



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

## **WORKSHOP REPORT**

**Draft Amendments to Regulation 2: Permits, Rule 1: General Requirements**

**Draft Amendments to Regulation 2: Permits, Rule 5: New Source Review of Toxic Air Contaminants**

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## I. EXECUTIVE SUMMARY

The Bay Area Air Quality Management District (Air District) staff is developing amendments to its permitting regulation (Regulation 2: Permits) to make the rules within it more health protective, with a particular emphasis on improving air quality at the local level. Regulation 2 includes the Air District's rules that govern New Source Review, which is a comprehensive permitting program that applies to entities within the San Francisco Bay Area when they install new equipment or make modifications to existing equipment that will increase air pollution emissions. When someone wants to install a new source of air pollution or modify an existing source that will increase emissions above the Air District's applicability thresholds, they must obtain a permit from the Air District. To obtain a permit from the Air District, the permit applicant must control emissions or exposure to people nearby if emissions or exposures exceed established thresholds. The Air District cannot issue permits for projects that will exceed health risk limits, or that do not comply with regulatory standards.

Based on an evaluation of the permitting process and feedback received from the public during the concepts workshop, which was held in May 2021, staff recommends and seeks public feedback on the following changes to two permitting rules; Regulation 2: Permits, Rule 5: New Source Review of Toxic Air Contaminants (Rule 2-5), and Regulation 2: Permits, Rule 1: General Requirements (Rule 2-1). The draft changes to each rule are described below.

### Rule 2-1: General Requirements

The proposed changes to Rule 2-1 would include a new definition to identify areas that experience relatively high levels of cumulative impacts (areas where air pollution levels are higher and that are also more vulnerable to environmental, socioeconomic, and health stressors). Areas that experience high levels of cumulative impacts are called "Overburdened Communities" in Draft Amended Rule 2-1. Overburdened Communities are census tracts that score at or above the 70<sup>th</sup> percentile in the California Communities Environmental Health Screening Tool (CalEnviroScreen), Version 4.0, as well as areas that are within one thousand feet of the boundaries of census tracts that score at or above the 70<sup>th</sup> percentile in CalEnviroScreen 4.0. There are two additional significant draft changes to Rule 2-1. First, there is a new requirement for projects to notify surrounding addresses, if the project will require a health risk assessment because of toxic air contaminant (TAC) emissions and the project will be located within or near a community that experiences relatively high levels of cumulative impacts, as identified through the CalEnviroScreen. Second, staff proposes to extend the Air District's permit application review timeline from 35 working days to 45 working days.

### Rule 2-5: New Source Review of Toxic Air Contaminants

There are three overarching draft changes to the Air District's Air Toxics New Source Review Rule. First, the cancer risk limit in Rule 2-5 would be made more stringent in areas that experience relatively high levels of cumulative impacts. To accomplish this, Rules 2-1 and 2-5 would utilize CalEnviroScreen to identify areas where cumulative impacts are high in the Bay Area. Second, draft revisions to the Air District's Health Risk Assessment Guidelines incorporate updates to the health risk assessment procedures for gasoline dispensing facilities, to be consistent with other permitted sources/facilities. Third, staff drafted updates to Table 2-5-1, the Toxic Air Contaminant Trigger Levels table, including updated trigger levels based on new and revised health effects values developed and approved by the California Office of Environmental Health Hazard Assessment (OEHHA). In addition, draft acute trigger levels are updated based on an acute target hazard index of 0.20, which is consistent with the Air District's Rule 11-18 significant source

threshold of an acute hazard index of 0.20. Previous acute trigger levels were based on a target hazard index of 1.0. In addition to the three draft changes discussed above, the Air District is proposing several additional changes to Rule 2-5 that are intended to prevent circumvention of Rule 2-5's health risk requirements and to enable the Air District to more effectively manage staff resources.

Staff plans to hold a virtual public workshop to present the draft changes described in this document and receive public feedback on them. The workshop would feature a presentation by staff on areas relevant to addressing community members' concerns and will include time for public comments and a question-and-answer session. The workshop would focus on the topics described in this Workshop Report.

## II. BACKGROUND

The effort to amend the Air District's Permitting Regulation began at the urging of community advocacy organizations to address air quality impacts from permitting activities in overburdened communities. This section describes the history of this current regulatory effort as well as other permitting regulations at different jurisdictions that staff has researched during this process and plans to use in contextualizing the Air District's current permitting regulation.

### A. *Concerns from Community Stakeholders*

At the 2018 AB 617 Community Health Protection Program Regional Kick-Off meeting, community advocates stated that the Air District needed to make significant changes to its permitting regulation.<sup>1</sup> Advocates brought up recent high-profile projects for which the Air District issued permits, stating that the Air District, by issuing permits, is allowing areas already overburdened by air pollution and combined effects of cumulative impacts (such as those from land and water pollution, poverty, and economic and social injustices) to be subject to even more pollution. Advocates told Air District leadership that the agency needed to address its permitting program, especially the portion of the program that continues to permit sources that disproportionately impact communities of color. Advocates and workshop participants urged the Air District to revise its permitting rules so that new sources of air pollution are no longer allowed in communities overburdened by poor air quality. Advocates also stated that the communities that face the highest levels of air pollution and the worst health outcomes are generally the communities in which people of color reside in the greatest numbers.

In response to community advocates' concerns expressed during this meeting, Air District leadership committed to taking a thorough look at its permitting regulation and processes to assess how to improve them with the goal of reducing pollution and exposure that the most impacted communities experience. The Air District stated that it would collaborate with community advocates and committed to work in the communities and with the experts and residents in those communities to come up with solutions to address concerns regarding air permitting.

### B. *Concept Development Processes*

#### 1. *Internal Assessment and Evaluation*

Following the 2018 AB 617 Community Health Protection Program Regional Kick-off meeting, Air District staff met internally to discuss potential changes to the permitting regulation and processes. Staff convened an internal workgroup consisting of staff members from multiple

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<sup>1</sup> BAAQMD, 2018. AB 617: Community Health Protection Program Regional Kick-off.

divisions within the Air District with the purpose of formulating ideas to improve the Air District's permitting regulation regarding new and modified sources in and near impacted communities. The workgroup identified potential changes within the Air District's regulatory purview and did not require amendments to state or federal law. Staff then discussed benefits and challenges to implementing changes to the regulation and related Air District operations such as enforcement and monitoring. Through the process, the workgroup focused on changes to the permitting regulations that address toxic air contaminants and particulate matter emissions.

Staff coordinated outreach to community advocacy organizations that are committed to making the Air District's Permitting Regulation more health protective and continued to assess options internally that would increase the health protectiveness of the regulation, particularly in communities that experience relatively high levels of pollution burden, as well as communities that experience disproportionate health burdens that may be exacerbated by air pollution. Staff developed concepts to share with the public on potential ways to amend rules within the Permitting Regulation in response to concerns from the public and advocacy organizations and based on the Air District's information on different levels of exposure to air pollution at the local level within the Bay Area.

Following the Concepts Workshop, staff reviewed and considered comments received from workshop participants and comments submitted in writing by members of the public and met internally to prepare for the next step of the rule amendment process, which is to prepare draft rule language and this workshop report.

## 2. Initial Outreach to Community Organizations

Staff has been meeting with concerned community advocates regarding the permitting process since Air District staff's leadership commitment to evaluate potential changes and update the Permitting rules to be more health protective in areas overburdened by pollution or health vulnerabilities. To receive initial input on considerations for evaluating potential amendments to the Permitting rules, staff met with community organizations that are active in the public health and air quality arena at the regional and subregional levels. Staff's meetings with these organizations were intended to receive insights and suggestions from organizations across the Bay Area. Table 1 below shows the names of the community organizations with which staff has met to receive feedback on the Air District's permitting process and how the process can be improved to further protect public health.

**Table 1 – Community Outreach Organizations**

Geographic Region	Community Organization/Neighborhood Name
Carquinez Corridor	All Positives Possible
	Fresh Air Vallejo
	Bayo Vista (neighborhood residents)
Suisun Bay	La Clínica
Eastern San Francisco	Bayview Hunters Point Community Advocates
East Oakland	Communities for a Better Environment (East Oakland and Richmond)
	Rose Foundation/New Voices Are Rising
	Regional Asthma Management & Prevention
Tri-Valley	Tri-Valley Air Quality Alliance
South Bay	Breathe California
North Bay	Daily Acts

Feedback from community organizations often centered on ensuring that the Air District prevents harmful sources or operations from receiving permits. Although there were differences in the types of projects community members want to prevent from locating in or near their neighborhoods, community members and advocates from all the community groups with whom staff met said that they want the permitting rules to be more stringent. Some community advocates have called for a complete permitting moratorium in certain parts of the Bay Area, a request that was repeated during the workshop and in the written comments sent to staff. Some have also said that overburdened communities need enhanced regulatory protections. Most advocates stated that there needs to be a cumulative impacts consideration in the Air District's permitting regulation and that the Air District needs to take into account the proximity of a proposed project to other existing sources of air pollution, although feedback differed in terms of what should be considered or prioritized in the cumulative impacts analysis.

Air District staff noted the following overall suggestions from community advocates:

- Incorporate into the permitting regulation a way to assess the impacts on the surrounding community from a proposed project;
- Make the requirements for permitting more stringent, paying particular attention to communities that experience high levels of pollution burden and health vulnerabilities; and
- Consider that some communities already experience unacceptably high levels of background air pollution, which leads to elevated health risk in the community.

### 3. Proposed Concepts

Based on the feedback received from community organizations and staff's research on potential amendments to the permitting rules, the Air District held a public workshop on May 12, 2021, to present concepts to amend the permitting rules and receive public feedback. Staff also prepared a concept paper in preparation for the workshop, which was released to the public.<sup>2</sup> The concepts presented in the Concept Paper and the workshop are summarized below:

- Make the Air District's Air Toxics Permitting Rule more stringent, either Bay Area-wide or in overburdened communities: Staff presented high-level information on a more stringent risk limit across the Bay Area or in communities identified as being overburdened by pollution or health vulnerabilities. Staff requested feedback on whether to recommend a more stringent risk level Bay Area-wide or at the subregional level. Staff also requested input on how to identify overburdened communities if the Permitting Regulation was made more stringent at the subregional level.
- Enhance public noticing and analysis requirements: Increase transparency by providing additional notifications and analysis of proposed projects in overburdened communities.
- Update the health risk screening process for gas stations: Revise the Air District's Health Risk Assessment Guidelines to incorporate the latest procedures to assess health risk from projects that involve gas stations.
- Evaluate methodologies to make permitting more stringent for sources that will emit particulate matter: Assess how to mandate reductions in emissions and exposure to fine particulate matter from new and modified sources.

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<sup>2</sup> The Concept Paper, Appendices, and FAQ documents are available on the Air District's website: [www.baaqmd.gov/reg-2-permits](http://www.baaqmd.gov/reg-2-permits)

The Concept Paper described the concepts described above and attempted to provide background information and context for workshop participants and the public to provide feedback. The Air District also included appendices documents that summarized current Air District permitting rules, discussed land use considerations and the California Environmental Quality Act (CEQA) process as it pertains to air quality considerations, and provided some information on the permitting processes at other large California air districts.<sup>3</sup> The appendix section also included a discussion on relevant portions of permitting programs in different places outside of California that try to pay special attention to permitting in overburdened communities.

Since the release of the Concept Paper and supporting appendices, the California Department of Toxic Substances Control released the Senate Bill 673 Cumulative Impacts and Community Vulnerability Draft Regulatory Framework, which proposes to use CalEnviroScreen to identify communities that experience combined environmental and health burdens where the Department’s permitted facilities are or may be located.<sup>4</sup> After applying CalEnviroScreen to determine cumulative impacts in areas where permitted facilities are located, the Department would set requirements based upon those surrounding impacts and the impacts from the facility.<sup>5</sup>

*a) Public Feedback Received on the Proposed Concepts*

The May 12 workshop on concepts to amend the Permitting rules included over 100 participants. The workshop was held virtually using Zoom. Participants were able to provide feedback on the concepts via Zoom chat or by providing verbal comments. Participant comments were recorded using a digital whiteboard on which comments were written down and made visible in real time for workshop participants. In addition, after the workshop, public commenters submitted to staff a total of ten written comments on the concepts. Table 2 below provides a breakdown of comment categories and general summaries of the comments staff received during the workshop and in the written comments.

**Table 2: Summary of Most Common Feedback on Permitting Concepts**

Comment Category	Comment Summary
Cancer Risk Limit	Need to assess impacts to businesses and workers before recommending a lower cancer risk limit.
	Need to assess impacts on critical infrastructure, exempt for public safety or other uses favored by the community.
	Lower it in overburdened communities or lower it overall.
	Cancer risk from permitted stationary sources in the Bay Area is small compared to risk from other types of sources; a more stringent risk limit will jeopardize jobs without really improving health outcomes.
	Lowering the cancer risk/toxics emissions limits will reduce the incentive to replace old equipment or locate essential services.
CEQA Thresholds	CEQA Thresholds for greenhouse gases, particulate matter, and toxic air contaminants should be made more stringent.

