

# East Oakland Community Emissions Reduction Plan (CERP)

## **Community Steering Committee Meeting #27**

*March 13, 2025*

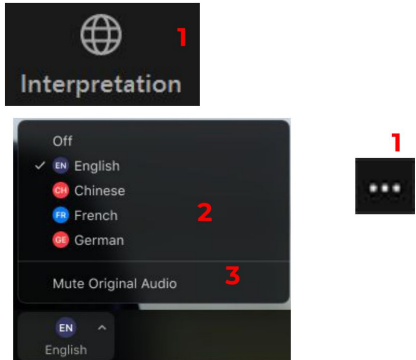


Bay Area Air District

COMMUNITIES  
FOR A BETTER  
ENVIRONMENT  
established 1978

# Interpretation Instructions

Windows | macOS



## ZOOM - Select Language Channel

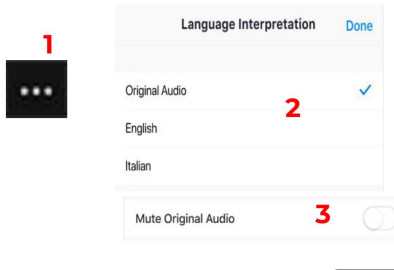
### ENGLISH

1. In your meeting/webinar controls, click Interpretation.
2. Select the language that you would like to hear: English.
3. Closed caption: please turn on if you need it.

### SPANISH

1. En los controles de la reunión o el seminario web, haga clic en Interpretación.
2. Haga clic en el idioma que desee escuchar: español (Spanish).
3. (Opcional) Para escuchar solo el idioma interpretado, haga clic en Silenciar audio original

Android | iOS





# WELCOME TO THE CSC MEETING

**Co-Chairs:**  
**Aiyahna Johnson**  
**Mr. Charles Reed**  
**Mykela Patton**

# Meeting Objectives

- Provide information on airport pollution and empower CSC members to collaborate on strategies and actions to address airport pollution.
- Answer questions that CSC members have raised about airport pollution and operations.
- Provide background information on the Commercial and Industrial Focus Area
- Evaluate Part 1 of the Commercial and Industrial strategies and objectives.

# Meeting Agenda

- **Welcome and Agenda**
- **CSC #26 (February) Recap**
- **Airport Presentation**
- **Airport Activity**
- **Break (5 min)**
- **Commercial & Industrial Introduction**
- **Commercial & Industrial Activity**
- **Report out outreach & engagement**
- **Next Steps and Close Out**

# INITIAL MEETING AGREEMENTS OR NOTES FOR PARTICIPATION

- **One mic, one voice:** If in person, raise your hand to speak. If on Zoom, use Raised Hand function under Reactions at the bottom of your screen.
- Have grace for ourselves and one another.
- Take care of yourself (Stretch, drink water and breathe).
- Mutual respect, empowerment and active listening for all participants.
- To allow everyone to participate, please limit your comments to a speaking time of 2 minutes. We will actively give reminders and alerts.
- ‘Popcorning’ or passing the mic method will be used to encourage participation amongst quieter CSC members.
- **For any questions throughout the meeting:** If in person, please raise your hand to ask a question. If on Zoom, in addition to hand-raising, you may also use the Zoom Chat. CBE and BAAQMD staff will be responding to your questions.

# COMMUNITY BUILDING

In person attendees are encouraged to interact with fellow participants during the dinner/meet and greet.

## **Virtual attendees, please type into the Zoom Chat:**






- Your Name
- Your Pronouns
- Any affiliated organizations

**Community building on Zoom:** Use Chat and the Reaction emojis to inspire and encourage one another.

**Note:** CSC members, please raise your hand if you are not able to type into the chat and we will have you speak aloud.



