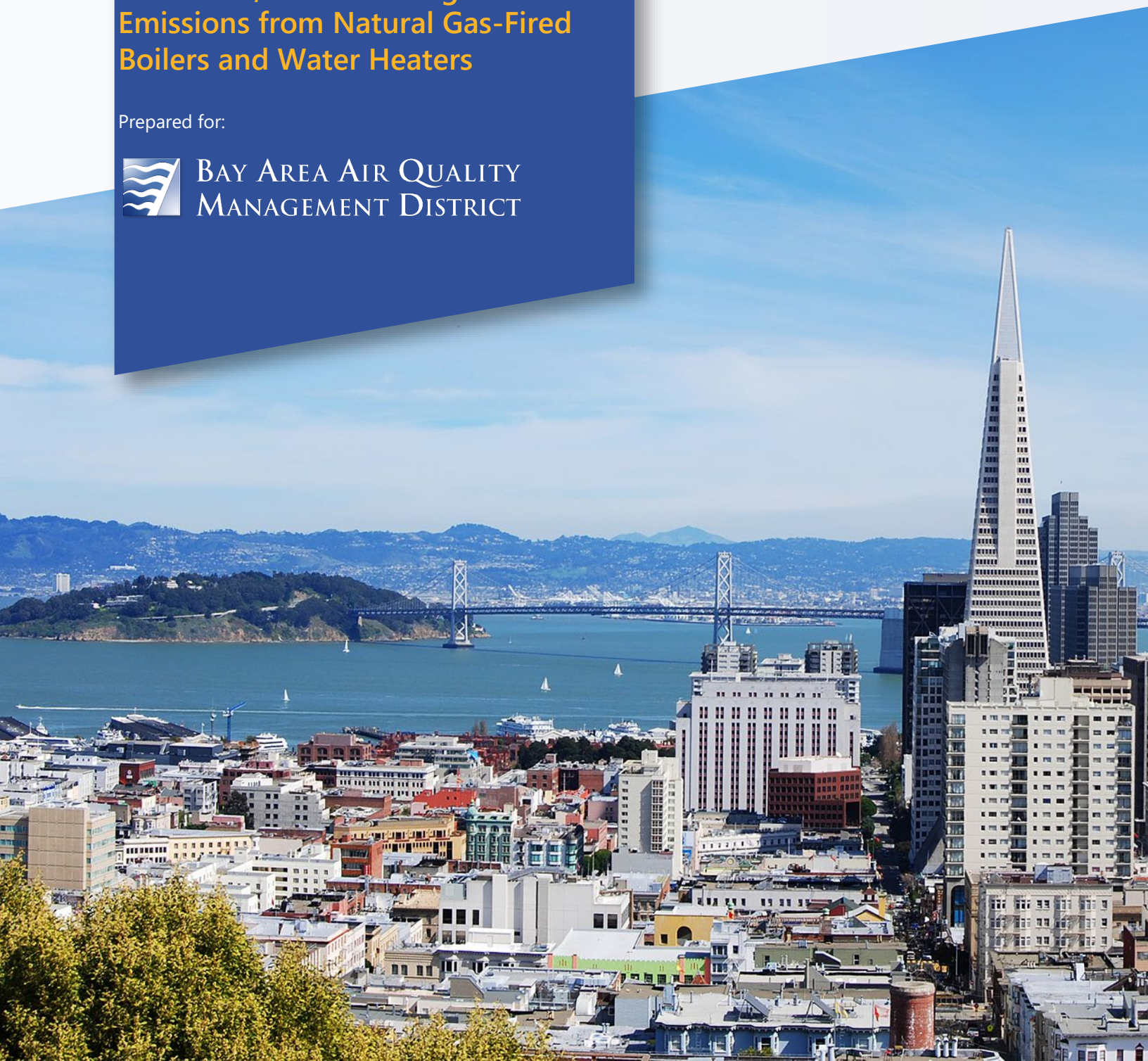
Initial Study
for the

Proposed Amendments to Building Appliance Rules – Regulation 9: Inorganic Gaseous Pollutants, Rule 4: Nitrogen Oxides from Fan Type Residential Central Furnaces and Regulation 9: Inorganic Gaseous Pollutants, Rule 6: Nitrogen Oxides Emissions from Natural Gas-Fired Boilers and Water Heaters

Prepared for:

Bay Area Air Quality Management District

ASCENT ENVIRONMENTAL



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Proposed Amendments to Building Appliance Rules – Regulation 9: Inorganic Gaseous Pollutants, Rule 4: Nitrogen Oxides from Fan Type Residential Central Furnaces and Regulation 9: Inorganic Gaseous Pollutants, Rule 6: Nitrogen Oxides Emissions from Natural Gas-Fired Boilers and Water Heaters

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ACRONYMS AND ABBREVIATIONS

AAQS	air quality standards
AB	Assembly Bill
BAAQMD	Bay Area Air Quality Management District
BP	Before Present
BTU	British thermal unit
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Projection
CEQA	California Environmental Quality Act
CH_4	methane
CHP	California Highway Patrol
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CRHR	California Register of Historic Resources
CWA	Clean Water Act
dBA	decibels
Delta	Sacramento–San Joaquin Delta
ECA	Essential Connectivity Areas
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping and Monitoring Program
GHG	greenhouse gas
H_2SO_4	sulfuric acid
HFC	hydrofluorocarbons
HNO_3	nitric acid
IS	Initial Study
LRA	Local Responsibility Area

N_2	nitrogen
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NFIP	National Flood Insurance Program
ng/joule	nanograms per joule
NO_2	nitrogen dioxide
NO_X	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_2	oxygen
PFC	perfluorocarbons
PG&E	Pacific Gas and Electric Company
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
project	proposed amendments to Rules 9-4 and 9-6
RCRA	Resource Conservation and Recovery Act
ROG	reactive organic gases
RPS	Renewable Portfolio Standard
Rule 9-4	Regulation 9, Rule 4: Nitrogen Oxides from Fan Type Residential Central Furnaces
Rule 9-6	Regulation 9, Rule 6: Nitrogen Oxides Emissions from Natural Gas-Fired Boilers and Water Heaters
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SF_6	sulfur hexafluoride
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO_2	sulfur dioxide
SRA	State Responsibility Area
TAC	toxic air contaminants
TMDL	Total Maximum Daily Load
VMT	vehicle miles traveled
VOC	volatile organic compounds
VTA	Valley Transportation Authority

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1 INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This Initial Study (IS) has been prepared by the Bay Area Air Quality Management District (BAAQMD) to provide an initial evaluation of the potential environmental effects resulting from implementing proposed amendments to its building appliance rules. Amendments are proposed to Regulation 9: Inorganic Gaseous Pollutants, Rule 4: Nitrogen Oxides from Fan Type Residential Central Furnaces (Rule 9-4) and Regulation 9: Inorganic Gaseous Pollutants, Rule 6: Nitrogen Oxides Emissions from Natural Gas-Fired Boilers and Water Heaters (Rule 9-6). The proposed amendments to Rules 9-4 and 9-6 (Project) would reduce nitrogen oxides (NOx) emissions from space and water heating appliances in the Bay Area.

This document has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Section 15000 et seq.). An Initial Study is prepared by a lead agency to determine if a project may have a significant effect on the environment (State CEQA Guidelines Section 15063[a]), and thus to determine the appropriate environmental document. In this circumstance, the BAAQMD has determined, based on the IS, that potential significant physical environmental impacts require further evaluation and preparation of an environmental impact report (EIR).

1.2 NOTICE OF PREPARATION

In accordance with provisions of CEQA, the BAAQMD is distributing a notice of preparation (NOP) of an EIR to solicit comments on the scope of the EIR for this Project. As required by CEQA, the NOP will be provided to the State Clearinghouse/Governor's Office of Planning and Research, responsible and trustee agencies, and the public for at least a 30-day review and comment period.

1.3 PURPOSE OF THIS INITIAL STUDY

Under CEQA, an IS can be prepared by a lead agency to determine if a project may have a significant effect on the environment (State CEQA Guidelines Section 15063[a]), and thus to determine the appropriate environmental document. In this circumstance, the BAAQMD has determined, based on the IS, that potential significant physical environmental impacts require further evaluation and an EIR will be prepared.

1.4 STANDARD TERMINOLOGY

This IS includes the following terminology regarding the significance of environmental impacts of the Project:

- No Impact: Implementing the Project would not result in an adverse effect.
- Less-than-Significant Impact: The impact would be adverse but would not exceed the defined standard or threshold of significance. Less-than-significant impacts do not require mitigation.
- Significant Impact: The impact would exceed the defined standard or threshold of significance and would or could cause a substantial adverse change in the environment. Potentially feasible mitigation measures or alternatives are recommended to eliminate the impact, reduce it to a less-than-significant level, or reduce it to the degree feasible.
- Potentially Significant Impact: The impact may be or is likely to be significant. Because information is limited, the conclusion is not definitive. For purposes of the EIR analysis, a potentially significant impact is treated the same as a significant impact and requires feasible mitigation measures or alternatives.

- Mitigation Measure: The measure could feasibly avoid, minimize, or compensate for a significant impact. Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments. Compliance with state and federal laws or other regulations, including potential actions to achieve such compliance, may be sufficient mitigation in instances in which compliance would be reasonably expected to avoid, minimize, or compensate for the environmental impact.

1.5 DOCUMENT ORGANIZATION

This IS is organized as follows:

Chapter 1, "Introduction," provides an introduction to the environmental review process. It describes the purpose and organization of this document.

