BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

FINAL STAFF REPORT
APPENDIX C

CEQA Initial Study and Negative Declaration

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BAY AREA AIR QUALITY MANAGEMENT DISTRICT

California Environmental Quality Act

Initial Study and Draft Negative Declaration

Proposed Amendments to Regulation 8: Organic Compounds, Rule 8: Wastewater Collection and Separation Systems

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CHAPTER 1
Introduction

The Bay Area Air Quality Management District (Air District, BAAQMD, or District) is proposing amendments to Regulation 8: Organic Compounds, Rule 8: Wastewater Collection and Separation Systems (Rule 8-8). The purpose of these amendments is to further address emissions of volatile organic compounds and methane (together referred to as "total organic compounds") from wastewater collection and separation systems at refineries in the Bay Area. Further emissions reductions of total organic compounds are needed to ensure progress towards attainment of the ambient air quality standards, reduce climate pollutant emissions, and reduce public health impacts from toxic compounds and ozone exposure. Air District staff have, therefore, directed the preparation of this Initial Study pursuant to CEQA.

As explained in detail in Chapter 3, the Initial Study has found that the proposed amendments will not have any significant adverse environmental impacts. Air District staff are, therefore, proposing that the District's Board of Directors adopt a Negative Declaration under CEQA pursuant to Section 15074 of the CEQA Guidelines.

The Air District is publishing this Initial Study and draft Negative Declaration concurrently with drafts of the proposed amendments and detailed Staff Report explaining in more detail what the proposed amendments will entail. The public should review this Initial Study and proposed Negative Declaration in conjunction with those other documents in order to obtain a full understanding of the proposed amendments and their potential for adverse environmental impacts.

1.1 PURPOSE OF THIS DOCUMENT

The Initial Study is a preliminary assessment of the potential environmental impacts of the proposed project. The purpose of the Initial Study is to determine whether a Negative Declaration or Environmental Impact Report (EIR) must be prepared (CEQA Guidelines §15365). If the Initial Study determines that there is substantial evidence that any aspect of the project either individually or cumulatively, may cause a significant effect on the environment, then an EIR must be prepared. If the Initial Study determines that there is no substantial evidence that the project or any of its aspects may cause a significant effect on the environment, then a Negative Declaration should be prepared (CEQA Guidelines §15063(b)). As explained herein, this Initial Study has reached the second conclusion: that there is no substantial evidence that the proposed amendments to Rule 8-8 will have any significant adverse effect on the environment. Accordingly, the Air District has prepared a draft Negative Declaration. The Initial Study provides the documentation for the finding in the draft Negative Declaration that the project will not have a significant impact on the environment (CEQA Guidelines§15063(c)(5)).

The Negative Declaration is a written statement by the lead agency describing why the proposed project will not have a significant effect on the environment and, therefore, does not require the preparation of an EIR (CEQA Guidelines §15371). A Negative Declaration is prepared by Air District staff based on the analysis in the Initial Study, and then is proposed for adoption by the District's Board of Directors. Air District staff provide notice to the public of the draft Negative Declaration and an opportunity to comment on it, and then the Board of Directors considers the Negative Declaration at a public hearing. The Board of Directors considers the Negative Declaration along with any public comments received, and then adopts (or certifies) the Negative Declaration if it finds, using its independent judgment and analysis, that based on the whole record – including the project description, Initial Study, any mitigation measures, and any public comments – that there is no substantial evidence that the project will have a significant effect on the environment (CEQA Guidelines §15074(b)).

1.2 SCOPE OF THIS DOCUMENT

This document evaluates the potential impacts of the proposed amendments on the following resource areas:

- aesthetics,
- agriculture and forestry resources,
- air quality,
- biological resources,
- cultural resources,
- energy,
- geology / 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 / service systems, and
- wildfire.

1.3 IMPACT TERMINOLOGY

The following terminology is used in this Initial Study/Negative Declaration to describe the levels of significance of impacts that would result from the proposed rule amendments:

- An impact is considered *beneficial* when the analysis concludes that the project would have a positive effect on a particular resource.

- A conclusion of *no impact* is appropriate when the analysis concludes that there would be no impact on a particular resource from the proposed project.

- An impact is considered *less than significant* if the analysis concludes that an impact on a particular resource topic would not be significant (i.e., would not exceed certain criteria or guidelines established by the District). Impacts are frequently considered less than significant when the changes are minor relative to the size of the available resource base or would not change an existing resource.

- An impact is considered *less than significant with mitigation incorporated* if the analysis concludes that an impact on a particular resource topic would be significant (i.e., would exceed certain criteria or guidelines established by the District), but would be reduced to a less than significant level through the implementation of mitigation measures.

1.4 ORGANIZATION OF THIS DOCUMENT

The content and format of this document, described below, are designed to meet the requirements of CEQA.

- Chapter 1, "Introduction," identifies the purpose, scope, and terminology of the document.

- Chapter 2, "Description of the Proposed Rule Amendments," provides background information on Rule 8-8, describes the proposed rule modifications, and describes the area and facilities that would be affected by the rule.

- Chapter 3, "Environmental Checklist," presents the checklist responses for each resource topic. This chapter includes a brief setting description for each resource area and identifies the impact of the proposed rule amendments on the resources topics listed in the checklist.

- Chapter 4, "References Cited," identifies all printed references and personal communications cited in this report.

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CHAPTER 2

Project Description

Introduction

Objectives

Background

Proposed Rule 8-8 Amendments

Compliance Options

Affected Area

CHAPTER 2

Description of the Proposed Rule Amendments

2.1 INTRODUCTION

The Air District is proposing amendments to Regulation 8: Organic Compounds, Rule 8: Wastewater Collection and Separation Systems (Rule 8-8). The purpose of these amendments is to further address emissions of volatile organic compounds and methane (together referred to as "total organic compounds") from wastewater collection and separation systems at refineries in the Bay Area. Further emissions reductions of total organic compounds are needed to ensure progress towards attainment of the ambient air quality standards, reduce climate pollutant emissions, and reduce public health impacts from toxic compounds and ozone exposure.

California Assembly Bill 617 (AB 617) requires each air district that is in nonattainment for one or more air pollutants to adopt an expedited schedule for implementation of Best Available Retrofit Control Technology (BARCT) by the earliest feasible date, but not later than December 31, 2023. In 2018, the Air District adopted the Expedited BARCT Implementation Schedule, which identified potential rule development projects to evaluate and implement BARCT at industrial sector facilities subject to California Greenhouse Gas Cap-and-Trade requirements. Refinery wastewater treatment systems were identified as a potential source of substantial emissions of organic compounds as well as toxic air contaminants such as benzene, toluene, ethylbenzene, and xylene. In addition, BARCT controls and requirements under Rule 8-8 have not been evaluated or adopted for over 17 years. The Air District also has a policy goal of reducing Bay Area greenhouse gas emissions to 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050. Methane is a potent and short-lived greenhouse gas; its global warming potential is 86 times stronger than that of carbon dioxide, when compared on a 20-year time horizon. Methane represents the second largest component of greenhouse gas emissions in the region, after carbon dioxide. Given the importance of controlling methane, the Air District developed a comprehensive Basin-wide Methane Strategy as part of its 2017 Clean Air Plan.

2.2 OBJECTIVES

- Improve enforceability of the rule and its existing requirements including improving consistency with comparable leak detection and repair provisions of other Air District rules and regulations and eliminate potential circumvention of the Rule;
- Reduce air quality impacts in AB617 communities and other areas overburdened by air pollution, poverty, economic injustice, and social injustice.
- Reduce the emissions of ozone precursors (ROG) to help achieve the federal and state ambient air quality standards for ozone;

- Reduce toxic air contaminant emissions from stationary sources of air pollution;
- Accurately and consistently characterize emissions from refinery-related emissions sources on an on-going basis to determine if additional emission reductions can be achieved;
- Reduce greenhouse gas emissions

2.3 BACKGROUND

2.3.1 INDUSTRY DESCRIPTION

Refining facilities process feedstocks (including crude oil and alternative feedstocks) into a variety of products, such as gasoline, aviation fuel, diesel and other fuel oils, lubricating oils, and feedstocks for petrochemical and chemical industries. Each of the five Bay Area refineries has a system that collects and treats wastewater from refinery processes and operations prior to discharge as effluent into San Francisco Bay Area waters. Note that the Marathon Martinez Refinery has modified their refinery to process alternative feedstocks and the Phillips 66 Rodeo Refinery has announced its intent to modify their operations to process alternative feedstocks. Refinery wastewater systems can be considered in the following two main portions: 1) Wastewater Collection and Separation, and 2) Wastewater Treatment.

2.3.1.1 Wastewater Collection and Separation

The collection portion of the system collects wastewater from process units and tankage to be directed to a dedicated unit that performs the physical phase separation of oil and water. Process streams and waste material are directed via a series of wastewater collection components (process drains, pipes, manholes, junction boxes and sumps) to the separation portion of the system.

Generally, the separation portion of the wastewater system consists of oil-water separators and dissolved nitrogen flotation (DNF), dissolved air flotation (DAF), or induced static flotation (ISF) units. An oil-water separator removes suspended solids and sludge, and oil from the influent wastewater. In the calm environment of the oil-water separator tanks, heavy organics and solids settle to the bottom and are removed as sludge or solids. Lighter oils and other organics float to the surface and are removed by mechanical skimmers and sent to slop oil tanks. In the slop oil tanks, the slop oil is treated for recycling or de-watered for disposal. In most systems, the wastewater is then routed to DNF, DAF, or ISF units, where air or gas percolates through the wastewater stream, causing any remaining floating oils and other floating liquid organic materials to float to the surface for removal by skimmers to slop oil tanks.

Collection of wastewater and physical separation of different phase components in the wastewater is sometimes referred to as “primary treatment” whereas “secondary treatment” refers to removal of dissolved organic compounds as described in the next section. All five Bay Area refineries include oil-water separation as part of their collection and separation system, and at all but one of the refineries, oil-water separator

effluent is piped directly to a DNF, DAF, or ISF unit. Each refinery uses a different system: Marathon Martinez Refinery operates DNF units; Martinez Refining Company operates DNF and DAF units; Valero Benicia Refinery operates an ISF unit; and Phillips 66 Rodeo Refinery operates a DAF unit. The Chevron Richmond Refinery does not operate any DAF, DNF, or ISF units in its treatment system and pipes the oil-water separator effluent directly to the secondary treatment units located at the refinery.

2.3.1.2 Wastewater Treatment

After collection and physical separation of different phase components of the effluent, the wastewater treatment portion of the system removes entrained or dissolved organic compounds. The components in this portion of the wastewater treatment system may include activated carbon injection tanks, flocculation tanks, biofilters, filters, screens, clarifiers, sludge thickeners, bioreactors, sludge presses, selenium removal and carbon filtration.

Wastewater treatment or "secondary treatment" commences where wastewater leaves the oil-water separator and DNF, DAF, ISF units (if applicable) and enters either equalization tanks or begins biological treatment. Equalization, which reduces fluctuations in the wastewater flow rate and organic content, results in a more uniform effluent quality for biological treatment. Biological treatment utilizes microorganisms which feed on and remove most of the organic materials. The goal is to remove dissolved and/or suspended organic and inorganic compounds from the wastewater prior to discharge into San Francisco Bay Area waters.

Three of the five refineries in the Bay Area (Phillips 66 Rodeo, Valero Benicia, and Martinez Refining Company) utilize dedicated equalization tanks prior to biological treatment while the other two refineries (Marathon Martinez and Chevron Richmond) pipe their effluent directly to biological treatment in the form of open, aerated, bermed ponds and lagoons that also act as equalization ponds. Three refineries (Phillips 66 Rodeo, Valero Benicia, and Martinez Refining Company) utilize activated sludge as their biological treatment process in aerated tanks, with Martinez Refining Company also utilizing an aerated pond open to the atmosphere.

All the Bay Area refineries utilize a combination of additional secondary processes to treat the effluent prior to discharge. These processes include flow controls, pH balancing, the addition of nutrients to sustain the microorganisms, selenium removal, carbon filtration, and water-enhanced wetland treatment. The treated effluent must meet all applicable California Regional Water Quality Control Board standards prior to discharge into San Francisco Bay Area waters.

2.4 PROPOSED AMENDMENTS TO RULE 8-8

2.4.1 BACKGROUND AND SUMMARY

Organic compounds become entrained in waters used in refinery processes which results in volatile organic compound and methane emissions from wastewater collection and treatment systems. Volatile organic compound emissions may include toxic air contaminants, such as benzene, toluene, ethylbenzene, xylene, naphthalene, and other toxic compounds. These organic compounds are volatilized during transport to an onsite wastewater treatment system by exposure to high temperatures and turbulence in the transport structures (pipes, manholes, junction boxes, sumps, and lift stations). The emitted vapors collect in the headspaces of these transport structures and can be passively vented to the atmosphere through uncontrolled system openings. Most emissions from the collection and treatment portion of the system are generated through volatilization and air entrainment.

Volatilization occurs when free phase organic liquid streams, which commonly float on the water, are exposed to the atmosphere just as organic liquid would volatilize were it in an open container or spilled on a surface. Factors that may affect this process include temperature, concentration, the gas/liquid partition coefficient, biodegradability, the affinity for adsorption, ventilation of the system, and turbulence or splashing.

Air entrainment occurs when liquid that contains petroleum or partial petroleum products is transmitted in contact with air to a transportation system (from a process outlet into a drain). Air pockets may become trapped below the water surface and will return to the surface to off-gas later. This off-gassing may release captured volatile organic compounds. These processes result in emissions of methane and volatile organic compounds, which can include toxic air contaminants.

The Air District estimates that approximately 109 tons per year of volatile organic compounds are emitted from refinery wastewater treatment systems in the Bay Area.

2.4.2 PROPOSED RULE AMENDMENTS

Proposed amendments to Rule 8-8 are intended to further limit emissions of volatile organic compounds and methane from refinery wastewater collection and separation systems and implement the requirements of AB 617. These emission reductions would also reduce the emissions of toxic compounds and thereby reduce the potential health impacts to nearby communities. Proposed amendments to Rule 8-8 would increase the stringency of leak standards for wastewater collection and separation equipment at refineries, require identification of components for ease of inspection, and clarify leak detection and repair requirements. These changes would help Air District staff more effectively enforce Rule 8-8 and would help eliminate potential circumvention of the Rule 8-8 requirements.

The proposed amendments to Rule 8-8 would establish and modify industrial wastewater collection and separation system standards to limit "total organic compounds"; the current standards only limit "organic compounds," which historically was defined by the Air District, and measured in a way, that excluded methane. Methane is a potent and short-lived greenhouse gas and limiting these emissions is consistent with Air District policy goals to reduce greenhouse gas emissions. Additionally, the proposed amendments update leak detection methodologies and instrumentation requirements to appropriately align with the applicable proposed standards.

The major provisions of the proposed amendments to Rule 8-8 include the following:

- Limiting emissions of total organic compounds (including methane) from the wastewater collection and separation systems. The current rule addresses only volatile organic compound emissions (excluding methane).

- Amending leak and vapor-tight standards to cover total organic compounds (including methane). The existing rule only limits volatile organic compounds, and the modification of Rule 8-8 would include methane and result in more stringent standards.

- Adding standards at refineries for wastewater collection and separation system components with a clear single vapor-tight emissions standard (500 ppmv) for all applicable wastewater collection and separation system components. The new standards require wastewater collection and separation system components at refineries to comply by being vapor-tight (a leak of less than 500 ppmv total organic compounds [expressed as methane] above background) or by operating a vapor tight collection system routed to a vapor recovery or abatement system which has a minimum combined collection and destruction efficiency of 95 percent, by weight, for abating emissions of total organic compounds (including methane) from the component. The collection system may also show compliance through achieving an outlet concentration of 500 ppmv total organic compounds [expressed as methane] above background levels.

- Prohibiting the discharge of non-aqueous phase hydrocarbon streams into collection and separation systems and prohibiting discharge of free phase organic liquid streams into refinery secondary treatment process components.

- Strengthening leak detection and repair protocols.

- Monitoring of organic concentrations and the presence of oil and grease in wastewater to increase understanding of the potential for emissions to the air from secondary treatment.

A summary of the proposed amendments to Rule 8-8 is provided in Table 2-1. Minor and non-substantive changes are not specified.

TABLE 2-1

Summary of Proposed Amendments to Rule 8-8

Rule Section #	Summary of Proposed Amendments to Rule 8-8
8-8-101	Changes description to regulate both volatile organic compounds and methane as "total organic compounds." The currently adopted version of Rule 8-8 only limits emissions of "organic compounds," which do not include methane.
8-8-102	Adds an "Applicability" section.
8-8-110	Deletes outdated exemption for wastewater separators which process less than 760 liters (200 gals.) per day of wastewater containing organic liquids.
8-8-112, 8-8-113	Bifurcates limited exemptions for Temperature and Critical Total Organic Compound Concentrations for clarity and for consistency with changes to Section 8-8-101 above.
8-8-114, 8-8-115	Edited for clarity.
8-8-116, 8-8-117	Edited to reflect renumbering of other sections.
8-8-118	Adds a limited exemption for refineries from requirements that apply only to non-refinery facilities.
8-8-119	Adds a limited exemption for refineries to clarify that the requirements of Section 8-8-315 do not apply to wastewater separation systems and wastewater collection system components when in use during active inspection, active maintenance, active repair, or active sampling.
8-8-200	Throughout this portion of the rule, existing sections are renumbered to bring definitions into alphabetical order and minor administrative changes are made.
8-8-203	Redefines "Critical Organic Compound" to "Critical Total Organic Compound" to include both volatile organic compounds and methane.
8-8-204	Adds new definition of "Free Phase Organic Liquid."
8-8-206	Modifies definition of junction box as any structure where one or more sewer lines meet and removes the word "co-mingled."
8-8-207	Adds definition of "Leak (or Leakage)".
8-8-209	Clarifies the definition of "Leak Repair" by providing greater detail.
8-8-212	Adds new definition for "Non-Aqueous Phase Hydrocarbon Streams" as organic liquids not dissolved in, or mixed with, wastewater.
8-8-221	Clarifies definition of process drains to include a single stream or multiple streams.
8-8-216	Adds slop oil vessels to definition of "Oil-Water Separator Slop Oil."
8-8-229	Adds the definition of "Total Organic Compounds" to include both volatile organic compounds and methane.
8-8-231	Changes the definition of "Vapor-Tight" to "a leak of less than 500 ppmv total organic compounds" to include methane for consistency with other changes to the rule.
8-8-235	Modifies definition to refer to total organic compounds for consistency with other changes to the rule.
8-8-236	Adds "Components" to the definition title for consistency purposes.
8-8-238	Modifies definition to refer to total organic compounds for consistency with other changes to the rule.

TABLE 2-1 (cont.)

Rule Section #	Summary of Proposed Amendments to Rule 8-8
8-8-301 through 8-8-308	Administrative changes to clarify language of existing sections and to make consistent with changes to rule language in other sections.
8-8-302	Deletes Subsection 302.6 to remove redundancy with new standards for wastewater collection and separation system components addressed in new Section 8-8-315. Other minor administrative changes are also made.
8-8-312 through 8-8-314	Removes and renumbers sections to address changes to the standards for wastewater collection system components at refineries.
8-8-315	Adds standards for wastewater collection system components and wastewater separation system components at refineries.(1)
8-8-316	Adds new standard for "Prohibition of Discharge at Refineries" to prevent the discharge of any non-aqueous phase hydrocarbon streams into wastewater collection system components and to prevent the discharge of any free phase organic liquid streams into secondary treatment process components.
8-8-402	Changes the administrative requirements for wastewater collection and separation system identification and inspection at refineries and deletes several subsections which are now addressed in Sections 8-8-405 and 8-8-406.
8-8-402.1	Adds new requirements for unique identification codes for all wastewater collection and separation system components.
8-8-402.4	Adds new requirements for quarterly inspection of all wastewater collection and separation system components.
8-8-403	Removes outdated language providing a compliance schedule for the control of wastewater collection system components at refineries.
8-8-404	Removes outdated requirement for uncontrolled wastewater collection system components election.
8-8-405	Adds new language for a repair schedule for leak excesses at refineries.
8-8-406	Adds new language for a recurrent leak schedule at refineries.
8-8-501 through 8-8-504	Administrative changes to clarify language of existing sections and to make consistent with changes to rule language in other sections. Record retention time increased from 2 years to 5 years.
8-8-504	Modifies the description of "Portable Hydrocarbon Detector" to be consistent with Air District Rule 8-18.
8-8-505	Modifies the language requiring that refineries keep records for their wastewater collection and separation system components.
8-8-506	Adds new language for source testing requirements for refineries that use abatement devises to comply with the requirements set forth in Section 8-8-315.2. This section does not apply to devices with existing source testing or parametric monitoring requirements associated with its permit to operate.
8-8-507	Adds monitoring requirements for organic concentrations in wastewater at end of collection, separation, and secondary treatment.
8-8-508	Adds recordkeeping requirements for wastewater monitoring addressed in previous section.
8-8-601	Adds language on the applicable methods used for determination of total organic concentration in wastewater.

8-8-602 through 8-8-603	Administrative changes to clarify language of existing sections and to make consistent with changes to rule language in other sections.
8-8-603	Updates the section numbers to which the inspection procedures apply.
8-8-604	Adds language on the determination of abatement efficiency of an abatement device.
8-8-605	Adds language on the methods used for determination of organic concentration in wastewater.

(1) Note: The standards for all controlled and uncontrolled wastewater collection system components and wastewater separation system components operated at refineries have been considerably simplified and consolidated to require owners or operators of these systems to comply by being vapor-tight (a leak of less than 500 ppmv total organic compounds [expressed as methane] above background) or by operating a vapor-tight collection system routed to a vapor recovery or abatement system which reduces the emissions of total organic compounds from the component by 95 percent or greater, by weight. The collection system may also show compliance through achieving an outlet concentration of 500 ppmv total organic compounds [expressed as methane] above background levels.

2.5 COMPLIANCE OPTIONS

The primary purpose of wastewater collection and separation is to remove organic compounds and other contaminants from the wastewater. The more efficiently the system separates, removes, and collects organic compounds from the wastewater, the less likely the organic compounds will be emitted to the atmosphere or be discharged into Bay waters. Several technologies and strategies are available to control emissions from wastewater collection and separation systems. They can be largely grouped into two categories: pollution prevention and emission controls. Pollution prevention strategies reduce emissions at their source by changes in operation, while emission controls reduce emissions after volatile organic compound-containing materials enter the wastewater system.

Equipment control strategies can require the installation of new equipment or devices or physical changes to the wastewater system. Potential equipment control strategies applicable for refinery wastewater systems can include a number of different components. Examples of emissions controls are gasketed or sealed collection system components, water-sealed collection system components, activated carbon scrubbers, water impingement scrubbers, vacuum stripping columns, and thermal oxidizers. Most of these technologies are 90 to 99 percent efficient in control of volatile organic compounds.

Under proposed Section 8-8-315, wastewater collection system and separation system components at refineries must either ensure all system components are vapor-tight (and repair any leak discovered not to be vapor-tight) or operate a vapor-tight collection system that is routed to a vapor recovery or abatement system. Staff understands that all subject refinery wastewater separation and collection systems would be able to comply with these proposed requirements under their current operations without substantial changes to control equipment. Therefore, additional air pollution control equipment is not expected to be needed at affected facilities to comply with these provisions.

The proposed amendments regulate total organic compounds that include methane. Therefore, operators would be required to use leak detection instrumentation under EPA Method 21 with the ability to detect methane, such as portable flame ionization detectors. Note that this provision would apply to both refinery and non-refinery facilities subject to Rule 8-8 requirements. The Air District's current understanding is that all affected facilities currently use leak detection instrumentation that would meet these proposed requirements, and the proposed amendments would align Rule 8-8 instrumentation requirements with this current industry practice.

The proposed amendments include requirements for enhanced identification and tagging of components, increase inspection frequency, and more rigorous repair protocols for refinery wastewater operators. The proposed amendments include wastewater sampling and monitoring to establish a greater understanding of emissions related to the secondary treatment system (including biological treatment). This would consist of increased monitoring of organics in the wastewater at the inlet to the oil/water separator systems, and the inlet and outlet of the secondary treatment systems.

Note that these proposed amendments to Rule 8-8 are intended to address the operation of refinery wastewater collection and separation systems, and do not include additional control requirements for the operation of wastewater secondary treatment systems. The proposed amendments include expanded wastewater monitoring requirements to improve characterization and increase understanding of the potential for emissions from secondary treatment systems. Future amendments to Rule 8-8 may potentially address emissions control methods for wastewater secondary treatment systems including biological treatment, as sufficient information is obtained to merit such a revision.

