

Toxic Air Contaminant Control Program

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**BAY AREA AIR QUALITY
MANAGEMENT DISTRICT**

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EXECUTIVE SUMMARY

Since 1987, the Air District has implemented toxic air contaminant control programs that are designed to identify and reduce the public's exposure to toxic air contaminants (TACs). The Air District's risk management strategies and local toxic control regulations with support from California and federal toxic regulations have been successfully reducing health risks both regionally and locally.

The Air District's Toxic Air Contaminant Control Program Annual Report – 2024 provides a comprehensive discussion of all Air District toxic control programs. This report includes the elements required for the California Assembly Bill (AB) 2588 Air Toxics Hot Spots (ATHS) Program's annual report (CA Health and Safety Code 44363). In addition, this report includes recent updates for each of the other Air District toxic programs, and it identifies TAC Program updates that are underway. The Air District is also undertaking a strategic planning initiative to identify goals and priorities for the Air District and is ensuring that environmental justice and civil rights are considered in these Air District programs.

Major Toxics Programs: The Air District's Air Toxics Control Programs have historically been directed at reducing TAC emissions from stationary sources by integrating federal and state mandates for stationary sources with local goals. In addition, the Air District's Community Health Protection programs seek to assess and address health risks in communities with disproportionate air quality impacts by partnering with communities. The Air District works with community partners to gain a better understanding about what sources are causing them the most harm and implements community-specific exposure reduction strategies, grants, incentives, and other initiatives designed to reduce disparate impacts and improve community health. Reducing air pollution health impacts is a major focus of the Air District's 2024-2029 Strategic Plan, and it involves cross-divisional efforts by nearly every Air District department. The Air District's major toxic programs are summarized below.

- **Air Toxics New Source Review (NSR)** – Preconstruction review for new or modified sources that emit TACs
- **Facility Risk Reduction** – Identification, assessment and reduction of health risks from existing facilities
- **TAC Control Measures** – Control regulations for source categories that emit TACs
- **TAC Emissions Inventory** – Identification and reporting of TAC emissions from permitted facilities
- **Air Toxics Ambient Air Monitoring** – Identification and assessment of TAC concentrations in ambient air at long-term air monitoring stations and through short duration studies, including mobile monitoring
- **Community Health Protection** – Reduction of air quality disparities and improvement of community health in vulnerable communities

The Air District's Toxic Air Contaminant Control Program Annual Report – 2024 explains each of these major programs, describes recent updates and improvements to these programs, and discusses planned program changes and concepts under development that are intended to further reduce health

impacts resulting from air pollution in the Bay Area. Recent updates to the major TAC programs and program updates that are underway are provided below.

- **Air Toxics New Source Review (NSR)**
 - In 2016, the Air District amended Regulation 2, Rule 5 by incorporating major changes to California’s health risk calculation procedures that were intended to be more protective of children’s health.
 - In 2021, the Air District amended Regulation 2, Rule 5 to add a lower cancer risk limit for projects located in overburdened communities to consider cumulative impacts and reduce health impact disparities.
- **Facility Risk Reduction**
 - In 2017, the Air District adopted Regulation 11, Rule 18 to complement the AB2588 Air Toxics Hot Spots (ATHS) Program and to further reduce health risks from existing facilities. This new regulation included California’s updated prioritization scoring procedures for existing facilities and included a reassessment of ATHS program rankings for existing permitted facilities. The Air District initiated an assessment of facility health risks for certain high and intermediate priority facilities using California’s updated health risk calculation procedures.
 - The Air District updated the implementation procedures for Regulation 11, Rule 18 earlier in 2024 and is considering further amendments to this regulation later this year that are intended to speed up the risk assessment and risk reduction processes.
- **TAC Control Measures**
 - The Air District is assessing potential regulatory amendments to Regulation 6, Rule 4: Particulate Matter, Metal Recycling and Shredding Operations. In July 2024, the Air District published a white paper that discusses the environmental impacts from metal shredding and recycling operations and potential strategies for reducing those impacts.
- **TAC Emissions Inventory**
 - Early in 2024, the Air District published TAC emission inventories for data years 2020, 2021, and 2022. The Air District has improved our internal procedures that will enable more expeditious publication of annual TAC emission inventories.
 - In September 2024, the Air District introduced a new toxic facility mapping tool that enables the public to more easily identify toxic facilities of concern in their community.
- **Air Toxics Ambient Air Monitoring**
 - During 2019-2022, the Air District worked in partnership with the Community Steering Committee for the Richmond-North Richmond-San Pablo Area to develop and implement a Community Air Monitoring Plan (CAMP). The December 2022 Air Toxics Monitoring Study report identifies areas where higher levels of toxic gases were found and helped point to opportunities for emission and exposure reduction strategies.

- In May 2024, the Air District published the draft 2024 Annual Air Monitoring Network Plan that describes long-term trends measurements of air toxics throughout the Bay Area. Comments on this plan were accepted through June 20, 2024.

- **Community Health Protection**

- In 2023, Bayview Hunters Point/Southeast San Francisco was selected as the fourth AB617 community in the Bay Area due to longstanding air quality challenges, environmental justice grievances, and health inequities. A community steering committee has been selected and development of a Community Emission Reduction Plan (CERP) is underway.
- In May 2024, the Path to Clean Air (PTCA) Plan, a CERP, was adopted for the Richmond-North Richmond-San Pablo community.
- West Oakland is working on a 5-year review of the CERP for this community.
- East Oakland has formed a steering committee and is working on a CERP.
- The Air District has developed a proposed methodology for determining local health impacts from undifferentiated fine particulate matter (PM2.5) emissions, which has been reviewed by the Air District’s Advisory Council. The Air District is considering next steps for reducing PM2.5 exposure – for example, setting thresholds for use in a regulatory context.

The Air District’s Toxic Air Contaminant Control Program Annual Report – 2024 also discusses the Air District’s status on implementing AB2588 AHS Program requirements. The Air District’s Facility Risk Reduction Program includes the longstanding AB2588 Program requirements and the Air District’s new requirements pursuant to Regulation 11, Rule 18. The status of these two programs is summarized below.

Facility Prioritization Scores and Rankings: Facility prioritization scores are used to rank facilities based on the annual TAC emission rates, taking into consideration the type of health impact (cancer versus noncancer), the toxicity of each TAC emitted and the distance between the facility and nearby receptors. The facilities are ranked as high, intermediate, or low priority based on the prioritization score. The Air District calculates prioritization scores for each permitted facility during the annual permit renewal process. For the 2022 inventory year, the number of facilities in each rank are summarized below. Appendix B contains a detailed list of all the facilities in each rank.

Table 1. Facility Rankings

Facility Ranking (PS = Prioritization Score)	Total Facility Counts 2022 Inventory Year
High Priority: PS >= 10	872
Intermediate Priority: 1 <= PS < 10	4,349
Low Priority: PS < 1	4,595
Total Facility Count	9,816

The Air District is evaluating the high priority facilities to determine if a new or updated health risk assessment is warranted.

Under Regulation 11, Rule 18, the Air District has determined that 313 high priority facilities and 13 intermediate priority facilities need further evaluation and may need new or updated health risk assessments. These facilities have been broken down into review phases: Phase I (33 facilities) and Phase II (293 facilities). The remaining 559 high priority facilities will be evaluated in Phase III under the ATHS program; however, 135 of these facilities have had recent site-wide HRAs demonstrating low health risks and are not likely to need any additional review.

Facility Health Risk Assessments (HRAs): Health risk thresholds and risk reduction actions for existing facilities, as specified in Regulation 11, Rule 18 and the ATHS program, are summarized below.

Table 2. Risk Management Thresholds and Risk Reduction Actions for Existing Facilities

Health Risk Thresholds	Basis	Risk Reduction Actions
Cancer Risk: = or > 10 in million Noncancer: = or > 1.0 hazard index	Regulation 11, Rule 18	Submit Risk Reduction Plan
Cancer Risk: = or > 10 in million Noncancer: = or > 1.0 hazard index	ATHS Program	Public Notification to Households and 1 Public Meeting
Cancer Risk: = or > 100 in million Noncancer: = or > 10 hazard index	ATHS Program	Public Notification, Public Meetings, and Mandatory Audit and Risk Reduction Plan

The Air District has completed facility-wide HRAs for 753 currently permitted facilities. Facility HRA results are presented in Appendix A of this report. Table A-1 shows facility cancer risks in descending order, while Table A-2 shows non-cancer health impacts in descending order.

About 30% of these facilities (221 facilities) have HRAs that were conducted using current health risk assessment guidelines.¹ Most of these HRAs were conducted pursuant to the Air District’s Air Toxic New Source Review program and were based on maximum permitted toxic emissions for the facility. Many of these facilities are smaller facilities that have only emergency diesel engines, gas stations, soil remediation operations, coating operations, or solvent operations. For each of these facilities, the HRAs demonstrate that health risks are less than Regulation 11, Rule 18 and ATHS “risk action” thresholds. Therefore, no further risk reduction measures are required for these sites.

For the remaining 532 sites with facility-wide HRAs conducted prior to 2018 that used older HRA guidelines, there are 346 facilities with a high priority rank that may need an updated HRA using the

¹ The Air District began implementing the current Air District HRA Guideline on July 1, 2017. HRAs conducted in 2018-2024 use the current HRA Guidelines. For more information about HRA Guidelines updates, see the staff report for the December 7, 2016 amendments to Regulation 2, Rule 5.

current HRA guidelines. These facilities have been included in the Phase I, Phase II, and Phase III facility lists described earlier in this report that may require new or updated HRAs:

- Phase I 33 facilities
- Phase II 293 facilities
- Phase III 424 facilities that have only emergency diesel engines or gas stations *
*excludes 135 facilities with HRAs conducted using current HRA guidelines

The Air District has initiated an air toxic emissions inventory review process for 30 of the Phase I facilities and is currently preparing new or updated HRAs for many of these Phase I facilities. Preliminary HRAs will be published on the Air District's web site and made available for public comment. After considering public comments, the Air District will post the final HRA for the Phase I facilities as they are completed, and the Air District will notify facilities if any of the risk reduction actions in Table 2 are required.