<sup>3</sup> BAAQMD, 2021. Concept Paper to Amend the Air District’s Permitting Rules in Response to Localized Differences in Air Quality and Permitting in Overburdened Communities: Appendix A—Permitting Processes and Land Use Considerations. April.

<sup>4</sup> DTSC, 2021. SB 673 Cumulative Impacts and Community Vulnerability Regulatory Framework May. Pages vi, 28.

<sup>5</sup> DTSC, 2021. SB 673 Cumulative Impacts and Community Vulnerability Regulatory Framework May. Page viii.

Comment Category	Comment Summary
Cumulative Impacts	Cumulative impacts should be taken into consideration when evaluating permit applications.
Education	There should be more public education on the permitting process.
Emission Credits	Polluting facilities should not be given emission credits.
Enforcement	Enforcement should be timely and meaningful against facilities that violate permit requirements.
Engagement	A multi-stakeholder working group should be established to consider potential amendments to the toxic air contaminant risk level.
	Residents need to be able to exercise some control over whether a polluting facility can locate or expand in the community.
	Provide financial support to community organizations so that they can conduct outreach proactively.
Enhanced Notification	Desire to be informed when a polluting facility will be opened or expanded in the community, as well as potential impacts.
	Need to inform the public of baseline pollution levels, facility information and past violations, and provide information on proposed projects, through website and email updates and a public meeting, if requested by the community.
	Some industry representatives are okay with giving notice but request the Air District address application processing times.
	Some people will be angry if enhanced notification won't change permitting outcomes.
	Enhanced notifications should be expanded to include undifferentiated particulate matter emissions.
	Notify the public as soon as the Air District is aware of a local land use permitting project application that will have significant community air quality impacts.
Exemptions	The Air District should eliminate exemptions for permitting equipment.
Fine particulate matter emissions	Need to have a methodology to evaluate impacts of PM <sub>2.5</sub> on the community, especially on children.
	Air District needs to prioritize PM emissions reductions.
	Facilities should not be able to trade particulate matter emissions credits.
	Particulate matter needs to be included in the permitting rule amendments given the Advisory Council's recommendations.
Gas stations	More stringent limits that result in fewer gas stations will lead to more traffic and more greenhouse gas emissions.
Greenhouse Gases	Need to address GHG emissions in permitting.
Land Use	The Air District should realize the role it plays in land use planning. Support for Air District advocacy at the State level to require land use entities to consider air quality during land use decision making.
Mobile Sources	Air District should prioritize achieving emissions reductions from mobile sources since they are the dominant contributor to emissions in overburdened communities.
Moratorium	Should be a permitting moratorium until the permitting rule amendments are adopted.
	Questions regarding why CalEnviroScreen was not selected to identify disadvantaged communities.

Comment Category	Comment Summary
Overburdened Community Identification	Questions regarding factors considered (e.g., race, unhoused population), availability of a map to identify overburdened areas.
	A question on how to ensure that communities don't compete with each other to be identified as "overburdened."
Permit Renewals	For facilities that are already permitted, the Air District should apply the updated permitting rules when permits are renewed.
Rule 11-18	Changes to the risk limit or methodology in the permitting rules will complicate Rule 11-18 implementation.

As shown in Table 2 above, the concepts received covered multiple categories. Currently, staff proposes to focus draft amendments to the permitting rules that regulate toxic air contaminant emissions, with particular emphasis on carcinogenic emissions, and increasing transparency through risk notifications. There is ongoing work involving community stakeholders to evaluate fine particulate matter emissions from permitted sources, although the State categorizes a type of particulate matter (diesel particulate matter) as a toxic air contaminant. Staff's draft rule changes will further strengthen controls on diesel particulate matter emissions. Staff proposes to keep the regulatory effort to address fine particulate matter that the State does not consider to be a toxic air contaminant separate from this one because it is an earlier stage of development.

### III. TECHNICAL REVIEW

#### A. *Air Toxics New Source Review Program*

The Air Toxics NSR Program was established in 1987 at the direction of the Air District's Board of Directors and was initially implemented based on policies and procedures established by the Air District's Air Pollution Control Officer (APCO). In 2005, the Air District updated the Air Toxics NSR Program and codified the Air Toxics New Source Review policies and procedures in Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants, in the Manual of Procedures, Volume II, Part 4: New and Modified Sources of Toxic Air Contaminants, and in the BAAQMD Health Risk Assessment (HRA) Guidelines. When evaluating health impacts from new and modified sources, the Air District follows the BAAQMD Health Risk Assessment Guidelines, which generally conform to State Air Toxics Hot Spots Health Risk Assessment guidelines. The California Office of Environmental Health Hazard Assessment (OEHHA) periodically revises the State Health Risk Assessment guidelines and has made some changes since the BAAQMD Health Risk Assessment Guidelines were updated in 2015. The last time Rule 2-5 was amended, at the end of 2016, the Air District updated the rule to include the most current OEHHA health risk assessment procedures for estimating health risk from new and modified sources of toxic air contaminants, which resulted in a 40% increase in estimated cancer risk for the same emission levels of most toxic air contaminants. For a dozen toxic air contaminants, the estimated cancer risk increased by up to a factor of five, solely based on the revised health risk assessment calculation methodology.<sup>6</sup>

The goal of the Air Toxics NSR Program is to evaluate and mitigate potential increases in public health risks resulting from new and modified sources of toxic air contaminants based on preconstruction permit review. The program is also intended to reduce existing health risks by requiring updated control requirements when older, more highly polluting sources are modified or replaced. Rule 2-5 contains health risk-based thresholds at which a new or modified source

<sup>6</sup> BAAQMD, 2016. Staff Report, Proposed Amendments to BAAQMD Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants. September.

must employ Best Available Control Technology for Toxics (TBACT) and health risk limits that each project cannot exceed. The rule also delineates the procedures to be used for calculating toxic air contaminant emission increases from sources and projects and for evaluating the health impacts that result from these emission increases.

The stringency of the program is affected by both the methodology and the 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. The recommended changes to Rule 2-5 in this document include increased stringency through a reduction in risk action level in communities overburdened by higher levels of pollution or population vulnerability, as well as changes in the methodologies for assessing health risks from gas stations and emergency engines, which will result in a higher calculated risks for projects involving gas stations and emergency engines.

### *B. Differences in Pollution Health Vulnerability at the Local Level*

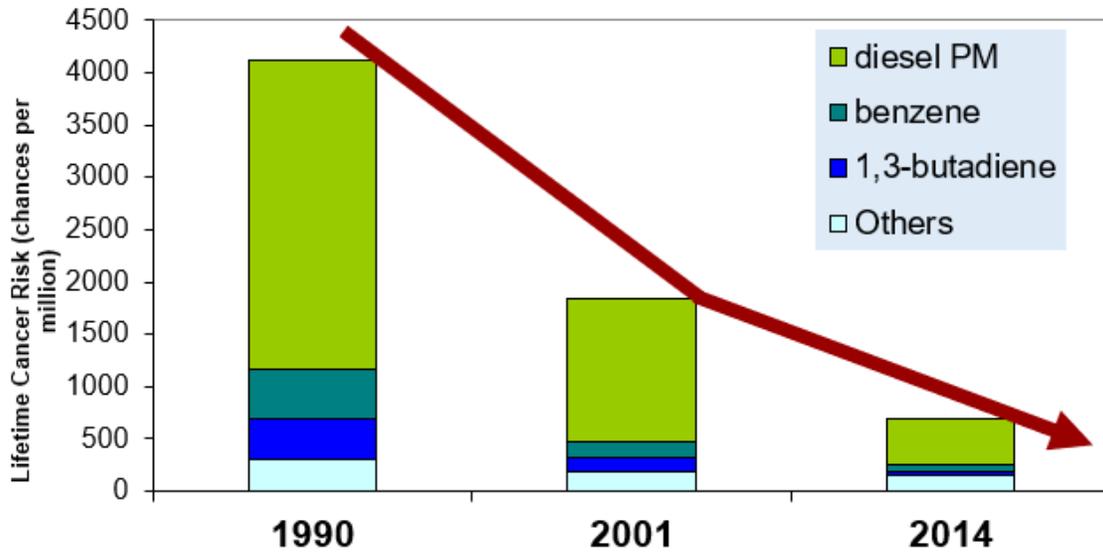
Due to a variety of factors, air quality in the Bay Area often varies between different locations. As described here as well as in the April 2021 Concept Paper on this rule amendment effort, Air District staff has focused on reducing disparities in access to clean air for decades and has developed programs that are specifically targeted to achieve reductions in air pollution in the Bay Area's communities that are overburdened by poor air quality, which can be compounded by exposure to other forms of environmental pollution and health vulnerabilities.<sup>7</sup> Efforts by the Air District in conjunction with actions undertaken by other regulatory agencies and industries have contributed to an overall decline of the average background cancer risk in the Bay Area, as Figure 1 shows below. Air District modeling and monitoring data show that cancer-risk weighted air toxics trends are declining regionally, and that the most significant driver of air toxics emissions in the Bay Area come from mobile source emissions. Since 1990, the estimated lifetime cancer risk for Bay Area residents over a 70-year lifespan from all toxic air contaminant emissions combined declined from 4,100 cases to around 600 cases per million people today.<sup>8</sup> Diesel particulate matter still accounts for the majority of toxic air contaminant emissions in the Bay Area and the majority of toxic emissions still result from mobile source emissions.<sup>9</sup>

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<sup>7</sup> BAAQMD, 2021. Concept Paper: Concepts to Amend the Air District's Permitting Rules in Response to Localized Differences in Air Quality and Permitting in Overburdened Communities. April. See page 3.

<sup>8</sup> BAAQMD, 2017. Final 2017 Clean Air Plan: Spare the Air – Cool the Climate. April. See page 2/25.

<sup>9</sup> BAAQMD, 2017. Final 2017 Clean Air Plan: Spare the Air – Cool the Climate. April. See pages 2/22 and 2/25.



**Figure 1 – Bay Area Lifetime Residential Cancer Risk\* from TAC Exposure**

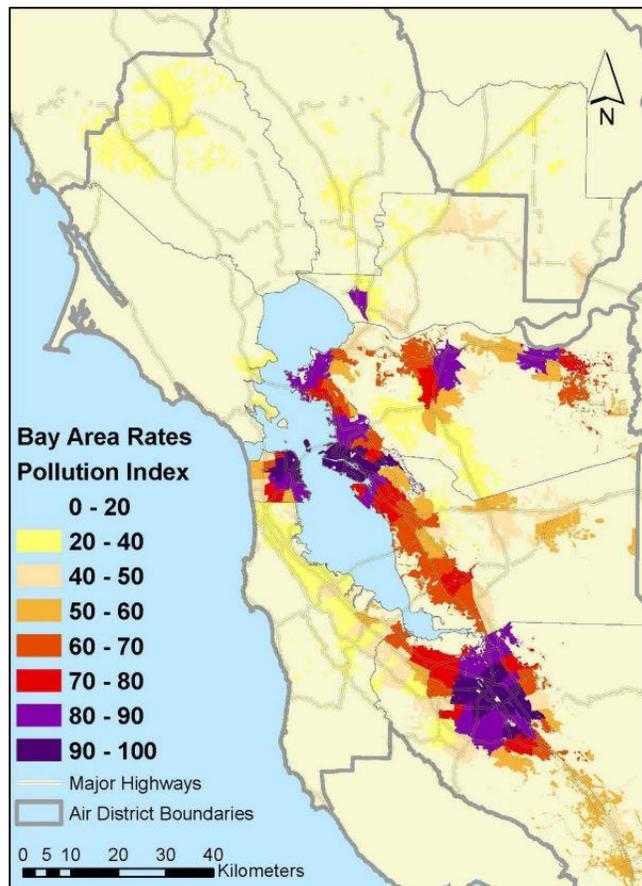
\* Cancer risk is based on average ambient air monitoring data and the population wide risk assessment methodology presented in OEHHA’s 2015 HRA Guidelines.

Despite the positive overall trend shown in Figure 1 above, information obtained through the Air District’s implementation of Assembly Bill 617 (AB 617) demonstrates the persistence of differences in exposure and vulnerability to air pollution, as illustrated by the discussion sections below. Even though carcinogenic toxic air contaminant emissions are declining, they still contribute to cancer risk in the region, and in some communities, cancer risk remains higher than other areas due to the existence of nearby roadways or stationary sources of air pollution over which the Air District holds permitting authority. The report subsections included below describe recent reports by the Air District on the locations of communities overburdened by air pollution and those that experience health vulnerabilities that may increase susceptibility to the effects of air pollution.

1. [Findings that Highlight Disparities in Exposure to Air Pollution and Health Vulnerability](#)

In 2018, Air District staff applied air pollution and health information to identify Priority Communities within the Bay Area for implementation of AB 617. Staff used several screening tools to identify overburdened communities, including CalEnviroScreen and the Healthy Places Index.<sup>10</sup> Staff also considered areas with lower life expectancy and areas that had previously been identified as part of the Air District’s Community Air Risk Evaluation (CARE) program, which is a collaborative program between Air District staff, community stakeholders, and industrial stakeholders that the Air District initiated in 2004 to identify and track areas with high concentrations of air pollution and populations most vulnerable to air pollution’s health impacts. In these areas with high cumulative exposure burden, staff assessed air pollution information at the zip code level, using modeled concentrations of cancer risk, fine particulate matter, and ozone (also known as “smog”), as well as fine particulate matter and air toxics monitoring data, to prepare the Pollution Index that is visually represented in Figure 2 below.