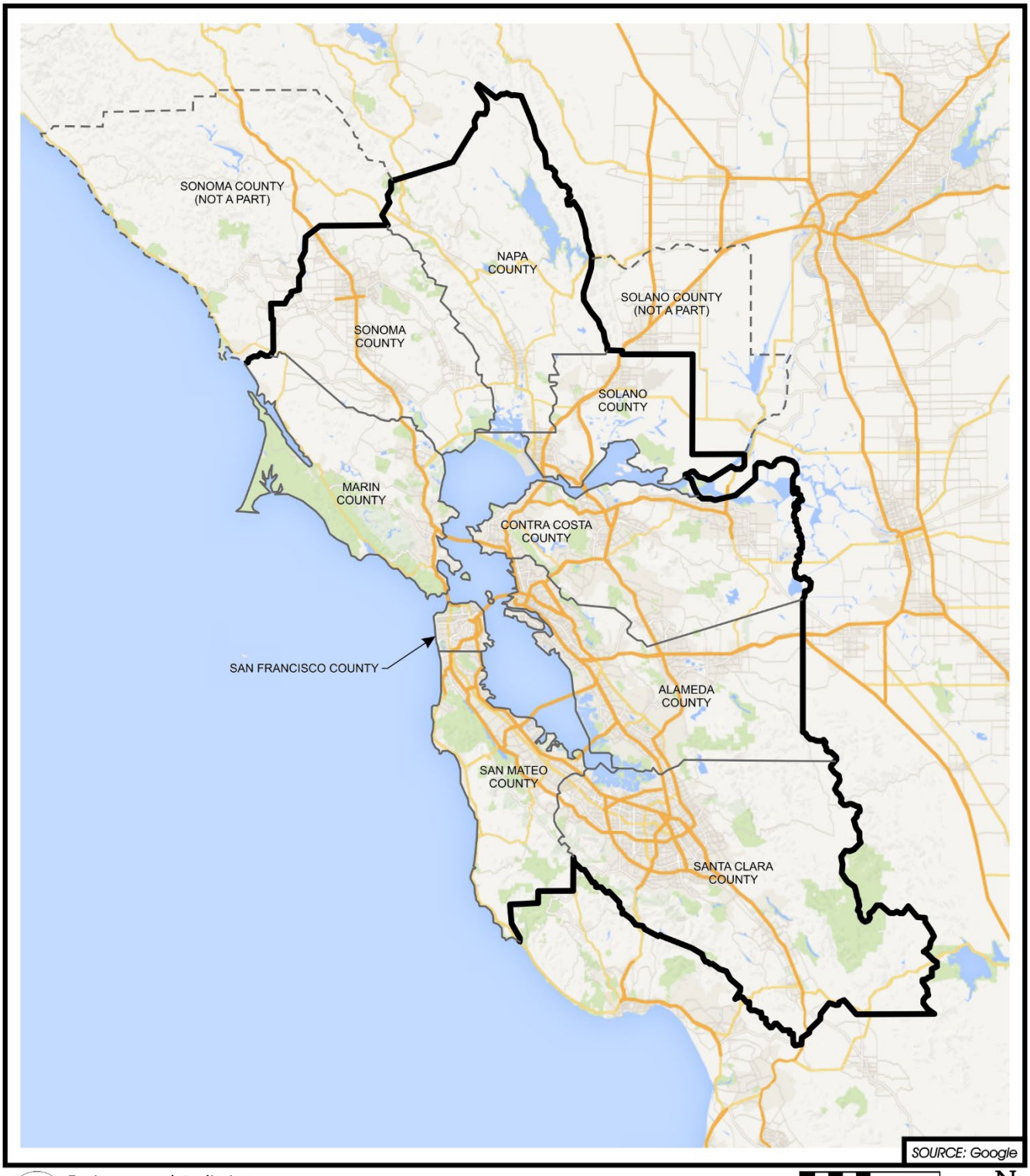
Based on the above, revisions to Rule 8-8 are expected to result in increased monitoring which could lead to increased maintenance and repair activities, which would result in a decrease in total organic compound emissions, including toxic air contaminant reductions.

2.6 AFFECTED AREA

The proposed amendments to Rule 8-8 are being implemented to reduce total organic compounds as well as toxic air contaminant emissions within the Air District's jurisdiction. The equipment affected by the proposed project is located within the jurisdiction of the Bay Area Air Quality Management District (see Figure 2-1). The BAAQMD jurisdiction includes all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma counties (approximately 5,600 square miles). While the rule modifications would affect the entire jurisdiction of the Air District, the goal is to reduce emissions and exposures in overburdened communities.

The San Francisco Bay Area is characterized by a large, shallow basin surrounded by coastal mountain ranges tapering into sheltered inland valleys. The combined climatic and topographic factors result in increased potential for the accumulation of air pollutants

in the inland valleys and reduced potential for buildup of air pollutants along the coast. The Basin is bounded by the Pacific Ocean to the west and includes complex terrain consisting of coastal mountain ranges, inland valleys, and bays.



Project No. 3230 Figure 2-1

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CHAPTER 3

EVALUATION OF ENVIRONMENTAL IMPACTS

Introduction

General Information Form

Summary Checklist:
Environmental Factors Potentially Affected

Determination

Detailed Checklist and Discussion:
Evaluation of Environmental Impacts

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CHAPTER 3
Evaluation of Environmental Impacts

INTRODUCTION

The Initial Study is required to identify and evaluate the proposed project's environmental effects. The California Natural Resources Agency has published a standard checklist for lead agencies to use in doing so, in Appendix G of the CEQA Guidelines. The Appendix G environmental checklist provides a standard evaluation tool to identify a project's adverse environmental impacts. The Guidelines specifically authorize and encourage the use of Appendix G to satisfy the legal requirements for sufficiency of the Initial Study. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the proposed project.

GENERAL INFORMATION

Project Title:	Initial Study for Proposed Amendments to Regulation 8, Rule 8, Wastewater Collection and Separation Systems.
Lead Agency Name:	Bay Area Air Quality Management District 375 Beale Street, Suite 600 San Francisco, California 94105
Contact Person:	Robert Cave
Contact Phone Number:	415-749-5048
Project Location:	Rule 8-8 applies to refinery wastewater treatment systems within the jurisdiction of the Bay Area Air Quality Management District, which encompasses all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano County and southern Sonoma County.
Project Sponsor's Name:	Bay Area Air Quality Management District
Project Sponsor's Address:	375 Beale Street, Suite 600 San Francisco, California 94105
General Plan Designation:	Rule 8-8 would apply to refinery wastewater treatment systems within the jurisdiction of the Bay Area Air Quality Management. Refineries are located within heavy industrial areas.
Zoning:	Rule 8-8 would apply to refinery wastewater treatment systems within the jurisdiction of the Bay Area Air Quality Management. Refineries are located within heavy industrial areas.
Description of Project:	See Chapter 2.
Surrounding Land Uses and Setting:	See "Project Location" in Chapter 1.
Have California Native American tribes traditionally	No tribes have requested consultation.

and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?	

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The following environmental impact areas have been assessed to determine their potential to be affected by the proposed project. As indicated by the checklist on the following pages, environmental topics marked with an "✓" may be adversely affected by the proposed project. An explanation relative to the determination of impacts can be found following the checklist for each area.

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

DETERMINATION

On the basis of this initial evaluation:

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

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

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

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

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

Signature: Date:

Name:

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis.

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, Program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c)(3)(D). In this case, a brief discussion should identify the following:

a) Earlier Analysis Used. Identify and state where they are available for review.

b) Impacts Adequately Addressed. Identify which effects from the checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
I.	**AESTHETICS**. Except as provided in PRC §21099, would the project:				
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☑
b)	Substantially damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	☐	☐	☐	☑
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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?	☐	☐	☐	☑

Environmental Setting

The Bay Area Air Quality Management District (BAAQMD or Air District) covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano County and southern Sonoma County. The area of coverage is vast (about 5,600 square miles), so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. The Bay Area is characterized by the diversity of urban development and the combination of rural and agricultural landscapes, as well a natural formations and wildlife provided by the surrounding mountain ranges and rich wildlife habitats.

The landscapes of the San Francisco Bay Area are varied and unique. To the west the Pacific Ocean and the Coast Ranges dominate the visual setting, stretching from Mount Tamalpais in the

north to the Santa Cruz Mountains in the south. To the east, the Diablo Range (dominated by Mount Diablo), rise from the urbanized plain along the eastern edge of the Bay, forming a several mile-wide band that also defines the western edge of the Diablo and Livermore Valleys of Contra Costa and Alameda Counties. The rolling hills of the Diablo Range separate these valleys from the lowlands of the Central Valley. These hills converge at the south end of the Bay Area in Santa Clara County. In the north, several ranges frame the Napa and Sonoma Counties valleys. Between these ranges and hills are numerous valleys both broad and narrow (ABAG, 2021).

Many built features in the Bay Area also provide scenic views, including the Golden Gate Bridge and Bay Bridge, as well as the San Francisco skyline (ABAG, 2021). Other landmarks include Alcatraz and Angel Islands, several large buildings in the East Bay hills, and Mount Saint Helena at the northern end of Napa Valley. Because of the variety of visual resources, scenic highways or corridors are located throughout the Bay Area and include 15 routes that have been designated as scenic highways and approximately 31 routes eligible for designation as scenic highways (ABAG, 2021).

The Bay Area contains a number of water bodies and waterways that flow through or are located within the region. Estuaries, creeks, and built waterways are found throughout the region, as well as the dominant body of water, the San Francisco Bay. Most rivers and streams originating in each of the counties of the Bay Area flow into San Francisco Bay, which provides access to the Pacific Ocean (ABAG, 2021).

The Carquinez Strait forms a visually distinct, relatively narrow channel that connects San Pablo Bay to Suisun Bay. The approximately 6-mile strait lies between two major bridges: the Carquinez Bridge, from Crockett to Vallejo; and the Benicia-Martinez Bridge, from Benicia to Martinez. Both bridges are visually distinct features in a landscape characterized by gently rolling terrain. The Carquinez Strait and Suisun Bay are characterized by a visual mix of industrial uses, small towns, and open areas of undeveloped land.

Industrial uses in the Carquinez Strait area are numerous, and include: terminals, including the Amorco Marine Terminal, Avon Marine Terminal, and TransMontaigne Terminal; refineries, including the Marathon Martinez Refinery, Martinez Refining Company, Valero Benicia Refinery, and Phillips 66 Rodeo Refinery; the port of Benicia; C&H Sugar in Crockett; and other industrial uses in Benicia and Martinez. From I-680 to the Point Edith Wildlife Area on the east, the visual setting is open space, characterized by views of the marsh and shoreline. The marshland includes wetland grasses, low-level shrubs, and small ponds.

The proposed amendments to Rule 8-8 will affect refinery wastewater treatment systems in the Bay Area, including the Chevron Richmond Refinery, the Phillips 66 Rodeo Refinery, the Martinez Refining Company, the Marathon Martinez Refinery, and the Valero Benicia Refinery. These facilities are located within heavy industrial areas, which generally do not have scenic resources.

Regulatory Background

Visual resources are protected by the California Scenic Highway Program which is managed by the California Department of Transportation (Caltrans). The legislation preserves and protects scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways.

Visual resources are generally protected by the city and/or county general plans through land use and zoning requirements, but policies can also be found in the conservation and open space elements as well. The General Plan Guidelines, prepared by the California Governor's Office of Planning and Research, recommend that the land use element address an inventory of scenic viewsheds and points of interest, definition of community scenic values, programs for protecting and promoting community aesthetics, and identification of scenic highways and byways (ABAG, 2021).

Significance Criteria

The proposed project impacts on aesthetics will be considered significant if:

- The proposed project would have a substantial adverse effect on a scenic vista.
- The proposed project would substantially damage scenic resources, including but not limited to trees, rock outcropping, and historical buildings within a state scenic highway.
- The proposed project would substantially degrade the existing visual character or quality of the site and its surroundings.
- The proposed project would add a visual element of urban character to an existing rural or open space area or add a modern element to a historic area.
- The proposed project would create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

Discussion of Impacts

1. a). Have a substantial adverse effect on a scenic vista? No Impact.
1. b). Substantially damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway? No Impact. A scenic vista is a location that offers a high quality and visually interesting view. Regional, county, and city policies address aesthetic issues in the area. These policies include the general plans of both Contra Costa and Solano counties, and of the cities of Martinez and Benicia. Three highways within Contra Costa County have been designated as scenic highways: Interstate 4 from Route 160 near Antioch to Route 84 near Brentwood; Route 24 from the Caldecott Tunnel to I-680 near Walnut Creek; and Route 680 from Alameda County line to Route 24 in Walnut Creek. Two highways have been designated as scenic in Solano County: Highway 29 from Route 37 near Vallejo to Route 211 near Napa; and Highway 128 from Route 1 near Mendocino to Route 505 is eligible for listing as a scenic route. Other portions of Route 580 and 680 in Alameda and Contra Costa counties are considered eligible for listing. While no designated State Scenic Highways are located in the vicinity of the refineries (Caltrans, 2023), the City of Benicia has

identified Interstate 680 north of the Benicia-Martinez bridge as a scenic route. Although it is not a State Scenic Highway, the San Francisco Bay Conservation and Development Commission's (BCDC) San Francisco Bay Plan Map 2 (2020) designates the Benicia-Martinez Bridge as a scenic drive (BCDC, 2020).

The existing refineries are located in heavy industrial areas of Contra Costa and Solano Counties and near a number of other industrial facilities. Rule 8-8 would require increased monitoring but would not require the construction of new equipment at existing refineries. With increased monitoring, there may be an increase in maintenance and repair activities. These activities would occur within the existing wastewater treatment plants at existing refineries and would not be noticeable outside of the existing wastewater treatment plants or the existing refineries. The views of the refineries would remain unchanged and continue to include views of heavy industrial equipment. Since the scenic vistas in the area are limited to the Benicia-Martinez Bridge, the proposed amendments to Rule 8-8 would not change the views from this bridge or of the area in general.

The amendments to Rule 8-8 would apply to existing industrial facilities, e.g., refineries, and no new construction activities will occur, therefore no trees, rock outcroppings, or historic buildings will be changed or modified by the proposed rule amendments. The views of the refineries would remain unchanged and continue to include views of heavy industrial equipment. Thus, the proposed Rule 8-8 amendments would not damage or degrade existing scenic resources.

1. c). In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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. No Impact. As discussed above, compliance with modified Rule 8-8 would not be visible outside the refineries and would not result in any changes in the visual quality or character of the refineries or the surrounding communities. The existing refineries are in heavy industrialized areas that are urbanized. Monitoring, maintenance and repair activities associated with the proposed Rule 8-8 amendments are compatible with existing zoning and other regulations governing scenic quality. Therefore, the proposed project would have no impact on the visual character or quality of the area, or result in significant adverse aesthetic impacts.

1. d). Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area? No Impact. Existing refineries and refinery units typically operate 24 hours per day and the sites are lighted for nighttime work activities. The proposed project would not result in the construction of any new equipment or require additional lighting. Monitoring, maintenance and repair activities associated with the proposed Rule 8-8 amendments would occur within existing wastewater treatment systems at the existing refineries which are already lighted for nighttime operations. No additional lighting would be required. Therefore, the proposed project would have no light or glare impacts or have any adverse aesthetic impacts to the surrounding community.

Conclusion

Based upon these considerations, no adverse aesthetic or light and glare impacts are expected due to implementation of the proposed amendments to Rule 8-8.

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

e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☑

Environmental Setting

The Air District covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles), so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. Approximately 18 percent of the region's 4.4 million land acres were considered to be urban built-up land, according to the California Department of Conservation Farmland Mapping and Monitoring Program. In 2018, over half of the region's land acres (2.3 million acres) were zoned for agricultural uses or classified as agricultural land. Of these agricultural lands, over 75 percent (1.7 million acres) are used for grazing (ABAG, 2021).

Some of these agricultural lands are under Williamson Act contracts. Agricultural land under Williamson Act contract includes both prime and nonprime lands. Prime agricultural land includes land with certain specific soil characteristics, land that has returned a predetermined annual gross value for three of the past five years, livestock-supporting land with specific carrying capacities, or land planted with fruit or nut trees, vines, bushes or crops that have a non-bearing period of less than five years (Government Code §51200-51207). Nonprime lands include pasture and grazing lands and other non-irrigated agricultural lands with lesser soil quality. In 2018, approximately 1.2 million acres of land in the Bay Area were under Williamson Act contract, with 17 percent designated as prime farmland and 83 percent as nonprime land (ABAG, 2021). Therefore, most of the land under Williamson contract are used for grazing.

Forests in the Bay Area are located at higher elevations of the Coast Ranges in areas with sufficient moisture. In the Bay Area, only Napa (59,100 acres), Sonoma (319,700 acres), San Mateo (45,600 acres), and Santa Clara (28,500 acres) Counties have substantial acreages of unreserved timberland forest (ABAG, 2021).

The proposed amendments to Rule 8-8 will affect refinery wastewater treatment systems at refineries in the Bay Area, including the Chevron Richmond Refinery, the Phillips 66 Rodeo Refinery, the Martinez Refining Company, the Marathon Martinez Refinery, and the Valero Benicia Refinery. The closest agricultural area to these refineries is the Briones Hills Agricultural Preservation Area located approximate 8 miles southwest of the Martinez Refining Company. The area includes open space, characterized by views of the marsh and shoreline. The marshland includes wetland grasses, low-level shrubs, and small ponds. Forest lands and agricultural lands are not located in the vicinity of the refineries.

Regulatory Background

The Delta Plan, required by the 2009 Sacramento-San Joaquin Delta Reform Act, created rules and recommendations to further the State's goals for the Delta of improving Statewide water supply reliability, as well as to protect and restore a vibrant and healthy Delta ecosystem. The plan includes specific policies for the protection and promotion of agriculture, such as those that call for wise location of new urban development, promotion of value-added crop processing, agritourism encouragement, wildlife friendly farming.

The California Land Conservation Act (Government Code Section 51200 et seq.) of 1965, commonly known as the Williamson Act, provides a tax incentive for the voluntary enrollment of agricultural and open space lands in contracts between local government and landowners. The act allows local governments to assess agricultural land based on the income-producing value of the property rather than the "highest and best use" value, and restricts the land to agricultural and open space uses and compatible uses defined in State law and local ordinances.

The California Farmland Conservancy Program (PRC Section 10200 et seq.) supports the voluntary granting of agricultural conservation easements from landowners to qualified nonprofit organizations, such as land trusts, as well as local governments. Conservation easements are voluntarily established restrictions that are permanently attached to property deeds, with the general purpose of retaining land in its natural, open space, agricultural, or other condition while preventing uses that are deemed inconsistent with the specific conservation purposes expressed in the easements.

The California Forest Legacy Program Act of 2007 is a program of the California Department of Forestry and Fire Protection (CalFire). The program provides conservation easements to environmentally sensitive forest areas that have environmental, aesthetic, or commodity value (ABAG 2021).

The Z'berg-Nejedly Forest Practice Act of 1973 (FPA) (PRC Sections 4511-4630.2) established the State Board of Forestry and Fire Protection, whose mandate is to protect and enhance the State's unique forest and wildland resources. This mandate is carried out through enforcement of the California Forest Practice Rules (California Code of Regulations Title 14, Chapters 4, 4.5, and 10).

Agricultural and forest resources are generally protected by the City and/or County General Plans, Community Plans through land use and zoning requirements, as well as any applicable specific plans, ordinances, and local coastal plans.

Significance Criteria

Project-related impacts on agriculture and forest resources will be considered significant if any of the following conditions are met:

- The proposed project conflicts with existing zoning or agricultural use or Williamson Act contracts.

- The proposed project will convert prime farmland, unique farmland or farmland of statewide importance as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.
- The proposed project conflicts with existing zoning for, or causes rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined in Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code § 51104 (g)).
- The proposed project would involve changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

Discussion of Impacts

2. a). Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? No Impact.

2. b). Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract? No Impact. Land designated by the California Resources Agency as Prime Farmland, Unique Farmland or Farmland of Statewide Importance are considered Farmland for CEQA purposes. The refineries are located within heavy industrial areas of Solano and Contra Costa counties and there are no designated Farmlands within the vicinity of the refineries. The area in the vicinity of the refineries and surrounding areas are developed and are designated as Urban and Built-Up Land by the California Department of Conservation. Further, the area is urbanized and not zoned for agricultural use so no Williamson Act contracts are located within the refineries.[1] Compliance activities would be within industrial areas and no agricultural lands would be impacted. Therefore, the proposed project would not conflict with existing zoning for agricultural use or with a Williamson Act contracts and would not convert agricultural lands to non-agricultural lands.

2. c). Conflict with existing zoning for, or cause rezoning of, forest land as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? No Impact.

2. d). Result in the loss of forest land or conversion of forest land to non-forest use? No Impact. The refineries are located in urbanized areas and there are no forest land or timberland resources in the community or vicinity of the refineries. Compliance activities would be within industrial areas and no forest land or timberland resources would be impacted. Therefore, the proposed project would not conflict with existing zoning for, or cause re-zoning of forest land, and would not result in the loss of forest land or conversion of forest land to non-forest use or impact timberland zoned as Timberland Production.

[1] California Department of Conservation, Farmland Mapping and Monitoring Program. Available at https://maps.conservation.ca.gov/DLRP/CIFF/.

2. e). Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? No Impact. Implementation of the amendments to Rule 8-8 would not involve changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use, since agricultural and forest land resources are not located within or adjacent to the refineries affected by the proposed amendments to Rule 8-8.

Conclusion

Based upon these considerations, no adverse agricultural or forestry resources impacts are expected due to implementation of the proposed amendments to Rule 8-8.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
III.	**AIR QUALITY.** When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☑
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a non-attainment area for 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 substantial number of people?)	☐	☐	☐	☑

Environmental Setting

The San Francisco Bay Area is characterized by a large, shallow basin surrounded by mountain ranges tapering into sheltered inland valleys. The basin is bounded by the Pacific Ocean to the west and includes complex terrain consisting of mountains, valleys and bays. Combined climatic and topographic factors result in increased potential for the accumulation of air pollutants in the inland valleys and reduced potential for buildup of air pollutants along the coast.

Air quality conditions in the San Francisco Bay Area have improved since the Bay Area Air Quality Management District (Air District) was created in 1955. The long-term trend of ambient concentrations of air pollutants and the number of days on which the region exceeds (AAQS) have generally declined, although some year-to-year variability primarily due to meteorology, causes some short-term increases in the number of exceedance days. The San Francisco Bay Area is in attainment of the State AAQS for carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2). However, the Bay Area does not comply with the State 24-hour particulate matter less than 10 microns in diameter (PM_{10}) standard, annual PM_{10} standard, and annual particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) standard. The District is designated

as unclassifiable/attainment for the federal CO, NO_2, SO_2, lead, and PM_{10} standards. A designation of unclassifiable/attainment means that the U.S. EPA has determined to have sufficient evidence to find the area either is attaining or likely attaining the AAQS.

Regional Air Quality

Regional air quality concerns are addressed by ambient air quality standards adopted by California Air Resourced Board (CARB) and the U.S. EPA. These standards set forth the maximum allowable concentrations of "criteria" pollutants in the ambient air throughout the region that are considered safe to breathe. These pollutants are called "criteria" pollutants because the standards are established by developing human-health based or environmentally-based "criteria" – i.e., science-based guidelines – for setting permissible ambient air pollutant concentrations.

The U.S. EPA has established National Ambient Air Quality Standards (NAAQS) for the following criteria pollutants: ozone, CO, NO_2, PM_{10}, $PM_{2.5}$, SO_2, and lead. California has also established standards for these pollutants, as well as for sulfate, visibility, hydrogen sulfide, and vinyl chloride. The state and national ambient air quality standards for each of these pollutants, and their effects on health, are summarized in Table 3-1.

TABLE 3-1
State and Federal Ambient Air Quality Standards

POLLUTANT	STATE STANDARD	FEDERAL STANDARD	MOST RELEVANT EFFECTS
Ozone	0.09 ppm, 1-hr. avg. 0.070 ppm, 8-hr	No Federal 1-hr standard 0.070 ppm, 8-hr avg.	(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; (d) Property damage
Carbon Monoxide	9.0 ppm, 8-hr avg. 20 ppm, 1-hr avg.	9 ppm, 8-hr avg. 35 ppm, 1-hr avg.	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses
Nitrogen Dioxide	0.03 ppm, annual avg. 0.18 ppm, 1-hr avg. >	0.053 ppm, ann. avg. 0.100 ppm, 1-hr avg.	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration
Sulfur Dioxide	0.04 ppm, 24-hr avg.> 0.25 ppm, 1-hr. avg. >	No Federal 24-hr Standard 0.075 ppm, 1-hr avg.	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma
Suspended Particulate Matter (PM_{10})	20 $\mu g/m^3$, annual arithmetic mean 50 $\mu g/m^3$, 24-hr averag	No Federal annual Standard 150 $\mu g/m^3$, 24-hr avg.	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children
Suspended Particulate Matter ($PM_{2.5}$)	12 $\mu g/m^3$, annual arithmetic mean No State 24-hr Standard	12 $\mu g/m^3$, annual arithmetic mean 35 $\mu g/m^3$, 24-hour average	Decreased lung function from exposures and exacerbation of symptoms in sensitive patients with respiratory disease; elderly; children.
Sulfates	25 $\mu g/m^3$, 24-hr avg.	No Federal Standard	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage
Lead	1.5 $\mu g/m^3$, 30-day avg. No State Calendar Quarter Standard No State 3-Month Rolling Avg. Standard	No Federal 30-day avg. Standard 1.5 $\mu g/m^3$, calendar quarter 0.15 $\mu g/m^3$ 3-Month Rolling average	(a) Increased body burden; (b) Impairment of blood formation and nerve conduction
Visibility-Reducing Particles	In sufficient amount to give an extinction coefficient >0.23 inverse kilometers (visual range to less than 10 miles) with relative humidity less than 70%, 8-hour average (10am – 6pm)	No Federal Standard	Visibility based standard, not a health based standard. Nephelometry and AISI Tape Sampler; instrumental measurement on days when relative humidity is less than 70 percent

U.S. EPA requires CARB and air districts to measure the ambient levels of air pollution to determine compliance with the NAAQS. To comply with this mandate, in 2020 the Air District monitored levels of various criteria pollutants at over 30 monitoring stations within the San Francisco Bay Area. A summary of the 2019 maximum concentration and number of days exceeding state and federal ambient air standards at the Air District monitoring stations for which data were collected to determine NAAQS compliance in 2019 are presented in Table 3-2.

