Initial Study and Mitigated Negative Declaration

Alameda County Water District

Groundwater PFAS Treatment Facility
January 2023

Contents

Figures

Acronyms and Abbreviations

2017 Plan	*2017 Clean Air Plan: Spare the Air, Cool the Climate*
ACWD	Alameda County Water District
BAAQMD	Bay Area Air Quality Management District
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CRHR	California Register of Historical Resources
CWA	Clean Water Act
dB(A)	A-weighted decibel
DDW	Division of Drinking Water
EPA	U.S. Environmental Protection Agency
Farmland	Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
GHG	greenhouse gas
HCP	Habitat Conservation Plan
IX	Ion Exchange
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant level
MGD	million gallons per day
NAHC	Native American Heritage Commission
NL	notification level
NPDES	National Pollutant Discharge Elimination System
PFBS	perfluorobutanesulfonic acid
PFHxS	perfluoroctanesulfonic acid
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
PG&E	Pacific Gas and Electric

PM	particulate matter
PM_{10}	particulate matter with aerodynamic diameter equal to or less than 10 microns
$PM_{2.5}$	particulate matter with aerodynamic diameter equal to or less than 2.5 microns
PFAS	Per- and Polyfluoroalkyl Substances
PT	Peralta-Tyson
RCRA	Resource Conservation and Recovery Act
RL	response level
SFPUC	San Francisco Public Utilities Commission
SWPPP	Storm Water Pollution Prevention Plan
TCR	Tribal Cultural Resource
UPRR	Union Pacific Railroad
VHFHSZ	Very High Fire Hazard Severity Zone

1. Project Description

1.1 Project Title

Groundwater PFAS Treatment Facility

1.2 Lead Agency Name and Address

Alameda County Water District
43885 S Grimmer Boulevard
Fremont, CA 94538

1.3 Contact Person and Phone Number

Kerri Smyth
Associate Engineer
Phone: (510) 668-4486
Email: kerri.smyth@acwd.com

1.4 Project Location

The project is located in the City of Fremont, Alameda County, California (Figure 1). The project is within a vacant rectangular area on the northeast side of the existing Blending Facility site at 1111 Mowry Avenue (Assessor's Parcel Numbers 507-377-15, 507-377-8-4, 507-377-8-2, 507-377-14-2). It is bound by the Union Pacific Railroad (UPRR) alignment to the north, Mowry Avenue to the south, and residential properties to the east and west.

The project is within the U.S. Geological Survey 7.5-minute Niles quadrangle at Township 4 south, Range 1 west, Section 16 Mount Diablo Meridian (at latitude 37°33'58.85"N, longitude 121°58'42.58"W).

1.5 General Plan Designation

City of Fremont: Public Facility

1.6 Zoning

City of Fremont: Public Facility

1.7 Project Description

Alameda County Water District (ACWD) blends local groundwater with purchased water from the San Francisco Public Utilities Commission (SFPUC) at ACWD's Blending Facility in Fremont, California. The groundwater is from ACWD's onsite Peralta-Tyson (PT) wellfield and the nearby Mowry wellfield, which each have eight production wells (total 16). The groundwater is blended with low-hardness SFPUC water to meet ACWD's hardness goals.

Per- and Polyfluoroalkyl Substances (PFAS) have recently been detected in the Mowry and PT production wells. The California State Water Resources Control Board's Division of Drinking Water (DDW) has established notification levels (NLs) and response levels (RLs) for four PFAS: perfluorooctanesulfonic acid (PFOS), perfluorooctanoic acid (PFOA), and perfluorobutanesulfonic acid (PFBS), and perfluoroctanesulfonic acid (PFHxS). California regulatory standards for PFAS are expected in the future, including NLs and RLs for PFAS and maximum contaminant levels (MCLs) for a class of PFAS including PFOA and PFOS. Additionally, a federal MCL for PFOA and PFOS is expected in 2023. While the Blending Facility has a capacity of 48 million gallons per day (MGD), current groundwater production is limited by hardness and PFAS goals. Meeting a 150-milligrams per liter hardness goal limits production to 32 to 36 MGD, while achieving a PFOS concentration below the NL further limits production to 22 to 24 MGD. Achieving the PFHxS NL would further limit the production to approximately 18 MGD.

Figure 1
Project Location
Alameda County Water District
Groundwater PFAS Treatment
Facility Project

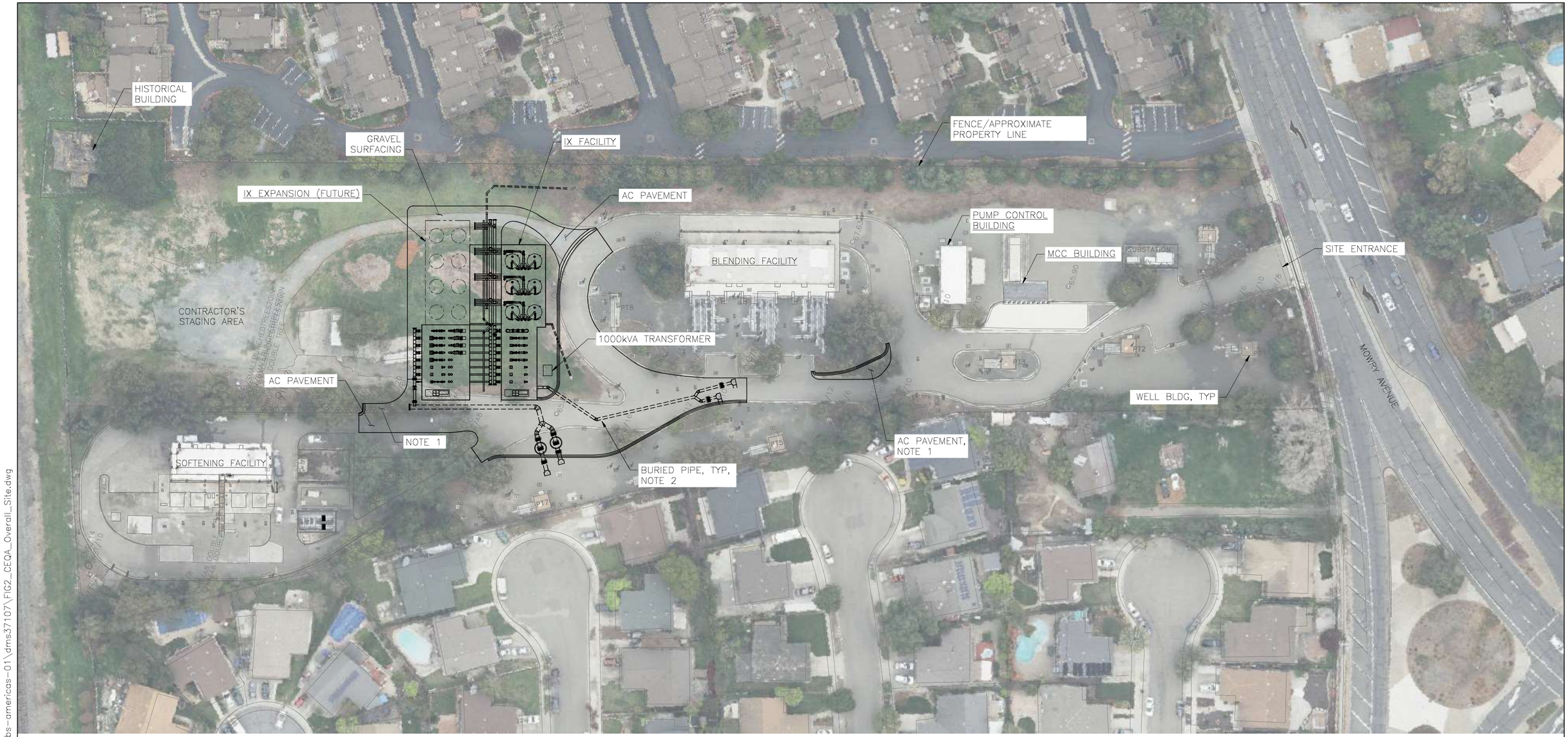
In light of the impact that PFAS has had on production at the Blending Facility and the anticipated MCLs, ACWD is designing a PFAS treatment system that will provide sufficient treated groundwater below the detection limit for both PFOS and PFOA and produce drinking water below the NL and RL requirements. The project includes the installation of a 15 MGD groundwater PFAS treatment system to bring PFAS concentrations below detection limits, to be constructed in two or more phases. The treatment technology to be implemented is ion exchange (IX). The project will thus restore the Blending Facility to pre-PFAS detection flows.

1.7.1 Project Features

The project consists of the key feature – the IX treatment units – along with all additional facilities required to run the new system. ACWD plans to construct the facility in phases, starting with 6 MGD of PFAS treatment and later expanding up to 15 MGD of treatment. Figure 2 shows the project features to be constructed for the initial phase, including 6 MGD of treatment and all site development. The remainder of the treatment capacity will be installed later within the area shown as future expansion. Project features are as follows:

- A new 15 MGD IX facility. This new facility will take water from the Mowry and PT wellfield raw water lines and, following treatment, the treated water will go back to the raw water lines before entering the Blending Facility, where it will be disinfected. The facility includes the following:
  - Seven approximately 50-horsepower feed pumps to provide adequate pressure to operate the IX system. The feed pumps would be enclosed in a pumphouse for noise reduction; depending on the exact type of pumps selected, either seven individual enclosures or one single enclosure would be used.
  - A pretreatment system, consisting of eight horizontal cartridge filter assemblies, to remove any suspended sediments that would impede system performance.
  - Seven IX trains with two pressure vessels each (14 total), operated in lead/lag configuration. Each train has a maximum capacity of 1,600 gallons per minute (2.3 MGD), for an overall system capacity of 16.1 MGD. Figure 3 is a three-dimensional rendering (called an isometric view) showing the pressure vessels and other site features with 6 MGD of treatment capacity installed. Each pressure vessel has a diameter of 12 feet and will be 16 feet and 4 inches high. The vessels would be filled with a resin material that acts as the IX media. Each vessel will be equipped with a media fill pipeline, utility air and water connections, vent ports, pressure relief valves, and vacuum/air release connections and piping.
  - Seven approximately 50-horsepower booster pumps to overcome any loss of pressure from the IX system to return the treated water into the existing system. Like the feed pumps, either seven individual sound enclosures or one single enclosure would be used.
- New pipelines to connect the new IX system to the existing raw water system. Most of these new pipelines would range from 30 to 42 inches in diameter and would be installed within the site as shown on Figure 2. Pipeline depth would be up to 16 feet below the existing ground surface.
  - Each of the IX treatment trains would connect to a pipeline that drains into the existing onsite storm drain. This new, 12-inch pipeline would be used to discharge non-hazardous liquid waste from vessel flushes, or if the Blending Facility is offline for an extended period.
- Access to the project is through the existing facility entrance, along the existing asphalt paved road. The existing road will be modified and extended to allow access to the new IX facility, as shown on Figure 2. Importantly, the new access must accommodate the large delivery trucks needed to service the IX facility. No additional parking facilities are required.