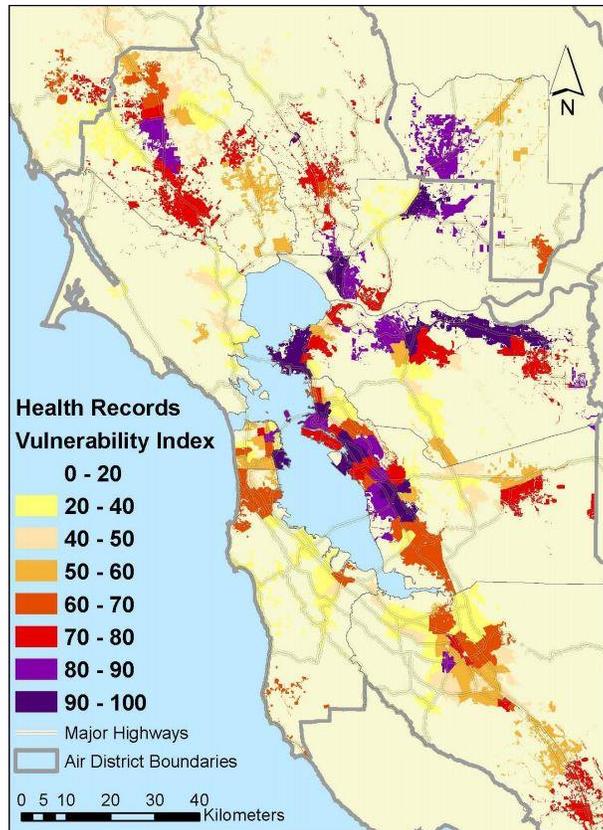
<sup>10</sup> BAAQMD, 2018. San Francisco Bay Area Community Health Protection Program: Improving Neighborhood Air Quality. August.



**Figure 2 – Bay Area CARE Pollution Index, 2018<sup>11</sup>**

As Figure 2 shows, there are disparities in air quality at the local level—translating to differences in air quality depending on where people in the Bay Area live, work, or go to school. Furthermore, many areas that have a higher pollution index also have a higher health burden index. Health burden, which the Air District based on mortality rates, emergency room visits, and hospitalizations attributed to causes known to be aggravated by air pollution, is shown in Figure 3 below.

<sup>11</sup> BAAQMD, 2018. San Francisco Bay Area Community Health Protection Program: Improving Neighborhood Air Quality. August.



**Figure 3 – Bay Area CARE Health Vulnerability Index, 2018<sup>12</sup>**

Information obtained through the CARE program and other programs that assess community air quality and health factors demonstrate the disparities between communities in terms of having clean air and the overlap between higher health vulnerability and poor air quality.

## 2. Ongoing Air District modeling and monitoring results

Additionally, Air District reports of data gathered through other programs and projects also demonstrate that air quality varies geographically. A 2019 report on regional modeling efforts support AB 617 implementation simulated 11 air toxic compounds emissions throughout the Bay Area. The simulation showed that six of the modeled air pollutants account for more than 90 percent of toxic air contaminant emissions in the Bay Area.<sup>13</sup> One of the major human health outcomes resulting from air toxics exposure is cancer risk. In air permitting, cancer risk is an estimate of the chance that an individual may develop cancer because of exposure to emitted carcinogens at a given receptor location, and considering, where appropriate, age sensitivity factors<sup>14</sup> to account for inherent increased susceptibility to carcinogens during infancy and

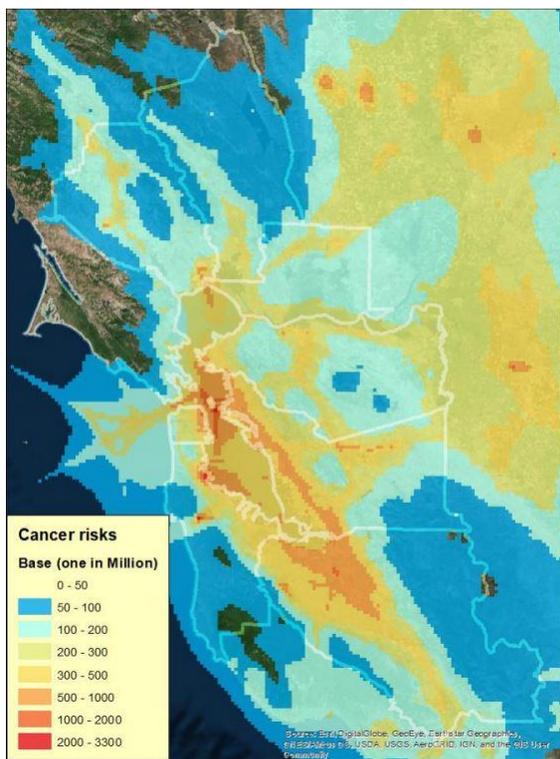
<sup>12</sup> BAAQMD, 2018. San Francisco Bay Area Community Health Protection Program: Improving Neighborhood Air Quality. August.

<sup>13</sup> BAAQMD, 2019. Air Toxics Data Analysis and Regional Modeling in the San Francisco Bay Area to Support AB617. April. See page 2.

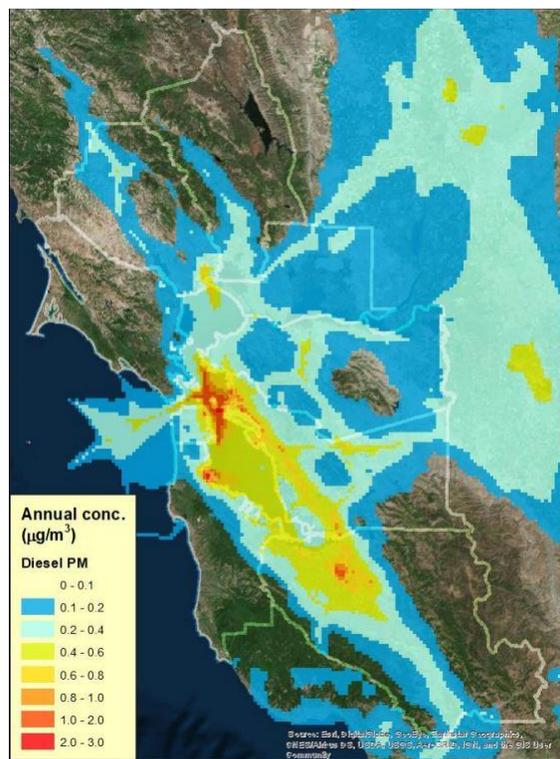
<sup>14</sup> Age sensitivity factors are cancer risk adjustment factors that account for children’s heightened sensitivity to air toxics. See California Office of Environmental Health Hazard Assessment, 2015. Air Toxics Hot Spots Program—Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments. February. Pages 8/4-8/5.

childhood. To assess cancer risk from all facilities other than gas stations, the Air District follows the procedures described in the Health Risk Assessment Guidelines for the Air Toxics Hot Spots Program adopted by the California Office of Environmental Health Hazard Assessment on March 6, 2015.<sup>15</sup> The Air District uses the recommended breathing rates described in the Risk Management Guidance for Stationary Sources of Air Toxics adopted by the California Air Resources Board on July 23, 2015.<sup>16</sup>

Modeling results show that the highest cancer risk locations in the Bay Area tend to be where diesel particulate matter concentrations are high.<sup>17</sup> Figure 4 shows the expected cases of cancer incidences (per million) due to air pollution exposure. Figure 5 shows the simulated annual average diesel PM concentrations for 2016.



**Figure 4 – Cancer risk from air pollution (incidences per million)<sup>18</sup>**



**Figure 5 – Simulated annual average diesel PM concentrations for 2016<sup>19</sup>**

<sup>15</sup> BAAQMD, 2016. Air Toxics NSR Program Health Risk Assessment Guidelines. December. See page 2.

<sup>16</sup> BAAQMD, 2016. Air Toxics NSR Program Health Risk Assessment Guidelines. December. See page 2.

<sup>17</sup> BAAQMD, 2019. Air Toxics Data Analysis and Regional Modeling in the San Francisco Bay Area to Support AB617. April. See page 33.

<sup>18</sup> BAAQMD, 2019. Air Toxics Data Analysis and Regional Modeling in the San Francisco Bay Area to Support AB617. April. See page 34.

<sup>19</sup> BAAQMD, 2019. Air Toxics Data Analysis and Regional Modeling in the San Francisco Bay Area to Support AB617. April. See page 25.

In addition to modeling data, the Air District also maintains an ambient air quality monitoring network with over thirty air monitoring stations located throughout the region.<sup>20</sup> The Air District's air quality monitoring network monitors a variety of air pollutants, including:

- Ozone
- Oxides of nitrogen
- Black carbon
- Sulfur dioxide
- Particulate matter (including PM<sub>10</sub>, PM<sub>2.5</sub>, and PM<sub>0.1</sub> (ultrafine particles))
- Lead
- Hydrogen sulfide
- Air toxics (which consist of 22 gaseous toxic compounds that are monitored at 23 toxics monitoring sites located throughout the Bay Area)<sup>21</sup>

Air District staff utilized air monitoring data to evaluate the simulated air toxics data described above in Figures 3 and 4.<sup>22</sup>

### 3. CalEnviroScreen

CalEnviroScreen is the commonly used name for the California Communities Environmental Health Screening Tool, which is a mapping tool developed and maintained by the California Office of Environmental Health Hazard Assessment (OEHHA). CalEnviroScreen was first developed in 2010 and is the product of a statewide effort to assess cumulative impacts,<sup>23</sup> and it has since been continually refined.<sup>24</sup> In the Spring of 2021, OEHHA released a draft update of CalEnviroScreen 4.0, the latest iteration of the tool, which includes updated supporting data and methodologies as well as a new indicator: lead risk to children from housing.<sup>25</sup> OEHHA plans to release the final version of CalEnviroScreen 4.0 in the Summer of 2021.<sup>26</sup>

Like the current version of CalEnviroScreen (3.0), version 4.0 multiplies pollution burden by population characteristics within a census tract to determine an overall score for the tract.<sup>27</sup> CalEnviroScreen bases scores upon indicators, which fall into four different components—two that consider pollution burden, and two that consider population characteristics. Pollution burden indicator categories are exposures and environmental effects. Population characteristics

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<sup>20</sup> BAAQMD, 2019. Air Toxics Data Analysis and Regional Modeling in the San Francisco Bay Area to Support AB617. April. See page 11.

<sup>21</sup> BAAQMD, 2021. 2020 Air Monitoring Network Plan. July. See page 63.

<sup>22</sup> BAAQMD, 2019. Air Toxics Data Analysis and Regional Modeling in the San Francisco Bay Area to Support AB617. April. See page 27.

<sup>23</sup> Defined by CalEPA to mean “exposures, public health or environmental effects from the combined emissions and discharges, in a geographic area, including environmental pollution from all sources, whether single or multi-media, routinely, accidentally, or otherwise released. Impacts will take into account sensitive populations and socioeconomic factors, where applicable and to the extent data are available.” OEHHA, 2021. Update to the California Communities Environmental Health Screening Tool: CalEnviroScreen 4.0 Public Review Draft. February. Page 10.

<sup>24</sup> OEHHA, 2021. Update to the California Communities Environmental Health Screening Tool: CalEnviroScreen 4.0 Public Review Draft. February. Pages 6-7.

<sup>25</sup> OEHHA, 2021. Update to the California Communities Environmental Health Screening Tool: CalEnviroScreen 4.0 Public Review Draft. February.

<sup>26</sup> OEHHA, 2021. Release and Event Timeline.

<sup>27</sup> OEHHA, 2021. Update to the California Communities Environmental Health Screening Tool: CalEnviroScreen 4.0 Public Review Draft. February. Page 11.

indicator categories are sensitive populations and socioeconomic factors. The indicators within each category are shown in Table 3 below.

**Table 3: CalEnviroScreen 4.0 Indicators<sup>28</sup>**

Pollution Burden		Population Characteristics	
Exposures	Environmental Effects	Sensitive Populations	Socioeconomic Factors
Ozone Concentrations	Cleanup sites	Asthma Emergency Department Visits	Educational Attainment
PM2.5 Concentrations	Groundwater Threats	Cardiovascular Disease (emergency department visits for heart attacks)	Housing-Burdened Low-Income Households
Diesel PM Emissions	Hazardous Waste	Low Birth-Weight Infants	Linguistic Isolation
Drinking Water Contaminants	Impaired Water Bodies		Poverty
Children’s Lead Risk from Housing	Solid Waste Sites and Facilities		Unemployment
Pesticide Use			
Toxic Releases from Facilities			
Traffic Impacts			

*b) CalEnviroScreen 4.0 Scores in the Bay Area*

Air District staff evaluated CalEnviroScreen 4.0 scores in the Bay Area to determine the census tracts and probable locations of areas in which permitting requirements could be made more stringent in response to cumulative impacts. Staff examined census tracts with scores at or above the 75<sup>th</sup> percentile as well as tracts within the range of 70<sup>th</sup> through the 75<sup>th</sup> percentile.

