomfort</li><li>• Reduced visibility</li></ul>
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	<ul style="list-style-type: none"><li>• Cancer</li><li>• Chronic eye, lung, or skin irritation</li><li>• Neurological and reproductive disorders</li></ul>

High O<sub>3</sub> levels are caused by the cumulative emissions of reactive organic gases (ROG) and NO<sub>x</sub>. These precursor pollutants react under certain meteorological conditions to form high O<sub>3</sub> levels.

<sup>9</sup> The area has attained both state and federal ambient air quality standards for CO. The project does not include substantial new emissions of sulfur dioxide or lead. These criteria pollutants are not discussed further.



Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce O<sub>3</sub> levels. The highest O<sub>3</sub> 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<sub>10</sub>) and fine particulate matter where particles have a diameter of 2.5 micrometers or less (PM<sub>2.5</sub>). Elevated concentrations of PM<sub>10</sub> and PM<sub>2.5</sub> are the result of both region-wide emissions and localized emissions.

### **Toxic Air Contaminants**

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).<sup>10</sup> Chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the California Air Resources Board (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.

#### **4.3.1.2 Regulatory Framework**

##### **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 (discussed previously), including PM, O<sub>3</sub>, CO, SO<sub>x</sub>, NO<sub>x</sub>, and lead.

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<sup>10</sup> California Air Resources Board. "Overview: Diesel Exhaust and Health." Accessed March 3, 2021. <https://www.arb.ca.gov/research/diesel/diesel-health.htm>.

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 DPM (in addition 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<sub>x</sub>.

## **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.<sup>11</sup>

### 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.

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<sup>11</sup> BAAQMD. *Final 2017 Clean Air Plan*. April 19, 2017. <http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans>.

### 4.3.1.3 *Existing Conditions*

The Bay Area is considered a non-attainment area for ground-level O<sub>3</sub> and PM<sub>2.5</sub> under both the federal Clean Air Act and state Clean Air Act. The area is also considered nonattainment for PM<sub>10</sub> 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<sub>3</sub> and PM<sub>10</sub>, BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for O<sub>3</sub> precursor pollutants (ROG and NO<sub>x</sub>), PM<sub>10</sub>, and PM<sub>2.5</sub>, and apply to both construction period and operational period impacts.

### **Sensitive Receptors**

There are no hospitals, daycare facilities, elder care facilities, and elementary schools in the project area that would be considered sensitive receptors for the project. The closest existing sensitive receptors to the project site are the residences across Curtner Road, approximately 70 feet north of the project site. The project would not introduce any new sensitive receptors to the project area.

### 4.3.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Note: 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 determinations.

### 4.3.2.1 *Thresholds of Significance*

### **Impacts from the Project**

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 May 2017 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<sub>2.5</sub>. The BAAQMD CEQA Air Quality thresholds used in this analysis are identified in Table 4.3-2 below.

Table 4.3-2: 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 <sub>x</sub>	54	54	10
PM <sub>10</sub>	82 (exhaust)	82	15
PM <sub>2.5</sub>	54 (exhaust)	54	10
CO	Not Applicable	9.0 ppm (eight-hour) or 20.0 ppm (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 <sup>12</sup> )			
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 <sub>2.5</sub>	0.3 µg/m <sup>3</sup>	0.8 µg/m <sup>3</sup> (average)	

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**Impact AIR-1: The project would not conflict with or obstruct implementation of the applicable air quality plan. (Less than Significant Impact)**

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Determining consistency with BAAQMD 2017 Clean Air Plan involves assessing whether a project would alter the population growth and vehicle miles traveled assumptions of the Plan. 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, and it would not generate substantial new vehicle trips in the Air Basin that would conflict with the Clean Air Plan. (See vehicle trip calculation below.) As a result, the project would not conflict with

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<sup>12</sup> 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. Source: Bay Area Air Quality Management District. CEQA Guidelines. May 2017.

or obstruct implementation of the Plan, and this impact would be less than significant. **(Less than Significant Impact)**

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**Impact AIR-2: The project would not 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)**

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As described in under *Section 4.3.1.3 Existing Conditions*, the Bay Area is a non-attainment area for ground-level ozone and PM<sub>2.5</sub> under both the Federal Clean Air Act and the California Clean Air Act. The Bay Area is also a non-attainment area for PM<sub>10</sub> under the California Clean Air Act.

### Construction Period Emissions

Construction activity is anticipated to include demolition, grading, trenching, building construction, and paving. For modelling purposes, construction activities were assumed to occur in one year. Using CalEEMod, construction period emissions were modeled using default construction schedule, equipment quantities, and vehicle activity assumptions (see Table 4.3-3). Vehicle trip activities were estimated to be 10 worker and four vendor trips per day for the building construction phase, with 10 estimated deliveries of concrete and 10 estimated deliveries of asphalt to the project site (40 total trips). As described below, construction period emissions would be below BAAQMD significance thresholds for all criteria pollutants. For this reason, construction period emissions would be less than significant **(Less than Significant Impact)**

<b>Table 4.3-3: Unmitigated Construction Period Emissions</b>				
<b>Year</b>	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub> Exhaust</b>	<b>PM<sub>2.5</sub> Exhaust</b>
<i>Unmitigated Construction Emissions Per Year (Tons)</i>				
Total, assuming 2021	0.1	0.5	0.03	0.03
<i>Maximum Daily Construction Emissions Per Year</i>				
Average (assuming 123 construction days)	2	8	<1	<1
BAAQMD Thresholds (pounds per day)	54	54	82	54
<b>Exceed Threshold?</b>	No	No	No	No

### Operational Period Emissions

The existing Curtner Road booster station operates on electrical power. The proposed project would result in the continued operation of the Curtner Road Booster Station, without any increase in capacity. No operational emissions would be generated from the proposed project as the replacement pumps would also be electric. 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. For these reasons, project operation would not result in an increase of air pollutant emissions. **(Less Than Significant Impact)**

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**Impact AIR-3: The project would not expose sensitive receptors to substantial pollutant concentrations. (Less than Significant Impact with Mitigation Incorporated)**

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**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 located approximately 70 feet north of the project site, along Curtner Road and approximately 200 feet south of the project site, along Windmill Drive. 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 infants present or increased annual PM<sub>2.5</sub> concentrations caused by construction equipment and traffic exhaust and fugitive dust. The following measures would be implemented to reduce the potential impact of construction-related DPM and dust emissions.

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

**MM AIR-3.1:** During any construction period requiring ground disturbance, the applicant shall ensure that the project contractor implements measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. The contractor shall implement the following best management practices that are required 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 per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the District regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

**MM AIR-3.2:** The project shall use equipment that has low 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. EPA particulate matter emissions standards for Tier 4 or use engines that include particulate matter emissions control equivalent to 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.

The proposed project is small in overall size, has limited site access by construction equipment, and has a short construction schedule. For these reasons, and with implementation of the above measures, construction period emissions would be less than significant. **(Less than Significant Impact with Mitigation Incorporated)**

### 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 proposed 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. **(Less Than Significant Impact)**

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**Impact AIR-4:      The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. (No Impact)**

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The proposed project would result in the continued operation of the Curtner Road Booster Station, without any substantial change in operation. Booster station 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. **(Less Than Significant Impact)**



## 4.4 BIOLOGICAL RESOURCES

This section is based in part on an Arborist Report, and a Biological Resource Assessment, prepared for the project by WRA, Inc. in ~~December 2020 and March 2021, respectively~~ August 2021. These reports are included in this document as Appendix B.

### 4.4.1 Environmental Setting

#### 4.4.1.1 *Regulatory Framework*

##### **Federal and State**

##### Endangered Species Act

Individual plant and animal species listed as rare, threatened, or endangered under state and federal Endangered Species Acts are considered special-status species. Federal and state endangered species legislation has provided the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Permits may be required from both the USFWS and CDFW if activities associated with a proposed project would result in the take of a species listed as threatened or endangered. To “take” a listed species, as defined by the State of California, is “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” these species. Take is more broadly defined by the federal Endangered Species Act to include harm of a listed species.

In addition to species listed under state and federal Endangered Species Acts, Sections 15380(b) and (c) of the CEQA Guidelines provide that all potential rare or sensitive species, or habitats capable of supporting rare species, must be considered as part of the environmental review process. These may include plant species listed by the California Native Plant Society and CDFW-listed Species of Special Concern.

##### Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits killing, capture, possession, or trade of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. Hunting and poaching are also prohibited. The taking and killing of birds resulting from an activity is not prohibited by the MBTA when the underlying purpose of that activity is not to take birds.<sup>13</sup> Nesting birds are considered special-status species and are protected by the USFWS. The CDFW also protects migratory and nesting birds under California Fish and Game Code Sections 3503, 3503.5, and 3800. The MBTA defines taking as including causing abandonment and/or loss of reproductive efforts through disturbance.

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<sup>13</sup> United States Department of the Interior. “Memorandum M-37050. The Migratory Bird Treaty Act Does Not Prohibit Incidental Take.” Accessed November 18, 2020. <https://www.doi.gov/sites/doi.gov/files/uploads/m-37050.pdf>.

### Sensitive Habitat Regulations

Wetland and riparian habitats are considered sensitive habitats under CEQA. They are also afforded protection under applicable federal, state, and local regulations, and are generally subject to regulation by the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), CDFW, and/or the USFWS under provisions of the federal Clean Water Act (e.g., Sections 303, 304, 404) and State of California Porter-Cologne Water Quality Control Act.

### Fish and Game Code Section 1602

Streambeds and banks, as well as associated riparian habitat, are regulated by the CDFW per Section 1602 of the Fish and Game Code. Work within the bed or banks of a stream or the adjacent riparian habitat requires a Streambed Alteration Agreement from the CDFW.

## **Local**

### City of Fremont Tree 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 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 (City of Fremont 2020). 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.

### Watercourse Protection

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:

- Discharge into or connect any pipe or channel to a watercourse
- 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

#### **4.4.1.2      *Existing Conditions***

The study area of the Arborist Report and Biological Resource Assessment encompassed the entire 0.43-acre area of the project area, including the portion extending into the northern bank of the Agua Fria Creek. The study area consists of developed land cover ~~ornamental woodland~~, California sycamore woodland, and intermittent stream habitat. The study area includes both planted and natural occurring native and non-native trees.

### **Protected Trees**

A total of 26 trees were surveyed in the study area (see Table 4.4-1). Species identified included Raywood ash, Oregon ash, arroyo willow, blue elderberry, and coast live oak. All 26 surveyed trees are considered protected per the City of Fremont Tree Ordinance. In order to accommodate clearances to new equipment installed as a component of the booster station rehabilitation, ~~three~~ two

trees have been identified as potentially requiring removal. The location of trees is shown on Figure 4.4-1.

Table 4.4-1: Tree Survey				
Tree No.	Scientific Name	Common Name	DBH in Inches	Remove/Preserve
620	<i>Fraxinus angustifolia</i>	Raywood ash	48.7	Preserve
621	<i>Fraxinus latifolia</i>	Oregon ash	14.1	Preserve
622	<i>Fraxinus angustifolia</i>	Raywood ash	31.1	Preserve
623	<i>Quercus agrifolia</i>	coast live oak	10.8	Preserve
624	<i>Fraxinus latifolia</i>	Oregon ash	26.0	Preserve
625	<i>Fraxinus latifolia</i>	Oregon ash	29.5	Preserve
626	<i>Quercus agrifolia</i>	coast live oak	13.8	Preserve
627	<i>Salix lasiolepis</i>	arroyo willow	32.4	Preserve
628	<i>Salix lasiolepis</i>	arroyo willow	25.4	Preserve
629	<i>Salix lasiolepis</i>	arroyo willow	7.9	Preserve
630	<i>Fraxinus latifolia</i>	Oregon ash	6.4	Preserve
631	<i>Fraxinus latifolia</i>	Oregon ash	13.9	Preserve
632	<i>Salix lasiolepis</i>	arroyo willow	6.2	Preserve
633	<i>Fraxinus latifolia</i>	Oregon ash	13.0	Preserve
634	<i>Sambucus nigra ssp. caerulea</i>	blue elderberry	6.8	Preserve
635	<i>Sambucus nigra ssp. caerulea</i>	blue elderberry	18.4	Preserve
636	<i>Quercus agrifolia</i>	coast live oak	7.2	Preserve
<b>637</b>	<b><i>Quercus agrifolia</i></b>	<b>coast live oak</b>	<b>22.3</b>	<b>Remove</b>
<b>638</b>	<b><i>Quercus agrifolia</i></b>	<b>coast live oak</b>	<b>17.8</b>	<b><del>Preserve</del> Remove</b>
639	<i>Quercus agrifolia</i>	coast live oak	8.6	Preserve
640	<i>Quercus agrifolia</i>	coast live oak	17.5	<del>Preserve</del> <b>Remove</b>
641	<i>Quercus agrifolia</i>	coast live oak	25.7	<del>Preserve</del> <b>Remove</b>
642	<i>Quercus agrifolia</i>	coast live oak	6.1	Preserve
643	<i>Sambucus nigra ssp. caerulea</i>	blue elderberry	16.8	Preserve
644	<i>Quercus agrifolia</i>	coast live oak	7.2	Preserve
645	<i>Salix lasiolepis</i>	arroyo willow	10.8	Preserve
Notes: DBH= Diameter at Breast Height				

## Sensitive Biological Communities

### Intermittent Stream

The northern bank of the Agua Fria Creek is largely composed of English ivy (*Hedera helix*) and Himalayan blackberry (*Rubus armeniacus*), as well as arroyo willow (*Salix lasiolepis*), Oregon ash (*Fraxinus latifolia*), and poison oak (*Toxicodendron diversilobum*). The stream channel contains cobbles, gravels, and fine sediment. The stream eventually flows into the San Francisco Bay, located approximately 5.5 miles west of the study area.

### California Sycamore Woodland (CDFW Rank G3/S3)

California sycamore woodland within the study area is a riparian community that occurs along and above the northern bank of the intermittent stream. The California sycamore woodland overstory is dominated by California sycamore (*Platanus racemosa*) and Fremont cottonwood (*Populus*



Source: WRA, August 19, 2021.

TREE LOCATION MAP

FIGURE 4.4-1

fremontii). The understory of this community is dominated by native trees and shrubs, including arroyo willow, Oregon ash, and poison oak. Highly invasive, non-native species are also present within the understory of this community, including Himalayan blackberry and English ivy. California sycamore woodland is classified by the CDFW as having a G3/S3 sensitivity ranking, indicating that it is globally vulnerable and vulnerable within California state boundaries.

## **Special Status Species**

### **Special Status Plant Species**

According to a review of databases conducted as part of the Biological Resource Assessment, 51 special status plant species have been documented in project vicinity (see Figure 4 of Appendix B). However, the project site has a low potential to support any documented special status plant species due to absence of specific soil types, absence of suitable habitat, dominance of invasive species, and location outside geographic range and known distribution of species. No special status plant species were observed during the site visit.

### **Special Status Wildlife Species**

A database review identified 48 special status wildlife species within the project vicinity (see Figure 5 of Appendix B). Due to the project area's location beyond the known range of the species, lack of suitable habitat and soils, lack of burrows for occupancy, and absence of suitable nesting structures, 47 out of the 48 special status species were not considered to have a potential to occur within the project site. Only one species (California red legged frog) was considered to have a moderate potential to occur in the study area.

Agua Fria Creek within the study area does not contain suitable spawning habitat for fishes. Much of Agua Fria Creek is long sections of underground culvert and engineered channels, likely precluding anadromous species from the study area. Therefore, steelhead and other fishes are unlikely to be present in Agua Fria Creek.

### **Nesting Birds**

Vegetation on-site, such as trees and shrubbery, may be used as nesting habitat by native bird species.

## **Wetland and Jurisdictional Waters**

The project site contains a portion of Agua Fria Creek, an intermittent waterway. The project does not contain any jurisdictional wetlands or non-wetland waters that would qualify as waters of the U.S. or State.



#### 4.4.2

#### Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
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 (CDFW) or United States Fish and Wildlife Service (USFWS)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 CDFW or USFWS?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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**Impact BIO-1:** The project would not 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 CDFW or USFWS. (Less than Significant Impact with Mitigation Incorporated)

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### **Federally and State Listed Special Status Plant and Wildlife Species**

As described in *Section 4.4.1.2 Existing Conditions*, the project area is unlikely to support special-status plant or wildlife species due to absence of suitable habitat, known species' ranges, and the presence of non-native plant species.

Only one species out of the 48 special-status species documented in the vicinity, was considered to have a moderate potential to occur in the study area. The project area is unlikely to support California red-legged frog due to existing development and disturbance, and lack of ground vegetation or refugia. No Project work would occur below the top of bank. In addition, Agua Fria Creek is an intermittent stream, and any demolition or grading would occur in summer months when California red-legged frog are not likely to be present in Agua Fria Creek. For these reasons, the project would have a less than significant impact on any identified special status species. **(Less than Significant Impact)**

### **Native Nesting Birds**

According to the Biological Resources Assessment prepared for the proposed project, the site contains vegetation that may be used as nesting habitat by a variety of native bird species protected under California Fish and Wildlife Code Sections 3503, 3503.5, and 2800. Construction activities such as vegetation removal and ground disturbance occurring during the nesting season (i.e., February 1 – August 31) could cause direct mortality of eggs or young, or to cause abandonment of active nests due to auditory, vibratory, or visual disturbance which would constitute a significant impact.

**Mitigation Measures:** Implementation of the following mitigation measure would reduce the impacts to nesting birds below a significant level:

**MM BIO-1.1:** Construction activities, such as vegetation removal, grading, or initial ground-disturbance, shall be scheduled to avoid the nesting season. The nesting season for most birds, including most raptors in the San Francisco Bay area, extends from February 1st through August 31st, inclusive.

**MM BIO-1.2:** If project activities must be conducted during the nesting season, a pre-construction nesting bird survey shall be conducted by a qualified biologist no more than 14 days prior to vegetation removal or initial ground disturbance. The survey will include the project area and surrounding 250 feet to identify the location and status of any nests that could potentially be affected either directly or indirectly by project activities.

If active nests of native nesting bird species are located during the nesting bird survey, a work exclusion zone shall be established around each nest by a qualified biologist. Established exclusion zones will remain in place until all young in the nest have fledged or the nest otherwise becomes inactive (e.g., due to predation). Appropriate exclusion zone sizes shall be determined by a qualified biologist and will vary based on species, nest location, existing visual buffers, noise levels, and other factors. An exclusion zone radius may be as small as 50 feet for common, disturbance-adapted species, or as large as 250 feet or more for raptors. Exclusion zone size shall be reduced from established levels by a qualified biologist if nest monitoring findings indicate that project activities do not adversely impact the nest, and if a reduced exclusion zone would not adversely affect the nest.

With the implementation of the above measure, the project would have a less than significant impact on nesting bird species **(Less than Significant with Mitigation Incorporated)**

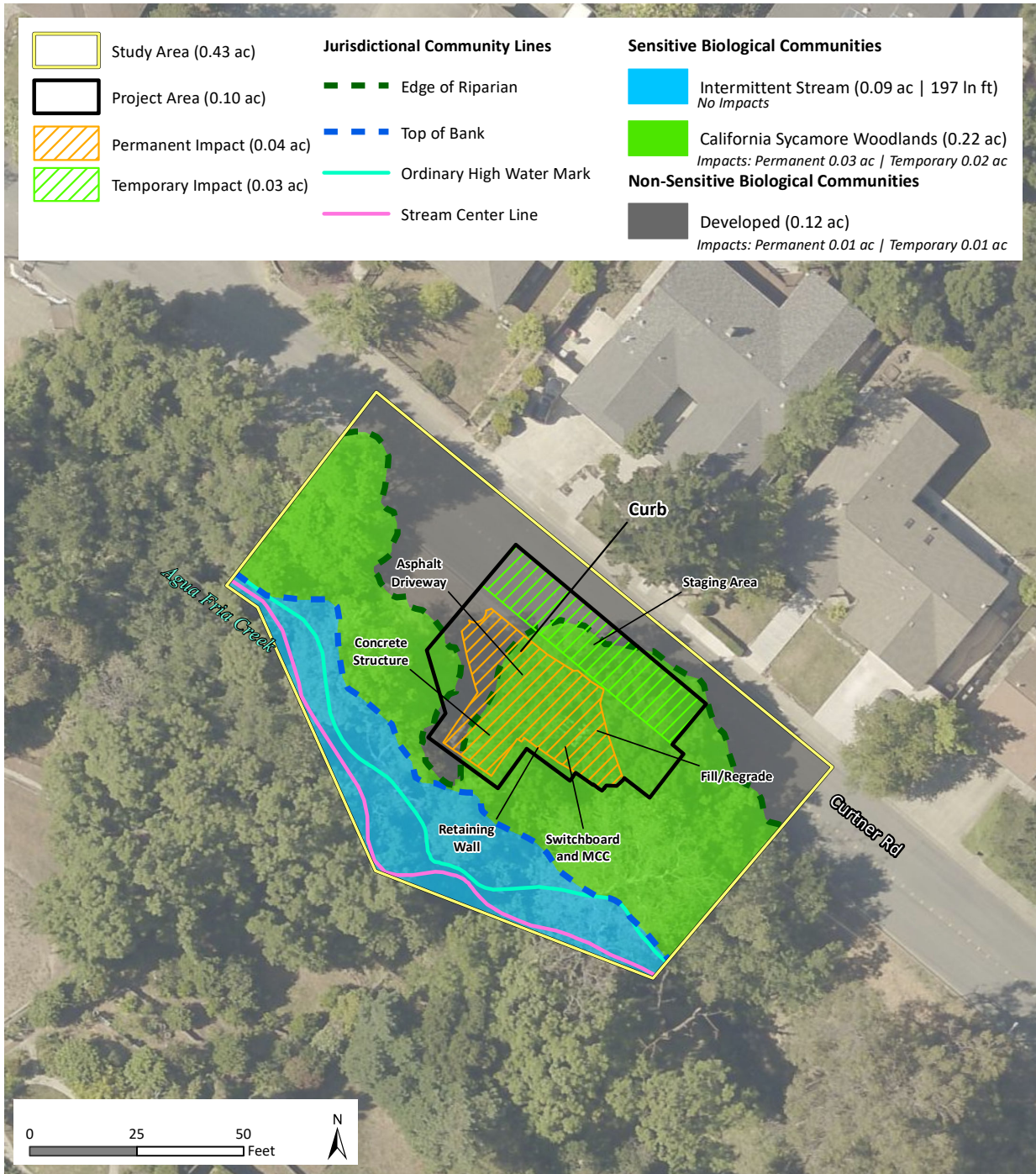
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**Impact BIO-2: The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS. (Less than Significant Impact with Mitigation Incorporated)**

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The project site contains one area of riparian habitat community: California sycamore woodland. The extent of the California sycamore biological community, as well as the other sensitive and non-sensitive biological communities on-site, is shown in Figure 4.4-2, below. As shown on Figure 4.4-2, the project would permanently impact ~~less than 100 square feet~~ 0.03 acre and temporarily impact 0.02 acre of California sycamore woodlands which qualifies as both a CDFW sensitive community (due to its G3/S3 designation as explained in Section 4.4.1.2 above) and a CDFW jurisdictional community (since it is a riparian community). Permanent impacts to riparian habitat would ~~not result in the removal or harm of riparian trees~~ be unavoidable, as they would occur where the booster station would be rehabilitated. Permanent impacts to this community would result in the removal of two riparian coast live oak trees. Temporary impacts to California sycamore woodlands would occur to canopy of coast live oak trees that overhang Curtner Road, which would be used for staging; however, these trees would not be directly impacted. Impacts to CDFW sensitive communities and/or CDFW jurisdictional communities are considered significant under CEQA. Since California sycamore woodlands is a CDFW jurisdictional community, the Project requires a Section 1602 Lake and Streambed Alteration Agreement from the CDFW. ~~This impact would be associated with construction of a retaining wall, switchboard and MCC, the asphalt driveway, work on the booster station structure (e.g., installing new hatches); and areas that require regrading and repaving. No work would occur below the top of bank of Agua Fria Creek. This project would only impact the highly invasive, non-native species of the understory of the community, such as Himalayan blackberry and English ivy. As a result, the project would not significantly impact riparian habitat or sensitive natural communities.~~

**Mitigation Measures:** The following mitigation measures shall be implemented to reduce impacts to sensitive communities.



Source: WRA, August 19, 2021.

- MM BIO-2.1:** The project shall obtain a Lake and Streambed Alteration Agreement from the CDFW to proceed with proposed impacts to CDFW jurisdictional riparian habitat. All compliance measures included in these permits will be adhered to.
- MM BIO-2.2:** The Project shall replant coast live oak trees within the riparian corridor at a mitigation ratio of 3:1 to offset the removal of coast live oak trees from the California sycamore woodlands habitat. A replanting plan and a mitigation and monitoring plan shall be submitted to the CDFW prior to implementation.

With the implementation of the above measures, the project would have a less than significant impact on sensitive natural communities. (Less than Significant Impact with Mitigation Incorporated)

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**Impact BIO-3:**     **The project would not have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. (~~No~~ Less than Significant Impact)**

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As described in *Section 4.4.1.2 Existing Conditions*, the project site does not contain any jurisdictional waters or wetlands. All proposed work would be conducted above the ordinary high water mark (OHWM) and top of bank, and therefore outside the landward edge of any riparian habitat associated with Agua Fria Creek. As a result, Agua Fria Creek, the intermittent wetland within the project site, would not be affected by the project. (~~No~~ Less than Significant Impact)

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**Impact BIO-4:**     **The project would not 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. (Less than Significant Impact)**

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The project site is located in a densely developed, residential area of the City of Fremont. However, local wildlife may utilize the Agua Fria Creek corridor for movement or migration. As described above, under Impact BIO-3, project activity would occur above the OHWM and top of bank, and would not impact the function of the creek. For this reason, the impact on species would be less than significant. (**Less than Significant Impact**)

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**Impact BIO-5:**     **The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Less than Significant Impact with Mitigation Incorporated)**

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### **City of Fremont Municipal Code Chapter 18.210.120**

The project would involve construction within 20 feet of top of bank or 30 feet of the centerline of Agua Fria Creek. Thus, the City of Fremont's watercourse protection policy (Chapter 18.210.120) would not be applicable. (**No Impact**)

## City of Fremont Tree Ordinance

As described in *Section 4.4.1.2 Existing Conditions*, the project would remove ~~three~~ two trees from the project site to install the new retaining wall and regrade portions of the booster station in order to achieve required clearances for new equipment. These are both City-protected coast live oak trees, which qualify as "protected trees". However, as discussed in *Section 4.4.1.1 Regulatory Framework*, the tree ordinance includes a provision that exempts public utility projects from needing a tree removal permit, unless a "landmark tree" is impacted. The subject trees are not landmark trees and they are being removed to accommodate facility improvements to the Alameda County Water District-operated Curtner Road Booster Station, which qualifies as a public utility. Therefore, the project would be exempt from needing a tree removal permit. No permit or mitigation will be required for the removal of the ~~three~~ two trees identified as potentially requiring removal. However, removal of the ~~three~~ two trees could result in damage to the remaining trees on-site.

**Mitigation Measures:** The following mitigation measures shall be implemented to reduce impacts to on-site trees not removed during project construction.

### **MM BIO-5.1:**

To avoid and minimize damage to the remaining trees surveyed, the following measures would be implemented during construction:

- All construction activity (grading, filling, paving, etc.) shall respect the root protection zone (RPZ) around all trees within the vicinity of the project area that are to be preserved. The RPZ should be a distance of 1.0 times the dripline radius measured from the trunk of the tree. Exception to this standard could be considered on a case-by-case basis, provided that it is demonstrated that an encroachment into the RPZ will not affect the root system or the health of the tree, and is authorized by an ISA-Certified Arborist or comparable specialist.
- Temporary protective fencing shall be installed around the dripline of existing trees prior to commencement of any construction activity conducted within 25 feet of the tree canopy. The fence shall be clearly marked to prevent inadvertent encroachment by heavy machinery. Drainage shall not be allowed to pond around the base of any tree.
- Drainage shall not be allowed to pond around the base of any tree.
- An ISA-Certified Arborist or tree specialist shall be retained to perform any necessary pruning of trees during construction activity. Roots exposed as a result of construction activities shall be covered with wet burlap to avoid desiccation, and should be buried as soon as practicable.
- Roots exposed, as a result of construction activities, shall be covered with wet burlap to avoid desiccation, and should be buried as soon as practicable.
- Construction materials or heavy equipment shall not be stored within the RPZ of preserved trees.

- Only an ISA-Certified Arborist, or comparable specialist, shall make specific recommendations as to where any existing trees can safely tolerate some level of fill within the drip line.
- Trenching within RPZ shall be done under the field supervision of an ISA-Certified Arborist and shall be hand dug as much as possible in addition to using auger or drill.
- Construction materials shall be properly stored away from existing trees to avoid spillage or damage to trees.

With the implementation of the above measures, and because the project is exempt from tree removal permitting requirements, the project would have a less than significant impact on protected trees.  
**(Less than Significant Impact with Mitigation Incorporated)**

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**Impact BIO-6:      The project would not 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)**

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The project area 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 will not conflict with the provisions of an adopted HCP, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. **(No Impact)**



## 4.5 CULTURAL RESOURCES

The following discussion is based, in part, on an Archaeological Report prepared by *Holman & Associates, Inc.* in March 2021. A copy of the archaeology report is on file with the District and available for review by qualified professionals.

### 4.5.1 Environmental Setting

#### 4.5.1.1 *Regulatory Framework*

##### 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.<sup>14</sup>

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.

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<sup>14</sup> California Office of Historic Preservation. “CEQA Guidelines Section 15064.5(a)(3) and California Office of Historic Preservation Technical Assistance Series #6.” Accessed August 31, 2020.  
<http://www.ohp.parks.ca.gov/pages/1069/files/technical%20assistance%20bulletin%206%202011%20update.pdf>.

## 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 codes 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.

#### **4.5.1.2      *Existing Conditions***

##### **Historic Structures**

The site is developed with a pump booster station building originally constructed in 1972, and therefore is less than 50 years old. Aside from maintenance-related activities, the station has remained relatively unchanged since the last modifications were performed in 1990. The pump station building is utilitarian in design, without any architectural style. The pump station structures are not associated with the lives of historically important people, or events. The booster station is not listed on the NRHP, CRHR, or the City of Fremont's Historic Building Inventory.

##### **Archaeological Resources**

Site records and studies were received from the Northwest Information Center of the California Historical Resources Information System. No archaeological resources have been recorded within the project area. No resources are listed on federal, state, or local inventories within or abutting the property. A field survey of the project area did not identify any artifacts or cultural deposits that would indicate an archaeological resource. There is an archaeological record of one large Native American village within 0.5 miles of the project. Archaeological and cultural resources associated with the village consisted of burials, baking features, and artifacts deposited over predominantly the last 2,000 years.

## 4.5.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

---

**Impact CUL-1:** The project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5. **(No Impact)**

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The project would rehabilitate the booster station within the footprint of existing structures, and on new portions of the project area. In total, approximately 0.10 areas of the 0.43-acre project site would be impacted by the proposed project. As identified above, in *Section 4.5.1.2 Existing Conditions*, the booster station structures are less than 50 years in age and are not identified as historical resources. In addition, historic-era maps for the project area were examined to identify the potential for archaeological resources that might elaborate on the history. Neither 1876 nor 1899 maps identified any historic-era activity within or adjacent to the project area. For these reasons, the proposed project would not cause an adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5. **(No Impact)**

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**Impact CUL-2:** The project would not 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)**

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Native American communities historically used lands adjacent to creeks and rivers to live, camp, source and process food and other resources. The property is located within the Agua Fria Creek area, extending from the steep bank to Curtner Road. As described above, in *Section 4.5.1.2 Existing Conditions*, there is one large Native American village to the west within 0.5-miles of the project site. However, subsurface soils on-site have been previously disturbed for the construction of the existing booster station structures. For this reason, archaeological sensitivity on-site is low. In addition, as described in the Archaeological Resources Report, there are no identified cultural resources within, or adjacent to, the project site. Although it is unlikely, unrecorded cultural resource may be impacted during construction.

**Mitigation Measures:** The following mitigation measures shall be implemented to reduce impacts to archaeological resources and/or human remains that may be present on the site.

**MM CUL-2.1:** 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. If buried or previously unrecognized archaeological deposits or materials of any kind are inadvertently exposed during any construction activity, work within 50 feet of the find shall cease until a qualified archaeologist can assess the find and provide recommendations for further treatment, as warranted. Construction and potential impacts to the area(s) within a radius determined by the archaeologist should not recommence until the assessment is complete and any mitigation measures warranted are implemented.