In addition to these main project features, the project also includes an electrical connection to the Blending Facility as well as various new and upgraded facility control systems to operate and monitor the system.



NOTES:

1. TREES AND EXISTING CURB TO BE REMOVED WITHIN LIMIT OF NEW AC PAVEMENT.
2. TRENCHING AND STRUCTURE EXCAVATION UP TO 15' DEEP.
3. AREA OF IMPACT IS APPROXIMATELY 10' OUTSIDE THE IMPROVEMENTS SHOWN.

PLAN
1" = 40'

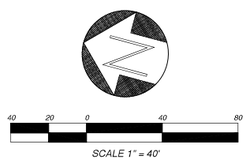


FIGURE 2
OVERALL SITE PLAN
JANUARY 2023
GROUNDWATER PFAS TREATMENT FACILITY

ACWD ALAMEDA COUNTY WATER DISTRICT Jacobs

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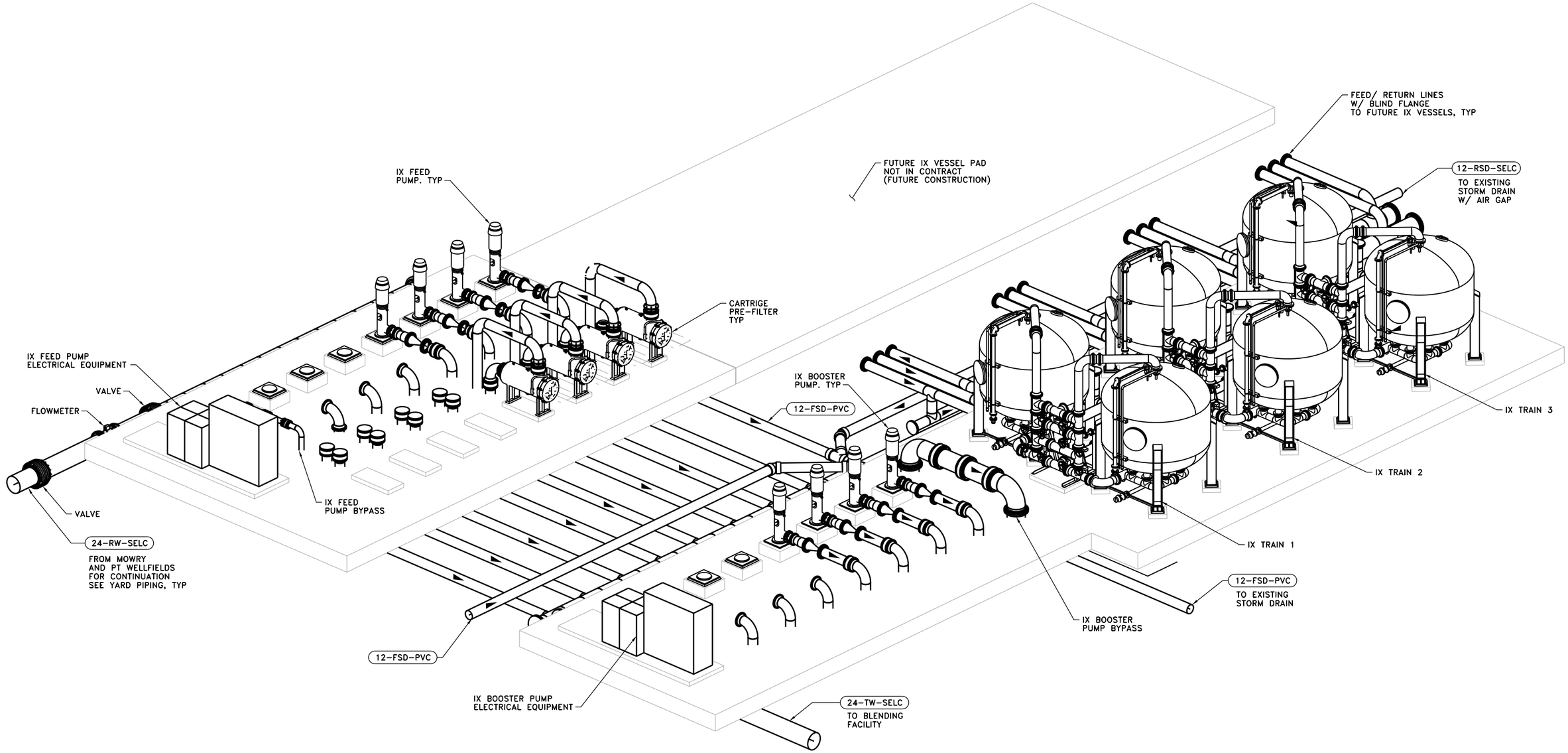

ISOMETRIC VIEW
NTS

FIGURE 3
IX FACILITY ISOMETRIC VIEW
JANUARY 2023
GROUNDWATER PFAS TREATMENT FACILITY

ALAMEDA COUNTY WATER DISTRICT

Jacobs

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1.7.2 Construction

Project construction is planned to start in Summer 2023. The initial phase of construction (6 MGD of treatment capacity) is expected to last up to approximately 18 months, driven in part by equipment procurement, with the new facility becoming operational in late 2024. ACWD may procure specialized equipment in support of this project in advance of commencing construction, which would allow the facility to become operational in late 2024.

Project construction activities would use standard construction equipment with no highly disruptive activities, such as blasting or pile driving. Typical equipment used onsite is expected to include the following:

- Demolition activities including clearing and grubbing of the site to remove some existing trees, as well as some demolition of existing asphalt and concrete along the existing access road.
- Small grading equipment (such as graders and backhoes) to prepare the existing ground surface for the new facility and for the new access roads. Little grading is required given the flat surface.
- A large excavator to dig trenches to accommodate large pipelines in trenches up to 16 feet below the ground surface.
- Concrete work to prepare the IX facility foundation, as well as asphalt and concrete work for the reconfigured access road.
- Equipment installation to install all project features, consisting of delivery of all new equipment and installation using labor and small construction equipment.

Most site work is expected to be completed as part of the initial construction. The facility will be expanded up to 15 MGD at a later date, with the additional construction activity focused on the installation of the remaining equipment.

1.7.3 Operation

The new IX facility would be operated using the upgraded control systems already located onsite. The facility would require minimal additional labor; up to one new ACWD staff person would be required to perform the following duties:

- Routine water quality sampling
- Review and reporting of water quality
- Daily rounds and inspection
- Routine calibration and maintenance of instrumentation and equipment
- Support during media changeout

Media changeout will be required for the IX resin media and the cartridge filters will need to be replaced. The IX media must be changed out when PFAS is detected at a threshold level in the lead vessel. When required, the spent media will be removed via a truck for offsite disposal, and the pressure vessel will be refilled with new media. Media will need to be replaced less than once per year for each IX treatment train. With seven treatment trains, a media replacement activity may occur once every few months. Cartridge filter replacement is expected to be required four times per year.

1.8 Regulatory Permits

California Environmental Quality Act (CEQA) Responsible Agencies are state or local agencies, other than the Lead Agency, that have discretionary approval authority over a project. This document is intended to support permit issuance and discretionary approvals that may be needed before construction begins from state and local agencies as Responsible Agencies, as follows:

- DDW – Water Supply Permit (Amendment)

1.9 References

Trussell Technologies, Inc. and Jacobs. 2022. *PFAS Treatment of ACWD's Groundwater Facilities Basis of Design Report*. October.

2. Environmental Determination

2.1 Environmental Factors Potentially Affected

The following checked environmental factors would be potentially affected by this project; that is, they would involve at least one Potentially Significant Impact, as indicated by the checklist on the following pages.

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

2.2 Determination

On the basis of this initial evaluation:

☐ The Lead Agency finds that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

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

☐ The Lead Agency finds that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

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

☐ The Lead Agency finds that although the proposed project could have a significant effect on the environment because all potentially significant effects (1) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (2) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

3. Evaluation of Environmental Impacts

3.1 Aesthetics

Aesthetics Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b. Substantially damage scenic resources, including trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c. Substantially degrade the existing visual character or quality public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☒	☐

3.1.1 Setting

The project location primarily includes disturbed and developed areas, ruderal vegetation, and ornamental and fruiting trees with relatively flat terrain and topography. The site is surrounded by residential units and other facilities owned by ACWD to the west, south, and east, and UPRR rail tracks to the north.

The project is in an urbanized area and is subject to the City of Fremont's regulations governing scenic quality. The *City of Fremont General Plan* (City of Fremont 2011) Land Use and Community Character elements have listed the following policies to protect its visual resources:

- *Land Use Policy 2-3.12 Community Preservation.* Maintain community preservation and code enforcement programs which protect health and safety and keep Fremont neighborhoods free of nuisances and visual blight. These programs should also abate excessive noise, illegal dumping, illegal signage, graffiti, littering, and other activities that disrupt neighborhood quality of life.
- *Land Use Policy 2-5.8: Industrial Land Use Compatibility.* Achieve compatibility between industrial uses and adjacent land uses through the regulation of industrial activities, limits on operations, and standards for buffering. This is particularly important in Service Industrial areas, since they may be adjacent to commercial and residential uses.
- Community Character Policy 4-5.1: Buffering and Screening. 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.

3.1.2 Impact Analysis

a) Would the project have a substantial adverse effect on a scenic vista?

NO IMPACT. No features within the project area are designated as scenic vistas, and nothing within the project area could be characterized as a scenic vista. Therefore, there would be no impact.

b) Would the project substantially damage scenic resources, including trees, rock outcroppings, and historic buildings within a state scenic highway?

NO IMPACT. Mowry Road is not designated as a state scenic highway by the California Department of Transportation. Therefore, there would be no impact.

c) Would the project substantially degrade the existing visual character or quality public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

LESS THAN SIGNIFICANT IMPACT. The project is in an urbanized area and is subject to City of Fremont regulations governing scenic quality. The project is consistent with the polices described in Section 3.1.1

The project site is bordered by retaining walls, chain-link fence, shrubs, and trees that block most public views of the property and existing facilities onsite. The new IX treatment facility includes new pressure vessels that would be 16 feet and 4 inches tall, making them visible to residents of the upper-level apartments in the Redwood Terrace Apartment Complex along the eastern border of the project site. Residences along Gilbert Court and Clay Court along the western border of the project site may be able to observe the new project features, which extend above the retaining walls and shrubs.

The project would require the removal of several small trees; however, views of these trees are not prominent from nearby residents on Clay Court, directly west of the project footprint, or from the Redwood Terrace Apartment Complex east of the site. Removal of the trees would not substantially degrade the existing visual character of the site.

While some residents of the apartment complexes and surrounding streets may be able to observe the new facilities, these facilities would not adversely degrade the existing visual character of the site. The new IX facility would be located on a site that already contains other large, visible water treatment features. Therefore, there would be a less than significant impact.

d) Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

LESS THAN SIGNIFICANT IMPACT. The new IX treatment facility would not create any new sources of substantial light or glare once construction is complete. No nighttime construction is expected, and therefore no nighttime lighting for construction is anticipated. The security and maintenance lighting required for safe operation of the new facility would be small in scale and would not create substantial glare or adversely affect views in the area. Therefore, there would be a less than significant impact.