The rationale for selecting scores at or above the 75<sup>th</sup> percentile comes from CalEPA’s designation that “disadvantaged communities” as defined in Senate Bill 535 (De León, Chapter 830, Statutes of 2012) consisted of the highest scoring 25 percent of census tracts in CalEnviroScreen.<sup>29</sup> Staff additionally included tracts in the 70<sup>th</sup> through the 75<sup>th</sup> percentiles for two reasons: first, that including these census tracts could be more inclusive of communities that face burdensome socioeconomic vulnerability; and second, that including these census tracts could make up for the fact that several census tracts that were previously identified as disadvantaged under CalEnviroScreen 3.0 have dropped off the top 25 percent list but continue to face many of the same pollution burdens or health vulnerabilities as before.

Using the categorization described above, staff found that, out of 1,552 total census tracts within the Air District’s jurisdiction, 166 census tracts, or about 11 percent of the total, would be considered as disadvantaged or overburdened based on CalEnviroScreen 4.0 scoring. Table 4 below shows the breakdown of census tracts by county and score type, and Figures 6 through 9 show the census tracts and 1000-foot buffer areas. Please see Appendix D: Maps of

<sup>28</sup> OEHHA, 2021. Update to the California Communities Environmental Health Screening Tool: CalEnviroScreen 4.0 Public Review Draft. February. Page 18.

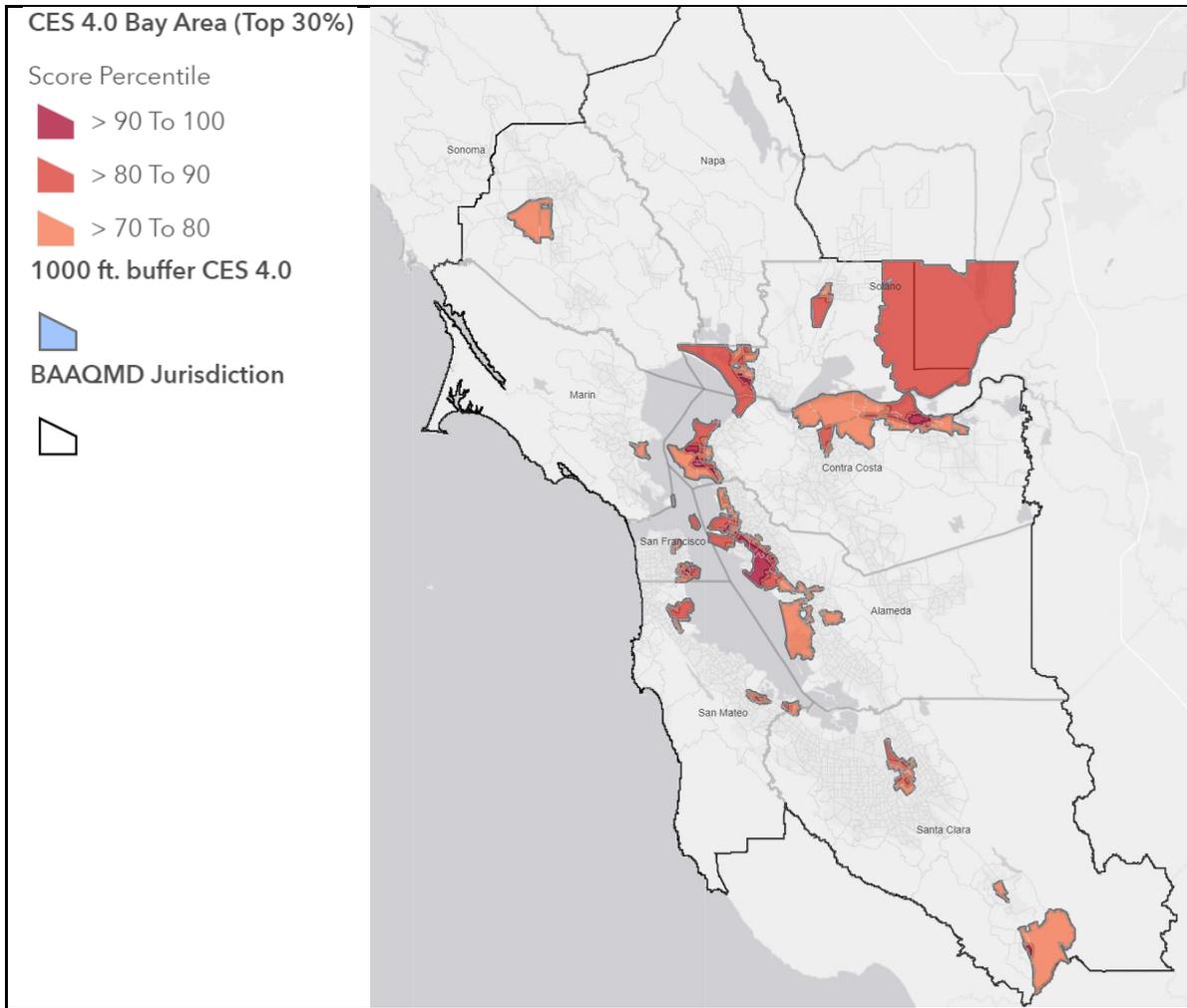
<sup>29</sup> CalEPA, 2017. Designation of Disadvantaged Communities Pursuant to Senate Bill 535 (DE LEÓN). Page 1. April.

Overburdened Communities, for higher quality maps of areas identified as “Overburdened Communities” for the purposes of the permitting rules.

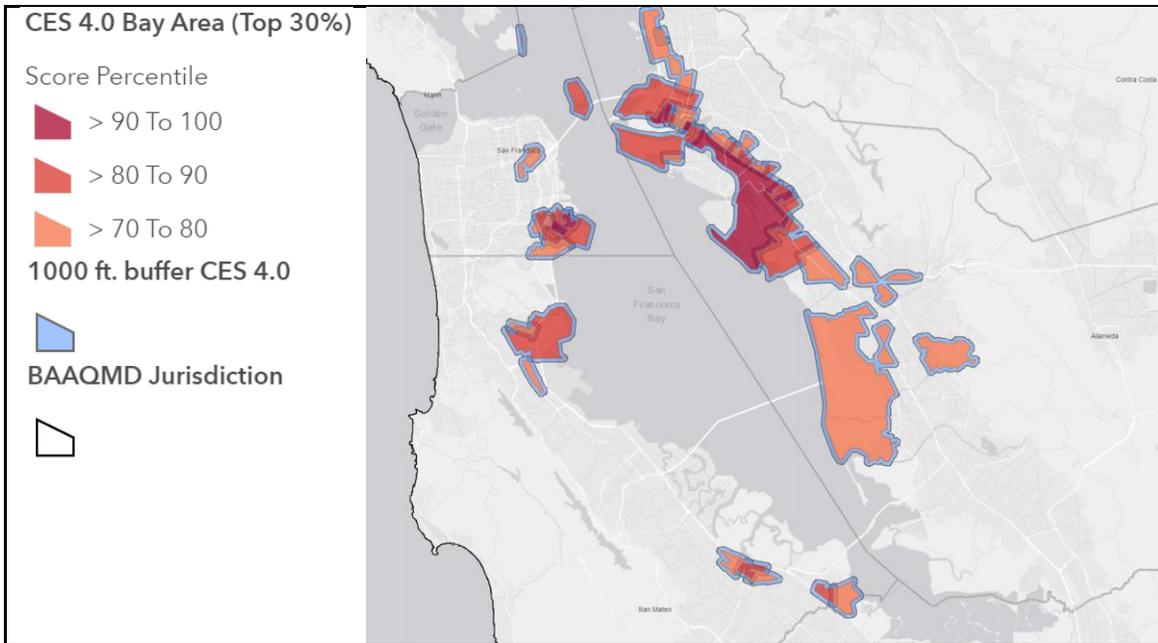
**Table 4: CalEnviroScreen 4.0 Census Tract Scores by County<sup>30</sup>**

<b>County</b>	<b>Census Tracts ≥75<sup>th</sup> Percentile Overall</b>	<b>Census Tracts Between 70<sup>th</sup> and 75<sup>th</sup> Percentile Overall</b>	<b>Total</b>
Alameda	38	17	<b>55</b>
Contra Costa	28	15	<b>43</b>
Marin	0	1	<b>1</b>
Napa	0	0	<b>0</b>
San Francisco	12	6	<b>18</b>
San Mateo	9	0	<b>9</b>
Santa Clara	14	6	<b>20</b>
Solano	11	6	<b>17</b>
Sonoma	1	2	<b>3</b>
<b>TOTAL</b>			<b>166</b>

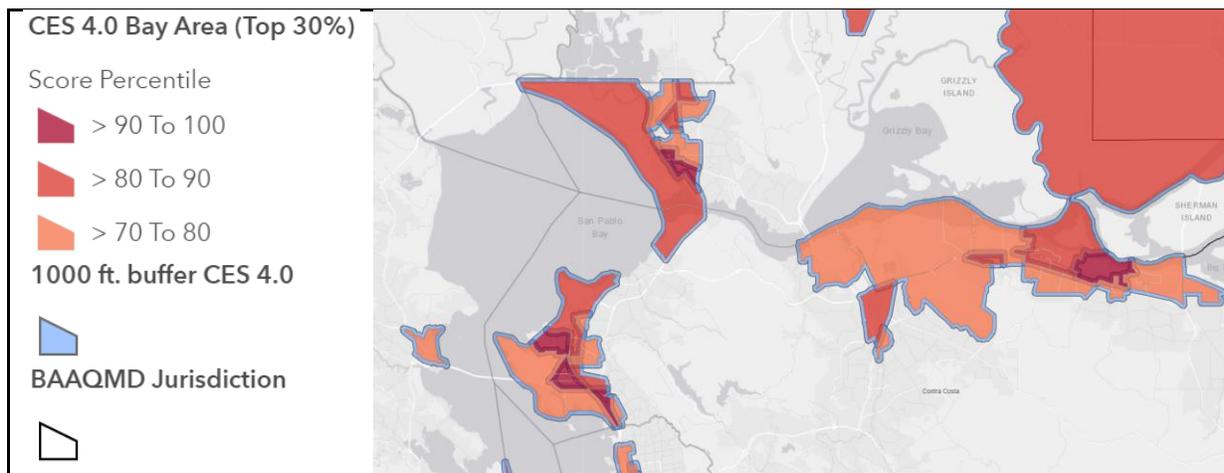
<sup>30</sup> Using 2010 census tracts, consistent with CalEnviroScreen 4.0. OEHHA, 2021. Update to the California Communities Environmental Health Screening Tool: CalEnviroScreen 4.0 Public Review Draft. February. Page 13.



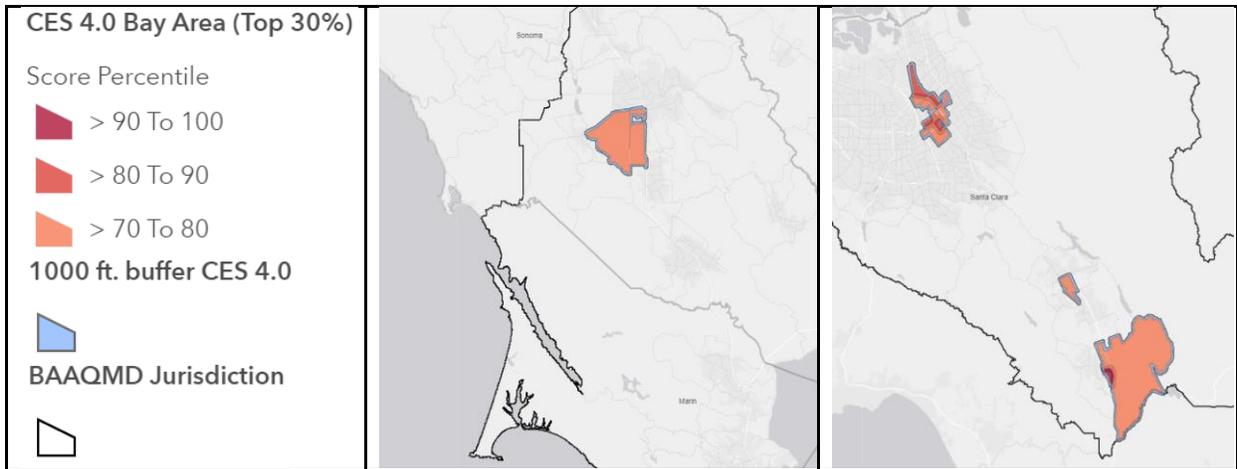
**Figure 6 – Bay Area Top 30% CalEnviroScreen 4.0 Census Tract Scores**