**MM CUL-2.2:** 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 project applicant shall immediately notify the Alameda County Coroner/ Medical Examiner's Office. 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 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 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 Native American Heritage Commission 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 landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

With implementation of the MM CUL-2.1 and CUL-2.2, the proposed project would have a less than significant impact on subsurface cultural resources. **(Less than Significant Impact with Mitigation Incorporated)**

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**Impact CUL-3:** The project would not disturb any human remains, including those interred outside of dedicated cemeteries. **(Less than Significant Impact with Mitigation Incorporated)**

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As a result of the original construction activities for the booster station structures, 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. With the implementation of Mitigation Measures CUL-2.1, the proposed project would result in less than significant impacts to unknown human remains. **(Less than Significant Impact with Mitigation Incorporated)**

## **4.6 ENERGY**

### **4.6.1 Environmental Setting**

#### **4.6.1.1 *Regulatory Framework***

##### **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.

#### **4.6.1.2 *Existing Conditions***

Total energy usage in California was approximately 7,875 trillion British thermal units (Btu) in the year 2018, the most recent year for which this data was available.<sup>15</sup> Out of the 50 states, California is ranked second in total energy consumption and 46<sup>th</sup> in energy consumption per capita. The breakdown by sector was approximately 18 percent (1,440 trillion Btu) for residential uses, 19 percent (1,510 trillion Btu) for commercial uses, 23 percent (1,847 trillion Btu) for industrial uses, and 39 percent (3,078 trillion Btu) for transportation.<sup>16</sup> This energy is primarily supplied in the form of natural gas, petroleum, nuclear electric power, and hydroelectric power.

##### **Electricity**

Electricity in Alameda County in 2019 was consumed primarily by the commercial sector (72 percent), followed by the residential sector consuming 28 percent. In 2019, a total of approximately 10,684 gigawatt hours (GWh) of electricity was consumed in Alameda County.<sup>17</sup>

East Bay Community Energy (EBCE) is the electricity provider for Alameda County. EBCE 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).<sup>18</sup> 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.

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<sup>15</sup> United States Energy Information Administration. "State Profile and Energy Estimates, 2018." Accessed January 28, 2021. <https://www.eia.gov/state/?sid=CA#tabs-2>.

<sup>16</sup> Ibid.

<sup>17</sup> California Energy Commission. Energy Consumption Data Management System. "Electricity Consumption by County." Accessed March 11, 2021. <http://ecdms.energy.ca.gov/elecbycounty.aspx>.

<sup>18</sup> East Bay Community Energy. "Power Mix". <https://ebce.org/our-power-mix/index.html/> Accessed March 8, 2021.



## Fuel for Motor Vehicles

In 2019, 15.4 billion gallons of gasoline were sold in California.<sup>19</sup> 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.<sup>20</sup> 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.<sup>21,22</sup>

### 4.6.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

---

**Impact EN-1:      The project would not 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)**

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The project would involve the removal and replacement of infrastructure of the Curtner Road pump booster station for a full rehabilitation of the station, and the construction of new on-site improvements. 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.

The operation of the project would consume electricity for lighting and operation of pump equipment. The project would not increase the capacity nor change the operations of the booster

<sup>19</sup> California Department of Tax and Fee Administration. "Net Taxable Gasoline Gallons." Accessed February 3, 2021. <https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=VehicleTaxableFuelDist>.

<sup>20</sup> United States Environmental Protection Agency. "The 2020 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975." January 2021. <https://www.epa.gov/sites/production/files/2021-01/documents/420r21003.pdf>

<sup>21</sup> United States Department of Energy. *Energy Independence & Security Act of 2007*. Accessed March 8, 2021. <http://www.afdc.energy.gov/laws/eisa>.

<sup>22</sup> Public Law 110-140—December 19, 2007. *Energy Independence & Security Act of 2007*. Accessed March 8, 2021. <http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf>.

station. For these reasons, the rehabilitated station will not result in wasteful, inefficient, or unnecessary consumption of energy. **(Less than Significant Impact)**

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**Impact EN-2:      The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (No Impact)**

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As described in Impact EN-1 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. Electricity demands on-site would be substantially the same as under existing conditions, will not increase over time, and will be adequately served by the current provider. Therefore, the project would not conflict with state or local plan for renewable energy or energy efficiency. **(No Impact)**

## **4.7 GEOLOGY AND SOILS**

The following discussion is based in part on a Geotechnical Investigation Report prepared by *BSK Associates* in June 2020. A copy of the Geotech report is on file with the District and available for review by any interested party.

### **4.7.1 Environmental Setting**

#### **4.7.1.1 *Regulatory Framework***

##### **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.

### **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, including the following:

<b>City of Fremont 2030 Relevant Land Use Policies</b>	
<b>Policies</b>	<b>Description</b>
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.

#### **4.7.1.2      *Existing Conditions***

The project area is located within the Coast Ranges geomorphic province. This province consists of northwest trending mountain ranges and valleys that extend from southern California to Oregon. 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, Curtner Road Booster Station is located within the Milpitas 7.5-minute topographic quadrangle.

## Soils

Based on the Soil Survey of Alameda County, California, the project area contains a single soil unit: Danville silty clay loam, three to 10 percent slopes. Soils on-site consist of silty clay loam and deep clays. These soils are generally alluvium derived from sandstone, shale, and siltstone. Soils present on-site are well drained and are not considered hydric. Although clay soils sometime exhibit swell-shrink cycles when saturated, soils on-site are categorized as Group C, which indicates that clay textures on-site are well aggregated, of low bulk density, or contain greater than 35 percent rock fragments. Overall, on-site soils have moderate to high expansive potential.

## 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 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.<sup>23</sup> The project site is located approximately 0.3-miles east of the Hayward fault zone, and is not located within the mapped Alquist-Priolo Earthquake Fault Zone of the Hayward fault.<sup>24</sup>

## 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. The project site is not located within a liquefaction zone.<sup>25</sup>

## Lateral Spreading

Lateral spreading is a type of ground failure related to liquefaction. It consists of the lateral movement of saturated soil deposits towards an open face. The open bank of Aqua Fria Creek is within project boundaries. The site is considered to be a landslide hazard zone.<sup>26</sup>

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<sup>23</sup> City of Fremont. *General Plan 2030 Safety Element*. December 2011.

<sup>24</sup> California Department of Conservation. Earthquake Zones of Required Investigation. Map. <https://maps.conservation.ca.gov/cgs/EQZApp/app/>. Accessed March 8, 2021

<sup>25</sup> Ibid.

<sup>26</sup> Ibid.

## 4.7.2

**Impact Discussion**

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) 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 (refer to Division of Mines and Geology Special Publication 42)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
– Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
– Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
– Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4) Be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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**Impact GEO-1:     The project would not 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; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides. (No Impact)**

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The proposed project would rehabilitate the existing Curtner Road Booster Pump Station. As discussed under *Section 4.7.1.2 Existing Conditions*, the project is not located within an Alquist-Priolo earthquake fault hazard zone. However, the project area is located in a seismically-active region and in proximity to the Hayward fault. As a result, the project could experience very strong ground shaking during the lifetime of the proposed project. The project's booster station upgrades would not, however, exacerbate the rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, or landslides. Moreover, the structural modifications would be designed in accordance with applicable seismic provisions of the CBC. As such, there would be no CEQA impact. **(No Impact)**

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**Impact GEO-2:     The project would not result in substantial soil erosion or the loss of topsoil. (Less Than Significant Impact)**

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The project's pump station rehabilitation 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 *Section 4.10, Hydrology and Water Quality*, measures are included in the proposed project to reduce erosion and associated impacts to water quality to a less than significant level. **(Less Than Significant Impact)**

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**Impact GEO-3:     The project would not 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)**

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The project site is within a mapped seismic landslide hazard zone, due to the free face of Agua Fria Creek in the southern portion of the site. The project's utility upgrades, however, would not exacerbate on- or off-site landslide, lateral spreading, subsidence, or liquefaction. 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 proposed structure would be designed and constructed in accordance with the recommendations of a design level geotechnical report prepared for the site, which identifies the specific design features related to geologic and seismic conditions. Therefore, grading proposed on the steeply sloping site along the creek bank would not lead to collapse or instability. As such, the CEQA impact would be less than significant. **(Less than Significant Impact)**

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**Impact GEO-4: The project would not be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property. (Less Than Significant Impact)**

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The project site contains soils with moderate to high expansive potential, due to the clay content. The proposed project would not, however, exacerbate the hazards of the existing expansive soils on-site, thus, the project would not result in geology and soil impacts as defined in CEQA. City of Fremont Conditions of Approval would be incorporated into the project to address the effects of existing expansive soils on the proposed project. **(Less than Significant Impact)**

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**Impact GEO-5: The project would not 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)**

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The proposed project would replace and reconstruct equipment and structures associated with the Curtner Road Booster station. Septic tanks or alternative wastewater disposal systems are not proposed by the project. Therefore, this threshold is not applicable. **(No Impact)**

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**Impact GEO-6: The project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature. (Less than Significant Impact with Mitigation Incorporated)**

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

**Mitigation Measures:** Consistent with the General Plan EIR, the proposed project would implement the following mitigation measures to reduce impacts to paleontological resources during project construction activities to a less than significant level.

**MM GEO-6.1:** 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. ACWD 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-6.1, potential impacts to unique paleontological resources would be reduced to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

## **4.8 GREENHOUSE GAS EMISSIONS**

### **4.8.1 Environmental Setting**

#### **4.8.1.1 *Background Information***

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<sub>2</sub> equivalents (CO<sub>2</sub>e). The most common GHGs are carbon dioxide (CO<sub>2</sub>) and water vapor but there are also several others, most importantly methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>). 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<sub>2</sub> and N<sub>2</sub>O are byproducts of fossil fuel combustion.
- N<sub>2</sub>O is associated with agricultural operations such as fertilization of crops.
- CH<sub>4</sub> 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<sub>6</sub> 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.

#### **4.8.1.2 *Regulatory Framework***

##### **State**

##### **Assembly Bill 32**

Under the California Global Warming Solutions Act, also known as AB 32, CARB established a statewide GHG emissions cap for 2020, adopted mandatory reporting rules for significant sources of GHGs, and adopted a comprehensive plan, known as the Climate Change Scoping Plan, identifying how emission reductions would be achieved from significant GHG sources.

In 2016, SB 32 was signed into law, amending the California Global Warming Solution Act. SB 32, and accompanying Executive Order B-30-15, require CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. CARB updated its Climate Change Scoping Plan in December of 2017 to express the 2030 statewide target in terms of million metric tons of CO<sub>2</sub>E (MMTCO<sub>2</sub>e). Based on the emissions reductions directed by SB 32, the annual 2030 statewide target emissions level for California is 260 MMTCO<sub>2</sub>e.

## **Regional and Local**

### 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 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 (CAP) 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.

#### **4.8.1.3      *Existing Conditions***

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.

### **Existing GHG Emissions from the Project Site**

The Curtner Road booster station currently contains five main pumps, each with a 75-horsepower motor. The main source of GHG emissions associated with the existing uses on-site is the electricity

use of the pump station. Additional emissions also result from vehicle trips associated with maintenance and operation of the pump station.

#### 4.8.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 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<sub>2</sub>e per year or 4.6 MT CO<sub>2</sub>e 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 two 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.



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**Impact GHG-1:** The project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. **(Less than Significant Impact)**

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The proposed project would rehabilitate the existing Curtner Road Booster Station to eliminate operational and maintenance issues with the station 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 trenching, grading, and paving. Construction equipment and trucks using diesel and other fuels would be the primary source of GHG emissions. These emissions would be temporary, and would not represent an on-going source of GHG emissions in the area. Implementation of MM AIR-3.1 would further reduce GHG emissions from construction activities.

The existing Curtner Road Booster Station operates on electrical power. The proposed project would result in the continued operation of the booster station, without any increase in capacity or electricity usage. 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. For these reasons, the proposed project would result in a less than significant impact due to generation of GHG emissions. **(Less than Significant Impact)**

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**Impact GHG-2:** The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. **(No Impact)**

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As described above in Impact GHG-1, the proposed project would not result in substantial GHG emissions during construction or operation phase. The proposed project would allow the continued operation of the existing Curtner Road Booster Station 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. **(No Impact)**

## **4.9 HAZARDS AND HAZARDOUS MATERIALS**

### **4.9.1 Environmental Setting**

#### **4.9.1.1 *Regulatory Framework***

##### **Overview**

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.<sup>27</sup>

#### 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.<sup>28</sup>

#### 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

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<sup>27</sup> United States Environmental Protection Agency. "Superfund: CERCLA Overview." Accessed November 13, 2020. <https://www.epa.gov/superfund/superfund-cercla-overview>.

<sup>28</sup> United States Environmental Protection Agency. "Summary of the Resource Conservation and Recovery Act." Accessed November 13, 2020. <https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act>.

substance release sites identified by the Department of Toxic Substances Control (DTSC) and State Water Resources Control Board (SWRCB).<sup>29</sup>

### 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

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 asbestos-containing materials (ACMs) are asphalt roofing shingles, vinyl floor tiles, and transite 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

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<sup>29</sup> California Environmental Protection Agency. "Cortese List Data Resources." Accessed November 17, 2020. <https://calepa.ca.gov/sitecleanup/corteselist/>.

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.<sup>30</sup> 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 2030 General Plan

The proposed project would be subject to the land use policies of the City of Fremont's General Plan, including the following:

City of Fremont 2030 Relevant Land Use Policies	
Policies	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.

#### 4.9.1.2 Existing Conditions

##### On-site Conditions

The project involves the rehabilitation of the existing Curtner Road Booster Station, and the installation of new accessory structures within the project site. The station is situated in a concrete vault constructed in 1972 to house the valve vault to control inflow and outflow from the Alameda Reservoir. Because of the age of the structure, there is the potential that it contains ACMs or lead-based paint (LBP).

<sup>30</sup> California Regional Water Quality Control Board. *San Francisco Bay Region Municipal Regional Stormwater NPDES Permit*. November 2015.

## Surrounding Conditions

The project area consists mainly of residential development and an open space corridor along Agua Fria Creek. There are no recorded hazardous material spill incidents in the site vicinity that would be likely to significantly impact soil, soil vapor, or groundwater beneath the site.<sup>31</sup>

## Wildfire Hazards

The project site is not located within a Fire Hazard Zone of local or state responsibility as mapped by CalFire.<sup>32</sup>

### 4.9.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) 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, result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<sup>31</sup> California Environmental Protection Agency. "Cortese List Data Resources." Accessed November 17, 2020. <https://calepa.ca.gov/sitecleanup/corteselist/>.

<sup>32</sup> CalFire. "Alameda County Very High Fire Hazard Severity Zones in SRA". Map. November 2007.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
7) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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**Impact HAZ-1: The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (Less Than Significant Impact)**

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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 rehabilitated pump station would 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. **(Less than Significant Impact)**

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**Impact HAZ-2: 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. (Less than Significant Impact with Mitigation Incorporated)**

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### **Asbestos-Containing Materials and Lead-Based Paint**

Due to the age of the existing structures on-site, building materials may 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 Occupational Safety and Health Administration (OSHA) regulations and any debris containing lead must be disposed appropriately. Demolition of the existing structures on-site could expose construction workers or occupants of adjacent residences to harmful levels of ACMs or lead.

**Mitigation Measures:** The proposed project would implement the following mitigation measures to reduce hazards from harmful levels of ACMs or lead to a less than significant level.

**MM HAZ-2.1:** The project would be required to implement the following measures to reduce impacts due to the presence of ACMs and/or 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 asbestos-containing materials (ACMs) and/or lead-based paint (LBP).
- During demolition activities, all building materials containing lead-based paint shall be removed in accordance with Cal/OSHA Lead in Title 8, California Code of Regulations (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 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 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 lead-based paint.
  - 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.
  - 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.

Implementation of MM HAZ-2.1 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. **(Less than Significant Impact with Mitigation Incorporated)**

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**Impact HAZ-3: The project would not 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)**

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The nearest school to the project site is James Leitch Elementary School, located approximately 0.75-miles southwest of the project site. In addition, as described above, the project would involve routine transport, use, and/or disposal of hazardous materials during construction and operation of the rehabilitated pump station, however, compliance with applicable federal, state, and local laws and regulations pertaining to the hazardous materials would ensure that the project would not result significant impacts within one-quarter mile of a school. **(Less than Significant Impact)**

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**Impact HAZ-4: The project would not 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, create a significant hazard to the public or the environment. (No Impact)**

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As stated in *Section 4.9.1.2 Existing Conditions*, the project site is not included on any list of hazardous material sites. 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. **(No Impact)**

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**Impact HAZ-5: The project would not be 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. The project would not result in a safety hazard or excessive noise for people residing or working in the project area. (No Impact)**

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The project site is located approximately ten miles from the nearest public airport, Norman Y. Mineta San José International Airport. The project site is not within any airport land use plan area. The proposed project would not result in a safety hazard for workers in the project area. **(No Impact)**

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**Impact HAZ-6: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (No Impact)**

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During construction, certain sections of the road would be temporarily impacted and may result in temporary traffic detours. While detours may be in place, emergency personnel would always have access throughout the project area. When completed, the project would allow for continued service through District's operations, and would have no impact on the implementation of any emergency response or evacuation plan. **(No Impact)**

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**Impact HAZ-7: The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. (No Impact)**

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As stated in *Section 4.9.1.2 Existing Conditions*, the project site is located in an urban, developed area of the City of Fremont, and is not located within a Fire Hazard Zone of local or state responsibility as mapped by CalFire. The project would, therefore, not expose people or structures to wildland fire risks. **(No Impact)**

## **4.10 HYDROLOGY AND WATER QUALITY**

### **4.10.1 Environmental Setting**

#### **4.10.1.1 *Regulatory Framework***

##### **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.<sup>33</sup> 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 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.

### 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 wasteload allocation in the Basin Plan by March 2030.<sup>34</sup> 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 ACFCWCD operates as the flood control agency for Alameda County. The District plans, designs, constructs, and maintains flood control projects such as natural creeks, channels, levees, pump stations, dams, and reservoirs.

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<sup>33</sup> MRP Number CAS612008

<sup>34</sup> San Francisco Bay Regional Water Quality Control Board. *Municipal Regional Stormwater Permit, Provision C.12*. November 19, 2015.

#### **4.10.1.2      *Existing Conditions***

##### **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**

The Niles Cone Groundwater Basin comprises the sub-basin of the Santa Clara Groundwater basin underlying much of the south east bay area, including the City of Fremont. The project site is located in an area of the Niles Cone Basin identified by the District as the Above Hayward Fault (AHF) basin, due to its location east, and at a higher elevation than, the coastal plain portion of the basin, west of the Hayward Fault. The AHF basin aquifer is a single layer from ground surface to bedrock, bounded on all sides with low permeability sediment and other low- or no-flow boundaries, including the Hayward Fault to the west.<sup>35</sup>

Groundwater levels may fluctuate due to variations in rainfall, underground drainage patterns, and other factors. According to the California Geological Survey (CGS), historical groundwater near the Curtner Road Booster Station is greater than 40 feet below ground surface (BGS). The project site is not located in a natural or groundwater recharge area. The natural channel of Agua Fria Creek, which intersects the project site, may interface with the aquifer, draining or recharging groundwater, depending on local conditions.

##### **Storm Drainage System**

The project site drains to the Agua Fria Creek, which flows through natural and engineered channels into Coyote Creek. The Coyote Creek watershed drains into the San Francisco Bay.

##### **Flooding Hazards**

The project site is located within Flood Zone X, which means it is outside a FEMA 100-year flood hazard area, according to the Flood Insurance Rate Map (FIRM) Panel No. 06001C0606G.<sup>36</sup> Due to the elevation of the site, and distance from confined bodies of water, it is not subject to sea level rise or seiche hazards. The project site is not located in an area that would be impacted by dam failure.

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<sup>35</sup> ACWD. "2020 Groundwater Monitoring Report." February 5, 2021.

<sup>36</sup> Federal Emergency Management Agency. Flood Insurance Rate Map. Community Panel No. 06001C0606G.

## 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.<sup>37</sup>

A mudflow is the rapid movement of a large mass of mud formed from loose soil and water. The project site and surrounding area are relatively flat. The project site is not susceptible to mudflows.

### 4.10.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3) 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:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
– result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
– substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
– create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
– impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<sup>37</sup> California Department of Conservation. “Alameda County Tsunami Inundation Quads”. Accessed March 10, 2021. <https://www.conservation.ca.gov/cgs/tsunami/maps/alameda>.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
4) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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**Impact HYD-1: The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. (Less than Significant Impact)**

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### Construction Period

The proposed project would involve the rehabilitation of the existing Curtner Road Booster Station, including the demolition of some existing structures and site improvements, and the construction and installation of improved site features. Construction would include ground disturbing activities, including grading, with 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. However, in order to prevent construction related water quality impacts, the project would implement Best Management Practices (BMPs) to prevent erosion and sedimentation, and to protect water quality during project construction. BMPs could include stormwater inlet protection, the use of fiber rolls, sandbags, and earthen berms to prevent runoff water from leaving the site, and hydroseeding of disturbed areas, among other measures. The implementation of BMPs would limit any construction related impacts to water quality to less than significant. **(Less than Significant Impact)**

### Operational Period

The proposed project would not create or replace 10,000 square feet or more of impervious surface area, and as a result, would not be required to comply with the LID requirements of Provision C.3 of the Municipal Regional Permit. In addition, the rehabilitated booster station 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 small overall size of the proposed project (less than one acre), and the similar nature of the operation of the rehabilitated booster station 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. **(Less than Significant Impact)**

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**Impact HYD-2:    The project would not 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)**

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The proposed project would not require groundwater extraction during construction or operation. The impervious surface area of the project site would be increased marginally over existing conditions. However, the project is not located in a designated groundwater recharge area. In addition, the project would rehabilitate a critical piece of the District's infrastructure, allowing for continued operation of water supply and management activities in the District's service area. For these reasons, the proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project would impede sustainable groundwater management of the Niles Cone Basin. **(Less than Significant Impact)**

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**Impact HYD-3:    The project would not 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 result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. (Less than Significant Impact)**

---

The project does not propose to alter the existing drainage pattern of the site or alter the course of a stream or river. Stormwater runoff from the project site would continue to drain to the Agua Fria Creek channel. The project would involve the construction of an additional concrete pad for the new electrical equipment. As a result, the impervious surface area of the site would be marginally increased. However, the project would disturb only a small portion (approximately 0.10-acre) of the 0.43-acre project site, and any increase in impervious surface area would not be substantial. In addition, the project would implement construction BMPs to prevent erosion and siltation during construction. The project would not impede or redirect flood flows. For these reasons, the proposed project would have a less than significant impact to site drainage, vicinity waterways, erosion, surface runoff quantity or quality, or flood flows. **(Less than Significant Impact)**

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**Impact HYD-4:    The project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. (No Impact)**

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As discussed above in *Section 4.10.1.2 Existing Conditions*, 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 Impact)**

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**Impact HYD-5: The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (Less than Significant Impact)**

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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 Curtner Road Booster Station. The proposed project would allow the continued operation of critical water supply infrastructure by the District, and is, as a result, consistent with the management and supply of groundwater by the District. For these reasons, the proposed project would not conflict with or obstruct implementation of water quality control plan or sustainable groundwater management plan. **(Less than Significant Impact)**

## **4.11 LAND USE AND PLANNING**

### **4.11.1 Environmental Setting**

#### **4.11.1.1 *Regulatory Framework***

##### **Regional and Local**

##### 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, including the following:

<b>City of Fremont 2030 Relevant Noise and Vibration Policies</b>	
<b>Policies</b>	<b>Description</b>
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 Open Space (OS) zoning district. The OS zoning district is intended to permit limited but reasonable use of open lands, while protecting the public health, safety and welfare from the dangers of seismic hazards and unstable soils; preserve the topography of the city that shapes it and gives it its identity; allow land to be used for agricultural production in its natural or as near natural state as possible; coordinate with and carry out regional, county, and city open space plans; and where permitted, encourage the clustering of dwelling units in order to preserve and enhance the remainder of open space lands as a limited and valuable resource.

#### **4.11.1.2 *Existing Conditions***

##### Project Site

The project site consists of the existing Curtner Road pump booster station operated by the District. This falls under the Public Facility designation of the City General Plan. This designation applies to City facilities, public schools, water and sanitary district facilities, transit agency facilities utilities and other federal, state, county, and local government facilities. Due to the project site's size of less than one acre, it is not identified as a Public Facility on the land use map of the General Plan.

##### Surrounding Land Use

The creek and surrounding open space adjacent to the project site is designated Resource Conservation and Public Open Space by the General Plan. This category includes open spaces owned

by public or quasi-public agencies other than the City, including the easements and rights of way owned by the District.

#### 4.11.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

---

**Impact LU-1:      The project would not physically divide an established community. (No Impact)**

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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 a quasi-public area of the City of Fremont, adjacent to existing residential development. The project would occupy approximately the same area as the current pump station, 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 Impact)**

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**Impact LU-2:      The project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. (No Impact)**

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The rehabilitation of the Curtner Road Booster Station would be consistent with the Public Facility designation of the project site under the City of Fremont's General Plan. The project would not conflict with the Open Space zoning district of the project site. The project would not result in a change to the existing land use or zoning designations for the project site. The project, therefore, would not conflict with applicable land use plans in the project area. **(No Impact)**

## 4.12 MINERAL RESOURCES

### 4.12.1 Environmental Setting

#### 4.12.1.1 *Regulatory Framework*

##### Surface Mining 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.

#### 4.12.1.2 *Existing Conditions*

The project site is located in a developed area in the City of Fremont. The site is currently occupied by Alameda County Water District facilities and infrastructure, and surrounded by single-family residential uses. There are no known mineral resources on-site, and the site is not a designated mineral resource recovery area of any kind.

### 4.12.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<hr/>				
<b>Impact MIN-1:</b>	<b>The project would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. (No Impact)</b>			

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. **(No Impact)**

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**Impact MIN-2:     The project would not 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)**

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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. **(No Impact)**



## 4.13 NOISE

The following discussion is based on a Noise and Vibration Assessment completed for the project by *Illingworth & Rodkin, Inc.*, in December 2020. This report is included as Appendix C of this document.

### 4.13.1 Environmental Setting

#### 4.13.1.1 *Background Information*

##### **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.<sup>38</sup> 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.

#### 4.13.1.2 *Regulatory Framework*

##### **Local**

##### City of Fremont 2030 General Plan

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<sup>38</sup>  $L_{eq}$  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  $L_{eq}$ .

The proposed project would be subject to the noise and vibration policies of the City of Fremont's General Plan, including the following:

<b>City of Fremont 2030 Relevant Noise and Vibration Policies</b>	
<b>Policies</b>	<b>Description</b>
Policy 10-8.3	<p>Protect existing residential neighborhoods from noise. In general, the City will require evaluation of mitigation measures for projects under the following circumstances:</p> <ol style="list-style-type: none"> <li>1. The project would cause the <math>L_{dn}</math> to increase by 5 dB(A) or more but would remain below 60 dB(A), or;</li> <li>2. The project would cause the <math>L_{dn}</math> to increase by 3 dB(A) or more and exceed 60 dB(A), or;</li> <li>3. The project has the potential to generate significant adverse community response due to the unusual character of the noise.</li> </ol>
Policy 10-8.5	<p>Control construction noise at its source to maintain existing noise levels, and in no case to exceed the acceptable noise levels.</p> <p><b>Implementation 10-8.5.B: Construction Noise Mitigation</b></p> <ul style="list-style-type: none"> <li>• 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.</li> </ul>

#### 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 and City-recognized holidays.

**Chapter 18.218.050 Standard Development Requirements.** (d) 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.

#### 4.13.1.3 *Existing Conditions*

The project area is located on Curtner Road (between Klamath Street and Paseo Padre Parkway). The project site is located approximately 500 feet north of the intersection of Curtner Road and East Warren Avenue in the City of Fremont. The project area consists of residential land uses and open space associated with the Agua Fria Creek riparian corridor. 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 across Curtner Road to the northeast, approximately 70 feet from the project site. The project would not introduce any new sensitive receptors to the project area.

#### 4.13.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
1) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
2) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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**Impact NOI-1:     The project would not result in 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. (Less than Significant Impact with Mitigation Incorporated)**

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### Construction Noise

Proposed construction activities would consist of demolition of existing portions of the booster station, regrading of the site area, and construction of new electrical equipment pads and site access infrastructure including curbs, ramps, and the booster station top slab. The construction of the project could 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 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 seen in Table 4.13-1, 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.). As this project is small in scale and would require fewer individual pieces of construction equipment operating simultaneously than what is typical, the lower range of noise levels for public works projects from Table 4.13-1, assuming minimum equipment present at the site, will be 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 five (5) to 10 dBA noise reduction at distant receptors.

Table 4.13-1: Typical Ranges of Construction Noise Levels at 50 Feet, Leq (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
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 multiple phases. All demolition and grading work would take place during the first phase. Mechanical improvements would be installed and the station would be temporarily sealed in the second phase. During the final phase, the temporary seal would be removed and replaced with the permanent structure. While construction is anticipated to occur over a period of approximately one year, there will be substantial periods of inactivity where no construction is taking place and therefore the construction duration for the purpose of this analysis will not exceed one year.

Noise-sensitive receptors near the site include single-family residences, with property lines located as close as about 50 feet from the station. At this distance, noise levels would reach 75 to 84 dBA Leq 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 Leq at residences located within approximately 750 feet of the project site.

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, are necessary to protect the health and safety of persons, promote the general welfare of the community, and maintain the quality of life. Construction activities associated with the proposed project will 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. While project construction would not occur over a period of greater than one year, 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. (Significant Impact)~~

**Mitigation Measures:** The following mitigation measures 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 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 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, 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. (Ord. 27-2016 § 37, 12-6-16; Ord. 23-2018 § 41, 10-2-18.)
- Construct temporary noise barriers which block the line of sight between the project and the nearest residential land uses. Acceptable temporary

barriers include Sound Seal STC-27 to 37 Sound Curtains, Environmental Noise Control STC-25 Acoustical Barrier/Absorber Blankets, Pacific Sound Control STC-33 Noise Soaker Acoustical Barriers, or equivalent. This type of barrier may be set up on a supporting structure, such as a cyclone-type fence or on guy-wire strung between temporary supports.

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. **(Less than Significant Impact with Mitigation Incorporated)**

### **Operational Noise**

The proposed project would result in the rehabilitation of the existing Curtner Road Booster Station. Rehabilitation would not change the capacity nor the operations of the Curtner Road Booster Station. The existing five pumps and two sump pumps would be demolished and replaced with four new vertical turbine style pumps and two new sump pumps. Following installation, all pump equipment would be located underground and would not be expected to generate audible noise at any nearby sensitive receptors.

A new ventilation system would be installed with two fans, one for intake and one for exhaust. The existing station currently only has one intake fan, and therefore some noise increase is expected from the installation of a second fan. Project plans indicate the fans would be facing the southeast and southwest and at approximately five feet below ground level. The fans would not be oriented towards the nearest residence to the northeast. Selected fans are expected to generate noise levels at a distance of 5 feet of 58 and 53 dBA, respectively. The nearest residential property line to the southeast or southwest is located approximately 150 feet away. At this distance and without consideration of additional noise reduction provided by terrain, noise from the fans would be expected to reach about 30 dBA at the nearest residential property line. The new switchboard and motor control center would be installed on the eastern side of the property and would not be anticipated to generate substantial noise. Operational noise associated with the project would not exceed any General Plan or Municipal Code standards at any nearby residences. **(Less than Significant Impact)**

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<b>Impact NOI-2:</b>	<b>The project would not result in generation of excessive groundborne vibration or groundborne noise levels. (Less than Significant Impact)</b>
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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, grading, installation of equipment, and installation of the permanent pump station structure. While a list of construction equipment was not available for the proposed project, pile driving equipment, which can cause excessive vibration, is not expected to be required for the proposed project.

For structural damage, the California Department of Transportation recommends a vibration limit of 0.5 in/sec PPV for buildings structurally sound and designed to modern engineering standards, which typically consist of buildings constructed since the 1990s. A conservative vibration limit of 0.2 in/sec



PPV has been used for buildings that are found to be structurally sound but where structural damage is a major concern. For historical buildings or buildings that are documented to be structurally weakened, a conservative limit of 0.08 in/sec PPV is often used to provide the highest level of protection. No historical buildings or buildings that are documented to be structurally weakened adjoin the project site. For the purposes of this study, therefore, groundborne vibration levels exceeding the conservative 0.2 in/sec PPV limit would have the potential to result in a significant vibration impact.

