AGENDA: 7

Bay Area Air District

Air District Permitting Overview

Community Advisory Council Meeting

September 17, 2026

Ayah Hassan
Principal Air Quality Engineer
Engineering Department

There’s Something in the Air

- Over the last 50 years, air quality across the Bay Area as a whole has improved.

- Not everyone has had the same access to that cleaner air—air pollution is still worse for communities of color and those with lower income levels and educational attainment.

https://magazine.gwu.edu/air-equality-all

Strategic Plan Goal 2: Advance Environmental Justice

The Air District is committed to addressing the Community Advisory Council's Environmental Justice Priorities through its 2024 – 2029 Strategic Plan.

Strategy 2.11 Cumulative Health Impacts:

- The Air District will develop a better understanding of where cumulative impacts exist and how they should be considered in our regulatory programs

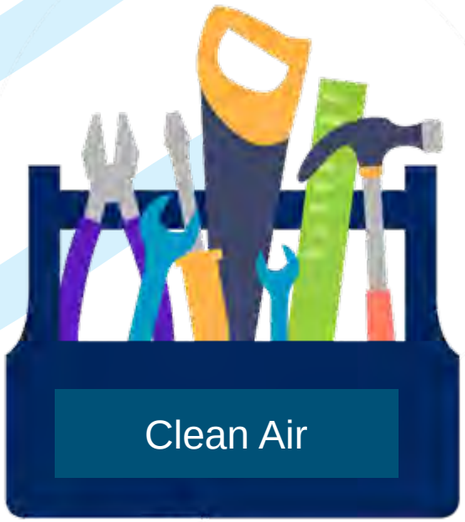
Presentation Outline

- Permitting Overview
- Evaluations in Air District Permitting, including Cumulative Impact Considerations

Bay Area Air District

Permitting Overview

The Air Quality Management Toolkit



Measurement Tools

- air monitoring
- source testing
- emission inventories
- health risk assessments

Regulatory Tools

- rules
- permits
- inspections
- enforcement

Non-Regulatory Tools

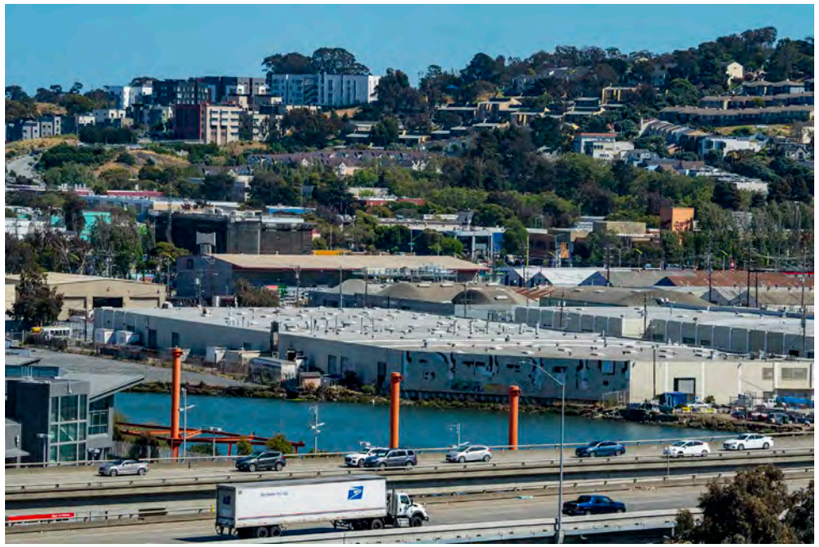
- voluntary programs
- incentives
- education
- compliance assistance

Permits Help Achieve Clean Air For All

The Air District's mission directly aligns with the Clean Air Act; Clean Air Act ensures continuous improvement in air quality over time

Bay Area Challenges and Opportunities:

- Historic land use and density – industry alongside neighborhoods
- Some of the most stringent air quality regulations and health protective rules in the nation
- Board of Directors has established environmental justice as a guiding principle of the 2024–29 Strategic Plan



Why Issue Air Permits?

When Permits are the right tool, they:

- Protect public health and the environment by ensuring continuous improvements to air quality over time
- Regulate emissions from stationary air pollution sources
- Protect overburdened populations from disproportionate exposure to air pollutants
- Work with applicants to ensure **federal, state, and local regulations** are met
- Allow greater transparency on local emissions for communities and businesses

What Requires a Permit?

Stationary sources that emit air pollution and are subject to air quality regulations, typically require a permit.

What does NOT require a permit?