Chapter 2, "Environmental Checklist," presents an analysis of a range of environmental issues identified in the CEQA Environmental Checklist and determines if Project actions would result in no impact, a less-than-significant impact, a less-than-significant impact with mitigation incorporated, or a potentially significant impact. If any impacts are determined to be potentially significant, further study of the potential impacts will be conducted and disclosed as part of the EIR.

Chapter 3, "References," lists the references used in preparation of this IS.

Chapter 4, "Report Preparers," identifies the report preparers.

2 ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION

1.	Project Title:	Proposed Amendments to Building Appliance Rules – Regulation 9: Inorganic Gaseous Pollutants, Rule 4: Nitrogen Oxides from Fan Type Residential Central Furnaces and Regulation: Inorganic Gaseous Pollutants, Rule 6: Nitrogen Oxides Emissions from Natural Gas-Fired Boilers and Water Heaters
2.	Lead Agency Name and Address:	Bay Area Air Quality Management District 375 Beale Street, Suite 600 San Francisco, California 94105
3.	Contact Person and Phone Number:	Jennifer Elwell (415) 749-8732
4.	Project Location:	The proposed amendments would apply to the area within the jurisdiction of Bay Area Air Quality Management District (BAAQMD), which 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
5.	Project Sponsor's Name and Address:	Same as lead agency
6.	General Plan Designation:	The proposed amendments would apply to the area within the jurisdiction of BAAQMD and may include all general plan designations within the Bay Area
7.	Zoning:	The proposed amendments would apply to the area within the jurisdiction of BAAQMD and may include all types of zoning within the Bay Area

8. Description of Project: (Describe the whole action involved, including but not limited to later phases of the Project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

   See Notice of Preparation (attached)

9. Surrounding Land Uses and Setting: (Briefly describe the project's surroundings) — See Notice of Preparation (attached)

10. Other public agencies whose approval is required: (e.g., permits, financing approval, or participation agreement) — None

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?
    Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project

proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

No California Native American tribes have requested to be informed of projects by BAAQMD; therefore, there is no trigger to begin consultation under AB 52, resulting in no resources identified as tribal cultural resources under Public Resources Code Section 21074.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages. Where checked below, the topic with a potentially significant impact will be addressed in an environmental impact report.

☐ Aesthetics	☐ Agriculture and Forest 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 / Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance
	☐ None	☐ None with Mitigation Incorporated

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation:

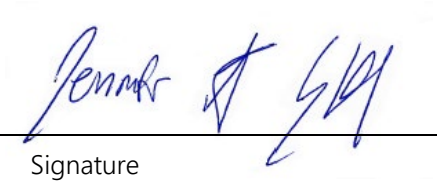
☐ I find that the proposed project could not have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

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

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

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

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



Signature

5/16/2022

Date

Jennifer Elwell

Printed Name

Senior Air Quality Engineer

Title

Bay Area Air Quality Management District

Agency

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, then 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 above 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.

2.1 AESTHETICS

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

2.1.1 Environmental Setting

The Bay Area Air Quality Management District's (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. This area covers about 5,600 square miles, and land uses within the area include a range of commercial, industrial, residential, agricultural, and open space uses. Important views of natural features include the San Francisco Bay and ocean, Mount Tamalpais, Mount Diablo, and other peaks and inland valleys of the Coast Range. Cityscape views offered by buildings and distinctive Bay Area bridges, especially the Golden Gate and Bay Bridges and the San Francisco skyline, are also important built visual resources to the region. Views along travel corridors, including roads and rail lines, are in abundance in the Bay Area and include views of the San Francisco Bay, city scape, mountains and hills, redwood groves, and broader views of the ocean and lowlands, such as along ridgelines. Because of the variety of visual resources, scenic highways and corridors are located throughout the Bay Area and include 15 routes that have been designated as scenic highways and 31 routes eligible for designation as scenic highways (MTC and ABAG 2021: 3.2-8 and 3.2-9).

2.1.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of residential and commercial buildings and would not be visible to the public.

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

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

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

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings and would not be visible to the public. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. Therefore, the Project would not adversely affect a scenic vista, damage scenic resources, or degrade the existing visual character or quality of public views within the Bay Area. No impact would occur, and this issue will not be analyzed further in the EIR.

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

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings and would not be visible to the public. The proposed rule amendments would not require new lighting fixtures. Therefore, the Project would not generate substantial light or glare impacts on day or nighttime views. No impact would occur, and this issue will not be analyzed further in the EIR.

2.2 AGRICULTURE AND FOREST RESOURCES

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

2.2.1 Environmental Setting

The BAAQMD's 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. This area covers about 5,600 square miles, and land uses within the area include a range of commercial, industrial, residential, agricultural, and open space uses. The Bay Area has a substantial amount of land in agricultural uses, some of which is under Williamson Act contract.

The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) classifies agricultural land in eight categories based on soil quality and irrigation status. In 2018, over half of the region's approximately 4.4 million acres were zoned for agricultural uses or classified as agricultural land, as defined by the FMMP (MTC and ABAG 2021: 3.3-2). Of these approximately 2.3 million acres of agricultural land, over 70 percent (about 1.7 million acres) are used for grazing. Products grown in the Bay Area include field crops, fruit and nut crops, seed crops,

vegetable crops, and nursery products. Field crops, which include corn, wheat, and oats, as well as pasture lands, represent approximately 62 percent of the Bay Area's agricultural land (MTC and ABAG 2021: 3.3-2).

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of preserving agriculture and restricting unnecessary conversion to urban uses. Under the contract, landowners receive reduced property tax assessments based on the property's value for farming and open space uses as opposed to full market value. 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 Sections 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 were under Williamson Act contract in the Bay Area (MTC and ABAG 2021: 3.3-4). Of the total acres, 17 percent were designated as prime farmland and 83 percent were nonprime. Lands under Williamson Act contract are primarily used for pasture and grazing and not for cultivation of crops.

The Bay Area includes a variety of forest types spread throughout the nine-county region. Forests are generally located at higher elevations of the Coast Ranges in areas with sufficient moisture. Forestland is a valuable environmental and aesthetic resource and a defining feature in many parts of the landscape in the Bay Area. Forest habitats include a wide range of woodland and forest species. In the Bay Area, only Napa (59,100 acres), Sonoma (319,700 acres), San Mateo (45,600 acres), and Santa Clara (28,500) Counties have substantial acreages of unreserved timberland forest (MTC and ABAG 2021: 3.3-6).

2.2.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of buildings in residential and commercial areas.

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

d) Result in the loss of forest land or conversion of forest land to non-forest use?

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

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of buildings in residential and commercial areas. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. Existing agricultural and forest land resources within the BAAQMD's jurisdiction would not be affected. The Project would not convert farmland to non-agricultural use, conflict with zoning for agricultural use or a Williamson Act contract, conflict with zoning of forest land, or convert forest land to non-forest use. Therefore, no impact would occur, and this issue will not be analyzed further in the EIR.

2.3 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality.				
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations.				
Are significance criteria established by the applicable air district available to rely on for significance determinations?	☒ Yes		☐ No	
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 non-attainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☒

2.3.1 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 BAAQMD was created in 1955. The long-term trend of ambient concentrations of air pollutants and the number of days on which the region exceeds ambient air quality standards (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 increase of severity and frequency of wildfire smoke episodes since 2017 has led to an increase in levels of annual particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) and particulate matter less than 10 microns in diameter (PM_{10}) and indicates the need for continued reductions. 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 is designated as a non-attainment area for the State PM_{10} (24-hour and annual) and $PM_{2.5}$ (annual) standards. The BAAQMD is designated unclassifiable/ attainment for the Federal CO, NO_2, SO_2, lead, PM_{10} and 2013 annual $PM_{2.5}$ standards. A designation of unclassifiable/attainment means that the U.S. Environmental Protection Agency (EPA) has sufficient evidence to find the area either is attaining or likely attaining the Federal AAQS (BAAQMD 2017a).

Based on the 2020 air quality data from the BAAQMD monitoring stations, no monitoring stations measured an exceedance of any of State or federal AAQS for CO or NO_2 (CARB 2020). There was one exceedance of the Federal 1-hour SO_2 standard in 2020 at the Crockett station, and one exceedance of the federal PM_{10} standard in 2020 at the Concord station. The State 24-hour PM_{10} standard was exceeded at one or more Bay Area stations on eleven days in 2020.

The Bay Area is designated as a non-attainment area for the federal and State eight-hour ozone standard and the federal 2006 24-hour $PM_{2.5}$ standard. The State and federal eight-hour ozone standards were exceeded at one site or more in the BAAQMD on ten and nine days in 2020, respectively: most frequently in the Eastern District, the Santa Clara Valley, and the South Central Bay zones. The federal 24-hour $PM_{2.5}$ standard was exceeded at one or more Bay Area stations on 25 days in 2020 throughout the BAAQMD.

CRITERIA AIR 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 $PM_{2.5}$ 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 because 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 $PM_{2.5}$. 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}. 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 BAAQMD's primary mandate is attaining and maintaining the federal and State AAQS for criteria pollutants within the BAAQMD's jurisdiction, the BAAQMD 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 BAAQMD'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 Health Protection 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 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,1 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 cases per million people in 2014. This represents an 80 percent decrease between 1990 and 2014 (BAAQMD 2017b).

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 because of CARB regulations and the BAAQMD 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 BAAQMD 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 detailed emissions inventory is reported in the BAAQMD's Toxic Air Contaminant Control Program, 2018 Annual Report (BAAQMD 2018). The 2018 emissions inventory continues to show decreasing emissions of many TACs in the Bay Area.