The nearest structure to the site is a single-family residence across Curtner Road to the northeast, approximately 70 feet from the project site. 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. **(Less than Significant Impact)**

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<b>Impact NOI-3:</b>	<b>The project would not be 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. The project would not expose people residing or working in the project area to excessive noise levels. (No Impact)</b>
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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 Booster Station rehabilitation project would not introduce sensitive receptors to the project area. Furthermore, the project area is located outside the 65 dBA CNEL noise contour line for aircraft activities at Norman Y. Mineta San José International Airport (i.e., the nearest airport). For these reasons, the proposed project would not expose people to excessive noise levels from airport operations. The proposed project is not located within the vicinity of a private airstrip and would not introduce sensitive receptors into the project area. **(No Impact)**

## **4.14 POPULATION AND HOUSING**

### **4.14.1 Environmental Setting**

#### **4.14.1.1 *Regulatory Framework***

##### **State**

##### **Housing-Element Law**

State requirements mandating that housing be included as an element of each jurisdiction's general plan is 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.<sup>39</sup> 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 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 residential and commercial neighborhoods near transit, particularly within identified Priority Development Areas (PDAs).<sup>40</sup>

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, 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).

#### **4.14.1.2 *Existing Conditions***

The population of Fremont was estimated to be approximately 234,220 in May 2020 with an average of three persons per household. The County of Alameda's population was estimated to be 1,670, 834 as of January 1, 2020.<sup>41</sup> Housing is located north of the project site on Curtner Road. The project site is currently developed with a booster pump station, and there are no residents on-site.

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<sup>39</sup> California Department of Housing and Community Development. "Regional Housing Needs Allocation and Housing Elements" Accessed November 17, 2020. <http://hcd.ca.gov/community-development/housing-element/index.shtml>.

<sup>40</sup> Association of Bay Area Governments and Metropolitan Transportation Commission. "Project Mapper." <http://projectmapper.planbayarea.org/>. Accessed November 17, 2020.

<sup>41</sup> State of California – Department of Finance. E-1 "Population Estimates for Cities, Counties, and the State — January 1, 2019 and 2020". May 2020. <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-1/>.

#### 4.14.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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**Impact POP-1:     The project would not 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)**

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The proposed project would rehabilitate the existing Curtner Road Booster Station to provide the continued performance and reliability needed to meet the needs of a designated critical facility. 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 booster station rehabilitation project would serve existing and planned development within the urban envelope of Fremont. **(No Impact)**

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**Impact POP-2:     The project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. (No Impact)**

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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 Impact)**

## **4.15 PUBLIC SERVICES**

### **4.15.1 Environmental Setting**

#### **4.15.1.1 *Regulatory Framework***

##### **Regional and Local**

##### **Countywide Trails Master Plan**

The Santa Clara County Trails Master Plan Update is a regional trails plan approved by the Santa Clara County Board of Supervisors. It provides a framework for implementing the County's vision of providing a contiguous trail network that connects cities to one another, cities to the county's regional open space resources, County parks to other County parks, and the northern and southern urbanized regions of the County. The plan identifies regional trail routes, sub-regional trail routes, connector trail routes, and historic trails.

#### **4.15.1.2 *Existing Conditions***

##### **Fire Protection Services**

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 2019, FFD responded to 495 fire incidents, 10,543 medical emergencies and 249 incidents involving hazardous materials.<sup>42</sup> The nearest fire station to the project site is Fire Station 5, located approximately one mile southeast of the project site at 55 Hackamore Lane.

##### **Police Protection Services**

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.<sup>43</sup> FPD divides the City of Fremont into three zones for patrol services. The project site is located in Zone 3. Officers patrolling the area are dispatched from police headquarters, located at 2000 Stevenson Boulevard, approximately 4.5 miles north of the project site.

##### **Schools**

The nearest school to the project site is James Leitch Elementary School, located approximately 0.75-miles southwest of the project site.

##### **Parks and Open Space**

The nearest parks to the project site are Mission Peak Regional Preserve, located approximately 0.6-miles northeast of the project site, Rancho Higuera Historical Park, located approximately 0.6-miles southeast of the project site, and Warm Springs Community Park, located approximately 0.8-miles

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<sup>42</sup> Fremont Fire Department. "FY 2020-2025 Fremont Fire Department Strategic Plan". Accessed November March 23, 2021. <http://fremontcityca.igm2.com/Citizens/FileOpen.aspx?Type=1&ID=1552&Inline=True>.

<sup>43</sup> Fremont Police Department. *Fremont Police Department Table of Organization FY 2020-21*. Accessed November 17, 2020. Available at: <https://www.fremontpolice.gov/Home/ShowDocument?id=2>

southwest of the project site. The project site is within an Open Space zoning district of the City of Fremont, north adjacent to the riparian corridor of Agua Fria Creek.

#### 4.15.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
1) Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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**Impact PS-1:**      **The project would not 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 fire protection services. (No Impact)**

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The project proposes the rehabilitation of the existing District's Curtner Road Booster Station in order to meet the needs of a designated critical facility. The proposed project would not cause an increase in public service needs. The proposed project does not require a full road closure but temporary lane closures along Curtner Road are anticipated during the construction phase of the project that may result in traffic detours. While detours may be in place, emergency personnel would always have access throughout the project area. 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 (**No Impact**)
- Police Protection (**No Impact**)
- Schools (**No Impact**)
- Parks (**No Impact**)
- Other Public Facilities (**No Impact**)

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<b>Impact PS-2:</b>	<b>The project would not 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 police protection services. (No Impact)</b>
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See Response to Impact PS-1. (No Impact)

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<b>Impact PS-3:</b>	<b>The project would not 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 schools. (No Impact)</b>
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See Impact PS-1. (No Impact)

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<b>Impact PS-4:</b>	<b>The project would not 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 parks. (No Impact)</b>
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See Impact PS-1. (No Impact)

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<b>Impact PS-5:</b>	<b>The project would not 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 other public facilities. (No Impact)</b>
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See Impact PS-1. (No Impact)

## 4.16 RECREATION

### 4.16.1 Environmental Setting

#### 4.16.1.1 *Existing Conditions*

The nearest parks to the project site are Mission Peak Regional Preserve, located approximately 0.6-miles northeast of the project site, Rancho Higuera Historical Park, located approximately 0.6-miles southeast of the project site, and Warm Springs Community Park, located approximately 0.8-miles southwest of the project site. The project site is within an Open Space district of the City of Fremont, north adjacent to the riparian corridor of Agua Fria Creek.

#### 4.16.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
1) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

---

**Impact REC-1: The project would not 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)**

---

As described in Section 4.15 *Public Services* under Impact PS-1, the project would not result in increased demands on any public services provided within the City. The booster station facility 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 constructed, the booster station would be located within the footprint of the existing station 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. **(No Impact)**

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**Impact REC-2: The project does not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. (No Impact)**

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The proposed project does not include recreational facilities and would not require the construction or expansion of recreational facilities. 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. **(No Impact)**



## **4.17           TRANSPORTATION**

### **4.17.1        Environmental Setting**

#### **4.17.1.1     *Regulatory Framework***

##### **State**

##### **Regional Transportation Plan**

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 a Regional Transportation Plan to guide regional transportation investment for revenues from federal, state, regional and local sources through 2040.

##### **Senate Bill 743**

SB 743 establishes criteria for determining the significance of transportation impacts using a vehicle miles traveled (VMT) metric intended to promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses. Specifically, SB 743 requires analysis of VMT in determining the significance of transportation impacts. Local jurisdictions were required by Governor's Office of Planning and Research (OPR) to implement a VMT policy by July 1, 2020.

#### **4.17.1.2     *Existing Conditions***

##### **Roadway Network**

Regional access to the project site is provided via I-680. Direct access to the site is provided via Curtner Road, Klamath Street, and E. Warren Avenue. These facilities are described below.

*Curtner Road* is a paved local street with one traffic lane in each eastbound and westbound direction between Mission Boulevard and E. Warren Avenue.

*E Warren Avenue*, which becomes Paseo Padre Parkway at its intersection with Curtner Road to the east of the project site, provides connectivity to regional roadways including I-680, I-880, Mission Boulevard, and Warm Springs Boulevard. In the City of Fremont General Plan, E Warren Avenue is classified as a Parkway to the east of its intersection with Navajo Road, and as an Arterial to the west of the intersection.

*Klamath Street* is a local street with one traffic lane in each direction. This street runs from Curtner Road and Paseo Padre Parkway.

## Pedestrian Facilities

E. Warren Ave has sidewalks on both sides in addition to highly-visible pedestrian crosswalks. Klamath Street has paved sidewalks on both sides of the road.

## Bicycle facilities

Class II (signed and striped) bicycle lanes are provided on E Warren Avenue, which connect to other nearby Class II facilities on Warm Springs Boulevard and Paseo Padre Parkway. The City of Fremont's Bicycle and Pedestrian Master Plan proposes several bikeway improvements in the vicinity of the project site, including providing a separated bikeway along E Warren Avenue and creating a Class I bicycle path that connects nearby parks including Warm Springs Community Park, Booster Park, Lone Tree Creek Park, and Plomosa Park. These projects are not designated as Priority Projects under the Bicycle Master Plan, and a timeframe for their completion is not known at this time.

### 4.17.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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**Impact TRN-1: The project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities. (Less than Significant Impact)**

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The proposed project may require temporary lane closures during construction of the proposed project which could extend beyond the site as needed for construction staging. Temporary lane closures may increase congestion on these streets during peak travel times. Construction vehicles traveling to and from the project area may also cause a slight increase in traffic volumes during the overall construction period. Any potential lane and driveway closures would be coordinated with the Cities of Fremont and the area residents and businesses to provide proper access. Therefore, impacts during construction would be less than significant.

Once constructed, the rehabilitated pump station and accessory structures would be located within the existing footprint of the existing pump station and would not impede or obstruct traffic on Curtner Road. As under current operating conditions, the pump station would require routine maintenance and repair in emergency situations. However, periodic maintenance and repair would not substantially increase traffic generation. 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. **(Less than Significant Impact)**

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**Impact TRN-2: The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). (No Impact)**

---

The project proposes the rehabilitation including the replacement of existing pumps, electrical equipment, and site improvements to the existing booster station. Implementation of the project would not increase the capacity nor change the operations of the booster station. 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)**

---

**Impact TRN-3: The 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 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 booster station. 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 Impact)**

---

**Impact TRN-4: The project would not result in inadequate emergency access. (Less than Significant Impact)**

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The proposed project does not propose any full road closure but temporary lane closures on Curtner Road are anticipated during construction phase; however, as listed in Impact TRN-1, any potential lane and driveway closures would be coordinated with the City of Fremont to ensure adequate emergency access is maintained throughout construction within public rights-of-way. Once completed, emergency access would not be affected. Therefore, impacts to emergency access would be less than significant. **(Less than Significant Impact)**

## **4.18 TRIBAL CULTURAL RESOURCES**

### **4.18.1 Environmental Setting**

#### **4.18.1.1 *Regulatory Framework***

##### **State**

##### **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.

#### **4.18.1.2 *Existing Conditions***

The project site is developed within the existing Curtner Road Booster Station. Native American consultation was initiated for the project on February 2, 2021. On 17 February 2021, the NAHC responded that a search of their Sacred Land Files (SLF) did not indicate any known resources.

No tribes have contacted the District requesting notification of projects under AB 52.

### **4.18.2 Impact Discussion**

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 1) 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)?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2) 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. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

---

**Impact TCR-1:** The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is 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). **(Less than Significant Impact with Mitigation Incorporated)**

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As discussed in *Section 4.18.1.2 Existing Conditions*, the proposed project is not known to contain any tribal cultural resources, however, there is the possibility that tribal cultural resources could be uncovered during project construction. As described in Impact CUL-2 in *Section 4.5, Cultural Resources*, the project would implement MM CUL-2.1 and MM CUL-2.2 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. Therefore, the proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed on local or state registers. **(Less than Significant Impact with Mitigation Incorporated)**

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**Impact TCR-2:** The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is 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. **(Less than Significant Impact)**

---

See Response to TCR-1. **(Less than Significant Impact)**

## **4.19 UTILITIES AND SERVICE SYSTEMS**

### **4.19.1 Environmental Setting**

#### **4.19.1.1 *Regulatory Framework***

##### **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 annually 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 in June 2016.<sup>44</sup> The District has published a draft of the 2020 UWMP for public review.<sup>45</sup> The deadline for adoption of the 2020 UWMP is July 2021<sup>46</sup>

##### 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.

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<sup>44</sup> Alameda County Water District. *Urban Water Management Plan 2015-2020*. Available at: <https://www.acwd.org/365/Urban-Water-Management-Plan>.

<sup>45</sup> Alameda County Water District. "Urban Water Management Plan." Accessed April 29, 2021. <https://www.acwd.org/365/Urban-Water-Management-Plan>

<sup>46</sup> California Department of Water Resources. "Urban Water Management Plans." Accessed April 29, 2021. <https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans#:~:text=July%201%2C%202021%20%2D%20Due%20date,submit%20their%20UWMPs%20to%20DWR>.

## California Green Building Standards Code

In January 2010, the State of California adopted the California Green Building Standards Code, establishing mandatory green building standards for all buildings in California. 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, as well as more rigorous voluntary guidelines, 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 50 percent of nonhazardous construction and demolition debris; and

Providing readily accessible areas for recycling by occupants.

### **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, including the following:

<b>City of Fremont 2030 Relevant Utilities Policies</b>	
<b>Policies</b>	<b>Description</b>
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.

#### **4.19.1.2      *Existing Conditions***

##### 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 customers, 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 2014-2015.<sup>47</sup> The project site is one of the 14 operating booster stations which transport water to upper pressure zones in order to supply customer demands.

#### Stormwater

The Alameda County Flood Control and Water Conservation District (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.

#### Electricity Services

Electricity is provided to the site by PG&E. The booster station is served by an existing transformer located approximately 40 feet northeast of the station. Electric lines serving the site are located below ground.

### **4.19.2      Impact Discussion**

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5) Be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<sup>47</sup> Alameda County Water District. *Urban Water Management Plan 2015-2020*. Available at: <https://www.acwd.org/365/Urban-Water-Management-Plan>.



---

**Impact UTL-1:**     **The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. (No Impact)**

---

The project would upgrade the existing Curtner Road Booster Station, including replacement of pumps, electrical equipment, and site improvement to allow for safe and reliable worker access to the site and on-site equipment. The project will not increase the capacity of the station, nor will 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 no impact due to construction of new or expanded utility or service system facilities. **(No Impact)**

---

**Impact UTL-2:**     **The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. (No Impact)**

---

The project would improve the function and efficiency of the existing District's water supply system 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 increment of potable water demand by the construction workers would not be significant to require new or expanded water supply resources or entitlements. As a result, this criterion is not applicable to the proposed project because no impacts on existing water supplies would occur, and no mitigation measures would be required. **(No Impact)**

---

**Impact UTL-3:**     **The project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (No Impact)**

---

See response to Impact UTL-1. **(No Impact)**

---

**Impact UTL-4:**     **The project would not 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 project would not generate any solid waste during operation. Solid waste resulting from construction and demolition activities will be hauled off-site and would comply with all applicable standards for solid waste management or impair the attainment of solid waste reduction goals.. **(Less than Significant Impact)**

---

**Impact UTL-5:     The project would not be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste. (No Impact)**

---

As described above, under Impact UTL-4, the proposed project would not generate solid waste in excess of any local or state standards. **(No Impact)**

## 4.20 WILDFIRE

### 4.20.1 Environmental Setting

#### 4.20.1.1 *Existing Conditions*

The California Department of Forestry and Fire Hazard Protection 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, the project site is not located within a FHSZ area.<sup>48</sup>

### 4.20.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
1) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; therefore, the project would not result in wildfire impacts. **(No Impact)**

<sup>48</sup> CalFire. "Wildland Hazard & Building Codes". Accessed November 20, 2020. <http://egis.fire.ca.gov/FHSZ/>.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
1) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

---

**Impact MFS-1:**    **The project does not 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)**

---

The project would not result in significant impacts to aesthetics, agricultural and forestry resources, greenhouse gas emissions, land use, mineral resources, noise, population and housing, public services, recreation, transportation, and utilities and service systems.

With the implementation of the mitigation measures described in the air quality, biology, cultural, geology, hazards and hazardous materials sections of this Initial Study, the proposed project would not result in significant adverse environmental impacts. **(Less Than Significant Impact with Mitigation Incorporated)**

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**Impact MFS-2:     The project does not have impacts that are individually limited, but cumulatively considerable. (Less than Significant Cumulative Impact with Mitigation Incorporated)**

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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.”

According to the City of Fremont’s website, there are no pending or approved projects occurring in the vicinity of the project site. The nearest development project is located approximately one mile away. The only cumulative project relevant for this discussion is the Alameda Reservoir Roof Replacement project that the District is undertaking at Alameda Reservoir, approximately 240 feet southeast of the project site. The Alameda Reservoir Roof Replacement project involves improvements to the existing reservoir structure for seismic safety. Improvements include replacement of the existing reservoir roof and roof monitoring station with a new roof and powered ventilation system, replacement and installation of new timber beams and concrete piers, removal and infilling of perimeter windows, and replacement of the existing drain valve. No changes to the footprint or capacity of the reservoir are proposed and construction is expected to begin late 2022 and end in mid-2023.

The project would not impact agricultural, forestry, or mineral resources, land use, population and housing, recreational facilities, or wildfire. Therefore, the project would not contribute to cumulative impacts to these resources.

The project would upgrade the existing Curtner Road Booster Station, including replacement of pumps, electrical equipment, and site improvement to allow for safe and reliable worker access to the site and on-site equipment. After project completion, existing conditions in the project area would remain unchanged, except for the removal of trees. Any tree removal would be completed in accordance with the City of Fremont tree removal guidelines and, therefore, would not contribute to a cumulative impact. As discussed throughout this Initial Study, the project’s operational aesthetics, air quality, biological resources, cultural resources, energy, geology, greenhouse gas, hazards, hydrology and water quality, noise, transportation, tribal cultural resources, utilities, wildfire impacts are incremental and would be less than significant with implementation of mitigation measures. For this reason, the project would have a less than significant cumulative impact with regard to these resources.

The potential environmental impacts from the proposed project are primarily limited to the construction period. Construction of the proposed project would result in temporary air quality, biological resources, cultural resources, geology, greenhouse gas, hazards, hydrology and water quality, noise, transportation, and tribal cultural resources impacts.

As discussed in Sections 4.4, 4.5, 4.7, 4.8, 4.9, and 4.18, the project would be required to implement mitigation measures to reduce impacts to biological resources, cultural resources, geology and soils, hazards, hydrology and water quality, and tribal cultural resources to a less than significant level. Therefore, the proposed project would not contribute to cumulative impacts upon these resources.

By their very nature, air pollution, greenhouse gas emissions, and energy, are largely cumulative resources. The project-level thresholds identified by BAAQMD (which the project's impacts were compared to in Section 4.3, Air Quality) are the basis for determining whether a project's individual impact is cumulatively considerable. As discussed in Sections 4.3, 4.6, and 4.8, the project would have a less than significant impact on air quality, energy, and greenhouse gas. For this reason, the project would not make a cumulatively considerable contribution to a significant air quality, energy, or greenhouse gas impact.

As discussed in Section 4.13 Noise, construction of the proposed project would result in temporary noise and vibration impacts during construction. However, the project would implement mitigation measures and comply with the adopted City of Fremont's Construction Noise policies to reduce the project's temporary construction noise impacts to a less than significant level. Cumulative projects, including the Alameda Reservoir Roof Replacement Project, 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 cumulative construction noise impacts.

As discussed in Section 4.17, Transportation, the proposed project may result in increased vehicles on area roadways and require temporary lane closures during construction, potentially increasing congestion on area roadways during peak travel times. However, any potential lane and driveway closures would be coordinated with the Cities of Fremont and the area residents and businesses to provide proper access. For this reason, the proposed project would not result in a cumulatively considerable contribution to a cumulative transportation impact. **(Less Than Significant Cumulative Impact with Mitigation Incorporated)**

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**Impact MFS-3:     The project does not have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly. (Less than Significant Impact with Mitigation Incorporated)**

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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 the Air Quality (Section 4.3) and Noise (Section 4.13) sections of the report, would avoid significant impacts. No other direct or indirect adverse effects on human beings have been identified. **(Less than Significant Impact with Mitigation Incorporated)**



## SECTION 5.0 REFERENCES

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The analysis in this Initial Study is based on the professional judgement and expertise of the environmental specialists preparing this document, based upon review of the site, surrounding conditions, site plans, and the following references:

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## **SECTION 6.0      LEAD AGENCY AND CONSULTANTS**

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### **6.1              LEAD AGENCY**

#### **Alameda County Water District**

Calos Sempere, Project Manager

### **6.2              CONSULTANTS**

#### **David J. Powers & Associates, Inc.**

##### ***Environmental Consultants and Planners***

Akoni Danielsen, Principal Project Manager

Pooja Nagrath, Project Manager

Ryan Osako, Graphic Artist

#### **Holman & Associates**

##### ***Archaeological Consultants***

Sunshine Psota, Senior Associate

#### **Illingworth & Rodkin, Inc.**

##### ***Acoustic and Air Quality Consultants***

James A. Reyff, Principal

Steve Deines, Consultant

#### **WRA, Inc.**

##### ***Biology Consultants***

Gregory Sproull, Project Manager



## SECTION 7.0      ACRONYMS AND ABBREVIATIONS

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AIA	Airport Influence Area
BAAQMD	Bay Area Air Quality Management District
Btu	British Thermal Unit
CalEPA	California Environmental Protection Agency
CalFire	California Department of Forestry and Fire Protection
CalGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CGS	California Geological Survey
CH <sub>4</sub>	Methane
CRHR	California Register of Historical Resources
District	Alameda County Water District
DOT	United States Department of Transportation
DPM	Diesel Particulate Matter
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
FFD	Fremont Fire Department
FMMP	Farmland Mapping and Monitoring Program
FPD	Fremont Police Department

GHGs	Greenhouse Gases
MBTA	Migratory Bird Treaty Act
MCC	Motor Control Center
MLD	Most Likely Descendant
MMTCO <sub>2</sub> e	Million Metro Tons of Carbon Dioxide Equivalent
MND	Mitigated Negative Declaration
MTC	Metropolitan Transportation Commission
N <sub>2</sub> O	Nitrous Oxide
NAHC	Native American Heritage Commission
NOD	Notice of Determination
NOI	Notice of Intent
NO <sub>x</sub>	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
PG&E	Pacific Gas and Electric Company
PM	Particulate Matter
PM <sub>2.5</sub>	Fine Particulate Matter
PPV	Peak Particle Velocity
RCRA	Resource Conservation and Recovery Act
RHNA	Regional Housing Needs Allocation
RPS	Renewables Portfolio Standard
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SF <sub>6</sub>	Sulfur Hexafluoride

SHMA	Seismic Hazards Mapping Act
SLF	Sacred Land Files
SMARA	Surface Mining and Reclamation Act
SR	State Route
TACs	Toxic Air Contaminants
TCRs	Tribal Cultural Resources
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
UWMP	Urban Water Management Plan
VMT	Vehicle Miles Traveled



# APPENDIX A

## Air Quality Assessment





# ***CURTNER ROAD BOOSTER STATION IMPROVEMENTS AIR QUALITY ASSESSMENT***

***Fremont, California***

**November 30, 2020**

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**Prepared by:**

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**I&R Job No.: 20-007**

## **Introduction**

This report addresses air quality impacts associated with planned improvements to the Curtner Road Booster Station for the Alameda County Water District (ACWD) in Fremont, California. The ACWD proposes a full booster station rehabilitation including the replacement of pumps, electrical equipment, and civil site improvements to provide safe and reliable worker access to the site and equipment. The project will not increase the capacity nor change the operations of the booster station. The purpose of this report is to address the construction air quality emissions and the construction community health risks associated with the proposed improvements. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).<sup>1</sup>

## **Project Description**

The Curtner Road Booster Station pumps water from Zone 1 into Zone 3. Water is supplied from Zone 1 by a connection to the transmission pipeline that connects the Alameda Reservoir to the Zone 1 distribution system. The Curtner Road Booster Station is relatively close to the Alameda Reservoir, and the static pressure in the transmission line at the booster station location is much lower than Zone 3; therefore, the station serves to provide the needed pressure boost to overcome the static pressure differential and the additional pressure needed to move water through the Zone 3 distribution system and into the Hidden Valley Tank which serves as the local storage for Zone 3. The booster station structure, which houses five 75-horsepower pumps and two sump pumps, is approximately 12-feet wide by 12-feet long, and approximately 37-feet deep. Access to the station is a steep driveway off of Curtner Road.

Due to recent changes to system operations, the station is now considered a critical facility and ACWD needs to perform a complete rehabilitation of the station. The purpose of this project is to eliminate operational and maintenance issues with the station while simultaneously providing the performance and reliability needed to meet the needs of a designated critical facility.

ACWD proposes a full station rehabilitation including the replacement of pumps, electrical equipment, and civil site improvements to provide safe and reliable worker access to the site and equipment. Civil Site Improvements include the necessary grading, paving, retaining walls, and other needed improvements to support the electrical and mechanical improvements of the station. The existing driveway, curb and landing ramp along with the top slab of the pumping station would be demolished and replaced. Some demolition of the pump station would be done to accommodate new mechanical and electrical equipment. The existing pumps in the station will all be demolished and replaced to meet the existing flows of the booster station. Four new vertical turbine style pumps will be installed to meet the same demand to the system. Two new sump pumps will also be installed to match the existing capacity of the sump pumps.

Construction will occur in multiple phases, beginning in the first summer where all demolition work and grading will take place. During the winter phase, all mechanical improvements will be installed, and the station will be temporarily sealed. During the final summer phase, the temporary

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<sup>1</sup> Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017.

seal will be removed and replaced with the permanent structure and the high-level overflow system will be installed.

Earthwork will primarily consist of some fill to decrease the slope of the approach and accommodate the installation of the electrical panels. Some excavation will be required to install the overflow pipe. The maximum excavation depth would be approximately 12 feet. The total area of disturbance is approximately 2,000 square feet (sf).

### Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 *CEQA Air Quality Guidelines*. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the *CEQA Air Quality Guidelines* in 2017 to include the latest significance thresholds that were used in this analysis are summarized in Table 1.

**Table 1. BAAQMD Air Quality Significance Thresholds**

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO <sub>x</sub>	54	54	10
PM <sub>10</sub>	82 (Exhaust)	82	15
PM <sub>2.5</sub>	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards	Single Sources Within 1,000-foot Zone of Influence	Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)	
Excess Cancer Risk	>10.0 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual PM <sub>2.5</sub>	>0.3 µg/m <sup>3</sup>	>0.8 µg/m <sup>3</sup>	
Note: ROG = reactive organic gases, NO <sub>x</sub> = nitrogen oxides, PM <sub>10</sub> = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, PM <sub>2.5</sub> = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less.			

## Construction Air Quality Impacts

The Bay Area is considered a non-attainment area for ground-level ozone and PM<sub>2.5</sub> under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM<sub>10</sub> under the California Clean Air Act, but not the federal act. The area has attained both State and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and PM<sub>10</sub>, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for ozone precursor pollutants (ROG and NO<sub>x</sub>), PM<sub>10</sub>, and PM<sub>2.5</sub> apply to both construction period and operational period impacts.

### Construction Period Emissions

Construction activity is anticipated to include demolition, grading, trenching, building construction, and paving. The closest sensitive receptors are the single-family residences across Curtner Road and those on Windmill Drive that back up to the site. Construction period emissions were modeled using the California Emissions Estimator Model, Version 2016.3.2 (CalEEMod). The anticipated construction schedule and equipment usage assumptions were based on CalEEMod defaults for a project of this type and size. The proposed project land uses were input into CalEEMod, which included 1,000 square feet (sf) entered as “General Heavy Industry” on 0.1 acres. In addition, 500 sf of demolition debris were entered into the model. Construction period emissions were modeled using the anticipated project construction activity that were based on a CalEEMod default construction schedule, equipment quantities, and vehicle activity assumptions. Since CalEEMod did not apply trip for building construction phase, it was assumed that there would be, on average, 10 worker and 4 vendor trips per day during. There would also be 10 deliveries of concrete and 10 deliveries of asphalt (40 total trips).

A conservative modeling assessment was conducted that assumed all construction activity would occur in a one-year period. Annual emissions are reported in Table 2. The average daily emissions are also reported in Table 2. These are compared against the significance thresholds for average daily emissions. Construction period emissions would be below significance thresholds.

**Table 2. Uncontrolled Construction Period Emissions**

Year	ROG	NO <sub>x</sub>	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust
<i>Uncontrolled Construction Emissions Per Year (Tons)</i>				
Total, assuming 2021	0.1	0.5	0.03	0.03
<i>Maximum Daily Construction Emissions Per Year (pounds/day)</i>				
Average (assuming 123 construction days)	2	8	<1	<1
<i>BAAQMD Thresholds (pounds per day)</i>	54 lbs./day	54 lbs./day	82 lbs./day	54 lbs./day
<b>Exceed Threshold?</b>	No	No	No	No

## Construction Community Health Risk Impacts

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose health risks for sensitive receptors such as surrounding residents. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to PM<sub>2.5</sub>. A qualitative health risk assessment of the project construction activities was conducted that evaluated potential health effects of sensitive receptors at these nearby residences from construction emissions of DPM and PM<sub>2.5</sub>.<sup>2</sup>

The CalEEMod model provided total annual PM<sub>10</sub> exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages of 0.03 tons (60 pounds). The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. Construction of the project would also result in some fugitive dust emissions, although extensive site grading is not anticipated.

### Qualitative Construction Community Risk Analysis

Residences along Curtner Road are located about 80 feet or further from the project site and those along Windmill Drive would be over 200 feet away. The construction period is expected to be relatively short, lasting less than a year. The residents are assumed to be present and exposed during all the construction activities. Because the site is small, there would be limited operation of construction equipment on any one given day. Given the close proximity of residential sensitive receptors to each project site, the construction activities are considered to result in potentially significant impacts in terms of excess cancer risk to any infants present or increased annual PM<sub>2.5</sub> concentrations caused by construction equipment and traffic exhaust and fugitive dust. There are measures available that would reduce these emissions and result in less-than-significant impacts.

#### ***Mitigation Measure 1: Include basic measures to control dust and exhaust during construction.***

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. The contractor shall implement the following best management practices that are required of all projects:

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

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<sup>2</sup> DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. 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.
4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
5. 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.
6. 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.
7. 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.
8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

***Mitigation Measure 2: Where reasonably available, the project shall use equipment that has low DPM or zero emissions as follows:***

1. Mobile diesel-powered off-road equipment larger than 25 horsepower and operating on the site for more than two days shall meet U.S. EPA particulate matter emissions standards for Tier 4 or use engines that include particulate matter emissions control equivalent to 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.
2. 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.

**Effectiveness of Mitigation**

Because of the short construction schedule, small size of the project, and limited access by construction equipment, potential health risk impacts are not likely. Implementing Mitigation Measure 1 is considered to reduce fugitive emissions by over 10 percent. Implementation of

Mitigation Measure 2 would further reduce on-site diesel exhaust emissions by 85 percent to 95 percent when compared against a statewide fleet mix assumed by the CalEEMod model. These measures would represent the best available control measures to reduce localized construction impacts that could adversely affect sensitive receptors. The project would have a *less-than-significant* impact with respect to community risk caused by construction activities with implementation of these mitigation measures.

### **Operational Air Quality Impacts**

Since the proposed project would not include any stationary equipment that has air pollutant emissions and would not increase traffic, emissions of air pollutants and greenhouse gases would not be expected to increase.

### **Supporting Documentation**

*Attachment 1* includes the CalEEMod output for project construction emissions.