TABLE 3-2
Bay Area Air Pollution Summary – 2019

MONITORING STATIONS	OZONE						CARBON MONOXIDE			NITROGEN DIOXIDE				SULFUR DIOXIDE				PM 10				PM 2.5				
	Max 1-Hr	Cal 1-Hr Days	Max 8-Hr	Nat 8-Hr Days	Cal 8-Hr Days	3-Yr Avg	Max 1-Hr	Max 8-Hr	Nat/ Cal Days	Max 1-Hr	Ann Avg	Nat 1-Hr Days	Cal 1-Hr Days	Max 1-Hr	Max 24-Hr	Nat 1-Hr Days	Cal 24-Hr Days	Ann Avg	Max 24-Hr	Nat 24-Hr Days	Cal 24-Hr Days	Max 24-Hr	Nat 24-Hr Days	3-Yr Avg	Ann Avg	3-Yr Avg
North Counties	(ppb)						(ppm)			(ppb)				(ppb)				(µg/m^3)				(µg/m^3)				
Napa Valley College*	95	1	76	2	2	*	1.3	1	0	37	5	0	0	-	-	-	-	14.2	39	0	0	21.5	0	*	5.9	*
San Rafael	96	1	80	1	1	55	1.4	0.9	0	50	8	0	0	-	-	-	-	14.3	33	0	0	19.5	0	42	6.4	9
Sebastopol*	70	0	59	0	0	*	1.4	1	0	32	4	0	0	-	-	-	-	-	-	-	-	28	0	35	5.7	7.4
Vallejo	92	0	76	1	1	56	2	1.5	0	53	7	0	0	10.9	1.9	0	0	-	-	-	-	30.5	0	48	8.6	11.2
Coast/Central Bay																										
Berkeley Aquatic Pk	50	0	42	0	0 40		5.6	1.3	0	50	13	0	0	-	-	-	-	-	-	-	-	28.8	0	42	9.4	10.1
Laney College Fwy	-	-	-	-	-	-	1.5	1	0	58	15	0	0	-	-	-	-	-	-	-	-	28.5	0	45	7.4	11.1
Oakland	98	1	73	2	2	49	3.3	1.1	0	62	9	0	0	-	-	-	-	-	-	-	-	24.7	0	44	6.7	9.3
Oakland-West	101	1	72	1	1	48	2.4	1.7	0	50	12	0	0	19.2	2.7	0	0	-	-	-	-	29.3	0	45	7.8	11.7
Richmond	-	-	-	-	-	-	-	-	-	-	-	-	-	16	3.7	0	0	-	-	-	-	-	-	-	-	-
San Francisco	91	0	73	1	1	49	1.2	1	0	61	10	0	0	-	-	-	-	14.7	42	0	0	25.4	0	44	7.7	9.7
San Pablo	103	1	79	2	2	52	1.8	0.9	0	42	7	0	0	17.6	1.9	0	0	16.5	36	0	0	35.9	1	44	7.8	10.4
Eastern District																										
Bethel Island	82	0	72	1	1	65	1.8	1	0	30	4	0	0	9.8	2.2	0	0	15.4	57	0	2	-	-	-	-	-
Concord	92	0	74	2	2	62	3.3	0.8	0	41	6	0	0	8.4	2.1	0	0	11.4	36	0	0	28.2	0	40	6.8	10.8
Crockett	-	-	-	-	-	-	-	-	-	-	-	-	-	17.9	4.6	0	0	-	-	-	-	-	-	-	-	-
Fairfield	80	0	68	0	0	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Livermore	105	4	78	7	7	73	-	-	-	48	8	0	0	-	-	-	-	-	-	-	-	28.8	0	40	6.4	8.7
Martinez	-	-	-	-	-	-	-	-	-	-	-	-	-	22.4	4.2	0	0	-	-	-	-	-	-	-	-	-
Pleasanton*	-	-	-	-	-	-	1.3	1	0	64	13	0	0	-	-	-	-	-	-	-	-	29.1	0	*	6.3	*
San Ramon	95	1	72	1	1	67	-	-	-	45	6	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-
South Central Bay																										
Hayward	106	2	85	2	2	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redwood City	83	0	77	2	2	52	2	1.1	0	55	9	0	0	-	-	-	-	-	-	-	-	29.5	0	36	7	8.9
Santa Clara Valley																										
Gilroy	79	0	67	0	0	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21.3	0	27	5.8	6.3
Los Gatos	87	0	78	2	2	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
San Jose	95	1	81	2	2	62	1.7	1.3	0	60	11	0	0	14.5	1.5	0	0	19.2	77	0	4	27.6	0	43	9.1	10.5
San Jose Freeway	-	-	-	-	-	-	2	1.6	0	65	14	0	0	-	-	-	-	-	-	-	-	32.8	0	43	7.4	10.1
San Martin	90	0	78	2	2	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Days over Standard		**6**		**9**	**9**				**0**			**0**	**0**			**0**	**0**			**0**	**5**		**1**			

Source: BAAQMD, 2020.

* Air monitoring at Napa Valley College began on April 1, 2018. Therefore, 3-year averages for ozone and PM2.5 are not available. Ozone data at Sebastopol had poor quality assurance results from July 17, 2019 through October 16, 2019 due to a failed California Air Resources Board audit. Therefore, the 3-year average for ozone is not available. Near-road air monitoring at Pleasanton began on April 1, 2018. Therefore, 3-year averages for PM2.5 are not available.7

(ppb) = parts per billion (ppm) = parts per million, (µg/m^3) = micrograms per cubic meter

Air quality conditions in the San Francisco Bay Area have improved since the Air District was created in 1955. The long-term trend of ambient concentrations of air pollutants and the number of days on which the region exceeds (AAQS) have generally declined, although some year-to-year variability, primarily due to meteorology, causes some short-term increases in the number of exceedance days (see Table 3-3). The Air District is in attainment of the State AAQS for CO, NO_2, and SO_2. However, the Air District does not comply with the State 24-hour PM_{10} standard, annual PM_{10} standard, and annual $PM_{2.5}$ standard. The Air District is unclassifiable/attainment for the federal CO, NO_2, SO_2, Pb, and PM_{10} standards. A designation of unclassifiable/attainment means that the U.S. EPA has determined to have sufficient evidence to find the area either is attaining or is likely attaining the NAAQS.

Based on the 2019 air quality data from the Air District monitoring stations, no monitoring stations measured an exceedance of any of State or federal AAQS for CO, NO_2, and SO_2. All monitoring stations were in compliance with the federal PM_{10} standards in 2019, except for one day in San Pablo. The State 24-hour PM_{10} standard was exceeded on five days in 2019, at the Bethel Island and San Jose monitoring stations.

The Bay Area is designated as a non-attainment area for the federal and state 8-hour ozone standard and the federal 24-hour $PM_{2.5}$ standard. The State and Federal 8-hour ozone standards were exceeded on nine days in 2019, at the Napa Valley College, San Rafael, Vallejo, Oakland, Oakland-West, San Francisco, San Pablo, Bethel Island, Concord, Livermore, San Ramon, Heyward, Redwood City, Los Gatos, San Jose, and San Martin monitoring stations. The State 1-hour ozone standard was exceeded six days in 2019, at the Napa Valley College, San Rafael, Oakland, Oakland-West, San Pablo, Livermore, San Ramon, Heyward, and San Jose monitoring stations.

TABLE 3-3

Bay Area Air Quality Summary
Days over Standards

YEAR	OZONE			CARBON MONOXIDE				NOx		SULFUR DIOXIDE		PM_{10}		$PM_{2.5}$
	8-Hr	1-Hr	8-Hr	1-Hr		8-Hr		1-Hr		1-Hr	24-Hr	24-Hr*		24-Hr
	Nat	Cal	Cal	Nat	Cal	Nat	Cal	Nat	Cal	Nat	Cal	Nat	Cal	Nat
2010	11	8	11	0	0	0	0	0	0	0	0	0	2	6
2011	9	5	10	0	0	0	0	0	0	0	0	0	3	8
2012	8	3	8	0	0	0	0	1	0	0	0	0	2	3
2013	3	3	3	0	0	0	0	0	0	0	0	0	6	13
2014	9	3	10	0	0	0	0	0	0	0	0	0	2	3
2015	12	7	12	0	0	0	0	0	0	0	0	0	1	9
2016	15	6	15	0	0	0	0	0	0	0	0	0	0	0
2017	6	6	6	0	0	0	0	1	0	0	0	0	6	18
2018	3	2	3	0	0	0	0	0	0	0	0	1	6	18
2019	9	6	9	0	0	0	0	0	0	0	0	0	5	1

Source: BAAQMD, 2020.

Criteria Pollutant Health Effects

Ozone: Ozone is not emitted directly from pollution sources. Instead, ozone is formed in the atmosphere through complex chemical reactions between hydrocarbons, or reactive organic gases (ROG), also commonly referred to as volatile organic compounds (VOC), and nitrogen oxides (NOx), in the presence of sunlight. ROG and NOx are referred to as ozone precursors.

Ozone is harmful to public health at high concentrations near ground level. Ozone can damage the tissues of the lungs and respiratory tract. High concentrations of ozone irritate the nose, throat, and respiratory system and constrict the airways. Ozone also can aggravate other respiratory conditions such as asthma, bronchitis, and emphysema, causing increased hospital admissions. Repeated exposure to high ozone levels can make people more susceptible to respiratory infection and lung inflammation and permanently damage lung tissue. Ozone can also have negative cardiovascular impacts, including chronic hardening of the arteries and acute triggering of heart attacks. Children are most at risk as they tend to be active and outdoors in the summer when ozone levels are highest. Seniors and people with respiratory illnesses are also especially sensitive to ozone's effects. Even healthy adults can be affected by working or exercising outdoors during high ozone levels.

The propensity of ozone for reacting with organic materials causes it to be damaging to living cells, and ambient ozone concentrations in the Bay Area are occasionally sufficient to cause health effects. Ozone enters the human body primarily through the respiratory tract and causes respiratory irritation and discomfort, makes breathing more difficult during exercise, reducing the respiratory system's ability to remove inhaled particles and fight infection while long-term exposure damages lung tissue. People with respiratory diseases, children, the elderly, and people who exercise heavily are more susceptible to the effects of ozone.

Plants are sensitive to ozone at concentrations well below the health-based standards and ozone is responsible for significant crop damage. Ozone is also responsible for damage to forests and other ecosystems.

Reactive Organic Gases (ROGs): It should be noted that there are no state or national ambient air quality standards for ROGs because they are not classified as criteria pollutants. ROGs are regulated, however, because ROG emissions contribute to the formation of ozone. They are also transformed into organic aerosols in the atmosphere, contributing to higher PM_{10} and lower visibility levels.

Although health-based standards have not been established for ROGs, health effects can occur from exposures to high concentrations of ROGs because of interference with oxygen uptake. In general, ambient ROG concentrations in the atmosphere are suspected to cause coughing, sneezing, headaches, weakness, laryngitis, and bronchitis, even at low concentrations. Some hydrocarbon components classified as ROG emissions are thought or known to be hazardous. Benzene, for example, one hydrocarbon component of ROG emissions, is known to be a human carcinogen.

ROG emissions result primarily from incomplete fuel combustion and the evaporation of paints, solvents and fuels. Mobile sources are the largest contributors to ROG emissions. Stationary

sources include processes that use solvents (such as manufacturing, degreasing, and coating operations) and petroleum refining, and marketing. Area-wide ROG sources include consumer products, pesticides, aerosol and architectural coatings, asphalt paving and roofing, and other evaporative emissions.

Carbon Monoxide (CO): CO is a colorless, odorless, relatively inert gas. It is a trace constituent in the unpolluted troposphere, and is produced by both natural processes and human activities. In remote areas far from human habitation, carbon monoxide occurs in the atmosphere at an average background concentration of 0.04 ppm, primarily as a result of natural processes such as forest fires and the oxidation of methane. Global atmospheric mixing of CO from urban and industrial sources creates higher background concentrations (up to 0.20 ppm) near urban areas. The major source of CO in urban areas is incomplete combustion of carbon-containing fuels, mainly gasoline used in mobile sources. Consequently, CO concentrations are generally highest in the vicinity of major concentrations of vehicular traffic.

CO is a primary pollutant, meaning that it is directly emitted into the air, not formed in the atmosphere by chemical reaction of precursors, as is the case with ozone and other secondary pollutants. Ambient concentrations of CO in the District exhibit large spatial and temporal variations, due to variations in the rate at which CO is emitted, and in the meteorological conditions that govern transport and dilution. Unlike ozone, CO tends to reach high concentrations in the fall and winter months. The highest concentrations frequently occur on weekdays at times consistent with rush hour traffic and late night during the coolest, most stable atmospheric portion of the day.

When CO is inhaled in sufficient concentrations, it can displace oxygen and bind with the hemoglobin in the blood, reducing the capacity of the blood to carry oxygen. Individuals most at risk from the effects of CO include heart patients, fetuses (unborn babies), smokers, and people who exercise heavily. Normal healthy individuals are affected at higher concentrations, which may cause impairment of manual dexterity, vision, learning ability, and performance of work. The results of studies concerning the combined effects of CO and other pollutants in animals have shown a synergistic effect after exposure to CO and ozone.

Particulate Matter (PM_{10} & $PM_{2.5}$): Particulate matter, or PM, consists of microscopically small solid particles or liquid droplets suspended in the air. PM can be emitted directly into the air or it can be formed from secondary reactions involving gaseous pollutants that combine in the atmosphere. Particulate pollution is primarily a problem in winter, accumulating when cold, stagnant weather comes into the Bay Area. PM is usually broken down further into two size distributions, PM_{10} and $PM_{2.5}$. Of great concern to public health are the particles small enough to be inhaled into the deepest parts of the lungs. Respirable particles (particulate matter less than about 10 micrometers in diameter) can accumulate in the respiratory system and aggravate health problems such as asthma, bronchitis and other lung diseases. Children, the elderly, exercising adults, and those suffering from asthma are especially vulnerable to adverse health effects of PM_{10} and $PM_{2.5}$.

A consistent correlation between elevated ambient particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and

the number of hospital admissions has been observed in different parts of the United States and various areas around the world. Studies have reported an association between long-term exposure to air pollution dominated by fine particles ($PM_{2.5}$) and increased mortality, reduction in lifespan, and an increased mortality from lung cancer.

Daily fluctuations in fine particulate matter concentration levels have also been related to hospital admissions for acute respiratory conditions, to school and kindergarten absences, to a decrease in respiratory function in normal children and to increased medication use in children and adults with asthma. Studies have also shown lung function growth in children is reduced with long-term exposure to particulate matter. The elderly, people with pre-existing respiratory and/or cardiovascular disease and children appear to be more susceptible to the effects of PM_{10} and $PM_{2.5}$.

Nitrogen Dioxide (NO_2): NO_2 is a reddish-brown gas with a bleach-like odor. Nitric oxide (NO) is a colorless gas, formed from the nitrogen (N_2) and oxygen (O_2) in air under conditions of high temperature and pressure which are generally present during combustion of fuels; NO reacts rapidly with the oxygen in air to form NO_2. NO_2 is responsible for the brownish tinge of polluted air. The two gases, NO and NO_2, are referred to collectively as nitrogen oxides or NOx. In the presence of sunlight, NO_2 reacts to form nitric oxide and an oxygen atom. The oxygen atom can react further to form ozone, via a complex series of chemical reactions involving hydrocarbons. Nitrogen dioxide may also react to form nitric acid (HNO_3) which reacts further to form nitrates, which are a component of PM_{10}.

NO_2 is a respiratory irritant and reduces resistance to respiratory infection. Children and people with respiratory disease are most susceptible to its effects.

Sulfur Dioxide (SO_2): SO_2 is a colorless gas with a sharp odor. It reacts in the air to form sulfuric acid (H_2SO_4), which contributes to acid precipitation, and sulfates, which are a component of PM_{10} and $PM_{2.5}$. Most of the SO_2 emitted into the atmosphere is produced by the burning of sulfur-containing fuels.

At sufficiently high concentrations, SO_2 affects breathing and the lungs' defenses, and can aggravate respiratory and cardiovascular diseases. Asthmatics and people with chronic lung disease or cardiovascular disease are most sensitive to its effects. SO_2 also causes plant damage, damage to materials, and acidification of lakes and streams.

Non-Criteria Pollutants Health Effects

Although the primary mandate of the Air District is attaining and maintaining the national and state AAQs for criteria pollutants within the Air District jurisdiction, the Air District also has a general responsibility to control, and where possible, reduce public exposure to airborne toxic compounds. Toxic air contaminants (TACs) are a defined set of airborne pollutants that may pose a present or potential hazard to human health. TACs can be emitted directly and can also be formed in the atmosphere through reactions among different pollutants. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage,

asthma, bronchitis or genetic damage; or short-term acute affects such as eye watering, respiratory irritation, running nose, throat pain, and headaches. TACs are separated into carcinogens and non-carcinogens based on the nature of the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. Non-carcinogenic substances differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is expected to occur. These levels are determined on a pollutant-by-pollutant basis. The air toxics program was established as a separate and complementary program designed to evaluate and reduce adverse health effects resulting from exposure to TACs.

The major elements of the District's air toxics program are outlined below.

- Preconstruction review of new and modified sources for potential health impacts, and the requirement for new/modified sources with TAC emissions that exceed a specified threshold to use BACT.

- The Air Toxics Hot Spots Program, designed to identify industrial and commercial facilities that may result in locally elevated ambient concentrations of TACs, to report significant emissions to the affected public, and to reduce unacceptable health risks.

- Findings from the District's Community Air Risk Evaluation (CARE) Program have been implemented to identify areas where air pollution contributes most to health impacts and where populations are most vulnerable to air pollution; to reduce the health impacts in these areas; and to engage the community and other agencies to develop additional actions to reduce local health impacts.

- Control measures designed to reduce emissions from source categories of TACs, including rules originating from the state Toxic Air Contaminant Act and the federal Clean Air Act.

- The TAC emissions inventory, a database that contains information concerning routine and predictable emissions of TACs from permitted stationary sources.

- Ambient monitoring of TAC concentrations at a number of sites throughout the Bay Area.

- The District's Regulation 11, Rule 18: Reduction from Air Toxic Emissions at Existing Facilities which was adopted November 15, 2017. This rule requires the District to conduct screening analyses for facilities that report TAC emissions within the District and calculate health prioritization scores based on the amount of TAC emissions, the toxicity of the TAC pollutants, and the proximity of the facilities to local communities. The District will conduct health risk assessments for facilities that have priority scores above a certain level. Based on the health risk assessment, facilities found to have a potential health risk above the risk action level would be required to reduce their risk below the action level, or install Best Available Retrofit Control Technology for Toxics on all significant sources of toxic emissions.

TAC Health Effects

TACs can cause or contribute to a wide range of health effects. Acute (short-term) health effects may include eye and throat irritation. Chronic (long-term) exposure to TACs may cause more severe effects such as neurological damage, hormone disruption, developmental defects, and cancer. CARB has identified roughly 200 TACs, including diesel particulate matter (diesel PM) and environmental tobacco smoke.

Unlike criteria pollutants which are subject to ambient air quality standards, TACs are primarily regulated at the individual emissions source level based on risk assessment. Human outdoor exposure risk associated with an individual air toxic species is calculated as its ground-level concentration multiplied by an established unit risk factor for that air toxic species. Total risk due to TACs is the sum of the individual risks associated with each air toxic species.

Occupational health studies have shown diesel PM to be a lung carcinogen as well as a respiratory irritant. Benzene, present in gasoline vapors and also a byproduct of combustion, has been classified as a human carcinogen and is associated with leukemia. 1,3-butadiene, produced from motor vehicle exhaust and other combustion sources, has also been associated with leukemia. Reducing 1,3-butadiene also has a co-benefit in reducing the TAC acrolein.

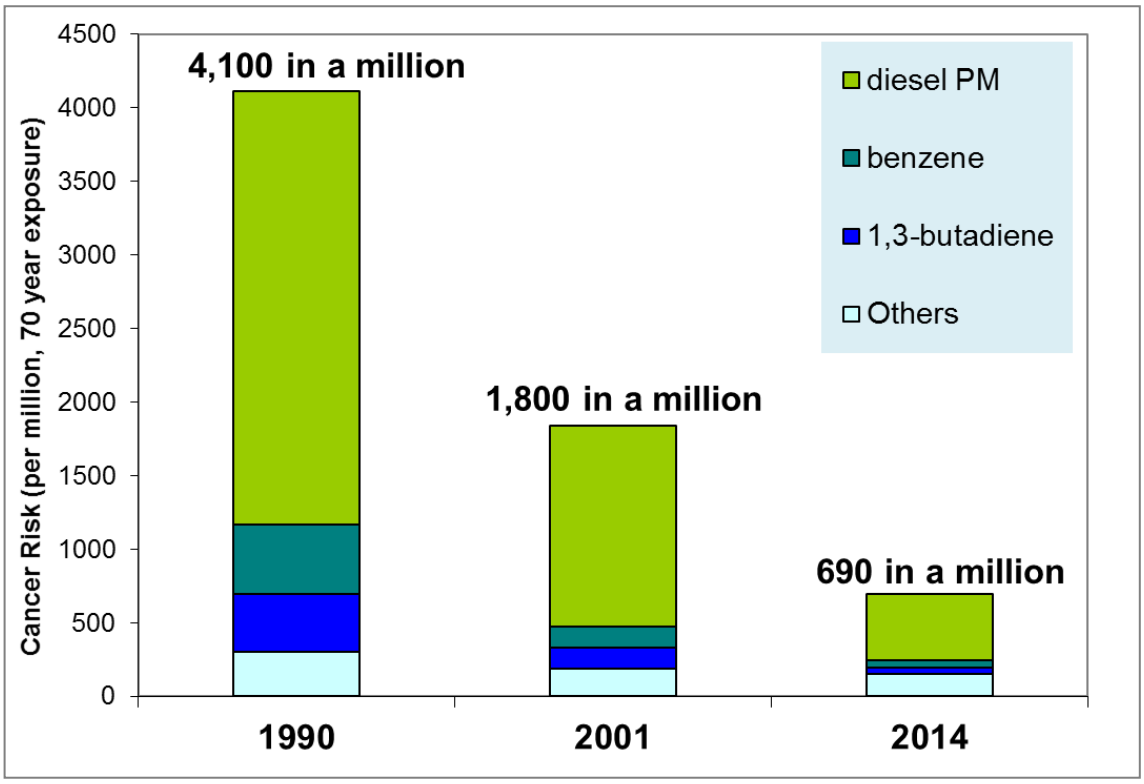
Acetaldehyde and formaldehyde are emitted from fuel combustion and other sources. They are also formed photo-chemically in the atmosphere from other compounds. Both compounds have been found to cause nasal cancers in animal studies and are also associated with skin and respiratory irritation. Human studies for carcinogenic effects of acetaldehyde are sparse but, in combination with animal studies, sufficient to support classification as a probable human carcinogen. Formaldehyde has been associated with nasal sinus cancer and nasopharyngeal cancer, and possibly with leukemia.

The primary health risk of concern due to exposure to TACs is the risk of contracting cancer. The carcinogenic potential of TACs is a particular public health concern because many scientists currently believe that there are not "safe" levels of exposure to carcinogens without some risk to causing cancer. The proportion of cancer deaths attributable to air pollution has not been estimated using epidemiological methods. Based on ambient air quality monitoring, and using OEHHA cancer risk factors,[2] the estimated lifetime cancer risk for Bay Area residents, over a 70-year lifespan from all TACs combined, declined from 4,100 cases per million in 1990 to 690

[2] See CARB's Risk Management Guidance for Stationary Sources of Air Toxics, Discussion Draft, May 27, 2015, https://www.arb.ca.gov/toxics/rma/rma_guidancedraft052715.pdf and the Office Environmental Health Hazard Assessment's toxicity values at http://oehha.ca.gov/media/CPFs042909.pdf. The cancer risk estimates shown in Figure 3-1 are higher than the estimates provided in documents such as the Bay Area 2010 Clean Air Plan and the April 2014 CARE report entitled *Improving Air Quality and Health in Bay Area Communities*. It should be emphasized that the higher risk estimates shown in Figure 3-1 are due solely to changes in the methodology used to estimate cancer risk, and not to any actual increase in TAC emissions or population exposure to TACs.

cases per million people in 2014, as shown in Figure 3-1. This represents an 80 percent decrease between 1990 and 2014 (BAAQMD, 2020a).

FIGURE 3-1 Cancer-Risk Weighted Toxics Trends



Source: BAAQMD, 2020a.

The cancer risk related to diesel PM, which accounts for most of the cancer risk from TACs, has declined substantially over the past 15-20 years as a result of CARB regulations and Air District programs to reduce emissions from diesel engines. However, diesel PM still accounts for roughly 60 percent of the total cancer risk related to TACs.

Air Toxics Emission Inventory

The Air District maintains a database that contains information concerning emissions of TACs from permitted stationary sources in the Bay Area. This inventory, and a similar inventory for mobile and area sources compiled by CARB, is used to plan strategies to reduce public exposure to TACs. The Air District maintains detailed TAC emissions inventories for specified stationary sources, the most recent of which is for 2019.[3]

Table 3-4 contains a summary of average ambient concentrations of TACs measured at monitoring stations in the Bay Area by the District.