# Where are We Today?

Where are We Today?		2023 Quarters				2024 Quarters				2025 Quarters				2026 Quarters				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
<b>SCOPE AND ORGANIZE</b>  PARTNERSHIP WITH COMMUNITY	Steering Committee (CSC)	[Active]																»»»
	CSC Governance	■	☑															
	Plan Vision & Principles	■	☑															
	Plan Community Boundary		■	☑														
 <b>ASSESS</b> THE CHALLENGES	Community Profile			[Active]														
	Emissions Inventory			■														
	Health Inequities Information			■														
	Community Mapping Project			■														
	Compliance & Enforce Data				■													
 <b>PLAN</b> OUR SOLUTIONS	Strategy Development					■												
	Plan Goals			■														
 <b>PLAN</b> REVIEW & ADOPT	Draft Plan																	
	Plan Adoption - CSC																	☑
	Plan Adoption – Air District																	☑
	Plan Implementation																	
 <b>Implement</b>	Track Progress																	
	Report on Progress																	

Updated 3/2/2025

■ INTRODUCTION TO THE STEERING COMMITTEE    ☑ DECISION MADE



# CSC #26 (Feb Mtg) Recap

Carly Cabral, CBE

# Recap of Feb CSC #26 Honoring Black History Month and Public Health & Wellness Presentation & Activity

- In honor of Black History Month, Co-Chairs shared a video of Hazel M. Johnson, the “Mother of Environmental Justice” from the South Side of Chicago
- Just Cities staff gave a presentation on Public Health & Wellness Overview Example Actions and led a breakout activity on Public Health & Wellness Example Actions answering the following questions
  - What resonates with you about these actions?
  - What is something that we have not addressed through these actions?

# Recap of February's CSC #26 Presentation on the Community Description

- Air District staff presented on the draft Community Description & Overview Chapter for the East Oakland CERP which covered:
  - The Principles of EJ
  - Background & Purpose of the Community Description
  - Sections of the Community Description
- We also heard from the following East Oakland CSC members for their Community Perspectives of their lived experiences in East Oakland: Ms. Cecilia Cunningham, Aiyahna Johnson (Co-Chair), Marina Muñoz, Mykela Patton (Co-Chair), Mr. Charles Reed (Co-Chair), Gabrielle Sloane-Law

# Illegal Dumping Special Meeting Recap

CSC Members Becca Bantum and Andria Blackmon

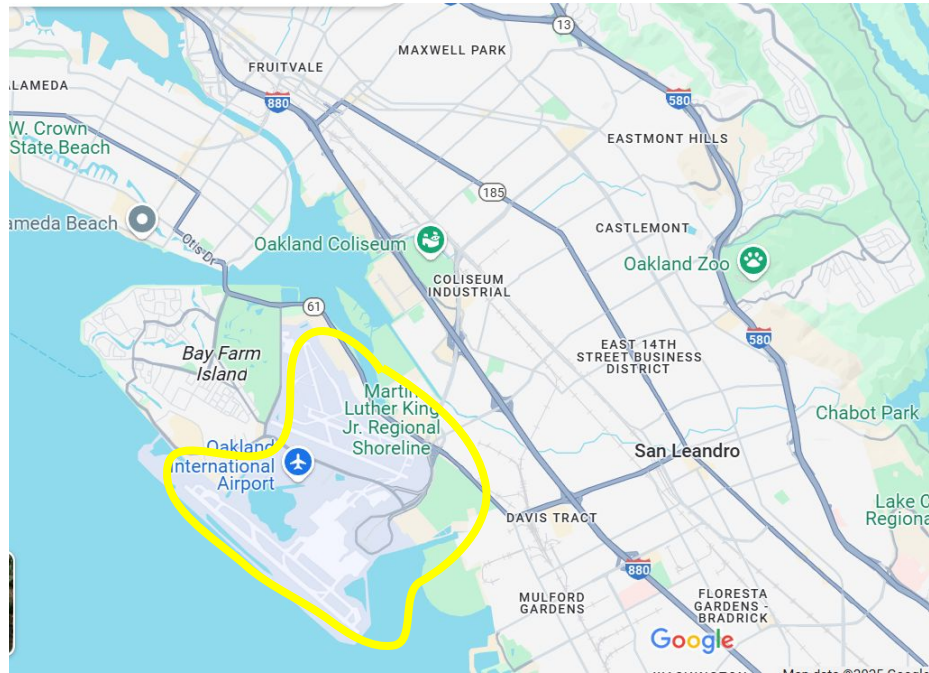
# Oakland International Airport (OAK) Emissions