3.1.3 References

City of Fremont. 2011. *City of Fremont General Plan*. https://www.fremont.gov/government/departments/community-development/planning-building-permit-services/plans-maps-guidelines/general-plan.

3.2 Agriculture and Forestry Resources

Agriculture and Forestry Resources Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared with the California Department of Conservation's (CDC's) Farmland Mapping & Monitoring Program (FMMP), to nonagricultural use?	☐	☐	☐	☒

Agriculture and Forestry Resources Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code [PRC] Section 12220(g)), timberland (as defined in PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to nonforest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to nonforest use?	☐	☐	☐	☒

3.2.1 Setting

The project area is zoned and designated as Public Facility in the *City of Fremont General Plan* (City of Fremont 2011). According to the California Department of Conservation Farmland Mapping and Monitoring Program, the project area consists of Urban and Built-Up Land. Urban and Built-Up land is defined as being occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel (California Department of Conservation 2019).

The Williamson Act, or California Land Conservation Act (California Government Code Section 51200 et seq.), is designed to preserve agricultural and open space land. It allows private landowners to enroll in contracts that voluntarily restrict land to agricultural and open space uses. In return, Williamson Act parcels receive a lower property tax rate consistent with agricultural and open space use instead of their market rate value. The project is not located on land under a Williamson Act contract (California Department of Conservation 2016).

3.2.2 Impact Analysis

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared with the California Department of Conservation's Farmland Mapping & Monitoring Program to nonagricultural use?

NO IMPACT. There is no Farmland within the project area or in the project vicinity. Therefore, there would be no impact.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

NO IMPACT. The project would not conflict with existing zoning for agricultural use, and there are no Williamson Act contracts within the project area or in the project vicinity. Therefore, there would be no impact.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)) or timberland (as defined in PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

NO IMPACT. The project area is not zoned for forest land or timberland use. Therefore, there would be no impact on any forest or timber resources.

d) Would the project result in the loss of forest land or conversion of forest land to nonforest use?

NO IMPACT. No forest land is present in the project area or in the project vicinity. Therefore, there would be no impact on forest resources.

e) Would the project involve other changes in the existing environment that, due to their location or nature, could result in the conversion of Farmland to nonagricultural use or conversion of forest land to nonforest use?

NO IMPACT. The project would not involve other changes that could convert Farmland to nonagricultural use. Therefore, there would be no other impact on any agricultural and farming resources.

3.2.3 References

California Department of Conservation. 2016. State of California Williamson Act Contract Land. https://planning.lacity.org/eir/HollywoodCenter/Deir/ELDP/(E)%20Initial%20Study/Initial%20Study/Attachment%20B%20References/California%20Department%20of%20Conservation%20Williamson%20Map%202016.pdf.

California Department of Conservation. 2019. California Important Farmland Finder. https://maps.conservation.ca.gov/DLRP/CIFF/.

3.3 Air Quality

Air Quality Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b. Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☒

3.3.1 Setting

The project area is located within the San Francisco Bay Area Air Basin, South Central Zone, under the jurisdiction of the BAAQMD. To protect public health and the environment, the U.S. Environmental Protection Agency (EPA) has set national standards for six common air pollutants, known as criteria pollutants, as follows:

- Ground-level ozone
- Particulate matter (PM)
- Carbon monoxide
- Nitrogen dioxide
- Sulfur dioxide
- Lead

Under federal standards, Alameda County is designated as attainment for carbon monoxide and nonattainment for ozone and PM with aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$) (EPA 2022). Under state standards, Alameda County is designated as attainment for carbon monoxide, nitrogen dioxide, sulfur dioxide, and sulfates, and is nonattainment for ozone, PM with aerodynamic diameter equal to or less than 10 microns (PM_{10}), and $PM_{2.5}$ (BAAQMD 2017a). The County is designated as attainment/unclassified for all other pollutants.

The BAAQMD is tasked with regulating stationary sources of air pollution in the nine counties that surround San Francisco Bay: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, southwestern Solano, and southern Sonoma counties. The BAAQMD adopted the *2017 Clean Air Plan: Spare the Air, Cool the Climate* (2017 Plan) on April 19, 2017 (BAAQMD 2017b). The 2017 Plan provides a regional strategy to protect public health and the climate with a wide range of control measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as PM, ozone, and toxic air contaminants; 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 (BAAQMD 2017b).

Construction activities could generate air pollutants that degrade air quality and temporarily increase local human exposure to air contaminants. The BAAQMD has a list of Standard Project Conditions that would be implemented throughout construction activities, including a comprehensive inventory list of equipment being used and a plan to reduce emissions during construction that would be submitted before the start of construction (BAAQMD 2017c).

3.3.2 Impact Analysis

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

NO IMPACT. The project would not conflict with or obstruct the 2017 Plan and is consistent with its listed goals and objectives (BAAQMD 2017b); therefore, there would be no impact.

b) Would the project result in cumulatively considerable net increase in 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. Constructing the project would temporarily increase ambient air pollutant concentrations through tailpipe emissions and dust entrainment from construction vehicles and equipment, which could affect nearby residents. Construction activities would occur immediately adjacent to residential properties to the east and west.

The BAAQMD adopted CEQA Guidelines in 2017 detailing thresholds of significance to identify the emissions level for which a project would not be expected to substantially conflict with the Clean Air Plan and with existing California legislation adopted to reduce statewide GHG emissions needed to move toward climate stabilization (BAAQMD 2017c).

The BAAQMD also developed screening criteria to provide lead agencies and project applicants with a conservative indication of whether a proposed project could result in potentially significant air quality impacts. If all of the screening criteria are met by a proposed project, then the lead agency or applicant would not need to perform a detailed air quality assessment of their project's air pollutant emissions. There are no specific screening criteria for water treatment facilities; therefore, it was assumed that "General Light Industry" screening criteria would be applied to the project. Screening criteria for this project land use type are new projects greater than 541,000 square feet, 72 acres, or 1,249 employees. In addition, construction-phase screening criteria apply for projects greater than 259,000 square feet, 11 acres, or 540 employees. The IX facility would be below all the aforementioned screening criteria; therefore, a detailed air quality assessment is not required.

For all proposed projects, BAAQMD recommends the implementation of all Basic Construction Measures, listed as follows, whether or not construction-related emissions exceed applicable Thresholds of Significance:

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

2. All haul trucks transporting soil, sand, or other loose material offsite will be covered.

3. All visible mud or dirt track-out onto adjacent public roads will 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 will be limited to 15 miles per hour.

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

6. Idling times will 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 will be provided for construction workers at all access points.

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

8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person will respond and take corrective action within 48 hours. The Air District's phone number will also be visible to ensure compliance with applicable regulations.

The project does not exceed the screening criteria and will adhere to the Basic Construction Measures listed previously; therefore, there would be a less than significant impact.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

LESS THAN SIGNIFICANT IMPACT. Although residential areas are adjacent to the project site, construction activities would be temporary. Long-term exposure to diesel PM would not occur. In addition, the BAAQMD's list of Standard Project Conditions would be implemented throughout the construction phase (BAAQMD 2017c). These conditions will minimize exposure of nearby sensitive receptors to construction-related pollutants. Therefore, project impacts would be less than significant.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

NO IMPACT. The project will not result in any emissions adversely affecting a substantial number of people. However, some temporary construction equipment would result in short-term emissions, such as temporary generators, vehicles, and other equipment. Further, the IX facility is an odorless facility, and therefore, there would be no impact.

3.3.3 References

Bay Area Air Quality Management District (BAAQMD). 2017a. Air Quality Standards and Attainment Status. https://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status.

Bay Area Air Quality Management District (BAAQMD). 2017b. *2017 Clean Air Plan: Spare the Air, Cool the Climate*. https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en.

Bay Area Air Quality Management District (BAAQMD). 2017c. California Environmental Quality Act: Air Quality Guidelines. https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en.

U.S. Environmental Protection Agency (EPA). 2022. California Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. https://www3.epa.gov/airquality/greenbook/anayo_ca.html.

3.4 Biological Resources

Biological Resources Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the 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, or regulations, or by the CDFW or USFWS?	☐	☐	☐	☒
c. Have a substantial adverse effect on state or federally protected wetlands (including marsh, vernal pool, and coastal areas) 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?	☐	☐	☐	☒

3.4.1 Setting

The site is located adjacent to the existing ACWD Blending Facility and is surrounded by residential housing, railroad tracks, additional ACWD-owned facilities, and other developed areas. The project area and vicinity include the following features:

- Relatively flat terrain topography
- Ruderal vegetation and ornamental and fruiting trees
- Disturbed soil and mounds of mulch, dirt, and other debris
- Gravel access roads and paved and unpaved roads
- Residential housing and chain-link or brick fences

The project is located within the Bay Flats subsection of the Central California Coast ecological subregion (Miles and Goudey 1997). The terrain is low to moderate elevation parallel ranges and valleys. Bedrock is sedimentary, granitic, and ultramafic formations. Vegetation in this ecoregion is a mixture of western hardwoods, chaparral-mountain shrub, and annual grasslands cover types (http://www.edc.uri.edu/atmt-dss/report_forecast/landscape_dynamics/SectionDescriptions.pdfUSDA 2007).

The soil at the site is Yolo silt loam (NRCS 2022). Topography is relatively flat. Alameda Creek runs to the north of the project area along with Kaiser Pond but is separated from the proposed site location by existing UPRR railroad tracks and residential housing (USGS 2020). There are no known waterbodies within the project area.

3.4.1.1 Literature and Database Reviews

Literature and database reviews were conducted to investigate the potential presence of sensitive resources, special-status species, and critical habitats within the project area. A species is considered special status if it meets at least one of the following criteria:

- Species that are listed, proposed for listing, or are candidates for listing as threatened or endangered under the Federal Endangered Species Act (Title 50 *Code of Federal Regulations* Section 17.11, 76 *Federal Register* 66370).
- Species that are listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (Fish and Game Code, Section 3050 et seq., 2062, 2067, and 2068).
- Species listed by the California Department of Fish and Wildlife as a species of special concern, or fully protected.
- Species listed by the California Native Plant Society with a status of 1 or 2 in the current online version of its Inventory of Rare and Endangered Plants of California (CNPS 2022) and meet the definition of "rare" or "endangered" under CEQA Guidelines Section 15125 (c), Section 15380, or both.

A list of special-status wildlife and plant species with potential to occur was developed by querying the following databases:

- U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) database was queried to determine which federally listed species could potentially occur near the project area (USFWS 2022b).
- The California Natural Diversity Database geographic information system database was queried to include a 5-mile radius of the project. (CDFW 2022a):
- The California Native Plant Society rare plant database was also queried to include a 5-mile radius of the project (CNPS 2022).
- The National Wetlands Inventory (NWI) database (USFWS 2022a) and the USGS National Hydrography Dataset (USGS 2023) were queried for assessing the potential presence of aquatic resources.

Each species identified in the searches above was evaluated to determine its potential to occur within the project area. A species was determined to have potential to occur if its known or expected habitat is represented within or immediately adjacent to the project limits.