[3] Bay Area AQMD TAC Inventory for 2019, available at: https://www.baaqmd.gov/about-air-quality/emission-inventory/toxic-air-contaminants

TABLE 3-4

Air District Ambient Air Toxics Monitoring Data

Compound	Max. Conc. (ppb) (1)	Min. Conc. (ppb) (2)	Mean Conc. (ppb) (3)
1,3-Butadiene	0.541	0.000	0.012
Acetaldehyde	5.680	0.480	1.982
Acetone	29.901	0.345	4.072
Acetonitrile	3.799	0.000	0.088
Acyrlonitrile	0.323	0.000	0.001
Benzene	3.123	0.000	0.221
Carbon Tetrachloride	0.130	0.024	0.098
Chloroform	0.115	0.000	0.023
Dichloromethane	1.791	0.000	0.159
Ethyl Alcohol	91.740	0.236	5.455
Ethylbenzene	1.136	0.000	0.138
Ethylene Dibromide	0.000	0.000	0.000
Ethylene Dichloride	0.000	0.000	0.000
Formaldehyde	7.290	0.480	2.707
Freon-113	0.205	0.051	0.070
Methyl Chloroform	1.226	0.000	0.006
Methyl Ethyl Ketone	5.743	0.000	0.259
Tetrachloroethylene	0.337	0.000	0.003
Toluene	3.925	0.000	0.503
Trichloroethylene	0.328	0.000	0.001
Trichlorofluoromethane	0.593	0.194	0.248
Vinyl Chloride	0.000	0.000	0.000
m/p-Xylene	2.929	0.000	0.236
o-Xylene	1.446	0.000	0.108

Source: BAAQMD, 2018a

NOTES: Table 3-4 summarizes the results of the Air District gaseous toxic air contaminant monitoring network for the year 2017. These data represent monitoring results at 21 separate sites at which samples were collected.

(1) "Maximum Conc." is the highest daily concentration measured at any of the 21 monitoring sites.

(2) "Minimum Conc." is the lowest daily concentration measured at any of the 21 monitoring sites.

(3) "Mean Conc." is the arithmetic average of the air samples collected in 2017 at the 21 monitoring sites.

(4) Acetaldehyde and formaldehyde concentrations reflect measurements from one monitoring site (San Jose-Jackson).

Regulatory Background

Criteria Pollutants

The U.S. EPA is responsible for setting and enforcing the NAAQS for ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. The U.S. EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The U.S. EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

At the federal level, the Clean Air Act Amendments of 1990 give the U.S. Environmental Protection Agency additional authority to require states to reduce emissions of ozone precursors and particulate matter in non-attainment areas. The amendments set attainment deadlines based on the severity of problems. At the state level, CARB has traditionally established state ambient air quality standards, maintained oversight authority in air quality planning, developed programs for reducing emissions from motor vehicles, developed air emission inventories, collected air quality and meteorological data, and approved state implementation plans. At a local level, California's air districts, including the Bay Area Air Quality Management District, are responsible for overseeing stationary source emissions, approving permits, maintaining emission inventories, developing air quality compliance plans, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by CEQA.

Other federal regulations applicable to the Bay Area include Title III of the Clean Air Act, which regulates hazardous air pollutants (HAPs). Title V of the Act establishes a federal permit program for large stationary emission sources. The U.S. EPA also has authority over the Prevention of Significant Deterioration (PSD) program, as well as the New Source Performance Standards (NSPS), both of which regulate stationary sources under specified conditions.

The Air District is responsible for 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 District is responsible for implementing emissions standards and other requirements of federal and state laws. Numerous regulations have been developed by the District to control emissions sources within its jurisdiction. It is also responsible for developing air quality planning documents required by both federal and state laws.

Toxic Air Contaminants

TACs are regulated in the District through federal, state, and local programs. At the federal level, HAPs are regulated primarily under the authority of the Clean Air Act. Prior to the amendment of the Clean Air Act in 1990, source-specific National Emission Standards for Hazardous Air Pollutants (NESHAPs) were promulgated under Section 112 of the Clean Air Act for certain sources of radionuclides and HAPs.

Title III of the 1990 Clean Air Act amendments required U.S. EPA to promulgate NESHAPs for certain categories of sources identified by U.S. EPA as emitting one or more of the 189 listed HAPs. Emission standards for major sources must require the maximum achievable control technology (MACT). MACT is defined as the maximum degree of emission reduction achievable considering cost and non-air quality health and environmental impacts and energy requirements.

Many of the sources of HAPs that have been identified under the Clean Air Act are also subject to the California TAC regulatory programs. CARB developed regulatory programs for the control of TACs, including: (1) California's TAC identification and control program, adopted in 1983 as Assembly Bill 1807 (AB 1807) (California Health and Safety Code §39662), a two-step program in which substances are identified as TACs, and airborne toxic control measures are adopted to control emissions from specific sources; and (2) the Air Toxics Hot Spot Information and Assessment Act of 1987 (AB 2588) (California Health and Safety Code §39656), which established a state-wide program to inventory and assess the risks from facilities that emit TACs and to notify the public about significant health risks associated with those emissions.

The Air District uses three approaches to reduce TAC emissions and to reduce the health impacts resulting from TAC emissions: 1) Specific rules and regulations; 2) Pre-construction review; and, 3) the Air Toxics Hot Spots Program. In addition, the Air District implements U.S. EPA, CARB, and Air District rules that specifically target toxic air contaminant emissions from sources at petroleum refineries.

In 2004, the Air District initiated the Community Air Risk Evaluation (CARE) program to identify areas with relatively high concentrations of air pollution – including TACs and fine particulate matter – and populations most vulnerable to air pollution's health impacts. Maps of communities most impacted by air pollution, generated through the CARE program, have been integrated into many Air District programs. For example, the Air District uses information derived from the CARE program to develop and implement targeted risk reduction programs, including grant and incentive programs, community outreach efforts, collaboration with other governmental agencies, model ordinances, new regulations for stationary sources and indirect sources, and advocacy for additional legislation. Information from the CARE program has been used to determine the communities most impacted by air quality for the purposes of AB617.

Significance Criteria

The Air District's CEQA Guidelines have been developed and periodically updated to assist local jurisdictions and lead agencies in complying with the requirements of CEQA regarding potentially adverse impacts to air quality. The most recent version is the 2022 CEQA Air Quality Guidelines (BAAQMD, 2022). A project would result in significant impacts if the applicable thresholds in Table 3-5 are exceeded.

For air toxics concerns, the threshold for a significant air quality impact is a lifetime cancer risk of 10 additional cancers per million people exposed or a non-cancer (i.e., chronic or acute) risk greater than 1.-0 hazard index (BAAQMD, 2022).

TABLE 3-5

Significance Thresholds for Criteria Air Pollutants and Precursors

Pollutant/Precursor	Daily Average Emissions (lbs/day)	Maximum Annual Emissions (tons/year)
Construction-Related Emissions		
ROG	54	NA(1)
NOx	54	NA
PM_{10}	82(2)	NA
$PM_{2.5}$	54(2)	NA
PM_{10}/ $PM_{2.5}$ Fugitive Dust	Best Management Practices	
Project-Related Emissions		
ROG	54	10
NOx	54	10
PM_{10}	82	15
$PM_{2.5}$	54	10

(1) Not Applicable.
(2) Applies to construction exhaust emissions only.
*Source: BAAQMD, 2022

Discussion of Impacts

3. a). Conflict with or obstruct implementation of the applicable air quality plan? No Impact. Amendments to Rule 8-8 would not conflict with or obstruct implementation of the applicable air quality plan. The applicable air quality plan is the Air District's 2017 Clean Air Plan, *Spare the Air, Cool the Climate* ("Plan"). The Plan outlines a strategy for achieving the Bay Area's clean air goals by reducing emissions of ozone precursors, particulate matter, TACs and other pollutants in the region (BAAQMD, 2017b). In addition, the Air District adopted AB 617 Expedited BARCT Implementation Schedule in December 2018. As part of the schedule, the Air District identified potential efforts to develop amendments to Rule 8-8 to address total organic compound emissions. Further, the proposed project would support the Air District's objectives of reducing GHG emissions and related climate change impacts. Therefore, the proposed project will not conflict with or obstruct implementation of an applicable air quality plan.

3. b). Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a non-attainment area for an applicable federal or state ambient air quality standard? No Impact/Beneficial Impact. The proposed amendments to Rule 8-8 are intended to further limit emissions of volatile organic compounds and methane from refinery wastewater collection and separation systems . These emission reductions would also reduce the emissions of toxic compounds. The existing emissions estimates from refinery wastewater treatment systems in the Bay Area are summarized in Table 3-6.

TABLE 3-6

VOC Emission Estimates for Refinery Wastewater Treatment Units

Refinery	Total Annual Estimated Volatile Organic Compound Emissions (tons per year)
Phillips 66 Rodeo	0.39
Martinez Refining Company	5.52
Marathon Martinez	21.97
Valero Benicia	2.23
Chevron Richmond	78.81
TOTAL	108.92

Organic compounds become entrained in waters used in refinery processes and this may result in volatile organic compound and methane emissions from wastewater collection and treatment systems. Volatile organic compound emissions may include TACs as well. These organic compounds are volatilized during transport to an onsite wastewater treatment system by exposure to high temperatures and turbulence in the transportation structures (e.g., pipes, manholes, junction boxes, sumps, and lift stations). The emitted vapors can collect in the headspaces of these transport structures and can be passively vented to the atmosphere through uncontrolled openings.

Under the proposed amendments to Rule 8-8, wastewater collection and separation system components at refineries must either ensure all system components are vapor-tight (and repair any leak discovered not to be vapor-tight) or operate a vapor-tight collection system that is routed to a vapor recovery or abatement system. All refinery wastewater separation and collection systems are expected to be able to comply with these requirements under their current configurations without substantial changes. Therefore, installation of additional controls are not expected to be required due to the proposed amendments to Rule 8-8 and no construction activities are expected to be required, so no construction emissions are expected.

The proposed amendments regulate total organic compounds that include methane. Therefore, operators would be required to use leak detection instrumentation under EPA Method 21 with the ability to detect methane, such as portable flame ionization detections. This provision would apply to both refinery and non-refinery facilities subject to Rule 8-8 amended requirements. The Air District understands that all affected facilities currently use leak detection instrumentation that would meet these requirements, and the proposed amendments would align Rule 8-8 instrumentation requirements with this industry practice.

The amendments to Rule 8-8 are expected to require more frequent monitoring to assure compliance, which could result in increases in the need for additional maintenance and repair. Since the refineries have existing monitoring programs, it is expected that the existing contractors or employees may conduct additional inspections, monitoring, or sampling activities

while onsite. In addition, the increase in monitoring and identification of additional leaks could lead to additional repairs. Overall the monitoring is not expected to require additional employees, increases in employee travel, or any other activity that would result in an increase in operational emissions.

TAC emissions may be generated from the collection, separation, and treatment of refinery wastewater, which may contain hydrogen sulfide, ammonia, phenols, benzene, cyanides, and suspended solids containing metals and inorganic compounds. Refinery effluents may have polycyclic aromatic hydrocarbons which are also toxic and can be persistent in the environment. Improved monitoring and repair requirements would be expected to reduce emissions of TACs, providing beneficial air quality and health risks by reducing exposure to such compounds.

3. c). Expose sensitive receptors to substantial pollutant concentrations? No Impact/Beneficial Impact. The proposed amendments to Rule 8-8 are expected to require more frequent monitoring to assure compliance with the vapor-tight standards. This is expected to reduce fugitive emissions of volatile organic compounds and methane from refinery wastewater collection and separation systems, and therefore serve to implement the requirements of AB 617. The reduction of emissions of toxic compounds would reduce potential health impacts to sensitive receptors in nearby communities. The proposed amendments are also expected to increase enforceability of existing and new requirements of Rule 8-8, therefore allowing the Air District to better respond to and address concerns raised by nearby communities.

3. d). Result in other emissions (such as those leading to odors adversely affecting substantial number of people?) No Impact. Since the proposed rule amendments would require monitoring and leak repair, the rule amendments are expected to reduce total organic emissions, and reduce the potential for odor impacts, providing a beneficial impact on odors produced by the refineries. Additionally, the amendments are not expected to require the installation or operation of additional control equipment that may generate other emissions or odors.

Conclusion

Based upon these considerations, no adverse air quality impacts are expected due to implementation of the proposed amendments to Rule 8-8.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IV.	**BIOLOGICAL RESOURCES.** Would the project:				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☑
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☑
c)	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☑
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☑
e)	Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☑
f)	Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☑

Environmental Setting

The Air District covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The Bay Area supports numerous distinct natural communities composed of a diversity of vegetative types that provide habitat for a wide variety of plan and wildlife species. Broad habitat categories in the region include grasslands, coastal scrub and chaparral, woodlands and forests, riparian systems and freshwater aquatic habitat, and wetlands. Extensive aquatic resources are provided by the San Francisco Bay Delta estuary, as well as numerous other rivers and streams. Urban and otherwise highly disturbed habitats, such as agricultural fields, also provide natural functions and values as wildlife habitat, as are aquatic and estuarine resources (ABAG, 2021).

Special-status species are defined as species that are legally protected or that are otherwise considered sensitive by federal, State, or local resource agencies. The high diversity of vegetation and wildlife found in the Bay Area is a result of the variety in soil, topographic, and microclimates. This, in combination with the rapid pace of development in the Bay Area, has resulted in a number of flora and fauna being endangered because they are rare, or vulnerable to habitat loss or population decline. Some of these species are listed and receive specific protection defined in federal or State endangered species laws. Other species have not been formally listed as threatened or endangered but have been designated as "rare" or "sensitive" (ABAG, 2021).

The San Francisco Bay and Delta make up the Pacific Coast's largest estuary, encompassing roughly 1,600 square miles of waterways and draining more than 40 percent of California's fresh water. The Sacramento and San Joaquin Rivers flow from northern California's inland valleys into the Delta's winding system of islands, sloughs, canals, and channels before emptying into San Francisco Bay and the Pacific Ocean (ABAG, 2021). As the largest estuary on the west coast, the San Francisco Bay supports an abundance of species.

The proposed amendments to Rule 8-8 will affect refinery wastewater treatment systems at refineries in the Bay Area, including the Chevron Richmond Refinery, the Phillips 66 Rodeo Refinery, the Martinez Refining Company, the Marathon Martinez Refinery, and the Valero Benicia Refinery. These facilities are located within heavy industrial areas, where native vegetation and biological resources have been removed.

Regulatory Setting

The regulations and policies of various federal and State agencies mandate protection of wetlands, some special-status plant and wildlife species, and aquatic and terrestrial communities in the region. The U.S. Army Corps of Engineers has primary federal responsibility for administering regulations that concern waters and wetlands, while U.S. Fish and Wildlife Service, NOAA Fisheries oversee the federal Endangered Species Act. Development permits may be required from one or both of these agencies if development would impact rare or endangered species. The California Department of Fish and Wildlife administers the California Endangered Species Act, which prohibits impacting endangered and threatened species.

Biological resources are also generally protected by the City and/or County General Plans through land use and zoning requirements which minimize or prohibit development in biologically sensitive areas.

Significance Criteria

The proposed project impacts on biological resources will be considered significant if:

- The project has a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries.
- The project has a substantial adverse effect on any riparian habitat, state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.), or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, through direct removal, filling, hydrological interruption, or other means.
- The project interferes substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impedes the use of native wildlife nursery sites.
- The project conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Discussion of Impacts

4. a). Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? No Impact.
4. b). Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? No Impact.
4. c). Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means? No Impact.
4. d). Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? No Impact. Proposed amendments to Rule 8-8 are designed to improve monitoring and potentially reduce emissions of total organic emissions from wastewater treatment systems. No construction activities are required so there would be no construction impacts. Monitoring activities would be limited to existing wastewater treatment units within industrial areas, where native biological resources have been removed and are non-existent. Thus, the proposed project is not expected to result in any impacts to biological

resources and would not be expected to impact riparian, wetlands, or other sensitive communities.

4. e). Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? No Impact.

4. f). Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?. No Impact. The proposed amendments to Rule 8-8 would not require any construction activities or any physical changes in operation. Therefore, the proposed amendments would not affect land use plans, local policies or ordinances, or regulations protecting biological resources such as a tree preservation policy or ordinances for the reasons described above. Land use and other planning considerations are determined by local governments and land use or planning requirements would not be altered by the proposed amendments. Similarly, the proposed amendments to Rule 8-8 would not affect any habitat conservation or natural community conservation plans, biological resources or operations, and would not create divisions in any existing communities, as no construction activities would be required. Rule 8-8 applies to existing industrial facilities that have already been developed, graded, and native vegetation has been removed, therefore, no impacts on biological resources would occur.

Conclusion

Based upon these considerations, no adverse biological resources impacts are expected due to implementation of the proposed amendments to Rule 8-8.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
V.	**CULTURAL RESOURCES.** Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	☐	☐	☐	☑
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☐	☐	☑
c)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☑

Environmental Setting

The Air District covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles), so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. Cultural resources include prehistoric resources, historic-period resources, and tribal cultural resources (see Section XII for further details on tribal cultural resources) as well as sensitive locations where resources are likely to be identified in the future based on our existing knowledge of historic and prehistoric settlement patterns. Archaeological resources are locations where human activity has measurably altered the earth or left deposits of prehistoric or historic-era physical remains (e.g., stone tools, bottles, former roads, house foundations). Historical (or built-environment) resources include standing buildings (e.g., houses, barns, outbuildings, cabins) and intact structures (e.g., dams, bridges, roads, districts), or landscapes (ABAG, 2021).

The Carquinez Strait represents the entry point for the Sacramento and San Joaquin Rivers into the San Francisco Bay. This locality lies within the San Francisco Bay and the west end of the Central Valley archaeological regions, both of which contain a rich array of prehistoric and historical cultural resources. The areas surrounding the Carquinez Strait and Suisun Bay have been occupied for millennia given their abundant combination of littoral and oak woodland resources.

Historic resources are standing structures of historic or aesthetic significance. Architectural sites dating from the Spanish Period (1529-1822) through the late 1960s are generally considered for protection if they are determined to be historically or architecturally significant. These may include missions, historic ranch lands, and structures from the Gold Rush and the region's early

industrial era. More recent architectural sites may also be considered for protection if they could gain historic significance in the future (ABAG, 2021).

Of the 8,118 sites recorded in the Bay Area, there are 1,006 cultural resources listed on the California Register of Historic Resources (CRHR), meaning that they are significant at the local, State or federal level; of those, 744 are also listed on the National Register of Historic Places (NRHP). From this list, 249 resources are listed as California Historic Landmarks. The greatest concentration of historic resources listed on both the NRHP and the CRHR in the Bay Area occurs in San Francisco, with 181 resources. Alameda County has the second highest number with 147 resources (ABAG, 2021).

The proposed amendments to Rule 8-8 will affect refinery wastewater treatment systems at refineries in the Bay Area, including the Chevron Richmond Refinery, the Phillips 66 Rodeo Refinery, the Martinez Refining Company, the Marathon Martinez Refinery, and the Valero Benicia Refinery. These facilities are located within heavy industrial areas which have been graded and developed. Cultural resources are not usually located in industrial areas.

Regulatory Setting

The State CEQA Guidelines define a significant cultural resource as a "resource listed or eligible for listing on the California Register of Historical Resources" (Public Resources Code §5024.1). A project would have a significant impact if it would cause a substantial adverse change in the significance of a historical resource (State CEQA Guidelines §15064.5(b)). A substantial adverse change in the significance of a historical resource would result from an action that would demolish or adversely alter the physical characteristics of a historical resource that convey its historical significance and that qualify the resource for inclusion in the California Register of Historical Resources or a local register or survey that meets the requirements of Public Resources Code §§5020.1(k) and 5024.1(g). In addition the General Plans for some jurisdictions set forth goals, objectives, policies, and actions for historic preservation.

Significance Criteria

The proposed project impacts to cultural resources will be considered significant if:

- The project results in a substantial adverse change in the significance of historical resources as defined in CEQA Guidelines §15064.5. A substantial adverse change includes physical demolition, destruction, relocation, or alteration of a resource or its immediate surroundings such that the significance of the historical resources would be materially impaired.
- Cause a substantial adverse change in the significance of an archaeological resources pursuant to CEQA Guidelines §15064.5.
- Disturb any human remains, including those interred outside of formal cemeteries.

Discussion of Impacts

5. a). Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5? No Impact.
5. b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5? No Impact.
5. c). Disturb any human remains, including those interred outside of formal cemeteries? No Impact. CEQA Guidelines state that generally, a resource shall be considered "historically significant" if the resource meets the criteria for listing in the California Register of Historical Resources including the following:

A. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

B. Is associated with the lives of persons important in our past;

C. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values;

D. Has yielded or may be likely to yield information important in prehistory or history (CEQA Guidelines §15064.5).

Generally, resources (buildings, structures, equipment) that are less than 50 years old are excluded from listing in the National Register of Historic Places unless they can be shown to be exceptionally important. Proposed amendments to Rule 8-8 are designed to minimize total organic emissions from wastewater treatment systems. The amended rule would require monitoring which may lead to leak repairs but no construction activities or change in physical operations is expected to occur. Further, no demolition activities would be required. Therefore, no historic resources would be impacted or modified.

Rule 8-8 applies to wastewater treatment systems in heavy industrial areas. These areas have already been graded and developed, and no grading would be required to comply with the proposed amendments. Thus, the proposed rule amendments would not impact historical or archaeological resources as defined in CEQA Guidelines §15064.5, or disturb human remains interred outside formal cemeteries. Therefore, no impacts to cultural resources would occur as a result of the proposed project as no construction activities are required.

Conclusion

Based upon these considerations, no adverse cultural resources impacts are expected due to implementation of the proposed amendments to Rule 8-8.

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

Environmental Setting

Pacific Gas and Electric Company (PG&E) supplies electricity to over five million customers in central and northern California. The counties within the Air District (Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma) used approximately 53,200 gigawatt/hours (millions of kilowatt/hours) in 2021[4]. Residential electricity use accounts for approximately 33 percent of the electrical use and non-residential use accounts for approximately 67 percent. PG&E's electricity is supplied by natural gas power plants, nuclear generation, large hydroelectric facilities, and renewable sources (e.g., wind, geothermal, biomass, and small hydroelectric power).

In 2021, about 37.9 percent of electricity was generated by natural gas, 33.6 percent was generated by renewables, 10.2 percent was generated by hydroelectric facilities, 9.3 percent was generated by nuclear, and 3 percent was generated by coal in California.[5]

In 2021, the counties within the Air District used approximately 2,625 million therms of natural gas.[6] Residential natural gas use accounts for approximately 41 percent of the natural gas consumption in the Air District. Non-residential gas use accounts for approximately 59 percent of the natural gas consumption in the Air District.

[4] California Energy Commission, Electricity Consumption by County. Available at https://ecdms.energy.ca.gov/elecbycounty.aspx
[5] California Energy Commission, Total System Electric Generation. Available at: https://www.energy.ca.gov/almanac/electricity_data/total_system_power.html
[6] California Energy Commission, Gas Consumption by County. Available at: http://www.ecdms.energy.ca.gov/gasbycounty.aspx

Regulatory Setting

Energy efficiency requirements are primarily regulated at the state level. Title 24, California's Energy Efficiency Standards for Residential and Non-residential Buildings, details requirements to achieve minimum energy efficiency standards. The standards apply to new construction of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. Compliance with these standards is verified and enforced through the local building permit process.

Some local cities within the Bay Area have developed and implemented green building ordinances, energy and climate action plans, and sustainability plans that address energy efficiency, such as the cities of Belmont, Benicia, Martinez, Oakland, Palo Alto, Richmond, San Francisco, South San Francisco, and Walnut Creek, as well the counties of Marin and Contra Costa, among others.

Significance Criteria

The impacts to energy will be considered significant if any of the following criteria are met:

- The project conflicts with adopted energy conservation plans or standards.
- The project results in substantial depletion of existing energy resource supplies.
- An increase in demand for utilities impacts the current capacities of the electric and natural gas utilities.
- The project uses non-renewable resources in a wasteful and/or inefficient manner.

Discussion of Impacts

6. a). Result in potentially significant environmental impact due to wasteful, inefficient or unnecessary consumption of energy resources, during project construction or operations? No Impact. Proposed amendments to Rule 8-8 would not require the construction or operation of any additional units, and thus will not require energy consumption for construction activities. The amendments to Rule 8-8 may result in more frequent monitoring and could result in the need for additional maintenance and leak repair. Since the refineries have existing monitoring programs, it is expected that the existing contractors or employees may conduct additional inspections, monitoring, or sampling activities while onsite. In addition, the increase in monitoring and identification of additional leaks could lead to additional repairs. Overall the monitoring and subsequent repair, if applicable, is not expected to require additional employees, increases in employee travel, or any other activity that would result in an increase in energy. Therefore, the proposed amendments are not expected to result in an increase in electricity or natural gas, or require any other energy resources.

6. b). Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? No Impact. As discussed in 6 a) above, the proposed amendments are not expected to require additional energy resources. Therefore, the project would not conflict or obstruct a state of local plan for renewable energy or energy efficiency. California's renewables portfolio standard (RPS) requires retail sellers of electricity to increase their procurement of eligible renewable energy resources by at least one percent per year, so that 20 percent of their retail sales were procured from eligible renewable energy resources by 2017. The RPS was further modified to require retailers to reach 33 percent renewable energy by 2020 and 50 percent by 2030. The proposed amendments would not hinder the utility's ability to meet these requirements as no increase in electricity is expected. Therefore, the proposed amendments to Rule 8-8 would not conflict or obstruct a state or local plan for renewable energy or energy efficiency and no adverse energy impacts are expected.