## **Attachment 1: CalEEMod Modeling Output**

Curtner Booster Station - Alameda County, Annual

**Curtner Booster Station**  
**Alameda County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	1.00	1000sqft	0.10	1,000.00	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 & Electric Company				

CO2 Intensity (lb/MW/hr)	210	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - PG&E Rates

Land Use - Small construction Area - 2,000sf disturbed. Structure is 37'x12'x12' or less than 500sf

Construction Phase - Default

Off-road Equipment -

Grading - Use site acreage since larger

Demolition - estimate of building size to be removed

Trips and VMT - Model assigned no trip for building construction - so esitimated and added 10 concrete and asphalt deliveries

On-road Fugitive Dust -

Construction Off-road Equipment Mitigation - Tier 4 and BMPs

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblGrading	AcresOfGrading	0.00	0.10
tblLandUse	LotAcreage	0.02	0.10
tblProjectCharacteristics	CO2IntensityFactor	641.35	210
tblTripsAndVMT	HaulingTripNumber	0.00	20.00
tblTripsAndVMT	HaulingTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00

2.0 Emissions Summary

## 2.1 Overall Construction

### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr															
2021	0.0541	0.4957	0.4529	8.0000e-004	7.7900e-003	0.0262	0.0340	2.2400e-003	0.0242	0.0264	0.0000	70.6494	70.6494	0.0187	0.0000	71.1164
Maximum	0.0541	0.4957	0.4529	8.0000e-004	7.7900e-003	0.0262	0.0340	2.2400e-003	0.0242	0.0264	0.0000	70.6494	70.6494	0.0187	0.0000	71.1164

### 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															
2021	0.0219	0.2915	0.4906	8.0000e-004	7.0700e-003	1.1900e-003	8.2500e-003	1.9700e-003	1.1800e-003	3.1600e-003	0.0000	70.6494	70.6494	0.0187	0.0000	71.1163
Maximum	0.0219	0.2915	0.4906	8.0000e-004	7.0700e-003	1.1900e-003	8.2500e-003	1.9700e-003	1.1800e-003	3.1600e-003	0.0000	70.6494	70.6494	0.0187	0.0000	71.1163

	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
Percent Reduction	59.64	41.19	-8.31	0.00	9.24	95.45	75.71	12.05	95.12	88.05	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	6-1-2021	8-31-2021	0.2988	0.1700

2	9-1-2021	9-30-2021	0.0997	0.0564
		Highest	0.2988	0.1700

### 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	6/1/2021	6/14/2021	5	10	
2	Site Preparation	Site Preparation	6/15/2021	6/15/2021	5	1	
3	Grading	Grading	6/16/2021	6/17/2021	5	2	
4	Building Construction	Building Construction	6/18/2021	11/4/2021	5	100	
5	Paving	Paving	11/5/2021	11/11/2021	5	5	
6	Architectural Coating	Architectural Coating	11/12/2021	11/18/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0.1

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,500; Non-Residential Outdoor: 500; Striped Parking Area: 0

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42



Category	tons/yr										MT/yr				
Fugitive Dust					2.5000e-004	0.0000	2.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9800e-003	0.0363	0.0379	6.0000e-005		2.0400e-003	2.0400e-003	1.9400e-003	1.9400e-003	1.9400e-003	5.2047	5.2047	9.7000e-004	0.0000	5.2289
Total	3.9800e-003	0.0363	0.0379	6.0000e-005	2.5000e-004	2.0400e-003	2.2900e-003	4.0000e-005	1.9400e-003	1.9800e-003	5.2047	5.2047	9.7000e-004	0.0000	5.2289

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	2.7000e-004	5.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0756	0.0756	0.0000	0.0000	0.0757
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	1.6000e-004	1.1000e-004	1.1900e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3392	0.3392	1.0000e-005	0.0000	0.3394
Total	1.7000e-004	3.8000e-004	1.2400e-003	0.0000	4.2000e-004	0.0000	4.2000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.4148	0.4148	1.0000e-005	0.0000	0.4151

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1000e-004	0.0000	1.1000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1800e-003	0.0227	0.0397	6.0000e-005		9.0000e-005	9.0000e-005	9.0000e-005	9.0000e-005	9.0000e-005	0.0000	5.2047	5.2047	9.7000e-004	0.0000	5.2289

Total	1.1800e-003	0.0227	0.0397	6.0000e-005	1.1000e-004	9.0000e-005	2.0000e-004	2.0000e-005	9.0000e-005	1.1000e-004	0.0000	5.2047	5.2047	9.7000e-004	0.0000	5.2289
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**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	2.7000e-004	5.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0756	0.0756	0.0000	0.0000	0.0757
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	1.6000e-004	1.1000e-004	1.1900e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3392	0.3392	1.0000e-005	0.0000	0.3394
Total	1.7000e-004	3.8000e-004	1.2400e-003	0.0000	4.2000e-004	0.0000	4.2000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.4148	0.4148	1.0000e-005	0.0000	0.4151

**3.3 Site Preparation - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2000e-004	3.9100e-003	2.0100e-003	0.0000		1.5000e-004	1.5000e-004	1.4000e-004	1.4000e-004	1.4000e-004	0.0000	0.4276	0.4276	1.4000e-004	0.0000	0.4310
Total	3.2000e-004	3.9100e-003	2.0100e-003	0.0000	2.7000e-004	1.5000e-004	4.2000e-004	3.0000e-005	1.4000e-004	1.7000e-004	0.0000	0.4276	0.4276	1.4000e-004	0.0000	0.4310

**Unmitigated Construction Off-Site**



	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0170	0.0170	0.0000	0.0000	0.0170
Total	1.0000e-005	1.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0170	0.0170	0.0000	0.0000	0.0170

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-005	1.5500e-003	2.9300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.4276	0.4276	1.4000e-004	0.0000	0.4310
Total	9.0000e-005	1.5500e-003	2.9300e-003	0.0000	1.2000e-004	1.0000e-005	1.3000e-004	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.4276	0.4276	1.4000e-004	0.0000	0.4310

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0170	0.0170	0.0000	0.0000	0.0000	0.0000	0.0000	0.0170	0.0170
Total	1.0000e-005	1.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0170	0.0170	0.0000	0.0000	0.0000	0.0000	0.0000	0.0170	0.0170

### 3.4 Grading - 2021

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.1000e-004	0.0000	8.1000e-004	4.2000e-004	0.0000	4.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0000e-004	7.2500e-003	7.5700e-003	1.0000e-005	4.1000e-004	4.1000e-004	4.1000e-004	3.9000e-004	3.9000e-004	3.9000e-004	0.0000	1.0409	1.0409	1.9000e-004	0.0000	1.0458
Total	8.0000e-004	7.2500e-003	7.5700e-003	1.0000e-005	8.1000e-004	4.1000e-004	1.2200e-003	4.2000e-004	3.9000e-004	8.1000e-004	0.0000	1.0409	1.0409	1.9000e-004	0.0000	1.0458

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.4000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0679	0.0679	0.0000	0.0000	0.0679
Total	3.0000e-005	2.0000e-005	2.4000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0679	0.0679	0.0000	0.0000	0.0679

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.6000e-004	0.0000	3.6000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4000e-004	4.5400e-003	7.9400e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.0409	1.0409	1.9000e-004	0.0000	1.0458
Total	2.4000e-004	4.5400e-003	7.9400e-003	1.0000e-005	3.6000e-004	2.0000e-005	3.8000e-004	1.9000e-004	2.0000e-005	2.1000e-004	0.0000	1.0409	1.0409	1.9000e-004	0.0000	1.0458

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.4000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0679	0.0679	0.0000	0.0000	0.0679
Total	3.0000e-005	2.0000e-005	2.4000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0679	0.0679	0.0000	0.0000	0.0679

**3.5 Building Construction - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0388	0.3993	0.3632	5.7000e-004		0.0224	0.0224		0.0206	0.0206	0.0000	50.0410	50.0410	0.0162	0.0000	50.4456
Total	0.0388	0.3993	0.3632	5.7000e-004		0.0224	0.0224		0.0206	0.0206	0.0000	50.0410	50.0410	0.0162	0.0000	50.4456

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	8.0000e-005	2.7000e-003	5.0000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.7560	0.7560	4.0000e-005	0.0000	0.7570
Vendor	6.2000e-004	0.0214	4.5300e-003	5.0000e-005	1.3100e-003	4.0000e-005	1.3600e-003	3.8000e-004	4.0000e-005	4.2000e-004	0.0000	5.2394	5.2394	2.9000e-004	0.0000	5.2466
Worker	1.6000e-003	1.1400e-003	0.0119	4.0000e-005	3.9500e-003	3.0000e-005	3.9800e-003	1.0500e-003	2.0000e-005	1.0800e-003	0.0000	3.3924	3.3924	8.0000e-005	0.0000	3.3944
Total	2.3000e-003	0.0252	0.0170	1.0000e-004	5.4300e-003	8.0000e-005	5.5200e-003	1.4800e-003	7.0000e-005	1.5500e-003	0.0000	9.3878	9.3878	4.1000e-004	0.0000	9.3980

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	0.0119	0.2240	0.3981	5.7000e-004		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	50.0410	50.0410	0.0162	0.0000	50.4456

Total	0.0119	0.2240	0.3981	5.7000e-004	9.3000e-004	9.3000e-004	9.3000e-004	9.3000e-004	0.0000	50.0410	50.0410	0.0162	0.0000	50.4456
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### 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	8.0000e-005	2.7000e-003	5.0000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.7560	0.7560	4.0000e-005	0.0000	0.7570
Vendor	6.2000e-004	0.0214	4.5300e-003	5.0000e-005	1.3100e-003	4.0000e-005	1.3600e-003	3.8000e-004	4.0000e-005	4.2000e-004	0.0000	5.2394	5.2394	2.9000e-004	0.0000	5.2466
Worker	1.6000e-003	1.1400e-003	0.0119	4.0000e-005	3.9500e-003	3.0000e-005	3.9800e-003	1.0500e-003	2.0000e-005	1.0800e-003	0.0000	3.3924	3.3924	8.0000e-005	0.0000	3.3944
Total	2.3000e-003	0.0252	0.0170	1.0000e-004	5.4300e-003	8.0000e-005	5.5200e-003	1.4800e-003	7.0000e-005	1.5500e-003	0.0000	9.3878	9.3878	4.1000e-004	0.0000	9.3980

### 3.6 Paving - 2021

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8000e-003	0.0168	0.0177	3.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.8000e-003	0.0168	0.0177	3.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652

#### 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	8.0000e-005	2.7000e-003	5.0000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.7560	0.7560	4.0000e-005	0.0000	0.7570
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	1.4000e-004	1.0000e-004	1.0700e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3053	0.3053	1.0000e-005	0.0000	0.3055
Total	2.2000e-004	2.8000e-003	1.5700e-003	1.0000e-005	5.3000e-004	1.0000e-005	5.4000e-004	1.4000e-004	1.0000e-005	1.5000e-004	0.0000	1.0614	1.0614	5.0000e-005	0.0000	1.0625

**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	4.1000e-004	0.0100	0.0173	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.1000e-004	0.0100	0.0173	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652

**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					



## **Mitigated Construction On-Site**

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category		tons/yr											MT/yr					
Archit. Coating		5.2100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road		7.0000e-005	3.2000e-004	4.5800e-003	1.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394	
Total		5.2800e-003	3.2000e-004	4.5800e-003	1.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394	

## **Mitigated Construction Off-Site**

[illegible]





## APPENDIX B

# Biological Resources Assessment and Arborist Report



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# Biological Resources Assessment

## CURTNER ROAD BOOSTER STATION IMPROVEMENTS PROJECT FREMONT, ALAMEDA COUNTY, CALIFORNIA

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**Date:**  
August 2021

**WRA Project No:**  
29320



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## **LIST OF ABBREVIATIONS AND ACRONYMS**

BRA	Biological Resources Assessment
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGF	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
Corps	U.S. Army Corps of Engineers
CNPS	California Native Plant Society
CRLF	California Red-Legged Frog
CRPR	California Rare Plant Rank
CWA	Clean Water Act
ESA	Federal Endangered Species Act
FAC	Facultative
FACW	Facultative Wetland
HCP	Habitat Conservation Plan
MCC	Motor Control Center
OBL	Obligate
OHWM	Ordinary High Water Mark
RWQCB	Regional Water Quality Control Board
SWRCB	State Water Resources Control Board
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WBWG	Western Bat Working Group

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## 1.0 INTRODUCTION

On February 11, 2020, WRA, Inc. conducted a biological resources assessment (BRA) for the proposed Curtner Booster Station Improvements Project (Project), located in the City of Fremont, Alameda County, California (Appendix A, Figure 1). The Project would occur at and directly adjacent to the existing Alameda County Water District-operated Curtner Road Booster Station (Study Area). The station pumps potable water from the Warm Springs Reservoir to serve the surrounding system. The Study Area is approximately 0.43 acre in size and includes a portion of Curtner Road and Agua Fria Creek. It is located approximately 500 feet north of the intersection of Curtner Road and East Warren Avenue.

The existing station consists of a 12-foot by 12-foot concrete structure that extends approximately 40 feet below grade. The structure contains five main pumps, two sump pumps, various equipment associated with pumping operation (valves, piping, access grating platforms, etc.), and a 24-inch inlet/outlet pipe routed from the Warm Springs Reservoir. The existing motor control center (MCC) is located on the exterior of the structure and is cantilevered off the north side of the structure. The station is served by an existing transformer located approximately 40 feet northeast of the station. A small amount of storm water enters the station through several pipes that collect water from the Warm Springs Reservoir. The storm water accumulates in the sump structure at the station and is pumped to the adjacent creek via two sump pumps. The sump pumps currently discharge into the creek via a 4-inch pressurized pipe which penetrates the wall of the structure and outfalls into the creek.

The Project entails the rehabilitation of the Curtner Booster Station within an approximately 0.10-acre portion of the 0.43-acre Study Area (Project Area). The Project Area is situated north of an intermittent stream, Agua Fria Creek. The stream flows east-to-west and enters a concrete-lined channel approximately 200 feet downstream of the Project Area. The intermittent stream eventually flows into the San Francisco Bay, located approximately 5.5 miles west of the Study Area (and Project Area).

The Project would include: the removal of old pumps and associated infrastructure, and the installation of new pumps, pumping equipment, and piping; the installation of new stairs, a walkway, and access platforms; the construction of a pavement approach, concrete curbing, and a retaining wall; the installation of new access hatches and lighting; and the installation of a new MCC and switchboard (Appendix C).

This BRA provides an analysis of the Project's proposed impacts to biological resources as required by the California Environmental Quality Act (CEQA). This report describes the results of the BRA, which assessed the Study Area for the potential to support special-status species and the presence of other sensitive biological resources protected by local, state, and federal laws and regulations. The BRA was not a protocol-level survey for individual listed species that may require surveys for Project approval by local, state, or federal agencies. Consistent with the requirements of CEQA, this BRA provides information on the potential for jurisdictional habitat, sensitive habitat, and special-status plant and wildlife species to occur. This assessment is based on information available at the time of the study and on-site conditions that were observed on February 11, 2020.

## **1.1 Project Description**

The Project would fully rehabilitate the Curtner Road booster station, including the replacement of pumps, electrical equipment, and civil site improvements to provide safe and reliable worker access to the site and equipment. The Project would not increase the capacity nor change the operations of the booster station.

### Civil Site Improvements

Civil site improvements would include the necessary grading, paving, retaining wall installation, and other needed improvements to support the electrical and mechanical improvements of the station. The existing driveway from the road is a steep decline into the station making access to the station difficult. The existing driveway, curb, and landing ramp would be demolished. The top slab of the pump station would be demolished as well. A new top slab would be constructed approximately 2 feet higher than the existing slab to allow the new driveway, constructed in the same location as the existing driveway, to maintain a more gradual slope from the road to the top slab of the booster station. Grades on either side of the station would be raised to the level of the driveway and would be gradually sloped to the existing grades or retained with a retaining wall where grading is not achievable. New electrical panels would be constructed to the east of the booster station between the station structure and the existing transformer. This area would include new electrical equipment and associated concrete pads. The area proposed for this work is currently not developed and a retaining wall would be required, along with grading the area to match proposed grades. All work would occur within the Alameda County Water District's property.

Two coast live oak trees would be removed from the riparian California sycamore woodlands to create space as required for equipment clearances. The existing platforms and stairs inside the station would be demolished. New stairs and platforms would be installed at the level of the motors and at the base of the station to allow for operations and maintenance staff to work. A new ventilation system would be installed with two fans, one for intake and one for exhaust, to replace the existing system that only had an intake fan. The western wall of the station would be demolished to the first level to accommodate the new cantilevered structure. The proposed structure allows for access to the back of the pumps on the first level and does not require any additional earthwork to accommodate. An additional cantilevered walkway would be added to access the man hatch.

### Mechanical Equipment Improvements

The existing pumps in the station would be demolished and replaced to meet the existing flows of the booster station. Currently, there are five pumps to serve the Alameda County Water District's water system and two sump pumps to remove water drained to the station from the underdrain system of a nearby reservoir, all of which would be demolished. Four new vertical turbine style pumps would be installed to meet the same demand to the system. Two new sump pumps would be installed to match the existing capacity of the sump pumps. The sump pump discharge will be routed to the existing discharge piping outside of the station to discharge to the existing outlet at the creek.

### Electrical Improvements

The existing MCC is attached to the top slab of the existing structure, cantilevered over the western edge. This would be demolished and a new MCC would be installed on electrical equipment pads in the new electrical panel area as described above, in civil site improvements.



Site lighting would be installed for maintenance staff at the electrical panel area. Lighting within the booster station would be replaced. Miscellaneous improvements including float switches, and pressure sensors would be installed within the station as required to maintain adequate operations.

### Construction Details

The Project would be phased. During the first summer, all demolition work and grading would occur. Through the winter, all mechanical improvements would be installed and the station would be temporarily sealed. During the second (and final) summer, the temporary seal would be removed and replaced with the permanent structure. Earthwork would primarily be fill to decrease the slope of the approach and accommodate the installation of the electrical panels. It is not anticipated that there would be any requirements of a full road closure. The adjacent road (Curtner Road) would have a full lane closure at the entrance of the Study Area, which would extend beyond the site as needed for construction staging.

## **2.0 REGULATORY BACKGROUND**

The following sections explain the regulatory context of the BRA, including applicable laws and regulations that relate to the field investigations.

### **2.1 Special-Status Species**

Special-status species include plant and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA). These acts afford protection to both listed species and species proposed for listing. The federal Bald and Golden Eagle Protection Act also provides broad protections to both eagle species that in some regards are similar to those provided by ESA. In addition, California Department of Fish and Wildlife (CDFW) Fully Protected Species and Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, are considered special-status species. Although CDFW Species of Special Concern generally have no special legal status, they are given special consideration under CEQA. Bat species are also evaluated for conservation status by the Western Bat Working Group (WBWG), a non-governmental entity. Bats named as a “High Priority” or “Medium Priority” species for conservation by the WBWG are typically considered special-status and also considered under CEQA. In addition to regulations for special-status species, most native birds in the United States (including non-status species) are protected by the California Fish and Game Code (CFGC; Sections 3503, 3503.5, and 3513), and guidance for protection is provided by the Migratory Bird Treaty Act of 1918. Under the CFGC, destroying active nests, eggs, or young is illegal.

Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory with California Rare Plant Ranks of 1 and 2 are also considered special-status plant species and must be considered under CEQA. Rank 3 and Rank 4 species are afforded little or no protection under CEQA, but are included in this analysis for completeness. A description of the CNPS Ranks is provided below in Table 1.

Table 1. Description of CNPS Ranks and Threat Codes

<b>California Rare Plant Ranks (formerly known as CNPS Lists)</b>	
Rank 1A	Presumed extirpated in California and either rare or extinct elsewhere
Rank 1B	Rare, threatened, or endangered in California and elsewhere
Rank 2A	Presumed extirpated in California, but more common elsewhere
Rank 2B	Rare, threatened, or endangered in California, but more common elsewhere
Rank 3	Plants about which more information is needed - A review list
Rank 4	Plants of limited distribution - A watch list
<b>Threat Ranks</b>	
0.1	Seriously threatened in California
0.2	Moderately threatened in California
0.3	Not very threatened in California

### Critical Habitat

Critical habitat is a term defined in the ESA as a specific and designated geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species by the ESA jeopardy standard. However, areas that are currently unoccupied by the species but which are needed for the species' recovery are protected by the prohibition against adverse modification of critical habitat.

## **2.2 Vegetation and Aquatic Communities**

CEQA provides protections for particular vegetation types defined as sensitive by the 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" (California Department of Fish and Game [CDFG] 2010, CDFW 2020) and keeps records of their occurrences in its California Natural Diversity Database (CNDDB; CDFW 2020). CNDDB vegetation alliances are ranked 1 through 5 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 the USFWS must be considered and evaluated

under CEQA (California Code of Regulations [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.

#### 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 Corps Wetlands Delineation 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 RWQCBs 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*. 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 CWA 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 the 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 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.

## Other Sensitive Biological Communities

Other sensitive biological communities not discussed above 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 (alliances) as "threatened" or "very threatened" and keeps records of their occurrences in its California Natural Diversity Database (CNDDDB; CDFW 2020). CNDDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2010) 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 USFWS must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G). Specific habitats may also be identified as sensitive in city or county general plans or ordinances.

### **2.3 City of Fremont Municipal Code**

The City of Fremont Municipal Code contains all ordinances for the City of Fremont. The City of Fremont Municipal Code includes regulations relevant to biological resources within the Study Area as discussed below.

#### Protected Trees

Chapter 18.215, "Tree Preservation" (Tree Ordinance), of the City of Fremont Municipal Code stipulates 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 ordinance, 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. However, per Chapter 18.215.050, public utility projects are exempt from requiring a tree removal permit as long as the trees proposed for removal do not qualify as landmark trees and work is

necessary for maintaining the integrity of the public utility's facilities.

### Watercourse Protection

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:

- Discharge into or connect any pipe or channel to a watercourse
- 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

## **3.0 METHODS**

On February 11, 2020, the Study Area was traversed on foot to determine: (1) plant communities present within the Study Area, (2) if existing conditions provide suitable habitat for any special-status plant or wildlife species, and (3) if sensitive habitats are present.

### **3.1 Biological Communities**

Prior to the BRA survey, the Soil Survey of Alameda County, California (U.S. Department of Agriculture [USDA] 1961) was examined to determine if any unique soil types that could support sensitive plant communities and/or aquatic features were present in the Study Area. Biological communities present in the Study Area were classified based on existing plant community descriptions described in the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) or the *Manual of California Vegetation* (Sawyer et.al. 2009). However, in some cases, it was necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations.

#### **3.1.1 Non-sensitive Biological Communities**

Non-sensitive biological communities are not afforded special protection under state, federal, or local laws, regulations, and ordinances. Impacts to such communities would not be significant under CEQA. These communities may, however, provide suitable habitat for some special-status plant or wildlife species.

### 3.1.2 Sensitive Biological Communities

Sensitive biological communities are given special protection under CEQA and other applicable federal, state, and local laws, regulations, and ordinances. Applicable laws and ordinances are discussed above in Section 2. Methods used to identify sensitive biological communities are discussed below.

#### Wetlands and Non-wetland Waters

The Study Area was surveyed to determine if any wetlands or non-wetland waters potentially subject to jurisdiction by the Corps, RWQCB, or CDFW were present, consistent with the guidance provided by these agencies, including the State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State, which became effective on May 28, 2020, and the federal Navigable Waters Protection Rule, which became effective on June 22, 2020. Any potential wetland areas were identified as areas dominated by plant species with a wetland indicator status<sup>1</sup> of OBL (obligate), FACW (facultative wetland), or FAC (facultative) as provided on the Corps National Wetlands Plant List (Lichvar et al. 2016).

The preliminary non-wetland waters assessment was based primarily on the presence of unvegetated, ponded areas or flowing water, areas vegetated with hydrophytic plant species, or evidence indicating their presence, such as a high water mark or a defined drainage course.

#### Other Sensitive Biological Communities

The Study Area was evaluated for the presence of other sensitive biological communities, including riparian areas and sensitive plant communities recognized by the CDFW. If present in the Study Area, these sensitive biological communities were mapped and are described below.

## 3.2 Special-Status Species

### 3.2.1 Literature Review

The potential occurrence of special-status species in the Study Area was evaluated by first determining which special-status species occur in the vicinity of the Study Area through a literature and database search. Database searches for known occurrences of special-status species focused on the *Milpitas* 7.5-minute United States Geological Survey (USGS) quadrangle and the surround eight quadrangles, including *Newark*, *Niles*, *La Costa Valley*, *Mountain View*, *Calaveras Reservoir*, *Cupertino*, *San Jose West*, and *San Jose East*. The following sources were reviewed to determine which special-status plant and wildlife species have been documented to occur in the vicinity of the Study Area:

- CNDDDB records (CDFW 2020)
- USFWS Information for Planning and Conservation Species Lists (USFWS 2020a)
- CNPS Inventory records (CNPS 2020)
- CDFG publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)

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<sup>1</sup> OBL = Obligate, always found in wetlands (> 99% frequency of occurrence); FACW = Facultative wetland, usually found in wetlands (67-99% frequency of occurrence); FAC = Facultative, equal occurrence in wetland or non-wetlands (34-66% frequency of occurrence).

- CDFG publication *California Bird Species of Special Concern* (Shuford and Gardali 2008)
- CDFW and University of California Press publication *California Amphibian and Reptile Species of Special Concern* (Thomson et al. 2016)
- *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003)

### 3.2.2 Site Assessment

A site assessment was conducted in the Study Area to search for suitable habitats for special-status species. Habitat conditions observed in the Study Area were used to evaluate the potential for presence of special-status species based on these searches and the professional expertise of the investigating biologist. The potential for each special-status species to occur in the Study Area was then evaluated 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., CNDDDB, other reports) on the site recently.

The site assessment was intended to identify the presence or absence of suitable habitat for each special-status species known to occur in the vicinity to determine its potential to occur in the Study Area. The site visit did not constitute a protocol-level species survey and was not intended to determine the actual presence or absence of a species; however, if a special-status species was observed during the site visit, its presence was recorded and is discussed in Section 4, below.

Appendix B presents the evaluation of the potential for occurrence of each special-status plant and wildlife species known to occur in the vicinity of the Study Area with their habitat requirements, potential for occurrence, and rationale for the classification based on criteria listed above. Recommendations for further surveys for species with a moderate or high potential to occur in the Study Area are provided in Section 5, below.

## 4.0 RESULTS

The 0.43-acre Study Area is located in the northeastern portion of the *Milpitas* USGS 7.5-minute quadrangle. The Study Area includes a portion of an intermittent stream, Agua Fria Creek, and its northern bank. An approximately 200-foot section of Curtner Road is also included in the Study Area. Elevations within the Study Area range from 189 to 222 feet above mean sea level (Google Earth 2020). The Study Area is located approximately 0.3 mile east of Interstate 680. Historic aerial imagery indicates that the Study Area and surrounding areas were utilized for single-family

residential housing dating back to at least 1993 (Google Earth 2020). The Study Area is situated entirely within a residential neighborhood comprised of single-family homes.

The Study Area is underlain by one soil type: Danville silty clay loam, 3 to 10 percent slopes (USDA 1961). Soils present in the Study Area are depicted on Figure 2 of Appendix A. Danville series soils consist of very deep and well-drained soils that formed in alluvium derived from sedimentary rock sources. Danville series soils are considered to have a high runoff rate and are not considered hydric soils.

#### 4.1 Biological Communities and Land Cover Types

The Study Area contains two biological communities, including intermittent stream and California sycamore woodlands, and one land cover type, developed land cover. Table 2 provides biological community and land cover acreages in the Study Area. A description of the biological communities and the land cover type mapped in the Study Area is provided below. Figure 3 in Appendix A depicts the location and extent of each biological community and land cover type in the Study Area. Photographs of the Study Area are provided as Appendix D.

Table 2. Biological Communities and Land Cover Types within the Study Area

Biological Communities and Land Cover Type	Area (acres [linear feet])
Intermittent stream	0.09 (197)
California sycamore woodlands	0.22
Developed	0.12
<b>Total</b>	<b>0.43 (197)</b>

##### 4.1.1 Sensitive Biological Communities

###### Intermittent Stream

The intermittent stream community is a section of the Agua Fria Creek that parallels the Project Area. The stream conveys flows east-to-west through the Study Area, south of the Project Area, and varies between 5 and 15 feet in width. The southern bank of the stream (non-Project side) is very steep with substantial incision and extends nearly 15 feet above the low-flow channel; however, only the northern bank (Project side) was mapped as part of the Study Area. The northern bank of the stream has a more gradual slope and contains a vegetated, flat bench that is situated below top of bank but above the OHWM. The northern bank is largely composed of English ivy (*Hedera helix*) and Himalayan blackberry (*Rubus armeniacus*), as well as arroyo willow (*Salix lasiolepis*), Oregon ash (*Fraxinus latifolia*), and poison oak (*Toxicodendron diversilobum*). The stream channel contains cobbles, gravels, and fine sediment. Organic and inorganic debris, including small and large woody debris, trash, and slabs of concrete, are located throughout the stream channel. The stream transitions from a natural bed and banks to a concrete-lined channel approximately 200 feet downstream of the Study Area. An existing 4-inch discharge pipe that discharges water from the booster station to the stream is located directly below top of bank. The existing discharge pipe would not be impacted by the Project. The stream



eventually flows into the San Francisco Bay, located approximately 5.5 miles west of the Study Area.

#### California Sycamore Woodlands (CDFW Rank G3/S3)

California sycamore woodlands within the Study Area is a riparian community that occurs along and above the northern bank of the intermittent stream. The California sycamore woodlands overstory is dominated by California sycamore (*Platanus racemosa*) and Fremont cottonwood (*Populus fremontii*). The understory of this community is dominated by native trees and shrubs, including arroyo willow, Oregon ash, and poison oak. Highly invasive, non-native species are also present within the understory of this community, including Himalayan blackberry and English ivy (California Invasive Plant Council [Cal-IPC] 2020). California sycamore woodlands is classified by the CDFW as having a G3/S3 sensitivity ranking (CDFW 2020), indicating that it is globally vulnerable and vulnerable within California state boundaries.

#### *4.1.2 Non-sensitive Biological Communities and Land Cover Types*

##### Developed

Developed land cover in the Study Area consists of the existing concrete booster station structure and paved driveway. A portion of Curtner Road is also included in the developed land cover. Developed portions of the Study Area are devoid of vegetation and are composed entirely of impervious surfaces.

## **4.2 Special-status Species**

### *4.2.1 Plants*

Based on a review of the resources and databases discussed in Section 3, 51 special-status plant species have been documented in the vicinity of the Study Area (Appendix A, Figure 4). The Study Area has low potential to support any special-status plant species documented in the vicinity. Appendix B summarizes the potential occurrence for each special-status plant species located in the vicinity of the Study Area. No special-status plant species were observed during the site visit and none have a moderate or high potential to occur in the Study Area due to at least one of the following reasons:

- Absence of specific soil types (e.g., serpentine soils)
- Absence of suitable habitat (e.g., chaparral, grassland, coastal salt marsh)
- Dominance of invasive, non-native species
- Outside the geographic range of species (e.g., Study Area is below known elevation range)
- Outside the known distribution of species (e.g., Study Area is too far north)

### *4.2.2 Wildlife*

Based on a review of the resources and databases listed in Section 3, 48 special-status wildlife species have been documented in the vicinity of the Study Area. The locations of special-status wildlife in the CNDDDB within 5 miles of the Study Area are depicted on Figure 5 in Appendix A. Appendix B summarizes the potential for each of these species to occur within the Study Area. Of the 48 special-status species documented in the vicinity, one was considered to have a moderate potential to occur in the Study Area. The remaining 47 were determined to be unlikely or have no potential to occur for one or more of the following reasons:

- The Study Area is outside of the known or historical range of the species
- The Study Area lacks suitable aquatic habitat (e.g., ponds, lakes, vernal pools)
- The Study Area lacks suitable foraging or breeding habitat (e.g., marshes, grassland, scrub)
- The Study Area lacks suitable nesting structures (e.g., mature forest, cliffs)
- The Study Area lacks suitable soil for den development
- The Study Area lacks suitable burrows for occupancy
- No mine shafts, caves, rocky crevices or abandoned buildings are present
- There is a lack of connectivity with suitable occupied habitat

In addition to one special-status species (California red-legged frog), native nesting birds protected by the CFGC may occur within the Study Area as discussed below.

California red-legged frog (CRLF; *Rana draytonii*). Federal Threatened Species. CDFW Species of Special Concern. Moderate Potential. Physical and biological features that are considered to be essential for CRLF include: aquatic breeding habitat; non-breeding aquatic habitat; upland habitat; and dispersal habitat (USFWS 2010). Aquatic breeding habitat consists of low-gradient freshwater bodies, including natural and manmade (e.g., stock) ponds, backwaters within streams and creeks, marshes, lagoons, and dune ponds. Aquatic breeding habitat must hold water for a minimum of 20 weeks in most years. This is the average amount of time needed for egg, larvae, and tadpole development and metamorphosis so that juveniles can become capable of surviving in upland habitats (USFWS 2010). Aquatic non-breeding habitat may or may not hold water long enough for this species to hatch and complete its aquatic life cycle, but it provides shelter, foraging, predator avoidance, and aquatic dispersal for juvenile and adult CRLF. Upland habitats include areas within 300 feet of aquatic and riparian habitat and are composed of grasslands, woodlands, and/or vegetation that provide shelter, forage, and predator avoidance. Dispersal Habitat includes accessible upland or riparian habitats between occupied locations within 1 mile of each other that allow for movement between these sites.