3.4.1.2 Field Review

On June 20, 2022, a reconnaissance-level field survey of the proposed site location for the 15 MGD PFAS IX treatment facility was performed to identify biological and aquatic resources, as well as potential habitat for special-status species. Bird-nesting activities were also evaluated during the site visit. Initially, two possible locations at the PT Wellfield/Blending Facility site where the 15 MGD treatment system could be located were evaluated: 1) the vacant rectangular area on the northeast side of the PT Wellfield/ Blending facility site or 2), the triangular area on the northwest side of the PT Wellfield/Blending facility site which is the location of a decommissioned softening facility. ACWD selected the vacant rectangular area as the preferred location for the IX system, while the triangle area will remain intact (Trussell Technologies, Inc. and Jacobs 2022).

3.4.1.3 Natural Communities

The project area contains two natural communities: non-native annual grasslands/ruderal vegetation and trees and shrubs.

Most of the site is developed. Undeveloped portions of the site support a variety of annual grasses with ruderal (weedy) forb species and barren areas. Plant species observed during the reconnaissance-level field survey consist of mostly non-native plant species, including wild oats (*Avena* sp.), shortpod mustard (*Hirschfeldia incana*), docks (*Rumex* sp.), and mallows (*Malva* sp.).

The project site is bordered by mostly ornamental and fruiting trees consisting of walnut trees (*Juglans* sp.), deodar cedar (*Cedrus deodara*), ash trees (*Fraxinus* sp.), pine trees (*Pinus* sp.), loquat (*Eriobotrya japonica*), coast live oak (*Quercus agrifolia*), quince (*Cydonia oblonga*), Japanese persimmon (*Diospyros kaki*), and junipers (*Juniperus* sp.). Other tree species observed on the project site include an orange tree (*Citrus x sinensis*) and avocado tree (*Persea americana*) located close to the center of the open dirt area adjacent to an existing trailer, and a coast redwood tree (*Sequoia sempervirens*) adjacent and to the west of the open dirt area.

3.4.1.4 Wetlands and Other Waters

The project site is in the vicinity of Alameda Creek, which is jurisdictional under the Clean Water Act (CWA) and is listed as a Category 4a Impaired Water Body by the Regional Water Quality Control Board, meaning that the water body is impaired by a pollutant (such as urban runoff/storm sewers) (State Water Board 2011). Alameda Creek is a large perennial stream that runs 45 miles from a lake northeast of Packard Ridge to the eastern shore of San Francisco Bay through Niles Canyon and a flood control channel. No potential wetlands or other waters, as defined by Section 404 of the CWA and the Porter-Cologne Water Quality Control Act (Water Code, Section 13000 et seq.) were identified within the project area

3.4.1.5 Special-Status Species

The California Natural Diversity Database desktop review identified 22 state or federally listed and 25 unlisted special-status species with some potential to occur (within 5 miles) adjacent to or in the project area. Based on the reconnaissance-level field survey, it was determined that none of the special-status species known to occur in the vicinity are likely to occur within the project area.

3.4.1.6 Birds Protected Under the Migratory Bird Treaty Act

Suitable nesting habitat for birds protected by the Migratory Bird Treaty Act (MBTA) is present within and adjacent to the project area. This includes trees and shrubs in various locations within the project area.

3.4.1.7 Trees

The City of Fremont General Plan mentions preserving the visual character of the City of Fremont's open space and other unique natural visual elements. Among these elements, the General Plan references protecting Landmark Trees (Fremont Municipal Code, Sec. 4-5109) which are defined as "…any tree with significant girth, height, spread, or some other unique quality or species" along with Private Trees (any tree growing on private land) (City of Fremont 2011). The proposed trees that may be removed are located on publicly owned land and are not on the City of Fremont's list of Landmark Trees.

3.4.2 Impact Analysis

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS?

NO IMPACT. Based on the reconnaissance-level field survey conducted, no suitable habitat for special-status plant and wildlife species was identified in the project area. Therefore, implementation of the project would have no impact on special-status species.

3.4.2.1 Migratory Corridors

b) Would the project 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 or USFWS?

NO IMPACT. There is no riparian habitat or sensitive natural community identified by any regional plans, policies, or regulations, or by the CDFW or USFWS within the project site that would be affected by the project.

c) Would the project have a substantial adverse effect on state or federally protected wetlands (including marsh, vernal pool, and coastal areas) through direct removal, filling, hydrological interruption, or other means?

NO IMPACT. There are no state or federally protected wetlands, as defined by CWA Section 404 (including marsh, vernal pool, and coastal areas), within the project site; therefore, there would be no impact.

d) Would the project 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 WITH MITIGATION INCORPORATED. The project site is not located within or adjacent to any wildlife corridors (CDFW 2022b), and there are no wildlife corridors or nursery sites within the project area. Suitable nesting habitat for birds federally protected by the MBTA is present within and adjacent to the project area. Mature trees within the project site may provide nesting habitat for migratory birds, including raptors (birds of prey). Nesting birds may occur on the project site as potential nesters during the breeding season defined by the USFWS as extending from February 1 through August 31. Therefore, construction activities could result in significant impacts for which the following mitigation would be applied to reduce potential impacts to less than significant.

Mitigation Measure BIO-1. **The following measures will be implemented to avoid, minimize, and mitigate for impacts to special-status birds and migratory birds covered under the MBTA.**

- Construction activities will be scheduled to avoid the nesting season (February 1 through August 31, inclusive) if feasible. If construction activities are scheduled to take place outside the nesting season, impacts on nesting bids will be avoided.
- If ground-disturbing activities cannot be scheduled to occur between September 1 and January 31, then preconstruction surveys for nesting birds will be conducted by a qualified biologist so that no nests will be disturbed during project construction. If work begins during the early part of the nesting season (February 1 to April 30, inclusive), a qualified biologist will survey all suitable nesting habitat in the project area for presence of nesting birds. This survey will occur no more than 14 days prior to the start of ground-disturbing activities and will cover an area within a 250-foot buffer for nonlisted raptors, and 100 feet for nonlisted passerines. If work begins during the late part of the nesting season (May 1 to August 31, inclusive), a qualified biologist will survey all suitable nesting habitat in the project area for presence of nesting birds. This survey will occur no more than 30 days prior to the start of ground-disturbing activities.
- If active nests are identified during the preconstruction survey, then the qualified biologist should evaluate whether existing screening buffers (such as buildings, trees, and intervening topography) are sufficient to allow work to proceed and determine what level of work exclusion buffers or nest monitoring is needed, if any. This could result in work areas being reduced in size.
- If work cannot proceed without disturbing nesting birds, or if signs of disturbance are observed by the monitor, then work may be halted or redirected to other areas until nesting and fledging are complete or until the nest has otherwise become inactive.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

NO IMPACT. As discussed in Section 3.4.2.5. Trees, the City of Fremont Municipal Code protects Landmark Trees and Private Trees. However, because the project is located on publicly owned land, the tree ordinance does not apply. The walnut (*Juglans* sp.), deodar cedar (*Cedrus deodara*), ash (*Fraxinus* sp.), and several other smaller trees located within the project footprint may be removed prior to construction of the IX facility. All other trees observed during the reconnaissance-level field survey will not be removed as they are located within or adjacent to a large open area that may be utilized for staging purposes. The trees to be removed do not correspond with any of the classifications that warrant permitting according to the City Municipal Code 18.215. Therefore, there will be no impact.

f) Would the project conflict with the provisions of an adopted HCP; Natural Community Conservation Plan; or other approved local, regional, or state HCP?

NO IMPACT. The project area is not located within the plan or permit area of any adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or state HCP. Therefore, there would be no impact.

3.4.3 References

California Department of Fish and Wildlife (CDFW). 2022a. RareFind. https://jacobsengineering.sharepoint.com/:b:/r/sites/ICACWDPFAS/Shared%20Documents/900_Working_Documents/Task%2010%20-%20Environmental%20(CEQA)/ISMND/Bio/ACWD_PFAS_CNDDB_9QUAD_20220822.pdf?csf=1&web=1&e=j94HoW.

California Department of Fish and Wildlife (CDFW). 2022b. Biogeographic Information Observation System. https://apps.wildlife.ca.gov/bios6/.

California Native Plant Society (CNPS). 2022. CNPS Rare Plant Inventory. https://jacobsengineering.sharepoint.com/:b:/r/sites/ICACWDPFAS/Shared%20Documents/900_Working_Documents/Task%2010%20-%20Environmental%20(CEQA)/ISMND/Bio/ACWD_PFAS_CNPS_9QUAD_20220822.pdf?csf=1&web=1&e=wVScYE.

City of Fremont. 2011. *City of Fremont General Plan*. https://www.fremont.gov/government/departments/community-development/planning-building-permit-services/plans-maps-guidelines/general-plan.

Miles, S., and C. Goudey. 1997. Ecological Subregions of California. United States Department of Agriculture, Forest Service. Pacific Southwest Division. R5-EM-TP-005-Net. San Francisco.

Natural Resources Conservation Service (NRCS). 2022. Web Soil Survey.

State Water Resources Control Board (State Water Board). 2011. Category 4A. 2010 California List Of Water Quality Limited Segments Being Addressed By USEPA Approved TMDLS. *2010 Integrated Report (CWA Section 303(d) List/305(b) Report)*. Final. https://www.waterboards.ca.gov/water_issues/programs/tmdl/2010state_ir_reports/category4a_report.shtml.

Trussell Technologies, Inc. and Jacobs. 2022. *Basis of Design Report*.

U.S. Department of Agriculture (USDA). 2007. *Description of Ecological Subregions: Sections of the Conterminous United States*. http://www.edc.uri.edu/atmt-dss/report_forecast/landscape_dynamics/SectionDescriptions.pdf.

USFWS. 2022a. IPaC Resource List. https://jacobsengineering.sharepoint.com/:b:/r/sites/ICACWDPFAS/Shared%20Documents/900_Working_Documents/Task%2010%20-%20Environmental%20(CEQA)/ISMND/Bio/ACWD_PFAS_USFWS_IPaC_20220817.pdf?csf=1&web=1&e=PNKIw1.

USFWS. 2022b. IPaC Resource List. https://jacobsengineering.sharepoint.com/:b:/r/sites/ICACWDPFAS/Shared%20Documents/900_Working_Documents/Task%2010%20-%20Environmental%20(CEQA)/ISMND/Bio/ACWD_PFAS_USFWS_IPaC_20220817.pdf?csf=1&web=1&e=2Ho9x5.

U.S. Geological Survey (USGS). 2020. National Water Information System: Mapper. https://maps.waterdata.usgs.gov/mapper/index.html.

USGS. 2023. National Hydrography Dataset. https://www.usgs.gov/national-hydrography/national-hydrography-dataset.