Conclusion

Based upon these considerations, no adverse impacts on energy resources are expected due to implementation of the proposed amendments to Rule 8-8.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY / SOILS. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☑
ii) Strong seismic ground shaking?	☐	☐	☐	☑
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☑
iv) Landslides?	☐	☐	☐	☑
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☑
c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in 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 California Building Code, creating substantial direct or indirect risks to life or property?	☐	☐	☐	☑
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas 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.	☐	☐	☐	☑

Environmental Setting

Most of the Bay Area is located within the natural region of California known as the Coast Ranges geomorphic province. The Coast Range, extends about 400 miles from Oregon south into Southern California, and is characterized by a series of northwest trending ridges and valleys that roughly parallel the San Andreas fault zone. Much of the Coast Range province is composed of marine sedimentary and volcanic rocks located east of the San Andreas Fault. The region west of the San Andreas Fault is underlain by a mass of basement rock that is composed of mainly marine sandstone and various metamorphic rocks (ABAG, 2021). Unconsolidated alluvial deposits, artificial fill, and estuarine deposits, (including Bay Mud) underlie the low-lying region along the margins of the Carquinez Straight and Suisun Bay.

The San Francisco Bay Area is a seismically active region that lies along the San Andreas Fault, which forms the boundary between the Pacific and North American tectonic plates. Other principal faults capable of producing significant ground shaking in the Bay Area include the Hayward Fault, the Rodgers Creek-Healdsburg Fault, the Marsh Creek-Greenville Fault, and the West Napa fault. A major seismic event on any of these active faults could cause significant ground shaking and surface rupture, as was experienced during earthquakes in recorded history, including the 1906 San Francisco earthquake (magnitude 7.8) and the 1989 Loma Prieta earthquake (magnitude 6.9), both of which occurred on the San Andreas Fault. The 1868 Hayward earthquake generated a magnitude 7.0 on the Hayward Fault (ABAG, 2021).

Strong ground movement for a major earthquake could affect the Bay Area during the next 30 years. Ground shaking may affect areas hundreds of miles away from the earthquake's epicenter. The intensity of ground movement during an earthquake can vary depending on the overall magnitude, distance from the fault, direction of earthquake energy, and type of geologic material. Areas in the Bay Area most susceptible to intense ground shaking are those areas located closest to the earthquake-generating gault and areas underlain by thick, loosely unconsolidated, saturated sediments, particularly soft, saturated bay muds, and artificial fill along the tidal margins of San Francisco Bay (ABAG, 2021).

Liquefaction is a phenomenon where unconsolidated and/or nearly saturated soils lose cohesion and are converted to a fluid state as a result of significant shaking. The relatively rapid loss of soil shear strength during strong earthquake shaking results in the temporary fluid-like behavior of the soil. Soil liquefaction can cause ground failure that can damage roads, airport runways, pipelines, underground cables, and buildings with shallow foundations. Liquefaction potential is highest in areas underlain by shallow groundwater and bay fills, bay mud, and unconsolidated alluvium (ABAG, 2021).

Expansive soils possess a "shrink-swell" characteristic. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Changes in soil moisture can result from rainfall, landscape irrigation, utility leakage, roof drainage, and/or perched groundwater. Structural damage may occur incrementally over a long period of time, usually as a result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Soils with high clay

content, such as the bay muds located on the margins of the San Francisco Bay, are highly expansive (ABAG, 2021).

Important vertebrate and invertebrate fossils and unique geologic units have been documented throughout California. The fossil yielding potential of a particular area is highly dependent on the geologic age and origin of the underlying rocks. Pleistocene or older (older than 11,000 years) continental sedimentary deposits are considered to have a high paleontological potential while Holocene-age deposits (less than 10,000 year old) are generally considered to have a low paleontological potential because they are geologically immature and are unlikely to contain fossilized remains of organisms. Metamorphic and igneous rocks have a low paleontological potential, either because they formed beneath the surface of the earth (such as granite), or because they have been altered under heat and high pressures (ABAG, 2021).

Regulatory Setting

The California Building Code (CBC) has been codified in the CCR as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction.

The American Society of Civil Engineers (ASCE), Minimum Design Standard 7-05 (ASCE 7-05) provides requirements for general structural design and includes means for determining earthquake loads, as well as other loads (e.g., flood, snow, wind), for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure, or any appurtenances connected or attached to such buildings or structures throughout California.

Construction is regulated by the local City or County building codes that provide requirements for construction, grading, excavations, use of fill, and foundation work including type of materials, design, procedures, etc., which are intended to limit the probability of occurrence and the severity of consequences from geological hazards. Necessary permits, plan checks, and inspections are generally required.

The City and County General Plans include the Seismic Safety Element. The Element serves primarily to identify seismic hazards and their location in order that they may be taken into account in the planning of future development. The California Building Code is the principle mechanism for protection against and relief from the danger of earthquakes and related events.

In addition, the Seismic Hazard Zone Mapping Act (Public Resources Code §§2690 – 2699.6) was passed by the California legislature in 1990 following the Loma Prieta earthquake. The Act required that the California Division of Mines and Geology (DMG) develop maps that identify the areas of the state that require site specific investigation for earthquake-triggered landslides

and/or potential liquefaction prior to permitting most urban developments. The act directs cities, counties, and state agencies to use the maps in their land use planning and permitting processes.

Local governments are responsible for implementing the requirements of the Seismic Hazards Mapping Act. The maps and guidelines are tools for local governments to use in establishing their land use management policies and in developing ordinances and reviewing procedures that will reduce losses from ground failure during future earthquakes.

Significance Criteria

The proposed project impacts on the geological environment will be considered significant if:

- Topographic alterations would result in significant changes, disruptions, displacement, excavation, compaction or over covering of large amounts of soil.
- Unique geological resources (paleontological resources or unique outcrops) are present that could be disturbed by the construction of the proposed project.
- Exposure of people or structures to major geologic hazards such as earthquake surface rupture, ground shaking, liquefaction or landslides.
- Secondary seismic effects could occur which could damage facility structures, e.g., liquefaction.
- Other geological hazards exist which could adversely affect the facility, e.g., landslides, mudslides.

Discussion of Impacts

7. 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); ii) Strong seismic ground shaking; iii) seismic-related ground failure, including liquefaction; iv) Landslides? No Impact.
7. 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? No Impact.
7. d). Be located on expansive soil, as defined in Table 18-1-B of the California Building Code, creating substantial direct or indirect risks to life or property? No Impact. Proposed amendments to Rule 8-8 are designed to monitor and minimize total organic emissions from wastewater treatment units. No physical modifications are expected to be required and no units are expected to be built. The proposed rule amendments apply to existing refineries that have already been built and are operating. Since no new equipment or facilities are required to be built, the proposed project would not result in an increase in seismic hazards such as ground shaking, ground failure, subsidence, landslides or construction on expansive soils.

7. b). Result in substantial soil erosion or the loss of topsoil? No Impact. No construction activities are expected due to implementation of the proposed amendments to Rule 8-8.

Therefore, the proposed amendments would not result in soil erosion or the loss of topsoil as no construction activities would be required.

7. e). Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater? No Impact. Septic tanks or other similar alternative wastewater disposal systems are typically associated with small residential projects in remote areas. The proposed amendments to Rule 8-8 would affect existing refineries that have existing wastewater treatment systems and/or are connected to appropriate wastewater facilities. The proposed project will require additional monitoring of existing wastewater treatment systems but would not result in an increase in wastewater. Further, the affected facilities do not rely on septic tanks or similar alternative wastewater disposal systems. Based on these considerations, septic tanks or other alternative wastewater disposal systems would not be impacted by the proposed amendments to Rule 8-8.

7. f). Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? No Impact. The amendments to Rule 8-8 would apply to existing refineries that have been graded and developed. No construction or grading activities would be required due to implementation of the Rule 8-8 amendments. Thus, the proposed amendments to Rule 8-8 would not adversely affect paleontological resources. Therefore, no impacts to paleontological resources are anticipated to occur as a result of the proposed project as no construction activities are required.

Conclusion

Based upon these considerations, no adverse impacts to geology and soils are expected due to implementation of the proposed amendments to Rule 8-8.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	☑
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☑

Environmental Setting

Global climate change refers to changes in average climatic conditions on the earth as a whole, including temperature, wind patterns, precipitation and storms. Global climate change is caused primarily by an increase in levels of greenhouse gases (GHGs) in the atmosphere. The major greenhouse gases are the so-called "Kyoto Six" gases – carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs) – as well as black carbon.[7] These greenhouse gases absorb longwave radiant energy (heat) reflected by the earth, which warms the atmosphere in a phenomenon known as the "greenhouse effect." The potential effects of global climate change include rising surface temperatures, loss in snow pack, sea level rise, ocean acidification, more extreme heat days per year, and more drought years.

Increases in the combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.) since the beginning of the industrial revolution have resulted in a significant increase in atmospheric levels of GHGs. CO_2 levels have increased from long-term historical levels of around 280 ppm before the mid-18th century to over 400 ppm today. This increase in GHGs has already caused noticeable changes in the climate. The average global temperature has risen by approximately 1.4°F (0.8°C) over the past one hundred years, and 16 of the 17 hottest years in recorded history have occurred since 2001, according to the National Oceanic and Atmospheric Administration.

Total global GHG emissions contributing to climate change are in the tens of billions of metric tons of CO_2e per year. The total GHG inventory for California in 2020 was 369.2 MMTCO2e

[7] Technically, black carbon is not a gas but is made up of solid particulates or aerosols. It is included in the discussion of greenhouse gas emissions because, like true greenhouse gases, it is an important contributor to global climate change.

(CARB, 2022). This is less than the 2020 target of 431 MMTCO2e required to meet legislative targets included in the Global Warming Solutions Act of 2006 (AB 32). Table 3.8-1 summarizes the Statewide GHG inventory for California by percentage. GHG emissions associated with the transportation sector account for the largest source of GHG emissions, followed by industry and electricity generation.

TABLE 3-7

2020 Statewide GHG Emissions by Sector

Sector	Percent	MMTCO2e
Transportation	38	139.9
Industrial	23	85.3
Electricity Generation (in state)	11	41.1
Agriculture & Forestry	9	31.6
Residential	8	30.7
Commercial	6	22.0
Electricity (imports)	5	18.7
Total	100	369.2

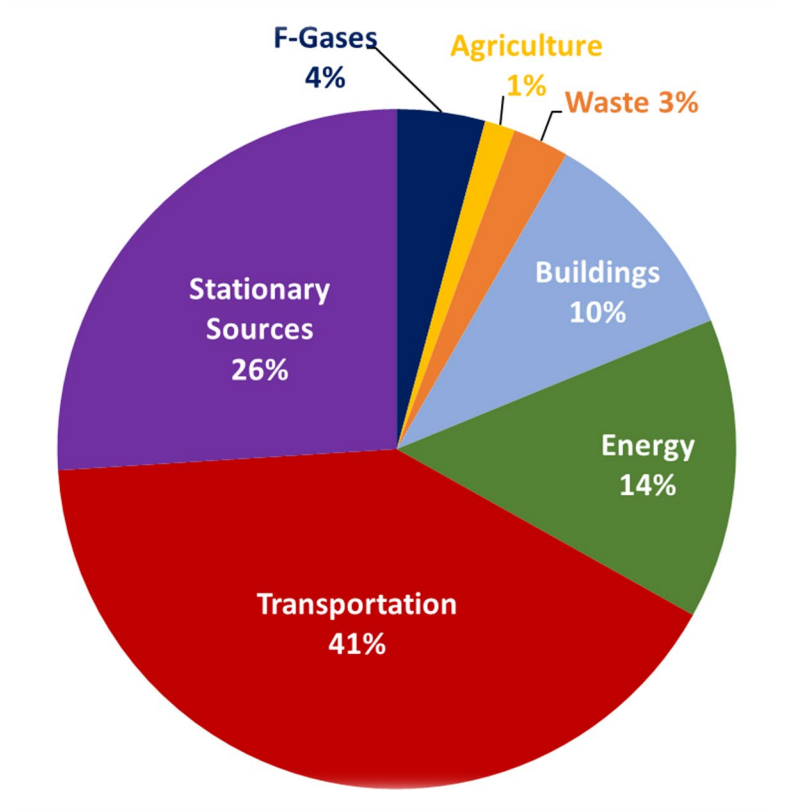
Source: CARB, 2022.

The Bay Area's contribution to the global total is approximately 85 million tons per year. Figure 3-2 presents a breakdown of the region's GHG emissions by major source categories. Transportation sources generate approximately 40 percent of the total, with the remaining 60 percent coming from stationary and area sources (see Figure 3-2).

Historically, regional GHG emissions rose substantially as the Bay Area industrialized. But emissions have peaked recently, and they are expected to decline in the coming years. Figure 3-3 shows the Bay Area's total GHG emissions since 1990, with projections for future emissions through 2050. As the figure shows, emissions are expected to decline in the future as the region continues to shift away from burning fossil fuels and towards renewable energy resources such as wind and solar power. Emissions will need to decline even more than currently projected, however, in order to reach the aggressive targets adopted by California and by the Air District. These GHG reduction goals are represented by the dashed line on the graph in Figure 3-3.

FIGURE 3-2

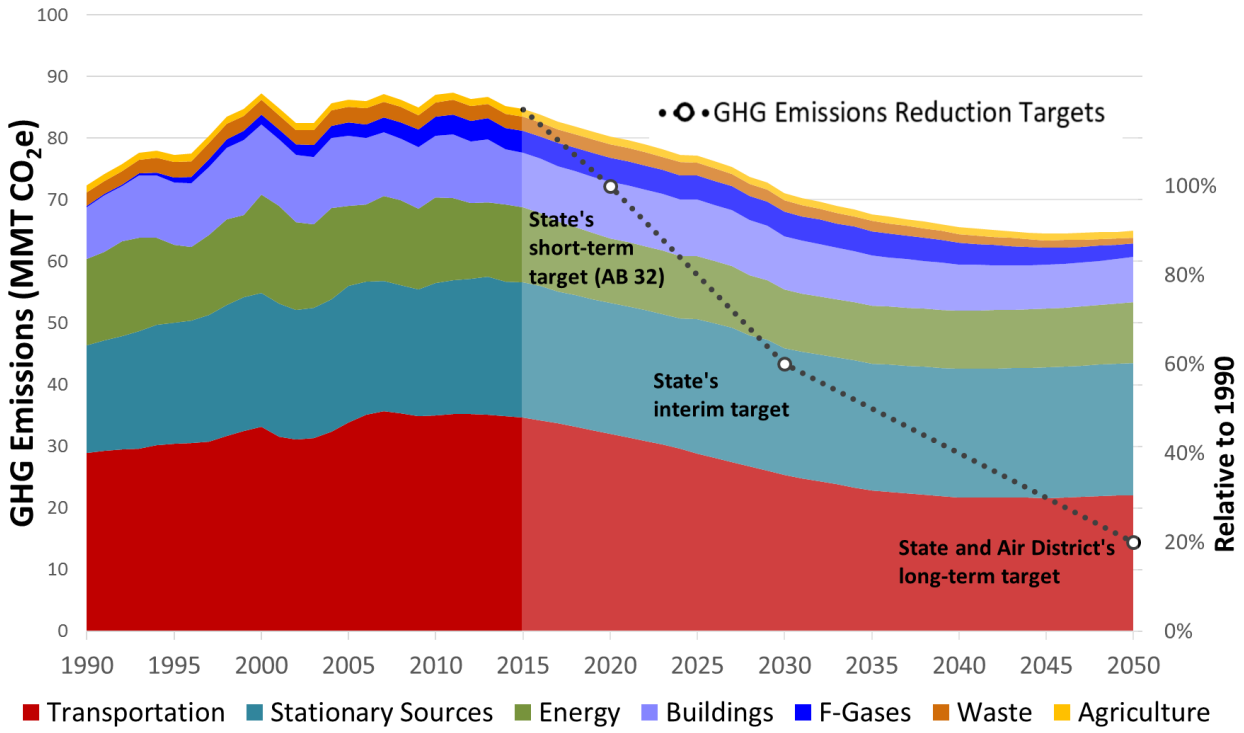
2015 Bay Area GHG Emissions by Source Category (Total = 85 MMT CO_2e)



Source: BAAQMD, 2017b

FIGURE 3-3

Projected Bay Area GHG Emissions by Sector Based on State Policies



Source: BAAQMD, 2017b

Regulatory Background

There is a general consensus that global temperature increases must be limited to well under 2°C in order to reduce the risks and impacts of climate change to an acceptable level. Limiting global climate change to no more than this amount drives GHG regulation at every level.

For purposes of the Bay Area, the most important regulatory actions on climate change have been undertaken by the State of California. To fulfill its share of the burden of keeping climate change within acceptable limits, California has committed to reducing its GHG emissions to 1990 levels by 2020, to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050. This commitment is enshrined in AB 32, the Global Warming Solutions Act of 2006, which adopted the 2020 target; in 2016's SB 32 (Pavley), which adopted the 2030 target; and in Executive Order S-3-05, which adopted the 2050 target. The Air District has adopted the same 80 percent reduction target for 2050 for the Bay Area's GHG emissions, in Board of Directors Resolution 2013-11.

To achieve these emission reduction goals, the California legislature has directed the California Air Resources Board (CARB) to develop a Scoping Plan setting forth regulatory measures that CARB will implement, along with other measures, to reduce the state's GHG emissions. One of

the principal regulatory measures is CARB's Cap and Trade program, which requires industrial GHG sources to obtain "allowances" equal to their GHG emissions. The amount of available allowances is subject to a "cap" on total emissions statewide, which CARB will reduce each year. Regulated facilities will either have to reduce their emissions or purchase allowances on the open market, which will give them a financial incentive to reduce emissions and will ensure that total annual emissions from the industrial sector will not exceed the declining statewide cap.

California has also adopted the "Renewable Portfolio Standard" for electric power generation, which requires that at least 33 percent of the state's electric power must come from renewable sources by 2020, and at least 50 percent must come from renewables by 2030. To complement these efforts on electricity generation, the state has also committed to increasing the energy efficiency of existing buildings by 50 percent by 2050 in order to reduce energy demand.

California has also adopted regulatory measures aimed at reducing GHG emissions from mobile sources. These measures are referred to as the "Pavley" standards for motor vehicle emissions and the state's Low Carbon Fuel Standard, which set limits on the carbon intensity of transportation fuels. California has also adopted SB 375, the Sustainable Communities and Climate Protection Act of 2008, which requires regional transportation and land use planning agencies to develop coordinated plans, called "Sustainable Communities Strategies," to reduce GHG emissions from the transportation sector by promoting denser development and alternatives to driving. The current Sustainable Communities Strategy for the Bay Area is *Plan Bay Area 2050*, was adopted by the Metropolitan Transportation Commission and the Association of Bay Area Governments in October 2021 (ABAG, 2021).

The Air District supports these statewide goals through action at the regional level. The Air District has committed to reducing the Bay Area's regional GHG emissions to 80 percent below 1990 levels by 2050, as noted above. The Air District has also committed to a broad suite of specific measures to address GHGs in the 2017 Clean Air Plan, *Spare the Air, Cool the Climate*. That document lays out the Air District's vision for what the Bay Area may look like in a post-carbon year 2050 and describes policies and actions that the region needs to take in the near- to mid-term to achieves these goals.

Significance Criteria

The Air District's 2022 CEQA Air Quality Guidelines (BAAQMD, 2022) established GHG thresholds for specific projects, general plans, and regional plans. An air quality rule does not fall neatly into any of these categories. Air quality rules are typically regional in nature, as opposed to general plans and community plans. In addition, air quality rules are usually specific to particular source types and particular pollutants.

The Air District's 2022 CEQA Air Quality Guidelines (BAAQMD, 2022) established a GHG threshold for air quality plans of "no net increase in emissions," which is appropriate for air quality plans because they include a mix of control measures with individual trade-offs. For example, one control measure may result in combustion of methane to reduce GHG emissions, while increasing criteria pollutant combustion emissions by a small amount. Those increases from the methane measure would be offset by decreases from other measures focused on

reducing criteria pollutants. In a particular rule development effort, there may not be opportunities to make these trade-offs.

The project-level GHG threshold for stationary source projects is 10,000 metric tons of carbon dioxide equivalent (CO_2eq) emissions under the Air District draft CEQA Guidelines. This threshold is expected to capture approximately 95 percent of all GHG emissions from new permit applications from stationary sources within the jurisdiction of the Air District. The threshold level was calculated as an average of the combined CO_2 emissions from all stationary source permit applications submitted to the Air District during the three-year analysis period (BAAQMD, 2022). The project-level GHG significance thresholds of 10,000 MT CO_2eq will be used to evaluate the cumulative GHG impacts associated with proposed Rule 8-8.

Discussion of Impacts

8. a). Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? No Impact. The analysis of GHG emissions is a different analysis than for criteria pollutants for the following reasons. For criteria pollutant, significance thresholds are based on daily emissions because attainment or non-attainment is typically based on daily exceedances of applicable ambient air quality standards. Further, several ambient air quality standards are based on relatively short-term exposure effects to human health, e.g., one-hour and eight-hour. Using the half-life of CO_2, 100 years for example, the effects of GHGs are longer-term, affecting the global climate over a relatively long timeframe. GHGs do not have human health effects like criteria pollutants. Rather, it is the increased accumulation of GHGs in the atmosphere that may result in global climate change. Due to the complexity of conditions and interactions affecting global climate change, it is not possible to predict the specific impact, if any, attributable to GHG emissions associated with a single project. Furthermore, the GHG emissions associated with a single project would be small relative to total global or even state-wide GHG emissions. Thus, the significance of potential impacts from GHG emissions related to proposed projects are analyzed for long-term operations on a cumulative basis.

The overall objective of the proposed amendments to Rule 8-8 is to minimize and strengthen monitoring of total organic compound emissions, including methane (GHG) emissions, from wastewater treatment systems at refineries. The proposed amendments would require repair of any components found to be leaking above specified amounts, which is expected to result in a reduction in total organic compounds, including methane. Overall, the proposed rule amendments are expected to result in a decrease in GHG emissions due to the monitoring/inspection and leak repair requirements for total organic emissions, including methane emissions, from wastewater treatment systems, providing a beneficial impact on GHG emissions and climate change.

8. b). Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? No Impact. The proposed amendments to Rule 8-8 will not conflict with any plans, policies, or regulations addressing climate change. The Air District adopted AB 617 Expedited BARCT Implementation Schedule in December 2018. As part of the schedule, the Air District identified potential efforts to develop amendments to Rule

8-8 to address total organic compound emissions. Further, the proposed project would support the Air District's objectives of reducing GHG emissions and related climate change impacts. Therefore, the proposed project will not conflict with or obstruct implementation of an applicable GHG reduction plan, policy or regulation, but would assist in GHG reductions efforts.

The Air District's 2017 Clean Air Plan, *Spare the Air, Cool the Climate* outlines a strategy for achieving the Bay Area's clean air goals by reducing emissions of ozone precursors, particulate matter, TACs and other pollutants in the region. The proposed amendments to Rule 8-8 would support the Air District's objectives of reducing GHG emissions and related climate change impacts. Therefore, the proposed project would implement portions of the 2017 Clean Air Plan that are aimed at reducing GHG emissions.

California's regulatory setting for GHG emissions ensures that most of the existing and foreseeable GHG emission sources are subject to one or more programs aimed at reducing GHG emission levels. The GHG emissions from refineries are regulated under CARB's Mandatory Reporting Rule and the AB 32 Cap-and-Trade regulations. Since refineries are included in the AB32 Cap-and-Trade Program, an allowance (offset) in an amount equal to the emissions from non-biogenic sources are required to be provided for stationary sources. It should be noted that the proposed Rule 8-8 amendments will not result in an increase in GHG emissions. Therefore, the proposed project would not conflict with any regulatory efforts to achieve the state and regional GHG emission reduction goals under CARB's Scoping Plan, the District's 2017 Clean Air Plan, *Plan Bay Area 2050*, or any other local climate action plan.

Conclusion

Based upon these considerations, no adverse GHG emissions or climate change impacts are expected due to implementation of the proposed amendments to Rule 8-8.

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

Environmental Setting

Generation and Disposal of Hazardous Materials and Waste

Materials and waste may be considered hazardous if they are poisonous (toxic); can be ignited by open flame (ignitable); corrode other materials (corrosive); or react violently, explode, or generate vapors when mixed with water (reactive). The term "hazardous material" is defined in the State of California's Health and Safety Code, Chapter 6.95, Section 25501(o) as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.

Various hazardous materials are commonly transported, stored, used, and disposed of in activities such as construction, industry (both light and heavy), dry cleaning, film processing, landscaping, automotive maintenance and repair, and common residential/commercial maintenance activities. The use, transport, storage, and disposal of hazardous materials is regulated by the U.S. Environmental Protection Agency (EPA) and California Environmental Protection Agency (CalEPA) as well as the California Air Resources Board (CARB), California Department of Pesticide Regulation, California Department of Toxic Substances Control (DTSC), Office of Environmental Health Hazard Assessment (OEHHA), State Water Resources Control Board (SWRCB), and California Department of Public Health Center for Environmental Health.