This species was documented in Agua Caliente Creek north of the Study Area in 1996 (CDFW 2020). However, Agua Fria Creek is not immediately hydrologically connected to Agua Caliente Creek and is separated from the occurrence by dense residential development. Since the 1996 occurrence, the area has been subject to additional disturbance and development. There are no other documented occurrences of this species within 3 miles of the Study Area. Agua Fria Creek within and adjacent to the Study Area does not contain marshes, ponds, or stream pools suitable to support breeding by this species. Much of Agua Fria Creek downstream of the Study Area is conveyed via an underground culvert and engineered channel (Alameda County Flood Control and Water Conservation District 2020), and does not provide suitable habitat for CRLF. The Alameda County Flood Control and Water Conservation District has implemented a restoration project approximately 1000 feet downstream of the Study Area to stabilize banks and improve habitat for CRLF. Given that there are documented occurrences in the hills approximately 4 miles east of the Study Area, and there is limited aquatic habitat within Agua Fria Creek, individuals may occasionally occur within the Study Area.

The Project Area is located outside of the top of the bank of Agua Fria Creek in a developed and disturbed area with barren and hard-packed ground that does not provide habitat for CRLF. This species has potential to occur within Agua Fria Creek, but is unlikely to occur within the developed and disturbed land within the Project Area.

#### Nesting birds (non-status), High Potential (Present)

The Study Area contains vegetation (trees, shrubbery, etc.) that may be used as nesting habitat by bird species with legal baseline protections under the CFGC. These laws/codes apply to a wide variety of native birds, including species that are non-migratory and/or commonly found in Alameda County.

#### *4.2.3 Critical Habitat*

The Study Area is not located within any units of designated critical habitat (USFWS 2020b).

### **5.0 PROJECT IMPACTS AND MITIGATION MEASURES**

The State CEQA Guidelines provide direction for assessing the impacts of projects on biological resources and determining which impacts will be significant. CEQA defines a “significant effect on the environment” as “a substantial adverse change in the physical conditions which exist in the area affected by the proposed project.” Under State CEQA Guidelines Section 15065, a project’s impacts on biological resources are deemed significant if the project would:

- A. substantially reduce the habitat of a fish or wildlife species
- B. cause a fish or wildlife population to drop below self-sustaining levels
- C. threaten to eliminate a plant or animal community
- D. reduce the number or restrict the range of a rare or endangered plant or animal

Additionally, Appendix G of State CEQA Guidelines provides a checklist of other potential impacts to consider when analyzing the significance of project effects. The impacts listed in Appendix G may or may not be significant, depending on the level of the impact. For biological resources, these impacts include whether the Project would:

- 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 CDFW or USFWS
- 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
- 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 (HCP), Natural Community Conservation Plan, or other approved local, regional, or state HCP

This report uses these thresholds in the analysis of impacts and determination of the significance of those impacts. The assessment of impacts under CEQA is based on the change caused by the Project relative to the CEQA baseline, which in this case are the existing conditions in the Study Area. In applying CEQA Appendix G, the terms “substantial” and “substantially” are used as the

basis for significance determinations in many of the thresholds but are not defined qualitatively or quantitatively in CEQA or in technical literature. In some cases, the determination of a substantial adverse effect (i.e., significant impact) may be relatively straightforward. For instance, “take” or other direct adverse impacts to special-status species listed under the CESA or the ESA or their habitat without implementation of appropriate mitigation is considered a significant impact. In other cases, the determination of a substantial adverse effect (i.e., significant impact) requires application of best professional judgment based on knowledge of site conditions, as well as the ecology and physiology of biological resources present in a given area and the type of effect that would be caused by a project. Determinations of whether or not Project activities will result in a substantial adverse effect to biological resources are discussed in the following sections.

Potential impacts on existing biological resources were evaluated by comparing the quantity and quality of habitats present in the Project Area under baseline conditions to the anticipated conditions after implementation of proposed Project activities (Appendix A, Figure 3). Direct and indirect impacts on special-status species and sensitive natural communities were assessed based on the potential for the species, their habitat, or the natural community in question to be disturbed or enhanced by construction or operation of the proposed Project. Table 3 lists permanent and temporary impacts proposed by the Project within each biological community and land cover type in the Project Area.

The Project would permanently impact approximately 0.01 acre of developed land cover and 0.03 acre of riparian California sycamore woodlands habitat (Appendix A, Figure 3). Permanent impacts to California sycamore woodlands would be associated with the installation of the new MCC and switchboard; the installation of the new retaining wall, walkway, curbing, and railing; work on the booster station structure (e.g., installing new hatches); and areas that require regrading and repaving. These impacts would require the removal of two coast live oak trees. Permanent impacts to developed land cover would result from repaving a portion of the existing driveway. These permanent impacts would occur in non-jurisdictional, non-sensitive upland communities and land cover types.

The Project would temporarily impact approximately 0.01 acre of developed land cover and 0.02 acre of California sycamore woodlands (Appendix A, Figure 2). Temporary impacts would result from equipment staging that would occur along the Project-side lane of Curtner Road. The intermittent stream would not be impacted by the Project.

Table 3. Project Impacts within Each Biological Community/Land Cover Type in the Project Area

<b>Biological Community/Land Cover Type</b>	<b>Permanent Impact (acres)</b>	<b>Temporary Impact (acres)</b>
Developed	0.01	0.01
California Sycamore Woodlands	0.03	0.02
<b>Total</b>	<b>0.04</b>	<b>0.03</b>

## 5.1 Impact BIO-1: Special-Status Species

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 CDFW or USFWS.

The following impact analysis describes the Project's adverse effects on special-status species. The analysis is organized by the listing status (federal, state, and/or California Rare Plant Rank [CRPR]) of special-status species. Appendix B lists the potentially occurring special-status species, along with their listing status and basis for the determination of their absence from the Study Area.

***Impact BIO-1a: Impacts on Federally- and State-Listed Special-Status Plants and CRPR 1 or 2 Plants***

The Project Area is unlikely to support special-status plant species due to the absence of suitable habitat, known species' ranges, and the presence of non-native plant species. Thus, the Project would not have a moderate or high potential to impact special-status plant species.

*Level of Significance: Less Than Significant*

***Impact BIO-1b: Impacts on California Red-legged Frog***

The Project Area is unlikely to support California red-legged frog due to existing development and disturbance, and lack of ground vegetation or refugia. No Project work will occur below top of bank. In addition, Agua Fria Creek is an intermittent stream, and any demolition or grading will occur in summer months when California red-legged frog are not likely to be present in Agua Fria Creek.

*Level of Significance: Less Than Significant*

***Impact BIO-1c: Impacts on Native Nesting Birds***

The Project has the potential to impact non-special-status native nesting birds protected by the CFGC. Project activities, such as vegetation removal and ground disturbance, have the potential to impact these species by causing direct mortality of eggs or young, or by causing auditory, vibratory, and/or visual disturbance of a sufficient level to cause abandonment of an active nest. If Project activities occur during the nesting season, which generally extends from February 1 through August 31, nests of native birds could be impacted by construction and other ground-disturbing activities. Impacts to nesting birds would be considered significant under CEQA.

*Level of Significance: Potentially Significant*

**Mitigation Measure 1: Special-status and Non-status Native Nesting Birds**

Project activities, such as vegetation removal, grading, or initial ground-disturbance, will be conducted between September 1 and January 31 (outside of the February 1 to August 31 nesting season) to the greatest extent feasible.

If Project activities must be conducted during the nesting season, a pre-construction nesting bird survey will be conducted by a qualified biologist no more than 14 days prior to vegetation removal or initial ground disturbance. The survey will include the Project Area and surrounding 250 feet to identify the location and status of any nests that could potentially be affected either directly or indirectly by Project activities.

If active nests of native nesting bird species are located during the nesting bird survey, a work exclusion zone will be established around each nest by the qualified biologist. Established exclusion zones will remain in place until all young in the nest have fledged or the nest otherwise

becomes inactive (e.g., due to predation). Appropriate exclusion zone sizes will be determined by a qualified biologist and will vary based on species, nest location, existing visual buffers, noise levels, and other factors. An exclusion zone radius may be as small as 50 feet for common, disturbance-adapted species, or as large as 250 feet or more for raptors. Exclusion zone size will be reduced from established levels by a qualified biologist if nest monitoring findings indicate that Project activities do not adversely impact the nest, and if a reduced exclusion zone would not adversely affect the nest.

*Level of Significance After Mitigation: Less Than Significant*

## **5.2 Impact BIO-2: Sensitive Communities**

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 CDFW and USFWS.

The CDFW defines sensitive natural communities and vegetation alliances using NatureServe's standard heritage program methodology (CDFG 2007), as described above in Section 2.2. Project impacts on CDFW sensitive natural communities, vegetation alliances/associations, or any such community identified in local or regional plans, policies, and regulations, were considered and evaluated. Furthermore, aquatic, wetland, and riparian habitats are also protected under applicable federal, state, or local regulations, and are generally subject to regulation, protection, or consideration by the Corps, the RWQCB, the CDFW, and/or the USFWS.

The Project would permanently impact 0.03 acre and temporarily impact 0.02 acre of California sycamore woodlands, which qualifies as both a CDFW sensitive community (due to its G3/S3 designation) and a CDFW jurisdictional community (since it is a riparian community). Permanent impacts would be unavoidable, as they would occur where the booster station would be rehabilitated. Permanent impacts to this community would result in the removal of two riparian coast live oak trees. Temporary impacts to California sycamore woodlands would occur to canopy of coast live oak trees that overhang Curtner Road, which would be used for staging; however, these trees would not be directly impacted. Impacts to CDFW sensitive communities and/or CDFW jurisdictional communities are considered significant under CEQA. Since California sycamore woodlands is a CDFW jurisdictional community, the Project requires a Section 1602 Lake and Streambed Alteration Agreement from the CDFW.

*Level of Significance: Potentially Significant*

### **Mitigation Measure 2: Issuance of a Lake and Streambed Alteration Agreement**

The Project will obtain a Lake and Streambed Alteration Agreement from the CDFW to proceed with proposed impacts to CDFW jurisdictional riparian habitat. All compliance measures included in these permits will be adhered to.

### **Mitigation Measure 3: Replanting Trees Proposed for Removal**

The Project will replant coast live oak trees within the riparian corridor at a mitigation ratio of 3-to-1 to offset the removal of coast live oak trees from the California sycamore woodlands habitat. A replanting plan and a mitigation and monitoring plan will be submitted to the CDFW prior to implementation.

*Level of Significance After Mitigation: Less Than Significant*

### **5.3 Impact BIO-3: Jurisdictional Wetlands**

Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Wetlands are considered sensitive environmental resources protected at federal, state, and local levels. They provide unique habitat functions and values for wildlife, and provide habitat for plant species adapted to wetland hydrology. Throughout California, the quality and quantity of wetlands has dramatically declined owing to the construction of dams, dikes, and levees, as well as because of water diversions, the filling of wetlands for development, and the overall degradation of water quality by inputs of runoff from agricultural, urban, and infrastructure development and other sources.

The Project Area does not contain any jurisdictional non-wetland waters or wetlands that would qualify as waters of the U.S. or State. An intermittent stream, Agua Fria Creek, is located within the Study Area, but would not be affected by the Project. All proposed Project work would occur entirely above the OHWM and top of bank associated with Agua Fria Creek. Thus, the Project would have a less than significant impact on jurisdictional wetlands or non-wetland waters.

*Level of Significance: Less Than Significant*

### **5.4 Impact BIO-4: Wildlife Movement**

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.

For many species, the landscape is a mosaic of suitable and unsuitable habitat types. Environmental corridors are segments of land that provide a link between these different habitats while also providing cover. Development that fragments natural habitats (i.e., breaks them into smaller, disjunct pieces) can have a twofold impact on wildlife: (1) as habitat patches become smaller they are unable to support as many individuals (patch size), and (2) the area between habitat patches may be unsuitable for wildlife species to traverse (connectivity).

The Project Area is located within a dense residential area. Local wildlife may move through Agua Fria Creek, though extensive underground culverts and engineered channels downstream of the Project Area likely limit wildlife movement and use of the creek as a corridor. All Project work will occur above the top of bank of the creek and would not change the function of Agua Fria Creek for wildlife movement.

*Level of Significance: No Impact*

### **5.5 Impact BIO-5: Impacts due to Conflicts with Local Policies**

Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation ordinance or stream setback ordinance.

### **Impact BIO-5a: Impacts on Heritage Trees**

The Project Area contains trees that are considered protected trees, as defined by the City of Fremont Park Municipal Code. The Project proposes the removal of two protected coast live oak trees from the Project Area. The removal of coast live oak heritage trees from the California sycamore woodlands community would be required to install the new retaining wall and regrade portions of the booster station. Trees that would be removed do not qualify as landmark trees by the City of Fremont. Per Chapter 18.215 of the City of Fremont Municipal Code, a landmark tree is defined as, "...a tree that has been so designated by resolution of the City Council as well as any tree that has been designated in the general plan as a primary historic resource". Section 18.215.050 of the Municipal Code exempts public utility projects from needing tree removal permits for tree removal or pruning if the subject trees are not landmark trees and the work is required to maintain the integrity of the utility's facilities. As the trees proposed for removal by the Project do not qualify as landmark trees and since the proposed work is essential to maintain the integrity of the utility's facility, the Project would be exempt from requiring a tree removal permit. Therefore, the Project would have a less than significant impact related to local trees policies and ordinances.

*Level of Significance: Less Than Significant*

### **Impact BIO-5b: Impacts within the City of Fremont Riparian Setback**

The Project would involve construction within 20 feet of top of bank or 30 feet of the centerline of Agua Fria Creek. Thus, the City of Fremont's watercourse protection policy (Chapter 18.210.120) would not be applicable.

*Level of Significance: No Impact*

## **5.6 Impact due to Conflicts with an Adopted Habitat Conservation Plan**

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 Project will not conflict with the provisions of an adopted HCP, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. The Study Area is not within a geographic area covered by an adopted HCP or a natural community conservation plan. The Project would have no impact on provisions of an adopted, HCP, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

*Level of Significance: No Impact*

## **5.7 Cumulative Impacts**

Cumulative impacts on the biological resources that could be affected by the Project may result from a number of past, current, and reasonably foreseeable future projects that occur in the area.

Although such projects could result in impacts on these sensitive habitats and species, it is expected that most current and future projects that impact these species and their habitats would be required to mitigate these impacts through the CEQA or the regulatory permitting process, as



well as through the ESA Section 7 consultation process. As a result, most projects in the region will mitigate their impacts on these resources, minimizing cumulative impacts on these species.

Through implementation of the avoidance and minimization measures incorporated into the Project, it will not result in a cumulatively considerable contribution to any significant cumulative impacts to biological resources.

*Level of Significance: No Impact*

## 6.0 REFERENCES

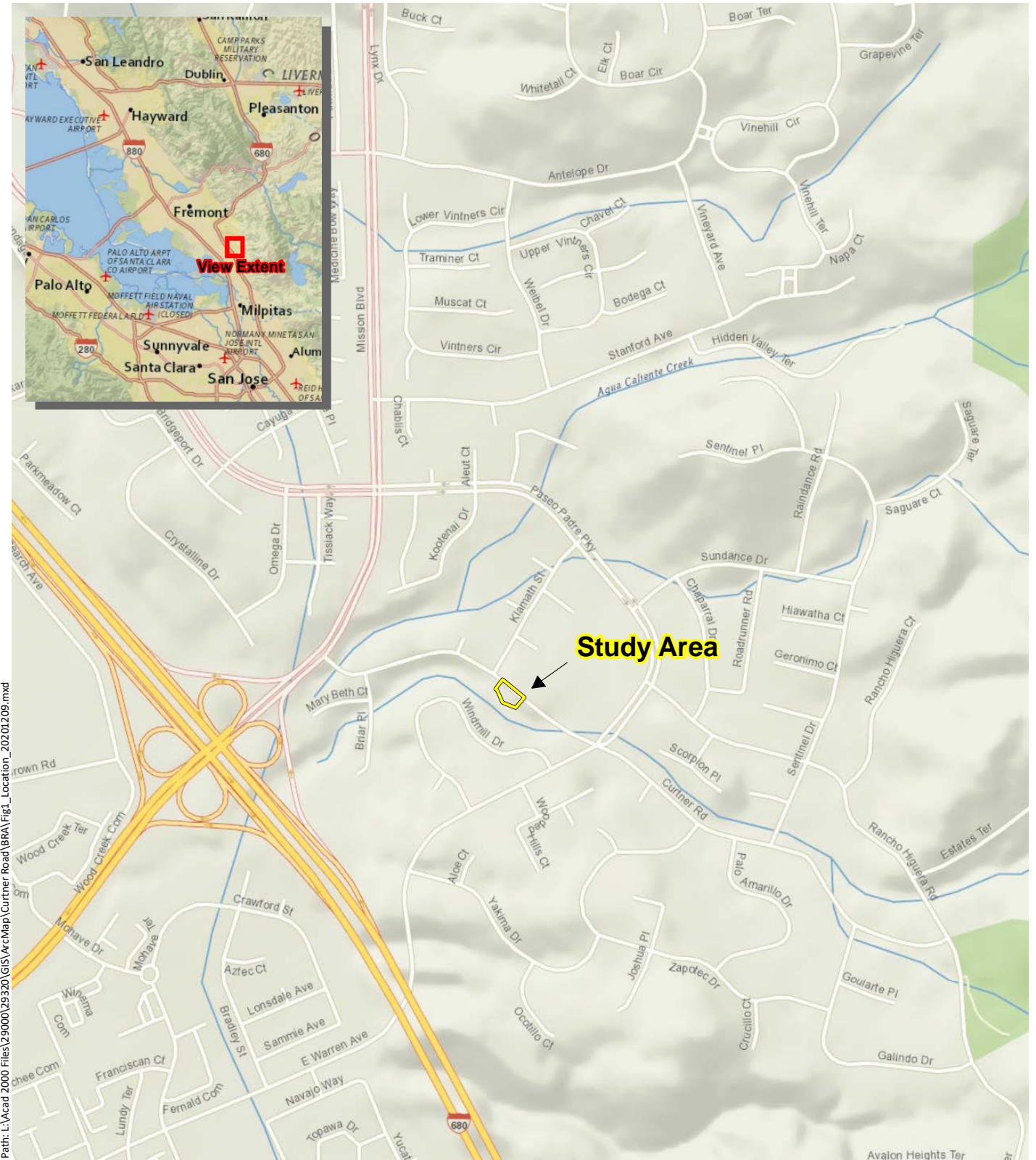
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## APPENDIX A

### FIGURES

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Sources: National Geographic, WRA | Prepared By: mweidenbach, 12/9/2020

## Figure 1. Study Area Regional Location Map

Biological Resources Assessment  
Alameda County Water District,  
Curtner Road Booster Station Improvements Project  
Alameda County, California

0 0.1 0.2  
Miles







Sources: Alameda County Aerial Imagery 2017, SSURGO, WRA | Prepared By: mweidenbach, 12/9/2020

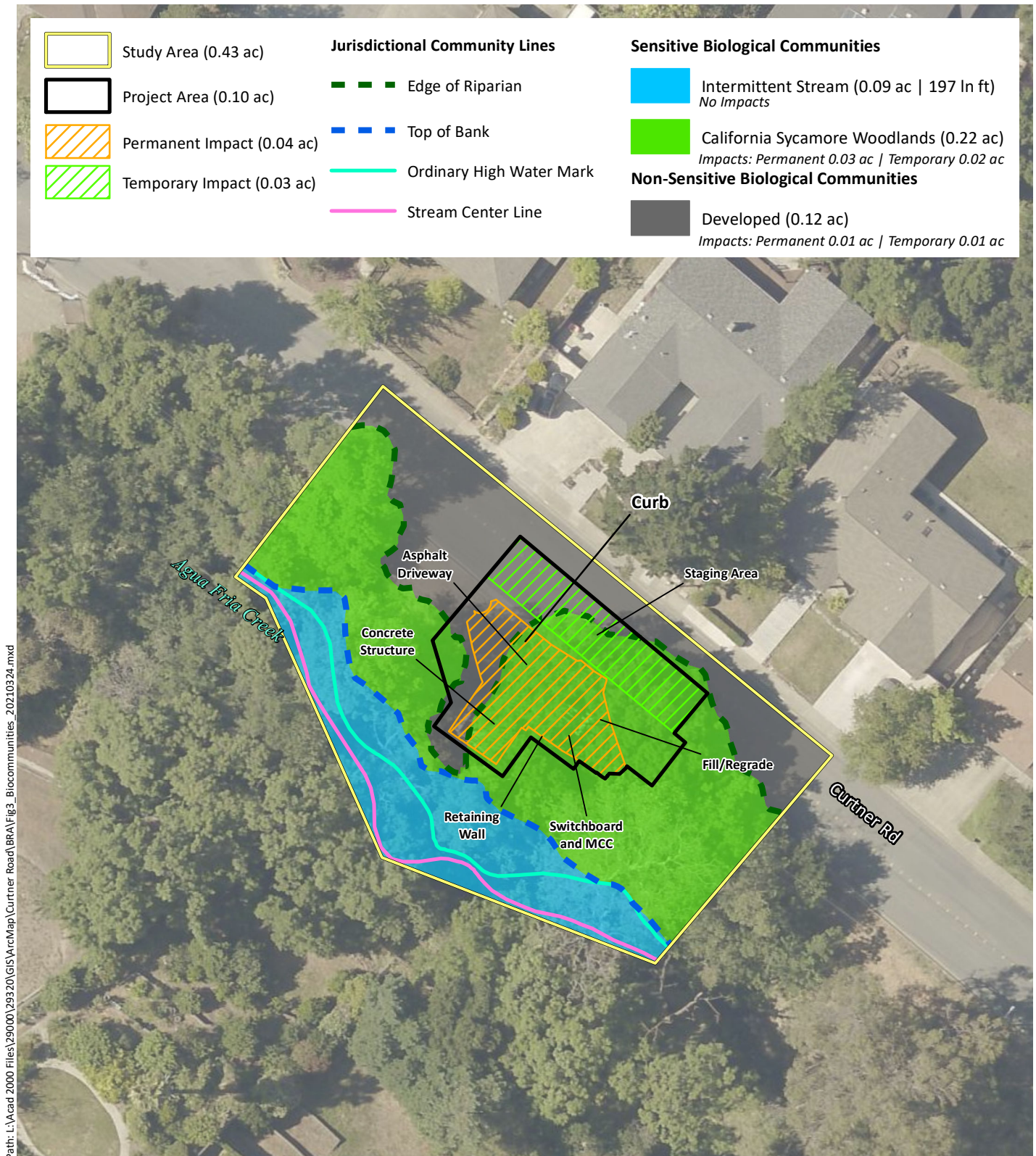
## Figure 2. Study Area Soils Map

Biological Resources Assessment  
Alameda County Water District,  
Curtner Road Booster Station Improvements Project  
Alameda County, California

0 25 50  
Feet







Sources: Alameda County Aerial Imagery 2017, WRA | Prepared By: njander, 8/19/2021

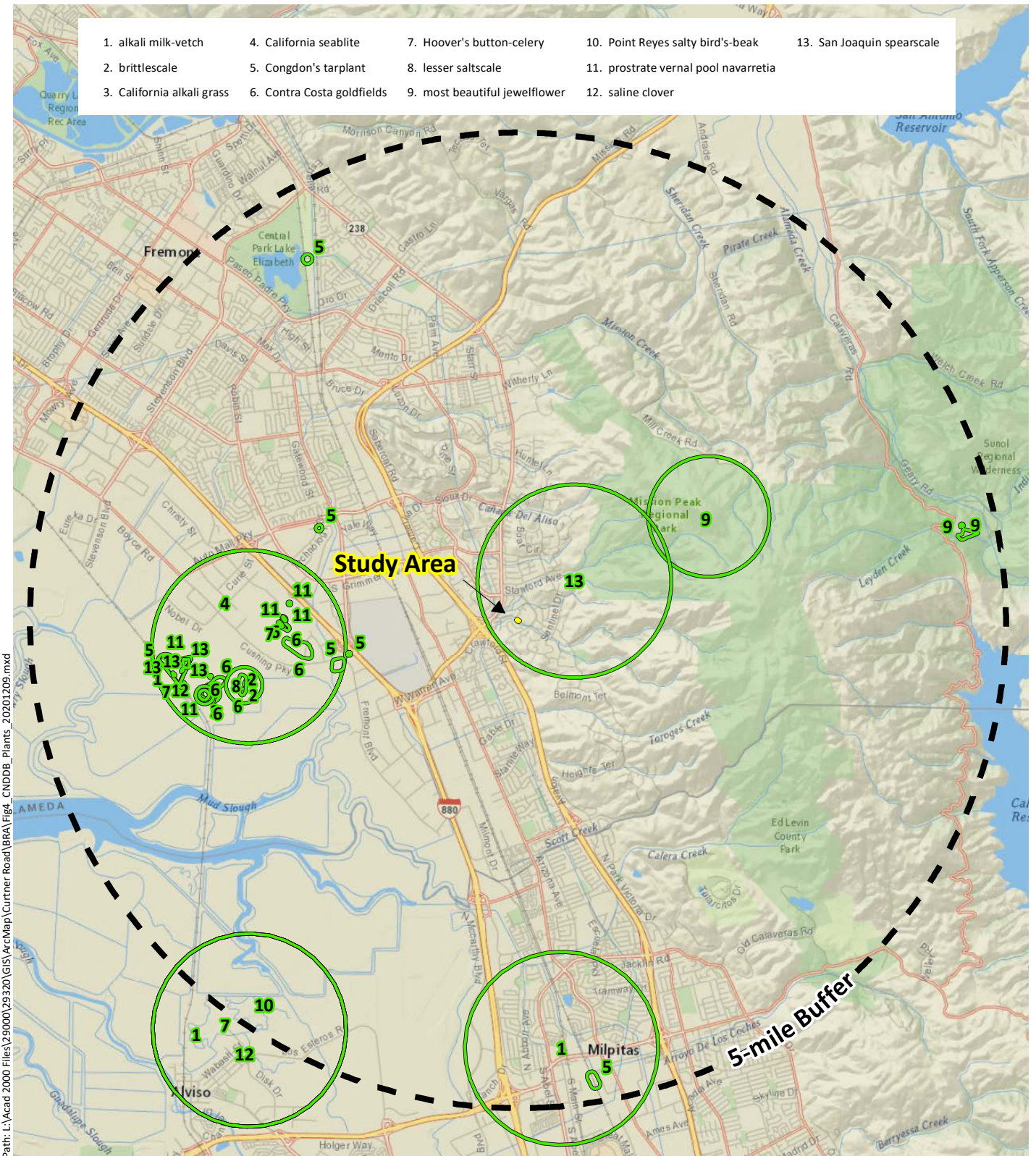
### Figure 3. Impacts to Biological Communities

Biological Resources Assessment  
Alameda County Water District,  
Curtner Road Booster Station Improvements Project  
Alameda County, California

0 25 50  
Feet







Sources: National Geographic, CNDDb February 2020, WRA | Prepared By: mweidenbach, 12/9/2020

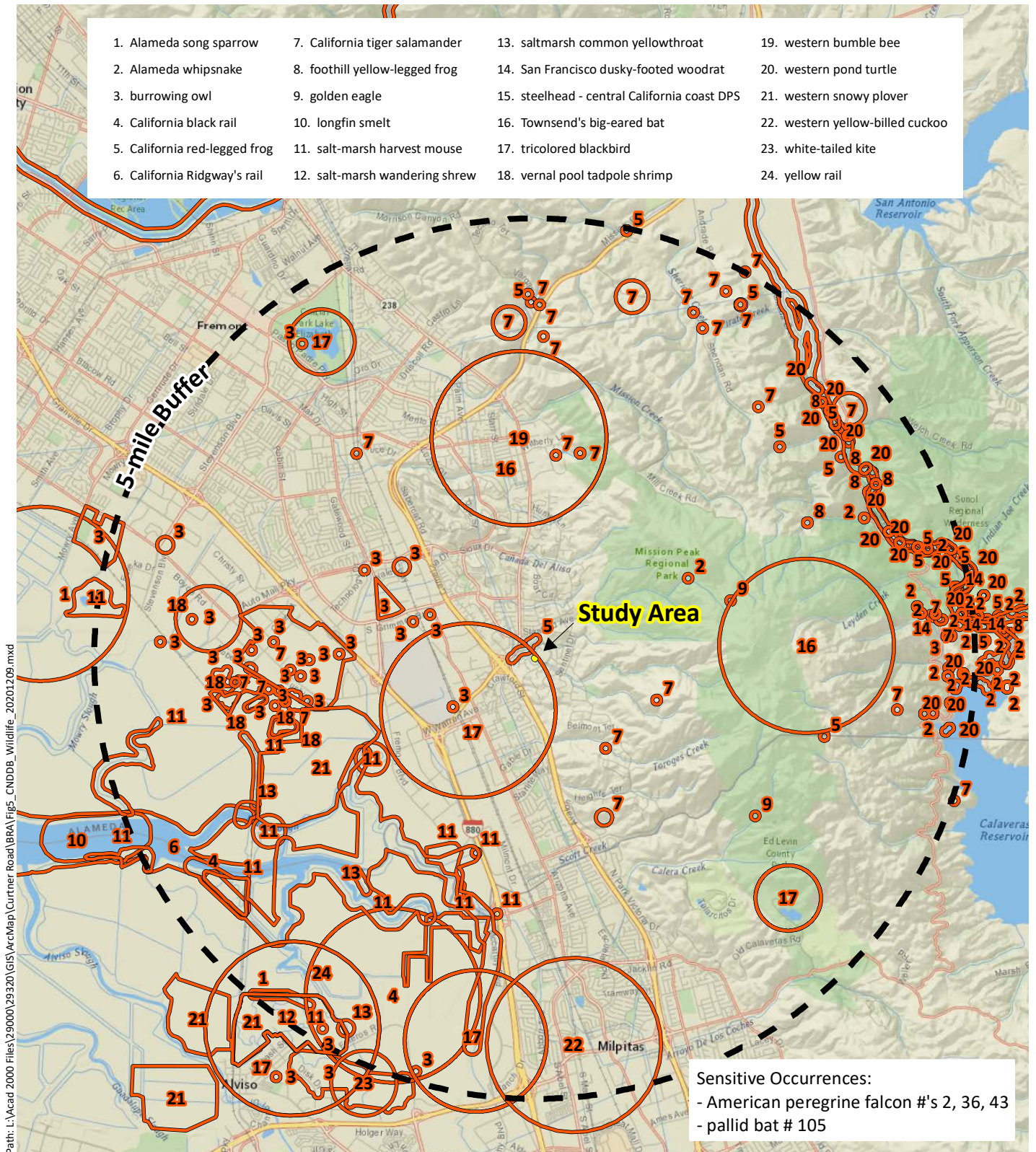
**Figure 4. Special-Status Plant Species Documented within 5 miles of the Study Area**

Biological Resources Assessment  
Alameda County Water District,  
Curtner Road Booster Station Improvements Project  
Alameda County, California

0 1 2 Miles







**Figure 5. Special-Status Wildlife Species Documented within 5 miles of the Study Area**

Biological Resources Assessment  
Alameda County Water District,  
Curtner Road Booster Station Improvements Project  
Alameda County, California