To date, the Air District has not confirmed, pursuant to a final approved HRA, that any Phase I, Phase II, or Phase III facilities have cancer risks of 10 in a million or higher or noncancer hazard indices of 1.0 or higher. Therefore, at this time, no facilities are subject to public notification under the ATHS program nor to risk reduction requirements pursuant to Regulation 11, Rule 18. As explained earlier, the Air District has completed HRAs for 221 facilities demonstrating that health risks do not exceed any risk action thresholds. These HRAs include 135 high priority Phase III sites. The remaining 86 sites with current HRAs are intermediate or low priority facilities that do not trigger any further review. HRA review has been initiated for most Phase I facilities. HRA review will be conducted as soon as possible for the remaining Phase II and Phase III facilities identified in Appendix B.

In this report, the Air District provides updates on five facilities and two industry-wide facility categories that were evaluated under the ATHS Program prior to adoption of Regulation 11, Rule 18. Pacific Steel Casting Company conducted public notifications until the facility ceased operating in 2018. In all other cases, health risks from these facilities were determined to be below the public notification thresholds for the ATHS program. Several highlights include:

- Pacific Steel Casting Company discontinued operations in 2018,
- Lehigh Southwest Cement Company discontinued cement manufacturing in 2021,
- Kraft Foods Global ceased operations in 2015, and
- All dry cleaners ceased using perchloroethylene in 2022.

Since 2018, the Air District has been reviewing high priority-Phase I facilities pursuant to Regulation 11, Rule 18. The Air District has initiated TAC inventory review for 30 out of the 33 facilities remaining in this category. The Air District has completed the initial inventory review for 13 facilities. A Preliminary HRA has been completed for 1 facility, and Preliminary HRAs are underway for 12 facilities. In addition to these facilities, the Air District worked on HRAs for 12 other facilities that have either shut down or significantly curtailed operations after HRA work began. Highlights of recent Air District HRA work include:

- Preparing Final HRA for Irvington Memorial Cemetery
- Preparing Preliminary HRA for Chevron Products Company
- Preparing Preliminary HRA for CoreSite Real Estate

- Preparing NSR HRA for Argent Materials
- HRA work discontinued due to facility shut downs or emission reductions: Owens Corning Insulating Systems, AB&I Foundry Oakland, PCC Structural, City of Palo Alto Landfill, FXI Inc. and Phillips 66 Carbon Plant.

INTRODUCTION

Since 1987, the Bay Area Air Quality Management District (BAAQMD or Air District) has implemented toxic air contaminant control programs that are designed to identify and reduce the public's exposure to toxic air contaminants (TACs).² TACs are air pollutants which may cause or contribute to an increase in mortality, or in serious illness, or which may pose a potential hazard to human health. Bay Area air quality has improved dramatically in recent decades. The Air District's risk management strategies and local toxic control regulations with support from California and federal toxic regulations have been successfully reducing health risks both regionally and locally. The Air District's toxic control programs work together to enable the Air District to identify and reduce health impacts from air pollution: (1) in local areas, or "hot spots", that have unhealthy risk levels, (2) from source categories that have the potential to cause elevated health risks, (3) from new projects that may cause or contribute to elevated health risks for nearby residents or workers, and (4) to address community air toxic concerns.

The Air District's Toxic Air Contaminant Control Program Annual Report – 2024 provides a comprehensive discussion for all Air District toxic control programs. This report includes the elements required for the California Assembly Bill (AB) 2588 Air Toxics Hot Spots (ATHS) Program annual report.³ In addition, this report includes recent updates for each of the other Air District toxic programs, and it identifies TAC Program updates that are underway. The Air District is also undertaking a strategic planning initiative to identify goals and priorities for the Air District and is ensuring that environmental justice and civil rights are considered in Air District programs.

The air toxics program is distinct from the BAAQMD's efforts to control ambient levels of the "criteria pollutants" (e.g., carbon monoxide, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide). The State and federal government have set health-based ambient air quality standards for criteria pollutants. 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 BAAQMD works to understand and minimize: ambient background concentrations of TACs, locally-elevated concentrations (i.e., "Hot Spots"), and health impact disparities from exposure to TACs in communities that are overburdened with air pollution and other health stressors. Major elements of the BAAQMD's air toxics program are:

- **Air Toxics New Source Review (NSR):** Air Toxics NSR requires preconstruction review of new and modified sources for potential health impacts. It requires that new and modified

² Board of Directors Resolution No. 1775 (adopted 1987) and Board of Directors Resolution No. 1986 (adopted 1990)

³ California Health and Safety Code 44363

sources with TAC impacts greater than de minimus levels use TBACT, and it establishes health risk limits for projects that require Air District permits. In 2021, this program was updated to include a more stringent cancer risk limit for permit projects located in overburdened communities.

- **Facility Risk Reduction Programs:** The Air District implements two Facility Risk Reduction Programs: The California AB2588 AHS and BAAQMD Regulation 11, Rule 18, Reduction of Risk from Air Toxic Emissions at Existing Facilities. These complementary programs are collectively designed to: (a) identify industrial and commercial facilities that have locally-elevated health impacts due to TAC emissions, (b) reduce these elevated health risks, and (c) notify the affected public about these health impacts and risk reduction plans. Both programs consider routine and predictable emissions from stationary sources at existing facilities and use the same procedures to evaluate health risks resulting from these emissions, but the two programs have distinct requirements.
 - Under the AB2588 AHS program, the Air District established significance levels for health risks, identified specific public notification measures for each significant health risk level, and required mandatory risk reductions for facilities causing unacceptable health risk levels. California's Office of Environmental Health Hazard Assessment (OEHHA) identifies health effects values for toxic pollutants and health risk calculation procedures. Additionally, Air Districts and CARB develop health risk management guidelines and prioritization score procedures to rank facilities based on toxic emissions, health effects, and distance to the public to manage the facility review process. These California risk assessment and risk management guidelines promote consistent comparison of facility rankings and health risks throughout California. In 2015, OEHHA adopted more stringent health risk calculation procedures to consider and protect children's health. Subsequently, CARB published updated facility prioritization score procedures. The Air District incorporated these updated risk calculation and facility ranking procedures into Air District toxic programs in 2017.
 - On November 15, 2017, the Air District adopted Regulation 11, Rule 18, Reduction of Risk from Air Toxic Emissions at Existing Facilities, or Rule 11-18. This program facilitates a new evaluation of health risks for identified Bay Area facilities using the updated AHS facility ranking procedures and health risk calculation procedures that were incorporated into Air District toxic programs earlier in 2017. Rule 11-18 establishes new and more stringent risk action levels for facility health risks and requires that facilities either reduce all health risks below these risk action levels or install TBARCT on each significant source of risk at the facility. Rule 11-18 includes public comment opportunities for HRAs and facility risk reduction plans before these are finalized.
- **TAC Control Measures:** TAC control measures are designed to reduce emissions from specific source categories of TACs. Air toxic control measures include rules originating from the federal Clean Air Act (National Emission Standards for Hazardous Air Pollutants or NESHAPs), the State Toxic Air Contaminant Control Act (Airborne Toxic Control Measures or ATCMs) and local Air District toxic rules.

- **TAC Emissions Inventory:** In the Bay Area, the Air District maintains a database that contains information concerning routine and predictable emissions of TACs from permitted stationary sources. This database information is used in conjunction with annual facility information update reports to develop an annual toxic emissions inventory and prioritization score for each facility. The TAC inventories and prioritization scores for all Bay Area facilities are reported to CARB on an annual basis. The annual TAC emission inventory for each facility is available on the Air District's website. The Air District is working on a toxic inventory mapping tool to enhance public access to the most recent TAC inventory data.
- **Air Toxics Ambient Air Monitoring Program:** The Bay Area monitors ambient air to determine the concentrations of certain air toxics at a number of long-term stations throughout the Bay Area. In addition, air toxics monitoring may be conducted at select temporary locations or by mobile monitoring to provide information about local air quality issues. The Air District continues to build the capacity to conduct more localized, source-oriented air monitoring studies.
- **Community Health Protection:** The Community Health Protection Programs are intended to assess and address health risks in communities with disproportionate air quality impacts. These programs include:
 - **California AB617 Communities in the Bay Area:** A collaborative initiative between communities, the Air District and other agencies that is focused on reducing exposures and improving community health in neighborhoods that are most impacted by air pollution. In the Bay Area, four communities have been selected as AB617 communities: West Oakland, Richmond-North Richmond-San Pablo, East Oakland, and Bayview Hunters Point/Southeast San Francisco.
 - **Community Health Protection Grants, Incentives and Initiatives:** The Air District oversees several grant and incentive programs and other initiatives that help reduce public exposure to air toxics.
 - **Reducing Exposure to Fine Particulate Matter:** The Air District is seeking to address growing concerns about fine particulate matter (PM2.5) exposures on a local scale, especially for vulnerable communities.

This annual report describes the major elements of the Air District's air toxics program and discusses recent changes that have occurred. This report also summarizes the most recently available AB2588 ATHS/Rule 11-18 facility rankings and the status of HRAs that are being prepared or reviewed pursuant to these Facility Risk Reduction Programs.

Currently, there are no Bay Area facilities that are subject to risk reduction requirements. Summaries of the Air District's review of risk reduction plans and facility risk reduction status will be added to this report in future years, if facilities become subject to Rule 11-18 risk reduction requirements.

AIR TOXICS NEW SOURCE REVIEW

The Air Toxics NSR Program was originally implemented in 1987, pursuant to the Risk Management Policy (RMP) established at the request of the BAAQMD's Board of Directors. The requirements of the Air District's Air Toxics NSR program are expressed as health risk-based thresholds and limits.

This program requires an assessment, called an HRA, that describes the possible adverse health effects which may result from public exposure to expected emission levels from a new or modified project. When required, the Air District conducts the HRA during the permit application preconstruction review process. This program evaluates impacts from routine and predictable emissions levels from the proposed new or modified stationary sources in the project. These toxic NSR HRAs do not evaluate tail-pipe emissions from vehicles or construction equipment that may be associated with a project and do not address adverse health effects that may result from accidental releases of toxic compounds. In California, review of industry's preparation for, and protection from, accidental releases is performed by Certified Unified Program Agencies or Administering Agencies (primarily at the county level).