Transportation of Hazardous Materials and Waste

Hazardous materials, hazardous wastes, and petroleum products are a subset of the goods routinely shipped along the transportation corridors. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. DTSC maintains a list of active registered hazardous waste transporters throughout California, and the California Department of Public Health regulates the haulers of hazardous waste. Shipments of hazardous materials and wastes include a wide variety of chemicals, such as petroleum products, medical waste, and radioactive materials. Each movement of hazardous materials/wastes has a degree of risk, depending on the material being moved, the mode of transport, and numerous other factors. On a tonnage basis, petroleum products make up the majority—more than 80 percent—of hazardous material moved around the State (ABAG, 2021).

Industrial Hazards

Hazards at a facility can occur due to natural events, such as earthquake, and non-natural events, such as mechanical failure or human error. A hazard analysis generally considers compounds or physical forces that can migrate off-site and result in acute health effects to individuals outside of the proposed project site. The risk associated with a facility is defined by the probability of an event and the consequence (or hazards) should the event occur.

The major types of public safety risks at industrial facilities consist of risk from accidental releases of regulated substances and from major fires and explosions. Shipping, handling,

storing, and disposing of hazardous materials inherently poses a certain risk of a release to the environment. The regulated substances currently handled by refineries include petroleum products, such as propane, butane, isobutane, gasoline, fuel oils, diesel, and other products, which pose a risk of fire and explosion.

A hazard analysis generally considers the compounds or physical forces that can migrate off-site and result in acute health effects to individuals outside of the refinery boundaries. It should be noted that hazards exist to workers on-site. However, the workers are trained in fire and emergency response procedures, wear protective clothing, have access to respiratory protection, and so forth. Therefore, workers could be exposed to hazards and still be protected because of training and personal protective equipment. The general public does not typically have access to these safety measures and, therefore, could be adversely affected if a hazard situation results in impacts to areas off-site.

The potential hazards associated with industrial activities are a function of the materials being processed, processing systems, and procedures used to operate and maintain the facility. The hazards that are likely to exist are identified by the physical and chemical properties of the materials being handled and their process conditions, and can include the following events:

Exposure to Toxic Gas Clouds: Toxic gas clouds, (gases, e.g., hydrogen sulfide), could form a dense cloud and migrate off-site, thus, exposing individuals to toxic materials. "Worst-case" conditions tend to arise when very low wind speeds coincide with an accidental release, which can allow the chemicals to accumulate as a dense cloud rather than disperse.

Exposure to Flame Radiation: Flame (thermal) radiation is the heat generated by a fire and the potential impacts associated with exposure to it. Exposure to thermal radiation would result in burns, the severity of which would depend on the intensity of the fire, the duration of exposure, and the distance of an individual to the fire.

Thermal radiation can be caused by a pool fire (fire of spilled material), torch fire (rupture of line followed by ignition), boiling liquid-expanding vapor explosion (BLEVE) of a pressurized storage vessel and/or flash fires (ignition of slow-moving flammable vapors).

Exposure to Explosion Overpressure: Process vessels containing flammable explosive vapors and potential ignition sources are present at the refineries. Explosions may occur if the flammable/explosive vapors come into contact with an ignition source. The greatest threat to off-site receptors could occur from a vapor cloud explosion (release, dispersion, and explosion of a flammable vapor cloud), or a confined explosion (ignition and explosion of flammable vapors within a building or confined area). An explosion could cause impacts to individuals and structures in the area due to overpressure.

Exposure to Contaminated Water: An upset condition and spill has the potential to adversely affect ground water and water quality. A spill of hazardous materials could occur under upset conditions, e.g., earthquake, tank rupture, and tank overflow. In the

event of a spill, materials could migrate off-site if secondary containment and appropriate spill control measures are not in place.

Regulatory Background

There are many federal and state rules and regulations that facilities handling hazardous materials must comply with which serve to minimize the potential impacts associated with hazards at these facilities.

Under the Occupational Safety and Health Administration (OSHA) regulations [29 Code of Federal Regulations (CFR) Part 1910], facilities which use, store, manufacture, handle, process, or move highly hazardous materials must prepare a fire prevention plan. In addition, 29 CFR Part 1910.119, Process Safety Management (PSM) of Highly Hazardous Chemicals, and Title 8 of the California Code of Regulations, General Industry Safety Order §5189, specify required prevention program elements to protect workers at facilities that handle toxic, flammable, reactive, or explosive materials.

Section 112 (r) of the Clean Air Act Amendments of 1990 [42 U.S.C. 7401 et. Seq.] and Article 2, Chapter 6.95 of the California Health and Safety Code require facilities that handle listed regulated substances to develop Risk Management Programs (RMPs) to prevent accidental releases of these substances, U.S. EPA regulations are set forth in 40 CFR Part 68. In California, the California Accidental Release Prevention (CalARP) Program regulation (CCR Title 19, Division 2, Chapter 4.5) was issued by the Governor's Office of Emergency Services (OES). RMPs are documents prepared by the affected owner or operator of a stationary source containing detailed information including: (1) regulated substances held onsite at the stationary source; (2) offsite consequences of an accidental release of a regulated substance; (3) the accident history at the stationary source; (4) the emergency response program for the stationary source; (5) coordination with local emergency responders; (6) hazard review or process hazard analysis; (7) operating procedures at the stationary source; (8) training of the stationary source's personnel; (9) maintenance and mechanical integrity of the stationary source's physical plant; and (10) incident investigation. California updated the CalARP Program in October 2017, along with the state's PSM program, in response to an accident at the Chevron Richmond Refinery.

Affected facilities that store materials are required to have a Spill Prevention Control and Countermeasures (SPCC) Plan per the requirements of 40 Code of Federal Regulations, Section 112. The SPCC is designed to prevent spills from on-site facilities and includes requirements for secondary containment so spilled materials would not migrate off-site, provides emergency response procedures, establishes training requirements, and so forth.

The Hazardous Materials Transportation (HMT) Act is the federal legislation that regulates transportation of hazardous materials. The primary regulatory authorities are the U.S. Department of Transportation, the Federal Highway Administration, and the Federal Railroad Administration. The HMT Act requires that carriers report accidental releases of hazardous materials to the Department of Transportation at the earliest practical moment (49 CFR Subchapter C). The California Department of Transportation (Caltrans) sets standards for trucks in California. The regulations are enforced by the California Highway Patrol, among others.

California Health and Safety Code Section 25500 et seq., codifying Assembly Bill 2185 (Maxine Waters 1985), requires local agencies to regulate the storage and handling of hazardous materials and requires development of a business plan to mitigate the release of hazardous materials. Businesses that handle any of the specified hazardous materials must submit to government agencies (i.e., fire departments), an inventory of the hazardous materials, an emergency response plan, and an employee training program. The information in the business plan can then be used in the event of an emergency to determine the appropriate response action, the need for public notification, and the need for evacuation.

Contra Costa County has adopted an industrial safety ordinance that addresses the human factors that lead to accidents. The ordinance requires stationary sources to develop a written human factors program that considers human factors as part of process hazards analyses, incident investigations, training, and operating procedures, among others.

Significance Criteria

The proposed project impacts associated with hazards will be considered significant if any of the following occur:

- Non-compliance with any applicable design code or regulation.
- Non-conformance with National Fire Protection Association standards.
- Non-conformance with regulations or generally accepted industry practices related to operating policy and procedures concerning the design, construction, security, leak detection, spill containment or fire protection.
- Exposure to hazardous chemicals in concentrations equal to or greater than the Emergency Response Planning Guideline (ERPG) 2 levels.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Exacerbate the risk of wildland fires, associated pollutant release, potential for flooding and landslides due to projected land use patterns and infrastructure in or near very high hazard severity fire zones.

Discussion of Impacts

9. a). Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? No Impact.
9. 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? No Impact. The proposed amendments to Rule 8-8 are designed to require monitoring and minimization of total organic compound (including methane) emissions from refinery wastewater treatment facilities. The proposed amendments may result in additional

monitoring and repair of equipment found to be leaking. However, the proposed amendments would not result in new equipment, construction activities, and would not introduce any new hazards or require the use of hazardous materials associated with operational activities.

Health and Safety Code §25506 specifically requires all businesses handling hazardous materials to submit a business emergency response plan to assist local administering agencies in the emergency release or threatened release of a hazardous material. Business emergency response plans generally require the following:

- Types of hazardous materials used and their locations;
- Training programs for employees including safe handling of hazardous materials and emergency response procedures and resources.
- Procedures for emergency response notification;
- Proper use of emergency equipment;
- Procedures to mitigate a release or threatened release of hazardous materials and measures to minimize potential harm or damage to individuals, property, or the environment; and
- Evacuation plans and procedures.

Hazardous materials at existing facilities would continue to be used in compliance with established OSHA or Cal/OSHA regulations and procedures, including providing adequate ventilation, using recommended personal protective equipment and clothing, posting appropriate signs and warnings, and providing adequate worker health and safety training. The exposure of employees is regulated by Cal-OSHA in Title 8 of the CCR. Specifically, 8 CCR 5155 establishes permissible exposure levels (PELs) and short-term exposure levels (STELs) for various chemicals. These requirements apply to all employees. The PELs and STELs establish levels below which no adverse health effects are expected. These requirements protect the health and safety of the workers, as well as the nearby population including sensitive receptors.

In general, all local jurisdictions and all facilities using a minimum amount of hazardous materials are required to formulate detailed contingency plans to eliminate, or at least minimize, the possibility and effect of fires, explosion, or spills. In conjunction with the California Office of Emergency Services, local jurisdictions have enacted ordinances that set standards for area and business emergency response plans. These requirements include immediate notification, mitigation of an actual or threatened release of a hazardous material, and evacuation of the emergency area.

The above regulations provide comprehensive measures to reduce hazards of explosive or otherwise hazardous materials. Compliance with these and other federal, state and local regulations and proper operation and maintenance of equipment should ensure the potential for

accidental releases of hazardous materials is not significant. The proposed amendments to Rule 8-8 would not create any new hazards to the public or environment.

9. c). Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? No Impact. The proposed amendments to Rule 8-8 would not result in any physical changes or modifications that would generate hazardous emissions or result in the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Therefore, no increase in hazardous emissions that impact a school site is expected due to the proposed project.

9. d). Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? No Impact. Government Code §65962.5 requires creation of lists of facilities that may be subject to Resource Conservation and Recovery Act (RCRA) permits or site cleanup activities. The refineries affected by the proposed rule amendments are located on lists of facilities that require cleanup activities. The proposed amendments to Rule 8-8 would have no impact on these cleanup actions or otherwise adversely affect the existing Cleanup and Abatement Orders. The Orders will remain in effect and continue to establish requirements for site monitoring and cleanup of existing contamination. The proposed amendments may require additional monitoring and leak repair of wastewater systems, but it would not have any impact on cleanup actions or create any additional hazards to the public or the environment associated with cleanup activities.

9. e). For a project located within an airport land use plan or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area? No Impact. Four of the five refineries affected by the proposed rule amendments are not located within two miles of an airport. Portions of the Marathon Martinez refinery are located within two miles of the Buchanan Field airport, an airport in the City of Concord. Airport Influence Areas are used in land use planning to identify areas commonly overflown by aircraft as they approach and depart an airport, or as they fly within established airport traffic patterns. The Buchanan Field Airport Influence Area is defined as the area within 14,000 feet of the ends of the primary surfaces for runways. The Contra Costa County *Airport Land Use Compatibility Plan* Countywide Policy 4.3.5 requires FAA review and approval of any structure over 200 feet in height. The proposed amendments to Rule 8-8 may require additional monitoring and leak repairs but will not require the construction of any new equipment or facilities. Therefore, the project is not expected to result in any additional safety risk associated with operations at the Buchanan Field Airport or any other airport in the Bay Area.

9 f). Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? No Impact. Under the proposed amendments, additional monitoring and leak repair of wastewater treatment systems may be required but no construction activities or modifications to operations are expected. The existing refineries have prepared, adopted, and implemented emergency response plans and no revisions to the emergency response plans are expected due to the rule amendments as no equipment would be modified or

changed. Therefore, implementation of proposed amendments to Rule 8-8 would not impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plans.

9. g). Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? No Impact. The California Department of Forestry and Fire Protection (CalFIRE) maps areas of significant fire hazard based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones, determine the requirements for special building codes designed to reduce the potential impacts of wildland fires on urban structures. The refineries in the Bay Area are located within a non-Very High Fire Hazard Severity Zone, as the areas are urbanized, are located adjacent to the Bay and marshlands, and are not located adjacent to wildland areas. The refineries are located well outside of Very High Fire Hazard Zones, which indicates that the facilities are not subject to significant wildfire hazard. Implementation of proposed amendments to Rule 8-8 may require additional monitoring and repair if leaks are found, but they would not require new equipment or modification to refinery operations. Therefore, the proposed amendments would not have any impact related to wildland fires.

Conclusion

Based upon these considerations, no adverse hazards or hazardous materials impacts are expected due to implementation of the proposed amendments to Rule 8-8.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
X.	**HYDROLOGY / WATER QUALITY.** Would the project:				
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☐	☑
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☑
c)	Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:				
i)	result in substantial erosion or siltation onsite or offsite;	☐	☐	☐	☑
ii)	substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☐	☑
iii)	create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;	☐	☐	☐	☑
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?	☐	☐	☐	☑

Environmental Setting

The San Francisco Bay estuary system is one of the largest in the country and drains approximately 40 percent of California. Water from the Sacramento and San Joaquin Rivers of the Central Valley flow into what is known as the Delta region, then into the sub-bays, Suisun

Bay and San Pablo Bay, and finally into the Central Bay and out the Golden Gate strait. Some of the fresh water flows through the Delta and into Bay, but much is diverted from the Bay for agricultural, residential, and industrial purposes, as well as delivery to distant cities of southern California as part of state and federal water projects (ABAG, 2021).

The two major drainages, the Sacramento and San Joaquin Rivers, receive more than 90 percent of runoff during the winter and spring months from rainstorms and snowmelt. Other surface waters flow either directly to the bay or Pacific Ocean. The largest watersheds include the Alameda Creek (695 square miles), the Napa River (417 square miles), and the Coyote Creek (353 square miles) watersheds. Of the water segments that make up the San Francisco Bay Estuary, Suisun Bay is the first water body that receives flows from the Sacramento and San Joaquin watershed. The San Francisco Bay estuary includes deep-water channels, tidelands, and marshlands that provide a variety of habitats for plants and animals.

Of the water segments that make up the San Francisco Bay Estuary, Suisun Bay is the first water body that receives flows from the Sacramento and San Joaquin watershed. Much of the land surrounding the Sacramento and San Joaquin watershed is devoted to agricultural and forestry land uses, with some major urban centers that contribute discharges into the rivers. The following major rivers and streams, listed by county, are located in the Bay Area (ABAG, 2021):

- Alameda County: Alameda Creek, San Leandro Creek, and San Lorenzo Creek;
- Contra Costa County: San Pablo Creek;
- Marin County: Corte Madera Creek, Lagunitas Creek, Gallinas Creek, Miller Creek, and Novato Creek;
- Napa County: Huichica Creek and Napa River;
- San Mateo County: Cordilleras Creek, San Mateo Creek, and Sanchez Creek;
- Santa Clara County: Adobe Creek, Coyote Creek, Guadalupe River, Llagas Creek (drains to the Pacific Ocean via the Pajaro River), Los Gatos Creek, Permanente Creek, San Francisquito Creek, and Stevens Creek;
- Solano County: Green Valley Creek, Napa River, Putah Creek, and Suisun Creek; and
- Sonoma County: Petaluma River, Russian River, Santa Rosa Creek, and Sonoma Creek.

The quality of surface water resources in the Bay Area varies considerably and is locally affected by point-source (i.e., emitted from a single point) and nonpoint-source (i.e., diffuse) discharges. Point sources, such as wastewater treatment effluent and industrial waste discharges, are often regulated and monitored to avoid adverse effects on water quality. Nonpoint-source pollutants are transported into surface waters through rainfall, air, and other pathways. Nonpoint-source pollutants are the leading cause of water quality degradation in the region's waterways. Stormwater runoff is estimated to contribute more heavy metals to San Francisco Bay than direct municipal and industrial dischargers, as well as significant amounts of motor oil, paints, chemicals, debris, grease, and detergents. Runoff in storm drains may also include pesticides and herbicides from landscaping products and bacteria from animal waste. Most urban runoff flows untreated into creeks, lakes, and San Francisco Bay (ABAG, 2021)

The San Francisco Bay Regional Water Quality Control Board (RWQCB), the main agency charged with protecting and enhancing surface water and groundwater quality in the Bay Area,

has classified the San Francisco Bay and many of its tributaries as impaired for various water quality constituents, as required by the Clean Water Act (CWA). The San Francisco Bay RWQCB implements the Total Maximum Daily Load (TMDL) Program for impaired water bodies, which involves determining a safe level of loading for each problem pollutant, determining the pollutant sources, allocating loads to all of the sources, and implementing the load allocations. Within the Bay Area region, the 2018 303(d) list (applied to impaired water bodies) includes nearly 350 listings for approximately 130 water bodies. Nearly 120 of these listings have an associated TMDL established. Primary pollutants for which a TMDL has been established on Bay Area surface waters include diazinon (a pesticide), PCBs, the metals mercury and selenium, pathogens, and indicator bacteria. RWQCB staff are currently developing TMDL projects or studies to address more than 190 additional listing (ABAG, 2021).

A groundwater basin is an area underlain by permeable materials capable of storing a significant amount of water. Groundwater basins are closely linked to local surface waters. As water flows from the hills toward San Francisco Bay, it percolates through permeable soils into the groundwater basins. The entire Bay Area region is divided into a total of 28 groundwater basins. Groundwater is used for numerous purposes, including municipal and industrial water supply, in the Bay Area; however, it accounts for only about 5 percent of total water consumption. Although some of the larger basins (such as Santa Clara Valley, Napa-Sonoma Valley, and Petaluma Valley) can produce large volumes of groundwater and generally have good water quality, many of the groundwater basins in the Bay Area are relatively thin and yield less water. Further, portions of the Bay Area have poor water quality as a result of past industrial uses or intrusion of brackish bay water. Because of water quality and available resources, water supply for much of the Bay Area is provided by imported water supplies through water conveyance facilities, such as the Hetch Hetchy Aqueduct, the Mokelumne Aqueduct, and the North and South Bay Aqueduct (ABAG, 2021).

Wastewater treatment in the Bay Area is provided by various agencies as well as individual city and towns wastewater treatment systems. Some treatment plants serve individual cities while others serve multiple jurisdictions. More than 50 agencies provide wastewater treatment throughout the Bay Area. Rule 8-8 applies to industrial wastewater treatment operations at refineries in the Bay Area as well as a small group of other industrial facilities in the Bay Area that operate wastewater treatment facilities as part of their process.

Regulatory Background

The Federal Clean Water Act of 1972 primarily establishes regulations for pollutant discharges into surface waters in order to protect and maintain the quality and integrity of the nation's waters. This Act requires industries that discharge wastewater to municipal sewer systems to meet pretreatment standards. The regulations authorize the U.S. EPA to set the pretreatment standards. The regulations also allow the local treatment plants to set more stringent wastewater discharge requirements, if necessary, to meet local conditions.

The 1987 amendments to the Clean Water Act enabled the U.S. EPA to regulate, under the National Pollutant Discharge Elimination System (NPDES) program, discharges from industries and large municipal sewer systems. The U.S. EPA set initial permit application requirements in

1990. The State of California, through the State Water Resources Control Board, has authority to issue NPDES permits, which meet U.S. EPA requirements, to specified industries.

The Porter-Cologne Water Quality Act is California's primary water quality control law. It implements the state's responsibilities under the Federal Clean Water Act but also establishes state wastewater discharge requirements. The Regional Water Quality Control Board administers the state requirements as specified under the Porter-Cologne Water Quality Act, which include storm water discharge permits. The water quality in the Bay Area is under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board.

In response to the Federal Act, the State Water Resources Control Board prepared two state-wide plans in 1991 and 1995 that address storm water runoff: the California Inland Surface Waters Plan and the California Enclosed Bays and Estuaries Plan, which have been updated in 2005 as the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. Enclosed bays are indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. San Francisco Bay, and its constituent parts, including Carquinez Strait and Suisun Bay, fall under this category.

The San Francisco Bay Basin Plan identifies the: (1) beneficial water uses that need to be protected; (2) the water quality objectives needed to protect the designated beneficial water uses; and (3) strategies and time schedules for achieving the water quality objectives. The beneficial uses of the Carquinez Strait that must be protected which include water contact and non-contact recreation, navigation, ocean commercial and sport fishing, wildlife habitat, estuarine habitat, fish spawning and migration, industrial process and service supply, and preservation of rare and endangered species.

The Sustainable Groundwater Management Act (SGMA) was enacted in September of 2014. Pursuant to SGMA, sustainable groundwater management is the management and use of groundwater in a manner that can be maintained during a 50-year planning and implementation horizon without causing undesirable results. The SGMA requires all groundwater basins of high or medium priority to prepare Groundwater Sustainability Plans (GWP). Sonoma, Napa, Solano, Contra Costa, Alameda and Santa Clara counties include basins designated as high or medium priority.

Significance Criteria

Water Demand:

- The existing water supply does not have the capacity to meet the increased demands of the project, or the project would use more than 263,000 gallons per day of potable water.

Water Quality:

- The project will cause degradation or depletion of ground water resources substantially affecting current or future uses.

- The project will cause the degradation of surface water substantially affecting current or future uses.
- The project will result in a violation of National Pollutant Discharge Elimination System (NPDES) permit requirements.
- The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the project.
- The project results in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
- The project results in alterations to the course or flow of floodwaters.

Discussion of Impacts

10. a). Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? No Impact. Process wastewater, sanitary sewage, and most of the storm water runoff from the refineries are collected and managed in the existing wastewater treatment systems that are regulated by an NPDES permit. The proposed amendments to Rule 8-8 are designed to require monitoring and minimization of total organic and methane emissions from wastewater treatment units at refineries, which are located within developed, existing industrial areas. The rule amendments would not require additional control equipment to be installed at the wastewater treatment systems. No construction activities are required and no changes in refinery configurations are expected. Therefore, no increase in water use or wastewater generation would occur. Further, the proposed amendments to Rule 8-8 would not result in any increase in water runoff or wastewater discharge, would not result in water quality impacts, would not result in the degradation of surface water, and would not result in any violation of NPDES permits.

10. b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? No Impact.
10. e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? No Impacts. The proposed amendments to Rule 8-8 are designed to require monitoring and minimization of total organic and methane emissions from wastewater treatment units at refineries. The rule amendments would not require additional control equipment to be installed at the wastewater treatment systems. No construction activities are required and no changes in refinery configurations are expected. Therefore, the proposed Rule 8-8 amendments will not impact water demand or interfere with groundwater recharge or cause any notable change in the groundwater table level.

10. c). Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would: i) result in substantial erosion or siltation onsite or offsite; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; iv) impede or redirect flood flows? No Impact. The proposed amendments to Rule 8-8 are designed to require monitoring and

minimization of total organic and methane emissions from wastewater treatment units at refineries. The rule amendments would not require additional control equipment to be installed at the wastewater treatment systems. The proposed rule amendments would not result in the construction of additional impervious surfaces or increase storm water runoff. There are no streams, rivers or other natural drainage within the confines of the existing refineries that would be impacted by the proposed amendments. Most rainwater and surface runoff within the existing industrial areas are controlled, collected, and treated within the existing wastewater treatment plants. Therefore, no significant adverse impacts to storm water runoff or existing drainage patterns are expected as a result of the proposed Rule 8-8 amendments.

10. d). In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? No Impact. As mapped on the National Flood Insurance Program Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency, the operating portions of the Bay Area refineries are designated Zone X, which means that it is an area determined to be an area of minimal flood hazard (outside the 0.2 percent annual chance floodplain) (FEMA, 2023). The proposed amendments to Rule 8-8 would not require any new equipment and no new equipment would be located in flood hazard zones. Therefore, the proposed amendments to Rule 8-8 would not create or increase risks from flooding or expose people or structures to significant risk of loss, injury or death involving flooding.

A seiche is a tidal change in an enclosed or semi-enclosed water body caused by sustained high winds or an earthquake. Tsunamis are seismically induced sea waves that, upon entering shallow near-shore waters, may reach heights capable of causing widespread damage to coastal areas. The waterfront area adjacent to the Suisan Bay is at risk of inundation from tsunamis that could be generated in the Pacific Ocean, San Francisco Bay, or Carquinez Strait. The area that is at risk of inundation from tsunamis along the waterfront is mostly marshland. Since no new equipment is required, the proposed rule amendments would not result in increased risk of inundation by seiche, tsunami, or mudflow.

Conclusion

Based upon these considerations, no adverse hydrology or water quality impacts are expected due to implementation of the proposed amendments to Rule 8-8.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI.	**LAND USE / PLANNING.** Would the project:				
a)	Physically divide an established community?	☐	☐	☐	☑
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☑

Environmental Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles), so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. The Bay Area includes 101 cities, with San Jose, San Francisco, and Oakland representing the largest urban centers. The counties with the highest population are Santa Clara, Alameda, and Contra Costa (ABAG, 2021).

The land uses surrounding the San Francisco Bay tend to be more intensely developed, particularly from San Francisco south along the peninsula to Santa Clara County, and from Contra Costa County south through Alameda County to Santa Clara County. These areas also include extensive networks of open space. The counties north of the bay (Marin, Sonoma, and Napa) are more sparsely developed with a combination of suburban development, smaller cities and towns, and agricultural areas of the Bay Area. The East Bay (away from the bay margins) and Solano County further to the east, tend to be more suburban in character, with heavy industry related to oil refineries, as well as areas of agricultural activities (ABAG 2021).