0 1 2 Miles



## APPENDIX B

### SPECIAL-STATUS PLANT AND WILDLIFE SPECIES POTENTIALS TABLE

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**Appendix B.** Potential for special-status plant and wildlife species to occur in the Study Area. List compiled from the California Department of Fish and Wildlife (CDFW) Natural Diversity Database (CDFW 2020), U.S. Fish and Wildlife Service (USFWS) Species Lists (USFWS 2020), and California Native Plant Society (CNPS) Electronic Inventory (CNPS 2020a) searches of the Milpitas and surrounding eight USGS 7.5' quadrangles.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
<b>Plants</b>				
Santa Clara thorn-mint <i>Acanthomintha lanceolata</i>	Rank 4.2	Chaparral (often serpentine), cismontane woodland, coastal scrub. Elevation ranges from 260 to 3935 feet (80 to 1200 meters). Blooms Mar-Jun.	<b>No Potential.</b> Suitable habitat is not present within Study Area. Site is outside of species' elevation range.	No further action necessary
California androsace <i>Androsace elongata</i> ssp. <i>acuta</i>	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.	<b>No Potential.</b> Suitable habitat is not present within Study Area. Site is outside of species' elevation range.	No further action necessary
alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	Rank 1B.2	Playas, valley and foothill grassland (adobe clay), vernal pools. Elevation ranges from 0 to 195 feet (1 to 60 meters). Blooms Mar-Jun.	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary
brittlescale <i>Atriplex depressa</i>	Rank 1B.2	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland, vernal pools. Elevation ranges from 0 to 1050 feet (1 to 320 meters). Blooms Apr-Oct.	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary
lesser saltscale <i>Atriplex minuscula</i>	Rank 1B.1	Chenopod scrub, playas, valley and foothill grassland. Elevation ranges from 45 to 655 feet (15 to 200 meters). Blooms May-Oct.	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
big-scale balsamroot <i>Balsamorhiza macrolepis</i>	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 145 to 5100 feet (45 to 1555 meters). Blooms Mar-Jun.	<b>Unlikely.</b> Suitable habitat is not present within Study Area.	No further action necessary
Brewer's calandrinia <i>Calandrinia breweri</i>	Rank 4.2	Chaparral, coastal scrub. Elevation ranges from 30 to 4005 feet (10 to 1220 meters). Blooms (Jan)Mar-Jun.	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary
chaparral harebell <i>Campanula exigua</i>	Rank 1B.2	Chaparral (rocky, usually serpentine). Elevation ranges from 900 to 4100 feet (275 to 1250 meters). Blooms May-Jun.	<b>No Potential.</b> Suitable habitat is not present within Study Area. Site is outside of species' elevation range.	No further action necessary
Congdon's tarplant <i>Centromadia parryi</i> ssp. <i>congdonii</i>	Rank 1B.1	Valley and foothill grassland (alkaline). Elevation ranges from 0 to 755 feet (0 to 230 meters). Blooms May-Oct(Nov).	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary
Point Reyes bird's-beak <i>Chloropyron maritimum</i> ssp. <i>palustre</i>	Rank 1B.2	Marshes and swamps (coastal salt). Elevation ranges from 0 to 35 feet (0 to 10 meters). Blooms Jun-Oct.	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary
robust spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i>	FE, Rank 1B.1	Chaparral (maritime), cismontane woodland (openings), coastal dunes, coastal scrub. Elevation ranges from 5 to 985 feet (3 to 300 meters). Blooms Apr-Sep.	<b>Unlikely.</b> Suitable habitat is not present within Study Area.	No further action necessary

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Mt. Hamilton fountain thistle <i>Cirsium fontinale</i> var. <i>campylon</i>	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 325 to 2920 feet (100 to 890 meters). Blooms (Feb)Apr-Oct.	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary
Santa Clara red ribbons <i>Clarkia concinna</i> ssp. <i>automixa</i>	Rank 4.3	Chaparral, cismontane woodland. Elevation ranges from 295 to 4920 feet (90 to 1500 meters). Blooms (Apr)May-Jun(Jul).	<b>No Potential.</b> Suitable habitat is not present within Study Area. Site is outside of species' elevation range.	No further action necessary
Lewis' clarkia <i>Clarkia lewisii</i>	Rank 4.3	Broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub. Elevation ranges from 95 to 3920 feet (30 to 1195 meters). Blooms May-Jul.	<b>Unlikely.</b> Suitable habitat is not present within Study Area.	No further action necessary
San Francisco collinsia <i>Collinsia multicolor</i>	Rank 1B.2	Closed-cone coniferous forest, coastal scrub. Elevation ranges from 95 to 820 feet (30 to 250 meters). Blooms (Feb)Mar-May.	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary
clustered lady's-slipper <i>Cypripedium fasciculatum</i>	Rank 4.2	Lower montane coniferous forest, north coast coniferous forest. Elevation ranges from 325 to 7990 feet (100 to 2435 meters). Blooms Mar-Aug.	<b>No Potential.</b> Suitable habitat is not present within Study Area. Site is outside of species' elevation range.	No further action necessary

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Hospital Canyon larkspur <i>Delphinium californicum</i> ssp. <i>interius</i>	Rank 1B.2	Chaparral (openings), cismontane woodland (mesic), coastal scrub. Elevation ranges from 635 to 3595 feet (195 to 1095 meters). Blooms Apr-Jun.	<b>No Potential.</b> Suitable habitat is not present within Study Area. Site is outside of species' elevation range.	No further action necessary
western leatherwood <i>Dirca occidentalis</i>	Rank 1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, north coast coniferous forest, riparian forest, riparian woodland. Elevation ranges from 80 to 1395 feet (25 to 425 meters). Blooms Jan-Mar(Apr).	<b>Unlikely.</b> The Study Area contains minimal riparian woodland habitat and this species was not observed during the February 11, 2020 site visit (which occurred during this species' published bloom period). No known occurrences within 13 miles of the Study Area.	No further action necessary
Santa Clara Valley dudleya <i>Dudleya abramsii</i> ssp. <i>setchellii</i>	FE, Rank 1B.1	Cismontane woodland, valley and foothill grassland. Elevation ranges from 195 to 1495 feet (60 to 455 meters). Blooms Apr-Oct.	<b>Unlikely.</b> Suitable habitat is not present within Study Area.	No further action necessary
Jepson's woolly sunflower <i>Eriophyllum jepsonii</i>	Rank 4.3	Chaparral, cismontane woodland, coastal scrub. Elevation ranges from 655 to 3365 feet (200 to 1025 meters). Blooms Apr-Jun.	<b>No Potential.</b> Suitable habitat is not present within Study Area. Site is outside of species' elevation range.	No further action necessary
Hoover's button-celery <i>Eryngium aristulatum</i> var. <i>hooveri</i>	Rank 1B.1	Vernal pools. Elevation ranges from 5 to 150 feet (3 to 45 meters). Blooms (Jun)Jul(Aug).	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary



SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
San Joaquin spearscale <i>Extriplex joaquinana</i>	Rank 1B.2	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland. Elevation ranges from 0 to 2740 feet (1 to 835 meters). Blooms Apr-Oct.	<b>Unlikely.</b> Suitable habitat is not present within Study Area.	No further action necessary
stinkbells <i>Fritillaria agrestis</i>	Rank 4.2	Chaparral, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland. Elevation ranges from 30 to 5100 feet (10 to 1555 meters). Blooms Mar-Jun.	<b>Unlikely.</b> Suitable habitat is not present within Study Area.	No further action necessary
fragrant fritillary <i>Fritillaria liliacea</i>	Rank 1B.2	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 5 to 1345 feet (3 to 410 meters). Blooms Feb-Apr.	<b>Unlikely.</b> Suitable habitat is not present within Study Area.	No further action necessary
Diablo helianthella <i>Helianthella castanea</i>	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.	<b>Unlikely.</b> The Study Area contains minimal riparian woodland habitat and occurs near the lower limit of this species' elevation range. Additionally, the Study Area is situated south of this species' known range in the Bay Area. No known occurrences within 12 miles of the Study Area.	No further action necessary
Loma Prieta hoita <i>Hoita strobilina</i>	Rank 1B.1	Chaparral, cismontane woodland, riparian woodland. Elevation ranges from 95 to 2820 feet (30 to 860 meters). Blooms May-Jul (Aug-Oct).	<b>Unlikely.</b> The Study Area contains minimal riparian woodland habitat. Additionally, the Study Area is situated outside of this species' known range in the	No further action necessary

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
coast iris <i>Iris longipetala</i>			Bay Area. This species is known to occur in more mountainous areas, such as the Santa Cruz Mountains. No known occurrences within 20 miles of the Study Area.	
	Rank 4.2	Coastal prairie, lower montane coniferous forest, meadows and seeps. Elevation ranges from 0 to 1970 feet (0 to 600 meters). Blooms Mar-May.	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary
Contra Costa goldfields <i>Lasthenia conjugens</i>	FE; Rank 1B.1	Cismontane woodland, playas (alkaline), valley and foothill grassland, vernal pools. Elevation ranges from 0 to 1540 feet (0 to 470 meters). Blooms Mar-Jun.	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary
bristly leptosiphon <i>Leptosiphon acicularis</i>	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.	<b>Unlikely.</b> Suitable habitat is not present within Study Area.	No further action necessary
serpentine leptosiphon <i>Leptosiphon ambiguus</i>	Rank 4.2	Cismontane woodland, coastal scrub, valley and foothill grassland. Elevation ranges from 390 to 3705 feet (120 to 1130 meters). Blooms Mar-Jun.	<b>No Potential.</b> Suitable habitat is not present within Study Area. Site is outside of species' elevation range.	No further action necessary

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
woolly-headed lessingia <i>Lessingia hololeuca</i>	Rank 3	Broadleafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 45 to 1000 feet (15 to 305 meters). Blooms Jun-Oct.	<b>Unlikely.</b> Suitable habitat is not present within Study Area.	No further action necessary
smooth lessingia <i>Lessingia micradenia</i> var. <i>glabrata</i>	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 390 to 1380 feet (120 to 420 meters). Blooms (Apr-Jun)Jul-Nov.	<b>No Potential.</b> Suitable habitat is not present within Study Area. Site is outside of species' elevation range.	No further action necessary
arcuate bush-mallow <i>Malacothamnus arcuatus</i>	Rank 1B.2	Chaparral, cismontane woodland. Elevation ranges from 45 to 1165 feet (15 to 355 meters). Blooms Apr-Sep.	<b>Unlikely.</b> Suitable habitat is not present within Study Area.	No further action necessary
Hall's bush-mallow <i>Malacothamnus hallii</i>	Rank 1B.2	Chaparral, coastal scrub. Elevation ranges from 30 to 2495 feet (10 to 760 meters). Blooms (Apr)May-Sep(Oct).	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary
Mt. Diablo cottonweed <i>Micropus amphibolus</i>	Rank 3.2	Broadleafed upland forest, chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 145 to 2705 feet (45 to 825 meters). Blooms Mar-May.	<b>Unlikely.</b> Suitable habitat is not present within Study Area.	No further action necessary

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
elongate copper moss <i>Melichhoferia elongata</i>	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).	<b>Unlikely.</b> Suitable habitat is not present within Study Area.	No further action necessary
San Antonio Hills monardella <i>Monardella antonina</i> ssp. <i>antonina</i>	Rank 3	Chaparral, cismontane woodland. Elevation ranges from 1045 to 3280 feet (320 to 1000 meters). Blooms Jun-Aug.	<b>No Potential.</b> Suitable habitat is not present within Study Area. Site is outside of species' elevation range.	No further action necessary
woodland woollythreads <i>Monolopia gracilens</i>	Rank 1B.2	Broadleafed upland forest (openings), chaparral (openings), cismontane woodland, north coast coniferous forest (openings), valley and foothill grassland. Elevation ranges from 325 to 3935 feet (100 to 1200 meters). Blooms (Feb)Mar-Jul.	<b>No Potential.</b> Suitable habitat is not present within Study Area. Site is outside of species' elevation range.	No further action necessary
Patterson's navarretia <i>Navarretia paradoxiclara</i>	Rank 1B.3	Meadows and seeps. Elevation ranges from 490 to 1410 feet (150 to 430 meters). Blooms May-Jun(Jul).	<b>No Potential.</b> Suitable habitat is not present within Study Area. Site is outside of species' elevation range.	No further action necessary
prostrate vernal pool navarretia <i>Navarretia prostrata</i>	Rank 1B.1	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools. Elevation ranges from 5 to 3970 feet (3 to 1210 meters). Blooms Apr-Jul.	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
hairless popcornflower <i>Plagiobothrys glaber</i>	Rank 1A	Meadows and seeps (alkaline), marshes and swamps (coastal salt). Elevation ranges from 45 to 590 feet (15 to 180 meters). Blooms Mar-May.	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary
California alkali grass <i>Puccinellia simplex</i>	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.	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary
chaparral ragwort <i>Senecio aphanactis</i>	Rank 2B.2	Chaparral, dismontane woodland, coastal scrub. Elevation ranges from 45 to 2625 feet (15 to 800 meters). Blooms Jan-Apr(May).	<b>Unlikely.</b> Suitable habitat is not present within Study Area.	No further action necessary
maple-leaved checkerbloom <i>Sidalcea malachroides</i>	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.	<b>Unlikely.</b> The Study Area contains minimal riparian habitat and this species has not been documented in the Bay Area in the last century.	No further action necessary
long-styled sand-spurrey <i>Spergularia macrotheca</i> var. <i>longistyla</i>	Rank 1B.2	Meadows and seeps, marshes and swamps. Elevation ranges from 0 to 835 feet (0 to 255 meters). Blooms Feb-May(Jun).	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary
Metcalf Canyon jewelflower <i>Streptanthus albidus</i> ssp. <i>albidus</i>	FE, Rank 1B.1	Valley and foothill grassland (serpentine). Elevation ranges from 145 to 2625 feet (45 to 800 meters). Blooms Apr-Jul.	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
most beautiful jewelflower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	Rank 1B.2	Chaparral, dismontane woodland, valley and foothill grassland. Elevation ranges from 310 to 3280 feet (95 to 1000 meters). Blooms (Mar)Apr-Sep(Oct).	<b>No Potential.</b> Suitable habitat is not present within Study Area. Site is outside of species' elevation range.	No further action necessary
slender-leaved pondweed <i>Stuckenia filiformis</i> ssp. <i>alpina</i>	Rank 2B.2	Marshes and swamps (assorted shallow freshwater). Elevation ranges from 980 to 7055 feet (300 to 2150 meters). Blooms May-Jul.	<b>No Potential.</b> Suitable habitat is not present within Study Area. Site is outside of species' elevation range.	No further action necessary
California seablite <i>Suaeda californica</i>	FE, Rank 1B.1	Marshes and swamps (coastal salt). Elevation ranges from 0 to 50 feet (0 to 15 meters). Blooms Jul-Oct.	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary
saline clover <i>Trifolium hydrophilum</i>	Rank 1B.2	Marshes and swamps, valley and foothill grassland (mesic, alkaline), vernal pools. Elevation ranges from 0 to 985 feet (0 to 300 meters). Blooms Apr-Jun.	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary
caper-fruited tropidocarpum <i>Tropidocarpum capparideum</i>	Rank 1B.1	Valley and foothill grassland (alkaline hills). Elevation ranges from 0 to 1495 feet (1 to 455 meters). Blooms Mar-Apr.	<b>No Potential.</b> Suitable habitat is not present within Study Area.	No further action necessary

Mammals				
pallid bat <i>Antrozous pallidus</i>	SSC, WBWG High Priority	Occupies a variety of habitats at low elevation including grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting.	<b>Unlikely.</b> The Study Area does not contain dry or open forest, woodland, grassland, or shrubland habitat that is typically associated with this species. No rocky areas are present in the Study Area to support roosting by this species.	No further actions are recommended for this species.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	SSC, WBWG High Priority	Primarily found in rural settings in a wide variety of habitats including oak woodlands and mixed coniferous-deciduous forest. Day roosts highly associated with caves and mines. Building roost sites must be cave like. Very sensitive to human disturbance.	<b>Unlikely.</b> The Study Area does not contain caves, mines, or abandoned buildings to support roosting by this species.	No further actions are recommended for this species.
hoary bat <i>Lasiurus cinereus</i>	WBWG Medium	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.	<b>Unlikely.</b> The Study Area does not contain the dense forested habitat typically used for roosting by this species.	No further actions are recommended for this species.

long-eared myotis <i>Myotis evotis</i>	WBWG Medium	Occurs in semiarid shrublands, sage, chaparral, and agricultural areas, but is usually associated with coniferous forests from sea level to 9000 feet. Individuals roost under exfoliating tree bark, and in hollow trees, caves, mines, cliff crevices, and rocky outcrops on the ground. They also sometimes roost in buildings and under bridges.	<b>Unlikely.</b> The Study Area does not contain shrubland, coniferous forest, or other roosting habitat typical for this species.	No further actions are recommended for this species.
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	SSC	Typically occurs in forest habitats of moderate canopy and moderate to dense understory, especially redwood. Also found in chaparral habitats.	<b>Unlikely.</b> The Study Area does not contain forest with moderate or dense canopy and understory to support this species. The Project Area is primarily developed with bare ground.	No further actions are recommended for this species.
salt-marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE, SE, CFP	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.	<b>No Potential.</b> No salt marsh habitat is present to support the species.	No further actions are recommended for this species.
salt-marsh wandering shrew <i>Sorex vagrans halicoetes</i>	SSC	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 <i>Salicornia</i> .	<b>No Potential.</b> The Study Area does not contain marsh habitat.	No further actions are recommended for this species.



San Joaquin kit fox <i>Vulpes macrotis mutica</i>	FE, ST	Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	<b>No Potential.</b> The Study Area does not contain annual grassland or open habitat with suitable soils for burrow development. In addition, the Study Area is in an area of dense urban development and is not contiguous with occupied habitat.	No further actions are recommended for this species
American badger <i>Taxidea taxus</i>	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable, uncultivated soils. Prey on burrowing rodents.	<b>No Potential.</b> The Study Area does not contain suitable grassland or dry forest habitat for this species and is not contiguous with occupied habitat. High development and disturbance levels preclude badger from the Study Area.	No further actions are recommended for this species.
<b>Birds</b>				
tricolored blackbird <i>Agelaius tricolor</i>	SSC, ST	Usually nests over or near freshwater in dense cattails, tules, or thickets of willow, blackberry, wild rose or other tall herbs. Nesting area must be large enough to support about 50 pairs.	<b>Unlikely.</b> The Study Area does not contain suitable expanses of marsh or dense patches of freshwater vegetation to support nesting by a colony of this species.	No further actions are recommended for this species.
golden eagle <i>Aquila chrysaetos</i>	CFP, BGEPA	Year-round resident in rolling foothills with open grasslands, scattered trees, and cliff-walled canyons.	<b>Unlikely.</b> The Study Area does not contain trees or cliffs large enough to support nesting by the species. In addition, the high level of development in the surrounding area reduces the potential for golden eagles to forage in the vicinity. This species may occasionally fly over.	No further actions are recommended for this species.

burrowing owl <i>Athene cunicularia</i>	SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	<b>Unlikely.</b> The Study Area does not contain suitable open dry annual grassland or scrubland to support this species. The Study Area is within a densely developed urban area, further reducing the potential for burrowing owl to occur in the Study Area	No further actions are recommended for this species.
Swainson's hawk <i>Buteo swainsoni</i>	ST	Summer resident in California's Central Valley and limited portions of the southern California interior. Nests in tree groves and isolated trees in riparian and agricultural areas, including near buildings. Forages in grasslands and scrub habitats as well as agricultural fields, especially alfalfa. Preys on arthropods year-round as well as smaller vertebrates during the breeding season.	<b>Unlikely.</b> The Study Area is within a densely developed urban area that does not provide foraging opportunities for Swainson's hawk. In addition, there are no nearby documented occurrences of this species (CDFW 2020).	No further actions are recommended for this species.
western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT, SSC	Federal listing applies only to the Pacific coastal population. Found on sandy beaches, salt pond levees, and shores of large alkali lakes. Requires sandy, gravelly, or friable soils for nesting.	<b>No Potential.</b> There is no sand, dune or beach habitat present within the Study Area to support nesting by the species. The Study Area is within a densely developed urban area, further reducing the potential for this species to occur.	No further actions are recommended for this species.
northern harrier <i>Circus cyaneus</i>	SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain shrubby vegetation, usually at marsh edge.	<b>No Potential.</b> The Study Area does not contain annual grassland or open habitat to support nesting or foraging by this species. The urban nature of the site further reduces the potential for northern harrier to nest within or adjacent to the Study Area.	No further actions are recommended for this species.

western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FT, SE	Summer resident, breeding in dense riparian forests and jungles, typically with early successional vegetation present. Utilizes densely-forested deciduous trees and shrubs. Eats mostly caterpillars. Current breeding distribution within California very restricted.	<b>No Potential.</b> The Study Area does not contain suitably dense riparian habitat to support this species. This species has not been documented nesting in the vicinity of the Study Area since the 1800s (CDFW 2020).	No further actions are recommended for this species.
yellow rail <i>Coturnicops noveboracensis</i>	SSC	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.	<b>No Potential.</b> The Study Area does not contain freshwater marsh or wet meadow to support breeding by this species. The urban nature of the site further reduces the potential this species to nest within or adjacent to the Study Area.	No further actions are recommended for this species.
white-tailed kite <i>Elanus leucurus</i>	CFP	Year-long resident of coastal and valley lowlands. Preys on small diurnal mammals and occasional birds, insects, reptiles, and amphibians.	<b>Unlikely.</b> The Study Area is primarily residential development and lacks open grasslands and prey base to support this species.	No further actions are recommended for this species.
American peregrine falcon <i>Falco peregrinus</i>	CFP	Resident and winter visitor to region. Occurs near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape on a depression or ledge in an open site.	<b>No Potential.</b> The Study Area does not contain suitable cliffs or tall structures to support nesting by the species.	No further actions are recommended for this species.

San Francisco (saltmarsh) common yellowthroat <i>Geothlypis trichas sinuosa</i>	SSC	Resident of San Francisco bay region fresh and salt-water marshes. Requires thick, continuous cover down to water surface for foraging, tall grasses, tule patches, willows for nesting.	<b>Unlikely.</b> The Study Area does not contain marsh habitat or dense vegetation to support nesting and foraging by the species. This species may occasionally be seen in the Study Area during migrations.	No further actions are recommended for this species.
bald eagle <i>Haliaeetus leucocephalus</i>	SE, CFP, BGEPA	Frequents ocean shores, lake margins, and rivers for both nesting and wintering. Requires abundant fish and adjacent snags or other perches. Nests in large, old-growth, or dominant live tree with open branch-work.	<b>Unlikely.</b> The Study Area does not contain suitable large trees or open water to support nesting and foraging by this species. This species may occasionally fly over.	No further actions are recommended for this species.
California black rail <i>Laterallus jamaicensis coturniculus</i>	ST, CFP	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.	<b>No Potential.</b> The Study Area does not contain marsh habitat to support nesting by this species.	No further actions are recommended for this species.
Alameda song sparrow <i>Melospiza melodia pusillula</i>	SSC	Year-round resident in tidal-influenced marshes along the eastern and southern portions of San Francisco Bay.	<b>Unlikely.</b> The Study Area is outside the typical range of this subspecies and does not contain marsh or tidal habitats.	No further actions are recommended for this species.
California Ridgway's (clapper) rail <i>Rallus obsoletus (longirostris) obsoletus</i>	FE, SE, CFP	Associated with tidal salt marsh and brackish marshes supporting emergent vegetation, upland refugia, and incised tidal channels.	<b>No Potential.</b> The Study Area does not contain marsh habitat to support nesting by this species.	No further actions are recommended for this species.

bank swallow <i>Riparia riparia</i>	ST	Migrant in riparian and other lowland habitats in western California. Colonial nester in riparian areas with vertical cliffs and bands with fine-textured or fine-textured sandy soils near streams, rivers, lakes or the ocean.	<b>Unlikely.</b> The Study Area does not contain cliff habitat required for nesting by this species.	No further actions are recommended for this species.
black skimmer <i>Rynchops niger</i>	SSC	Found primarily in southern California; South San Francisco Bay has a small resident population. Nests colonially on gravel bars, low islets, and sandy beaches	<b>No Potential.</b> The Study Area does not contain gravel bars, islets, or sandy beach habitat to support nesting by this species.	No further actions are recommended for this species.
California least tern <i>Sterna antillarum browni</i>	FE, SE, CFP	Nests along the coast from San Francisco bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	<b>No Potential.</b> There is no sand, dune or beach habitat present within the Study Area to support nesting by the species.	No further actions are recommended for this species.
<b>Reptiles and Amphibians</b>				
western pond turtle <i>Actinemys [Emys] marmorata</i>	SSC	Occurs in perennial ponds, lakes, rivers and streams with suitable basking habitat (mud banks, mats of floating vegetation, partially submerged logs) and submerged shelter.	<b>Unlikely.</b> Agua Fria Creek runs through the Study Area; however, much of Agua Fria Creek is underground culvert and is engineered channel and is surrounded by dense urban development which serves as a barrier to dispersal for nearby populations. The Project Area is primarily developed with hard packed and barren ground.	No further actions are recommended for this species.

California tiger salamander <i>Ambystoma californiense</i>	FT, ST	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.	<b>Unlikely.</b> The Study Area does not contain grassland or seasonal wetland habitat to support this species. The Study Area is within an area of dense residential development which serves as a dispersal barrier for this species.	No further actions are recommended for this species.
Santa Cruz black salamander <i>Aneides flavipunctatus niger</i>	SSC	Climbing salamanders of the genus <i>Aneides</i> frequent damp woodlands and are usually found hiding under various debris (i.e. bark, woodrat nests, logs). The Santa Cruz black salamander exists south of the San Francisco Bay and was only recently recognized as a separate and protected species. Santa Cruz black salamander is highly sedentary, preferring to stay hidden under riparian debris. Prey items include millipedes, spiders, and other insects (Stebbins and McGinnis 2012).	<b>Unlikely.</b> The Study Area contains riparian habitat. However, the Study Area is north of this species typical range. There are no nearby documented occurrences (CDFW 2020).	No further actions are recommended for this species.
northern California legless lizard <i>Anniella pulchra</i>	SSC	Fossorial species, inhabiting sandy or loose loamy soils under relatively sparse vegetation. Suitable habitat includes dunes, stream terraces, and scrub and chaparral. Adequate soil moisture is essential.	<b>No Potential.</b> The Study Area does not contain suitable sandy or loamy soils. In addition, the Study Area is surrounded by dense urban development which serves as a barrier to dispersal for nearby populations.	No further actions are recommended for this species.

California giant salamander <i>Dicamptodon ensatus</i>	SSC	Occurs in the north-central Coast Ranges. Moist coniferous and mixed forests are typical habitat; also uses woodland and chaparral. Adults are terrestrial and fossorial, breeding in cold, permanent, or semi-permanent streams. Larvae usually remain aquatic for over a year.	<b>Unlikely.</b> Aquatic habitat within the Study Area is surrounded by dense urban development and does not contain the forested or chaparral habitat typically associated with terrestrial forms of this species. The Study Area is located north of the Santa Cruz Mountains' population of <i>Dicamptodon</i> . There are no documented occurrences in the vicinity of the Study Area (CDFW 2020).	No further actions are recommended for this species.
Alameda whipsnake <i>Masticophis lateralis euryxanthus</i>	FT, ST	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.	<b>Unlikely.</b> The Study Area does not contain suitable vegetative mosaics with grasses and chaparral to support this species. This species is documented to occur in the open hills east of the Study, with the nearest documented occurrence approximately 2 miles to the northeast (CDFW 2020). However, the Study Area is surrounded by dense urban development which serves as a barrier to dispersal for nearby populations. The Project Area is primarily developed and disturbed with hard packed and barren ground.	No further actions are recommended for this species.

foothill yellow-legged frog (FYLF) <i>Rana boylei</i>	SC, SSC	<p>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.</p>	<p><b>Unlikely.</b> No records of FYLF exist for the species within or near Agua Fria Creek or its tributaries. The Study Area does not contain rocky or cobble habitat with riffles to support breeding by this species. Much of Agua Fria Creek is underground culvert and engineered channel and does not provide suitable habitat for FYLF. In addition, the Project Area is located outside of the top of the bank of Agua Fria Creek in a developed and disturbed area.</p>	<p>No further actions are recommended for this species.</p>
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California red-legged frog (CRLF) <i>Rana draytonii</i>	FT, SSC	Associated with quiet perennial to intermittent ponds, stream pools, and wetlands with adjacent upland habitat containing refugia. Prefers shorelines with extensive vegetation. Documented to disperse through upland habitats after rains.	<p><b>Moderate Potential.</b> This species has not recently been documented within 3 miles of the Study Area (CDFW 2020). Agua Fria Creek within and adjacent to the Study Area does not contain marshes, ponds, or stream pools suitable to support breeding by this species. Much of Agua Fria Creek downstream of the Study Area is conveyed via an underground culvert and engineered channel and does not provide suitable habitat for CRLF. Given that there are documented occurrences in the hills approximately 4 miles east of the Study Area, and there is limited aquatic habitat within Agua Fria Creek, individuals may occasionally occur within the Study Area. The Project Area is located outside of the top of the bank of Agua Fria Creek in a developed and disturbed area with barren and hard-packed ground that does not provide habitat for CRLF. This species has potential to occur within Agua Fria Creek, but is unlikely to occur within the developed and disturbed land within the Project Area.</p>	No Project work will occur below top of bank. In addition, Agua Fria Creek is an intermittent stream, and any demolition or grading will occur in summer months when California red-legged frog are not likely to be present in Agua Fria Creek. No further actions are recommended for this species.
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Fish				
Delta smelt <i>Hypomesus transpacificus</i>	FT, SE	Lives in the Sacramento-San Joaquin estuary in areas where salt and freshwater systems meet. Occurs seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities > 10 ppt; most often at salinities < 2 ppt.	<b>No Potential.</b> The Study Area does not contain estuarine habitat to support this species.	No further actions are recommended for this species.
hardhead <i>Mylopharodon conocephalus</i>	SSC	Found in low to mid-elevation streams in the Sacramento-San Joaquin drainage; also occurs in the Russian River and tributaries. Favors clear, deep pools with sand-gravel-boulder bottoms and slow water velocity. Not found where exotic Centrarchids predominate.	<b>Unlikely.</b> Agua Fria Creek within the Study Area is not characteristic of habitat for this species (clear, deep pools, sand-gravel-boulder bottom). Much of Agua Fria Creek is underground culvert and engineered channels.	No further actions are recommended for this species.
Coho salmon - Central CA Coast ESU <i>Oncorhynchus kisutch</i>	FE, SE	Federal listing includes populations between Punta Gorda and San Lorenzo River. State listing includes populations south of San Francisco Bay only. Occurs inland and in coastal marine waters. Requires beds of loose, silt-free, coarse gravel for spawning. Also needs cover, cool water and sufficient dissolved oxygen.	<b>Unlikely.</b> Agua Fria Creek within the Study Area is not characteristic of habitat for this species (silt free, coarse gravel). Much of Agua Fria Creek is long sections of underground culvert and engineered channels, likely precluding anadromous species from the Study Area.	No further actions are recommended for this species.

steelhead, Central California Coast ESU <i>Oncorhynchus mykiss irideus</i>	FT	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.	<b>Unlikely.</b> Agua Fria Creek within the Study Area does not contain suitable spawning habitat. Much of Agua Fria Creek is long sections of underground culvert and engineered channels, likely precluding anadromous species from the Study Area. No known run of steelhead is present in Agua Fria Creek (Leidy et. al. 2005).	No further actions are recommended for this species.
longfin smelt <i>Spirinchus thaleichthys</i>	FC, ST	Found in open waters of estuaries, mostly in the middle or bottom of the water column. This species prefers salinities of 15 to 30 ppt, but can be found in completely freshwater to almost pure seawater.	<b>No Potential.</b> The Study Area does not contain estuarine habitat to support this species.	No further actions are recommended for this species.
Pacific lamprey <i>Entosphenus</i> (= <i>Lampetra</i> ) <i>tridentatus</i>	SSC	Spawns between March and July in gravel bottomed streams in riffle habitat. Larvae drift downstream to areas of low velocity and fine substrates and are relatively immobile in the stream substrates.	<b>Unlikely.</b> The Study Area does not contain suitable gravel bottomed riffle habitat. In addition, much of Agua Fria Creek is long sections of underground culvert and engineered channels, further reducing suitability for this species.	No further actions are recommended for this species.
<b>Invertebrates</b>				
Crotch bumblebee <i>Bombus crotchii</i>	SC	Range largely restricted to California, favoring grassland and scrub habitats. Typical of bumble bees, nests are usually constructed underground.	<b>Unlikely.</b> The Study Area does not contain grassland or scrub habitat and is surrounded by dense residential development. No small mammal burrows were observed within the Study Area to support ground nesting.	No further actions are recommended for this species.

western bumblebee <i>Bombus occidentalis</i>	SC	Once widespread in the western United States and Canada, populations of this insect have drastically declined in recent decades. Pollinates a variety of wild flowering plants and crops. Nests in the ground, usually in association with small mammal burrows with sunny aspects. Current populations are thought to be restricted to high elevation sights in the Sierras with scattered occurrences on the northern California coast (Xerces, 2018).	<b>Unlikely.</b> The Study Area is outside of this species known current distribution. In addition, no small mammal burrows were observed within the Study Area to support ground nesting.	No further actions are recommended for this species.
San Bruno elfin butterfly <i>Callophrys mossii bayensis</i>	FE	Inhabits coastal mountainous areas with grassy ground cover, mainly in the vicinity of San Bruno Mountain, San Mateo County. Colonies are located on steep, north-facing slopes above 200 feet within the fog belt. Larval host plant is <i>Sedum spathulifolium</i> .	<b>No Potential.</b> The Study Area is either developed or woodland habitat. The larval host plant for this species was not observed in the Study Area during site visits by WRA in 2020. There are no documented occurrences in the vicinity of the Study Area, and the Study Area is outside of the range of this species.	No further actions are recommended for this species.
Monarch butterfly <i>Danaus plexippus</i>	(winter roosting sites monitored by CDFW)	Winter roost sites located in wind-protected tree groves (Eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Winter roosts monitored by CDFW.	<b>Unlikely.</b> The Study Area does not contain eucalyptus, monterey pine, or cypress groves to support winter roosting. No known winter roosts are documented in the vicinity of the Study Area. This species may be observed during migration.	No further actions are recommended for this species.