3.5 Cultural Resources

Cultural Resources Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to California Code of Regulations (CCR) Section 15064.5?	☐	☐	☒	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CCR Section 15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

3.5.1 Setting

A literature review was conducted to identify previously conducted cultural resources studies and previously recorded cultural resources within the project area and a 0.5-mile radius project area. The literature review was conducted in July 2022 through the Northeast Information Center of the California Historical Resources Information System and included a review of the National Register of Historic Places, California Register of Historical Resources (CRHR), California Points of Historical Interest, and California Historic Landmarks (NWIC 2022). There are no previously recorded archaeological resources in the project area, and none recorded with the 0.5-mile radius of the record search. Additionally, the Sacred Lands File, which was developed by the Native American Heritage Commission (NAHC) was reviewed on August 31, 2022, to identify sacred and tribal cultural sites within the 0.5-mile radius project area. The results of the Sacred Lands File Search were positive and the NAHC indicated that the North Valley Yokuts Tribe should be contacted for more information. Initial contact letters were sent to the Yokuts Tribe on December 5, 2022. ACWD has not received a response.

A pedestrian survey of the project area was completed with transects generally oriented parallel to the long axis of the project area. The survey was limited to surface inspection and included a close examination of the following elements:

- Exposed sediments
- Cutbanks
- Graded areas
- Rodent burrows
- Other areas of recent disturbance

The pedestrian survey also involved inspection of the local topography to identify areas that have been subject to modern anthropogenic landscape alterations and that offer higher archaeological potential for subsurface resources within the area of ground disturbance that might require additional investigation through subsurface testing.

3.5.2 Impact Analysis

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in CCR Section 15064.5?

LESS THAN SIGNIFICANT IMPACT. The background research and literature review indicated that one previously identified CRHR-eligible architectural resource is located within the project area. The Joseph Nichols House is an abandoned nineteenth-century farmhouse located along the back of the parcel. The resource was evaluated in 2008 and was found to meet all four significance criteria for listing on the CRHR. The house was described as meeting significance criteria through its association with early settlement of the region; Joseph Nichols, a prominent early horticulturalist; its early architectural style and construction; as well as its ability to offer information about Gold Rush-era construction. The setting of the

house in 2008 was found to be sufficient to convey the significance of the property considering modern surrounding residential development and the existing treatment facility on the parcel (Minor 2008).

The project includes the addition of upgraded equipment that is within the larger parcel and set back from the residence. This upgrade work would not result in temporary or permanent changes to the character defining features such as: Greek Revival architecture, early woodwork, adobe infill, and dressed-stone foundation. Therefore, integrity of location, design, materials, and workmanship would be maintained, and the residence will continue to convey its historical significance. Further, the integrity of feeling, setting, and association would not be reduced by the proposed project components. The house is currently separated and protected by cyclone fencing creating a visible environmentally sensitive area to afford avoidance by any project work and components. The house would continue to exist as it has before project implementation. Therefore, the impact would be less than significant.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CCR Section 15064.5?

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. The project would be located in an area containing Holocene Alluvial Fan deposits (younger) and Latest Holocene Stream Terrace deposits, which are often associated with prehistoric uses; however, there are no previously recorded archaeological resources are located in the project area (NWIC 2022). The project area has been subject to previous disturbances, and much of the surrounding area has been graded and developed without exposing archaeological resources within a half mile of the project location. A pedestrian survey of the project area did not identify previously unknown cultural resources.

The pedestrian survey determined that most of the project area is characterized by surface disturbance. While surface visibility was variable due to grass and weed growth, extensive rodent activity on-site has resulted in many piles of soils on the surface that are indicative of subsurface conditions. A thorough inspection of these rodent created soil pile did not reveal the presence of any cultural materials and no archaeological sites were identified. Because the project area is underlain by Holocene alluvial deposits, construction activities extending beyond 1 foot below the present ground surface may encounter unknown prehistoric and historic era archaeological sites and resources. While these efforts did not identify archaeological resources within the project area, unidentified resources could be present or encountered during ground-disturbing activities in previously undisturbed soils, for which the following mitigation would be applied to reduce potential impacts to less than significant.

Mitigation Measure CUL-1. To minimize potential impacts on unknown prehistoric and historic era archaeological sites and resources, the project applicant will implement the following measures:

- A professional archaeologist will provide a preconstruction briefing to supervisory personnel of any excavation contractor to alert them to the possibility of exposing significant prehistoric archaeological resources within the project area. The briefing will include a discussion of any archaeological objects that could be exposed, the need to stop excavation at the discovery, and the procedures to follow regarding discovery protection and notification to ACWD and archaeological team.
- A professional archaeologist will be available during any ground-disturbing construction activities extending 1 foot below ground surface to review, identify, and evaluate cultural resources that may be inadvertently exposed during construction. If previously unidentified cultural resources are discovered during project construction, the contractor will cease work within 50 feet of the resources and notify ACWD immediately. The archaeologist will review and evaluate any discoveries to determine whether they are historical resources or unique archaeological resources under CEQA.
- If the professional archaeologist determines that any cultural resources exposed during construction constitute a historical resource or unique archaeological resource, then the archaeologist will notify ACWD of the evaluation and recommended mitigation measures to mitigate to a less than significant impact. Mitigation measures may include any of the following, or any combination of these:
  - Avoidance
  - Preservation in place
  - Recordation
  - Additional archaeological testing
  - Data recovery

Any significant cultural resources will be treated only with ACWD approval. The archaeologist will document the resources using California Department of Parks and Recreation Form 523 and file the form with the Northeast Information Center of the California Historical Resources Information System. The archaeologist will submit a report of the findings and methods for curating or protecting the resources to ACWD for review and approval before resuming work. Further work within the area of discovery will not be allowed until these steps have been taken.

c) Would the project disturb any human remains, including those interred outside of formal cemeteries?

LESS THAN SIGNIFICANT IMPACT. No recorded instances of prehistoric or historic human remains are known to be within or adjacent to the project area. In the unlikely event that human remains are discovered during project activities, the construction contractor is required to follow California Health and Safety Code Section 7050.5(b), which specifies protocols if human remains are discovered. By implementing this standard procedure, the impact would be less than significant.

3.5.3 References

Minor, Woodruff. 2008. DPR Form Set: Joseph Nichols House. Prepared by Woodruff Minor and Ward Hill, Architectural Historians. On file with ACWD, Fremont, California. July.

Northwest Information Center (NWIC). 2022. Records Search for ACWD CEQA: Project W8Y17800: NWIC File No.: 21-2077. Rohnert Park, California.

3.6 Energy

Energy Checklist

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

3.6.1 Setting

Depletion of nonrenewable energy resources may be consumed throughout all phases of the project. The electricity need to power the IX facility would be provided by Pacific Gas and Electric (PG&E) using the existing electrical connection that serves the Blending Facility and related onsite uses. Other than connecting to the existing onsite system, no new electrical supply is needed. Backup power would be provided by an existing emergency generator. Construction equipment would consume gasoline and diesel fuel.

The *City of Fremont Climate Action Plan* (City of Fremont 2012) and the *City of Fremont General Plan* (City of Fremont 2011) identify and discuss goals and policies regarding energy efficiency and the use of renewable energy resources around new development, water efficiency, transportation, and solid waste.

3.6.2 Impact Analysis

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

LESS THAN SIGNIFICANT IMPACT. Nonrenewable energy resources, primarily fossil fuels (oil, gasoline, and diesel) for construction equipment, would be used during project construction. These nonrenewable energy resources would follow basic construction measures (such as reducing idle time) and be used efficiently during construction activities (BAAQMD 2017). Project construction would last approximately 18 months and would not consume unnecessary amounts of energy. Power to the proposed facility would be provided using an existing PG&E power supply. Neither ACWD nor the construction contractor are expected to use energy in a wasteful manner, the impact would be less than significant.

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

NO IMPACT. The City of Fremont's general plan does not include an applicable plan for renewable energy or energy efficiency for wastewater projects and the project would not conflict with or obstruct the City of Fremont's Climate Action Plan. Therefore, there would be no impact.

3.6.3 References

Bay Area Air Quality Management District (BAAQMD). 2017. California Environmental Quality Act: Air Quality Guidelines. https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en.

City of Fremont. 2011. *City of Fremont General Plan*. https://www.fremont.gov/government/departments/community-development/planning-building-permit-services/plans-maps-guidelines/general-plan.

City of Fremont. 2012. *City of Fremont Climate Action Plan*. https://www.fremont.gov/home/showpublisheddocument/1631/637752865273470000.

3.7 Geology and Soils

Geology and Soils Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

Geology and Soils Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

3.7.1 Setting

The project area is part of Coast Ranges geomorphic province (California Department of Conservation 2002). The Coast Ranges are composed of thick Mesozoic and Cenozoic sedimentary strata. The eastern border, in which Alameda County is located, is characterized by strike-ridges and valleys in Upper Mesozoic strata. According to the Geological Map of California, the project area is in the Quaternary geological unit and made up of alluvium, lake, playa, and terrace deposits (CGS 2010). Natural Resources Conservation Service maps show the project area contains Yolo Silt loam at a 0 to 3% slope (NRCS 2019).

3.7.2 Impact Analysis

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

NO IMPACT. The project area is not located within any known designated Alquist-Priolo Earthquake Fault Zones (Jacobs 2022). Therefore, there would be no impact.

ii) Strong seismic ground shaking?

LESS THAN SIGNIFICANT IMPACT. As described in the project's Geotechnical Design Report, the site classification is Site Class D, Stiff Soil, and the project is considered Risk Category III (Jacobs 2022b). Facilities which fall under Risk Category III are buildings and other structures that represent a substantial hazard to human life in the event of failure. The Geotechnical Design Report evaluated the potential effects from the Maximum Considered Earthquake ground motion, and determined that the following earthwork recommendations would be appropriate for the facility at this site:

- **Site Preparation:** Site clearing, grubbing, and earthwork should be performed in accordance with the project specifications.

- **Subgrade Preparation:** If encountered, loose or wet soils should be removed from the subgrade for the foundation of a structure.
- **Structural Fill Placement:** Structural fill is recommended for fill to be placed beneath slabs, footings, and pavements.

Because these recommendations have been incorporated into the project design, the impact would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

NO IMPACT. Liquefaction analyses indicate thin layers of silt and silty sand between depths of 20 to 38 feet below ground surface that are potentially liquefiable under seismic conditions. The potential liquefaction-induced settlement of project facilities was determined to be approximately 1 inch (Jacobs 2022). The recommendations from the Geotechnical Design Report have been incorporated into the project design; therefore, there would be no impact.

iv) Landslides?

NO IMPACT. The project area has no record of landslides and is not mapped within a landslide hazard area (Jacobs 2022). Due to the relatively flat land (0 to 3% slope), there is a low probability for landslides in the project area. Therefore, there would be no impact.

b) Would the project result in substantial soil erosion or the loss of topsoil?

LESS THAN SIGNIFICANT IMPACT. The project is occurring within a site that is generally flat but with grading and excavation occurring over a large area. Although no substantial soil erosion is expected, standard construction best management practices will be installed and a Storm Water Pollution Prevention Plan (SWPPP) including sediment and erosion control measures will be implemented. By following these erosion control plans, the project would have a less than significant impact.

c) Would the project be located on a geologic unit or soils that are unstable, or that would become unstable as a result of the project, and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

LESS THAN SIGNIFICANT IMPACT. Liquefaction and other types of failures described in item a) state that the project is not located within a liquefaction zone or within any known designated Alquist-Priolo Earthquake Fault Zones. The project area is mostly flat developed land with no record of landslides and would not be subject to becoming unstable. As described earlier, there is some potential for seismic-related ground failure, but the recommendations from the Geotechnical Design Report have been incorporated into the project design. Therefore, the impact would be less than significant.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

NO IMPACT. The project area does not contain expansive soil and would not create any direct or indirect risks to life or property. Therefore, there would be no impact.