Carly Cabral, CBE  
Stephen Reid, Air District

# Goals for Airport Presentation

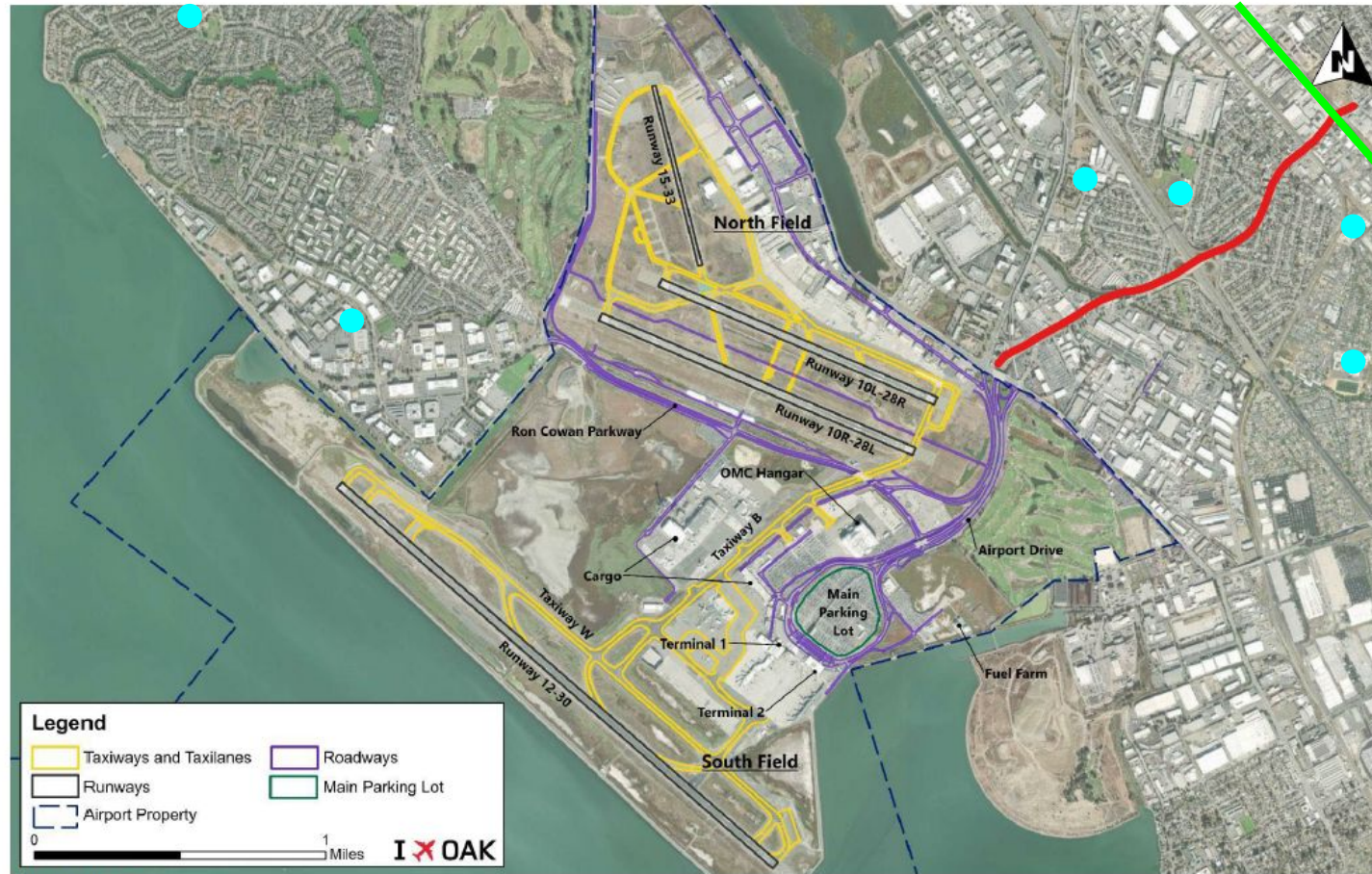
- Provide information to CSC members on airport-related pollution to better understand a large source of emissions in East Oakland.
- Empower CSC members to collaborate on strategies/actions to address airport-related pollution.
- Answer CSC member questions about airport-related pollution and operations.