**Figure 7 – San Francisco Bay Region Top 30% CalEnviroScreen 4.0 Census Tract Scores**



**Figure 8 – San Pablo/Carquinez/Suisun Region Top 30% CalEnviroScreen 4.0 Census Tract Scores**



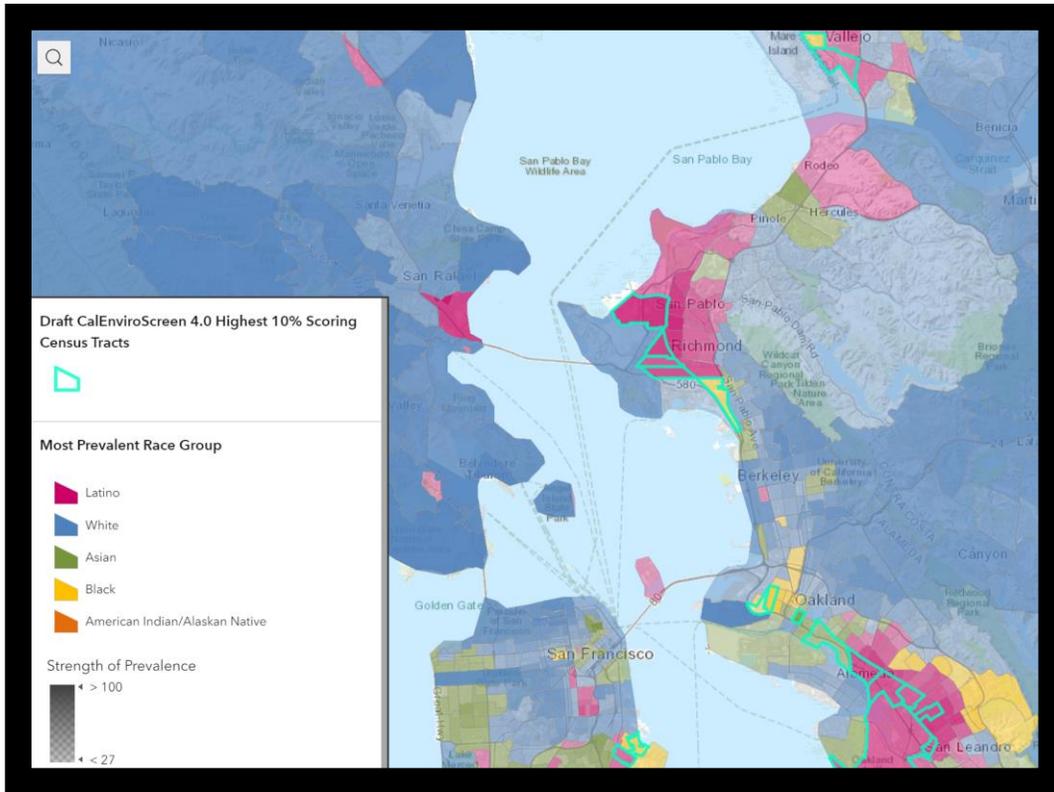
**Figure 9 – North Bay Region (Left Image) and South Bay Region (Right Image) CalEnviroScreen 4.0 Census Tract Scores, by Percentile**

OEHHA has also published a preliminary analysis on race and ethnicity in the context of draft CalEnviroScreen 4.0, which will be finalized along with the completed update of CalEnviroScreen 4.0.<sup>31</sup> The preliminary analysis that is currently available takes a statewide perspective, but Figures 10 and 11 below, developed by OEHHA, show the most densely populated regions of the Bay Area in terms of the most prevalent race group in the census tracts that score in the highest ten percent throughout California.



**Figure 10 – Highest scoring CalEnviroScreen 4.0 Census Tracts and Most Prevalent Race Groups, Central Bay Area**

<sup>31</sup> See OEHHA, 2021. Preliminary Analysis of Race/Ethnicity and Draft CalEnviroScreen 4.0 Scores. February.



**Figure 11 – Highest scoring CalEnviroScreen 4.0 Census Tracts and Most Prevalent Race Groups, Central Bay Area (Zoomed)**

Furthermore, Table 5 below provides a demographic breakdown by race/ethnicity in the highest-scoring census tracts in CalEnviroScreen 4.0.

**Table 5: Demographics Comparison**

Race/Ethnicity	BAAQMD Jurisdiction	90 <sup>th</sup> + CES Percentile	80 <sup>th</sup> + CES Percentile	70 <sup>th</sup> + CES Percentile
African-American/Black	6.2%	25.3%	18.8%	12.8%
Asian-American	24.9%	14.7%	18.5%	20.0%
Native American	0.2%	0.3%	0.3%	0.3%
Hispanic/Latinx	22.6%	44.6%	39.6%	40.8%
Pacific Islander	0.5%	1.2%	1.2%	0.7%
White	41.1%	10.4%	17.4%	21.2%
Other	4.5%	3.6%	4.4%	4.1%
Total Population	7,536,796	92,809	241,775	465,677

**C. Emission Control Methods to Reduce Cancer Risk**

The Air District’s Toxic New Source Review rule applies to a wide range of industries and sources of air pollution, although most permit applications at a region-wide level are for diesel engines,

with another large share of applications for projects at gas stations. Other projects that emit carcinogens include, but are not limited to, projects at or involving crematories, concrete batch plants, soil vapor extraction operations. Section V of this report provides more information on the types of projects that could be affected by the draft rule amendments.

Emission control methods to reduce cancer risk generally involve reducing operating hours, throughput rates, or emission rates to comply with a more stringent standard. Reducing emission rates may require a permit applicant to install an abatement device, such as a diesel particulate filter or an oxidation catalyst, to reduce emissions. In some cases, it may not be possible to locate a proposed source in an area in which the cancer risk limit is more stringent due to cost constraints necessary to install abatement equipment or change planned operations to reduce emissions, although staff does not expect this scenario to be likely given the probable number of affected projects based on past applications. Preliminary estimates of potential impacts from a more stringent risk limit are discussed in Section V below.

#### *D. Health Risk Assessment Procedures for Gasoline Dispensing Facilities and Other Procedure Changes*

Gas stations account for more than one in five Air District-permitted facilities.<sup>32</sup> Bay Area-wide, gas stations and other gasoline dispensing facilities (collectively referred to in this document as gas stations) make up anywhere between five to 15 percent of permitting health risk screening analyses.<sup>33</sup> Gas station emissions include toxic air contaminants such as benzene that can pose health risks to nearby residents and workers. Under Rule 2-5, new gas stations and existing gas stations proposing modifications are required to apply for a permit from the Air District. During the review and evaluation of the permit application, the Air District performs a health risk assessment, which models cancer and non-cancer health risks based on various factors including the proposed project location, the proximity of nearby residents and workers, weather patterns, terrain, and emissions data.

Draft revisions to the Air District's Health Risk Assessment Guidelines incorporate updates to the health risk assessment procedures for gasoline dispensing facilities, to be consistent with other permitted sources/facilities. In 2015, OEHHA approved and adopted updated Health Risk Assessment Guidelines (2015 Guidelines) that are used in the Air District's Health Risk Assessment Guidelines. Under this concept, the Air District would update and incorporate the 2015 Guidelines to its evaluation of new and modified gas dispensing facility projects. The 2015 Guidelines adjusted multiple additional factors used to prepare health risk assessments, including breathing rate assumptions, exposure frequency and exposure duration, that in combination will result in higher calculated risks. Fully incorporating all the 2015 OEHHA health risk calculation procedures will result in cancer risk estimates for residents that are about 40 percent higher than the current procedures and will add a new limit on acute impacts. While these changes would not prevent gas stations from renewing permits, they could result in some existing gas stations being unable to increase throughput, or they could reduce the amount of gasoline throughput that might otherwise be allowed for a new station. The inclusion of acute health impacts in gas station risk assessment procedures could limit the number of dispensers or the maximum hourly pumping rate for new stations.

About 60 percent of the health risk assessments are conducted for emergency standby diesel-fired internal combustion engines. Currently, Rule 2-5 Section 111 exempts all emissions

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<sup>32</sup> BAAQMD, 2021. 2020 Annual Report. Page 13.

<sup>33</sup> BAAQMD, 2017-2021 Annual Reports. Gas station health risk analyses vary considerably year to year.

occurring from emergency operations from the Rule 2-5 health risk assessment requirements. Initially, this emergency operating time was not considered routine or predictable. However, the Air District has found that many emergency standby engines are operating more frequently due to heat emergencies, fires or fire prevention, power outages, and droughts. Some emergency operation of standby engines has now become routine and predictable. Therefore, the Air District is proposing modify the Section 111 exemption to include a set number of hours per year of emergency operating time in the health risk assessment for each emergency standby engine, although staff seeks feedback on what that number should be. Currently, standby engine health risk assessments are usually based on 50 hours per year of operation for reliability related testing. A proposed change would mean that standby engine health risk assessments would be based on a higher number of hours per year of operating time, which would increase the projected health risks from emergency engines. This change may result in more emergency standby engines triggering Best Available Control Technology for Toxics (TBACT) and more engines having to install diesel particulate filters to meet the health risk limits. This change would apply to all locations, but the additional diesel particulate filter controls could be required more frequently in Overburdened Communities due to the concurrent proposal to reduce the cancer risk limit to six in one million in these communities.

### *E. Public Notifications of Permit Applications*

The Air District publishes information regarding permit applications on its website and provides public notifications and opportunities for public comment on several permit application types, one of which involves permits applications that will result in an increase in toxic air contaminants near schools. Rule 2-1: General Requirements states that the Air District must notify parents and guardians of children enrolled in the school or schools near which the source or sources will be located, as well as to each address near the source.<sup>34</sup> The Air Pollution Control Officer is required to review and consider all comments received during the application period. The expense of the public notice process is borne by the permit applicant, in the form of a fee that is paid to the Air District to cover costs. Since 2009, the Air District has carried out an annual average of 72 public notifications for projects triggering the schools notification requirement, at a cost of over \$160,000 per year in total.

## **IV. DRAFT RULE AMENDMENTS**

The purpose of the draft rule amendments is to reduce exposure to toxic air contaminants from new and modified sources of air pollution in communities that are overburdened by pollution or face health vulnerabilities at the community level that could contribute to residents being more susceptible to the detrimental health effects from air pollution. Staff utilized data from draft CalEnviroScreen 4.0, which quantifies indicators of pollution burden and population characteristics to score communities based on cumulative impacts, to identify parts of the Bay Area where more stringent cancer risk limits and enhanced notifications could be justified on the basis of a cumulative impacts analysis. Additionally, staff intends to update the toxic new source review rule to ensure it reflects the latest advances in the science of air pollution health risk assessments.

Staff drafted amendments to Rule 2-1: General Requirements and to Rule 2-5: Toxic New Source Review and to require more health protective risk requirements based upon cumulative impacts

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<sup>34</sup> See Section 2-1-412 and Regulation 3, Section 318 for specific requirements regarding the schools notification process.

analyses via CalEnviroScreen 4.0 and to require enhanced notification in high-scoring CalEnviroScreen 4.0 communities.

### *A. Draft Rule Amendments to Rule 2-1: General Requirements*

Draft changes to Rule 2-1: General Requirements work in tandem with draft changes to Rule 2-5: Toxic New Source Review. Rule 2-1 provides the framework for the Air District's permitting regulation, while other rules within the regulation (such as Rule 2-5) focus on specific elements of the permitting process. In Rule 2-1, a new provision that defines an Overburdened Community for the purpose of the Permitting Regulation is the basis for more stringent limits in Rule 2-5. Also, the Air District has heard from community stakeholders that there is a desire for greater transparency into the permitting process, particularly regarding permits for projects in communities that experience relatively high levels of pollution or where residents face relatively high health vulnerabilities, which may make them more susceptible to the detrimental effects of air pollution.

Draft updates to Regulation 2-1 to include a new notification requirement for projects that are proposed to be located in communities that are overburdened by environmental or health burdens. Although these changes alone will not increase the stringency of emissions limitations, they are intended to serve the purpose of providing greater transparency to the public.

#### 1. Purpose

The purpose of the draft amendments to Rule 2-1 is to provide more information to the public on active permit applications in communities that face environmental and health burdens. By making information more accessible to the public through physical mailing of information to residents and posting notifications on the Air District website, the Air District would provide more awareness of permit applications and the proposed projects. Additionally, this change would include a written public comment period, which could enable members of the public to provide additional information for the Air District to consider in evaluating permit applications.

#### 2. Applicability

Draft amendments to Rule 2-1 that pertain to the new notification requirement for projects that require health risk assessments and are located in areas that have high CalEnviroScreen scores would be limited to a relatively small number of applications per year compared to the overall volume of applications that the Air District receives. However, to account for the draft changes to Rule 2-5, the changes to the notification procedures, and increasing constraints on staff due to implementation of multiple new programs over the recent past, staff proposes increasing the amount of time by which the APCO must notify the permit applicant of an approval, approval with conditions, or denial of the application.

#### 3. Exemptions

The draft rule amendments do not include any changes to the Exemptions section of Rule 2-1.

#### 4. Definitions

Section 2-1-243 – Overburdened Community: The draft amendments will add a definition for Overburdened Community. The draft definition refers to CalEnviroScreen scoring percentiles to determine whether an area constitutes an Overburdened Community. The definition states that

the Air District would reference CalEnviroScreen version 4.0. It includes a 1000-foot buffer zone around any census tract identified by the CalEnviroScreen criteria to ensure that projects that may have an influence on Overburdened Communities would also be included.<sup>35</sup> The permit applications for projects that would be located within the high-scoring census tracts or in the one-thousand-foot area from the census tract boundary would be required to comply with the more stringent cancer risk requirement in draft Regulation 2-5-302.