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

NO IMPACT. The project does not include septic tanks or alternative wastewater disposal systems; therefore, there would be no impact.

f) Would the project directly or indirectly destroy a unique paleontological resource or unique geologic feature?

NO IMPACT. There is not currently expected to be any unique paleontological resource or unique geologic feature at the project location. Therefore, there would be no impact.

3.7.2.1 References

California Department of Conservation. 2002. California 36 Geomorphic Provinces. California Geological Survey. https://www.conservation.ca.gov/cgs/Documents/Publications/CGS-Notes/CGS-Note-36.pdf.

California Geological Survey (CGS). 2010. Geologic Map of California. https://maps.conservation.ca.gov/cgs/gmc/.

Jacobs. 2022. *Geotechnical Design Report.*

Natural Resources Conservation Service (NRCS). 2019. Web Soil Survey. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

3.8 Greenhouse Gas Emissions

Greenhouse Gas Emissions Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with any applicable plan, policy, or regulation adopted to reduce GHG emissions?	☐	☐	☐	☒

3.8.1 Setting

GHGs include both naturally occurring and anthropogenic gases that trap heat in the earth's atmosphere. GHGs known to contribute significantly to climate change include the following:

- Carbon dioxide
- Methane
- Nitrous oxide
- Hydro-chlorofluorocarbons
- Perfluorocarbons
- Sulfur hexafluoride

The BAAQMD developed the 2017 Plan to achieve emission reduction goals outlined by Global Warming Solutions Act of 2006 (Assembly Bill 32). Assembly Bill 32 required California Air Resources Board to implement rules and regulations that would achieve Greenhouse Gas (GHG) emissions equivalent to 1990 statewide levels by 2020 (BAAQMD 2017).

The BAAQMD has established Thresholds of Significance for GHG and recommends using the approach endorsed by the California Supreme Court in Center for Biological Diversity v. Department of Fish & Wildlife (2015) (62 Cal.4th 204), which evaluates a project based on its effect on California's efforts to meet the State's long-term climate goals (BAAQMD 2022). Refer to Section 3.3 for additional information related to Thresholds of Significance.

3.8.2 Impact Analysis

a) Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

LESS THAN SIGNIFICANT IMPACT. Generation of GHG emissions from vehicle emissions would result from short-term construction activities and vehicle traffic during construction as well as from maintenance activities during operation. In addition, the project would draw additional power from the existing onsite PG&E electrical system during operation. Based on the screening criteria described in Section 3.3, the project would be below the BAAQMD Thresholds of Significance; therefore, the impact would be less than significant.

b) Would the project conflict with any applicable plan, policy, or regulation adopted to reduce GHG emissions?

NO IMPACT. The project would not exceed the BAAQMD Thresholds of Significance as described in Section 3.3, indicating compliance with the 2017 Clean Air Plan. Therefore, there would be no impact.

3.8.3 References

Bay Area Air Quality Management District (BAAQMD). 2017. *2017 Clean Air Plan: Spare the Air, Cool the Climate.* https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/final-clean-air-plan-april-2017revised4_26-pdf.pdf?la=en.

Bay Area Air Quality Management District (BAAQMD). 2022. *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans*. https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf.pdf?la=en.

3.9 Hazards and Hazardous Materials

Hazards and Hazardous Materials Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c. Emit hazardous emissions or require the handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☐	☐	☒
d. Be located on a site included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5; and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e. For a project located within an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	☒

3.9.1 Setting

The project area is located near industrial land; however, an investigation into the EnviroStor and GeoTracker databases was performed and did not identify any operating or closed hazardous materials cleanup sites within the project area (DTSC 2022). Niles Elementary School is located approximately 0.7 mile north of the project area. There are no airports or private airstrips located within a 2-mile radius of the project area.

3.9.2 Impact Analysis

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

LESS THAN SIGNIFICANT IMPACT. During construction, routine hazardous materials, such as oil, gas, and diesel fuel from construction equipment, would be used and transported throughout the project area. The *City of Fremont General Plan* (City of Fremont 2011) requires that use and disposal of hazardous waste and materials comply with regulations from numerous agencies, including the California Department of Toxic Substances Control, the EPA, and California Occupational Safety and Health Administration. The City of Fremont's Municipal Code (City of Fremont 2022) describes roles and responsibilities of federal, state, and local agencies during a hazardous materials incident. Compliance with standard regulatory requirements would reduce potential hazardous materials impacts associated with construction activities to less than significant.

During operation, the IX treatment facility would produce solid waste in the form of spent resin. EPA has outlined plans to initiate rulemaking to designate PFOA, PFOS, phosphate-buffered saline, and hexafluoropropylene oxide (GenX) as hazardous *constituents* under the Resource Conservation and Recovery Act (RCRA). This would classify these compounds as characteristically hazardous. The result is that it would limit the sites where ACWD can dispose the resin (for example, it must be disposed at a landfill that is certified to receive hazardous waste or dispose at an incineration facility) and thus will increase the disposal cost. Fouled cartridge filter elements may also have some absorbed PFAS and may require disposal at a hazardous waste facility. Because the spent resin would be managed consistent with hazardous materials requirements, the impact would be less than significant.

b) Would the project 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. The EnviroStor and GeoTracker databases do not identify any operating or closed hazardous materials cleanup sites within the project area. The project site itself is undeveloped but part of a previously disturbed area within the Blending Facility site with no known history of hazardous materials at the specific IX facility location. Therefore, project construction is not expected to create a hazard through upset or accident involving the release of hazardous materials from a known site, and the impact would be less than significant.

c) Would the project emit hazardous emissions or require the handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

NO IMPACT. The project is not located within 0.25 mile of any existing or proposed schools; therefore, there would be no impact.

d) Would the project be located on a site included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5; and, as a result, would it create a significant hazard to the public or the environment?

NO IMPACT. The project is not included on the list compiled pursuant to Government Code Section 65962.5; therefore, there would be no impact.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

NO IMPACT. The project is not located within 2 miles of and airport and is not subject to any airport land use plans. Therefore, there would be no impact.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

NO IMPACT. The project area is not located within any adopted emergency response or evacuation plan; therefore, there would be no impact.

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

NO IMPACT. The project area is located within a Local Responsibility Area (CalFire 2022) managed by the City of Fremont and would not expose people or structures to significant risk associated with wildfire. Therefore, there would be no impact.

3.9.3 References

California Department of Forestry and Fire Protection (CalFire). 2022. https://egis.fire.ca.gov/FHSZ/.

California Department of Toxic Substances Control (DTSC). 2022. State Water Resources Control Board GeoTracker. https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=city+of+fremont%2C+ca.

City of Fremont. 2022. *City of Fremont Municipal Code*. https://www.codepublishing.com/CA/Fremont/html/Fremont08/Fremont0835.html#8.35.220.

3.10 Hydrology and Water Quality

Hydrology and Water Quality Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements (WDRs) or otherwise substantially degrade surface water or groundwater quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation onsite or offsite	☐	☐	☒	☐
ii. Substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite	☐	☐	☒	☐

Hydrology and Water Quality Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
iii. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	☐	☐	☒	☐
iv. Impede or redirect flood flows	☐	☐	☐	☒
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

3.10.1 Setting

The project has been designed to meet water quality objectives set by EPA and DDW that set legal limits for multiple contaminants in drinking water provided by public water systems (Trussell Technologies, Inc. and Jacobs 2022). ACWD's existing water supply permit with DDW will need to be amended as part of this project. Moreover, ACWD has an existing statewide National Pollutant Discharge Elimination System (NPDES) permit for discharges from drinking water systems (General Order No. CAG140001). Further, the Federal Emergency Management Agency Flood Map Service Center has not designated the project area in a flood zone. The location of the project area is expected to be subject to sea level rise increases between 0.5 and 1.0 feet by 2050. This will likely increase coastal flood elevations and expand the areas subject to the 1 and 0.2 percent annual chance floods (FEMA 2022a).

3.10.2 Impact Analysis

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality?

LESS THAN SIGNIFICANT IMPACT. The Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality. The IX treatment facility will not generate a continuous waste stream, but occasional liquid, including infrequent IX flush waste, will be discharged to the storm drain under ACWD's existing statewide NPDES permit for drinking water systems (General Order No. CAG140001) through train connections to the existing 24-inch storm drain. This connection will be used to discharge waste from vessel flushes. ACWD currently discharges well pump flush waste (flow rates of 3.2 MGD) to the storm drain when bringing a well pump online. Therefore, the storm drain has sufficient capacity to handle flows up to at least 3.2 MGD. There is no continuous waste stream from the IX process, but there are two instances when ACWD will be discharging IX flush waste to the storm drain: 1) after a media change-out and 2) if the blending facility is offline for an extended period of time (more than a few days). During operation, media replacement and resin installation will result in flushing to the storm drain. The pH of this flush water is expected to meet requirements for storm drain discharged under the General NPDES permit. If the Blending Facility is offline, water that is run through each IX train daily will be discharged to the storm drain. The quality of this water is the same as the quality of the water that would be sent to the Blending Facility for distribution and would meet the requirements for storm drain discharge in the General NPDES permit. (Trussell Technologies, Inc. and Jacobs 2022).

During construction, there is a low risk of encountering groundwater through excavation. Groundwater is assumed to be no less than 20 feet below the ground surface, and the maximum excavation depth is expected to be approximately 16 feet. Any unexpected construction dewatering will be implemented pursuant to applicable regulations before discharge into the existing 24-inch storm drain. Therefore, the impact would be less than significant.

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

NO IMPACT. The project would not decrease groundwater supplies or interfere with groundwater recharge any more than current operations do through the existing Blending Facility, which draws groundwater from the PT and Mowry wellfields. The existing facility has a flow capacity of 48 MGD but its current production is limited by the blending required to achieve the hardness and PFAS goals. To meet potable water hardness goal limits, the existing Blending Facility's production is restricted to 32 to 36 MGD; while meeting the PFOS goal of below the NL further limits production to 22 to 24 MGD. Meeting the proposed PFHxS NL would further limit the production to approximately 18 MGD (Trussell Technologies, Inc. and Jacobs 2022). With the construction of the IX treatment facility, the project would result in additional flow capacity up to 15 MGD, which results in a flow capacity of 37 to 39 MGD for PFOS and 31 MGD for PFHxS – still below the existing facility's capacity of 48 MGD. The project would not result in an increase in water supply as it is adding a new treatment process to an existing water delivery system. There will be no capacity increase of the existing system, although the additional treatment for PFAS will result in the removal of recent capacity limitations. Further, the IX treatment facility will be constructed above grade which does not impose a significant threat to sustainable groundwater management; therefore, there would be no impact.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would:

i) Result in substantial erosion or siltation onsite or offsite

LESS THAN SIGNIFICANT IMPACT. The project will implement a SWPPP and Erosion Control Plan that would result in minimal erosion or siltation from the construction of the project and would result in a less than significant impact.

ii) Substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite

LESS THAN SIGNIFICANT IMPACT. The project will increase impervious surfaces by constructing the 15 MGD IX treatment facility adjacent to the existing Blending Facility. However, the scale of the facility would not be substantial enough to increase surface runoff that would result in flooding onsite or offsite. In addition, the project will use an existing 24-inch storm drain for any liquid waste disposal that is covered under ACWD's existing statewide NPDES permit. Therefore, impacts would be less than significant.

iii) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff

LESS THAN SIGNIFICANT IMPACT. The site will be graded to slope away from facilities to allow stormwater runoff to flow to existing storm drain inlets. Existing inlets may be relocated to accommodate access requirements. Grading will be designed to discourage ponding onsite. Further, the project will implement a SWPPP and Erosion Control Plan to ensure that construction will not create or contribute to substantial additional sources of polluted runoff. During operation, the IX treatment facility will use existing stormwater drains that are used by the Blending Facility. Therefore, the impact would be less than significant.

iv) Impede or redirect flood flows?