Certain stationary sources may not require a permit if they are:

- **Exempt*** per Regulation 2-1 (Permits: General Requirements), or
- **Excluded** per Regulation 1-110 (General: Exclusions)

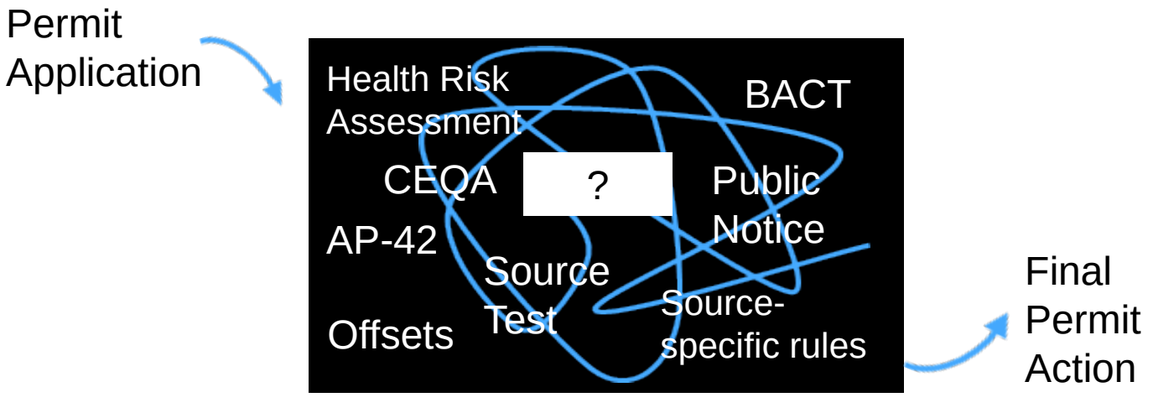
Registration: Some smaller sources that do not require individual permits may still be required to register with the Air District.

*Exempt sources are subject to and must comply with regulations.

Some mobile sources that do not require an air permit are construction equipment and locomotives. (Source: California Air Resources Board (CARB))

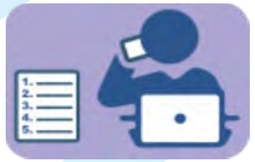
Evaluations Informing the Permitting Process

- Not a ”one size fits all” process – every application assessed individually
- Permitting process is iterative and becomes a coordinated effort between the Air District and Applicant, with public noticing and participation in important cases
- Detailed operational and technical information is requested, reviewed for completion and accuracy, and then the engineering evaluation involves **determining which of the 100+ Bay Area Air District rules apply**



BACT: Best Available Control Technology
CEQA: California Environmental Quality Act
AP-42: Air Pollutant Emission Factors from Stationary Sources

Permitting Process Overview



Pre Phase: Application Review

- Application Received
- Review of Information
- Application Complete

Phase 1: Preliminary Engineering Evaluation

- Calculate Emissions
- Health Risk Assessment (HRA)
- Propose emissions and operating limits

Phase 2: Final Technical Review and Public Notice

- Public Notice Distribution (if required) & Respond to Comments
- Revise Engineering Evaluation
- Finalize Permit Conditions

Phase 3: Final Determination

- Issue Authority to Construct
- Construct and Test & Review Source Test
- Make Final Determination on Permit to Operate

A permit denial may be issued at the end of the process if the project will not comply with regulatory requirements.

Bay Area Air District

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Evaluations in Air District Permitting

Regulation 2: Permitting

Summary of Key Sections:

2-1: General Requirements

- Permits shall comply with all applicable regs
- California Environmental Quality Act Review
- Public Notice

2-2: New Source Review (NSR)

- Best Available Control Technology Evaluation
- Emission Offsets

2-5: Toxics NSR

- Health Risk Assessment
- Toxics Best Available Control Technology Evaluation

Components of Permitting Process

California Environmental Quality Act	Reg 2-1
Source-category specific & pollutant-specific rules	
Emission Controls: Best Available Control Technology	Reg 2-2
Health Risk Assessments	Reg 2-5
Public Notice	Reg 2-1
Emission Offsets	Reg 2-1

California Environmental Quality Act

CEQA requires government agencies to consider the **environmental consequences** of their actions before approving plans and policies or committing to a course of action on a project.

Assessing Air Quality Impacts in CEQA:

- Air quality impacts are inherently cumulative.
- The Air District CEQA Guidelines documents the process to assess air quality impacts. The Air District CEQA Guidelines include thresholds of significance for criteria pollutants and localized impacts including cancer risk, chronic and acute health risks, and $PM_{2.5}$ concentrations.

The Air District can be a responsible or lead agency in the CEQA review.
The Air District will not take a final action on a permit until the CEQA review is completed (per 2-1-310).

PM: Particulate Matter

When is a project exempt from CEQA?

CEQA exemptions are based on the CEQA Statute and Guidelines:

1. Categorical exemption
2. Statutory exemption
   - Ministerial exemption:

CEQA applies to discretionary projects, but not ministerial projects

Ministerial Projects:

- Projects where approval is based on fixed, objective standards such as numerical emissions limits; and
- Projects where there is no room for differences in professional opinion or judgement about whether a project complies with the applicable regulations; and
- Projects where the agency does not decide on the wisdom or appropriateness of the project.
  - Projects where the agency lacks discretion to deny or shape the project.