Proposed Rule 8-8 amendments would affect refineries in the Bay Area, which are located in heavy industrial areas.

Regulatory Background

Land uses are generally protected and regulated by the City and/or County General Plans through land use and zoning requirements.

In 1965, the McAteer-Petris Act (California Government Code, Section 66600 et seq.) established the San Francisco Bay Conservation and Development Commission to regulate development on and adjacent to the San Francisco Bay. The mandate of this Commission is to protect the Bay and the quality of its waters; to maximize public access to the Bay; to allow

planned, controlled development along the Bay, particularly water-oriented land uses; to restrict uncoordinated and haphazard filling of the Bay; and to maintain salt ponds and managed wetlands along the Bay. The Commission developed the San Francisco Bay Plan (BCDC, 2020). as a comprehensive and enforceable plan for fulfilling its legislated mandate.

The Bay Plan identifies five high priority uses of the Bay and shoreline for which shoreline areas should be reserved. These "priority uses" are ports, water-related industry, airports, wildlife refuges, and water-related recreation (BCDC, 2020).

Significance Criteria

The proposed project impacts will be considered significant on land use and planning if the project conflicts with the land use and zoning designations established by local jurisdictions, or any applicable habitat conservation or natural community conservation plan.

Discussion of Impacts

11. a). Physically divide an established community? No Impact. The proposed amendments to Rule 8-8 are designed to require monitoring and minimization of total organic and methane emissions from wastewater treatment units at refineries. The rule amendments would not require additional control equipment to be installed at the wastewater treatment systems. No construction activities are required and no changes in refinery configurations are expected. Thus, the proposed project would not result in impacts that would physically divide an established community.

11. b). Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? No Impact. As discussed in 11 a) above, the proposed amendments would not require the installation of any new equipment. Land uses surrounding the refineries are primarily industrial. The General Plans and land use plans for areas with industrial land uses, such as Contra Costa County, allow for and encourage the continued use of industrial land uses within their respective communities. The proposed amendments to Rule 8-8 would not conflict with any applicable land use plan, policy or regulation of an agency, because no new equipment would be required. The jurisdictions with land use approval recognize and support the continued use of industrial facilities and the proposed amendments to Rule 8-8 would not interfere with those land use policies or objectives.

Conclusion

Based upon these considerations, no adverse land use impacts are expected due to implementation of the proposed amendments to Rule 8-8.

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

Environmental Setting

Most of the mineral resources in the Bay Area are located in the populated plains or valleys, as opposed to the mountainous areas. The major mineral resources recovered in the Bay Area are: (1) construction materials, such as limestone and oyster shells (used in the manufacture of cement), sand and gravel, and crushed stone; (2) energy sources, such as gas, oil, and geothermal power; and (3) salines. Historically, most mineral products have been used locally to fulfill the need for construction materials and to supply energy (ABAG, 2021).

According to the California Department of Conservation Division of Mines and Geology's Aggregate Resources Map, two Aggregate Resource areas are located in the Bay Area. North San Francisco has 492 million tons of permitted aggregate reserves sector and South San Francisco has 1,320 million tons of permitted reserves. Other smaller aggregate production areas in the Bay Area include Fremont, Pleasanton, Santa Clara, Santa Cruz, among others (California Geological Survey, 2018).

Regulatory Background

Mineral resources are generally protected and regulated by the City and/or County General Plans through land use and zoning requirements.

Significance Criteria

The proposed project impacts on mineral resources will be considered significant if:

- The project would 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.

- The proposed project results in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Discussion of Impacts

12. 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? No Impact.
12. 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? No Impact. The proposed amendments to Rule 8-8 are not associated with any action that would 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, or of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. The proposed amendments to Rule 8-8 are designed to require monitoring and minimization of total organic and methane emissions from wastewater treatment units at refineries. The rule amendments would not require additional control equipment to be installed at the wastewater treatment systems or result in any construction activities. The refinery sites do not contain any known mineral resources including sand, gravel, timber resources, or oil or natural gas reserves. No known locally important mineral resources are known to occur at the affected sites. As a result, no adverse impacts on available mineral resources are anticipated.

Conclusion

Based upon these considerations, no adverse impacts to mineral resources are expected due to implementation of the proposed amendments to Rule 8-8.

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

Environmental Setting

The ambient noise environment in the urban areas of the Bay Area is defined by a wide variety of noise sources, with the predominant noise source being traffic. Traffic noise exposure is primarily a function of the volume of vehicles per day, the speed of those vehicles, the type of ground surface, the number of those vehicles represented by medium and heavy trucks, the distribution of those vehicles during daytime and nighttime hours, and the proximity of noise-sensitive receptors to the roadway. Existing average traffic noise exposure ranges from 52.6 decibels (dBA) (next to collector and small roads) to a as high as 74.9 dBA (next to freeways). Bus transit also contributes to roadway noise levels. In San Francisco, a large portion of the transit bus fleet is electrified and, consequently, the contribution of bus transit to localized roadway noise levels is decreased (ABAG, 2021).

The Bay Area is also affected by noise from freight and passenger rail operations. While these operations generated significant noise levels in the immediate vicinity of the railways, train operations are intermittent and area railways are widely dispersed. Commuter rail operates with more frequency than standard gauge rail operations but at lower speeds, resulting in lower noise levels. Bay Area Rapid Transit operations can attain higher speeds and have the potential for great noise levels along extended stretches. Based on available data, noise levels from rail

operations with the Bay Area can range from 62 dBA Community Noise Equivalent Level (CNEL) to 81 dBA CNEL (ABAG, 2021).

A wide variety of industrial and other non-transportation noise sources are located within the Bay Area. These include manufacturing plants, landfills, treatment plants, power generation facilities, food packaging plants, lumber mills and aggregate mining facilities, to name a few. Noise generated from these sources varies widely but, in many cases, may be a dominant contributor to the noise environment (ABAG, 2021).

Regulatory Background

Noise levels related to construction and operation activities are addressed in local General Plan policies and local noise ordinance standards. The General Plans and noise ordinances generally establish allowable noise limits within different land uses including residential areas, other sensitive use areas (e.g., schools, churches, hospitals, and libraries), commercial areas, and industrial areas.

Significance Criteria

The proposed project impacts on noise will be considered significant if:

- Construction noise levels exceed the local noise ordinances or, if the noise ordinance is currently exceeded, project noise sources increase ambient noise levels by more than three decibels (dBA) at the closest off-site receptor.
- The proposed project operational noise levels exceed any of the local noise ordinances at the site boundary or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three dBA at the site boundary.

Discussion of Impacts

13. 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? No Impact. The proposed amendments to Rule 8-8 are designed to require monitoring and minimization of total organic and methane emissions from wastewater treatment units at refineries. The rule amendments would not require additional control equipment to be installed at the wastewater treatment systems or result in any construction activities. Since no construction activities are required, no construction noise impacts would occur.

The existing noise environment at each of the affected refineries is typically dominated by noise from existing equipment onsite, vehicular traffic around the facilities, trucks entering and exiting the refinery premises and adjacent businesses, noise from other businesses in the area, and rail traffic. The amendments to Rule 8-8 are expected to require more frequent monitoring to assure compliance, which could result in increases in the need for additional maintenance and repair. Since the refineries have existing monitoring programs, it is expected that existing contractors or employees may conduct additional inspections, monitoring or sampling activities while onsite.

Inspections, monitoring and sampling activities do not require equipment that generates noise. Any additional repair activities would occur within existing refineries and would be expected to use hand-held tools that do not generate substantial noise. Therefore, no adverse noise impacts are expected due to implementation of the proposed amendments to Rule 8-8.

13. b). Generation of excessive groundborne vibration or groundborne noise levels? No Impact. The proposed project is not expected to generate or expose people to excessive ground borne vibration or ground borne noise. No equipment that generates vibration, e.g., large grading equipment, pile drivers, etc. are required as no construction activities are required to implement the amendments to Rule 8-8. Further, no new industrial equipment is required. Therefore, the proposed amendments to Rule 8-8 would not generate excessive ground borne vibration or noise.

13. c). For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels? No Impact. The closest airport to a refinery is Buchanan Field Airport, an airport in the City of Concord. Portions of the Marathon Martinez refinery are located within two miles of the Buchanan Field Airport. The proposed amendments to Rule 8-8 may require additional monitoring and repair but will not require the construction of any new equipment or facilities. The proposed modifications to Rule 8-8 would not result in an increase in noise or place residential or occupational receptors closer to the Buchanan Field Airport. Therefore, proposed rule amendments would not expose people residing or working in the project area to excessive noise levels associated with airports.

Conclusion

Based upon these considerations, no adverse noise impacts are expected due to implementation of the proposed amendments to Rule 8-8.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. POPULATION / HOUSING. Would the project:				
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 a substantial number of existing people or housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑

Environmental Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles), so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. Proposed amendments to Rule 8-8 would apply to facilities which are typically located within industrial or commercial areas.

Population in the Bay Area in January 2023 was about 7.5 million people, which is about 19 percent of California's population. The population in California decreased by approximately 138,500 people (0.4 percent) from January 2022 to January 2023 (California Department of Finance, 2023). The population of the Bay Area was predicted to grow to about 10.3 million people by 2050 (ABAG, 2021). Approximately 4 million people in the Bay Area were employed in 2015, and that number is expected to grow to 5.4 million jobs by 2050 (ABAG, 2021).

There has been a mismatch between growth in jobs and growth in housing supply in the Bay Area. Jobs have grown by at least three percent each year since 2012, reaching a peak of over 4 million jobs. The Bay Area has added nearly two jobs for every housing unit built since 1990. This deficit in housing production has resulted in rising housing prices and a limited supply of affordable housing (ABAG, 2021). There were approximately 3 million households in the Bay Area in 2023, an increase of approximately 1 percent from 2022 (California Department of Finance, 2023). The number of households was predicted to increase by an additional 1.4 million by 2050 (ABAG, 2021).

Regulatory Background

Population and housing growth and resources are generally protected and regulated by the City and/or County General Plans through land use and zoning requirements.

A number of state regulations have been imposed to increase housing, especially affordable housing. California Government Code Sections 65583(a)(1) and 65584 require the preparation of a Regional Housing Needs Allocation to determine each region's existing and projected housing. The RHNA allocates a share of the regional housing need to each city, county, or city and county based on an analysis of population and employment trends and documentation of projections and a quantification of the locality's existing and projected housing needs for all income levels, including extremely low income households, as defined in subdivision (b) of Section 50105 and Section 50106 of the Health and Safety Code.

Significance Criteria

The proposed project impacts on population and housing will be considered significant if:

- The demand for temporary or permanent housing exceeds the existing supply.
- The proposed project produces additional population, housing or employment inconsistent with adopted plans either in terms of overall amount or location.
- The project displaces substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere in excess of that contained in a City or County Housing Element.

Discussion of Impacts

14. 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)? No Impact. Population in the Bay Area is currently about 7.5 million people and is expected to grow to about 10.3 million people by 2050 (ABAG, 2021). Approximately 4 million people in the Bay Area were employed in 2015, and that number is expected to grow to 5.4 million jobs by 2050 (ABAG, 2021). The amendments to Rule 8-8 are expected to require more frequent monitoring to assure compliance, which could result in increases in the need for additional maintenance and repair. Since the refineries have existing monitoring programs, it is expected that the existing contractors or employees may conduct additional inspections, monitoring, or sampling activities while onsite. In addition, the increase in monitoring and identification of additional leaks could lead to additional repairs. Overall the monitoring is not expected to require additional employees. As such, implementing the proposed rule amendments is not expected to induce substantial population growth in the Bay Area, either directly or indirectly.

14. b). Displace a substantial number of existing people or housing units, necessitating the construction of replacement housing elsewhere? No Impact. Because the project modifications will occur within existing industrial facilities located in a highly urbanized area, no

housing units will be displaced. Because the labor force is not expected to increase over historical levels, no additional housing will be necessary to accommodate the labor force. Substantial housing growth in the area will not occur as a result of the project modifications. Therefore, no significant adverse population or housing impacts are expected due to implementation of the proposed Rule 8-8 modifications.

Conclusion

Based upon these considerations, no adverse population and housing impacts are expected due to implementation of the proposed amendments to Rule 8-8.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES.				
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:	☐	☐	☐	☑
Fire protection?				
Police protection?	☐	☐	☐	☑
Schools?	☐	☐	☐	☑
Parks?	☐	☐	☐	☑
Other public facilities?	☐	☐	☐	☑

Environmental Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles), so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. The proposed amendments to Rule 8-8 would generally apply to facilities which are located within industrial areas in the District.

Given the large area covered by the BAAQMD, public services are provided by a wide variety of local agencies.

Fire Protection

Fire protection services are managed at the local level, typically by municipalities, counties, fire protection districts, or volunteer fire companies. California Government Code §38611 states that any city organized under general law must establish a fire department unless it is included within the boundaries of an established fire protection district. State and federal lands are generally served by State and federal fire agencies, e.g., CALFIRE and National Park Service. In some cases, businesses and native tribes manage their own fire departments. Each fire protection

agency is responsible for serving its own prescribed area, but mutual aid agreements are in wide use across the region such that agencies can rely on assistance from neighboring agencies in the case of overwhelming demand (ABAG, 2021).

Each county in the Bay Area, including incorporated cities and towns within those counties, provides emergency medical services to its residents through the training and certification of paramedics and emergency medical technicians. The various departments charged with administering emergency medical services contract with private ambulance services and local fire departments to deploy emergency medical services within their service areas (ABAG, 2021)

Police Protection

Police services are provided on the State, county, and local levels. Police services provide law enforcement in crime prevention, traffic and congestion control, safety management, emergency response, and homeland security. The California Highway Patrol (CHP) is responsible for police protection along the interstate highway systems and provides services for traffic management, emergency response, and protection of the highway system. Each county in the Bay Area has its own sheriff's department responsible for police protection in unincorporated areas of each county. Each incorporated city and town has a police department responsible for police protection within its own jurisdiction (ABAG, 2021).

Schools

Although the California public school system is under the policy direction of the Legislature, the California Department of Education relies on local control for the management of school districts. School district governing boards and district administrators allocate resources among the schools of the district and set education priorities for their schools. Each jurisdiction in the Bay Area provides residents with local public education facilities and services, including elementary, middle, secondary, and post-secondary schools, as well as special and adult education (ABAG, 2021).

Parks and Other Public Facilities

The Bay Area contains over 1 million acres of parks and open space. According to the Bay Area Protected Areas Database compiled by the Bay Area Open Space Council, about 140,000 acres of open space were permanently conserved between 2010 and 2018. While access by the general public to these reserve areas is restricted, the areas are important for the preservation of wildlife habitats and the protection of the environmental and rural characteristics of various parts of the region (ABAG, 2021).

Regulatory Background

City and/or County General Plans usually contain goals and policies to assure adequate public services are maintained within the local jurisdiction.

Significance Criteria

The proposed project impacts on public services will be considered significant if the project results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives.

Discussion of Impacts

15. a). Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: Fire Protection? Police Protection? Schools? Parks? Other public facilities? No Impact. The existing refineries maintain personnel and equipment on-site for fire suppression efforts. Fire hydrants are located throughout the refineries that provide additional fire water flow in the event of an emergency. The proposed amendments to Rule 8-8 would not require construction activities or changes in operations. The amendments would require additional monitoring of wastewater treatment systems but would not introduce any additional fire hazards to the facilities and no new flammable materials would be required at the refineries. Increased monitoring for emissions of total organic compounds would be expected to reduce potential fire hazards. It is expected that the refineries will continue to maintain equipment and fire response staffing as part of the existing refinery operations.

Compliance with State and local fire codes minimizes the need for additional fire protection services. All refineries have their own emergency response team, along with the local fire department and other emergency services. Since no new equipment or changes in operation are required, the proposed rule amendments would not change the requirements for additional or altered fire protection.

Entry and exit at the existing refineries are currently monitored and no additional or altered police protection is expected. The refineries are fenced with 24-hour security forces. All monitoring activities will occur within the confines of the existing refineries/industrial facilities which already have security measures in place. Therefore, no impacts to the local police department are expected related to the project modifications.

As noted in the “Population and Housing” discussion above, the proposed amendments to Rule 8-8 are not expected to induce population growth. Since the refineries have existing monitoring programs, it is expected that the existing contractors or employees may conduct additional inspections, monitoring, or sampling activities while onsite. In addition, the increase in monitoring and identification of additional leaks could lead to additional repairs. Overall the monitoring is not expected to require additional employees. Therefore, there will be no increase in local population and, thus, no impacts are expected to local schools or parks.

Implementation of the amendments to Rule 8-8 would not result in the need for new or physically altered government facilities in order to maintain acceptable service ratios, response times, or other performance objectives. The facilities affected by the amendments to Rule 8-8 are existing refineries for which public services are already required and no increase in the need for such services is expected. There will be no increase in population as a result of the adoption of the proposed rule amendments, therefore, no need for physically altered government facilities.

Conclusion

Based upon these considerations, no adverse impacts to public services are expected due to implementation of the proposed amendments to Rule 8-8.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. RECREATION. Would the project:				
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?	☐	☐	☐	☑

Environmental Setting

The Bay Area contains approximately 1.4 million acres of parks and open space. According to the Bay Area Protected Areas Database compiled by the Bay Area Open Space Council, about 140,000 acres of open space were permanently conserved between 2010 and 2018. While access by the general public to these reserve areas is restricted, the areas are important for the preservation of wildlife habitats and the protection of the environmental and rural characteristics of various parts of the region (ABAG, 2021).

Parks and open space are generally categorized according to their size and amenities. Smaller parks, such as pocket parks, neighborhood parks, community parks, urban forests, and community gardens, serve local communities, typically are located in urbanized areas, and often include a wide range of improvements from playing fields and picnic areas to playgrounds and fitness trails. These parks are most often managed by local park districts or municipalities, which typically set minimum standards for park acreage based on their population. Larger open space areas, such as regional parks, greenbelts, trails and pathways, natural and wildlife preserves, some private farmlands, some public rangelands, State parks, and federal parks, serve a broader geographic range, typically are located outside of major urbanized areas, and generally include fewer improvements. Management of these parks is divided among a range of organizations and agencies, including regional park districts, State and federal government, private individuals, and nonprofit land trusts. (ABAG, 2021).

Regulatory Background

Recreational areas are generally protected and regulated by the City and/or County General Plans at the local level through land use and zoning requirements. Some parks and recreation areas are designated and protected by state and federal regulations.

Significance Criteria

The proposed project impacts on recreation will be considered significant if:

- The project results in an increased demand for neighborhood or regional parks or other recreational facilities.
- The project adversely affects existing recreational opportunities.

Discussion of Impacts

16. a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? No Impact.
16. b). Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? No Impact. As discussed under "Land Use" (Section XI), there are no provisions in the proposed amendments to Rule 8-8 that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments; no land use or planning requirements will be altered by the proposed amendments to Rule 8-8. No construction activities are expected. Further, since the refineries have existing monitoring programs, it is expected that the existing contractors or employees may conduct additional inspections, monitoring, or sampling activities while onsite. Overall the monitoring is not expected to require additional employees. Thus, since there would be no change in land use or increase in population, there would be no impacts on recreation facilities due to increased use.

The proposed amendments to Rule 8-8 would not increase or redistribute population and, therefore, would not increase the demand for or use of existing neighborhood and regional parks or other recreational facilities or require the construction of new or the expansion of existing recreational facilities. Therefore, implementation of the amendments to Rule 8-8 would not have any significant adverse impacts on recreation.

Conclusion

Based upon these considerations, no adverse recreation impacts are expected due to implementation of the proposed amendments to Rule 8-8.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. TRANSPORTATION Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	☑
b) Would the project conflict or be inconsistent with CEQA Guidelines § 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?	☐	☐	☐	☑

Environmental Setting

The Bay Area currently contains over 650 miles of limited-access highways, which include both interstates and State highways. These facilities provide access to major employment centers and to destinations outside of the Bay Area. In addition, the Bay Area has over 20,000 miles of arterials and local streets, providing more access to individual communities. Together, these roadway facilities accommodate nearly 165 million vehicle miles each weekday. The road network also serves nearly 660,000 vehicles that travel into or out of the region from adjacent areas (ABAG, 2021).

The region is served by numerous interstate and U.S. freeways. On the west side of San Francisco Bay, Interstate 280 and U.S. 101 run north-south. U.S. 101 continues north of San Francisco into Marin County. Interstates 880, and 680 run north-south on the east side of the Bay. Interstate 80 starts in San Francisco, crosses the Bay Bridge, and runs northeast toward Sacramento. Interstate 80 is a six-lane north-south freeway which connects Contra Costa County to Solano County via the Carquinez Bridge. State Routes 29 and 84 become freeways that run east-west, and cross the Bay. Interstate 580 starts in San Rafael, crosses the Richmond-San Rafael Bridge, joins with Interstate 80, runs through Oakland, and then runs eastward toward Livermore. From the Benicia-Martinez Bridge, Interstate 680 extends north to Interstate 80 in Cordelia. Interstate 780 is a four lane, east-west freeway extending from the Benicia-Martinez Bridge west to I-80 in Vallejo.

The Bay Area public transit system includes a combination of heavy rail (e.g., Bay Area Rapid Transit or BART), light rail (e.g., Muni Metro and Santa Clara Valley Transportation Authority Light Rail), commuter rail (e.g., Caltrain and Alameda Commuter Express), diesel and electric buses, cable cars, and ferries. This public transit system accommodates a total of over 1.7 million passengers a day, with about 45 percent of daily passengers (744,000) on Muni, about 26 percent of daily passengers (427,000) on BART, 11 percent (180,000) on Alameda County Transit, and 7 percent (121,000) on Santa Clara Valley Transportation Authority (ABAG, 2021).

The Bay Area has an extensive system of pedestrian facilities including multi-use paths, sidewalks, crosswalks, walkways, stairs, and ramps. Other pedestrian facilities include pedestrian signals, pedestrian refuge islands and median, and curb extensions. In addition to pedestrian facilities, the Bay Area has a bikeway network that includes 1,450 miles of bike paths.

Regulatory Background

The Metropolitan Transportation Commission (MTC) is the state designated metropolitan planning organization for the nine-county San Francisco Bay Area; it has authority for regional planning, distributing and administering federal and state funds for all modes of transportation, and assuring that projects are consistent with the Regional Transportation Plan.

MTC updated its Regional Transportation Plan in 2021, referred to as the Plan Bay Area 2050, which forecasts transportation needs through 2050, while providing more housing and transportation choices and reducing pollution caused by transportation.

Most local counties maintain a transportation agency that has the duties of transportation planning and administration of improvement projects within the county and implements the Transportation Improvement and Growth Management Program, and the congestion management plans (CMPs). The CMP identifies a system of state highways and regionally significant principal arterials and specifies level of service standards for those roadways.

Significance Criteria

The proposed project impacts on transportation will be considered significant if:

- The project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- The project conflicts with or is inconsistent with CEQA Guidelines §15064.3 subdivision (b).
- Water borne, rail car or air traffic is substantially altered.
- Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased due to geometric design features or incompatible uses.
- The project would result in inadequate emergency access.

Discussion of Impacts

17. a). Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? No Impact.
17. b). Would the project conflict or be inconsistent with CEQA Guidelines § 15064.3 subdivision (b)? No Impact. The proposed amendments to Rule 8-8 are designed to require monitoring and minimization of total organic and methane emissions from wastewater treatment units at refineries. The rule amendments would not require additional control equipment to be installed at the wastewater treatment systems or result in any construction activities. The amendments to Rule 8-8 may require more frequent monitoring to assure compliance which could result in increases in the need for additional maintenance and repair. All refineries currently have existing leak detection programs for fugitive components associated with wastewater treatment operations.

Since the refineries have existing monitoring programs, it is expected that the existing contractors or employees may conduct additional inspections, monitoring, or sampling activities while onsite. In addition, the increase in monitoring and identification of additional leaks could lead to additional repairs. As discussed in XIV - Population and Housing, it is not expected that the affected facilities would need to hire additional personnel. The amendments also would not result in an increase in truck traffic requirements.

The proposed amendments to Rule 8-8 would not result in a conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Therefore, the project would not conflict or be inconsistent with CEQA Guidelines § 15064.3 subdivision (b), as no increase in traffic is expected to occur.

17. 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? No Impact. The proposed project would not increase traffic hazards or create incompatible uses. The proposed amendments to Rule 8-8 would not require the construction of any roadways or other transportation design features, so no changes to current roadway designs that would increase traffic hazards are expected. Since changes to the roadway system are not expected, no impacts to emergency access would be expected. Emergency access at the affected refineries is not expected to be impacted, as no modifications that effect traffic or access are expected to be required. Based on the above, the proposed amendments to Rule 8-8 are not expected to increase vehicle trips or to alter the existing long-term circulation patterns, thus do not create traffic hazards or impacting emergency access.

Conclusion

Based upon these considerations, no adverse transportation impacts are expected due to implementation of the proposed amendments to Rule 8-8.

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

Environmental Setting

The Carquinez Strait represents the entry point for the Sacramento and San Joaquin Rivers into the San Francisco Bay. This locality lies within the San Francisco Bay and the west end of the Central Valley archaeological regions, both of which contain a rich array of prehistoric and historical cultural resources. The areas surrounding the Carquinez Strait and Suisun Bay have been occupied for centuries given their abundant natural resources and moderate climate. The Bay Area has supported human habitation for several thousand years. Some theories suggest that the prehistoric bay and river margins where inhabited as early as 10,000 years ago (ABAG, 2021).