NO IMPACT. The project would not impede or redirect flood flows. Therefore, there would be no impact.

d) Would the project risk release of pollutants in flood hazard, tsunami, or seiche zones due to project inundation?

NO IMPACT. Project construction would occur in areas that have been previously disturbed by residential, industrial, and utility use. The project area is not located in an area that is expected to be subject to sea level rise increases between 0.5 and 1.0 feet by 2050 (FEMA 2022a). This will likely increase coastal flood elevations and expand the areas subject to the 1 and 0.2 percent annual chance floods. The project is not located in a special flood hazard zone (FEMA 2022b). The project site is not within a tsunami hazard zone as indicated in the San Francisco County Tsunami Hazard Areas map (California Department of Conservation

2022). Furthermore, ACWD staff operating the Blending Facility will monitor and control discharges consistent with ACWD's NPDES permit and order. Therefore, the project would not substantially risk release of pollutants from flood hazards and there would be no impact.

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

LESS THAN SIGNIFICANT IMPACT. Based on recently detected PFAS (which includes PFOS, PFOA, PFBS, and PFHxS) in the Mowry and PT wellfields that draw groundwater from the Niles Cone Groundwater Basin, this project serves to remove these contaminants to levels below the NLs from the drinking water supply. For this reason, the project would not increase use of groundwater from the PT and Mowry wellfields; therefore, the project would not obstruct or conflict with a water quality control plan or sustainable groundwater management plan. This impact would be less than significant.

3.10.3 References

California Department of Conservation. 2022. San Francisco County Tsunami Hazard Areas. https://www.conservation.ca.gov/cgs/tsunami/maps/san-francisco.

Federal Emergency Management Agency (FEMA). 2022a. Sea Level Rise Viewer. https://coast.noaa.gov/slr/#/layer/slr

Federal Emergency Management Agency (FEMA). 2022b. Draft National Flood Hazard Layer Viewer. https://experience.arcgis.com/experience/86fafd9a1bb44cdd8cacc8a9df4d9503/page/Page/?data_id=dataSource_2-SeaLevelRise_8100-0%3A619.

Trussell Technologies, Inc. and Jacobs. 2022. *Basis of Design Report*.

3.11 Land Use and Planning

Land Use and Planning Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	☐	☒
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted to avoid or mitigate an environmental effect?	☐	☐	☐	☒

3.11.1 Setting

The project area is designated as Public Facility in the *City of Fremont General Plan* (City of Fremont 2011) and is zoned as Public Facility. The site is surrounded by residential units and other facilities owned by ACWD to the west, south, and east, and train tracks to the north. Surrounding land uses include Industrial – Service, Residential – Medium, and Residential – Low.

3.11.2 Impact Analysis

a) Would the project physically divide an established community?

NO IMPACT. The project is located within an already established community and would be constructed within previously disturbed and vacated land. Therefore, the project would not physically divide an established community, and there would be no impact.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted to avoid or mitigate an environmental effect?

NO IMPACT. The project would be consistent with the land use designations and zoning within and around the project site, and would not conflict with any land use plans, policies, or regulations. Therefore, there would be no impact.

3.11.3 References

City of Fremont. 2011. *City of Fremont General Plan*. https://www.fremont.gov/government/departments/community-development/planning-building-permit-services/plans-maps-guidelines/general-plan.

3.12 Mineral Resources

Mineral Resources Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

3.12.1 Setting

The project is located in a previously ground-disturbed area for the existing blending facility. There are two historic gravel pits located within 0.5 mile of the project area, which were closed in 1961 (USGS 2022). The project area is not located within a State Mineral Resources Zone (CGS 2015).

3.12.2 Impact Analysis

a) Would the project 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?

NO IMPACT. The project is not within a known mineral resources area; therefore, there would be no impact.

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

NO IMPACT. The State of California Division of Mines and Geology does not list the project area as having any locally important mineral resource recovery sites and would not result in the loss of availability of a locally important mineral resource recovery site; therefore, there would be no impact.

3.12.3 References

California Geological Survey (CGS). 2015. *Mineral Land Classification Map.* https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc.

U.S. Geological Survey (USGS). 2022. Mineral Resources Online Spatial Data. https://mrdata.usgs.gov/general/map-us.html.

3.13 Noise

Noise Resources Checklist

Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b. Generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☐	☒
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 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?	☐	☐	☐	☒

3.13.1 Setting

The closest sensitive noise receptors in the project area are the residential properties along the east and west borders of the project area. The City of Fremont Municipal Code Chapter 18.160, Construction Hours, states any construction activity occurring within 500 feet of one or more residences, lodging facilities, nursing homes or inpatient hospitals will 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 (City of Fremont 2022a).

The City of Fremont Municipal Code Chapter 18.50, Industrial Districts, states that when industrial users are adjacent or contiguous to residential, institutional uses, or similar sensitive uses, the maximum noise level will not exceed an hourly level of equivalent continuous sound 50 A-weighted decibel (dB[A]) during daytime hours (7:00 a.m. to 10:00 p.m.), an hourly level of equivalent continuous sound level of 45 dB(A) during nighttime hours (10:00 p.m. to 7:00 a.m.), an hourly level of maximum sound level of 70 dB(A) during daytime hours, and an hourly level of maximum sound level of 65 dB(A) during nighttime hours (City of Fremont 2022b).

The IX treatment facility site is near residential neighborhoods to the east and west; City of Fremont noise codes and ordinances would be adhered to in order to reduce impacts to these sensitive receptors. Sound enclosures on noise-producing equipment have been incorporated into the project as the primary solution to control noise emission levels (Trussell Technologies, Inc. and Jacobs 2022). Motor enclosures sound levels will be limited to 45 dBA and vibration would be limited to 60 vibration decibels (City of Fremont 2022c)

3.13.2 Impact Analysis

a) Would the project 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. Construction activities would occur between the hours allowed under the City of Fremont's noise ordinance and would not be expected to disturb residents during active construction. Rotating equipment, such as motors, would produce noise but would be housed in acoustical enclosures to reduce noise pollution while in operation. Enclosures would be large enough to contain multiple pumps with motors and motorized valves, or individual sheds over each pump similar to existing well pump housings.

Construction of the project would result in short-term noise impacts, which would be limited in compliance with the previously listed ordinances and standards. Operation of the project would result in a permanent increase in noise levels, but project-related noise emissions would be addressed though use of the acoustical enclosures and would remain within standards as established in the local general plan and City Municipal code. Therefore, there would be a less than significant impact.

b) Would the project result in generation of excessive ground-borne vibration or ground-borne noise levels?

NO IMPACT. As described earlier, vibration from project features will be limited to 60 vibration decibels in compliance with City of Fremont standards. There would not be any excessive construction- or operational-related ground-borne vibrations or noises associated with the project; therefore, there would be no impact.

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 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

NO IMPACT. There are no airports or private airstrips located within a 2-mile radius of the project area; therefore, there would be no impact.

3.13.3 References

City of Fremont. 2022a. City of Fremont Municipal Code. 18.160.010 Construction hours – Limitations. https://www.codepublishing.com/CA/Fremont/html/Fremont18/Fremont18160.html.

City of Fremont. 2022b. City of Fremont General Plan. Chapter 10: Safety. https://www.fremont.gov/home/showpublisheddocument/809/637750630888070000.

City of Fremont. 2022c. City of Fremont Municipal Code. 18.50 Industrial Districts. https://www.codepublishing.com/CA/Fremont/#!/Fremont18/Fremont1850.html#18.50.

Trussell Technologies, Inc. and Jacobs. 2022. *Basis of Design Report*

3.14 Population and Housing

Population and Housing Checklist

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

3.14.1 Setting

The project is surrounded by residential units and other facilities owned by ACWD to the west, south, and east, and UPRR rail tracks to the north

3.14.2 Impact Analysis

a) Would the project induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?

NO IMPACT. The purpose of the project is to treat groundwater drawn from the PT and Mowry wellfields and bring PFAS levels below NLs. The new IX treatment facility will increase ACWD's ability to treat groundwater, meet regulatory standards, and bring the blending facility back to pre-PFAS detection flows; but does not expand or increase the water supply itself. For this reason, the project would not induce population growth or expand capacity of new homes, businesses, or roads. The project would expand current infrastructure but will not result in new water supply; therefore, there would be no impact.

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

NO IMPACT. The project would be constructed on previously disturbed land owned by ACWD and would not displace existing people or housing; therefore, there would be no impact.

3.15 Public Services

Public Services Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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, the construction of which could cause significant environmental impacts, needed to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
a. Fire protection?	☐	☐	☒	☐
b. Police protection?	☐	☐	☒	☐
c. Schools?	☐	☐	☐	☒
d. Parks?	☐	☐	☐	☒
e. Other public facilities?	☐	☐	☐	☒

3.15.1 Setting

Public services and facilities are generally provided by City of Fremont and Alameda County staff, including fire, police, and public works. The IX treatment facility will not be staffed and will have very low maintenance needs.

3.15.2 Impact Analysis

Would the project 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, the construction of which could cause significant environmental impacts, needed to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services?

a) Fire protection?

LESS THAN SIGNIFICANT IMPACT. The project will add an additional treatment process onto an existing water supply delivery system, and therefore would not increase the demand for fire protection services at the project site. If an emergency were to occur during construction, all potential impacts that could affect emergency response times would be coordinated with local emergency service providers. Therefore, this impact would be less than significant.

b) Police protection?

LESS THAN SIGNIFICANT IMPACT. The project will add an additional treatment process onto an existing water supply delivery system, and therefore would not increase the demand for police protection services at the project site. If emergencies were to occur at the project site or during construction, local authorities (Fremont Police Department) would be contacted. Therefore, this impact would be less than significant.

c) Schools?

NO IMPACT. The project would not generate additional population or students during construction or operation; therefore, there would be no impact.

d) Parks?

NO IMPACT. The project would not increase the use of existing neighborhood and regional parks or other recreation facilities; therefore, there would be no impact.

e) Other public facilities?