Changes to the Air District's Toxics NSR Program since 1987 are summarized below.

In 2001, the RMP was updated to add diesel engine exhaust particulate matter and its associated health effects values to the list of TACs included in the program.

On June 15, 2005, the BAAQMD Board of Directors adopted Rule 2-5 to replace the RMP. Rule 2-5 updated and enhanced program requirements primarily to increase conformity with updated State guidelines, TAC lists, and health effects values. Changes to key standards included: the addition of a new acute hazard index limit of 1.0 and an associated evaluation procedure for proposed maximum hourly emissions in a project, the addition of a TBACT threshold of 0.2 chronic hazard index for non-cancer source risks, and the elimination of discretionary Air District authority to approve project health risks greater than a cancer risk of 10 in a million or greater than a non-cancer hazard index of 1.0.

Rule 2-5 was amended on January 6, 2010 to incorporate new TACs and updated health effects values approved by OEHHA. In addition, the Air District added new Age Sensitivity Factors (ASF) that were adopted by OEHHA on June 1, 2009. ASFs were developed to account for inherent increased susceptibility to carcinogens during infancy and childhood. The Air District added ASFs to cancer risk calculation procedures for residents and students and increased risk protection for children.

Rule 2-5 was amended on December 6, 2017 to incorporate new TACs and updated health effects values and to adopt the remainder of the children's health protection guidelines that OEHHA approved in 2015. The Air District delayed implementation of the 2015 OEHHA guidelines for gas stations and instead created a new hybrid procedure that used new emission factors and new health effects values for TACs emitted from gas stations but that used the 2010 risk calculation procedures for gas stations. This delay was necessary because CARB was still developing uniform HRA guidelines for gas stations. In addition, the Air District revised the toxic emission calculation procedures for modified sources to base the health risk on the total emission rate for the modified source rather than the emission increase since 1987. An alternative net project risk reduction procedure was added to ensure that facilities with toxic sources installed before 1987 could obtain permits for projects that reduce risk when the residual risk for the source is lower than current impacts but may still exceed the risk limit for a new source.

Most recently, Rule 2-5 was amended on December 15, 2021. The key change was to add a lower

project cancer risk limit of 6 in a million for projects located in overburdened communities to take into consideration the potential cumulative impacts of pollution and to help reduce health impact disparities in overburdened communities. In addition, the Air District fully implemented OEHHA's 2015 risk calculation procedures for gas stations and incorporated CARB's updated risk assessment guidelines for gasoline dispensing facilities into Air District procedures. The staff report for these recent Rule 2-5 amendments may be viewed at:

https://www.baaqmd.gov/rules-and-compliance/rules/reg-2-rule-5-new-source-review-of-toxic-air-contaminants?rule_version=2021%20Amendment.

The stringency of toxic programs is affected by both the methodology used to calculate health risks and the risk action levels. Stringency can be increased either by changes in methodology that result in a higher calculated risk or by reductions in the risk action levels. In the case of the Air District's Toxic NSR Program, the stringency of the program has increased by both methods. Improved health effects data since 1987 has increased calculated cancer risks and non-cancer hazard indices by varying amounts depending on the pollutant. The methodology changes adopted in 2010 and 2016 were expected to result in health risks that are 1.5 to 3 times higher than 2005 methods. In addition, the 2021 reduction in project risk limit reduced allowable project cancer in overburdened communities by an additional 40%. Overall, allowable project emission rates are less than half of the rates that would have been allowed in the 1990s and may be much lower than half for certain pollutants.

Toxic emissions are estimated for all sources within a proposed project; if these emissions exceed the trigger levels of Table 2-5-1, an HRA is required to determine risk from each source and total risk for the project (all sources in a permit application plus related sources permitted within the last 5 years). BAAQMD staff completes an HRA using computer-modeled estimates of atmospheric dispersion. An HRA may be a conservative screening-level analysis, or a more refined analysis involving the use of various site-specific data (e.g., the use of actual meteorological data and terrain elevations).

Where the predicted health risk from a proposed toxic source exceeds a cancer risk of 1.0 in one million (1.0E-6) or a chronic hazard index of 0.20, the source must use TBACT to minimize TAC emissions.

The BAAQMD denies an Authority to Construct or a Permit to Operate for any new or modified source of TACs if the project risk exceeds any of the following health impacts:

- 6 in a million cancer risk for projects located in overburdened communities, or
- 10 in a million cancer risk for projects located outside of overburdened communities, or
- chronic hazard index for non-cancer health impacts based on annual average emissions, or
- acute hazard index for non-cancer health impacts based on maximum hourly emissions.

When an HRA for a permit application initially finds that a health impact is exceeding a project risk limit, the Air District notifies the Applicant of the HRA results and gives the Applicant an opportunity to modify the project to achieve compliance with all risk limits. In the vast majority of these cases, Applicants request emission reduction measures, such as reducing requested throughput, reducing operating time limits or adding emissions control technology, that are successful at reducing the health risks to acceptable levels. Other commonly successful risk reduction actions may involve measures that improve dispersion or decrease ground level concentrations, such as relocating a source

farther away from receptors, increasing stack height, changing stack orientation, removing rain caps from stacks, or enclosing fugitive emissions.

The Air District conducts an average of 330 HRAs per year for toxic NSR projects. The majority of the HRAs are related to permit applications for new or modified emergency diesel engines (82% in 2023). Other common NSR HRAs are for: power generation projects, petroleum refinery projects, soil remediation operations, concrete batch plants, semiconductor fabrication areas, landfills and material recovery facilities, compost operations, wastewater treatment operations, gasoline dispensing and marketing facilities, and coating and solvent operations.

Toxic NSR HRAs that include all toxic emission sources at a facility may also satisfy the HRA requirements for the Facility Risk Reduction Programs described below. About 70% of NSR HRAs also constitute site-wide HRAs. NSR HRAs conducted from 2018 to today have used the current HRA guidelines and need no further review. Older HRAs may need to be updated using current HRA guidelines or HRA streamlining procedures. To date, the Air District has conducted over 1100 site-wide HRAs and a little over half of these HRAs (565) were conducted on or after 2018.

FACILITY RISK REDUCTION PROGRAMS

The Air District implements two Facility Risk Reduction Programs: The California AB2588 AHS and BAAQMD Regulation 11, Rule 18, Reduction of Risk from Air Toxic Emissions at Existing Facilities, or Rule 11-18. These complementary programs are collectively designed to: (a) identify industrial and commercial facilities that have locally-elevated health impacts due to TAC emissions, (b) reduce these elevated health risks, and (c) notify the affected public about these health impacts and risk reduction plans. Both programs consider routine and predictable emissions from stationary sources at existing facilities and use standardized California-wide procedures to evaluate health risks resulting from these emissions, but the two programs have distinct requirements, which are explained below.

AIR TOXICS HOT SPOTS PROGRAM

The Air Toxics "Hot Spots" Information and Assessment Act (AB2588, Connelly, 1987) established a formal regulatory program for site-specific air toxics emissions inventory and health risk quantification that is managed by California air districts. Under this program, a wide variety of industrial, commercial, and public facilities are required to report the types and quantities of toxic substances their facilities routinely release into the air. The goals of the AHS Program are to collect emissions data, to identify facilities with potential for localized health impacts, to ascertain health risks, to notify nearby residents of risks that are determined to warrant such notification, and to reduce significant risks.

Air Toxics Hot Spots Program Description: Under the AB2588 AHS program, the Air District established significance levels for health risks, identified specific public notification measures for each significant health risk level, and required mandatory risk reductions for facilities causing unacceptable health risk levels.

In 1991, Level 0 risk levels were deemed to be acceptable or not significant. The Air District did not require any public notifications or risk reductions for Level 0 risk levels. Level 1 risk levels were considered to be “elevated” and required public notification about this hazard. Facilities were encouraged to implement measures to reduce these health risks, but these measures were voluntary. Level 2 and Level 3 risk levels were considered unacceptable and risk reductions below Level 2 risk levels were mandatory. The Air District’s ATHS Program levels and action thresholds are summarized below:

Table 3. AB2588 ATHS Program Notification Requirements

	Risk Level	Public Notification	Risk Reduction
Level 0	Cancer Risk < 10 in a million and Non-Cancer Hazard Index < 1	None	None
Level 1	Cancer Risk of 10-99 in a million or Non-Cancer Hazard Index of 1-9	Short Letters to Households & 1 Public Meeting	Voluntary
Level 2	Cancer Risk of 100-490 in a million or Non-Cancer Hazard Index of 10 or higher	Level 1 + Long Letters for Higher Risk Areas & Public Meetings	Mandatory Audit and Source Reduction, Possible Regulation
Level 3	Cancer Risk of 500 in a million or higher	Level 2 & Quarterly Public Meetings	Mandatory Audit and Source Reduction, Possible Regulation

There are five steps to implementing the ATHS program:

- **Air Toxics Emissions Inventory:** Facilities subject to the ATHS program are required to report emissions of toxic compounds to the BAAQMD. Each facility’s emissions inventory must be updated on a regular basis to reflect changes in equipment, materials, and production levels at the facility. Initially the reporting period was once every four years, but the Air District has recently transitioned to an annual reporting frequency for all facilities. An air toxics emissions inventory is prepared for each facility in the Bay Area based upon information supplied to the BAAQMD by the affected facility during the annual permit renewal process; this information is reviewed by BAAQMD engineers. Subject facilities may be required to refine their emission estimates (e.g., conduct source testing) and submit a comprehensive toxics emissions inventory report. Individual facility inventories are integrated into a District-wide emission inventory. The most recent district-wide air toxics emission inventory is available at: <https://www.baaqmd.gov/about-air-quality/emission-inventory/toxic-air-contaminants>.
- **Prioritization and Ranking:** In the second step of the ATHS Program, the BAAQMD ranks or prioritizes facilities for potential to cause risk, considering the quantity and toxicity of pollutants emitted, and the proximity of persons that may live or work nearby. During the annual permit renewal process, a prioritization score is calculated for each facility based on the

TAC inventory and the prioritization score procedures.⁴ Two types of prioritization scores are calculated: one score based on cancer risk toxicity and one score based on non-cancer toxicity. The higher of these two scores (usually the cancer risk score) is recorded as the prioritization score for the facility. The prioritization scores are then used to rank facilities as High Priority, Intermediate Priority, or Low Priority.