Six different groups of Native American population, identified by their language, lived within the Bay Area, including Ohlone, Bay Miwok, Patwin, Coast Miwok, Pomo, and Wappo. These

native populations periodically increased between 5,000 BC and the arrival of the Spanish in the late 18th Century. Native villages and campsites were inhabited on a temporary basis and are found in several ecological niches due to the seasonal nature of their subsistence base. Remains of these early populations indicate that main villages, seldom more than 1,000 residents, were usually established along water courses and drainages. By the late 1760s, about 300,000 Native Americans lived in California (ABAG, 2021).

Tribal cultural resources are defined by Assembly Bill (AB) 52, Statutes of 2014, in PRC Section 21074), as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe.

Regulatory Background

The State CEQA Guidelines were amended in July 2015 to include evaluation of impacts on tribal cultural resources. Tribal cultural resources include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe (Public Resources Code 21074).

Significance Criteria

The proposed project impacts to tribal resources will be considered significant if:

- The project results in the disturbance of a significant prehistoric or historic archaeological site or a property of tribal cultural significance to a community or ethnic or social group or a California Native American tribe.
- Unique objects with cultural value to a California Native American tribe are present that could be disturbed by construction of the proposed project.

Discussion of Impacts

The State CEQA Guidelines were amended in July 2015 to include evaluation of impacts on tribal cultural resources, which include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe. Assembly Bill (AB) 52 specifies that a project that may cause a substantial adverse change to a tribal cultural resource may result in a significant effect on the environment. AB52 requires tribes interested in development projects within a traditionally and culturally affiliated geographic area to notify a lead agency of such interest and to request notification of future projects subject to CEQA prior to determining if a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. The lead agency is then required to notify the requesting tribe within 14 days of deeming a development application subject to CEQA complete with an invitation to consult on the project.

18. a). Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the

landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resourced Code section 5020.1(k), or ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? No Impact. As discussed under Cultural Resources (Section V), the Bay Area has locations that were historically used by Native Americans. Thus, there is the potential for the presence of unrecorded tribal cultural resources to be buried throughout the District. The proposed amendments to Rule 8-8 are designed to require monitoring and minimization of total organic and methane emissions from wastewater treatment units at refineries. The rule amendments would not require additional control equipment to be installed at the wastewater treatment systems or result in any construction or demolition activities. Therefore, the proposed amendments would not impact historic resources as identified in Public Resources Code 5020.1(k) for listing in a local register of historical resources (Public Resources Code Section 5020.1(k), and would not impact resources that have cultural value to a California Native American tribe.

Because the proposed amendments would not result in construction or grading activities, there would be no physical changes to a site, feature, place, cultural landscape, sacred place or object with cultural value to a California Native American Tribe. Furthermore, the proposed amendments to Rule 8-8 would not result in a physical change to a resource determined to be eligible for inclusion or listed in the California Register of Historical Resources or included in a local register of historical resources. The proposed amendments to Rule 8-8 would not result in impacts on historical and tribal resources as defined in Public Resources Sections 5020.1(k), or 5024.1. Therefore, no to tribal resources impacts are anticipated to occur as a result of implementing the amendments to Rule 8-8.

Conclusion

Based upon these considerations, no adverse tribal cultural impacts are expected due to implementation of the proposed amendments to Rule 8-8.

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

Environmental Setting

Given the large area covered by the BAAQMD, public utilities are provided by a wide variety of local agencies. Most industrial facilities have wastewater and storm water treatment facilities and discharge treated wastewater under the requirements of National Pollutant Discharge Elimination System (NPDES) permits. Water is supplied to affected facilities by several water purveyors in the Bay Area. Solid waste is handled through a variety of municipalities, through recycling activities and at disposal sites.

Water Demand

Water is supplied to affected facilities by several water purveyors in the Bay Area. Most counties contain several water providers. The major water providers in the Bay Area include the following:

- Alameda County Water District – serves the Cities of Fremont, Newark, Union City and portions of Hayward.
- Bay Area Water Supply and Conservation Agency – serves San Mateo, Santa Clara, and Alameda counties.
- Contra Costa Water District – serves Clayton, Clyde, Pacheco, Port Costa, and parts of Martinez, Pleasant Hill, Walnut Creek, Antioch, Oakley, Brentwood, and Pittsburg.
- East Bay Municipal Utility District – serves Alameda, Alamo, Albany, Berkley, Castro Valley, Crockett, Danville, Diablo, El Cerrito, El Sobrante, Emeryville, Hayward, Hercules, Kensington, Lafayette, Moraga, Oakland, Orinda, Piedmont, Pinole, Pleasant Hill, Richmond, Rodeo, San Leandro, San Lorenzo, San Pablo, San Ramon, Selby, and Walnut Creek.
- Marin Municipal Water District – serves Marin, San Rafael, Mill Valley, Fairfax, San Anselmo, Ross, Larkspur, Corte Madera, Tiburon, Belvedere, and Sausalito.
- City of Napa Water Department – serves portions of Napa County.
- San Francisco Public Utilities Commission – serves San Francisco, San Mateo, Santa Clara, Alameda, and Tuolumne Counties.
- Santa Clara Valley Water District – serves Palo Alto, Mountain View, Sunnyvale, Santa Clara, San Jose, Milpitas, Purissima Hills Water District, and Stanford University.
- Solano County Water Agency – serves Fairfield, Suisun City, Vacaville, Vallejo, Solano Irrigation District, Maine Prairie Water District, University of California, Davis, and the California State Prison in Solano.
- Sonoma Water – serves northern Marin County and Sonoma County.
- Zone 7 Water – serves Livermore-Amador Valley, Sunol Valley, portions of the Diablo Range, California Water Service Company, Dublin San Ramon Services District, Livermore, and Pleasanton.

Water to supply the water agencies includes supplies from local and imported sources including: local sources (31%), Mokelumne (19%), Tuolumne (19%), Central Valley Project (15%), State Water Project (13%), and other (3%). Wastewater is also recycled for water use (ABAG, 2021).

Wastewater Treatment

Urbanized and unincorporated areas of cities and counties throughout the Bay Area provide wastewater treatment facilities. These facilities include systems made up of pipelines, pipe stations, interceptor stations, and discharge stations. Treatment plants send wastewater through up to three treatment processes (primary, secondary, tertiary) depending on treatment requirements established by the pertinent RWQCB for the particular plant. The level of treatment is often dictated by where treated effluent is discharged (land, water body) and if there is an end use that requires higher treatment levels (recycling). Many of the Bay Area's wastewater treatment plants include primary and secondary treatment for wastewater, as well as

recycled water programs that require tertiary treatment. In many cases, secondary effluent is discharged into the San Francisco Bay, and wastewater from Solano County is pumped into the Delta. Wastewater is also recycled for other uses, such as agriculture, irrigation, or landscaping. Treatment requirements are promulgated by the RWQCB and are typically reviewed, along with treatment capacity, every 5 years. As a result of this process, planning and upgrading of treatment plants is an ongoing process for each plant.

Wastewater treatment in the Bay Area is provided by various agencies, as well as individual city and town wastewater treatment systems. There are approximately 55 wastewater treatment facilities within the Bay Area (ABAG, 2021). Rule 8-8 applies to industrial wastewater treatment operations at refineries in the Bay Area as well as a small group of other industrial facilities in the Bay Area that operate wastewater treatment facilities as part of their process, but does not apply to municipal wastewater treatment systems.

Stormwater Treatment

Stormwater has been identified as urban runoff, which can be discharged over land or through storm sewer systems, often untreated with direct flow into water bodies, after a precipitation event. Stormwater is regulated at the regional, county, and city level. In the early 1990s, the RWQCB issued countywide municipal stormwater permits to operators of municipal separate storm sewer systems (MS4s) serving populations over 100,000. Subsequently, in 2015, the RWQCB reissued these countywide municipal stormwater permits as one Municipal Regional Stormwater NPDES Permit to regulate stormwater discharges from municipalities and local agencies in Alameda, Contra Costa, San Mateo, and Santa Clara Counties, as well as the Cities of Fairfield, Suisun City, and Vallejo. MS4s are defined as conveyance systems that are owned by cities or other public entities, are designed to collect, or convey stormwater (including gutters, storm drains, pipes, and ditches), and are not part of a combined sewer or a publicly owned sewage treatment plant. A General Permit for Discharge of Stormwater is also issued to small MS4s including Marin county and its cities, Napa County and its cities, San Francisco, Solano County, the City of Benicia, Sonoma County, Petaluma and the City of Sonoma (ABAG, 2021)

Additionally, each county has its own storm water pollution prevention programs (SWPPPs), which are intended to facilitate compliance with State and federal regulations through coordination with local municipalities, residents, businesses, and schools. These programs provide initiatives for preventing stormwater pollution; protecting and enhancing water quality in watersheds, waterways, creeks, and wetlands; and preventing water pollution in the San Francisco Bay and Pacific Ocean (ABAG, 2021).

Solid/Hazardous Waste

Each Bay Area county, plus the Cities of Berkeley, Pittsburg, and San Jose, has a local enforcement agency (LEA) covering all solid waste facilities in the region. LEAs are responsible for ensuring the correct operation and closure of solid waste facilities in the State, as well as for guaranteeing the proper storage and transportation of solid wastes. LEAs issue operating permits to facilities, including landfills, transfer stations, material recovery, and composting facilities.

There are 14 privately operated landfills in the Bay Area with a total remaining capacity of 259,634,119 cubic yards, and daily throughput of 40,254 tons per day, and an estimated average of 46 percent remaining capacity (ABAG, 2021). In addition, there are 57 transfer stations in the Bay Area that receive solid waste and transfer it into containers or vehicles before it is finally disposed of or taken to a transformation facility. The maximum combined daily throughput capacity of the transfer stations in the Bay Area is 54,136 tons per day (ABAG, 2021).

There are no hazardous waste disposal sites within the jurisdiction of the Air District. Hazardous waste generated at facilities, which is not recycled off-site, is required to be disposed of at a licensed hazardous waste disposal facility. Two such facilities are the Chemical Waste Management Inc. (CWMI) Kettleman Hills facility in King's County, and the Safety-Kleen facility in Buttonwillow (Kern County). Hazardous waste can also be transported to permitted facilities outside of California.

Regulatory Background

City and/or County General Plans usually contain goals and policies to assure adequate utilities and service systems are maintained within the local jurisdiction.

The Porter-Cologne Water Quality Control Act established SWRCB and divided the State into nine regions, each overseen by a separate RWQCB. Each RWQCB region is required to prepare and update a basin plan for its jurisdictional area. The RWQCBs also issue waste discharge requirements (WDRs) for discharges of privately or publicly treated domestic wastewater to locations other than surface water, such as groundwater basins. The Bay Area is largely within the San Francisco Bay RWQCB, with portions in the North Coastal, Central Coastal, and Central Valley RWQCBs.

The Resource Conservation and Recovery Act of 1976, Subtitle D (Subtitle D) focuses on State and local governments as the primary planning, regulating, and implementing entities for the management of nonhazardous solid waste, such as household garbage and nonhazardous industrial solid waste. Subtitle D provides regulations for the generation, transportation, and treatment, storage, or disposal of hazardous wastes. EPA developed federal criteria for the proper design and operation of municipal solid waste landfills and other solid waste disposal facilities, but State and local governments are the primary planning, permitting, regulating, implementing, and enforcement agencies for management and disposal subject to approval by EPA. EPA approved the State of California's program on October 7, 1993.

The California Construction Stormwater Permit (Construction General Permit), adopted by SWRCB, regulates construction activities that include clearing, grading, and excavation resulting in soil disturbance of at least 1 acre of total land area. The Construction General Permit authorizes the discharge of stormwater to surface waters from construction activities and prohibits the discharge of materials that contain a hazardous substance in excess of reportable quantities, unless a separate NPDES permit has been issued to regulate those discharges.

Significance Criteria

The proposed project impacts on utilities/service systems will be considered significant if:

- The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the project.
- An increase in demand for utilities impacts the current capacities of the electric utilities.
- The existing water supply does not have the capacity to meet the increased demands of the project, or the project would use a substantial amount of potable water.
- The project increases demand for water by more than 263,000 gallons per day.
- The generation and disposal of hazardous and non-hazardous waste exceeds the capacity of designated landfills.

Discussion of Impacts

19. a). Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?. No Impact. The potential water use and wastewater impacts associated with implementation of the proposed project were discussed under Hydrology and Water Quality (see Section X). The proposed amendments to Rule 8-8 would require monitoring for total organic compounds at industrial wastewater treatment facilities but would not require additional water use or generate additional wastewater. Further, the proposed project would not require any construction activities or alter storm water generation or runoff.

The potential increase in energy consumption associated with proposed project was discussed under Energy (see Section VI). The proposed amendments to Rule 8-8 would not require any additional increase in electricity or natural gas use and would not require any additional telecommunications facilities. Therefore, the proposed project would have no impact on water demand, wastewater treatment, storm water generation, energy use or telecommunication facilities.

19. b). Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? No Impact. The potential water demand impacts associated with implementation of the proposed project were discussed under Hydrology and Water Quality (see Section X). The proposed amendments to Rule 8-8 would require monitoring for total organic compounds at industrial wastewater treatment facilities but would not require additional water use. Therefore, no impacts on water demand would occur.

19. c). Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? No Impact. The proposed amendments to Rule 8-8 would not result in the construction of new equipment or change operations that would increase wastewater generation. The refineries treat wastewater generated onsite and will

continue to do so in the future. Therefore, the proposed amendments to Rule 8-8 would not impact or require additional capacity from any public wastewater treatment provider.

19. 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? No Impact. Additional monitoring for total organic compounds as a result of the proposed amendments to Rule 8-8 would not increase solid or hazardous wastes generated by the affected existing facilities. No waste generation impacts are expected due to implementation of the proposed rule amendments as no construction activities are required and no change in operations would occur. Routine maintenance of wastewater treatment facilities occurs today and will continue following implementation of the amendments to Rule 8-8. Therefore, no impacts to hazardous or solid waste disposal facilities are expected due to implementation of the proposed rule amendments. The affected refineries are expected to continue to comply with all applicable federal, state, and local statutes and regulations related to solid and hazardous wastes.

19. e). Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? No Impact. Additional monitoring for total organic compounds as a result of the proposed amendments to Rule 8-8 would not increase solid wastes generated by the affected existing facilities. No waste generation impacts are expected due to implementation of the proposed rule amendments as no construction activities are required and no change in operations would occur. Therefore, the project would not impact affected facilities from complying with federal, state, or local management and reduction statues related to solid waste.

Conclusion

Based upon these considerations, no adverse utilities and service system impacts are expected due to implementation of the proposed amendments to Rule 8-8.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XX.	**WILDFIRE.** If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a)	Substantially impair an adopted emergency response plan or emergency evaluation 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 or a wildfire?	☐	☐	☐	☑
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☑
d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☑

Environmental Setting

Wildland fires are a natural part of the California landscape and the number of fires and their impact vary from year to year. 2022 was a moderate fire year by the California Department of Forestry and Fire Protection (CalFire), who reported that 362,455 acres of land burned because of 7,490 incidents, resulting in 9 fatalities and 876 structures damaged or destroyed.[8] In comparison, CalFire reported that 3,627,010 acres of land burned in 2020, because of 8,648 incidents, resulting in 33 fatalities and 11,116 structures damaged or destroyed.[9]

[8] CalFire Incident Resports https://www.fire.ca.gov/incidents/2022
[9] CalFire Incident Reports https://www.fire.ca.gov/incidents/2020/

While all of California is subject to some degree of wildfire hazard, there are specific features that make certain areas more hazardous. CalFire is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors (PRC Sections 4201–4204 and Government Code 51175–51189). Factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. CalFire maps significant fire hazard areas, referred to as Fire Hazard Severity Zones, and determines the requirements for special building codes designed to reduce the fire hazards in these areas.

Wildfire behavior is a product of several variables—primarily weather, vegetation, topography, and human influence—that combine to produce local and regional fire regimes that affect how, when, and where fires burn. Once a fire is started, the spread and behavior of a fire become a function of fuel characteristics, terrain, and weather conditions. Development that has spread into less densely populated, often hilly areas has increased the number of people living in heavily vegetated areas that are prone to wildfire. This area where wildlands meet urban development is referred to as the wildland-urban interface (WUI) and is subject to urban wildfire (ABAG, 2021)

People have intervened deliberately and dramatically in the natural fire regime through fire suppression and actions that affect fuel connectivity. Historically, fire suppression was used to prevent and limit wildfires. Contemporary fire management practices include fuel management activities that are intended to reduce the intensity and severity of wildfires.

Throughout the Bay Area, there is a full range of conditions and fire hazards, with all Bay Area counties except San Francisco having areas of High and Very High Fire Hazard in areas of CalFire responsibility. The areas of greatest wildfire hazard are concentrated in the hillside areas of San Mateo, Santa Clara, Sonoma, and Napa Counties, with smaller hazard areas in Marin County, the East Bay Hills of Alameda and Contra Costa Counties, and on the slopes of Mount Diablo.

Wildfires tend to be larger under drier atmospheric conditions and when fed by drier fuel sources. Several large wildfires in California have started by lightning storms coupled with dry fuels, including the Santa Clara Unit Lightning complex fires which burned in the Diablo Range in Santa Clara, Alameda, Contra Costa, San Joaquin, Merced, and Stanislaus counties in August 2020. In 2017, the Tubbs Fire caused substantial destruction in parts of Napa, Sonoma, and Lake counties. Believed to have been started by a private electrical system, the fire damaged 5,636 structures and resulted in 22 deaths, with much of the destruction in Santa Rosa (ABAG, 2021)

Regulatory Background

The State of California has passed numerous laws to address wildlife and structural fires. Wildfire-prevention laws regulate activities in areas deemed by the state to be hazardous fire areas; the maintenance of buildings and other structures in areas covered by forest, brush, or other flammable materials; and the setting and burning of fires on open land.

Title 24 of the California Building Code sets forth the fire, life-safety and other building-related regulations applicable to any structure fit for occupancy statewide for which a building permit is sought. Title 24 Part 9 is the California Fire Codes that addresses automatic sprinkler systems,

fire-alarm systems, access by fire-fighting equipment, fire hydrants, explosion-hazards safety, hazardous materials storage and use, protection for first responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings.

Executive Order N-05-19 was issued in 2019 to address the increasing threat of wildfires due to climate change. The executive order was issued to earmark funding from the Greenhouse Gas Reduction Fund to active forestland management to reduce wildfires in the state. As a result, the 2019 Strategic Plan prepared by CalFire and the California Natural Resources Agency lays out central goals for reducing and preventing the impacts of fire in the State. The goals are meant to establish a natural environment that is more resilient and human-made assets that are more resistant to the occurrence and effects of wildland fire.

In addition to the 2019 Strategic Plan for California, individual CalFire units develop fire plans, which are major strategic documents that establish a set of tools for each CalFire unit for its local area. Updated annually, unit fire plans identify wildfire protection areas, initial attack success, assets and infrastructure at risk, prefire management strategies, and accountability within their unit's geographical boundaries.

Local cities and counties generally include safety elements in their General Plans that establishes goals and policies to assure adequate fire services are maintained within the local jurisdiction. Cities and counties also may establish building and fire prevention codes which place regulations on the separation of buildings, ventilation criteria, roof materials, landscaping, building access, and the installation of automatic fire-extinguishing systems in public buildings.

Significance Criteria

The impacts to wildfires will be considered significant if:

- The project results in new structures located within or adjacent to lands classified as very high fire hazard severity zones
- The project adversely effects emergency response or emergency evacuation plans.

Discussion of Impacts

20. a) Substantially impair an adopted emergency response plan or emergency evaluation plan? No Impact.
20. 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 or a wildfire? No Impact.
20. c). Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? No Impact.
20. 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. As discussed in Section IX - Hazards above, CalFire maps areas of significant fire hazard based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones, determine the requirements for special building codes designed to reduce the potential impacts of wildland fires on urban structures.

The refineries in the Bay Area are located within a non-Very High Fire Hazard Severity Zone, as the areas are urbanized, are located adjacent to the Bay and marshlands, and are not located adjacent to wildland areas. The refineries are located well outside Very High Fire Hazard Zones, which indicates that they are not subject to significant wildfire hazard. Implementation of proposed amendments to Rule 8-8 may require additional monitoring and repair if leaks are found, but they would not require new equipment or modification to refinery operations. Therefore, the proposed amendments would not have any impact related to wildland fires.

Conclusion

Based upon these considerations, no adverse wildfire impacts are expected due to implementation of the proposed amendments to Rule 8-8.

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

Discussion of Impacts

21. a). Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? No Impact. The proposed amendments to Rule 8-8 are designed to require monitoring and minimization of total organic and methane emissions from wastewater treatment units at refineries. The rule amendments would not change the operation of the wastewater treatment systems or result in any construction or demolition activities at the affected refineries.

As discussed in Section IV – Biological Resources above, the refineries are located in heavy industrial areas that have been developed and graded. Native biological resources have been removed and are non-existent. Further, the proposed project would not result in construction activities so no impacts to biological resources, including riparian, wetlands, or other sensitive communities, would be expected.

As discussed in Section V – Cultural Resources above, the proposed amendments to Rule 8-8, would not adversely affect historical or archaeological resources as defined in CEQA Guidelines §15064.5, or disturb human remains interred outside formal cemeteries. The affected facilities are located in heavy industrial areas that have already been graded and developed and no construction or demolition activities would occur due to the proposed project. Therefore, no impacts to cultural resources are anticipated to occur as a result of the proposed amendments to Rule 8-8.

Therefore, proposed amendments to Rule 8-8 do not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory, as discussed in the previous sections of the CEQA checklist. As discussed in Section IV - Biological Resources, Section V - Cultural Resources, and Section XVIII – Tribal Cultural Resources, no adverse impacts are expected to biological, cultural or tribal cultural resources.

21. b). Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects). No Impact. The existing refineries include the operation of numerous units and equipment. The proposed amendments to Rule 8-8 are designed to require monitoring and minimization of total organic and methane emissions from wastewater treatment units at refineries. The rule amendments would not change the operation of the wastewater treatment systems or result in any construction or demolition activities at the affected refineries. Further, increased monitoring and repair of leaking equipment is expected to result in a reduction in total organic compounds, including methane emissions, providing overall beneficial impacts on air quality and GHG emissions, as well as toxic air contaminants and their related health impacts. Therefore, since no project impacts are expected, no cumulatively considerable impacts are expected either.

21. c). Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? No Impact. The proposed amendments to Rule 8-8 are designed to require monitoring and minimization of total organic and methane emissions from wastewater treatment units at refineries. The rule amendments would not change the operation of the wastewater treatment systems or result in any construction or demolition activities at the affected refineries. Further, increased monitoring and repair of leaking equipment is expected to result in a reduction in total organic compounds, including methane emissions, providing overall beneficial impacts on air quality and GHG emissions, as

well as toxic air contaminants and their related health impacts. Therefore, no direct or indirect impacts on human beings are expected.

CHAPTER 4

REFERENCES

References

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CHAPTER 4

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CALIFORNIA ENVIRONMENTAL QUALITY ACT
NEGATIVE DECLARATION

Proposed Amendments to
Regulation 8: Organic Compounds, Rule 8: Wastewater Collection and Separation Systems

Pursuant to the California Environmental Quality Act (CEQA), Public Resources Code §§ 21000 et seq, and Sections 15071 and 15074 of the CEQA Guidelines, the Board of Directors of the Bay Area Air Quality Management District (Air District) hereby adopts this Negative Declaration finding that the adoption of Proposed Amendments to Regulation 8: Organic Compounds, Rule 8: Wastewater Collection and Separation Systems will not have a significant effect on the environment.

Project Name: Proposed Amendments to Regulation 8: Organic Compounds, Rule 8: Wastewater Collection and Separation Systems.

Project Description: The Air District has regulatory authority over stationary sources of air pollution in the San Francisco Bay Area. The proposed amendments to Regulation 8, Rule 8 (Rule 8-8) address emissions of volatile organic compounds and methane (together referred to as "total organic compounds") from wastewater collection and separation systems at industrial facilities in the Bay Area. The proposed amendments would enact more stringent best available retrofit control technology (BARCT) levels at the refinery wastewater treatment systems by increasing frequency of leak inspections, updating leak detection methodologies and standards to include a wider range of organic compounds (including methane), and strengthening protocols for repairing and minimizing leaks. The amendments also include a number of other changes to improve enforceability of the provisions and expand sampling and monitoring requirements.

Project Location: The nine-county jurisdiction of the Bay Area Air Quality Management District, which includes all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties, and portions of southwestern Solano County and southern Sonoma County. A map of the project location is provided in Figure 2-1 on page 2-11 of the Initial Study attached hereto.

Project Proponent and Lead Agency: The Bay Area Air Quality Management District.

Finding of No Significant Impact: The Board of Directors of the Bay Area Air Quality Management District hereby finds, using its own independent judgment and analysis, that based on the whole record (including the Initial Study and public comments received) there is no substantial evidence that the proposed amendments to Regulation 8: Organic Compounds, Rule 8: Wastewater Collection and Separation Systems will have a significant effect on the environment.

Initial Study: A copy of the Initial Study documenting the reasons supporting the finding of no significant impact is attached hereto.

Mitigation Measures: No mitigation measures need to be included in the project to avoid potentially significant effects, as the project will not have any potentially significant effects.