2.3.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of residential and commercial buildings.

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

Potentially significant impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings. The proposed rule amendments would not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. The applicable air quality plan is the BAAQMD's 2017 Clean Air Plan, Spare the Air, Cool the Climate ("Plan") (BAAQMD 2017b). 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.

The overall purpose of the proposed amendments is to reduce NOx emissions from natural gas-fired space- and water-heating appliances in buildings in the Bay Area. NOx emissions are a key criteria pollutant as a precursor to ozone and secondary PM formation. Secondary PM is formed from the conversion of NOx to ammonium nitrate through atmospheric chemical reactions with ammonia. PM, a diverse mixture of suspended particles and liquid droplets, is the air pollutant most harmful to the health of Bay Area residents. The Bay Area is currently classified as non-attainment for $PM_{2.5}$ under the State AAQS. Exposure to $PM_{2.5}$, on either a short-term or long-term basis, can cause a wide range of respiratory and cardiovascular health effects, including strokes, heart attacks, and premature

deaths. Because NOx compounds in the atmosphere contribute to the formation of secondary PM, any NOx emission reduction would also result in reduction of the formation of secondary $PM_{2.5}$. In addition, the Bay Area is currently in non-attainment for ozone, a regional pollutant, under federal and State AAQS. Emissions of ROG and NOx throughout the Bay Area contribute to ozone formation in downwind areas. Therefore, reductions in emissions of ROG and NOx are needed throughout the region to decrease ozone levels.

Implementation of the proposed rule amendments is intended to directly support the goals of the Plan to reduce ozone and $PM_{2.5}$ precursor emissions and improve public health. The proposed rule amendments do not prescribe what type of energy an appliance must use; rather, they impose an emission limitation that could be met by appliances powered by differing sources of energy. If natural gas-fired appliances that meet a zero NOx standard become available and widely used to replace existing appliances, there would be a reduction in criteria pollutant emissions from the Project because the zero NOx natural gas-fired appliances would emit less criteria pollutant air pollution than the current appliances. On the other hand, if consumers choose to replace natural gas-fired appliances with electric appliances, which are widely available today and meet the zero NOx standard, increases in electricity usage would result from the Project. Whether this increased electricity demand can be met by existing produced supply will be evaluated in the EIR. Implementation of the proposed rule amendments could indirectly result in an increase in criteria air pollutant emissions from any increased production of electricity required to meet the Project demand, depending on the source of the electricity. These potential emissions could exceed significance criteria established by the BAAQMD to identify significant contributions to regional air pollution and thereby could conflict with the BAAQMD's regulations and applicable air quality plans. However, these emissions would be compared to accompanying reductions in criteria pollutant emissions from implementation of the zero NOx appliances standard to determine the net impact and change in the environment. This would be a potentially significant impact that will be analyzed further in the EIR.

Secondary and cumulative effects associated with the potential need for the construction of new electricity generation and transmission infrastructure will also be evaluated in the EIR.

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

Potentially significant impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings. The proposed rule amendments would not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. If generation of additional electricity is required as a result of the proposed rule amendments, there could be an increase in criteria air pollutant emissions, depending on the source of the electricity. However, these potential emissions would be compared to accompanying reductions in criteria pollutant emissions from implementation of the zero NOx appliances standard to determine the net impact and change in the environment. As discussed above, the Bay Area is in non-attainment for pollutants such as ozone and particulate matter. Thus, the Project, along with increases in criteria pollutant emissions from other development in the region, could contribute to non-attainment status pursuant to federal or state ambient air quality standards. Because the Project may exceed the BAAQMD's established significance criteria for criteria pollutants (as noted above), the Project's contribution may be cumulatively considerable. This would be a potentially significant impact that will be analyzed further in the EIR.

Secondary and cumulative effects associated with the potential need for the construction of new electricity generation and transmission infrastructure will also be evaluated in the EIR.

c) Expose sensitive receptors to substantial pollutant concentrations?

Potentially significant impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings. The proposed rule amendments would not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded

facilities. If generation of additional electricity is required as a result of the proposed rule amendments, depending on the source of the electricity, this could expose nearby sensitive receptors to increased concentrations of pollutant concentrations. The potential for the Project to indirectly increase emissions that could affect sensitive receptors would be a potentially significant impact that will be analyzed further in the EIR.

Secondary and cumulative effects associated with the potential need for the construction of new electricity generation and transmission infrastructure will also be evaluated in the EIR.

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

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. Even if production of additional electricity is required as a result of the proposed rule amendments, odorous emissions would not be generated. Therefore, the Project would not result in odorous emissions. No impact would occur.

2.4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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 Wildlife or the 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 the U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

2.4.1 Environmental Setting

The BAAQMD's 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. This area covers about 5,600 square miles, and land uses within the area include a range of commercial, industrial, residential, agricultural, and open space uses. A wide variety of biological resources are located within the Bay Area.

Special-status species are defined as species that are legally protected or that are otherwise considered sensitive by federal, State, or local resource agencies. Several species known to occur in the Bay Area are considered special-status species because of their recognized rarity or vulnerability to habitat loss or population decline. The U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration Fisheries Service designate critical

habitat for certain species that they have listed as threatened or endangered. Critical habitat has been designated for 30 species in the Bay Area (MTC and ABAG 2021: 3.5-3).

Sensitive natural communities are those native plant communities that are defined by CDFW as having limited distribution Statewide or within a county or region and that are often vulnerable to environmental effects of projects. Sensitive communities in the Bay Area include coastal salt marsh; brackish and freshwater wetlands, including marshes, seasonal wetlands, and vernal pools; riparian forests and woodlands; and several types of coastal scrub, chaparral, and perennial grasslands (MTC and ABAG 2021: 3.5-3).

The Bay Area supports numerous distinct natural communities composed of a diversity of vegetative types that provide habitat for a wide variety of plant 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 (MTC and ABAG 2021: 3.5-9).

The Bay Area includes 13 Essential Connectivity Areas (ECAs), which are a network of wildlands that are considered important to the continued support of California's diverse natural communities (MTC and ABAG 2021: 3.5-22). These ECAs occur within all nine Bay Area counties and are typically centered along the region's mountain ranges. These areas are composed primarily of wildlands but may also include some agricultural and developed areas (mostly rural residential) and many are bisected by major roadways.

2.4.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of buildings in residential and commercial areas.

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the 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 the U.S. Fish and Wildlife Service?

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

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of buildings in residential and commercial areas. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. Because there would be no construction, the Project would also not result in habitat conversion or vegetation removal. Existing biological resources, including special-status species, habitats, and wildlife corridors, within the BAAQMD's jurisdiction would not be affected. Therefore, the Project would not have a substantial adverse

effect on a candidate, sensitive, or special-status species; riparian habitat or other sensitive natural community; or state or federally protected wetlands. Additionally, the Project would not interfere 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 would occur, and this issue will not be analyzed further in the EIR.

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

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of buildings in residential and commercial areas. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. Because there would be no construction, the Project would also not result in habitat conversion or vegetation removal. Existing biological resources, including special-status species, habitats, and wildlife corridors, within the BAAQMD's jurisdiction would not be affected. Therefore, the Project would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Similarly, the Project would not conflict with a habitat conservation plan or natural community conservation plan. Therefore, no impact would occur, and this issue will not be analyzed further in the EIR.

2.5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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 Section 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☐	☒
c) Substantially disturb human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

2.5.1 Environmental Setting

The BAAQMD's 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. This area covers about 5,600 square miles, and land uses within the area include a range of commercial, industrial, residential, agricultural, and open space uses. Cultural resources are defined as buildings, sites, structures, or objects which might have historical architectural, archaeological, cultural, or scientific importance. Cultural resources generally are the material remains of human activity identified with either the prehistoric inhabitants of the area (any time before the arrival of the Spanish in the latter half of the 18th century) or with the historic inhabitants. The historic period begins with the arrival of the Spanish.

Cultural resources in the Bay Area reflect centuries of human settlement in the region and document the changing character of economic, social, and spiritual activities. They include prehistoric resources, historic-period resources, and 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 (MTC and ABAG 2021: 3.7-1).

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 (MTC and ABAG 2021: 3.7-1).

Of the 8,118 sites recorded in the Bay Area as of 2013, 1,006 cultural resources were listed in the California Register of Historic Resources (CRHR), meaning that they are significant at the local, State or national level. Of those, 744 are also listed in 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 of NRHP- and CRHR-listed resources, with 147 resources (MTC and ABAG 2021: 3.7-12 and 3.7-13).

2.5.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of buildings in residential and commercial areas. Grading would not be required.

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

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

c) Substantially disturb human remains, including those interred outside of formal cemeteries?

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings and would not require any excavation that may disturb historical or archaeological resources or human remains or structure modification that may affect historic structures. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities that may disturb historical or archaeological resources or human remains. Therefore, the Project would not adversely affect historical or archaeological resources or disturb human remains, including those interred outside of formal cemeteries. No impact would occur, and this issue will not be analyzed further in the EIR.

2.6 ENERGY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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 operation?	☐	☐	☐	☒
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

2.6.1 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 BAAQMD's jurisdiction (Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma) used over approximately 53,050 gigawatt/hours (millions of kilowatt/hours) in 2020 (California Energy Commission 2020a). Residential and non-residential electricity use accounts for approximately 33 and 67 percent, respectively. In 2020, the counties within the BAAQMD used approximately 2,682 million therms of natural gas (California Energy Commission 2020b). Residential and non-residential natural gas use accounts for approximately 40 and 60 percent, respectively.