# OAK Airport Background



- The airport is owned and operated by the Port of Oakland; governed by Port Commission
- Tenant companies operate at the airport:
  - Passenger Airlines (Southwest is the majority of flights)
  - Commercial Cargo Shipping (UPS and FedEx)
  - Private Aviation (smaller private planes)
  - Ground support operators
  - Businesses in the terminals (shops, restaurants)

FIGURE 2-2  
EXISTING FACILITIES AT OAK



98th Ave

San Leandro St.

School

Source: RS&H, 2022



# Proposed “Oakland International Airport Terminal Modernization and Development Project”

- The airport is a source of particulate matter and nitrogen oxides in East Oakland.
- Port is pursuing an expansion and modernization project that includes:
  - New terminal with up to 16 new gates
  - Expanded and relocated fuel tanks and fuel infrastructure
  - Expanded utility plant and more diesel backup generators
  - Expanded parking (more than 1000 new spaces)
  - Remediation and demolition of many facilities

# Airport Emission Sources

There are 4 major categories of airport-related emissions:

## Aircraft



## Ground Access Vehicles



## Ground Support Equipment



## Stationary Sources



# Airport Emission Sources- Details (1)

## **Aircraft**



Passenger and cargo planes burn jet fuel. Emissions are modeled to include startup, taxiing, climbing and descent below “mixing height” (a height above which aviation emissions do not impact ground level concentrations) and auxiliary power unit emissions (small engines built-in to planes used to power limited functions of planes while parked on the ground).

## **Ground Access Vehicles**



On-road vehicles (cars and trucks) associated with passengers, air cargo, airport tenant business operations, and employees’ travel to and from the airport.

## Airport Emission Sources- Details (2)

### Ground Support Equipment



Baggage carts and tractors, belt loaders, aircraft pushback tractors, catering trucks, lavatory trucks, and other off-road equipment needed to service planes on the ground.

### Stationary Sources

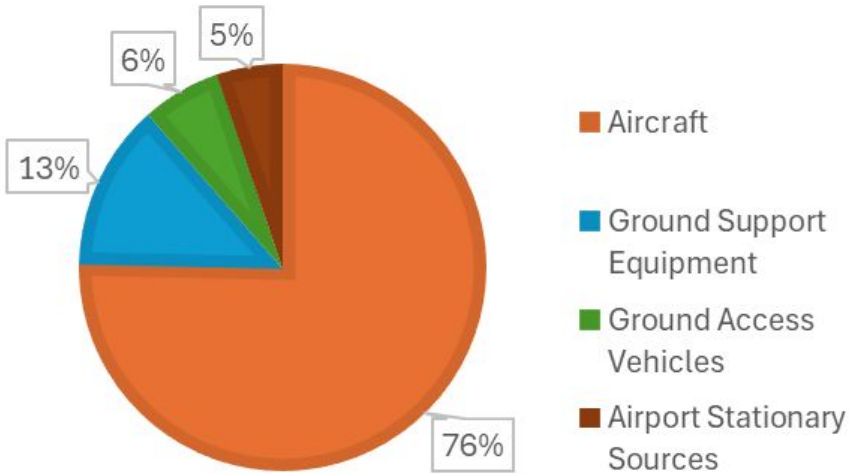


Airport terminal and facility heating (boilers), backup generators, above ground fuel storage tanks, and fuel dispensing.