## 5. Standards

The draft rule amendments do not include any changes to the Standards section of Rule 2-1.

## 6. Administrative Requirements

Section 2-1-408 – Action on Applications: This section identifies the Air District’s standard permit application review time period (35 working days) once an application is deemed complete and by which the Air District should notify the applicant of the approval, approval with conditions, or denial decisions regarding the permit application request. This section also identified the types of applications that are not subject to this standard review period, which include applications subject to public noticing requirements. This section will indicate that applications subject to the new proposed public noticing requirements for toxic emission increase projects located in Overburdened Communities will not be subject to the standard 35 working day review period.

Draft amended Section 2-1-408 extends the timeline required for the APCO to notify the permit applicant of the approval, approval with conditions, or denial of the permit application by 10 working days (from 35 working days to 45 working days). As mentioned above, this change is to account for the anticipated increased time staff needs to process applications, notify the public where necessary, and review and respond to comments.

Section 2-1-412 – Public Notice, Schools & Overburdened Communities: Draft amended Rule 2-1 includes revisions to Section 2-1-412 to add a new notification requirement for projects that are proposed to be located in communities that are in the high-scoring CalEnviroScreen census tracts. The draft language would require the same type of notification that is currently required for projects that will result in an increase in toxic air contaminant emissions that are proposed to be located near K-12 schools—but the applicability would extend to all projects within high-scoring areas in CalEnviroScreen for which a Health Risk Assessment is prepared. Applicants that propose projects that will require a Health Risk Assessment would be required to distribute the notice to surrounding addresses located within one thousand feet of the proposed source, if the source will be located within an Overburdened Community as defined in Section 2-1-243.

## 7. Monitoring and Records

The draft rule amendments do not include any changes to the Monitoring and Records section of Rule 2-1.

## 8. Manual of Procedures

The draft rule amendments do not include any changes to the Manual of Procedures section of Rule 2-1.

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<sup>35</sup> See CAPCOA, 2009. Health Risk Assessments for Proposed Land Use Projects. July. Page 9. See also CARB, 2005. Air Quality and Land Use Handbook: A Community Health Perspective. April.

## *B. Draft Rule Amendments to Rule 2-5: Toxic New Source Review*

As mentioned above, the purpose of Rule 2-5: Toxic New Source Review is to provide for the review of new and modified sources of toxic air contaminant emissions to evaluate potential public exposure and health risk, to mitigate potentially significant health risks resulting from these exposures, and to provide net health risk benefits by improving the level of control when existing sources are modified or replaced. Rule 2-5 currently operates on a regional scale; its requirements are the same throughout the Bay Area, regardless of background air quality—either in terms of cancer risk or in terms of exposure to noncarcinogenic forms of air pollution.

As discussed in the Concept Paper that the Air District released in April of this year, this change would involve transforming Rule 2-5 into a rule that regulates on a subregional scale.<sup>36</sup> Instead of having one standard that applies throughout the Bay Area, Rule 2-5 would have two standards for cancer risk limits: one that applies in areas that do not score highly according to CalEnviroScreen, and another, more stringent standard, for areas that score highly on CalEnviroScreen and are therefore determined to be “Overburdened Communities” for health risk management.

### 1. Purpose

The draft amendments are intended to reduce exposure to carcinogenic toxic air contaminant emissions by increasing the level of stringency for new or modified equipment subject to air toxics new source review. The draft amendments also include updates to the Air District’s Health Risk Assessment Guidelines, which describe the procedures for assessing health risk from sources that emit air toxics. The draft amendments include updates to the list of toxic air contaminants and trigger levels that the Air District utilizes to determine whether a site-specific health risk assessment is necessary. Finally, the draft amendments include revisions to exemptions, definitions, and procedures that are necessary to clarify applicability and enable efficient use of staff resources.

### 2. Applicability

The draft amendments to Rule 2-5 would apply to sources that are subject to the Toxics New Source Review requirements, although not every change will apply to every project. While some projects located in areas that receive higher CalEnviroScreen scores will be subject to a more stringent cancer risk standard, some projects will not be subject to a more stringent cancer risk than the existing limit of ten in one million ( $10^{-5}$  or  $1.0E-5$ ). Updates to the Air District’s Health Risk Assessment Guidelines that specifically pertain to gasoline dispensing facilities will only apply to those facilities. The proposed revision to the limited exemption for emergency standby engines will only impact standby engines. Updates to the Toxic Air Contaminant Trigger Level table (Table 2-5-1) will apply to sources emitting those chemicals that have been added or updated.

### 3. Exemptions

Section 2-5-111 – Limited Exemption, Emergency Standby Engines: The draft amendments to Rule 2-5 modify this limited exemption by proposing to include some number of hours per year of emergency operating time per engine in the health risk assessment rather than exempting all

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<sup>36</sup> See BAAQMD, 2021. Concept Paper: Concepts to Amend the Air District’s Permitting Rules in Response to Localized Differences in Air Quality and Permitting in Overburdened Communities. April.

emergency operating time from the health risk assessment. Staff seeks feedback on what this number should be. Projected diesel engine health risks would increase due to this change to more accurately account for anticipated emergency use. Staff has received comments in numerous forums requesting that the Air District do more to reduce diesel engine emissions. This proposed change would result in both toxic air contaminant and particulate emission reductions, because many more standby engines will be required to install diesel particulate filters to meet either the existing Best Available Control Technology for Toxics (TBACT) requirements or the project risk limits in this rule. It may also encourage applicants to explore cleaner back-up power technologies, especially in Overburdened Communities where the project cancer risk is proposed to be reduced as well. This change would have benefits throughout the Bay Area during emergencies due to the additional use of diesel particulate filters on emergency standby engines, but the benefits will be greater still in Overburdened Communities.

Section 2-5-113 – Exemption, Small Internal Combustion Engines and Gas Turbines: This section exempts small engines (50 brake horsepower (bhp) capacity or less) from health risk assessment requirements. Engines of this size are also exempt from Air District permitting requirements. The draft amendments will require a health risk assessment for a project if the combined capacity for these small engines is greater than 50 brake horsepower. This change will help ensure that the cumulative risk from having many small engines at a facility is not significant.

Section 2-5-116 – Exemption, Small Gas-fired Boilers and Similar Combustion Equipment: This draft exemption would exempt small boilers (less than 10 million British thermal units (MMBtu) per hour capacity if fired on natural gas or other clean fuels or less than 1 MMBtu per hour capacity fired on any gaseous fuels) from the requirement to undergo a health risk assessment to verify that these small boilers will continue to meet all permit exemption criteria. Although toxic air contaminants from these sources may exceed health risk assessment triggers, staff does not expect these sources to present any significant health risks based on modeling experience with these sources. This exemption will enable the Air District to focus staff resources on projects that are more likely to have significant health risks.

#### 4. Definitions

Section 2-5-216 – Project: The draft amendments modify the definition of Project to include those new or modified sources of toxic air contaminants at a facility that have been permitted within the five-year period immediately preceding the date a complete application is received and any project at a facility that is under Authority to Construct. This revision is intended to ensure that all potentially related projects are included in the health risk assessment to further prevent circumvention of this rule's requirements. This revision will also ensure that the cumulative impacts of multiple projects at a facility are fully considered in the health risk assessment.

Section 2-5-227 – Priority Community: Section 2-5-227 is proposed to be deleted, because the definition is no longer necessary. The definition for Overburdened Community is located in Regulation 2-1, Section 2-1-243.

Section 2-5-230 – Essential Public Service: The draft rule includes a new definition for essential public service, which is based upon public feedback received during the concepts workshop and in subsequent written feedback on the concept paper, along with reference to other rules at this Air District and at the South Coast Air District that exempt some operations from specific

standards based upon their categorization as essential public services.<sup>37</sup> Essential public services would not be subject to the more stringent limit in areas that score highly on CalEnviroScreen; they are instead subject to the existing limit of 10 in one million. In reviewing recent permit applications since the last time Rule 2-5 was amended, it is likely that this limited exemption would not be used often.

Section 2-5-231 – Acute Receptor: The draft rule includes a new definition for acute receptor, which is defined as “receptors for each offsite location within the modeling domain where an individual person or group of people may be exposed to toxic air contaminants for durations as short as one hour.” This definition is necessary to clarify the applicability of the acute hazard index limit and will be useful for gas stations that will be subject to acute limits for the first time.

## 5. Standards

Section 2-5-302 – Project Risk Requirement: The draft amendments to Rule 2-5 modify the text of the project risk requirement to clarify that there are two project risk requirement standards. These two standards apply in different scenarios: one applies in areas that score highly on CalEnviroScreen, and one applies in areas outside of high-scoring CalEnviroScreen locations. Draft amendments to Section 2-5-302 would clarify that in Overburdened Communities, as defined in draft Regulation 2-1-243, the cancer risk limit is 6.0 in one million ( $6.0 \times 10^{-6}$  or 6.0E-6). In areas that are not located within Overburdened Communities, the cancer risk limit, chronic and acute hazard index limits would remain unchanged from the current ten in one million limit in the current version of Section 2-5-302.

Section 2-5-303 – Net Project Risk Requirement: Section 2-5-303 was added to Rule 2-5 in 2016 to allow consideration of contemporaneous risk reductions for a small number of projects that involve pre-1987 modified sources.<sup>38</sup> To be subject to Section 2-5-303, projects need to meet the applicability and procedural criteria in Section 2-5-406. To date, no permit applicants have requested to comply with Section 2-5-303.

As with Section 2-5-302 above, the draft amendments to Rule 2-5 modify the text of the net project risk requirement to clarify that there are two net project risk requirement standards.

## 6. Administrative Requirements

Section 2-5-404 – Designation of Priority Community: Section 2-5-404 is proposed to be deleted. The procedures for identifying Overburdened Communities are proposed to be moved to Regulation 2-1-243 because Rule 2-1 will contain the public notification procedures for applications located in Overburdened Communities and is a more general requirement that applies to all permit activities.

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<sup>37</sup> See, e.g., Bay Area Air Quality Management District Rule 9-8: Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines, Section 331, which allows additional hours of operation for reliability-related testing for essential public services, which are defined in Section 9-8-233 and include similar facility types and operations as those included in draft Rule 2-5. See also South Coast Air Quality Management District Regulation XII: New Source Review, Rule 1304: Exemptions and Rule 1309.1: Emission Reduction Credits and Short Term Credits, Priority Reserve, which are permitting rules governing offsets and emission reduction credits, respectively, and which enable additional flexibility for essential public services as defined in Rule 1302: Definitions, Section (m).

<sup>38</sup> See BAAQMD, 2016. Staff Report: Proposed Amendments to Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants. September. Page 24.

Section 2-5-405 – Cumulative Impact Summary for Priority Communities: Section 2-5-405 is proposed to be deleted, because these procedures are no longer necessary. Cumulative impacts summaries in Overburdened Communities are being addressed through other programs such as the Community Health Protection Program.

## 7. Monitoring and Records

The draft rule amendments do not include any changes to the Monitoring and Records section of Rule 2-5.

## 8. Manual of Procedures

Section 2-5-602 – Baseline Emission Calculation Procedures: The proposed changes to Section 602.2.2 clarify the procedures for calculating baseline throughput when a source's throughput rate is limited by a bottleneck at a related source. These proposed changes are intended to ensure consistency with the Section 2-5-214.3 definition of a modified source of toxic air contaminants for a source that does not have conditions limiting daily or annual toxic emissions.

Section 2-5-603 – Health Risk Assessment Procedures: There are no suggested changes to the text of Section 2-5-603: Health Risk Assessment Procedures, however, staff is recommending updates to the Air District's Health Risk Assessment Guidelines, which are included in Appendix C. Updates to the Air District's Health Risk Assessment Guidelines would revise the health risk assessment procedure for gas stations so that it is consistent with the health risk assessment procedures for all other source types subject to air toxics New Source Review.

Section 2-5-604 – Calculation Procedures for Toxicity Weighted Emissions: There are no suggested changes to the text of Section 2-5-604: Calculation Procedures for Toxicity Weighted Emissions, however, there are draft updates to Table 2-5-1, as shown in Appendix B.

Table 2-5-1 Toxic Air Contaminant Trigger Levels: This table will be updated by adding any new toxic air contaminants and any new health effects values that have been identified by OEHHA since this table was last revised. New toxic air contaminants include carbonyl sulfide, cobalt, 1,6-hexamethylene diisocyanate, and tertiary butyl acetate. Chronic inhalation reference exposure levels (RELs) or the associated chronic trigger level are being updated for: arsine, ethylene glycol butyl ether, mercuric chloride, methylene diphenyl isocyanate, selenium sulfide, toluene, and toluene diisocyanates.

In addition, staff is proposing to revise the procedures by which acute trigger levels are determined. Currently, the acute trigger level is determined based on an acute hazard index of 1.0. The proposed acute trigger levels will instead be based on an acute hazard index of 0.2, which is consistent with the significant source thresholds in Air District Rule 11-18. This change will impact all compounds in Table 2-5-1 that have an acute reference exposure level.