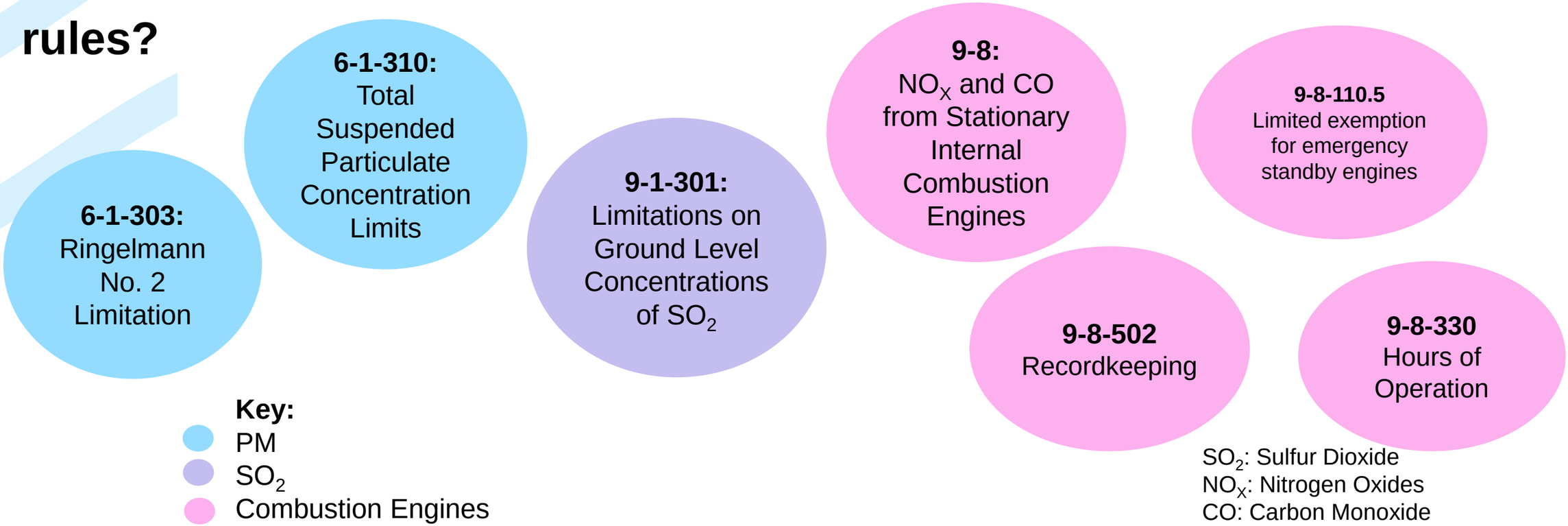
Source or Pollutant Specific Rules

- The engineer determines which of the ~100 source or pollutant specific rules apply. These can be considered **“prohibitory rules”**
- These rules support clean air plan strategies to achieve ambient air quality standards
- Emissions reductions from stationary sources are achieved through the adoption of prohibitory rules with an emissions limit meant to reduce air pollution that require the installation of best available retrofit control technology (BARCT) or reasonably achievable control technology (RACT)

Example: Backup Diesel Generator

A facility applies to install a new Tier 4 backup diesel generator.

What are the applicable pollutant specific and/or source specific rules?



SO_2: Sulfur Dioxide
NO_X: Nitrogen Oxides
CO: Carbon Monoxide

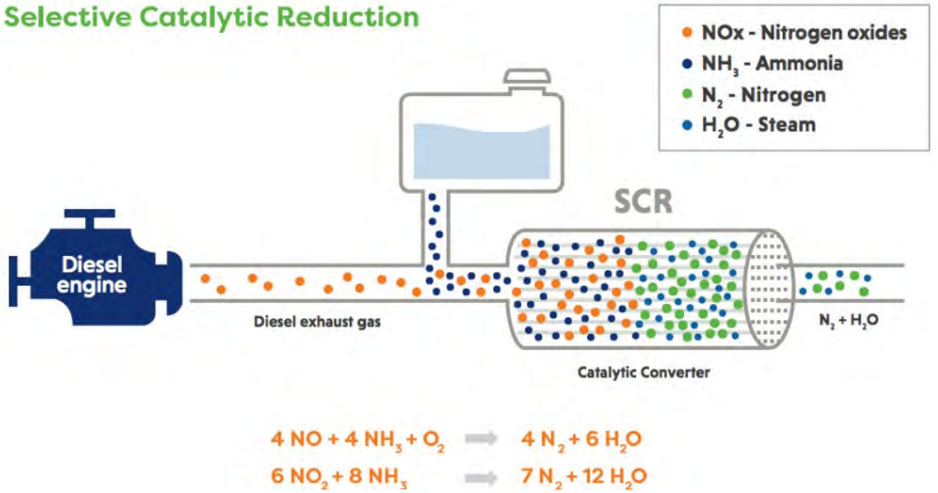
New Source Review: Best Available Control Technology

Regulation 2, Rule 2, Section 301:

BACT is required to minimize air pollution emissions from stationary sources.