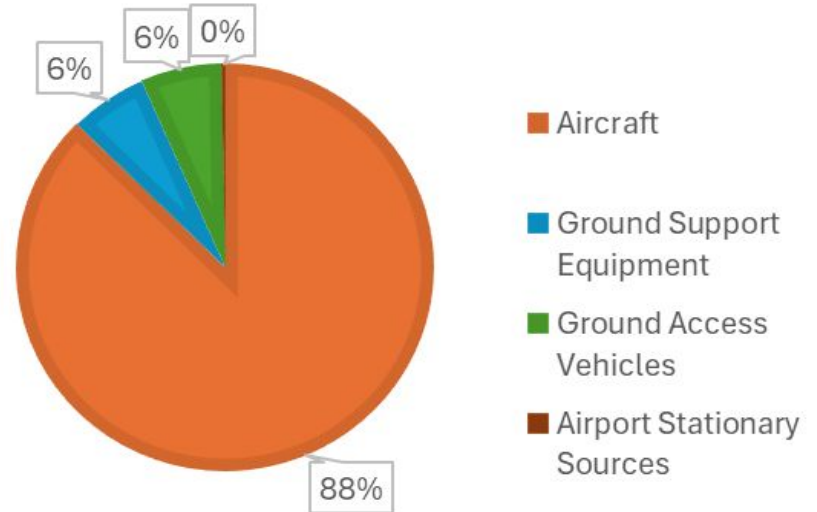
# Comparing Airport-Related Emission Sources

Aircraft emissions from jet fuel combustion contribute the most pollution of Oakland Airport-related sources.

### OAK Particulate Matter (PM2.5) Emissions by Source Category



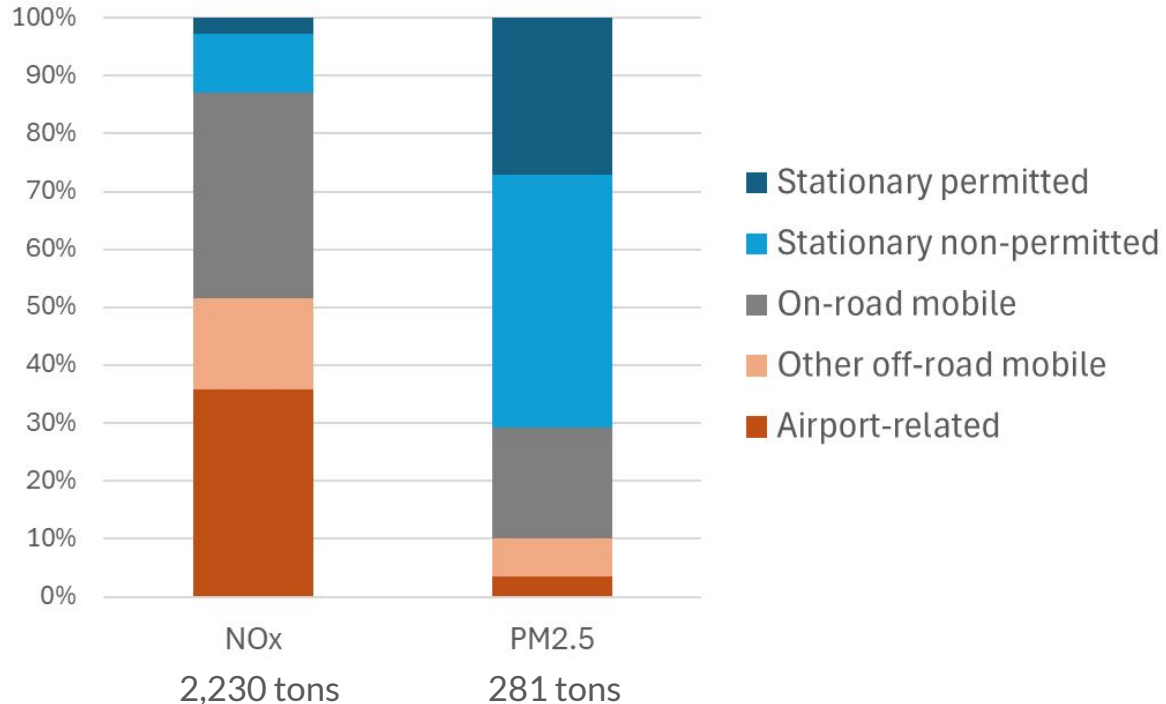
### OAK Nitrogen Oxides (NOx) Emissions by Source Category