- **High Priority Facilities:** High priority facilities have a prioritization score that is equal to or greater than 10 (PS \geq 10). High priority facilities receive additional Air District review and may warrant a new or updated HRA. A facility with a rank of high priority does not necessarily mean that nearby persons are exposed to significant risk from the facility's air emissions; rather, a rank of high priority indicates that the facility emissions may need to be analyzed in more detail.
- **Intermediate Priority Facilities:** Intermediate priority facilities have a prioritization score that is equal to or greater than 1 and less than 10 (PS \geq 1 and PS $<$ 10). Generally, intermediate priority facilities do not require further district review. However, districts consider other factors to determine if additional district review is warranted. These factors may include but are not limited to the type of toxic emissions (cancer scores versus non-cancer scores), how the emissions are released into the atmosphere (fugitive emissions, stack heights compared to local building heights, etc.), and information about the surrounding community (location and density of nearby receptors, AB617 or overburdened community, frequent complaints, etc.)
- **Low Priority Facilities:** Low priority facilities have a prioritization score that is less than 1 (PS $<$ 1). Low priority facilities do not require any further district review.

In response to OEHHA's 2015 update of the ATHS Health Risk Assessment Guidelines, the Air District updated the BAAQMD Prioritization Score Procedures in 2017. In particular, the cancer risk normalization factor was increased from 1700 to 7700, which increased cancer risk prioritization scores by 4.5 times. This updated prioritization scoring procedure was integrated into the Air District's annual permit renewal procedures starting with facilities that renewed their permits on or after August 1, 2017. As a result of these changes, the type and number of facilities in the high priority category increased for the 2018 and newer emissions inventory years.

- **Health Risk Assessment:** The Air District conducts or reviews HRAs for recently designated high priority facilities in accordance with the procedures described below for the Regulation 11, Rule 18 Facility Risk Reduction Program. The recent results and progress of the health risk assessment program pursuant to both the ATHS and Regulation 11, Rule 18 are described in more detail below in the Regulation 11, Rule 18 section of this report.

⁴ Current BAAQMD Prioritization Score Procedures are available of the Air District's website at: https://www.baaqmd.gov/~media/dotgov/files/rules/regulation-11-rule-18/documents/20171003_priorproc_1118-pdf.pdf?rev=14cd7841f4b64710907d28122806c45e&sc_lang=en.

For high priority facilities that have only emergency standby diesel engines, HRA evaluations have been on hold while CARB is working on updated HRA procedures for this industry-wide source type. These updated HRA procedures are currently in beta review and are expected to be available next year.

The Air District and Cal/EPA's OEHHA review the HRAs prepared for the ATHS program. These HRAs must be prepared in accordance with the ATHS Program Risk Assessment Guidelines. These guidelines include sections for assessing the impacts of acute and chronic exposures, estimating risks due to carcinogens, and inclusion of stochastic modeling. The current Air Toxics Hot Spots Program Risk Assessment Guidelines were completed and adopted by OEHHA in 2015 and incorporated into Air District programs in July 2017. OEHHA occasionally revises or adopts new health effects values for toxic compounds and the Air District incorporates new and updated health effects values by amending Table 2-5-1 of Rule 2-5. Table 2-5-1 was last amended in 2021 based on OEHHA data approved through June 30, 2021.

- **Public Notification:** If the health risks resulting from the facility's emissions exceed action levels established by the Air District, the facility is required to notify all exposed persons regarding the results of the HRA by direct mail to affected households and workplaces. The facility is required to conduct at least one public meeting to present the HRA and explain the results. The BAAQMD has established a cancer risk of 10 in a million or greater and a noncancer Hazard Index of greater than one or greater as ATHS public notification thresholds (for Level 1 and higher facilities).
- **Risk Reduction:** If the health risks resulting from the facility's emissions exceed significance levels established by the Air District, the facility is required to conduct a toxic risk reduction audit and develop a plan to implement measures that will reduce risk from the facility to a level below the significance level within five years. The BAAQMD has established a cancer risk of 100 in a million or greater and a noncancer Hazard Index of ten or greater as ATHS mandatory risk reduction levels (for Level 2 and higher facilities).

District policy allows facilities to implement voluntary risk reduction measures in order to change their ATHS status. These risk reductions must be real and must be made enforceable through permit conditions. Many facilities have adopted this incentive to implement risk reduction projects in lieu of satisfying the public notification requirements (e.g., virtually all of the Bay Area chrome plating facilities installed high efficiency filtration devices to reduce emissions of hexavalent chromium, a potent carcinogen).

Air Toxics Hot Spots Program Status: In the Bay Area, facility rankings are re-prioritized on an annual basis as part of the annual permit renewal process. This allows for identification of any facility of interest that may have had a significant increase in emissions or other changes that could increase risk significantly. Facility rankings based on 2022 toxic emission inventory data are presented in Appendix B.

In 1991, the first year of the risk assessment phase of the program, 30 facilities were identified with Level 1 health risks that triggered public notification requirements. The number of facilities requiring public notification steadily decreased over the first decade of the program as industries reduced toxic

emissions and refined estimates of risk. The last facility to undergo public notification was Pacific Steel Casting Company of Berkeley, and they discontinued operations in 2018.

In the Air District's previous Toxic Program Report, the Air District identified several large companies that had been re-prioritized as High Priority because of changes in production, increases in emissions, or in one case, encroachment of residential properties. For continuity, the Air District is providing a short update on these previously identified facilities, but none of these facilities have Level 1 or higher risks and none are subject to public notification.

In addition to public notification requirements, the ATHS Program requires facilities to reduce their health risks below levels determined by the Air District to be significant within a certain timeframe. The BAAQMD requires mandatory risk reduction measures for those facilities with health risks of Level 2 or greater. There are currently no facilities in the Bay Area that have risks identified as Level 2 or greater.

Updates on Previously Identified High Priority Facilities:

- **Pacific Steel Casting Company** (Berkeley) was identified in 2005 as a facility with potential for high risk. PSC conducted an extensive source test program and prepared a revised toxic emission inventory report in February 2007 and an HRA. Based on the results of the HRA, Pacific Steel Casting Company was subject to the public notification requirements of the Hot Spots Act, but not mandatory risk reduction. PSC implemented a number of voluntary risk reduction measures that significantly mitigated the level of risk. A community meeting to discuss the HRA was held in Berkeley. PSC periodically sent written notices to people in nearby areas with risk that exceeded the notification thresholds until operations were discontinued in 2018.
- **Lehigh Southwest Cement Company** (Cupertino) operated a quarry and a large cement production facility. They had prepared an HRA for the ATHS program in 1996, and risks were determined to be less than public notification levels. Because of state-wide interest in potential chromium exposure for people living close to cement plants, the Air District requested that Lehigh conduct source testing and submit an updated ATHS emission inventory. The 2009 inventory indicated higher emissions for some TACs. Lehigh was required to prepare an HRA, which they submitted in September 2010. The Air District requested revision of the HRA and Lehigh submitted a revised HRA in March 2011. The revised HRA includes several production scenarios that incorporated several new risk reduction measures and a future production scenario that considers full compliance with the federal NESHAP in 2015. The approved HRA indicated that risk levels for the 2011 production scenario are less than public notification levels. Lehigh discontinued cement manufacturing operations in 2021. In 2023, Lehigh was recategorized as a Low Priority facility.
- **Sentinel Crematory** (Emeryville) operated two crematory retorts and was determined to be a high priority facility. Operations had not changed but several high-rise condominium buildings were built in very close proximity to the facility. The company relocated to a commercial/industrial area in East Oakland and was permitted at the new location to have health risks below public notification levels based on health risks calculated using the 2015

OEHHA HRA Guidelines. Based on source test results conducted at the new Oakland location, this crematory has health risks below the public notification thresholds. The Air District continues to monitor this facility at its new location.

- **Kraft Foods Global** (San Leandro) operates multiple large coffee roasters and was determined to be a high priority facility. The facility submitted an HRA in 2011. In response to staff comments, Kraft submitted an addendum to their HRA in May 2012. Staff verified the results in the HRA addendum through independent AERMOD modeling runs and risk calculations and agrees with the finding that the risk levels are below ATHS Program action levels. The facility ceased operations and shut down in 2015.
- **Microsoft Corporation** (Santa Clara) operates 26 diesel emergency engines and was determined to be a high priority facility. The facility submitted an HRA in February 2012 and a revised HRA in September 2012. In addition, Microsoft applied for a change in permit conditions to allow for more flexibility in their schedules for reliability-related testing. The permit to operate with the change in permit conditions was issued on January 23, 2013. As part of the review process of the application for the change in permit conditions, an HRA was prepared for the new hours of operation for reliability-related testing. The results of the HRA indicate risk levels that are below ATHS Program action levels.
- **Perchloroethylene Dry Cleaners** Dry cleaning facilities were evaluated in an “industry-wide” risk assessment on a statewide basis as a part of the ATHS Program. Risk assessments for these facilities indicated that many dry cleaners had Level 2 risks. In 1994, the BAAQMD adopted Regulation 11, Rule 16, Perchloroethylene and Synthetic Solvent Dry Cleaning Operations, which incorporated the risk reduction requirements of SB-1731. These risk reduction measures were fully implemented by 1998, and the health risks from all permitted dry cleaners had been reduced to Level 1 or lower. Because of the residual risk for many dry cleaners, CARB revised the state-wide dry cleaning ATCM in January 2007 to phase out use of perchloroethylene as a solvent at dry cleaning facilities. In the Bay Area, all perchloroethylene usage at dry cleaning facilities ceased by January 1, 2023.
- **Gasoline Dispensing Facilities (GDFs)** GDFs were also evaluated in “industry-wide” risk assessments on a statewide basis as a part of the ATHS Program. Currently, all GDFs in the Bay Area are ranked as either low or intermediate priority, and no further review is required.