How?

- Based on the maximum degree of control that can be achieved
- Considers energy, environmental and economic impact
- Add on control equipment or modification of processes or methods
- Design, equipment, work practice, or operational standard



Selective Catalytic Reduction is an example control technology to reduce NO_X emissions from diesel exhaust. Available at: https://www.aecc.eu/wp-content/uploads/2020/10/selective-catalyctic-reduction-1-980x548.png

Toxics NSR: Health Risk Assessment (HRA)

HRAs assess the potential health impact from exposure to toxic air contaminants.

Toxics NSR: Health Risk Assessment

Requirements and Risk Thresholds

HRA Requirements:

- HRA required when annual or hourly emissions from the Project exceed Regulation 2-5 thresholds
- The Project (and therefore HRA) includes emissions from permit applications from the past 5 years

Risk Thresholds and Outcomes

- Cancer Risk ≤ 10 in a million
  - **Overburdened communities: ≤ 6 in a million**
- Acute and Chronic Hazard Index ≤ 1.0
- If not met, the project will need to be modified to bring risks below thresholds, or denied

Example: Toxics NSR: Health Risk Assessment

A facility located in an overburdened community (OBC) applies to install a new Tier 4 backup diesel generator. There is 1 other generator onsite that was permitted within the last 5 years.

- **Emissions:** Calculate toxic air contaminant emissions for both generators, assuming 50 hours of maintenance testing per year
  - **Outcome**: The total Diesel Particulate Matter (DPM) emissions exceed Reg 2-5 thresholds, and therefore an HRA is required
- **Health Risk Assessment:**
  - Model the concentration of emissions at nearby resident, school, and worker receptors. Calculate the associated health risk
  - **Outcome:** The cancer risk associated with DPM emissions from the two generators is 1.5 in a million, which is below the 6 in a million threshold in an OBC

Finding: The project complies with Regulation 2-5 and the new generator will be limited to 50 hours of maintenance testing per year.

Toxics NSR: TBACT

The source-specific HRA results are also used to determine if Best Available Control Technology for Toxic Air Contaminants (TBACT) is required.

TBACT is required for any new or modified source of toxic air contaminants when the source risk is:

- Cancer risk greater than 1.0 in one million, and/or
- Chronic hazard index greater than 0.20

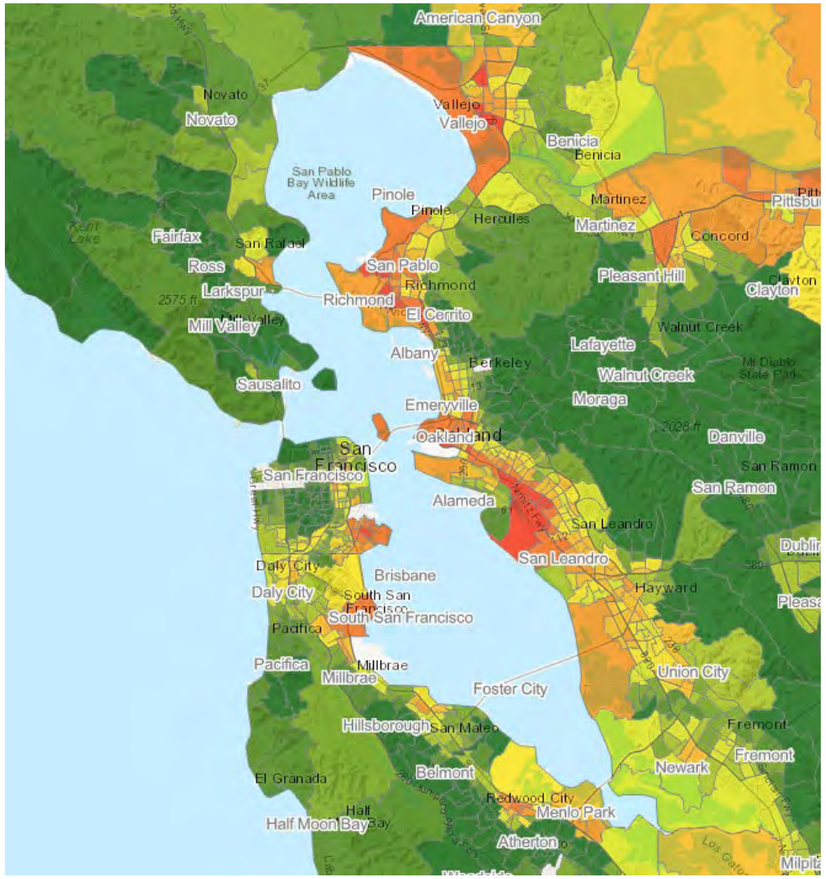
When triggered, TBACT is required by the Air District to minimize toxic emissions.