# Airport Contribution to Local Emissions

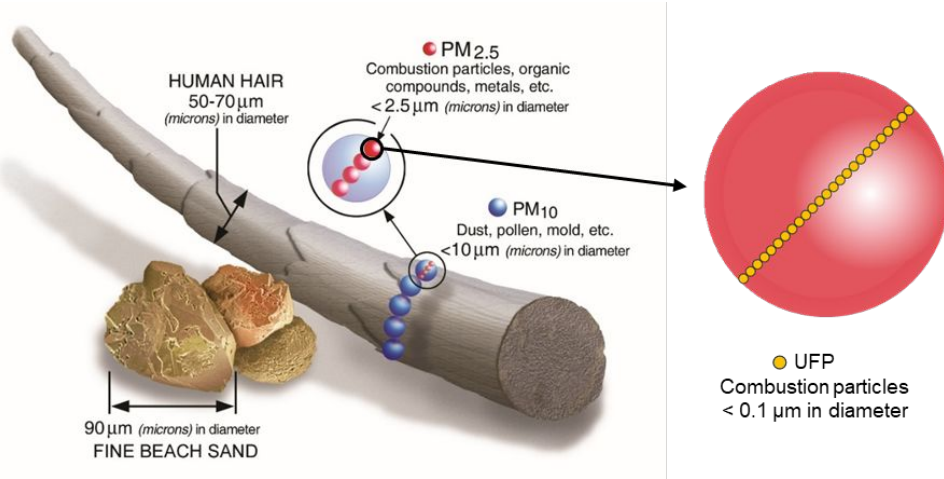
- Airport-related emissions account for 36% of total local NO<sub>x</sub> (Nitrogen Oxides) emissions in the 2021 East Oakland inventory
- Airport-related NO<sub>x</sub> emissions are comparable to total NO<sub>x</sub> emissions from local motor vehicles\*
- Airport-related sources make a small contribution (3%) to local fine particulate matter (PM<sub>2.5</sub>) emissions, which are dominated by stationary sources

2021 East Oakland Annual Emissions  
Source: 2021 Planning Inventory for East Oakland



\*Note: motor vehicles accessing the airport are not included in the airport-related emissions

# Other Key Pollutants at Airports



Ultrafine Particles (UFP) is a pollutant of particular concern

UFP includes particles with diameter smaller than 0.1 micrometer (μm). Because of their very small size, UFP can travel deeper into the lungs and bloodstream compared to larger particles

Additional pollutants: Black carbon, carbon monoxide, polycyclic aromatic hydrocarbons, lead (some small aircraft use leaded fuel)

# What are airport workers exposed to?

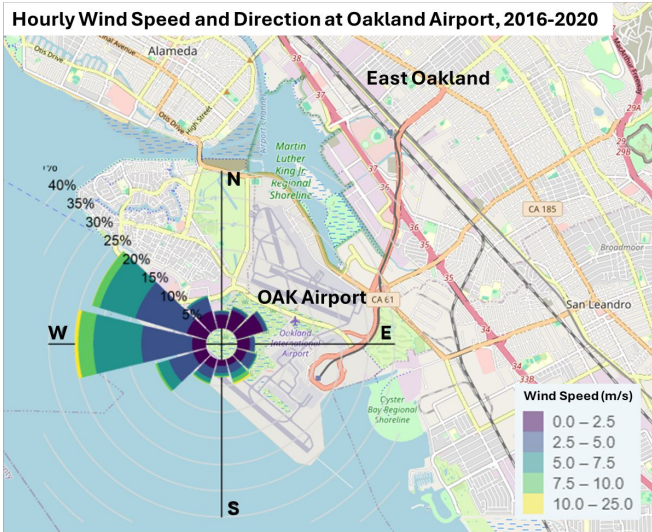


[Image Attribution: formulaone flickr](#)

- Airport pollution is most concentrated on the tarmac (outside, closest to planes and equipment) and disperses from there.
- A study of Copenhagen Airport (2021)<sup>1</sup> found baggage handlers were exposed to ultrafine particle (UFP) concentrations equivalent to a confined smoking room.