In 2020, approximately 85 percent of the electricity PG&E supplied was GHG free (PG&E 2021). More than 35 percent of PG&E's delivered electricity came from Renewable Portfolio Standard (RPS)-eligible sources, including solar, wind, geothermal, small hydroelectric, and various forms of bioenergy. PG&E is also progressing to meet the State's 60 percent by 2030 renewable energy mandate.

2.6.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of residential and commercial buildings.

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

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

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings and would not require any grading or other ground disturbance. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. Because no construction would be required, implementation of the proposed rule amendments would not require of the use of any heavy-duty equipment or other construction-related vehicles and thus, would not result in consumption of energy resources.

Regarding operations, the draft rule amendments would allow for any energy source that meets the draft emissions standards. If natural gas-fired appliances are developed that meet the proposed emissions standards, there will be no change from the current consumption of energy resources, and no environmental impact would occur. If, on the other hand and based on currently available technology, natural gas-fired appliances are replaced with electric solutions, this would also not lead to an adverse environmental impact. According to CARB, electrification supports the wise and efficient use of energy resulting in beneficial long-term operation impacts on energy demand. Replacement of older equipment typically results in increased energy efficiency. In addition, as discussed above, approximately 85 percent of the electricity PG&E supplied in 2020 was GHG free with more than 35 percent being delivered from RPS-eligible sources, including solar, wind, geothermal, small hydroelectric, and various forms of bioenergy (PG&E 2021). Thus, implementation of the proposed rule amendments would not result in wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency. No impact would occur, and this issue will not be analyzed further in the EIR.

2.7 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Geology and 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 California Geological Survey Special Publication 42.)	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

2.7.1 Environmental Setting

REGIONAL GEOLOGY

California has 11 natural geologic regions, known as geomorphic provinces, which are defined by the presence of similar physical characteristics, such as relief, landforms, and geology. The majority of the Bay Area is located within what is known as the Coast Range geomorphic province, with eastern portions of Solano, Contra Costa, and Alameda Counties extending into the neighboring Great Valley geomorphic province, located east of the Coast Range.

The Coast Range extends about 400 miles along the Pacific Coast, from Oregon south into Southern California. The Coast Range province is characterized by a series of northwest trending ridges and valleys that roughly parallel the San Andreas fault zone and can be further divided into the northern and southern ranges, which are separated by San Francisco Bay. The San Francisco Bay is a broad, shallow regional structural depression created from an east-west expansion between the San Andreas and the Hayward fault systems (MTC and ABAG 2021: 3.8-1).

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. Marginal lands surrounding San Francisco Bay consist generally of alluvial plains of low relief that slope gently towards the bay from bordering uplands and foothills. The alluvial plains that make up the bay margin are composed of alluvial sediments (up to two million years old) consisting of unconsolidated stream and basin deposits. These alluvial plains terminate bayward at the tidal marshlands that immediately surround the bay. Marshlands are composed of intertidal deposits, including widely found, fine-grained plastic clays commonly referred to as bay mud, which, in some areas, underlies artificial fills (MTC and ABAG 2021: 3.8-2).

Portions of Solano, Contra Costa, and Alameda Counties are in the Great Valley geomorphic province, which is characterized by a large, nearly level inland alluvial plain 400 miles in length and averaging 50 miles in width. The topography of the Great Valley is primarily flat, but it slopes gently along its eastern margin (Sierra Nevada foothills) and western margin (Coast Ranges) (MTC and ABAG 2021: 3.8-2).

SOILS

A wide variety of soils and soil types can be found throughout the nine-county Bay Area region. Soils in the Bay Area fall within four major classifications established by the U.S. Natural Resources Conservation Service. Depending on localized conditions, these general classifications are grouped into more specific soil types by location, climate, and slope. The Santa Clara Valley and the alluvial plains surrounding San Francisco Bay are classified as deep alluvial plain and floodplain soils. These soils occupy the valleys in areas with higher rainfall and are considered productive when drained and fertilized. Soils closer to the bay margin are generally dark-colored clays that have a high water table or are subject to flooding. Soils at the extreme edge of San Francisco Bay have a moderate to high content of soluble salts; these soils are referred to as alkali soils. Soils in northern San Mateo County, the eastern portion of San Francisco, and Marin County are classified as residual soils and are characterized by moderate depth to underlying bedrock. However, much of the Bay Area has been developed, and in urbanized areas, native soils are commonly no longer present or have been reworked and combined with imported fill materials over a long history of earthwork activities associated with development (MTC and ABAG 2021: 3.8-2).

SEISMICITY AND SEISMIC HAZARDS

The San Francisco Bay Area is a seismically active region with numerous active and potentially active faults capable of producing significant seismic events. An active fault is defined by the State of California as a fault that has had surface displacement within Holocene time (approximately the last 10,000 years). A potentially active fault is defined as a fault that has shown evidence of surface displacement during the Quaternary (last 1.6 million years) unless direct geologic evidence demonstrates inactivity for all of the Holocene or longer. The Hayward, Calaveras, and San Andreas Faults are the three faults considered to have the highest probabilities of causing a significant seismic event in the Bay Area. These three faults are classified as strike-slip faults that have experienced movement within the last 155 years. Other faults include the Rodgers Creek-Healdsburg, Concord-Green Valley, Marsh Creek-Greenville, and the West Napa Faults. A major seismic event on any of these active faults could cause significant ground shaking and potential surface fault rupture (MTC and ABAG 2021: 3.8-3).

Ground movement intensity during an earthquake can vary depending on the overall magnitude, distance to the fault, direction of earthquake energy, and type of geological material. Areas that are underlain by bedrock tend to experience less ground shaking than those underlain by unconsolidated sediments such as artificial fill. Earthquake

ground shaking may have secondary effects on certain foundation materials, including liquefaction, seismically induced settlement, and lateral spreading.

PALEONTOLOGICAL RESOURCES

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, chaotically mixed, or severely fractured. Records of paleontological finds maintained by the University of California Museum of Paleontology state that there are approximately 5,809 sites at which fossil remains have been found in the Bay Area, with the greatest concentration of 2,570 occurring in Contra Costa County; San Mateo County has the second highest number of paleontological sites at 924 (MTC and ABAG 2021: 3.8-12 and 3.8-13).

2.7.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of buildings in residential and commercial areas. Grading would not be required.

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 California Geological Survey Special Publication 42.)

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings and would not require any grading or other ground disturbance. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. Geologic hazards are not expected because no construction activities would occur. Therefore, the Project would not expose people or structures to substantial adverse effects related to rupture of a known earthquake fault, strong seismic ground shaking, strong ground failure or liquefaction, or landslides. No impact would occur, and this issue will not be analyzed further in the EIR.

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

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings and would not require any grading or other ground

disturbance. Thus, the proposed rule amendments would not result in substantial soil erosion or the loss of topsoil. No impact would occur, and this issue will not be analyzed further in the EIR.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings and would not require any grading or other ground disturbance. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. Geologic hazards are not expected because no construction activities would occur. Therefore, the Project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. No impact would occur, and this issue will not be analyzed further in the EIR.

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

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings and would not require any grading or other ground disturbance. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. Geologic hazards are not expected because no construction activities would occur. Therefore, the Project would not be located on expansive soils. No impact would occur, and this issue will not be analyzed further in the EIR.

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

No impact. Septic tanks or other similar alternative wastewater disposal systems are typically associated with small residential projects in remote areas. Residential and commercial consumers affected by the proposed rule amendments would already be connected to appropriate wastewater treatment facilities in the Bay Area and would not rely on septic tanks or similar alternative wastewater disposal systems. Based on these considerations, septic tanks or other alternative wastewater disposal systems are not expected to be affected by the Project. No impact would occur, and this issue will not be analyzed further in the EIR.

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

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings and would not require any grading or other ground disturbance. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. Because no construction or grading would occur, the Project would not destroy unique paleontological resources or sites or unique geologic features. Therefore, no impact would occur, and this issue will not be analyzed further in the EIR.

2.8 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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?	☒	☐	☐	☐

2.8.1 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 GHGs 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. These GHGs 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 snowpack, 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 carbon dioxide equivalent (CO_2e) emissions per year. Technically, black carbon is not a gas but is made up of solid particulates or aerosols. It is included in the discussion of GHG emissions because it is an important contributor to global climate change.

Historically, regional GHG emissions rose substantially as the Bay Area industrialized (BAAQMD 2022). But emissions have peaked recently, and they are expected to decline in the coming years. 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, to reach the aggressive targets adopted by California and by the BAAQMD.

2.8.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of residential and commercial buildings.

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?

Potentially significant impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. The overall purpose of the proposed amendments is to reduce NOx emissions from natural gas-fired space- and water-heating appliances in buildings in the Bay Area, but implementation may also reduce GHG emissions in the future.

As discussed in Section 2.3, "Air Quality," the Plan provides a regional strategy to protect public health by continuing progress toward attaining all Federal and State AAQS and eliminating health risk disparities from exposure to air pollution among Bay Area communities (BAAQMD 2017b). Regarding climate change, the Plan also defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050 and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets and align with State goals, supporting the California's 2017 Climate Scoping Plan and the 2022 Scoping Plan update currently in process. The Plan includes a wide range of control measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and TACs; to reduce emissions of CH_4 and other "super-GHGs" that are potent climate pollutants in the near-term; and to decrease emissions of CO_2 by reducing fossil fuel combustion.