NSR: Overburdened Community Definition

CalEnviroScreen is a screening tool that analyzes a combination of environmental hazards, public health factors, and socioeconomic data to produce a score for each census tract in California.

How is an Overburdened Community defined?

An Overburdened Community is defined by an overall CalEnviroScreen4.0 score at or above a certain threshold, which covers about 10% of the Bay Area population.



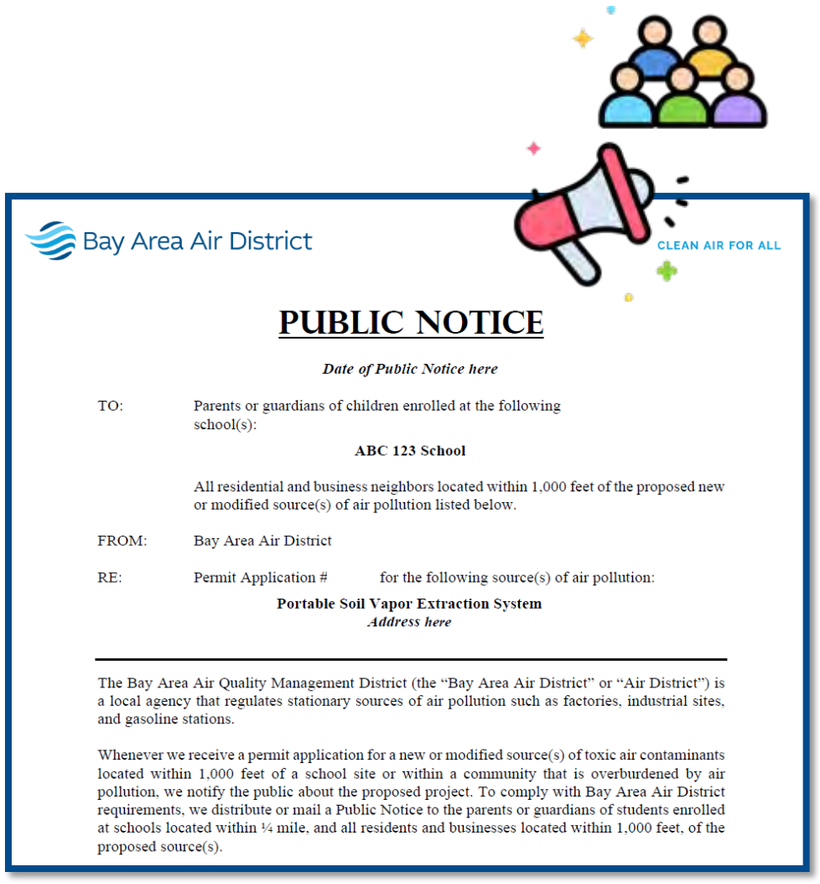
Source: CalEnviroScreen 4.0, https://oehha.ca.gov/calenviroscreen

Public Notice

Public Notice and 30-day public comment period:

- Project within 1,000 feet of a K-12 school, or
- Project triggers a HRA and is in an overburdened community, or
- Project with significant emission increases or banking

Translated, mailed to residences, available online, distributed via email notification.



Bay Area Air District

CLEAN AIR FOR ALL

PUBLIC NOTICE

Date of Public Notice here

TO: Parents or guardians of children enrolled at the following school(s):

ABC 123 School

All residential and business neighbors located within 1,000 feet of the proposed new or modified source(s) of air pollution listed below.

FROM: Bay Area Air District

RE: Permit Application # for the following source(s) of air pollution:

Portable Soil Vapor Extraction System

Address here

The Bay Area Air Quality Management District (the "Bay Area Air District" or "Air District") is a local agency that regulates stationary sources of air pollution such as factories, industrial sites, and gasoline stations.

Whenever we receive a permit application for a new or modified source(s) of toxic air contaminants located within 1,000 feet of a school site or within a community that is overburdened by air pollution, we notify the public about the proposed project. To comply with Bay Area Air District requirements, we distribute or mail a Public Notice to the parents or guardians of students enrolled at schools located within ¼ mile, and all residents and businesses located within 1,000 feet, of the proposed source(s).