Updates on Health Risk Assessments:

Appendix A lists the facilities for which the Air District has conducted HRAs. Table A-1 in Appendix A lists the facilities in descending order of their cancer risks and Table A-2 in Appendix A lists the facilities in descending order by their non-cancer risks. The data in these tables is based on the Air District’s most recent annual submission to CARB, which is available on the Air District’s web site at: <https://www.baaqmd.gov/en/about-air-quality/emission-inventory/toxic-air-contaminants>. As discussed below, the Air District has not confirmed, by an HRA based on current actual emissions, that any facilities have health impacts that are meeting or exceeding the public notification thresholds of 10 in a million cancer risk or 1.0 non-cancer hazard index. Therefore, no facilities are subject to public notification at this time.

Table A-1 identifies two facilities with a reported cancer risk greater than 10 in a million, CoreSite Real Estate (FIDs 19539, 23518, 201165) and Zoetis Inc. (FID 24652), and 32 facilities with cancer risk reported as exactly 10 in a million. The Air District has determined that these facilities are not subject to public notification at this time for the reasons explained in detail below.

- **CoreSite Real Estate (FIDs 19539, 23518, 201165):** CoreSite Real Estate has three facility IDs (FIDs) with diesel-fired emergency back-up engines located in Santa Clara at: Coronado Drive and Stender Way, 3032 Coronado Street, and 3045 Stender Way, respectively. Diesel-fired emergency engines emit diesel particulate matter (DPM), which is a TAC. Under the Air District’s NSR program, each of these addresses was initially permitted as a separate FID number. However, the Air District has since determined that these facilities are on contiguous property and should therefore be combined into one site for the purposes of AB2588 and NSR applicability. The three FIDs combined have a prioritization score of 536 due to DPM emissions and warrant further HRA review. As an initial conservative assumption, the Air District reported HRA results determined by summing the cancer risk results and chronic hazard indices for all NSR HRAs conducted at these sites. However, upon further review, the Air District has determined that this HRA screening procedure may overestimate health impacts for the following reasons:
 - Sources not Installed – The NSR HRA results include equipment for which an Air District Authority to Construct has been issued. Some of the sources that have a valid Authority to Construct have not been installed and are not operating. The HRAs for AB2588 purposes should be based on installed and operating equipment.
 - Potential to Emit – The NSR HRAs for emergency engines are based on the maximum permitted non-emergency operating time for all sources in the project, which is called the “potential to emit”. HRAs conducted for AB2588 purposes may use this more conservative potential to emit as a worst-case emissions estimate, but AB2588 regulations allow the emission rates to be refined by determining the emissions resulting from actual non-emergency operating rates.
 - Double Counting – The newest NSR HRAs for these locations include all sources that were permitted within the previous 5-year period. For example, sources that were included in an NSR HRA conducted in 2019 were also included in a subsequent HRA conducted in 2022. Adding the two HRA results together can result in double counting of the risk results for this location.
 - HRA Impacts May Not Be Additive – For each NSR HRA, the HRA results are reported for the maximally impacted receptor. Adding impacts from two different locations would result in an overestimate of health impacts. Since receptor locations were not considered when the NSR HRA impacts were added together, a sum of NSR HRA results for three FIDs may overestimate health impacts, because for even two nearby facility locations, the maximally impacted receptors for each facility are likely to be at different locations.

For the reasons above, the Air District has concluded that the screening procedure that was used for this site has likely resulted in an overestimate of health risks, and that a more refined HRA is needed before public notification will be required. This more refined HRA will include all installed and operating equipment with TAC emissions for the three contiguous locations and will include all TAC emissions determined for the most recently available non-

emergency annual operating time for each emergency engine. The Air District has initiated calculations for this emission inventory refinement and will conduct an HRA based on this updated actual emissions inventory.

- **Zoetis Inc. (FID 24652):** Zoetis Inc. (formerly Abaxis) is located at 3240 Whipple Road in Union City and operates three diesel-fired emergency engines. This facility has had three NSR HRAs conducted in 2015 for S-2, in 2017 for S-3, and in 2022 for S-5. As with CoreSite above, the Air District previously estimated worst-case health impacts based on a sum of the cancer risk results for each NSR HRA, which resulted in a maximum combined health risk of 11.1 in a million ($5.8+4.3+1.0 = 11.1$). Each of these NSR HRAs was based on the maximum potential to emit and the sum of these HRA results overestimates current actual health impacts. Based on reported operating times and Air District calculated DPM emissions, the prioritization score for this facility is 3.9, which indicates that this facility is in the intermediate priority and does not require further HRA review at this time. While not required, the Air District conducted a site-wide HRA for this facility based on the maximum potential to emit in July of 2024. Results from this HRA indicate that the facility cancer risk is estimated at 4.2 in a million, the facility chronic hazard index is estimated at 0.0011, and the facility acute hazard index is estimated at 0.0036. Based on these results, since the estimated facility cancer risk does not exceed 10 in a million and chronic hazard index does not exceed 1.0, this facility does not require public notification under the AB2588 program.
- The Air District has identified 32 facilities with a reported cancer risk of exactly 10 in a million. These facility cancer risks were determined using Air District-approved health risk screening assessment (HRSA) procedures for diesel-fired emergency engines during 2002-2016. These conservative HRSA procedures assured that health impacts based on the maximum potential to emit for each facility would be less than the public notification threshold of 10 in a million for cancer risk. Prior to 2017, the Air District recorded and reported all HRSA results for diesel-fired emergency engines as either 9.99 in a million or exactly 10 in a million for cancer risk. However, having an HRSA result of exactly 10 in a million was not intended to result in a public notification requirement. Furthermore, the Air District's current policy is to report results based on HRSAs and HRA streamlining procedures as 9.9 in a million for cancer risk to more clearly indicate that health impacts are less than the 10 in a million public notification threshold. The Air District plans to reassess health impacts for any facilities with a reported cancer risk greater than 9.9 in a million that are also considered high priority to ensure that current health impacts remain below the public notification threshold. The following facilities have prioritization scores of less than 10 and do not require reassessment at this time: FIDs 13348, 13480, 13544, 13550, 13554, 13728, 13194, 16717, 16787, 20249, 21793, 22788, 23554, 23612, 24528, 24570, 100156, 100340, and 108613.

Table A-2 identifies two facilities with a reported chronic non-cancer hazard index greater than 1.0, T-C 55 Second Street LLC (FID 24787) and Argent Materials (FID 22474), and 6 facilities with non-cancer hazard index reported as exactly 1.0. The Air District has determined that these facilities are not subject to public notification at this time for the reasons explained in detail below.

- **T-C 55 Second Street LLC (FID 24787):** T-C 55 Second Street LLC is located at 55 Second

Street, San Francisco and operates two diesel-fired emergency engines. A conservative HRSA was conducted for this facility in 2002, which determined that health impacts from this facility did not exceed public notification thresholds. HRSA results should have been recorded as a cancer risk of 9.9 in a million or less and a chronic hazard index of 0.1 or less. However, the non-cancer hazard index was incorrectly reported as 9.9. This is a clear reporting error that will be corrected during the next reporting cycle.

- **Argent Materials (FID 22474):** Argent Materials is located at 800 Baldwin Street, Oakland and operates a material processing facility. An HRA was conducted in 2023 for proposed operations pursuant to Permit Application # 29851 that resulted in a proposed non-cancer health impact of 1.5 hazard index. These proposed operations have not yet been permitted and are still under review by the Air District. The Air District cannot approve any proposed operations that result in a non-cancer hazard index of 1.0 or higher. Therefore, it was incorrect to report health risk for a proposed and unpermitted project as a current health impact. Health impacts at the current maximum permitted operating rate are less than the public notification and Rule 11-18 risk action thresholds. The Air District is reviewing both current actual health risks for this facility (see Permit Application # 30122) and proposed health impacts for Permit Application # 29851. Current actual health risks will be corrected during the next reporting period.
- The Air District identified six (6) facilities with a reported non-cancer hazard index of exactly 1.0. For these facilities, the non-cancer hazard index was estimated to be 1.0 using Air District-approved HRSA procedures for diesel-fired emergency engines. These conservative HRSA procedures assured that health impacts based on the maximum potential to emit for the engines at each facility would be less than the public notification threshold of 1.0 chronic hazard index. For these streamlining procedures, having a hazard index of exactly 1.0 was not intended to result in a public notification requirement. Furthermore, the Air District's current policy is to report results based on HRSA and HRA streamlining procedures for diesel engines as 0.1 or less to more clearly reflect the estimated non-cancer hazard index for these engines, which is typically far below the 1.0 hazard index threshold. Chevron Business and Real Estate Services (FID 7237) also includes several registered and exempt boilers and will undergo further review during the Air District's review of Phase II high priority facilities (see further discussion under Rule 11-18). Since health risks are not expected to exceed 1.0 for any of these facilities, public notification is not required for these facilities.

REGULATION 11, RULE 18

On November 15, 2017, the Air District adopted Regulation 11, Rule 18, Reduction of Risk from Air Toxic Emissions at Existing Facilities, or Rule 11-18. This program is intended to further reduce health risks from existing facilities by facilitating a new evaluation of health risks for identified Bay Area facilities using the updated AHS facility ranking procedures and health risk calculation procedures that were incorporated into Air District toxic programs as of July 1, 2017. The 2017 BAAQMD HRA guideline updates incorporated OEHHA's 2015 HRA calculation procedure updates that were intended to be more protective of children's health. As a result of these methodological changes, many facilities that had not previously been required to submit HRAs would be ranked as

High Priority facilities using the new procedures. In addition, some facilities that had HRAs approved from 1990 to 2016 would have the potential to have higher calculated health risks even if toxic emissions had not increased due to these 2017 health risk calculation procedure changes. Therefore, the Air District concluded that new HRAs would likely be warranted for many facilities and that health risk action levels and risk reduction requirements should be reconsidered.