<p>Bay checkerspot butterfly <i>Euphydryas editha bayensis</i></p>	FT	<p>Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. <i>Plantago erecta</i> is the primary host plant; <i>Orthocarpus densiflorus</i> and <i>O. purpurascens</i> are the secondary host plants.</p>	<p><b>Unlikely.</b> The Study Area does not contain native grassland or serpentine soil and is surrounded by dense urban development. The host plant for this species was not observed during the site visit by WRA in 2020.</p>	<p>No further actions are recommended for this species.</p>
<p>vernal pool tadpole shrimp <i>Lepidurus packardii</i></p>	FE	<p>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.</p>	<p><b>No Potential.</b> No vernal pool habitat is present within the Study Area to support this species.</p>	<p>No further actions are recommended for this species.</p>
<p>conservancy fairy shrimp <i>Branchinecta conservatio</i></p>	FE	<p>Endemic to the grasslands of the northern two-thirds of the Central Valley; found in large, turbid pools. Inhabit astatic pools located in swales formed by old, braided alluvium; filled by winter/spring rains, last until June.</p>	<p><b>No Potential.</b> No vernal pool habitat is present within the Study Area to support this species.</p>	<p>No further actions are recommended for this species.</p>
<p>vernal pool fairy shrimp <i>Branchinecta lynchi</i></p>	FT	<p>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.</p>	<p><b>No Potential.</b> No vernal pool habitat is present within the Study Area to support this species.</p>	<p>No further actions are recommended for this species.</p>

**\* Key to status codes:**

CFP	CDFW Fully Protected
BGEPA	Bald and Golden Eagle Protection Act
FC	Federal Candidate for listing
FE	Federal Endangered
FT	Federal Threatened
SC	State Candidate for listing
SE	State Endangered
SSC	California Department of Fish and Wildlife Species of Special Concern
ST	State Threatened
WBWG	Western Bat Working Group High Priority Species
Rank 1A	California Native Plant Society (CNPS) Rank 1A: Plants presumed extirpated in California and rare or extinct elsewhere
Rank 1B.1	California Native Plant Society (CNPS) Rank 1B.1: Plants rare, threatened or endangered in California and elsewhere (seriously threatened in California)
Rank 1B.2	California Native Plant Society (CNPS) Rank 1B.2: Plants rare, threatened, or endangered in California and elsewhere (moderately threatened in California)
Rank 2B.2	California Native Plant Society (CNPS) Rank 2B.2: Plants rare, threatened, or endangered in California, but more common elsewhere (moderately threatened in California)
Rank 4.3	California Rare Plant Rank 4.3: Plants of Limited Distribution - A Watch List (not very threatened in California)

**\*\*Potential species occurrence definitions:**

Present. Species was observed on the site during site visits or has been recorded (i.e. CNDDDB, other reports) on the site recently.

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.

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.

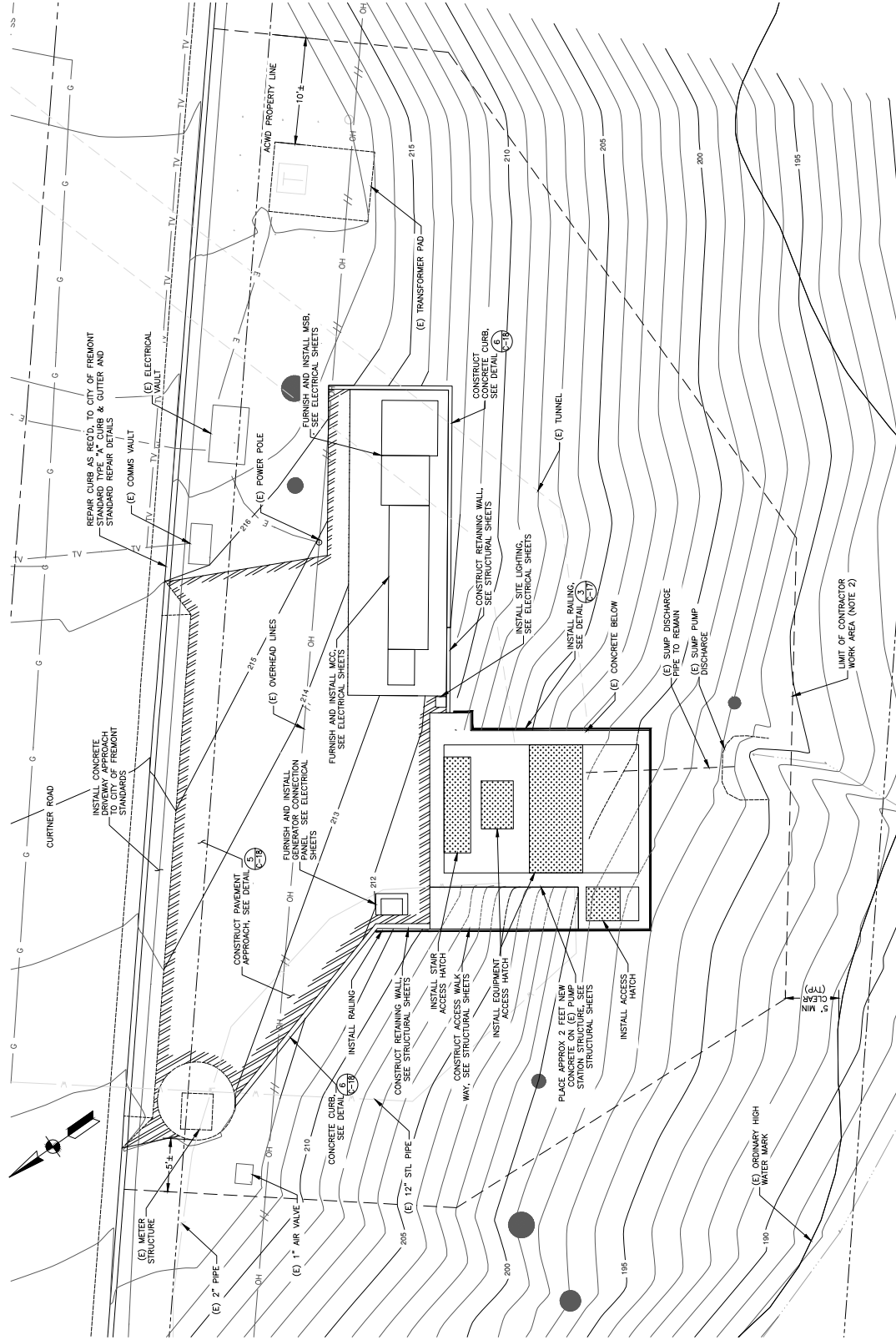
Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species has a low probability of being found on the site.

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).

APPENDIX C  
PROJECT PLANS

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BOOSTER STATION IMPROVEMENTS SITE PLAN

**Schaaf & Wheeler**  
CONSULTING CIVIL ENGINEERS  
1171 HOMESTEAD ROAD, STE 255  
SANTA CLARA, CA 95050  
(408) 246-4848

SECURITY SENSITIVE DISTRICT INFORMATION  
**DO NOT COPY OR DISTRIBUTE**

**DO NOT PUT IN RECYCLED BINS**  
**RETURN DOCUMENTS TO ALAMEDA COUNTY WATER DISTRICT**

[illegible]

APPENDIX D  
REPRESENTATIVE PHOTOGRAPHS

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Photograph 1. The photograph was taken facing south of the existing Curtner Road Booster Pump Station (developed land cover). Photograph was taken on February 11, 2020.



Photograph 2. The photograph was taken facing northeast of the existing railing of the station and adjacent coast live oaks (*Quercus agrifolia*) in the ornamental woodland community. Photograph was taken on February 11, 2020.





Photograph 3. Photograph was of the existing 4-inch discharge pipe that discharges stormwater from the station into Agua Fria Creek. Photograph was taken on February 11, 2020.



Photograph 4. The photograph was taken facing east of the existing station adjacent to the top of bank of Agua Fria Creek in the California sycamore woodlands community. Photograph was taken on February 11, 2020.





Photograph 5. Photograph of Agua Fria Creek below the Curtner Road Booster Station. Photograph was taken on February 11, 2020.



Photograph 6. The photograph was taken in the California sycamore woodlands community, facing downhill. Photograph was taken on February 11, 2020.



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# Arborist Survey Report

## CURTNER ROAD BOOSTER STATION IMPROVEMENTS PROJECT FREMONT, ALAMEDA COUNTY, CALIFORNIA

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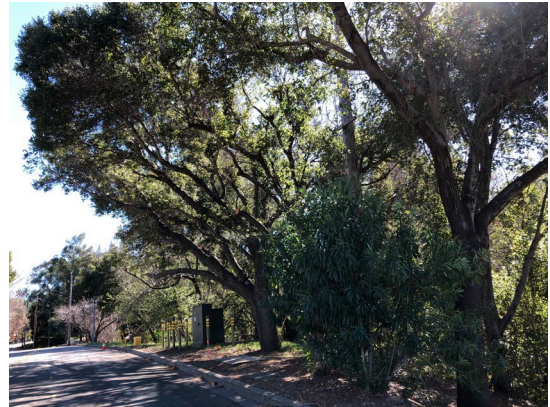
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**Date:**  
August 2021

**WRA Project No:**  
29320



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Appendix B	Tree Survey Map
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## **1.0 INTRODUCTION**

On February 11, 2020, WRA, Inc. (WRA) conducted an arborist survey for the proposed Curtner Booster Station Improvements Project (Project), located in the City of Fremont, Alameda County, California. The Project would occur at and directly adjacent to the existing Alameda County Water District-operated Curtner Road Booster Station (Study Area). The Study Area is approximately 0.43 acre and includes a portion of Curtner Road and Agua Fria Creek. The Project entails the maintenance and rehabilitation of the Curtner Booster Station within an approximately 0.08-acre portion of the Study Area (Project Area). The purpose of the survey was to identify and document the presence of “Protected Trees” and “Landmark Trees” as defined by Chapter 18.215, “Tree Preservation” of the City of Fremont Municipal Code (Tree Ordinance) within the Study Area (City of Fremont 2020).

GPS locations for all trees surveyed within the Study Area and information regarding the species, size in diameter at breast height (DBH; as measured 4.5 feet above grade), estimated crown radius, estimated height, health, condition, and structure ratings were collected and are included in this report. A table with all relevant information pertaining to surveyed trees is provided in Appendix A. A tree survey location map is provided in Appendix B. Photographs of the Study Area are provided in Appendix C.

### **1.1 Study Area Description**

The approximately 0.43-acre Study Area is composed of the existing Curtner Road Booster Station and habitat that extends into Agua Fria Creek, located southwest of the Project Area. The Study Area is located approximately 500 feet north of the intersection of Curtner Road and East Warren Avenue. The Study Area is composed of developed land cover, ornamental woodland, California sycamore woodland, and intermittent stream habitat. A segment of Agua Fria Creek (i.e., intermittent stream habitat) and associated riparian vegetation (i.e., California sycamore woodland) occurs in the southern section of the Study Area. Both planted and naturally occurring native and non-native trees are present in the Study Area.

### **1.2 Regulatory Background**

#### City of Fremont Tree Ordinance

The City of Fremont recognizes the value and beneficial functions that trees provide the residents of the City. 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 (City of Fremont 2020). Protected trees subject to permit requirements include:

- A tree having a 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 (City of Fremont 2020).

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.

## 2.0 METHODS

On February 11, 2020, the Study Area was traversed on foot to inventory all trees 6 inches DBH and greater located in the Study Area (including those located in the Project Area). WRA's International Society of Arboriculture (ISA)-Certified Arborist, Gavin Albertoli (ISA #WE-12027A) surveyed the area and recorded relevant tree information for each surveyed tree.

### 2.1 Tree Inventory

Locations of surveyed trees within the Study Area were recorded using a handheld GPS unit capable of sub-meter accuracy. Only trees with trunks rooted within the Study Area were surveyed. Each surveyed tree was given an aluminum tree tag with a unique identification number. DBH was calculated by measuring the trunk diameter at 4.5 ft. above grade. DBH for trees that split into multiple trunks at or just below 4.5 feet were measured at the narrowest point beneath the split. DBH for multi-stem trees that split into multiple trunks at or near ground level were calculated by measuring each individual trunk and calculating the sum total of trunk diameters. In cases where multi-trunk trees had more than five main trunks, only the five largest trunks were measured. In cases where an irregular buttress or bulge occurred at 4.5 feet above ground measurements were taken above or below the irregular feature to best represent the size of the tree. All tree inventory methods follow ISA's tree measurement best practices guidelines. A complete list of all surveyed trees is provided in Appendix A.

## 2.2 Tree Assessment

General notes on the condition of trees were taken, including health, structure, and overall condition. Assessment of the health, structure, and overall condition of each tree was conducted according to the narratives listed in Table 1.

Table 1. Rating Narratives for Tree Assessment

Health	
Good	Tree is free from symptoms of disease and stress
Fair	Tree shows some symptoms of disease or stress including twig and small branch dieback, evidence of fungal / parasitic infection, thinning of crown, or poor leaf color
Poor	Tree shows symptoms of severe decline
Structure	
Good	Tree is free from major structural defects
Fair	Tree shows some structural defects in branches but overall structure is stable
Poor	Tree shows structural failure of a major branch or co-dominant trunk
General Condition	
Good	Tree shows condition of foliage, bark, and overall structure characteristic of the species and lacking obvious defect, or disease
Fair	Tree shows condition of foliage, bark, and overall structure characteristic of the species with some evidence of stress, defect, or disease
Poor	Tree shows condition of foliage, bark, and overall structure uncharacteristic of the species with obvious evidence of stress, defect, or disease

## 2.3 Tree Impact Assessment

Potential impacts to all trees located within the Study Area (and Project Area) were analyzed in GIS. The Project footprint was overlaid with tree survey data to determine which trees would potentially be impacted by the Project (Google Earth 2020; Appendix B). Any tree in the Project Area where Project activities are proposed to occur (or directly adjacent to such areas) was considered to be a potentially impacted tree. Protected (or landmark) trees that would be impacted by the Project would require a permit from the County. The results of the impacts analysis are provided below and are shown in Appendix A.

## 3.0 RESULTS

### 3.1 Tree Inventory

A total of 26 trees, defined herein as any stem with at least 6 inches DBH, were identified in the Study Area. Tree species surveyed within the Study Area included Raywood ash (*Fraxinus angustifolia*; two total), Oregon ash (*Fraxinus latifolia*; six total), arroyo willow (*Salix lasiolepis*; five total), blue elderberry (*Sambucus nigra* ssp. *caerulea*; three total), and coast live oak (*Quercus*

*agrifolia*; ten total). All of the 26 surveyed trees are considered protected trees per the Tree Ordinance. No landmark trees were present in the Study Area.

The protected trees surveyed in the Study Area ranged in size from 6.1 to 48.7 inches DBH. The largest protected tree surveyed was a 48.7-inch DBH multi-trunk Raywood ash (Tree #620). Approximate canopy radii averaged from 5 to 40 feet. Approximate height ranged from 17 to 65 feet. A complete list of all trees surveyed is presented in Appendix A. The GPS locations of surveyed trees are shown in Appendix B. Photographs are provided in Appendix C.

### 3.2 Tree Assessment

The overall condition, health, and structure of trees inventoried during this assessment ranged from poor to good, with most trees ranking fair in all three categories. Sixty-five (65) percent of the trees surveyed within the Study Area ranked fair in general condition with most trees displaying little to no signs of maladies or decline in vigor. Sixty-two (62) percent of the trees ranked fair in health with 16 percent ranking good, further indicating the large quantity of visibly healthy trees surveyed in the Study Area. Fifty-four (54) percent of trees surveyed ranked fair in structure, but forty-two (42) percent of the trees surveyed ranked poor, mostly due to having poor growth forms. Trees that received a poor structure rating had excessive, uncorrected leans or other structural defects. Table 2 below summarizes the assessment results for all trees surveyed.

Table 2. Tree Assessment Results Summary

Criteria Assessed/Rating	Condition (Tree Count [Percent])	Health (Tree Count [Percent])	Structure (Tree Count [Percent])
Good	4 (16%)	4 (16%)	1 (4%)
Fair	17 (65%)	16 (62%)	14 (54%)
Poor	5 (19%)	6 (22%)	11 (42%)

### 3.3 Tree Impact Assessment

Two (2) trees have been identified as potentially needing to be removed to accommodate the proposed Project (Appendix B). Both trees identified for potential removal are considered protected trees per the Tree Ordinance. These trees include two coast live oak trees (Tree #s 637 and 638).

Potential permit, mitigation, and tree protection requirements as required by the Tree Ordinance are provided below.

## 4.0 SUMMARY AND RECOMMENDATIONS

A tree removal permit is required anytime a protected tree or landmark tree is proposed for removal or relocation. As specified in the Tree Ordinance, exemptions to tree removal permit requirements include the damage or removal of private trees by a public utility necessary for building or maintaining the public utility's facilities.

As described above, the Project would potentially remove three protected trees. All three protected trees proposed for removal are exempt from tree removal permit requirements because

they are being removed to accommodate facility improvements to the Alameda County Water District-operated Curtner Road Booster Station, which qualifies as a public utility. No authorized tree removal permit will be required for the removal of the three protected trees proposed for removal. No mitigation will be required for the removal of the three protected trees proposed for removal.

To avoid and minimize damage to existing trees that are not proposed for direct impact by Project activities, the following measures are recommended to be implemented during construction:

- All construction activity (grading, filling, paving, etc.) shall respect the root protection zone (RPZ) around all trees within the vicinity of the Project Area that are to be preserved. The RPZ should be a distance of 1.0 times the dripline radius measured from the trunk of the tree. Exception to this standard could be considered on a case-by-case basis, provided that it is demonstrated that an encroachment into the RPZ will not affect the root system or the health of the tree, and is authorized by an ISA-Certified Arborist or comparable specialist.
- Temporary protective fencing shall be installed around the dripline of existing trees prior to commencement of any construction activity conducted within 25 feet of the tree canopy. The fence shall be clearly marked to prevent inadvertent encroachment by heavy machinery.
- Drainage shall not be allowed to pond around the base of any tree.
- An ISA-Certified Arborist or tree specialist shall be retained to perform any necessary pruning of trees during construction activity.
- Roots exposed, as a result of construction activities, shall be covered with wet burlap to avoid desiccation, and should be buried as soon as practicable.
- Construction materials or heavy equipment shall not be stored within the RPZ of preserved trees.
- Only an ISA-Certified Arborist, or comparable specialist, shall make specific recommendations as to where any existing trees can safely tolerate some level of fill within the drip line.
- Trenching within RPZ shall be done under the field supervision of an ISA-Certified Arborist and shall be hand dug as much as possible in addition to using auger or drill.
- Construction materials shall be properly stored away from existing trees to avoid spillage or damage to trees.

## **5.0 REFERENCES**

Google Earth. 2020. Aerial Photography 1993-2020.

City of Fremont. 2020. Chapter 18.215, "Tree Preservation" (Tree Ordinance) of the City of Fremont Municipal Code. Available online at: <https://www.codepublishing.com/CA/Fremont/>. Most recently accessed: December 2020.

## APPENDIX A

### TREE SURVEY TABLE



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Appendix A: Curnter Road Booster Station Improvements Project, Tree Survey Table, December 2020

Tag ID	Species	Common Name	Multi-stem	DBH 1	DBH 2	DBH 3	DBH 4	DBH 5	Total DBH (inches)	Ordinance Status	Impact Assessment	Dripline (feet)	Height (feet)	Condition	Health	Structure
620	<i>Fraxinus angustifolia</i>	Raywood ash	Yes	23.0	12.5	7.2	6.0	0.0	48.7	protected tree	no impact	25	50	Fair	Fair	Poor
621	<i>Fraxinus latifolia</i>	Oregon ash	Yes	6.2	2.5	3.6	1.8	0.0	14.1	protected tree	no impact	10	20	Fair	Fair	Poor
622	<i>Fraxinus angustifolia</i>	Raywood ash	Yes	13.9	7.0	10.2	0.0	0.0	31.1	protected tree	no impact	20	25	Fair	Fair	Poor
623	<i>Quercus agrifolia</i>	coast live oak	Yes	4.3	6.5	0.0	0.0	0.0	10.8	protected tree	no impact	10	30	Fair	Fair	Fair
624	<i>Fraxinus latifolia</i>	Oregon ash	No	26.0	0.0	0.0	0.0	0.0	26.0	protected tree	no impact	30	65	Good	Good	Fair
625	<i>Fraxinus latifolia</i>	Oregon ash	No	29.5	0.0	0.0	0.0	0.0	29.5	protected tree	no impact	30	65	Good	Good	Good
626	<i>Quercus agrifolia</i>	coast live oak	No	13.8	0.0	0.0	0.0	0.0	13.8	protected tree	no impact	20	45	Good	Good	Fair
627	<i>Salix lasiolepis</i>	arroyo willow	No	32.4	0.0	0.0	0.0	0.0	32.4	protected tree	no impact	25	50	Poor	Poor	Fair
628	<i>Salix lasiolepis</i>	arroyo willow	Yes	18.0	7.4	0.0	0.0	0.0	25.4	protected tree	no impact	35	35	Fair	Fair	Poor
629	<i>Salix lasiolepis</i>	arroyo willow	No	7.9	0.0	0.0	0.0	0.0	7.9	protected tree	no impact	40	25	Poor	Poor	Poor
630	<i>Fraxinus latifolia</i>	Oregon ash	No	6.4	0.0	0.0	0.0	0.0	6.4	protected tree	no impact	6	40	Fair	Fair	Fair
631	<i>Fraxinus latifolia</i>	Oregon ash	Yes	6.1	5.8	2.0	0.0	0.0	13.9	protected tree	no impact	10	40	Fair	Fair	Fair
632	<i>Salix lasiolepis</i>	arroyo willow	No	6.2	0.0	0.0	0.0	0.0	6.2	protected tree	no impact	5	40	Poor	Poor	Fair
633	<i>Fraxinus latifolia</i>	Oregon ash	No	13.0	0.0	0.0	0.0	0.0	13.0	protected tree	no impact	15	50	Good	Good	Fair
634	<i>Sambucus nigra</i> ssp. <i>caerulea</i>	blue elderberry	No	6.8	0.0	0.0	0.0	0.0	6.8	protected tree	no impact	18	20	Fair	Fair	Poor
635	<i>Sambucus nigra</i> ssp. <i>caerulea</i>	blue elderberry	Yes	8.1	6.5	3.8	0.0	0.0	18.4	protected tree	no impact	25	25	Poor	Poor	Poor
636	<i>Quercus agrifolia</i>	coast live oak	No	7.2	0.0	0.0	0.0	0.0	7.2	protected tree	no impact	8	17	Fair	Poor	Poor
637	<i>Quercus agrifolia</i>	coast live oak	No	22.3	0.0	0.0	0.0	0.0	22.3	protected tree	potential removal impact	25	45	Fair	Fair	Poor
638	<i>Quercus agrifolia</i>	coast live oak	No	17.8	0.0	0.0	0.0	0.0	17.8	protected tree	potential removal impact	20	40	Fair	Fair	Fair
639	<i>Quercus agrifolia</i>	coast live oak	Yes	6.1	2.5	0.0	0.0	0.0	8.6	protected tree	no impact	10	20	Fair	Fair	Fair
640	<i>Quercus agrifolia</i>	coast live oak	No	17.5	0.0	0.0	0.0	0.0	17.5	protected tree	no impact	20	35	Fair	Fair	Fair
641	<i>Quercus agrifolia</i>	coast live oak	No	25.7	0.0	0.0	0.0	0.0	25.7	protected tree	no impact	25	40	Fair	Fair	Poor
642	<i>Quercus agrifolia</i>	coast live oak	No	6.1	0.0	0.0	0.0	0.0	6.1	protected tree	no impact	15	25	Fair	Fair	Fair
643	<i>Sambucus nigra</i> ssp. <i>caerulea</i>	blue elderberry	No	16.8	0.0	0.0	0.0	0.0	16.8	protected tree	no impact	15	28	Fair	Fair	Fair
644	<i>Quercus agrifolia</i>	coast live oak	No	7.2	0.0	0.0	0.0	0.0	7.2	protected tree	no impact	10	20	Fair	Fair	Fair
645	<i>Salix lasiolepis</i>	arroyo willow	No	10.8	0.0	0.0	0.0	0.0	10.8	protected tree	no impact	15	20	Poor	Poor	Poor

APPENDIX B  
TREE SURVEY MAP

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Sources: Alameda County Aerial Imagery 2017, WRA | Prepared By: njander, 8/19/2021

## Appendix B. Tree Survey Map

Arborist Report  
Alameda County Water District,  
Curtner Road Booster Station Improvements Project  
Alameda County, California

0 25 50 Feet



APPENDIX C  
REPRESENTATIVE PHOTOGRAPHS

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Photograph 1. Tree #620, a 48.7" DBH Raywood ash (*Fraxinus angustifolia*) protected tree in the northern portion of the Study Area.





Photograph 2. Tree #622, a 31.1" DBH Raywood ash (*Fraxinus angustifolia*) protected tree in the northern portion of the Study Area.





Photograph 3. Tree #637, a 22.3" DBH coast live oak (*Quercus agrifolia*) protected tree proposed for removal in the central portion of the Study Area.





Photograph 4. Tree #'s 637, 640, and 641 in the central portion of the Study Area adjacent to Curtner Road.

# APPENDIX C

## Noise and Vibration Assessment





# ***CURTNER ROAD BOOSTER STATION IMPROVEMENT PROJECT***

***Fremont, California***

**December 3, 2020**

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Project: 20-007

## INTRODUCTION

The proposed project would fully rehabilitate the Curtner Road Booster Station located in Fremont California. Due to recent changes in systems operations, the station is considered a critical facility. Rehabilitation would eliminate operational and maintenance issues with the station and provide the performance and reliability needed to meet the needs of a critical facility through replacement of pumps, electrical equipment, and civil site improvements to provide safe and reliable worker access to the site and equipment.

This report evaluates the project's potential to result in significant construction noise and vibration impacts with respect to applicable California Environmental Quality Act (CEQA) guidelines. The report is divided into two sections: 1) the Setting Section provides a brief description of the fundamentals of environmental noise and summarizes applicable regulatory criteria; and 2) the Impacts and Mitigation Measures Section describes the significance criteria used to evaluate project impacts, provides a discussion of each project impact, and presents mitigation measures, where necessary, to provide a compatible project in relation to adjacent noise sources and land uses.

## SETTING

### Fundamentals of Environmental Noise

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its *loudness*. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (*frequency*) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. A *decibel (dB)* is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 1.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level (dBA)*. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 2. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an

average level that has the same acoustical energy as the summation of all the time-varying events. This *energy-equivalent sound/noise descriptor* is called  $L_{eq}$ . The most common averaging period is hourly, but  $L_{eq}$  can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the *sound level meter*. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night -- because excessive noise interferes with the ability to sleep -- 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Community Noise Equivalent Level (CNEL)* is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 p.m. - 10:00 p.m.) and a 10 dB addition to nocturnal (10:00 p.m. - 7:00 a.m.) noise levels. The *Day/Night Average Sound Level ( $L_{dn}$ )* is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

## **Effects of Noise**

### *Sleep and Speech Interference*

The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55 dBA if the noise is fluctuating. Outdoors the thresholds are about 15 dBA higher. Steady noises of sufficient intensity (above 35 dBA) and fluctuating noise levels above about 45 dBA have been shown to affect sleep. Interior residential standards for multi-family dwellings are set by the State of California at 45 dBA  $L_{dn}$ . Typically, the highest steady traffic noise level during the daytime is about equal to the  $L_{dn}$  and nighttime levels are 10 dBA lower. The standard is designed for sleep and speech protection and most jurisdictions apply the same criterion for all residential uses. Typical structural attenuation is 12-17 dBA with open windows. With closed windows in good condition, the noise attenuation factor is around 20 dBA for an older structure and 25 dBA for a newer dwelling. Sleep and speech interference is therefore possible when exterior noise levels are about 57-62 dBA  $L_{dn}$  with open windows and 65-70 dBA  $L_{dn}$  if the windows are closed. Levels of 55-60 dBA are common along collector streets and secondary arterials, while 65-70 dBA is a typical value for a primary/major arterial. Levels of 75-80 dBA are normal noise levels at the first row of development outside a freeway right-of-way. In order to achieve an acceptable interior noise environment, bedrooms facing secondary roadways need to be able to have their windows closed; those facing major roadways and freeways typically need special glass windows.



## *Annoyance*

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that the causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The  $L_{dn}$  as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. When measuring the percentage of the population highly annoyed, the threshold for ground vehicle noise is about 50 dBA  $L_{dn}$ . At a  $L_{dn}$  of about 60 dBA, approximately 12 percent of the population is highly annoyed. When the  $L_{dn}$  increases to 70 dBA, the percentage of the population highly annoyed increases to about 25-30 percent of the population. There is, therefore, an increase of about 2 percent per dBA between a  $L_{dn}$  of 60-70 dBA. Between a  $L_{dn}$  of 70-80 dBA, each decibel increase increases by about 3 percent the percentage of the population highly annoyed. People appear to respond more adversely to aircraft noise. When the  $L_{dn}$  is 60 dBA, approximately 30-35 percent of the population is believed to be highly annoyed. Each decibel increase to 70 dBA adds about 3 percentage points to the number of people highly annoyed. Above 70 dBA, each decibel increase results in about a 4 percent increase in the percentage of the population highly annoyed.

## **Fundamentals of Groundborne Vibration**

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One method is the Peak Particle Velocity (PPV). The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. In this report, a PPV descriptor with units of mm/sec or in/sec is used to evaluate construction generated vibration for building damage and human complaints. Table 3 displays the reactions of people and the effects on buildings that continuous or frequent intermittent vibration levels produce. The guidelines in Table 3 represent syntheses of vibration criteria for human response and potential damage to buildings resulting from construction vibration.

Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile driving and vibratory compaction equipment typically generates the highest construction related groundborne vibration levels. Because of the impulsive nature of such activities, the use of the PPV descriptor has been routinely used to measure and assess groundborne vibration and almost exclusively to assess the potential of vibration to cause damage and the degree of annoyance for humans.

The two primary concerns with construction-induced vibration, the potential to damage a structure and the potential to interfere with the enjoyment of life, are evaluated against different vibration limits. Human perception to vibration varies with the individual and is a function of physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels, such as people in an urban environment, may tolerate a higher vibration level.

Structural damage can be classified as cosmetic only, such as paint flaking or minimal extension of cracks in building surfaces; minor, including limited surface cracking; or major, that may threaten the structural integrity of the building. Safe vibration limits that can be applied to assess the potential for damaging a structure vary by researcher. The damage criteria presented in Table 3 include several categories for ancient, fragile, and historic structures, the types of structures most at risk to damage. Most buildings are included within the categories ranging from “Historic and some old buildings” to “Modern industrial/commercial buildings”. Construction-induced vibration that can be detrimental to the building is very rare and has only been observed in instances where the structure is at a high state of disrepair and the construction activity occurs immediately adjacent to the structure.

The annoyance levels shown in Table 3 should be interpreted with care since vibration may be found to be annoying at lower levels than those shown, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage.