Bay Area Air District

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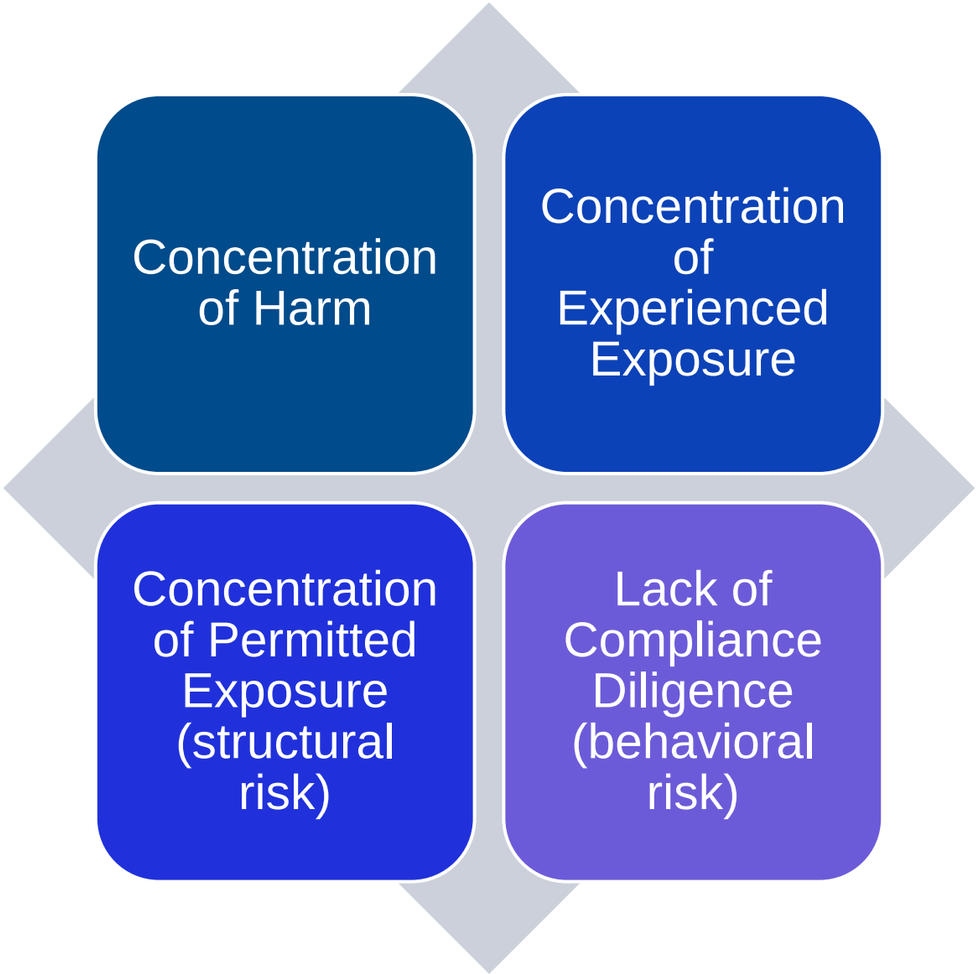
Cumulative Impacts In Permitting

Core Principles: Regulatory Design & Justice

Regulatory design focuses on how systems are structured to reduce harm, not simply enforce rules

Success is defined by outcomes (reduced emissions), not activity (number of permits)

Decision-Making As A Design Choice



Summary of Cumulative Impact Considerations in Permitting

CEQA Review

- Considers the combined environmental effect of a project with other closely related past, present, and reasonably foreseeable future projects
- Air Quality thresholds for nonattainment criteria pollutants, cancer risk, acute and chronic hazard, and $PM_{2.5}$ concentrations

Toxics NSR HRA (Rule 2-5)

- HRA includes:
  - Risk from the Project
  - Risk from related projects in the last 5 years
  - Risk from sources on Authority to Construct and not yet on Permit to Operate
- Lower cancer risk thresholds in **Overburdened Communities**
- Multi-pollutant and multi-pathway HRA

Facility-wide HRA (Rule 11-18)

- Facility-wide HRA for all existing sources
- Required to reduce impacts if shown to exceed the health protective thresholds in the regulation

Questions & Discussion

For more information:

Ayah Hassan | Principal Air Quality Engineer | ahassan@baaqmd.gov

Pamela Leong | Director of Engineering | pleong@baaqmd.gov

DRAFT
Recommendations to Address Cumulative Impacts in Permitting

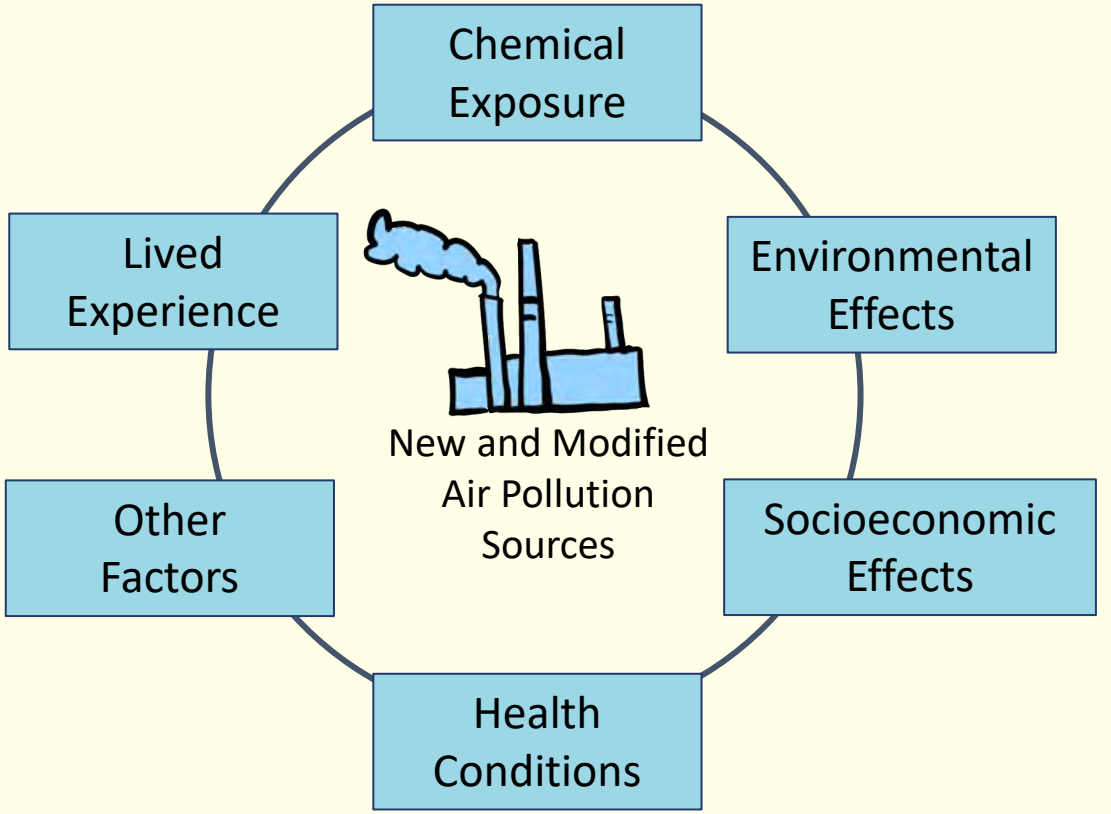
Bay Area Air District
Community Advisory Council

September 17, 2026

Phil Martien, PhD, Chair of (Technical) Advisory Council

(Technical) Advisory Council Currently Focused on Cumulative Impacts in Permitting

- We are seven members with backgrounds in air pollution and health science, plus the Board Chair
- We've had several prior meetings with members of the Community Advisory Council

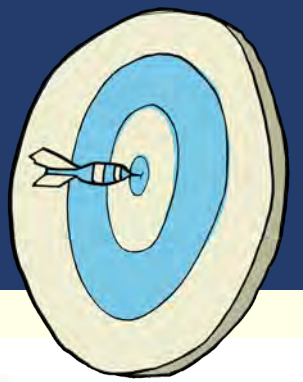


Cumulative Impacts

Seeking Guidance and Continued Collaboration with CAC

- Corrections, modifications to draft recommendations?
- Ways to meaningfully include community representation, beyond comments at meetings?
- Ways to communicate the recommendations?
- Interest in partnering to finalize draft recommendations?

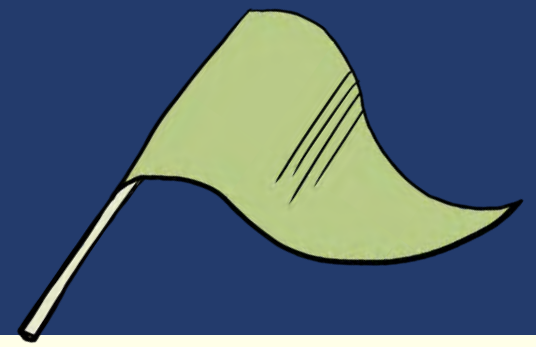
Goals to Guide the Recommendations



- Minimize added burden to areas already suffering cumulative impacts
- Reduce differential exposure to air pollution
- Consider non-chemical stressors
- Reflect community concerns and understanding

Focus on OUTCOMES, not just ACTIONS

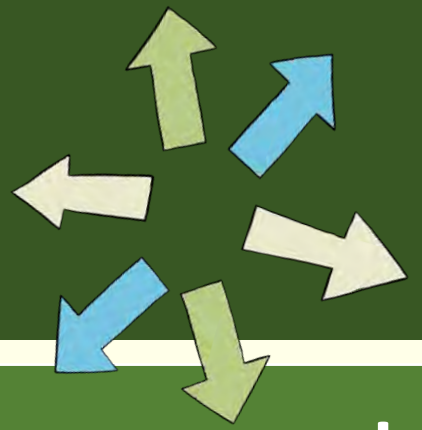
Some Action Already Taken by the Air District