As discussed in the staff report for Regulation 11, Rule 18, the Air District determined that more stringent risk action levels than the thresholds applicable under ATHS were needed. The Air District adopted Regulation 11, Rule 18 and required that facilities either reduce health risks below the new Rule 11-18 risk action levels or install TBARCT on each significant source of risk at the facility. Rule 11-18 includes public comment opportunities for HRAs and facility risk reduction plans before these documents are finalized.

The implementation steps for Rule 11-18 are similar to the procedures presented above for the ATHS Program. Rule 11-18 and ATHS use the same facility inventory and prioritization score for ranking. As with the ATHS Program, Rule 11-18 applies to routine and predictable emissions from stationary sources at existing facilities. Rule 11-18 focuses on facilities with the highest risk potential, and it exempts gasoline dispensing facilities and facilities with only emergency standby diesel engines from Rule 11-18 requirements unless the facility prioritization score equals or exceeds 250. Any high priority GDFs and emergency diesel engine facilities with prioritizations scores between 10-and 250 are classified as industry-wide facilities that will be evaluated later, during review Phase III, under ATHS program. Implementation procedures for Rule 11-18 are described in detail in the April 2024 Implementation Procedures document on the Air District’s website at: https://www.baaqmd.gov/~media/files/ab617-community-health/facility-risk-reduction/20240429_02_ip_final_rule1118-pdf.pdf?rev=c7422b1d2706433aa4c21fcc4d9584fe&sc_lang=en.

For Rule 11-18, the Air District is focusing on evaluating or re-evaluating high priority facilities, which have the highest potential for elevated health risks as determined using the newest HRA guidelines. In addition to high priority facilities, the Air District plans to evaluate intermediate priority facilities that have a cancer risk prioritization score less than 10 but that have a non-cancer prioritization score equal to or greater than 1. Under Rule 11-18 and the ATHS programs, high priority and intermediate priority facilities are broken down into the review phases described below. The Air District has begun reviewing Phase I facilities and will review Phase II facilities next, followed by Phase III facilities.

Table 4. BAAQMD Facility Review Phases

Review Phase	Prioritization Score Thresholds
Phase I Facilities	High Priority with cancer PS => 250 or High Priority with non-cancer PS => 10
Phase II Facilities	High Priority with cancer PS => 10 and PS < 250 or Intermediate Priority with and non-cancer PS => 1 and PS < 10
Phase III Facilities	High Priority Industry-Wide Facilities (GDFs or Emergency Diesel Engines Only with PS => 10 and PS < 250)

The Air District is currently considering rule amendment concepts for Regulation 11, Rule 18 that are intended to speed up the HRA review and approval process and to expedite implementation of risk reduction measures. The Air District expects to hold a public workshop on proposed Rule 11-18 amendments later in 2024.

Facility Rankings for Facility Risk Reduction Programs:

Based on the 2022 TAC emissions inventories and prioritization scores, the Air District has identified 872 high priority facilities that warrant further Air District review. In addition, the Air District has identified 13 intermediate priority facilities that warrant further Air District review due to having a non-cancer prioritization score of 1 or higher. The remaining intermediate priority facilities and all low priority facilities do not need any further Air District review.

Table 5. Facility Counts and Review Phases

Facility Ranking (PS = Prioritization Score)	Total Facility Counts	Rule 11-18 and ATHS Review Phase		
		Phase I	Phase II	Phase III
High Priority PS >= 10	872	32	281	559
Intermediate Priority 1 <= PS < 10	4,349	1	12	0
Low Priority PS < 1	4,595	0	0	0
Total Facility Counts	9,816	33	293	559

Detailed lists of facilities in each rank (high, intermediate, and low priority) are presented in Appendix B. High and intermediate priority facilities are broken down by the review phase.

In addition to publishing facility ranking lists, the Air District has been developing a new toxic facility interactive mapping tool that will show the facility name, prioritization score, priority category (high, intermediate, or low) and toxic emissions by facility location. This mapping tool will enable the public to easily identify toxic facilities located in their neighborhood and assess their level of concern based on facility rank.

The Air District will review facility TAC emission inventories and facility HRAs conducted pursuant to the Toxics NSR program to determine if a new or updated site-wide HRA is necessary. Air District inventories may need updates or corrections to ensure that the TAC inventory is acceptable. Toxic NSR HRAs conducted after July 1, 2017 are using the most recent HRA guidelines and have permit conditions and other requirements in place to ensure the facility risks will not exceed Rule 11-18 risk action levels. Therefore, further review is not necessary for facilities with recent Toxic NSR HRAs.

For High Priority Phase I facilities, the Air District has initiated review of facility TAC inventories for 30 facilities. The Air District has completed the initial inventory review for 13 facilities. A Preliminary HRA has been completed for 1 facility, and Preliminary HRAs are underway for the other 12 facilities. In addition to the facilities noted below, the Air District worked on HRAs for 12

facilities that have either shut down or significantly curtailed operations after HRA work began.

The following Tables 6 through 10 provide the summary of Air District’s review of Phase I Facilities (33 Facilities).

Table 6. List of Facilities with Final HRA Under Preparation or Review:

Facility Number	Facility Name	City
4134	Irvington Memorial Cemetery	Fremont

Table 7. List of Facilities with Preliminary HRA Under Preparation or Review:

Facility Number	Facility Name	City
10	Chevron Products Company	Richmond
23	Chemtrade West US LLC	Richmond
1179	Redwood Landfill Inc	Novato
1257	Genentech Inc	South San Francisco
1812	Kirby Canyon Recycling and Disposal Facility	Morgan Hill
1840	West Contra Costa County Landfill	Richmond
2266	Browning-Ferris Industries of CA Inc	Half Moon Bay
4618	Keller Canyon Landfill Company	Pittsburg
11866	Los Medanos Energy Center	Pittsburg
17667	Ameresco Keller Canyon LLC	Pittsburg
22789	Eco Services Operations Corp	Martinez
22987	Republic Services of Sonoma County Inc	Petaluma

Table 8. List of Facilities with Toxic Emissions Inventory Under Review:

Facility Number	Facility Name	City
146	CASS Inc	Oakland
148	Ball Metal Beverage Container Corp	Fairfield
208	Schnitzer Steel Products Company	Oakland
227	Shell Catalysts & Technologies	Pittsburg
2066	Waste Management of Alameda County	Livermore
9013	International Disposal Corp of CA	Milpitas

Facility Number	Facility Name	City
11531	Z-Best Composting Facility	Gilroy
12626	Valero Refining Company - California	Benicia
14628	Tesoro Refining & Marketing Company LLC	Martinez
14676	Equinix LLC	San Jose
20139	Potrero Hills Energy Producers LLC	Suisun City
21359	Phillips 66 Company - San Francisco Refinery	Rodeo
24380	Corteva Agriscience - Pittsburg Operations	Pittsburg
24726	Martinez Refining Company LLC	Martinez
25055	USS-UPI LLC	Pittsburg
200886	Britannia Pointe Grand LP	South San Francisco
201589	Fireye Inc.	Milpitas

Table 9. List of Facilities with Toxic Emissions Inventory Review Beginning Soon:

Facility Number	Facility Name	City
639	Stanford University	Palo Alto
1784	San Francisco International Airport	San Francisco
20459	Tesla Inc	Fremont

Table 10. List of Facilities with Inventory and HRA Review Discontinued Due to Facility Shutdown or Emissions Reductions:

Facility Number	Facility Name	City	Status Change	Rationale
17	Lehigh Southwest Cement Company Cupertino	Cupertino	Not Subject	TAC Emissions decreased and PS dropped below Phase II thresholds because facility discontinued use of and shut down major sources
41	Owens Corning Insulating Systems, LLC Santa Clara	Santa Clara	Not Subject	Facility has shut down
62	A B & I Foundry Oakland	Oakland	Not Subject	Facility has shut down
194	PCC Structural - San Leandro San Leandro	San Leandro	Not Subject	TAC Emissions decreased and PS dropped below Phase II thresholds because facility abated and shut down major sources

Facility Number	Facility Name	City	Status Change	Rationale
621	City of Santa Clara	Santa Clara	Not Subject	TAC Emissions decreased and PS dropped below Phase II thresholds after emission factor corrections based on source testing
2246	Waste Management of Alameda County	Fremont	Not Subject	PS decreased below Phase II thresholds after Air District approved proximity adjustment factors for this site
2721	City of Palo Alto Landfill	Palo Alto	Move to Phase II	TAC Emissions decreased and PS dropped below Phase I thresholds after facility shut down sludge incinerator
11247	Clover Flat Resource & Recovery Park	Calistoga	Move to Phase II	TAC Emissions decreased and PS dropped below Phase I thresholds after emission factor corrections and source shutdowns in 2020
17419	Air Liquide Large Industries US LP	Rodeo	Move to Phase II	TAC Emissions decreased and PS dropped below Phase I thresholds due to lower material usage
19746	FXI, Inc	San Leandro	Not Subject	Facility has shut down
21360	Phillips 66 Carbon Plant	Rodeo	Not Subject	TAC Emissions decreased and PS dropped below Phase II thresholds after major sources shut down in 2023
24313	Impact Transportation, LLC	Oakland	Not Subject	An NSR HRA conducted using current HRA Guidelines demonstrates that site-wide risks are below all risk action levels

The Air District will commence review of Phase II and Phase III high priority facilities when reviews of all Phase I facilities are complete. For the 281 Phase II high priority facilities, site-wide HRAs have been completed for 118 facilities, but only 1 facility has a site-wide HRA completed using the current HRA guidelines. For the 559 Phase III high priority facilities, site-wide HRAs have been completed for 346 facilities and 135 of these completed HRAs are based on the current HRA guidelines.