**TABLE 1      Definition of Acoustical Terms Used in this Report**

<b>Term</b>	<b>Definition</b>
Decibel, dB	A unit describing, the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20 micro Pascals.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micro Pascals (or 20 micro Newtons per square meter), where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e. g., 20 micro Pascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and Ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, $L_{eq}$	The average A-weighted noise level during the measurement period.
$L_{max}$ , $L_{min}$	The maximum and minimum A-weighted noise level during the measurement period.
$L_{01}$ , $L_{10}$ , $L_{50}$ , $L_{90}$	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, $L_{dn}$ or DNL	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 p.m. and 7:00 a.m.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 p.m.to 10:00 p.m. and after addition of 10 decibels to sound levels measured in the night between 10:00 p.m. and 7:00 a.m.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Handbook of Acoustical Measurements and Noise Control, Harris, 1998.

**TABLE 2     Typical Noise Levels in the Environment**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110 dBA	Rock band
Jet fly-over at 1,000 feet		
	100 dBA	
Gas lawn mower at 3 feet		
	90 dBA	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80 dBA	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	70 dBA	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60 dBA	
		Large business office
Quiet urban daytime	50 dBA	Dishwasher in next room
Quiet urban nighttime	40 dBA	Theater, large conference room
Quiet suburban nighttime		
	30 dBA	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20 dBA	
	10 dBA	Broadcast/recording studio
	0 dBA	

Source: Technical Noise Supplement (TeNS), California Department of Transportation, September 2013.

**TABLE 3      Reaction of People and Damage to Buildings from Continuous or Frequent Intermittent Vibration Levels**

<b>Velocity Level, PPV (in/sec)</b>	<b>Human Reaction</b>	<b>Effect on Buildings</b>
0.01	Barely perceptible	No effect
0.04	Distinctly perceptible	Vibration unlikely to cause damage of any type to any structure
0.08	Distinctly perceptible to strongly perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.1	Strongly perceptible	Threshold at which there is a risk of damage to fragile buildings with no risk of damage to most buildings
0.25	Strongly perceptible to severe	Threshold at which there is a risk of damage to historic and some old buildings.
0.3	Strongly perceptible to severe	Threshold at which there is a risk of damage to older residential structures
0.5	Severe - Vibrations considered unpleasant	Threshold at which there is a risk of damage to new residential and modern commercial/industrial structures

Source: Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020.

### **Regulatory Background - Noise**

The State of California and the City of Fremont have established regulatory criteria that are applicable in this assessment. The State CEQA Guidelines, Appendix G, and the City of Fremont General Plan and Municipal Code are used to assess the potential significance of impacts. A summary of the applicable regulatory criteria is provided below.

***State CEQA Guidelines.*** CEQA contains guidelines to evaluate the significance of effects of environmental noise attributable to a proposed project. Under CEQA, noise impacts would be considered significant if the project would result in:

- (a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local General Plan or Noise Ordinance, or applicable standards of other agencies;
- (b) Generation of excessive groundborne vibration or groundborne noise levels; or
- (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, if the project would expose people residing or working in the project area to excessive noise levels.

The project is a modification to an existing utility and would not involve a future residence or working location. Therefore, impact (c) does not apply and is not addressed further in this analysis.

***City of Fremont General Plan 2030.*** The City of Fremont’s General Plan Safety Element establishes goals, policies, and methods of implementation for noise and vibration sources. Applicable goals, policies, and implementation measures presented in the General Plan are as follows:

- **Policy 10-8.3: Noise Environment Protection**

Protect existing residential neighborhoods from noise. In general, the City will require evaluation of mitigation measures for projects under the following circumstances:

1. The project would cause the  $L_{dn}$  to increase by 5 dB(A) or more but would remain below 60 dB(A), or;
2. The project would cause the  $L_{dn}$  to increase by 3 dB(A) or more and exceed 60 dB(A), or;
3. The project has the potential to generate significant adverse community response due to the unusual character of the noise.

- **Policy 10-8.5: Construction Noise Levels**

Control construction noise at its source to maintain existing noise levels, and in no case to exceed the acceptable noise levels.

- > **Implementation 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.

***City of Fremont Municipal Code.*** The City’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.** Except as modified herein, construction activity for development projects in any zoning district on any property within 500 feet of one or more residences, lodging facilities, nursing homes or inpatient hospitals shall be limited to the weekday hours of 7:00 a.m. to 7:00 p.m. and the Saturday or holiday hours of 9:00 a.m. to 6:00 p.m., while Sunday construction is not allowed. Construction activity for projects not located within 500 feet of residences, lodging facilities, nursing homes or inpatient hospitals shall be limited to the weekday hours of 6:00 a.m. to 10:00 p.m. and the weekend or holiday hours of 8:00 a.m. to 8:00 p.m. A holiday shall be as defined in Section 2.35.010.

**Chapter 18.218.050 Standard Development Requirements.** (d) 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. (Ord. 27-2016 § 37, 12-6-16; Ord. 23-2018 § 41, 10-2-18.)

## NOISE IMPACTS AND MITIGATION MEASURES

### Significance Criteria

The following criteria were used to evaluate the significance of environmental noise resulting from the project:

- A significant temporary noise impact would be identified if construction-related noise would temporarily increase ambient noise levels at sensitive receptors. Hourly average noise levels exceeding 60 dBA  $L_{eq}$  at residential land uses or 70 dBA  $L_{eq}$  at commercial/industrial land uses, and the ambient by at least 5 dBA  $L_{eq}$ , for a period of more than one year would constitute a significant temporary noise increase.
- A significant noise impact would be identified if the project would expose persons to or generate noise levels that would exceed applicable noise standards presented in the General Plan.
- A significant impact would be identified if the construction of the project would generate excessive vibration levels surrounding receptors. Groundborne vibration levels exceeding 0.2 in/sec PPV would have the potential to result in cosmetic damage to normal buildings.

**Impact:** Existing noise-sensitive land uses would be exposed to a temporary increase in ambient noise levels due to project construction activities. The incorporation of Standard Development Requirements established in section 18.218.050 of City's Municipal Code would result in a **less-than-significant** temporary noise impact.

Noise impacts resulting from construction depend upon 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 areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), when the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction lasts over extended periods of time.

While noise thresholds for temporary construction are not provided in the City's General Plan or Municipal Code, the Fundamentals section of this report provides a threshold of 45 dBA for speech interference indoors. Assuming a 15 dBA exterior-to-interior reduction for standard residential construction and a 25 dBA exterior-to-interior reduction for standard commercial construction, this would correlate to an exterior threshold of 60 dBA  $L_{eq}$  at residential land uses and 70 dBA  $L_{eq}$  at commercial land uses. Additionally, temporary construction would be annoying to surrounding land uses if the ambient noise environment increased by at least 5 dBA  $L_{eq}$  for an extended period of time. Therefore, the temporary construction noise impact would be considered significant if project construction activities exceeded 60 dBA  $L_{eq}$  at nearby residences or exceeded 70 dBA  $L_{eq}$  at nearby commercial land uses and exceeded the ambient noise environment by 5 dBA  $L_{eq}$  or more for a period longer 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. A list of typical average and maximum instantaneous noise levels measured at 50 feet are provided in Table 4. As seen in Table 5, 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.). As this project is small in scale and will require fewer individual pieces of construction equipment operating simultaneously than what is typical, the lower range of noise levels for public works projects from Table 5, assuming minimum equipment present at the site, will be used for this analysis. Construction-generated noise levels drop off at a rate of about 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.

Construction will occur in multiple phases. All demolition and grading work will take place during the first summer. Mechanical improvements will be installed and the station will be temporarily sealed in the winter phase. During the final summer, the temporary seal will be removed and replaced with the permanent structure. While construction is anticipated to occur over a period of approximately one year, there will be substantial periods of inactivity where no construction is taking place and therefore the construction duration for the purpose of this analysis will not exceed one year. As information including the equipment to be used was not available as of this writing, typical hourly average noise levels from Table 5 were propagated out from the approximate center of construction to the nearest noise-sensitive receptors.

**TABLE 4 Construction Equipment 50-foot Noise Emission Levels (dBA)**

Equipment Category		L <sub>eq</sub> <sup>1,2,3</sup>	L <sub>max</sub> <sup>1,2</sup>	Equipment Category	L <sub>eq</sub> <sup>1,2,3</sup>	L <sub>max</sub> <sup>1,2</sup>
Air Hose		93	100	Horizontal Bore Drill	87	88
Air-Operated Post Driver		83	85	Impact Pile Driver	99	105
Asphalt Distributor Truck (Asphalt Sprayer)		-	70	Impact Wrench	68	72
Auger Drill		88	101	Jackhammer	91	95
Backhoe		76	84	Jig Saw	92	95
Bar Bender		66	75	Joint Sealer	-	74
Blasting (Abrasive)		100	103	Man Lift	72	73
Blasting (Explosive)		83	93	Movement Alarm	79	80
Chainsaw		79	83	Mud Recycler	73	74
Chip Spreader		-	77	Nail Gun	70	74
Chipping Gun		95	100	Pavement Scarifier (Milling Machine)	-	84
Circular Saw		73	76	Paving – Asphalt (Paver, Dump Truck)	-	82
Compactor (Plate)		-	75	Paving – Asphalt (Paver, MTV, Dump Truck)	-	83
Compactor (Roller)		82	83	Paving – Concrete (Placer, Slipform Paver)	87	91
Compressor		66	67	Paving – Concrete (Texturing/Curing Machine)	73	74
Concrete Batch Plant		87	90	Paving – Concrete (Triple Roller Tube Paver)	85	88
Concrete Grinder		-	97	Power Unit (Power Pack)	81	82
Concrete Mixer Truck		81	82	Pump	73	74
Concrete Pump Truck		84	88	Reciprocating Saw	64	66
Concrete Saw		85	88	Rivet Buster	100	107
Crane		74	76	Rock Drill	92	95
Directional Drill Rig		68	80	Rumble Strip Grinding	-	87
Drum Mixer		66	71	Sander	65	68
Dump Truck (Cyclical)		82	92	Scraper	-	92
Dump Truck (Passby)		-	73	Shot Crete Pump/Spray	78	87
Excavator		76	87	Street Sweeper	-	81
Flatbed Truck		-	74	Telescopic Handler (Forklift)	-	88
Front End Loader (Cyclical)		72	81	Vacuum Excavator (Vac-Truck)	86	87
Front End Loader (Passby)		-	71	Ventilation Fan	62	63
Generator		67	68	Vibratory Concrete Consolidator	78	80
Grader (Passby)		-	79	Vibratory Pile Driver	99	105
Grinder		68	71	Warning Horn (Air Horn)	94	99
Hammer Drill		72	75	Water Spray Truck	-	72
Hoe Ram		92	99	Welding Machine	71	72

Notes: <sup>1</sup> Measured at 50 feet from the construction equipment, with a “slow” (1 sec.) time constant.

<sup>2</sup> Noise levels apply to total noise emitted from equipment and associated components operating at full power while engaged in its intended operation.

<sup>3</sup> Equipment without average (L<sub>eq</sub>) noise levels are non-stationary and best represented only by maximum instantaneous noise level (L<sub>max</sub>).

Source: Project 25-49 Data, National Cooperative Highway Research Program, <https://apps.trb.org/cmsfeed/trbnetprojectdisplay.asp?projectId=3889>, October 2018

**TABLE 5 Typical Ranges of Construction Noise Levels at 50 Feet,  $L_{eq}$  (dBA)**

	<b>Domestic Housing</b>		<b>Office Building, Hotel, Hospital, School, Public Works</b>		<b>Industrial Parking Garage, Religious Amusement &amp; Recreations, Store, Service Station</b>		<b>Public Works Roads &amp; Highways, Sewers, and Trenches</b>	
	<b>I</b>	<b>II</b>	<b>I</b>	<b>II</b>	<b>I</b>	<b>II</b>	<b>I</b>	<b>II</b>
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
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
<b>I</b> - All pertinent equipment present at site.								
<b>II</b> - Minimum required equipment present at site.								

Source: U.S.E.P.A., Legal Compilation on Noise, Vol. 1, p. 2-104, 1973.

Noise-sensitive receptors near the site include single-family residences, with property lines located as close as about 50 feet from the station. At this distance, noise levels would reach 75 to 84 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 within approximately 750 feet of the project site.

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, are necessary to protect the health and safety of persons, promote the general welfare of the community, and maintain the quality of life. It is expected that construction activities will be conducted in accordance with the provisions of the City'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. While project construction would not actively occur over a period of greater than one year, the following Standard Development Requirements contained in section 18.218.050 of the City's Municipal Code are required to reduce annoyance and disruption at the nearest residences.

#### *Standard Development Requirements*

- (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. (Ord. 27-2016 § 37, 12-6-16; Ord. 23-2018 § 41, 10-2-18.)

Additionally, to ensure construction noise levels at the nearest residences are reduced to the greatest extent feasible, the following measure is recommended:

- Construct temporary noise barriers which block the line of sight between the project and the nearest residential land uses.

Implementation of the above measures 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.

**Mitigation Measure:**            **No further mitigation required.**

**Impact:**            The operation of the proposed project is not expected to generate noise levels in excess of the noise standards established in the City’s General Plan or Municipal Code at the adjacent residential property. **This is a less-than-significant impact.**

Rehabilitation would not change the capacity nor the operations of the Curtner Road Booster Station. The existing five pumps and two sump pumps will be demolished and replaced with four new vertical turbine style pumps and two new sump pumps. Following installation, all pump equipment will be located underground and would not be expected to generate audible noise at any nearby sensitive receptors.

A new ventilation system will be installed with two fans, one for intake and one for exhaust. The existing station currently only has an intake fan, and therefore some noise increase is expected from the installation of a second fan. Project plans dated May 2020 indicate the fans will be facing the southeast and southwest and at approximately five feet below ground level. The fans would not be oriented towards the nearest residence to the northeast. A Greenheck EQD-9-VG was selected as the intake fan and a Greenheck CUBE-099 was selected as the exhaust fan. These fans generate noise levels at a distance of 5 feet of 58 and 53 dBA, respectively. The nearest residential property line to the southeast or southwest is located approximately 150 feet away. At this distance and without consideration of additional noise reduction provided by terrain, noise from the fans would be expected to reach about 30 dBA at the nearest residential property line. The new switchboard and motor control center will be installed on the eastern side of the property and would not be anticipated to generate substantial noise. Operational noise associated with the project would not exceed any General Plan or Municipal Code standards at any nearby residences. This is a **less-than-significant** impact.

**Mitigation Measure:**            **None required.**

**Impact:**            **Generation of Excessive Groundborne Vibration.** Construction-related vibration levels are not expected to exceed applicable vibration thresholds at nearby sensitive land uses. **This is a 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, grading, installation of equipment, and installation of the permanent pump station structure. While a list of construction equipment was not available for the proposed project, pile driving equipment, which can cause excessive vibration, is not expected to be required for the proposed project.

For structural damage, the California Department of Transportation recommends a vibration limit of 0.5 in/sec PPV for buildings structurally sound and designed to modern engineering standards, which typically consist of buildings constructed since the 1990s. A conservative vibration limit of 0.2 in/sec PPV has been used for buildings that are found to be structurally sound but where structural damage is a major concern. For historical buildings or buildings that are documented to be structurally weakened, a conservative limit of 0.08 in/sec PPV is often used to provide the highest level of protection. No historical buildings or buildings that are documented to be structurally weakened adjoin the project site. For the purposes of this study, therefore, groundborne vibration levels exceeding the conservative 0.2 in/sec PPV limit would have the potential to result in a significant vibration impact.

Table 6 presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet as well as worst-case scenario vibration levels at the nearest structure. Project construction activities, such as drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) may generate substantial vibration in the immediate vicinity. Jackhammers typically generate vibration levels of 0.035 in/sec PPV and drilling typically generates vibration levels of 0.09 in/sec PPV at a distance

of 25 feet. Vibration levels would vary depending on soil conditions, construction methods, and equipment used.

The nearest structure to the site is a single-family residence across Curtner Road to the northeast, approximately 70 feet from the project site. 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. This is a **less-than-significant** impact.

**TABLE 6      Vibration Source Levels for Construction Equipment**

<b>Equipment</b>		<b>Reference PPV at 25 ft. (in/sec)</b>	<b>PPV at Nearest Curtner Road Residence – 70 ft. (in/sec)</b>
Clam shovel drop		0.202	0.065
Hydromill (slurry wall)	In soil	0.008	0.003
	In rock	0.017	0.005
Vibratory Roller		0.210	0.068
Hoe Ram		0.089	0.029
Large bulldozer		0.089	0.029
Caisson drilling		0.089	0.029
Loaded trucks		0.076	0.024
Jackhammer		0.035	0.011
Small bulldozer		0.003	0.001

Source: Transit Noise and Vibration Impact Assessment, United States Department of Transportation, Office of Planning and Environment, Federal Transit Administration, September 2018 as modified by Illingworth & Rodkin, Inc., November 2020.

**Mitigation Measure:**            **None required.**



## Mitigation Monitoring or Reporting Program





**MITIGATION MONITORING OR REPORTING PROGRAM**

**Curtner Road Booster Station Upgrade Project**



**August 2021**

# P R E F A C E

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 project implementation.

The Initial Study for the *Curtner Road Booster Station Rehabilitation Project* concluded that the implementation of the project could 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 CURTNER ROAD BOOSTER STATION REHABILITATION PROJECT				
Impact	Mitigation	Timeframe for Implementation	Method for Compliance	Oversight of Implementation
<b>AIR QUALITY</b>				
<b>Impact AIR-3:</b> Construction activities are considered to result in potentially significant impacts in terms of excess cancer risk to any infants present or increased annual PM2.5 concentrations caused by construction equipment and traffic exhaust and fugitive dust. <b>(Significant Impact)</b>	<b>MM AIR-3.1:</b> During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. The contractor shall implement the following best management practices that are required of all projects: <ul style="list-style-type: none"> <li>• All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.</li> <li>• All haul trucks transporting soil, sand, or other loose material off-site shall be covered.</li> <li>• 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.</li> <li>• All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).</li> <li>• 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.</li> <li>• 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,</li> </ul>	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 CURTNER ROAD BOOSTER STATION REHABILITATION PROJECT				
Impact	Mitigation	Timeframe for Implementation	Method for Compliance	Oversight of Implementation
	<p>Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.</li> </ul> <p><b>MM AIR-3.2:</b> The project shall use equipment that has low Diesel Particulate Matter or zero emissions as follows:</p> <ul style="list-style-type: none"> <li>• Mobile diesel-powered off-road equipment larger than 25 horsepower and operating on the site for more than two days shall meet U.S. EPA particulate matter emissions standards for Tier 4 or use engines that include particulate matter emissions control equivalent to 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.</li> </ul>			

MITIGATION MONITORING OR REPORTING PROGRAM CURTNER ROAD BOOSTER STATION REHABILITATION PROJECT				
Impact	Mitigation	Timeframe for Implementation	Method for Compliance	Oversight of Implementation
	<ul style="list-style-type: none"> <li>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.</li> </ul>			
<b>BIOLOGICAL RESOURCES</b>				
<p><b>Impact BIO-1:</b> The project has the potential to impact non-special-status native nesting birds. Construction activities such as vegetation removal and ground disturbance have the potential to cause direct mortality of eggs or young, or to cause abandonment of active nests due to auditory, vibratory, or visual disturbance of sufficient level.</p> <p><b>(Significant Impact)</b></p>	<p><b>MM BIO-1.1:</b> Construction activities, such as vegetation removal, grading, or initial ground-disturbance, shall be scheduled to avoid the nesting season. The nesting season for most birds, including most raptors in the San Francisco Bay area, extends from February 1st through August 31st, inclusive..</p> <p><b>MM BIO -1.2:</b> If Project activities must be conducted during the nesting season, a pre-construction nesting bird survey will be conducted by a qualified biologist no more than 14 days prior to vegetation removal or initial ground disturbance. The survey will include the Project Area and surrounding 250 feet to identify the location and status of any nests that could potentially be affected either directly or indirectly by Project activities.</p> <p>If active nests of native nesting bird species are located during the nesting bird survey, a work exclusion zone will be established around each nest by the qualified biologist. Established exclusion zones will remain in place until all young in the nest have fledged or the nest otherwise becomes inactive (e.g., due to predation). Appropriate exclusion zone sizes will be determined by a qualified biologist and will vary based on species, nest location, existing visual buffers, noise levels, and other factors. An exclusion zone radius may be as small as 50 feet for common, disturbance-adapted species, or</p>	<p>Prior to issuance of any tree removal, grading, demolition, and/or building permit or activities.</p>	<p>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.</p> <p>The construction contractor is responsible for keeping work out of the exclusion zone.</p>	<p>ACWD is responsible for incorporating measure into contract specifications, and ensuring compliance and ensuring work is conducted outside of the nesting bird season, if possible.</p>

MITIGATION MONITORING OR REPORTING PROGRAM CURTNER ROAD BOOSTER STATION REHABILITATION PROJECT				
Impact	Mitigation	Timeframe for Implementation	Method for Compliance	Oversight of Implementation
	as large as 250 feet or more for raptors. Exclusion zone size will be reduced from established levels by a qualified biologist if nest monitoring findings indicate that Project activities do not adversely impact the nest, and if a reduced exclusion zone would not adversely affect the nest.			
<b>Impact BIO-2:</b> <u>Construction activities associated with the project have the potential to impact riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS</u>	<p><b>MM BIO-2.1:</b> The project shall obtain a Lake and Streambed Alteration Agreement from the CDFW to proceed with proposed impacts to CDFW jurisdictional riparian habitat. All compliance measures included in these permits will be adhered to.</p> <p><b>MM BIO-2.2:</b> The Project shall replant coast live oak trees within the riparian corridor at a mitigation ratio of 3:1 to offset the removal of coast live oak trees from the California sycamore woodlands habitat. A replanting plan and a mitigation and monitoring plan shall be submitted to the CDFW prior to implementation.</p>	<p><u>Prior to issuance of any tree removal, grading, demolition, and/or building permit or activities.</u></p>	<p><u>Obtain LSAA permit from CDFW</u></p> <p><u>Submit replanting plan and MMRP to CDFW prior to implementation</u></p>	<p><u>ACWD is responsible for incorporating measure into contract specifications, and ensuring compliance with the mitigation measure.</u></p>
<b>Impact BIO-5:</b> Ground disturbing activities associated with project construction could result in damage to the remaining on-site trees. <b>(Significant Impact)</b>	<p><b>MM BIO-5.1:</b> To avoid and minimize damage to the remaining trees surveyed, the following measures would be implemented during construction:</p> <ul style="list-style-type: none"> <li>All construction activity (grading, filling, paving, etc.) shall respect the root protection zone (RPZ) around all trees within the vicinity of the project area that are to be preserved. The RPZ should be a distance of 1.0 times the dripline radius measured from the trunk of the tree. Exception to this standard could be considered on a case-by-case basis, provided that it is demonstrated that an encroachment into the RPZ will not affect the root system or the health of the tree, and is authorized by an ISA-Certified Arborist or comparable specialist.</li> </ul>	<p>Prior to commencement of any construction activity conducted within 25 feet of existing tree canopy.</p>	<p>A certified arborist is responsible for overseeing and authorizing any exceptions to the root protection zone, perform any necessary pruning of trees during construction activities, make</p>	<p>ACWD is responsible for incorporating measure into contract specifications, and ensuring compliance and ensuring work is conducted in a manner to respect the root protection zone of trees in the</p>

MITIGATION MONITORING OR REPORTING PROGRAM CURTNER ROAD BOOSTER STATION REHABILITATION PROJECT				
Impact	Mitigation	Timeframe for Implementation	Method for Compliance	Oversight of Implementation
	<ul style="list-style-type: none"> <li>Temporary protective fencing shall be installed around the dripline of existing trees prior to commencement of any construction activity conducted within 25 feet of the tree canopy. The fence shall be clearly marked to prevent inadvertent encroachment by heavy machinery. Drainage shall not be allowed to pond around the base of any tree.</li> <li><u>Drainage shall not be allowed to pond around the base of any tree.</u></li> <li>An ISA-Certified Arborist or tree specialist shall be retained to perform any necessary pruning of trees during construction activity. Roots exposed as a result of construction activities shall be covered with wet burlap to avoid desiccation, and should be buried as soon as practicable.</li> <li><u>Roots exposed, as a result of construction activities, shall be covered with wet burlap to avoid desiccation, and should be buried as soon as practicable.</u></li> <li>Construction materials or heavy equipment shall not be stored within the RPZ of preserved trees.</li> <li>Only an ISA-Certified Arborist, or comparable specialist, shall make specific recommendations as to where any existing trees can safely tolerate some level of fill within the drip line.</li> <li>Trenching within RPZ shall be done under the field supervision of an ISA-Certified Arborist and shall be hand dug as much as possible in addition to using auger or drill.</li> </ul>		<p>recommendations to where existing trees can tolerate fill within the drip line and supervise trenching activities associated with the project.</p>	<p>project vicinity to be preserved.</p>



MITIGATION MONITORING OR REPORTING PROGRAM CURTNER ROAD BOOSTER STATION REHABILITATION PROJECT				
Impact	Mitigation	Timeframe for Implementation	Method for Compliance	Oversight of Implementation
	<ul style="list-style-type: none"> <li>Construction materials shall be properly stored away from existing trees to avoid spillage or damage to trees.</li> </ul>			
<b>Impact CUL-2:</b> Ground disturbing activities associated with project construction could disturb previously unrecorded archaeological resources. <b>(Significant Impact)</b>	<p><b>MM CUL-2.1:</b> The project proponent shall retain a professional archaeologist to provide a <u>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.</u> If buried or previously unrecognized archaeological deposits or materials of any kind are inadvertently exposed during any construction activity, work within 50 feet of the find shall cease until a qualified archaeologist can assess the find and provide recommendations for further treatment, as warranted. Construction and potential impacts to the area(s) within a radius determined by the archaeologist should not recommence until the assessment is complete and any mitigation measures warranted are implemented.</p> <p><b>MM CUL- 2.2:</b> 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 project applicant shall immediately notify the Alameda County Coroner/ Medical Examiner's Office. The Coroner will make a determination as to whether the remains are Native American.</p>	<p>Ongoing during project construction. In the event that archaeological deposits or materials are inadvertently exposed during construction activity.</p> <p>In the event that human remains are found.</p>	<p>Stop work within 50 feet of the find and notify a qualified archaeologist.</p> <p>Stop all excavation or disturbance of the site and nearby area, notify the Alameda County Coroner.</p> <p>Contact the NAHC within 24 hours of determining remains are Native American.</p>	<p>ACWD is responsible for incorporating measure into contract specifications, and ensuring compliance during construction if archaeological resources or human remains are discovered.</p>

MITIGATION MONITORING OR REPORTING PROGRAM CURTNER ROAD BOOSTER STATION REHABILITATION PROJECT				
Impact	Mitigation	Timeframe for Implementation	Method for Compliance	Oversight of Implementation
	<p>If the remains are believed to be Native American, the Coroner shall contact the 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.</p> <p>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:</p> <ul style="list-style-type: none"> <li>The Native American Heritage Commission is unable to identify a most likely descendant or the most likely descendant failed to make a recommendation within 48 hours after being notified by the Commission.</li> <li>The descendant identified fails to make a recommendation; or</li> </ul> <p>The landowner or his authorized representative rejects the recommendation of the descendant, and the meditation by the NAHC fails to provide measures acceptable to the landowner.</p>		Inspect the remains and associated artifacts and make recommendation on treatment of artifacts.	
<b>Impact GEO-6:</b> Ground disturbing activities associated with project construction could uncover currently unknown paleontological resources or a unique geologic feature.	<b>MM GEO-6.1:</b> 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. ACWD 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	Ongoing during project construction.	Stop work within 50 feet of the find and notify a qualified paleontologist.	ACWD is responsible for incorporating standard inadvertent discovery clause in every construction

MITIGATION MONITORING OR REPORTING PROGRAM CURTNER ROAD BOOSTER STATION REHABILITATION PROJECT				
Impact	Mitigation	Timeframe for Implementation	Method for Compliance	Oversight of Implementation
(Significant Impact)	avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards. <u>The plan must include preparation, identification, cataloguing, and curation of any salvaged specimens.</u>		The paleontologist shall design and carry out a data recovery plan.	contract, and informing contractors of this requirement.
<b>Impact HAZ-2:</b> Demolition of existing structures on-site could create a significant hazard due to the presence of ACMs and lead. <b>(Significant Impact)</b>	<p><b>MM HAZ-2.1:</b> The project would be required to implement the following measures to reduce impacts due to the presence of ACMs and/or LBP:</p> <ul style="list-style-type: none"> <li>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).</li> <li>During demolition activities, all building materials containing lead-based paint shall be removed in accordance with Cal/OSHA Lead in Title 8, California Code of Regulations (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.</li> <li>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,</li> </ul>	<p>Prior to demolition of on-site buildings.</p> <p>During demolition activities.</p>	<p>Conduct a visual inspection/pre-demolition survey, and possible sampling of on-site buildings to determine the presence of asbestos-containing materials and or lead based-paint.</p> <p>Remove all building materials containing lead-based paint and all potentially friable ACMs</p>	<p>ACWD is responsible for retaining a qualified hazardous materials firm to conduct visual inspections/pre-demolition surveys for ACMs and LBP, retain a registered asbestos abatement contractor to remove and dispose of ACMs identified in the asbestos survey, and ensure any debris or soil containing lead-based paint or coatings shall be disposed of at landfills that</p>

MITIGATION MONITORING OR REPORTING PROGRAM CURTNER ROAD BOOSTER STATION REHABILITATION PROJECT				
Impact	Mitigation	Timeframe for Implementation	Method for Compliance	Oversight of Implementation
	<p>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.</p> <ul style="list-style-type: none"> <li>Based on Cal/OSHA rules and regulations, the following conditions are required to limit impacts to construction workers. <ul style="list-style-type: none"> <li>Prior to commencement of demolition activities, a building survey, including sampling and testing, shall be completed to identify and quantify building materials containing lead-based paint.</li> <li>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.</li> <li>Any debris or soil containing lead-based paint or coatings shall be disposed of at a landfill that meets acceptance criteria for the waste being disposed.</li> </ul> </li> </ul>		<p>Retain a registered asbestos abatement contractor to remove and dispose of ACMs identified in the asbestos survey.</p> <p>Any debris or soil containing lead-based paint or coatings shall be disposed of at a landfill that meets acceptance criteria for the waste being disposed.</p>	<p>meet acceptance criteria for the type of waste being disposed.</p>
<b>Impact NOI-1:</b> Project construction could result in noise levels exceeding City	<b>MM NOI-1.1:</b> During construction of the project, the district shall implement the following measures to reduce construction noise:	Ongoing during project construction.	Ensure that construction	ACWD is responsible for

MITIGATION MONITORING OR REPORTING PROGRAM CURTNER ROAD BOOSTER STATION REHABILITATION PROJECT				
Impact	Mitigation	Timeframe for Implementation	Method for Compliance	Oversight of Implementation
<p>of Fremont standards at the nearest residential property line. <b>(Significant Impact)</b></p>	<ul style="list-style-type: none"> <li>Construction equipment shall be well-maintained and used judiciously to be as quiet as practical.</li> <li>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.</li> <li>All internal combustion engine-driven equipment shall be equipped with mufflers, which are in good condition and appropriate for the equipment.</li> <li>The contractor shall utilize “quiet” models of air compressors and other stationary noise sources where technology exists.</li> <li>Loading, staging areas, stationary noise generating equipment, etc., shall be located as far as feasible from sensitive receptors.</li> <li>The contractor shall comply with Air Resource Board idling prohibitions of unnecessary idling of internal combustion engines.</li> <li>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. (Ord. 27-2016 § 37, 12-6-16; Ord. 23-2018 § 41, 10-2-18.)</li> </ul>		<p>equipment is well maintained, equipped with mufflers, and utilize “quiet mode”.</p> <p>Ensure that loading, staging areas, and noise 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.</p> <p>Constructing a temporary noise barrier which</p>	<p>incorporating measure into contract specifications, and ensuring compliance during construction.</p>

MITIGATION MONITORING OR REPORTING PROGRAM CURTNER ROAD BOOSTER STATION REHABILITATION PROJECT				
Impact	Mitigation	Timeframe for Implementation	Method for Compliance	Oversight of Implementation
	<ul style="list-style-type: none"> <li>Construct temporary noise barriers which block the line of sight between the project and the nearest residential land uses. Acceptable temporary barriers include Sound Seal STC-27 to 37 Sound Curtains, Environmental Noise Control STC-25 Acoustical Barrier/Absorber Blankets, Pacific Sound Control STC-33 Noise Soaker Acoustical Barriers, or equivalent. This type of barrier may be set up on a supporting structure, such as a cyclone-type fence or on guy-wire strung between temporary supports.</li> </ul>		blocks line of sight between the project and nearest residential land uses.	

**SOURCE:** Alameda County Water District, *Curtner Road Booster Station Upgrade Project*, August 2021.