## V. PRELIMINARY DISCUSSION OF POTENTIAL IMPACTS

This section discusses preliminary estimates of potential impacts associated with the potential rule amendments described in the draft amendments. Air District staff continues to evaluate and assess these potential impacts and may update estimates as staff conducts additional research and gathers additional information.

Proposals included in this Workshop Report would update the Air Toxics New Source Review Program via Rule 2-5 and update noticing and processing time requirements in the Permitting General Requirements rule (Rule 2-1). Changes to Rule 2-5 would increase the stringency of the program and the number of permit applications requiring a site-specific health risk assessment.

The Air District conducts about 300 health risk assessments per year for a wide variety of new and modified sources of air pollution. Common source types that require health risk assessments include diesel-fired internal combustion engines, other types of combustion operations, and gasoline stations. The Air District also conducts New Source Review health risk assessments for remediation operations, cement plants, concrete batch plants, asphalt plants, petroleum refineries, coating and solvent operations, tanks and loading operations, landfills, wastewater treatment plants, metal melting plants, coffee roasters, and other types of industrial facilities.

### *A. Preliminary Estimates of Potential Impacts from Changes to Rule 2-5*

The draft changes to Rules 2-1 and 2-5 will increase the stringency of the Air District's Air Toxics New Source Review Program and will increase transparency regarding the permitting process. Staff reviewed information from past permitting projects to contextualize how the draft changes might impact applications had they been in place at that time. The sections below discuss staff's analysis using permitting information from the recent past.

#### 1. *Historic Review Analysis*

The Concept Paper that was released in April of this year included a historic review analysis that examined the types of projects that would likely be affected if the cancer risk limit in Rule 2-5 is made more stringent. In preparing the historic review analysis, staff examined the types of project applications that have been submitted since the last time the air toxics permitting rule was updated (2016).

In that analysis, staff selected several potential cancer risk limits that could be applied Bay Area-wide or solely in overburdened communities, with the intention of providing context for public discussion around whether and how the Air District should proceed with a rule development effort that makes the cancer risk permitting limit more stringent.

- The six in one million cancer risk value is about one percent of the average Bay Area background cancer risk, according to the most recent available information.<sup>39</sup>
- The five in one million cancer risk value is twice as stringent as the current project cancer risk limit, which is 10 in one million.
- The three in one million cancer risk value is consistent from a risk minimization standpoint with existing California law and Air District requirements to reduce cancer risk at large facilities.<sup>40</sup>

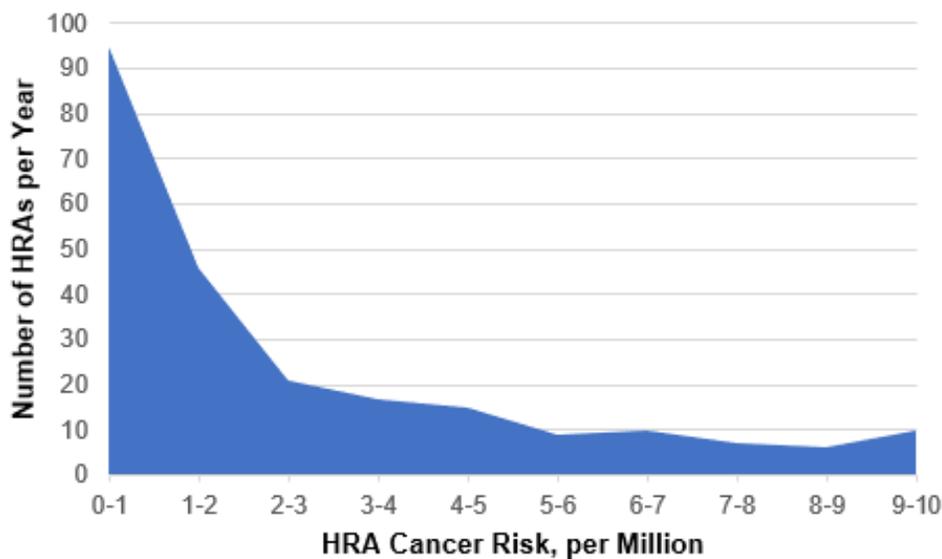
In preparation for this workshop report, staff reviewed health risk assessments prepared for permit applications since 2016, based on the assumption that high-scoring CalEnviroScreen census tracts would be subject to a more stringent risk limit. Staff recommends reducing the cancer risk limit to six in one million in high-scoring CalEnviroScreen census tracts and surrounding buffer areas based on the lookback analysis. Staff recommends the cancer risk limit of six in one million in high-scoring CalEnviroScreen communities based upon an

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<sup>39</sup> BAAQMD, 2017. Final 2017 Clean Air Plan: Spare the Air – Cool the Climate. April. See page 2/26.

<sup>40</sup> See Assembly Bill 2588 and Air District Regulation 11, Rule 18.

understanding of the relative contribution of the proposed project to the overall regionwide-average cancer risk. Staff also considered the number of applications per year, as the intention of the rule amendment is to increase the health protectiveness of the Permitting Regulation without unduly restricting new operations in the Bay Area. A breakdown of the number of Health Risk Assessments per year prepared for project applications and the corresponding cancer risk is shown in Figure 12 below, which shows that the number of projects tends to decrease with higher project cancer risk. For projects with cancer risk between six and ten in one million, Table 6 below shows the types of projects that would have been affected by a more stringent risk limit in areas that score highly on CalEnviroScreen 4.0. The analysis showed that about one third of health risk assessments prepared over this period would exceed the cancer risk limit of six in one million.



**Figure 12: Number of Projects per Year, Projects with Health Risk Assessments between 2017 and 2021**

There were about 40 total applications with a cancer risk between six in one million and ten in one million during this period, which translates to about ten projects per year that may need to modify operations, install additional abatement equipment, or consider other options such as moving the proposed source location to comply with the more stringent risk limit in the high-scoring areas.

**Table 6: Cancer Risk Assessments for Projects with Cancer Risk of 6-10 in One Million, in High-Scoring CalEnviroScreen 4.0 Communities, Feb. 2017 – Feb. 2021**

Project Type	Number of Applications	Approximate Percent of Total
Metal Casting Facility Project	1	<3%
Conveyors/Stockpiles at Waste Facility	1	<3%
Crematory Project	2	5%
Prime Diesel Engines	2	5%
Standby Diesel Engines	19	49%
Gas Station Project	11	28%
Soil Vapor Extraction Project	2	5%

Project Type	Number of Applications	Approximate Percent of Total
Concrete Manufacturing Facility Project	1	<3%
TOTAL	39	

As Table 6 above shows, about 80 percent of applications in areas that score highly in CalEnviroScreen are for standby diesel engines or gas stations, with standby diesel engines making up about half of the total projects. These numbers are generally consistent with the breakdown by project type in AB 617/CARE communities—as well as air permitting trends throughout the Air District.<sup>41</sup>

Staff is also evaluating the types of facilities that would be subject to the more stringent cancer risk limit in areas that have high scores in CalEnviroScreen. There are many facilities that have either not applied for permits during the historic review period or whose permit applications during the period have not required a health risk assessment under Rule 2-5. In areas within or near census tracts scoring at or above the 70<sup>th</sup> percentile in CalEnviroScreen 4.0, there is a wide spectrum of facility types whose carcinogenic toxic air contaminant emissions would be subject to a more stringent cancer risk limit. Many facilities with applications that have undergone toxic New Source Review permitting have been required to do so because they operate a diesel engine. Other facilities or operations, such as gas stations, chrome plating operations, and soil vapor extraction systems may release toxic air contaminants during operations. Draft amendments to both Rule 2-5 (regarding toxics New Source Review) and Rule 2-1 (regarding notifications and the extension of application processing time) would apply to new and modified sources of air pollution; they would not apply to facilities operating sources of air pollution that have already completed the permitting process under Regulation 2.

## 2. Emissions or Exposure Reductions

When a health risk assessment exceeds the maximum risk level, there are several options available to the permit applicant to reduce health risk from the proposed source.<sup>42</sup> First, the applicant could propose to reduce operating hours or throughput rates. This is the most common and least expensive toxic emission reduction method available. (Throughput generally means the amount of something that passes through something else, such as the amount of diesel fuel that passes through a diesel engine, powering it.) Reducing operating hours or throughput rates may be feasible, but below a certain point these changes may not be cost effective to install the source, or the source may not be able to operate below a baseline number of hours or throughput level. Second, the applicant could reduce the emission rate to comply with the health risk limits. Reducing emission rates may require a permit applicant to install an abatement device or an enclosure to control emissions. Diesel particulate filters can be used to reduce diesel particulate matter emissions. Carbon adsorbers reduce organic toxic air contaminant emissions such as benzene and perchloroethylene. Oxidation catalysts may be used on combustion devices to reduce formaldehyde emissions. Enclosures and baghouses may be used to capture and control particulate matter that contains toxic metals.

Third, a permit applicant could change project plans to reduce exposure to individuals. An applicant may also be able to increase the height of the stack from which emissions are exhausted or relocate the source farther away from where people could be exposed to the

<sup>41</sup> See BAAQMD, 2021. Concept Paper, pages 13-17.

<sup>42</sup> As explained in BAAQMD, 2016. Regulation 2, Rule 5 Staff Report. September. Page 29.

emissions. Enclosing a fugitive emission source and venting it through a stack or changing stack orientations to encourage dispersion of contaminants in the atmosphere. Changing the time of day that a source is operating to avoid exposing people nearby (for example, prohibiting diesel operations near schools during the times that children are there) is another way to reduce exposure.

Finally, the permit applicant may decide to completely change the project (for example, use an alternative type of back-up power to a standby diesel engine) or cancel the permit if it is too costly to meet the cancer risk limit. The applicant could re-apply to install the project elsewhere, or the applicant may cancel the project altogether or construct the project outside of the Bay Area.

The subsections below briefly discuss the two most common types of projects that are expected to be affected by the more stringent risk limit—diesel engines and gas stations—based upon permitting trends.

#### *a) Diesel Engines*

As discussed in the Concept Paper, diesel engines make up the largest share of applications that have cancer risk.<sup>43</sup> Diesel engines are used for many purposes, including providing prime and backup power for facilities such as data centers, fire stations, hospitals, hotels, residential housing operations, and airport operations, to name just a few. The sections below state the potential impacts of changes to the cancer risk limit and exemptions in draft amended Rules 2-1 and 2-5.

##### *(1) Potential Impacts of Changes to the Cancer Risk Limit in High-Scoring Census Tracts in CalEnviroScreen*

Historical information on health risk assessments prepared for emergency engine projects showed that of the 19 applications in Overburdened Communities with a cancer risk exceeding 6 in one million between February 2017 and February 2021, the average cancer risk value was 7.9 in one million, with a median value of 7.6 in one million. 19 applications per year over four years means that about 5 projects per year would have needed to be revised to meet the more stringent cancer risk limit in Overburdened Communities had the draft risk limit discussed in this Workshop Report been in place at that time.

As described above, cancer risk from diesel engine operations can be reduced by limiting throughput or operating hours or installing diesel particulate filters to catch particles before they enter the ambient air. Exposure can be lessened by increasing stack height.<sup>44</sup> In 2016, staff compiled a list of types of controls and typical control costs for reducing toxic air contaminant emissions or exposures. Staff assessed the price of diesel particulate filter controls to be within the range of \$3,500 and \$11,400 per year, in 2016 dollars.<sup>45</sup>

In 2020, the Air District updated the Best Available Control Technology (BACT) Guideline for emergency backup engines greater than or equal to one thousand brake horsepower (bhp) to US Environmental Protection Agency (EPA) Tier 4 emissions standards, which is the EPA's

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<sup>43</sup> BAAQMD, 2021. Concepts to Amend the Air District's Permitting Rules in Response to Localized Differences in Air Quality and Permitting in Overburdened Communities. April. Page 16.

<sup>44</sup> See BAAQMD, 2016. Regulation 2, Rule 5 Staff Report. September. Page 31.

<sup>45</sup> See BAAQMD, 2016. Regulation 2, Rule 5 Staff Report. September. Page 31.

most stringent emission standard.<sup>46</sup> The standard for Best Available Control Technology in for this type of engine is the same as the standard for Best Available Control Technology for Toxics for this engine type.<sup>47</sup> At present, there are over two thousand diesel emergency backup engines that are one thousand brake horsepower or larger in the Bay Area, out of a total of nearly eight thousand diesel emergency backup engines.<sup>48</sup> This means that applicants who apply to install a new engine of this size or modify an existing engine that does not meet this requirement will need to meet the more stringent Tier 4 emissions standard. There are several ways to comply with the Tier 4 emission standard, including purchase of an EPA-certified Tier 4 engine, purchase of a Tier 4-compliant engine that is packaged by the engine manufacturer with abatement equipment, or retrofit of a Tier 2 engine with aftermarket abatement equipment from a third-party vendor.<sup>49</sup>

## (2) *Potential Impacts of Changes to the Exemptions in Rule 2-5*

Along with a more stringent risk limit in areas that score highly on CalEnviroScreen, draft amendments to two sections in Rule 2-5 that apply to internal combustion engines (Sections 2-5-111 and 2-5-113) could further increase the health protectiveness of the rule across the region. Section 2-5-111, which provides a limited exemption for emergency standby engines, currently exempts from regulation toxic air contaminant emissions that occur during emergency use of emergency standby engines. The proposed change to Section 2-5-111 would remove the exemption for toxic air contaminant emissions. It would instead include an assumption of a set number of hours per year for emergency operations.<sup>50</sup> Staff is currently evaluating what that number would be and seeks feedback on what constitutes a representative value. Power outages and more frequent high heat events can result in at least some routine use of emergency operating time to provide electricity, which can result in negative consequences for local and regional air quality.<sup>51</sup> The amendment to this section would likely increase health risk by for all generator applications in the Bay Area. Additionally, many projects may no longer be eligible for permit streamlining based on increased modeled health risks, and refinements of health risk assessments and project modifications will probably become much more common.