CONTROL MEASURES FOR CATEGORIES OF SOURCES

Airborne Toxic Control Measures (ATCMs):

The primary mechanism for the development of retrofit air toxics control measures in California has been through the Toxic Air Contaminant Act, which was enacted in 1983 with the passage of AB-1807. Under this legislation, ATCMs adopted by CARB are implemented and enforced by the local air districts. Seventeen statewide ATCMs for stationary sources and one statewide ATCM for portable sources have been implemented in the Bay Area and are listed in Table 11:

Table 11. Airborne Toxic Control Measures (ATCMs)

Regulation	ATCMs	Date Adopted and Last Amended
17 CCR 93101	Benzene ATCM for Retail Service Stations	05/13/1988

Regulation	ATCMs	Date Adopted and Last Amended
17 CCR 93102 – 93102.16	Hexavalent Chromium ATCM for Decorative and Hard Chrome Plating and Chromic Acid Anodizing Operations	02/18/1988 05/25/2023
17 CCR 93101.5	ATCM for Thermal Spraying	12/09/2004
17 CCR 93103	Chromate Treated Cooling Towers	03/09/1989
17 CCR 93104	Dioxins ATCM for Medical Waste Incinerators	07/13/1990
17 CCR 93105	Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations	07/26/2001
17 CCR 93106	Asbestos ATCM for Surfacing Applications	04/12/1990 07/20/2000
17 CCR 93107	ATCM for Emissions of Toxic Metals from Non-Ferrous Metal Melting	01/14/1993
17 CCR 93108 17 CCR 93108.5	Ethylene Oxide ATCM for Sterilizers and Aerators Parts 1 & 2	05/21/1998
17 CCR 93109	ATCM for Emissions of Perchloroethylene from Dry Cleaning Operations	10/14/1993 01/25/2007
17 CCR 93110	Environmental Training Program Regulation for Perchloroethylene Dry Cleaning Operations	10/14/1993
17 CCR 93111	ATCM for Emissions of Chlorinated Toxic Air Contaminants from Automotive Maintenance and Repair Activities	04/27/2000
17 CCR 93112	ATCM for Emissions of Hexavalent Chromium and Cadmium from Motor Vehicle and Mobile Equipment Coatings	09/20/2001
17 CCR 93113	ATCM to Reduce Emissions of Toxic Air Contaminants from Outdoor Residential Waste Burning.	02/21/2002
17 CCR 93114	ATCM to Reduce Particulate Emissions from Diesel-Fueled Engines -- Standards for Nonvehicular Diesel Fuel	07/24/2003
17 CCR 93115	ATCM for Stationary Compression Ignition Engines	02/26/2004 10/21/2010
17 CCR 93116	ATCM for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater	02/26/2004 11/16/2017
17 CCR 93120	ATCM to Reduce Formaldehyde Emissions from Composite Wood Products	04/26/2007

Based on: <https://ww2.arb.ca.gov/resources/documents/airborne-toxic-control-measures>

National Emission Standards for Hazardous Air Pollutants (NESHAPs):

In addition to the ATCMs, the Air District also enforces NESHAPs developed by the U.S. EPA. These federal rules are also commonly referred to as MACT Standards, because they reflect Maximum Achievable Control Technology. The MACT Standards focus primarily on controlling emissions from facilities that are "major sources" of hazardous air pollutants (HAPs). A major source of HAPs is a facility that emits, or has the potential to emit, 10 tons per year or more of any individual HAP, or 25 tons per year or more of any combination of HAPs. The BAAQMD is required to implement and enforce all MACT Standards, or rules that are at least as stringent. Over the last decade, U.S. EPA has focused the NESHAPs on smaller "area sources" (i.e., facilities with HAP emissions below the major source thresholds). A complete listing of NESHAPs may be viewed at: <https://www.epa.gov/stationary-sources-air-pollution/national-emission-standards-hazardous-air-pollutants-neshap-8>.

Air District Toxic Control Regulations:

In addition to enforcing ATCMs and NESHAPs, the Air District adopts regulations to control toxic emissions from local sources of concern. Usually, the Air District's toxic control rules are identified

under Air District Regulation 11, Hazardous Pollutants. However, toxic emission control measures may also be included in other regulations, such as Air District Regulation 6, Particulate Matter or Air District Regulation 9, Inorganic Gaseous Pollutants, when toxic emission limits are included with other particulate or inorganic gas rule amendments. Current Air District toxic regulations are summarized in Table 13. Recent amendments and planned or proposed changes to Air District toxic regulations are discussed below after Table 12.

Table 12. Air District Regulations for Toxic Emissions

Regulation	Title and Applicability	Date Adopted and Last Amended
Reg. 6, Rule 5	Particulate Emissions from Refinery Fluidized Catalytic Cracking Units – Limits PM, sulfur dioxide, and ammonia emissions from fluidized catalytic cracking units located at refineries	12/15/2015 11/03/2021
Reg. 9, Rule 2	Hydrogen Sulfide – Limits ground level concentrations of hydrogen sulfide at any location outside of the property line where the emissions occur	03/17/1982 10/06/1999
Reg. 9, Rule 13	Nitrogen Oxides, Particulate Matter, and Toxic Air Contaminants from Portland Cement Manufacturing Operations - Limits NOx, PM, total hydrocarbons, and TACs (ammonia, dioxins/furans, hydrogen chloride, and mercury) from Portland Cement Manufacturing Operations	09/19/2012 10/19/2016
Reg. 11, Rule 1	Lead – Limits daily emissions and ground level concentrations of lead	03/17/1982
Reg. 11, Rule 2	Asbestos Demolition, Renovation and Manufacturing – Controls emissions of asbestos during demolition, renovation, milling, and manufacturing and establishes control measures for asbestos waste disposal operations	12/15/1976 10/7/1998
Reg. 11, Rule 3	Beryllium – Limits beryllium emissions from incineration and beryllium processing operations	03/17/1982
Reg. 11, Rule 4	Beryllium Rocket Motor Firing – Limits beryllium emissions from rocket motor test sites	03/17/1982
Reg. 11, Rule 5	Mercury – Limits mercury emissions from plants processing mercury ore and from sludge incineration and sludge drying plants	
Reg. 11, Rule 6	Vinyl Chloride – Limits vinyl chloride from plants producing vinyl chloride, polymers containing vinyl chloride, or ethylene dichloride	04/21/1982
Reg. 11, Rule 7	Benzene – Limits emissions from pumps, compressors, valves, pressure relief devices, flanges, other connectors, and any associated abatement equipment from components handling fluids containing 10% benzene or more	05/15/1985
Reg. 11, Rule 8	Hexavalent Chromium – Replaced by Hexavalent Chromium ATCM for Decorative and Hard Chrome Plating and Chromic Acid Anodizing Operations	07/20/1998 11/4/1998
Reg. 11, Rule 9	Ethylene Oxide Sterilizers – Replaced by Ethylene Oxide ATCM for Sterilizers and Aerators Parts 1 & 2	11/01/1989 05/17/2000
Reg. 11, Rule 10	Hexavalent Chromium Emissions from All Cooling Towers and Total Hydrocarbon Emissions from Refinery Cooling Towers – Prohibits use of hexavalent chromium chemicals in cooling towers and sets total hydrocarbon leak standards and monitoring requirements for refinery cooling towers	11/15/1989 11/03/2021
Reg. 11, Rule 11	National Emission Standard for Benzene Emissions from Coke By-Product Recovery Plants and Benzene Storage Vessels – Adopted by Reference to EPA NESHAP: 40 CFR Part 60, Subparts L and Y	07/18/1990
Reg. 11, Rule 12	National Emission Standard for Benzene Emissions from Benzene Transfer Operations and Benzene Waste Operations – Adopted by Reference to EPA NESHAP: 40 CFR Part 60, Subparts BB and FF	07/18/1990
Reg. 11, Rule 13	Medical Waste Incinerators – Limits dioxin and furan emissions from medical waste incinerators	01/16/1991

Regulation	Title and Applicability	Date Adopted and Last Amended
Reg. 11, Rule 14	Asbestos-Containing Serpentine – Prohibits use of asbestos-containing serpentine in road surfacing materials	07/17/1991
Reg. 11, Rule 15	Airborne Toxic Control Measure for Emissions of Toxic Metals from Non-ferrous Metal Melting – Adopted by reference to ATCM for Emissions of Toxic Metals from Non-Ferrous Metal Melting	04/06/1994
Reg. 11, Rule 16	Perchloroethylene and Synthetic Solvent Dry Cleaning Operations – Prohibits use of halogenated solvents (including perchloroethylene, 1,1,1-trichloroethane, and trichloro-trifluoroethane) in dry cleaning operations	12/21/1994 03/04/2009
Reg. 11, Rule 17	Limited Use Stationary Compression Ignition (Diesel) Engines in Agricultural Use – Limits use of diesel engines for agricultural operations	05/18/2011
Reg. 11, Rule 18	Reduction of Risk from Air Toxic Emissions at Existing Facilities – Requires risk reductions for facilities determined to have health risks exceeding risk action levels	11/15/2017

- Regulation 9, Rule 13:** On October 19, 2016, the Air District amended its Regulation 9, Rule 13: Nitrogen Oxides, Particulate Matter, and Toxic Air Contaminants from Portland Cement Manufacturing, or Rule 9-13. The rule sets emissions standards for NO_x, PM, total hydrocarbons, and TACs (ammonia, dioxins/furans, hydrogen chloride, and mercury). The rule also proposes analysis of health risk effects to the surrounding community from any modifications to the emissions stack of the kiln and provides fugitive dust control and mitigation measures at the facility to further reduce particulate emissions. The 2016 amendments address technical problems with the ammonia limit in the rule. Additional details on Rule 9-13 are available on the Air District’s web site at: <https://www.baaqmd.gov/en/rules-and-compliance/rules/reg-9-rule-13--nitrogen-oxides-particulate-matter-and-toxic-air-contaminants-from-portland-cement-ma>.
- Regulation 11, Rule 9:** On May 15, 2000, the Air District amended its Regulation 11, Rule 9: Ethylene Oxide Sterilizers to adopt the related ATCM by reference. The ATCM sets ethylene oxide emission standards for commercial and non-commercial sterilizers and aerators. On March 14, 2024, EPA announced final amendments to a related NESHAP for commercial ethylene oxide sterilizers: 40 CFR Part 63, Subpart O: Ethylene Oxide Emission Standards for Sterilization Facilities. For more information about EPA’s NESHAP amendments, see: <https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/proposal-reduce-ethylene-oxide-emissions-commercial>
- Regulation 11, Rule 10:** On November 3, 2021, the Air District amended its Regulation 11, Rule 10: Hexavalent Chromium Emissions from All Cooling Towers and Total Hydrocarbon Emissions from Refinery Cooling Towers. The amendments revised several definitions to ensure that refineries that are switching from petroleum-based fuels to renewable non-petroleum-based fuels would continue to be subject to the cooling tower emission limits and monitoring requirements in this regulation. Additional details on Rule 11-10 are available on the Air District’s web site at: https://www.baaqmd.gov/en/rules-and-compliance/rules/reg-11-rule-10-hexavalent-chromium-emissions-from-all-cooling-towers-and-total-hydrocarbon-emissions?rule_version=2021%20Amendment