Current Permitting Steps	What They Aim to Accomplish
Use CalEnviroScreen to map overburdened communities	Find areas with greater impacts
Apply standard risk assessment methods for toxic air contaminants	Estimate added harm (cancer risk)
Tighten risks limits in overburdened communities	Less additional cancer risk allowed

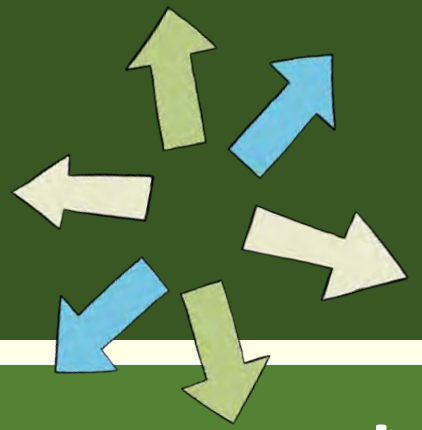
The Air District and other jurisdictions are using “place-based” methods.

Recommendations: Change What Counts



Current Limitation	Advisory Council Recommendation
New pollution considered apart from pollution already there	Account for existing background pollution
Assessments focused only on the highest modeled individual risk	Consider how many people are exposed and the overall community burden
Near-source fine particles ($PM_{2.5}$) not included in risk assessments	Address local $PM_{2.5}$ health impacts

More Recommendations on Changing What Counts



Current Limitation	Advisory Council Recommendation
Limited accounting for non-cancer toxic impacts	Better account for pollutants effects on multiple body parts
Community vulnerability outside impact assessments	Consider factors that can make pollution more harmful to some communities
Existing maps may miss some impacted areas	Improve how communities needing additional protection are identified

Recommendations: Change What Happens When a Community is Overburdened

Recommendation	What It Could Mean in Practice
Tighten health-risk limits for non-cancerous air toxins	Less additional health burden from air toxins allowed
Lower BACT* triggers and strengthen TBACT** triggers	Cleaner controls required sooner
Lower triggers for public notice and environmental review	More project require community notice and receive reviews

*BACT = Best Available Control Technology; **TBACT is Best Available Control Technology for Toxic Compounds

More Recommendations on Changing What Happens When a Community is Overburdened

Recommendation	What It Could Mean in Practice
Consider compliance history	Repeated violations matter when a facility wants to expand
Facility pollution caps; no net increase	Expansion cannot increase overall facility pollution
Selected permit prohibitions	Some high-polluting new or modified sources may not be allowed

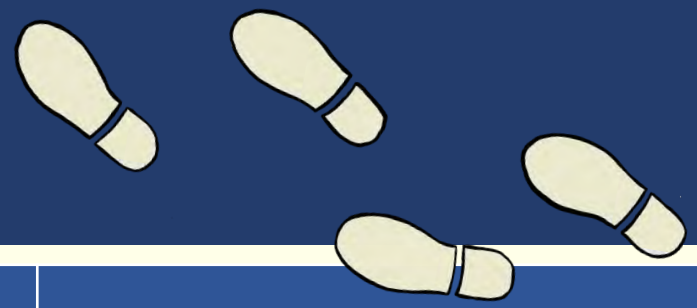
Recommendation: Explore Alternate Approaches

Recommendation	Where It Could Lead
Adopt precautionary approaches	Less need to quantify harm before requiring reductions; harm may be reasonably assumed
Shift agency focus toward harm reduction	More focus on harm-reducing outcomes in permitting and other activities
Increase engagement with community members	▪ Improved ways to identify “community” and the stakeholders to engage ▪ Improved ways / forms of communication to reach diverse community members ➢ Improved permitting outcomes

More Approaches to Explore

Recommendation	Where It Could Lead
Track ways that other agencies / jurisdictions redirect resources to overburdened communities	Productive examples may emerge
Use monitoring and modeling to estimate toxic air contaminant emissions and concentrations in the Bay Area, with an initial focus on AB 617 communities	▪ More insight into pollutants of concern ▪ Better maps of overburdened communities ▪ Better estimates of background concentrations

Next Steps and Draft Timeline



Next Steps	Dates
Continue to discuss draft recommendations with the Community Advisory Council and with Air District staff	2026
Complete draft recommendations document	2026
Present draft recommendations to Board of Directors	Early 2027
Complete final recommendations document	Mid 2027

Seeking Guidance and Continued Collaboration with CAC

- Corrections, modifications to draft recommendations?
- Ways to meaningfully include community representation, beyond comments at meetings?
- Ways to communicate the recommendations?
- Interest in partnering to finalize draft recommendations?