The proposed amendments to Rules 9-4 and 9-6 may reduce GHG emissions and support the achievement of reduction goals if natural gas-fired appliances are replaced by electric appliances. As discussed above, applicable plans, policies and regulations are aimed at limiting global climate change to well under 2°C, and at reducing regional and state-wide emissions to 80 percent below 1990 levels by 2050 to achieve that goal. The amendments would not directly conflict with Bay Area's progress towards achieving that emission reduction target. In fact, the Project would implement portions of the Plan and is intended to create a consistent regulatory framework for these operations.

However, implementation of the proposed rule amendments could result in indirect generation of GHG emissions if construction of additional grid capacity is required. GHG emissions associated with construction and operation of new or expanded electrical infrastructure could have a significant effect on the environment and could conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. This would be a potentially significant impact that will be analyzed further in the EIR.

2.9 HAZARDS AND HAZARDOUS MATERIALS

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

2.9.1 Environmental Setting

The BAAQMD's jurisdiction includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties, and potions of western Solano and southern Sonoma Counties. This area covers about 5,600 square miles, and land uses within the area include a range of commercial, industrial, residential, and agricultural uses.

Facilities and operations within the BAAQMD handle and process substantial quantities of flammable materials and acutely toxic substances. Accidents involving these substances can result in worker or public exposure to fire, heat, blast from an explosion, or airborne exposure to hazardous substances.

Hazards are related to the production, use, storage, and transport of hazardous materials. Industrial production and processing facilities are potential sites for hazardous materials. Some facilities produce hazardous materials as their

end product, while others use such materials as an input to their production processes. Examples of hazardous materials used by consumers include fuels, paints, paint thinner, nail polish, and solvents. Hazardous materials may be stored at facilities producing such materials and at facilities where hazardous materials are part of the production processes. Currently, hazardous materials are transported throughout the Bay Area in great quantities via all modes of transportation including rail, highway, water, air, and pipeline.

2.9.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of buildings in residential and commercial areas. No construction would be required.

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/or accident conditions involving the release of hazardous materials into the environment?

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings and would not require the transport, use, or disposal of hazardous materials. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. Impacts related to the transport, use, or disposal of hazardous materials or the accidental release of hazardous materials are not expected because no construction activities would occur. Therefore, the proposed amendments to Rules 9-4 and 9-6 would not create a significant hazard to the public or environment related to the transport, use, or disposal of hazardous materials or the accidental release of hazardous materials. No impact would occur, and this issue will not be analyzed further in the EIR.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No impact. Schools may be located within a quarter mile of residential and commercial buildings affected by the proposed rules amendments. The proposed amendments to Rules 9-4 and 9-6 would not result in the construction or operation of equipment or result in modifications to existing equipment, 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. The proposed rule amendments are expected to result in a reduction in TAC emissions and a reduction in the related health risk associated with exposure to TAC emissions, providing emissions and health benefits. Therefore, no increase in hazardous emissions is expected due to implementation of the proposed amendments to Rule 9-4 and 9-6. No impact would occur, and this issue will not be analyzed further in the EIR.

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

No impact. Government Code Section 65962.5 requires the creation of lists of facilities that may be subject to Resource Conservation and Recovery Act (RCRA) permits or site cleanup activities. Because the Project area includes nine counties, it is not known if the affected residential and commercial buildings are located on the hazardous materials sites list pursuant to Government Code Section 65962.5. However, the proposed rule amendments would not interfere with site cleanup activities or create additional site contamination and would not create a significant hazard to the public or environment. Therefore, no impact would occur, and this issue will not be analyzed further in the EIR.

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

No impact. The proposed rule amendments would not result in a safety hazard for people residing or working within two miles of a public airport. No impacts on airports or airport land use plans are anticipated from implementation of the amendments to Rules 9-4 and 9-6 because new appliances would be installed inside of residential and commercial buildings. Therefore, no impact would occur, and this issue will not be analyzed further in the EIR.

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

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. Because no construction would occur, the proposed rule amendments would not interfere with an adopted emergency response plan or emergency evacuation plan or require street closures that could affect emergency response or evacuation activities. Therefore, implementation of the proposed rule amendments would not impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plan. No impact would occur, and this issue will not be analyzed further in the EIR.

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

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings and would not generate additional development that would place people or structures closer to wildland areas. The proposed rule amendments would not increase the existing risk of fire hazards, nor would it increase fire risk by increasing the use of flammable materials. The proposed amendments to Rules 9-4 and 9-6 would not expose people or structures to wildfires. Therefore, no impact would occur, and this issue will not be analyzed further in the EIR.

2.10 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Hydrology and Water Quality.				
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☐	☒
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial on- or offsite erosion or siltation;	☐	☐	☐	☒
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; or	☐	☐	☐	☒
iv) Impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

2.10.1 Environmental Setting

The BAAQMD's 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. This area covers about 5,600 square miles.

REGIONAL HYDROLOGY

San Francisco Bay encompasses approximately 1,600 square miles and is surrounded by the nine Bay Area counties, of which seven border the bay. The San Francisco Bay is partially enclosed and is relatively shallow. Much of the perimeter of the bay is shallow tidal mud flats, tidal marshes, diked or leveed agricultural areas, and salt ponds. The

north lobe of San Francisco Bay is brackish and is known as San Pablo Bay. It is surrounded by Marin, Sonoma, Napa, and Solano Counties. Suisun Marsh is between San Pablo Bay and the Sacramento–San Joaquin Delta (Delta) and is the largest contiguous brackish marsh on the west coast of North America, providing more than 10 percent of California's remaining natural wetlands (MTC and ABAG 2021: 3.10-2).

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 subbays, Suisun Bay and San Pablo Bay, and finally into the central area of the bay and out the Golden Gate strait. The Delta is a large triangle of interconnected sloughs and agricultural "islands" that form a key link in California's water delivery system. Some of the freshwater flows through the Delta and into the 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 (MTC and ABAG 2021: 3.10-2).

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 snow melt. Other surface waters flow either directly to the bay or Pacific Ocean. The drainage basin that contributes surface water flows directly to the bay covers a total area of 3,464 square miles. The largest watersheds include the Alameda Creek (695 square miles), the Napa River (417 square miles), and the Coyote Creek (353 square miles) watersheds. The San Francisco Bay estuary includes deep-water channels, tidelands, and marshlands that provide a variety of habitats for plants and animals (MTC and ABAG 2021: 3.10-2 and 3.10-3).

The interaction between Delta outflow and Pacific Ocean tides determines how far salt water intrudes into the Delta. The salinity of the water varies widely as the landward flows of saline water and the seaward flows of fresh water converge near the Benicia Bridge. The salinity levels in the central area of the bay can vary from near oceanic levels to one-quarter as much, depending on the volume of freshwater runoff, which depends on precipitation, reservoir releases, and upstream diversions (MTC and ABAG 2021: 3.10-3).

SURFACE WATERS

Surface waters in the Bay Area include freshwater rivers and streams, coastal waters, and estuarine waters. Estuarine waters include the San Francisco Bay Delta from the Golden Gate Bridge to the Sacramento and San Joaquin Rivers, and the lower reaches of various streams that flow directly into the bay, such as the Napa and Petaluma Rivers in the North Bay and the Coyote and San Francisquito Creeks in the South Bay.

GROUNDWATER

The Bay Area region is divided into a total of 28 groundwater basins. Groundwater in the region is used for numerous purposes, including municipal and industrial water supply. However, groundwater use accounts for only about five percent of the total water consumption (MTC and ABAG 2021: 3.10-4 and 3.10-5).

SURFACE WATER QUALITY

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. 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 (MTC and ABAG 2021: 3.10-6).

FLOOD HAZARDS

The San Francisco Bay contains many flat, low-lying marginal areas and highly developed valleys with surrounding steep terrain that are conducive to flooding, especially during intense storms. Major floods occur regularly in the Bay Area, and local structural flood damage reduction measures, such as reservoirs, levees, and channel improvements, have been implemented. The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP), which provides subsidized flood insurance to communities that comply with FEMA regulations to limit development in floodplains.

TSUNAMIS AND SEICHES

A tsunami is a series of waves generated in a body of water by a rapid disturbance (e.g., submarine seismic, volcanic, or landslide event) that vertically displaces water. Tsunamis affecting the Bay Area can result from offshore earthquakes within the Bay Area or from distant events. A total of 51 tsunamis have been recorded or observed within the San Francisco Bay since 1850 (MTC and ABAG 2021: 3.10-11). Seiches are oscillations of enclosed and semienclosed bodies of water, such as bays, lakes, or reservoirs, caused by strong ground motion from seismic events, wind stress, volcanic eruptions, large landslides, and local basin reflection of tsunamis.

2.10.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of buildings in residential and commercial areas. No construction would be required.

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

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

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in substantial on- or offsite erosion or siltation;

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; or

iv) Impede or redirect flood flows?

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

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

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. The proposed rule amendments would not result in an increase in water runoff or wastewater discharge, would not result in water quality impacts, and would not result in the degradation of surface water or groundwater. The proposed rule amendments are not expected to result in any modifications to NPDES permits or result in violation of NPDES permits. No grading or site preparation would be involved and, therefore, no water would be used during these activities. Additionally, the proposed rule amendments would not alter the existing drainage or drainage patterns, result in erosion or siltation, alter the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite. Further, the proposed rule amendments would not result in an increase in wastewater that requires treatment and would not affect any wastewater treatment facility, storm water runoff, or existing drainage patterns. Additionally, proposed amendments to Rules 9-4 and 9-6 would not include the construction of new or relocation of existing housing or other types of facilities and, as such, would not require the placement of housing or other structures within a 100-year flood hazard area. Because no construction activities are involved, the proposed rule amendments would not a substantially increase risks from flooding; expose people or structures to significant risk of loss, injury or death involving flooding; or increase existing risks, if any, of inundation by seiche, tsunami, or mudflow. Therefore, no hydrologic or water quality impacts would occur, and this issue will not be analyzed further in the EIR.