- **Regulation 6, Rule 5:** On November 3, 2021, the Air District amended its Regulation 6, Rule 5: Particulate Emission Limits from Refinery Fluidized Catalytic Cracking Units. This rule limits emissions of total PM₁₀, sulfur dioxide, and ammonia from fluidized catalytic cracking units. While the ammonia emission limit was primarily set because ammonia is a precursor to PM₁₀ formation, ammonia is also a TAC. The amendments revised several definitions to ensure that refineries that are switching from petroleum-based fuels to renewable non-petroleum-based fuels would continue to be subject to the emission limits for fluidized catalytic cracking units. Additional details on Rule 6-5 are available on the Air District's web site at:
https://www.baaqmd.gov/en/rules-and-compliance/rules/reg-6-rule-5-particulate-emissions-from-refinery-fluidized-catalytic-cracking-units?rule_version=2021%20Nov%20Amendment
- **Regulation 11, Rule 18:** The Air District is making updates and improvements to its Rule 11-18 Facility Risk Reduction Program. In April of 2024, the Air District updated its Rule 11-18 Implementation Procedures document. Furthermore, the Air District is considering potential amendments to Rule 11-18 in order to help expedite the emissions inventory review, HRA, and Risk Reduction Plan approval steps, as well as other changes that may improve implementation of the rule. A Rule 11-18 Concept Paper, which is an initial step in the process of developing amendments to Rule 11-18, has been published on the Air District's web site. Additional information on the updates and improvements to Rule 11-18 are available on the Air District's web site at:
https://www.baaqmd.gov/~media/dotgov/files/rules/regulation-11-rule-18-reduction-of-risk-from-air-toxic-emissions-at-existing-facilities/2024-amendments/documents/20231231_rule1118_conceptpaper-pdf.pdf?rev=5b38e129f1a445e7a91f6e473ffbf908&sc_lang=en
- **Regulation 6, Rule 4:** The Air District recently published a white paper as the first step in assessing potential regulatory amendments to its Regulation 6, Rule 4: Particulate Matter, Metal Recycling and Shredding Operations, or Rule 6-4. The white paper discusses the environmental impacts from metal shredding and recycling operations and potential strategies for reducing those impacts. Additional details on Rule 6-4 are available on the Air District's web site at:
<https://www.baaqmd.gov/en/rules-and-compliance/rules/reg-6-rule-4--metal-recycling-and-shredding-operations>

AIR TOXICS EMISSIONS INVENTORY

The air toxics emissions inventory is a database that contains information concerning emissions of TACs from permitted stationary sources in the Bay Area. The inventory includes routine or predictable releases and is not intended to describe the potential for acute hazards from accidental releases. Information submitted by industry is reviewed for accuracy by BAAQMD staff prior to inclusion in the inventory. 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 data for 2022 are presented at:

<https://www.baaqmd.gov/en/about-air-quality/emission-inventory/toxic-air-contaminants>.

The data are presented for each facility sorted by county and city, and alphabetically by pollutant. The total inventory for the Bay Area is provided by pollutant. These are the BAAQMD's best estimates of TAC emissions, based on the information that facilities submitted in their annual update reports.

In September 2024, the Air District introduced a toxic facility mapping tool that the public may use to identify toxic facilities in their community. This new toxic facility mapping tool is available on the Air District's website at: <https://www.baaqmd.gov/en/about-air-quality/emission-inventory/toxic-air-contaminants/toxic-mapping-tool>.

AIR TOXICS AMBIENT AIR MONITORING

The Air District measures the concentrations of air toxics in ambient air both at long-term air monitoring stations, and also by conducting targeted, short-duration air monitoring projects designed to improve the information about the sources of emissions and their impacts on nearby communities.

Long-Term Ambient Air Monitoring Stations:

In the Bay Area, the Air District operates 21 long-term air monitoring stations that measure the concentrations of 22 VOCs that are also TACs. Two stations monitor additional TACs as a part of CARB's statewide air toxics air monitoring program. Detailed information about these long-term trends measurements are described in Section 3.4 of our Annual Air Monitoring Network Plan, posted at:

<https://www.baaqmd.gov/en/about-air-quality/air-quality-measurement/ambient-air-monitoring-network>.

The data for the BAAQMD's long-term air toxics ambient air monitoring network are uploaded to EPA's Air Quality System (AQS) database and can be accessed at:

<https://www.epa.gov/outdoor-air-quality-data>.

In May 2024, the Air District published the draft 2024 Annual Air Monitoring Network Plan that describes long-term trends measurements of air toxics throughout the Bay Area. Comments on this plan were accepted through June 20, 2024. The draft plan is available at:

https://www.baaqmd.gov/~media/files/technical-services/air-monitoring-network-plans/2024_network_plan_draft-pdf.pdf?rev=44e4919ab574453aaf07e5e2a36ca99c&sc_lang=en

Short-Duration Ambient Air Monitoring Projects:

In addition to the air toxics ambient air monitoring at long-term air monitoring stations, the Air District uses a variety of methods to measure the concentrations of air toxics at other locations in the Bay Area for shorter duration studies. These special air monitoring projects may have a variety of objectives for gathering data, such as:

- Identifying and characterizing emissions crossing a facility fenceline,
- Determining the impacts of facility emissions on nearby communities,

- Assessing cumulative impacts of multiple sources of air pollution on overburdened communities, and
- Collecting more information about the local-scale variation in the levels of specific pollutants.

Short-duration air toxics projects are described at:

<https://www.baaqmd.gov/en/about-air-quality/air-quality-measurement/special-air-monitoring-projects>.

For a recent example, the Air District worked with the Richmond-North Richmond-San Pablo AB 617 Community Air Monitoring Plan Community Steering Committee (CAMP CSC) to design an air toxics monitoring project to identify areas with higher levels of VOCs to identify opportunities for reducing emissions and exposure in this community facing disproportionate impacts. The study evaluated levels of VOCs using the Air District mobile monitoring platform in locations throughout this community identified by the CAMP CSC, including near different sources of VOCs and places where people spend time. The work with the CSC is described on the [CAMP website](#). The Air District worked with a Monitoring Outreach Team, a subset of the CSC, to develop a [StoryMap report](#) detailing the results of the study.

The Air District continues to build the capacity to conduct more localized, source-oriented air monitoring studies and expects to continue to increase the amount of this type of monitoring, particularly for air toxics, in the coming years.

COMMUNITY HEALTH PROTECTION PROGRAMS

The Air District implements several programs that are intended to assess and address health risks in communities with disproportionate air quality impacts. These programs include:

- California AB617 Community Air Protection program
- BAAQMD Community Air Protection Grant program
- BAAQMD Community Air Protection Incentives program
- Bay Area Healthy Homes Initiatives
- BAAQMD Community Air Risk Evaluation (CARE) program

California AB617 Communities in the Bay Area:

The Community Health Protection Program is a collaborative initiative between communities, the Air District and other agencies that is focused on reducing exposures and improving community health in neighborhoods that are most impacted by air pollution. In the Bay Area, four communities have been selected as AB617 communities:

- **West Oakland** – West Oakland was selected in 2018 for a Community Emission Reduction Program (CERP). BAAQMD partnered with the West Oakland Environmental Indicators Project (WOEIP) as co-leads to convene a community steering committee and developed *Owning Our Air: The West Oakland Community Action Plan*. A 5-year progress report is currently being prepared. More information is available at: <https://www.baaqmd.gov/community-health/community-health-protection-program/west-oakland-community-action-plan>

- **Richmond-North Richmond-San Pablo** – Richmond-North Richmond-San Pablo was selected in 2020 for a Community Air Monitoring Plan (CAMP) and a CERP. The CAMP is discussed above under the Air Toxics Ambient Air Monitoring section of this report. On May 1, 2024, the Air District adopted the Path to Clean Air (PTCA) Plan for this community. More information is available at:
<https://www.baaqmd.gov/community-health/community-health-protection-program/richmond-area-community-health-protection-program>
- **East Oakland** – East Oakland was selected in 2022 for a CERP. The Community Steering Committee (CSC) has been formed and is working on a CERP. More information is available at:
<https://www.baaqmd.gov/community-health/community-health-protection-program/east-oakland-community-emissions-reduction-plan>
- **Bayview Hunters Point/Southeast San Francisco** – Bayview Hunters Point/Southeast San Francisco was selected in 2023 for a CERP. The CSC has been formed and is working on a CERP. More information is available at:
<https://www.baaqmd.gov/community-health/community-health-protection-program/bayview-hunters-point-community-emissions-reduction-plan>

Community Health Protection Grants, Incentives and Initiatives:

In addition to working with AB617 communities on reducing air pollution emissions in their neighborhoods, the Air District oversees several grant and incentive programs and other initiatives that help reduce public exposure to air toxics. More information about these other programs, is available on the Air District's web site at:

<https://www.baaqmd.gov/en/community-health/air-pollution-and-community-health>.

Reducing Exposure to Fine Particulate Matter:

Numerous studies have demonstrated that exposure to fine particulate matter (PM2.5) is deleterious to human health with health outcomes such as: aggravation of asthma, bronchitis, and other respiratory problems, cardiovascular symptoms, and decreased life expectancy. While PM2.5 is currently regulated on a regional scale, the Air District is seeking to address growing concerns about PM2.5 exposures on a local scale, especially for vulnerable communities. In 2022, the Air District developed a proposed methodology for determining local health impacts from undifferentiated PM2.5. Documentation and plans for this proposed methodology are available on the Air District's web site at:

<https://www.baaqmd.gov/en/community-health/air-pollution-and-community-health/proposed-methodology-for-fine-particulate-matter>.