The amended draft language for Rule 2-5 also includes a revision to Section 2-5-113, which exempts small internal combustion engines and gas turbines from the rule. Based on community concerns about the cumulative impacts of multiple engines located nearby, staff proposes to limit the exemption in Section 2-5-113 to one small engine per site (or more as long as the combined brake horsepower is less than 50). The purpose of this change is to make sure that it is not possible to evade the health-protective objective of Rule 2-5 by installing multiple

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<sup>46</sup> BAAQMD, 2020. BACT/TBACT Workbook: I.C. Engine – Compression Ignition, Emergency  $\geq 1000$  hp. December.

<sup>47</sup> BAAQMD, 2020. BACT/TBACT Workbook: I.C. Engine – Compression Ignition, Emergency  $\geq 1000$  hp. December.

<sup>48</sup> BAAQMD, 2021. Presentation on Best Available Control Technology for Large Standby Diesel Engines. March. Slide 6.

<sup>49</sup> BAAQMD, 2021. Presentation on Best Available Control Technology for Large Standby Diesel Engines. March. Slide 14.

<sup>50</sup> This follows the Air District Policy: Calculating Potential to Emit for Emergency Backup Power Generators, which states: “When determining the Potential to Emit (PTE) for an emergency backup power generator, the District shall include emissions resulting from emergency operation of 100 hours per year, in addition to the permitted limit for reliability-related and testing operation. See BAAQMD, 2019. Policy: Calculating Potential to Emit for Emergency Backup Power Generator. June. Page 1.

<sup>51</sup> See San Francisco Chronicle, 2020. Power shut-offs, fires and heat fuel spike in Bay Area generator sales. September. See also CARB, 2020. Emission Impact: Additional Generator Usage Associated with Power Outage. January.

small engines or gas turbines where a larger engine or turbine would require controls to reduce emissions or exposure. Sites with diesel engines that are larger than 50 brake horsepower would need to include any small engines that are part of the project in the Health Risk Assessment. Staff also proposes that the project could still qualify for a permit exemption as long as the small engine does not trigger the requirement to apply the Best Available Control Technology for Toxics. At present, staff does not know how many small engines might be affected by this draft rule change.

#### *b) Gas Stations*

Gas stations undergoing toxics New Source Review will be affected by updates to the Air District's Health Risk Assessment Guidelines. As mentioned above, incorporation of the 2015 OEHHA health risk calculation procedures for gas stations as recommended in the draft rule changes would show that cancer risk increases by about 40 percent for projects where the maximally exposed individual is a residential receptor and will add a new limit on acute impacts.<sup>52</sup> In addition, gas stations that are located in areas that score highly on CalEnviroScreen will also need to comply with a more stringent cancer risk limits. As Table 6 above indicates, gas station permit applications made up about 30 percent of overall applications in high scoring areas, or about three projects per year in these areas.

In high-scoring CalEnviroScreen locations, the average cancer risk value for the 11 projects since February 2017 that had a cancer risk value that exceeded 6.0 in one million was 9.1 in one million. Any update to the Health Risk Assessment Guidelines, as described above, could mean an even larger exceedance of the maximum risk limit of 6.0 in one million in Overburdened Communities. Also, because the risk assessment revisions would increase cancer risk where the maximally exposed individual is a residential receptor, it is likely that some gas station projects that were below 6.0 in one million would have exceeded the limit due to the updated risk calculation guidelines. Given this information, staff expects that there would have been about three projects per year based on the historical analysis that may have needed to undergo revisions to meet the more stringent risk limits in Overburdened Communities.

At the regionwide scale (which also includes projects in high-scoring CalEnviroScreen locations) over the same time period, the average cancer risk value for gas station projects requiring health risk assessments was 6.3 in one million. A 40 percent increase in cancer risk for residential receptors likely means that many projects would still be below the cancer risk limit of 10 in one million outside of Overburdened Communities, but the analysis of projects since February 2017 indicates that about 7 gas station projects per year might have exceeded the 10 in one million risk limit and required changes to comply with the limit. Table 7 below provides a summary of the average cancer risk of gas station projects and the number of health risk assessments that would have exceeded the draft limits if they had been in place throughout the historical analysis period.

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<sup>52</sup> Health risk assessments consider the type of individual (for example, resident, worker, student, etc.) when assessing health risk. Rule 2-5 defines the receptor types that are considered in health risk assessments. A "residential receptor" is defined in Section 2-5-220 to mean any receptor location where an individual may reside for a period of six months or more out of a year.

**Table 7: Cancer Risk Averages and Exceedances from Gas Station Projects During Historical Lookback Period, Assuming HRA Procedure Changes and More Stringent Risk Limit in Overburdened Communities**

Location	Average Cancer Risk (per million)	Number of Health Risk Assessments Exceeding Limit Per Year*
Overburdened Communities	5.5	3
Bay Area Region	6.3	7

\*Assumes the limit in Overburdened Communities 6 in one million and the limit elsewhere remains 10 in one million.

Controls available to address toxic air contaminant emissions from gas stations include limiting the throughput rate or operating time, or in the case of new proposed gas stations, possibly revising source locations so that emissions sources are located farther from where people are likely to be exposed.<sup>53</sup> Costs borne by the applicant to reduce risk include the potential for reduced profitability as a result of limited throughput or operating time. Revisions to source locations could have consequences for overall construction planning and costs.

### 3. [Updates to Rule 2-5 Table 2-5-1: Toxic Air Contaminant Trigger Levels](#)

Draft updates to Table 2-5-1 within Rule 2-5 include changes to toxic air contaminant trigger levels, including updates to the list of toxic air contaminants that are regulated under Rule 2-5. Updates to Table 2-5-1, which are shown in Appendix B, also reflect new and revised health effects values adopted by OEHHA as of June 30, 2021. In addition, draft acute trigger levels are updated based on an acute target hazard index of 0.20, which is consistent with the District’s Rule 11-18’s significant source threshold of an acute hazard index of 0.20. Previous acute trigger levels were based on a target hazard index of 1.0. These draft updated acute trigger levels are five times lower, which will result in more permit applications requiring site-specific health risk assessments. Updates to Table 2-5-1 may result in additional chemicals or impacts from revised effects being considered in health risk assessments.

## *B. Preliminary Estimates of Potential Impacts from Changes to Rule 2-1*

Draft changes to Rule 2-1 include a new definition for Overburdened Community, a new notice requirement for projects that require health risk assessments and an extension of time to notify a permit applicant on the determination of whether the Air District will approve or deny the application.

### 1. [Public Notifications of Permit Applications](#)

A requirement to notify residents who live within one thousand feet of a proposed project that would require a health risk assessment as a result of planned toxic air contaminant emissions in the highest-scoring CalEnviroScreen 4.0 census tracts would probably require Air District staff to oversee about 66 additional notifications and response to comment periods per year. To arrive at this estimate, staff reviewed projects for which health risk assessments had been prepared since the last time Rule 2-5 had been updated (to ensure a consistent risk assessment procedure). A diverse array of projects would have been included, such as projects at concrete batch plants,

<sup>53</sup> See BAAQMD, 2016. Regulation 2, Rule 5 Staff Report. September. Page 31.

backup diesel engine projects, soil vapor extraction projects, projects involving gas stations, and paint repair booth projects, to name several representative project types.

To recover costs, staff would attach a public notice fee for any notification that is required under the draft notification section in Rule 2-1. Staff anticipates that the fee structure, including the fee amount, would be similar to the fee that is assessed for school notifications under Section 2-1-412. Under the school notification process, an applicant whose project requires a public notification is required to pay a fee to the Air District to carry out the notification process. The fee that is paid by the applicant covers the cost of preparing and delivering physical mail copies of the notice to the intended addresses.<sup>54</sup> The Air District would refund the applicant for the portion of the fee that the applicant pays to the Air District but is not necessary for preparation and distribution of the notice. To include the fee portion of the enhanced notification requirement in Overburdened Communities, the Air District will need to update Regulation 3: Fees to incorporate the notification fee requirement. At this point in time, the fee applicants must pay to comply with Section 2-1-412 is \$2,272 per application, however, that amount may be different based upon staff's continued analysis of administrative impacts of the draft notification section.<sup>55</sup> Finally, public notices add about 2-3 months (more time if there are many comments to respond to) to the overall processing time for permit applications that trigger a noticing requirement.

## 2. Extension of Time for Action on Applications

As mentioned earlier in this document, to account for the draft changes to Rule 2-5, the changes to the notification procedures, and increasing constraints on staff due to implementation of multiple new programs over the recent past, staff proposes increasing the amount of time by which the Air District Air Pollution Control Officer (APCO) must notify the permit applicant of an approval, approval with conditions, or denial of the application from 35 days to 45 days. The extension will realign the Rule with a timeline that is more conducive to fulfilling the necessary evaluation of permit applications and is more realistic in terms of its time expectation. Over the shorter term, permit applicants may need to update project timelines, however, staff does not anticipate costs beyond this initial readjustment.

## C. Cost Recovery

The Air District has the authority to assess fees to regulated entities for the purpose of recovering the reasonable costs of implementing and enforcing applicable regulatory requirements. In 2012, the Air District's Board of Directors adopted a Cost Recovery Policy which specifies that newly adopted regulatory measures should include fees that are designed to recover increased regulatory program activity costs associated with the measure, unless the Board of Directors determines that a portion of those costs should be covered by tax revenue.

In accordance with the adopted Cost Recovery Policy, the Air District assesses risk screening fees for new and modified sources that are required to undergo health risk assessments under Rule 2-5. The risk screening fees in Regulation 3: Fees will need to be updated to incorporate the increased administrative time that will be necessary to process applications to comply with the revised, more stringent rule. Regulation 3 will also need to be updated to reflect the draft change in Rule 2-1 to require notifications for projects that require health risk assessments in Overburdened Communities. Because of the necessary changes to Regulation 3 to enable the

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<sup>54</sup> See Section 2-1-412, see also Section 3-318.

<sup>55</sup> Section 3-318.

Air District to oversee the draft changes to Rules 2-1 and 2-5, staff recommends incorporating a future effective date for the rule updates to ensure consistency and cost recovery.

## **VI. RULE DEVELOPMENT / PUBLIC PARTICIPATION PROCESS**

As described above, the Air District's current effort to amend the Permitting Rules is intended to make the permitting process more health protective, with particular attention placed upon addressing differences in pollution exposure and health vulnerabilities at the subregional level. The Air District has heard from community advocates regarding the need to update the permitting process to consider permitting in overburdened communities. The draft rule amendments described in this document are intended to prioritize responding to concerns from the public regarding permitting decisions.

Staff has met with community advocates who have expressed an interest in updating the Air District's permitting process and will continue to do so throughout the rule amendment process. Staff has also met with regulated industry stakeholders to receive their feedback.

The Air District released proposed concepts on changes to the Permitting Rules in April 2021. In May 2021, the Air District held a public workshop to present the concepts to the public and receive public feedback. The Air District also requested written feedback from the public, which was accepted until the end of May 2021. In addition to the public workshop process, staff presented concepts to the Air District Stationary Source and Climate Impacts Committee in May 2021, and presented to the Community Equity, Health and Justice Committee in July 2021. The Air District is releasing this Workshop Report and accompanying draft rule amendments for public review. Air District staff is soliciting comments on these materials. Staff will continue to evaluate and consider previously received comments and other comments received during this current comment period in the further development of rule amendments.

As part of the rule development process, staff also evaluates potential environmental impacts as required by the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq. In evaluating potential environmental impacts related to the amendments to Rule 2-1 and Rule 2-5, staff will perform an analysis of impacts from the draft amendments as required by the California Environmental Quality Act.

Staff will prepare final proposal and staff report, along with other supporting documents, for further review and comment prior to a Public Hearing.

## **VII. CONCLUSION / RECOMMENDATIONS**

The Air District is developing amendments to Rule 2-1 and Rule 2-5 to increase transparency in the permitting process and increase health protectiveness of the Air Toxics New Source Review rule, respectively, with a particular focus on addressing disparities in exposure to pollution and health burdens. Air District staff has published this Workshop Report and related materials for public review and encourages interested parties to submit comments for consideration. Air District staff will continue to further develop and evaluate the rule amendments in preparation of presenting final proposed rule amendments for consideration by the Air District Board of Directors.

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