2.11 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Land Use and 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?	☐	☐	☐	☒

2.11.1 Environmental Setting

The BAAQMD's 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. This area covers about 5,600 square miles, and land uses within the area include a range of commercial, industrial, residential, agricultural, and open space uses. The land uses surrounding the bay margins tend to be more intensely developed, particularly from San Francisco south along the Peninsula to Santa Clara County, and 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 agriculture defining the landscape. Other areas of the Bay Area, such as the East Bay and Solano County, tend to be more suburban in character, with heavy industry related to oil refineries dotting the landscape as well as agriculture (MTC and ABAG 2021: 3.11-1).

According to the most recent data (available from 2016 and 2018), approximately 18 percent of the region's 4.5 million acres are considered to be urban or built-up land according to the California Department of Conservation Farmland Mapping and Monitoring Program. The remaining "undeveloped" area includes open space and agricultural lands, as well as water bodies (excluding the San Francisco Bay) and parks. Approximately 29 percent of the region is identified as protected open space. The Bay Area includes 101 cities with San Jose, San Francisco, and Oakland representing the largest urban centers (MTC and ABAG 2021: 3.11-2).

2.11.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of buildings in residential and commercial areas.

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?

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings and would not affect land use or planning. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require

construction of new or expanded facilities. Because no construction would occur, the proposed rule amendments would not physically divide an established community. As noted above, the proposed rule amendments would apply to residential and commercial areas; the Project would not conflict with land use plans, policies, or regulations. No land use or planning impacts would occur, and this issue will not be analyzed further in the EIR.

2.12 MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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?	☐	☐	☐	☒

2.12.1 Environmental Setting

The BAAQMD's 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. This area covers about 5,600 square miles, and land uses within the area include a range of commercial, industrial, residential, agricultural, and open space uses.

Most of the mineral resources in the Bay Area are located in the populated plains or valleys (rather than in the mountainous areas), which limits the potential for extraction. Nevertheless, substantial mineral resource extraction has occurred. More than 25 mineral commodities have been recovered in substantial quantities. The major mineral resources recovered in the Bay Area are (1) construction materials, such as limestone and oyster shells (used in 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, fulfilling a need for low-cost construction materials and a supply of energy (MTC and ABAG 2021: 3.8-13).

2.12.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of buildings in residential and commercial areas. No grading or subsurface excavation would be required.

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?

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings and would not require any grading or other ground disturbance. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. Because no grading or subsurface excavation would occur, the proposed amendments would not 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 a locally important mineral resource recovery site. Thus, no impacts to mineral resources would occur, and this issue will not be analyzed further in the EIR.

2.13 NOISE

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

2.13.1 Environmental Setting

The existing noise environment in the Bay Area is composed of two primary categories of noise sources: transportation and non-transportation. The ambient noise environment in the urban areas of the Bay Area is primarily influenced by traffic noise. Traffic noise exposure is primarily a function of the volume of vehicles per day, the speed of those vehicles, the type of ground (i.e., hard or soft), 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. Baseline traffic noise (based on the traffic study) within the Bay Area has been characterized by traffic noise modeling. The baseline for the noise analysis is a simulation of 2015 traffic levels and land use. Based on modeling conducted for all roadway types within Bay Area, average noise levels range from 52.6 decibels (dBA) Community Noise Equivalent Level (CNEL) (next to collector and small roads) to as high as 74.9 dBA CNEL (next to freeways) (MTC and ABAG 2021: 3.12-9).

The Bay Area is also affected by noise from freight and passenger rail operations. While these operations generate significant noise levels in the immediate vicinity of the railways, train operations are intermittent and area railways are widely dispersed. Commuter rail, such as San Francisco Municipal Railway and Valley Transportation Authority, operate with more frequency than standard gauge rail operations but at lower speeds, resulting in lower noise levels. Bay Area Rapid Transit operations, on the other hand, can attain higher speeds and have the potential for greater noise levels along extended stretches. Based on available data, noise levels from rail operations within the Bay Area can range from 62 dBA CNEL to 81 dBA CNEL (MTC and ABAG 2021: 3.12-9). Train operations may also be a source of ground vibration near the tracks.

The Bay Area has many airports, including public use, private use, and military facilities. Major airports include San Francisco International, Oakland International, and Norman Y. Mineta San Jose International. In addition to the daily aircraft operations originating and terminating at these facilities, aircraft not using these airports frequently fly over the Bay Area. All of these operations contribute to the overall ambient noise environment. In general, like rail noise, the proximity of the receiver to the airport and aircraft flight path determines the noise exposure. Other contributing

factors include the type of aircraft operated, altitude of the aircraft, and atmospheric conditions. Atmospheric conditions may contribute to the direction of aircraft operations (flow) and affect aircraft noise propagation.

A wide variety of industrial and other non-transportation noise sources are located within the Bay Area. These include manufacturing plants, landfills, treatment plants (e.g., water), power generation facilities, refineries, food packaging plants, lumber mills, and aggregate mining facilities, just to name a few. Noise generated by these sources varies widely, but in many cases may be a significant if not dominant contributor to the noise environment (MTC and ABAG 2021: 3.12-11).

2.13.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of buildings in residential and commercial areas.

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 in other applicable local, state, or federal standards?

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

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings and would not require construction. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. The proposed rule amendments would regulate the type of equipment that would be installed, not whether it would be installed. Regardless of the Project, Bay Area consumers would continue to purchase and install new furnaces and water heaters over the coming decades. Installation activities (which may generate a small amount of noise, would be temporary, and would primarily occur inside of existing residential and commercial buildings) would occur with or without the Project. Because no construction would be involved and installation would occur inside existing buildings, the proposed amendments would not generate a substantial temporary increase in ambient noise levels in excess of local noise standards. Therefore, noise impacts associated with construction activities would not occur, and this issue will not be analyzed further in the EIR.

The new appliances are not major sources of noise and would result in little to no noise impacts. Any noise producing equipment must comply with local noise ordnances and applicable OSHA and Cal/OSHA noise requirements. Compliance with these noise requirements would apply to residential and commercial buildings and would be expected to limit noise to acceptable levels. Therefore, noise impacts associated with operational activities would not occur, and this issue will not be analyzed further in the EIR.

The proposed rule amendments would not generate or expose people to excessive groundborne vibration or groundborne noise. No large construction equipment that would generate substantial noise or vibration (e.g., backhoes, graders, jackhammers, etc.) would be needed, no new appliances that would generate vibration would be installed, and no increase in traffic would be generated. Therefore, no vibration impacts would occur, and this issue will not be analyzed further in the EIR.

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

No impact. Airports may be located within two miles of residential and commercial buildings affected by the proposed rules amendments. However, the proposed rule amendments, which would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area, would not expose people residing or working in the Project area to excessive noise levels associated with airports, as this type of equipment is not typically noise generating equipment. Further, the proposed amendments would not locate residents or commercial buildings or other sensitive noise sources closer to airport operations. Therefore, the Project would not expose people residing or working in the Project area to excessive noise levels. No impact would occur, and this issue will not be analyzed further in the EIR.

2.14 POPULATION AND HOUSING

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

2.14.1 Environmental Setting

The BAAQMD's 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. This area covers about 5,600 square miles, and land uses within the area include a range of commercial, industrial, residential, agricultural, and open space uses.

Population in the Bay Area in 2015 was about 7.6 million people, which is about 20 percent of California's population. The population of the Bay Area is expected to grow to about 10.4 million people by 2050. Approximately 2.8 million people in the Bay Area were employed in 2015, and that number is expected to grow to 4 million jobs by 2050. Overall, the region's population is expected to grow by 37 percent from 2015 to 2050 conditions, while the number of employed residents is forecasted to increase by 42 percent over the same period, meaning there would be more workers per capita in 2050 than in 2015 (MTC and ABAG 2021: 2-26).

2.14.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of buildings in residential and commercial areas. No new residential or commercial buildings would be constructed, and no new jobs or businesses would be created.

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

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

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings. No new residential or commercial buildings would be constructed. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities.

It is expected that the existing labor pool in the Bay Area would accommodate the minor installation activities. In addition, no new jobs or businesses would be created as a result of the proposed amendments. As such, implementing the proposed amendments to Rules 9-4 and 9-6 would not induce substantial population growth. Therefore, no impact would occur, and this issue will not be analyzed further in the EIR.

The proposed rule amendments would not displace people or housing or require the construction of replacement housing. No impact would occur, and this issue will not be analyzed further in the EIR.

2.15 PUBLIC SERVICES

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

2.15.1 Environmental Setting

The BAAQMD's 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. Public services are provided by a wide variety of local agencies.

Fire protection services are managed at the local level, typically by municipalities, counties, fire protection districts, or volunteer fire companies. California Government Code Section 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., the California Department of Forestry and Fire Protection, 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. In an effort to prevent fire-related emergencies altogether, most fire departments and agencies sponsor prevention programs (e.g., public education, vegetation clearance) and enforce fire code regulations in built structures (MTC and ABAG 2021: 3.13-2).