NO IMPACT. The project would not increase population during project construction or operation; therefore, the project would not affect other government services or public facilities and there would be no impact.

3.16 Recreation

Recreation Checklist

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

3.16.1 Setting

The nearest park or recreational facility to the project area is the Shinn Historical Park and Arboretum, located approximately 0.15 mile west.

3.16.2 Impact Analysis

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

NO IMPACT. The project will add an additional treatment process onto an existing water supply delivery system and would not increase the demand for and use of existing neighborhood and regional parks or other recreational facilities; therefore, there would be no impact

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

NO IMPACT. The project will add an additional treatment process onto an existing water supply delivery system and would not expand capacity or the need to construct or expand recreational facilities. Therefore, there would be no impact.

3.17 Transportation

Transportation Checklist

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

3.17.1 Setting

The project area is located along Mowry Avenue and is not accessible to the public. There are residential roads located to the east and west accessible from Mowry Avenue.

3.17.2 Impact Analysis

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

LESS THAN SIGNIFICANT IMPACT. The project would not be constructed along any public roadways. Construction vehicles will enter and exit the site from Mowry Avenue but all construction activity would occur onsite and would not create additional traffic along surrounding public roads. The project would temporarily use existing roadways, such as Mowry Avenue, for transporting construction equipment and materials. Most construction traffic would occur along Mowry Avenue, and construction activities would generate a negligible amount of traffic and material deliveries during construction hours.

Traffic along Mowry Avenue is typically moderate, and with the temporary road closures as described further in this section, the impact would be less than significant.

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

LESS THAN SIGNIFICANT IMPACT. Road closures on Mowry Avenue resulting from construction activities (such as access and material deliveries) would temporarily generate a negligible amount of additional traffic along roadways in the vicinity of the project site. Construction would last approximately up to 18 months, with portions of the project likely finishing earlier. Because of the limited need for staffing, the project would result in no changes in vehicle miles traveled once construction is complete; therefore, the impact would be less than significant.

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

NO IMPACT. The project does not include any public road construction activities or changes in driveway access, including hazardous geometric design features; therefore, there would be no impact.

d) Result in inadequate emergency access?

NO IMPACT. The project includes access road improvements that are designed to accommodate large material delivery trucks to the new facility. The roadway improvements are consistent with design standards including access by emergency vehicles; therefore, there would be no impact.

3.18 Tribal Cultural Resources

Tribal Cultural Resources Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 21074 as either a site, feature, place, or 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: a. Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC 5020.1(k)	☐	☐	☐	☒
b. A resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC 5024.1. In applying the criteria set forth in subdivision (c), the Lead Agency will consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

3.18.1 Setting

Tribal Cultural Resources (TCRs) as defined by PRC Section 21074 are either (1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are either on or eligible for inclusion in the CRHR or a local historic register; or (2) a resource that the Lead Agency, at its discretion and supported by substantial evidence, chooses to treat as a TCR. Additionally, a cultural landscape may also qualify as a TCR if it meets the criteria to be eligible for inclusion in the CRHR and is geographically defined in terms of the size and scope of the landscape. Other historical resources including unique archaeological resources (may also be TCRs if they conform to the criteria to be eligible for inclusion in the CRHR).

In addition to the NAHC Sacred Lands File records search requested on August 3, 2022, a request for Native American Tribal contacts was also included. The NAHC responded on August 31, 2022, stating that a review of the Sacred Lands File Search was conducted, stating that results of the Sacred Lands File Search were positive. The NAHC response indicated that the North Valley Yokuts Tribe on their attached list should be contacted for more information. Additionally, a list of Native American Tribal contacts interested in consulting on development projects was also provided at this time.

ACWD is in the process of reaching out to the tribal contacts, with the initial contact letters sent on December 5, 2022, to the North Valley Yokuts Tribe. ACWD has not received any responses to date. The following discussion is based on the analysis of potential impacts to archaeological resources (refer to Section 3.5) and may be refined based on the results of tribal consultation.

3.18.2 Impact Analysis

a) Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC 5020.1(k)

NO IMPACT. The project would not result in a substantial adverse change in the significance of a known TCR as defined in Public Resources Code Section 21074, because no TCRs were identified within or immediately adjacent to the project site. Therefore, there would be no impact.

b) A resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC 5024.1. In applying the criteria set forth in subdivision (c) of PRC 5024.1, the Lead Agency will consider the significance of the resource to a California Native American tribe.

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. The Public Resources Code requires lead agencies to conduct formal consultations with California Native American tribes during the CEQA process to identify TCR that may be subject to significant impacts by a project. Where a project may have a significant impact on TCR, the Lead Agency's environmental document must discuss the impact and whether feasible alternatives or mitigation measures could avoid or substantially lessen the impact. This consultation requirement applies only if the tribes have sent written requests for notification of projects to the Lead Agency.

At the time of the preparation of this Initial Study, consultation is ongoing. As described in Section 3.5.2 (b), construction activities extending beyond 1 foot below the present ground surface may encounter unknown prehistoric and historic era archaeological sites and resources. Unidentified resources encountered during ground-disturbing activities in previously undisturbed soils could be a TCR. Potential impacts to unknown TCRs would be reduced to a less-than-significant level with the implementation of Mitigation Measure CUL-1.

3.19 Utilities and Service Systems

Utilities and Service Systems Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. 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?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☒	☐

Utilities and Service Systems Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
c. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

3.19.1 Setting

The project is located on the Blending Facility site, which also includes the PT Wellfield and underground piping from the Mowry Wellfield and SFPUC system. There are separate pipelines for the Mowry (30 to 36-inch-diameter) and the PT wellfields (24 to 36-inch-diameter) that enter the Blending Facility as well as various other underground pipelines and storm drains owned and operated by ACWD. The IX treatment facility will be constructed aboveground with some below grade treatment facility components; however, these facility components are part of the project and have been designed to avoid existing underground pipelines.

3.19.2 Impact Analysis

a) 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?

LESS THAN SIGNIFICANT IMPACT. The project will not exceed the existing facility's design capacity of 48 MGD. The project and its proposed new pipelines have been designed to avoid interruption or relocation of known utilities described in this section; therefore, impacts would be less than significant.

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

LESS THAN SIGNIFICANT. The project would restore the Blending Facility production rates to pre-PFAS detection flows and would not expand its capacity. There would be no changes to ACWD's operational water use. During construction, water would be used for dust control, but use would be minimal and would not cause shortages of available water supplies. Therefore, impacts would be less than significant.

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

LESS THAN SIGNIFICANT IMPACT. The project is not increasing capacity of the existing water supply system and facilities. The project includes a 12-inch waste pipeline that will connect the cartridge filter pretreatment facilities and the IX treatment trains to an existing 24-inch storm drain for disposal of treatment waste (Trussell Technologies, Inc. and Jacobs 2022). Non-hazardous liquid wastes will be disposed of through the existing 24-inch storm drain and not discharged to the municipal wastewater system. Therefore, the impact would be less than significant.

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

LESS THAN SIGNIFICANT IMPACT. The IX treatment facility will not generate a continuous waste stream, but occasionally liquid waste and spent media (solid waste) disposal will be required. During construction, the project would generate a small amount of waste, including asphalt and concrete from the existing access road. Construction debris would be properly disposed of in nearby landfills that have adequate capacity to accept waste generated from construction. During operation, the IX treatment facility would produce solid waste in the form of spent resin. EPA has outlined plans to initiate rulemaking to designate PFOA, PFOS, phosphate-buffered saline, and hexafluoropropylene oxide (GenX) as hazardous *constituents* under RCRA. This would classify these compounds as characteristically hazardous. The result is that it would limit the sites where ACWD can dispose the resin (for example, must dispose at a landfill that is certified to receive hazardous waste or dispose at an incineration facility) and thus will increase the disposal cost. Fouled cartridge filter elements may also have some absorbed PFAS and may require disposal at a hazardous waste facility. However, this solid waste would not be significant enough to cause an impact on local landfills and their existing capacities. Impacts to local landfills would, therefore, be less than significant.

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

LESS THAN SIGNIFICANT IMPACT. The project may require disposal of construction debris but only in small amounts because of the mostly undeveloped site characteristics. Construction debris, such as asphalt and concrete associated with access road changes, will be disposed of consistent with the City of Fremont Waste Handling Guidelines (City of Fremont 2018). While operational, the IX treatment facility would generate waste following treatment of groundwater. As discussed, EPA has initiated plans to designate PFAS as hazardous constituents under RCRA. Therefore, the resin produced after extraction of PFAS from groundwater in addition to fouled cartridge filter elements would need to be disposed of at a landfill that accepts hazardous waste or an incineration facility. Construction debris would be disposed of consistently with federal, state, and local regulations. Therefore, impacts would be less than significant.

3.19.3 References

City of Fremont. 2018. Construction & Demolition Debris. https://www.fremont.gov/government/departments/environmental-services/construction-demolition-debris.

Trussell Technologies, Inc. and Jacobs. 2022. *Basis of Design Report*.

3.20 Wildfire

Wildfire Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones (VHFHSZ): a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒

Wildfire Checklist

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

3.20.1 Setting

Hazard Severity Zones Maps identify Very High Fire Hazard Severity Zones (VHFHSZ) in local, state, or federal responsibility areas. Within these areas, the California Department of Forestry and Fire Protection has designated certain areas as VHFHSZ or Non-VHFHSZ (CAL FIRE 2023). The project is located within a local responsibility area; therefore, it is not a VHFHSZ.

3.20.2 Impact Analysis

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

NO IMPACT. The project is in a local responsibility area and is not classified as a VHFHSZ; therefore, there would be no impact.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

NO IMPACT. The project is in a local responsibility area and is not classified as a VHFHSZ; therefore, there would be no impact.

c) Require the installation or maintenance of associated infrastructure (such as road, 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?

NO IMPACT. The project is in a local responsibility area and is not classified as a VHFHSZ; therefore, there would be no impact.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

NO IMPACT. The project is in a local responsibility area and is not classified as a VHFHSZ; therefore, there would be no impact.

3.20.3 References

California Department of Forestry and Fire Protection (CAL FIRE). 2023. Fire Hazard Severity Zones Maps. https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/.

3.21 Mandatory Findings of Significance

Mandatory Findings of Significance Checklist

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

a) Would 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?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATION. As described in this Initial Study, 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 population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of a rare or endangered plant or animal. The project has some potential to affect nesting birds protected under the MBTA, but implementation of Mitigation Measure BIO-1 would reduce the impact to a less than significant level.

As described in this Initial Study, the project does not have the potential to eliminate important examples of the major periods of California history or prehistory. The project has some potential to affect unknown archaeological resources, which might also be TCRs, but implementation of Mitigation Measure CUL-1 would reduce the impact to a less than significant level.

b) Would 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.)

NO IMPACT. The project does not have impacts that are limited but cumulatively considerable. The new IX facility is not part of or connected to other past, current, or probably future projects.

c) Would the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

LESS THAN SIGNIFICANT IMPACT. As described in this Initial Study, the project would have some potential for adverse effects, but the impacts would be less than significant.