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 system that traverse the Bay Area 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. Additionally, each incorporated city and town has a police department responsible for police protection within its own jurisdiction. Unincorporated areas and individual cities and towns also may contract with county sheriff departments for police services instead of providing their own. Cities and towns may also contract with the county sheriff department to provide law enforcement services (MTC and ABAG 2021: 3.13-1).

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 nine-county region of the Bay Area provides residents with local public education facilities and services, including elementary, middle, secondary, and postsecondary schools, as well as special and adult education. As of the 2018-2019 school year, there were 1,764 public and charter schools in the Bay Area with 1,051,744 enrolled students and 53,174 teachers (MTC and ABAG 2021: 3.13-1).

Public facilities (e.g., libraries, social services, parks) within the BAAQMD are managed by different county, city, and special-use districts.

2.15.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of buildings in residential and commercial areas.

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

Fire protection?

Police protection?

Schools?

Parks?

Other public facilities?

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings that are currently provided with applicable public services; the Project would not increase the demand for these services. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. The proposed amendments are expected to result in additional control measures for sources of NOx emissions, particularly for applications in residential and commercial buildings. The modified rules would not require new facilities but may require sources to implement air pollution control measures. No additional fire or police protection services are expected to be required due to the proposed rule amendments as they would apply to existing emission sources.

As noted in Section 2.14, "Population and Housing," implementation of the proposed rule amendments would not induce population growth because no construction activities would occur, and no new jobs (temporary or permanent) would be created. As such, the proposed rule amendments would not increase the demand for public services nor generate the need for new or physically altered governmental facilities. No impact would occur, and this issue will not be analyzed further in the EIR.

2.16 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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?	☐	☐	☐	☒

2.16.1 Environmental Setting

The BAAQMD's jurisdiction includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties, and potions of western Solano and southern Sonoma Counties. This area covers about 5,600 square miles, and land uses within the area include commercial, industrial, residential, and agricultural uses.

The Bay Area contains over one million acres of parks and open space areas. 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 (the most recent year for which a full dataset is available) (MTC and ABAG 2021: 3.13-4).

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 cities, counties, regional park districts, State and federal government, private individuals, and nonprofit land trusts (MTC and ABAG 2021: 3.13-5).

The California Coastal Commission and the Bay Conservation and Development Commission (BCDC) regulate land use near the coastline and along the bay, respectively, to protect and enhance the coastline and to promote public access within the coastal zone of California. On land, the coastal zone varies in width from several hundred feet in highly urbanized areas to up to 5 miles in certain rural areas, and offshore, the coastal zone extends along a 3-mile-wide band of ocean. The coastal zone established by the California Coastal Act does not include San Francisco Bay, where development is regulated by BCDC.

2.16.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of buildings in residential and commercial areas. No new residential or commercial buildings would be constructed, and no new jobs or businesses would be created.

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?

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. No new residential or commercial buildings would be constructed, and no new jobs or businesses would be created. Because the proposed amendments to 9-4 and 9-6 would not increase or redistribute population, the proposed amendments 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. No impact would occur, and this issue will not be analyzed further in the EIR.

2.17 TRANSPORTATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	☒
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☐	☒

2.17.1 Environmental Setting

The BAAQMD's 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. This area covers about 5,600 square miles. The Bay Area features a robust transportation network, allowing for multimodal access across the region. The transportation system includes interstate and State highways, local arterial roadways, local streets and roads, public transit systems, bicycle and pedestrian facilities, seaports, and airports.

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 to providing mobility for automobiles, these facilities also support express bus services and freight movement. In addition, the Bay Area has over 20,000 miles of arterials and local streets, providing access to communities, and accommodating on-street parking and loading activities. Together, these roadway facilities carry 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 (MTC and ABAG 2021: 3.15-1 and 3.15-2). Additionally, Amtrak provides long-distance passenger rail services connecting the Bay Area to the Central Valley, Southern California, the Pacific Northwest, and the Midwest; and California High-Speed Rail service is planned to begin service from San Francisco to the Los Angeles basin, eventually extending to Sacramento and San Diego.

The Bay Area public transit system includes a combination of heavy rail (e.g., BART), light rail (e.g., Muni Metro and Santa Clara Valley Transportation Authority [VTA] Light Rail), commuter rail (e.g., Caltrain and ACE), 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 AC Transit, and 7 percent (121,000) on VTA (MTC and ABAG 2021: 3.15-2).

The Bay Area has an extensive system of pedestrian facilities including multi-use paths, sidewalks, crosswalks, walkways, stairs. In addition to pedestrian facilities, the Bay Area has a bikeway network, of which 1,450 miles of the 2,140-mile network have been completed as of December 2018 (MTC and ABAG 2021: 3.15-8).

The Bay Area is served by five seaports, which provide the opportunity for intermodal transfers to trucks and railcars. The Port of Oakland, the largest of the five, is the third largest U.S. seaport on the West Coast (after the Ports of Los Angeles and Long Beach). Other seaports include the Port of San Francisco, the Port of Richmond, the Port of Benicia,

and the Port of Redwood City. These seaports are supported by freight railroad services operated by Union Pacific and Burlington Northern Santa Fe. The Bay Area is also served by three international airports: San Francisco International Airport, Oakland International Airport, and Norman Y. Mineta San José International Airport.

According to U.S. Census Bureau data, Bay Area residents use a variety of transportation modes to get to their workplaces. While nearly two in three Bay Area residents drive alone to get to work on a typical day, twelve percent of residents rely on public transit and six percent either walk or bike to work. Over the past nearly three decades, the share of workers driving alone to work has been fairly constant at the regional level, remaining at around 68 percent between 1990 and 2010, with a decrease of four percentage points to 64 percent in 2018. Carpooling has decreased in popularity in the Bay Area over the past decade compared to other commute options, declining from thirteen percent in 1990 to ten percent in 2018. Transit mode share has increased by two percentage points, from ten percent to twelve percent, while bicycling to work and working from home have doubled from one percent to two percent and from three percent to six percent, respectively (MTC and ABAG 2021: 3.15-10).

2.17.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of buildings in residential and commercial areas. No construction would be required.

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

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3(b), which pertains to vehicle miles travelled?

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of buildings in residential and commercial areas. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded equipment manufacturing facilities or notable changes to equipment distribution patterns that could increase vehicle miles traveled (VMT).

As described in Section 2.13, "Noise," the proposed rule amendments would regulate the type of equipment that would be installed, not whether it would be installed. Regardless of the Project, Bay Area consumers would continue to purchase and install new furnaces and water heaters over the coming decades. Installation activities (which would include minimal truck trips for delivery/installation, spread out across the nine counties of the Bay Area, and occurring over several decades as consumers replace their existing furnaces and water heaters) would occur with or without the Project. Similarly, maintenance or repair activities (should they be needed), would occur regardless of the Project. It is expected that the existing labor pool in the Bay Area would accommodate the very minor installation and (should they be needed) maintenance and repair activities.

As discussed in Section 2.14, "Population and Housing," no new jobs or businesses would be created. Thus, no increase in permanent worker or truck traffic would occur. The proposed amendments to Rules 9-4 and 9-6 would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Further, the proposed rule amendments would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3 subdivision(b), as no substantial increase in traffic would occur. Therefore, no impacts would occur, and this issue will not be analyzed further in the EIR.

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 rule amendments would not increase traffic hazards or create incompatible uses. The Project does not involve construction of any roadways or other transportation design features; therefore, no changes to current roadway designs that would increase traffic hazards would occur. Because the proposed rule amendments would not change the roadway system, would not involve construction, and would not generate substantial truck trips, no impacts to emergency access would occur. No impacts would occur, and this issue will not be analyzed further in the EIR.

2.18 TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Tribal Cultural Resources.				
Has a California Native American Tribe requested consultation in accordance with Public Resources Code section 21080.3.1(b)?	☐ Yes			☒ No
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:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☐	☐	☐	☒
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☐	☐	☒

2.18.1 Environmental Setting

The BAAQMD's 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. This area covers about 5,600 square miles, and land uses within the area include a range of commercial, industrial, residential, agricultural, and open space uses.

Prehistoric cultural resources are composed of Native American structures or sites of historical or archaeological interest. These may include districts, objects, landscape elements, sites, or features that reflect human occupations of the region, such as villages and burial grounds. The moderate climate, combined with the abundant natural resources found throughout the nine-county region, has supported human habitation for several thousand years Before Present (BP). Some theories suggest that the prehistoric bay and river margins were inhabited as early as 10,000 years ago. Rising sea levels, the formation of the San Francisco Bay, and the resulting filling of inland valleys have covered these early sites, which were most likely located along the then existing bay shore and waterways. Existing evidence indicates the presence of many village sites from at least 5,000 years BP in the region. The arrival of Native Americans into the Bay Area is associated with documented cultural resources from circa 5,500 BP (MTC and ABAG 2021: 3.7-1 and 3.7-2).

Six different groups of Native American population, identified by their language, lived within the Bay Area: Ohlone (Alameda, Contra Costa, San Francisco, San Mateo, Santa Clara, and Solano Counties), Bay Miwok (Contra Costa County), Patwin (Napa and Solano Counties), Coast Miwok (Marin and Sonoma Counties), Pomo (Sonoma County), and Wappo (Napa County). These native populations periodically increased between 5,000 BP 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 (MTC and ABAG 2021: 3.7-2).

TRIBAL CULTURAL RESOURCES AND NATIVE AMERICAN COORDINATION

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. AB 52 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 tribe within 14 days of deeming a development application subject to CEQA complete to notify the requesting tribe as an invitation to consult on the project. AB 52 identifies examples of mitigation measures that will avoid or minimize impacts to tribal cultural resources and applies to projects that have a notice of preparation or a notice of intent to adopt a negative declaration/mitigated negative declaration circulated on or after July 1, 2015.

No California Native American tribes have requested to be informed of projects by BAAQMD; therefore, there is no trigger to begin consultation under AB 52, resulting in no resources identified as tribal cultural resources under Public Resources Code Section 21074.

2.18.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of buildings in residential and commercial areas. Grading would not be required.

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:

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

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

No impact. As discussed in Section 2.5, "Cultural Resources," 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 BAAQMD's jurisdiction. However, the proposed amendments to Rules 9-4 and 9-6 would not involve ground disturbance, and would result in the installation of new furnaces and water heaters inside of existing residential and commercial buildings. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities that may disturb tribal cultural resources. As noted above, no California Native American tribes have requested to be informed of projects by BAAQMD; therefore, there is no trigger to begin consultation under AB 52, resulting in no resources identified as tribal cultural resources under Public Resources Code Section 21074. Therefore, such resources would not be adversely affected by the proposed rule amendments. No impact would occur, and this issue will not be analyzed further in the EIR.

2.19 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. Utilities and Service Systems.				
Would the project:				
a) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	☒	☐	☐	☐
b) Have insufficient 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 that serves or may serve the project that it has inadequate 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) Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

2.19.1 Environmental Setting

Given the large area covered by the BAAQMD, public utilities are provided by a wide variety of local agencies. Wastewater treatment in the Bay Area is provided by more than 50 agencies throughout the Bay Area. Most public wastewater treatment plants and 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 by several water purveyors in the Bay Area, including the following major contributors: Alameda County Water District, Bay Area Water Supply & Conservation Agency, Contra Costa Water District, East Bay Municipal Utility District, Marin Municipal Water District, City of Napa Water Department, San Francisco Public Utilities Commission, Santa Clara Valley Water District, Solano County Water Agency, Sonoma Water, and Zone 7 Water Agency (MTC and ABAG 2021: 3.14-2 through 3.14-7). Solid waste is handled through a variety of municipalities, through recycling activities, and at disposal sites (including 14 privately operated landfills). The 14 landfills have a total remaining capacity of 259,634,000 cubic yards, a total daily throughput of 40,254 tons per day, and an estimated average of 46 percent remaining capacity (MTC and ABAG 2021: 3.14-18).

Electric, liquid fuel, and natural gas energy sources make up most of the Bay Area energy systems, which are becoming increasingly diversified as newer, more renewable energy sources are developed and expanded. Pacific Gas and Electric Company (PG&E) is the major operator of electricity infrastructure in the nine-county Bay Area, providing electricity and natural gas services.

Telecommunications services are offered by 39 providers across the Bay Area (MTC and ABAG 2021: 3.14-23).

2.19.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of buildings in residential and commercial areas.

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

Potentially significant impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of existing residential and commercial buildings that are already provided with utility services. There would be no change to existing water use, wastewater treatment, stormwater drainage, natural gas use, or telecommunication use. Therefore, the proposed rule amendments would not result in the relocation or construction of new or expanded facilities related to these utilities. No impact would occur and this issue will not be analyzed further in the EIR.

The new appliances may require increased amounts of electricity to operate, which could result in the need for additional electricity production and/or additional electrical grid capacity if Project demands exceed existing and planned supply (the potential for which will be evaluated in the EIR). The construction of this potential new or expanded electrical infrastructure could cause significant environmental effects. The Project's contribution could be a potentially significant indirect impact that will be analyzed further in the EIR.

Secondary and cumulative environmental effects on other resource areas associated with the potential need for the construction of new electricity generation and transmission infrastructure will also be evaluated in the EIR.

b) Have insufficient 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 that serves or may serve the project that it has inadequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?

No impact. The proposed amendments to Rules 9-4 and 9-6 would not involve the construction of new facilities or an increased demand for utility services. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of existing residential and commercial buildings that are already provided with utility services. There would be no change to existing water use or wastewater treatment. Therefore, the proposed rule amendments would have sufficient water supplies and would have adequate wastewater treatment capacity. No impact would occur, and this issue will not be analyzed further in the EIR.

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

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings, which are required to comply with applicable federal, state, and local regulations related to solid waste. As described in Section 2.13, "Noise," the proposed rule amendments would regulate the type of equipment that would be installed, not whether it would be installed. Regardless of the Project, Bay Area consumers would continue to purchase and install new furnaces and water heaters over the coming decades. When new appliances are installed, the old appliances would be removed and properly disposed of either at an appropriate recycling facility (that accepts scrap metal) or landfill in accordance with federal, state, and local laws. This would be a continuation of existing conditions. It is not anticipated that the amount of solid waste generated as a result of the proposed rule amendments would exceed the capacity of Bay Area landfills, which have an estimated average of 46 percent remaining capacity (MTC and ABAG 2021: 3.14-18), because proper disposal of old appliances would continue to occur regardless of whether the Project is implemented. Therefore, no impact would occur, and this issue will not be analyzed further in the EIR.

2.20 WILDFIRE

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

2.20.1 Environmental Setting

In California, responsibility for wildfire prevention and suppression is shared by federal, State, and local agencies. Federal agencies are responsible for federal lands in Federal Responsibility Areas. The State of California has determined that some nonfederal lands in unincorporated areas with watershed value are of Statewide interest and have classified those lands as State Responsibility Areas (SRAs), which are managed by the California Department of Forestry and Fire Projection (CAL FIRE). All incorporated areas and other unincorporated lands are classified as Local Responsibility Areas (LRAs) (MTC and ABAG 2021: 3.9-8).

While all of California is subject to some degree of wildfire hazard, there are specific features that make certain areas more hazardous. CAL FIRE 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.

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 CAL FIRE 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. CAL FIRE has also mapped Very High Fire Hazard Severity Zones in LRAs to provide guidance to local agencies.

2.20.2 Discussion

The proposed amendments to Rules 9-4 and 9-6 would affect natural gas-fired space- and water-heating appliances, including furnaces and water heaters used in single-family homes; multifamily residences; and commercial spaces, such as retail and office buildings. These appliances would be installed inside of buildings in residential and commercial areas.

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

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

c) Require the installation 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?

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of residential and commercial buildings, which are subject to state and local building and fire codes that take wildfire hazard zones and fire protection into consideration. Installation and operation of these appliances would not change existing wildfire risks in the Bay Area. Therefore, the proposed rule amendments would not impair an adopted emergency response plan or emergency evacuation plan, would not expose people to pollutants from a wildfire or the uncontrolled spread of a wildfire, would not require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk, and would not exposure people or structures to flooding or landslides as a result of post-fire slope or drainage changes. Therefore, no impacts related to wildfires would occur, and this issue will not be analyzed further in the EIR.

2.21 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. 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 an endangered, rare, or threatened species, 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?	☒	☐	☐	☐

2.21.1 Discussion

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 an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?

No impact. The proposed amendments to Rules 9-4 and 9-6 would result in changes to the types of new furnaces and water heaters that would be allowed for sale and installation within the Bay Area. These appliances would be installed inside of buildings in residential and commercial areas. The proposed rule amendments would also not result in foreseeable changes in equipment manufacturing that would require construction of new or expanded facilities. Because there would be no construction, the Project would also not result in habitat conversion or vegetation removal. Existing biological resources, including special-status species, habitats, and wildlife corridors, within the BAAQMD's jurisdiction would not be affected. In additional, cultural or tribal cultural resources would also not be expected to occur and would not be affected by the Project. Therefore, the proposed rule amendments would not degrade the quality of the environment, 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 this Initial Study. As discussed in Section 2.4, "Biological

Resources," Section 2.5, "Cultural Resources," and Section 2.18, "Tribal Cultural Resources," the Project would not adversely affect biological, cultural or tribal cultural resources. No impact would occur.

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.)

Potentially significant impact. As described in this Initial Study, the proposed amendments to Rules 9-4 and 9-6 could result in potentially significant environmental impacts related to air quality, GHG emissions, and utilities and service systems (energy resources). Therefore, Project impacts could be cumulatively considerable, and the Project could generate significant adverse cumulative impacts. The Project could have adverse environmental impacts that are limited individually, but cumulatively considerable when considered in conjunction with other regulatory control projects. These issues will be analyzed in the EIR.

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

Potentially significant impact. As described in this Initial Study, the proposed amendments to Rules 9-4 and 9-6 could result in potentially significant environmental impacts related to air quality, GHG emissions, and utilities and service systems (energy resources), which could cause substantial adverse effects on human beings, either directly or indirectly. These issues will be analyzed in the EIR.

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3 REFERENCES

1 Introduction

No references were cited in this section.

2 Environmental Checklist

2.1 Aesthetics

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2.2 Agriculture and Forest Resources

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2.3 Air Quality

BAAQMD. *See* Bay Area Air Quality Management Agency.

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CARB. *See* California Air Resources Board.

2.4 Biological Resources

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2.5 Cultural Resources

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2.6 Energy

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PG&E. *See* Pacific Gas and Electric Company.

2.7 Geology and Soils

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MTC and ABAG. *See* Metropolitan Transportation Commission and Association of Bay Area Governments.

2.8 Greenhouse Gas Emissions

BAAQMD. *See* Bay Area Air Quality Management Agency.

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2.21 Mandatory Findings of Significance

No references were cited in this section.

4 REPORT PREPARERS

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