# How far do airport emissions reach?



- Short-term monitoring studies at other airports have found increases in UFP and other pollutants above typical urban levels in areas downwind of airport runways associated with takeoff and landing activity.<sup>1</sup>
- While measurements from these studies were not made in East Oakland, it is expected that similar sources exist and that the findings would be representative for airport-adjacent communities including East Oakland.
- Winds at OAK are often from the west to west-northwest, with variation by season and time of day

1. See e.g., Hudda et al., Emissions from an International Airport Increase Particle Number Concentrations 4-fold at 10 km Downwind, *Environmental Science & Technology*, 48 (12), 6628-6635 (2014); Hudda et al., Impacts of Aviation Emissions on Near-Airport Residential Air Quality, *Environmental Science & Technology*, 54 (14), 8580-8588 (2020).

# Health Concerns Related to Airport Operations

- Communities near airports experience multiple sources of air pollution and environmental health stressors.
- CBE & SEIU-USWW (union representing airport workers) co-authored a report in 2024 that summarizes more scientific findings on airport pollution health impacts, see [bit.ly/OAKREPORT](https://bit.ly/OAKREPORT).

# What about alternative fuels?

- Airplanes are hard to transition to reduced/zero emissions technology.
- Hydrogen and electric planes: experts do not expect to be viable until after 2050.<sup>1</sup>

## “Sustainable Aviation Fuel” or “SAF”

- Produced from a variety of feedstocks including plant fuel crops and waste materials.
- Emissions of NO<sub>x</sub> and air toxics approximately equal to fossil jet fuel emissions.<sup>2</sup>
- Reduced carbon dioxide (CO<sub>2</sub>) emissions compared to fossil jet fuel, but some SAFs have very concerning environmental and social impacts (refining emissions, biodiversity loss, rising food prices and water scarcity).<sup>3</sup>
- SAF produced in 2023 met only 0.2% of global jet fuel demand and ability to scale up is limited.<sup>4</sup> Port reports currently 5% of total jet fuel at OAK is SAF.

1. International Energy Agency, Net Zero by 2050: A Roadmap for the Global Energy Sector (2021)

<https://iea.blob.core.windows.net/assets/0716bb9a-6138-4918-8023-cb24caa47794/NetZeroBy2050-ARoadmapfortheGlobalEnergySector.pdf>.

2. Gladstein, Neandross & Associates, Sustainable Aviation Fuel: Greenhouse Gas Reductions from Bay Area Commercial Aircraft, BAAQMD (Oct. 2020),

<https://www.baaqmd.gov/~/media/files/planning-andresearch/research-and-modeling/saf-report-final-for-distribution-to-baaqmd-pdf.pdf?la=en>.

3. Fleming et al., The Biofuels Myth: Why ‘Sustainable Aviation Fuels’ Won’t Power Climate-Safe Air Travel, Center for Biological Diversity (Aug. 2022)

[https://biologicaldiversity.org/programs/climate\\_law\\_institute/pdfs/2022\\_The\\_Biofuels\\_Myth\\_Center\\_for\\_Biological\\_Diversity.pdf](https://biologicaldiversity.org/programs/climate_law_institute/pdfs/2022_The_Biofuels_Myth_Center_for_Biological_Diversity.pdf).

4. Net zero 2050: sustainable aviation fuels, IATA (May 2024), <https://www.iata.org/en/iata-repository/pressroom/fact-sheets/fact-sheet-sustainable-aviation-fuels/>.

# Examples of current progress addressing airport emissions:

## Laws and Regulations

- CARB has begun scoping airport regulations, goal to propose rule(s) by 2027 and implement by 2030
- California law banning sale and distribution of leaded aviation gas goes into effect 2031
- Various vehicle and equipment standards set by CARB

## Voluntary Programs

- Port of Oakland has installed electrical infrastructure to allow tenants to use electric ground support equipment (eGSE) and ground power
- Los Angeles airports have committed to zero emissions ground support equipment for all commercially available equipment by 2033

# QUESTIONS AND ANSWERS



# We want to hear from you! Activity Overview

- We will have 3 breakout rooms (2 online and 1 in-person), focused on **OAK Airport Example Actions**. Each group will focus on actions under the following community concerns:
  - Emissions Reductions at the Oakland Airport
  - Port of Oakland Collaboration & Accountability to Community
  - Technical Analysis & Monitoring of Airport Air Quality & Community Health Impacts
- CSC members will join a group discussion led by a facilitator. Each breakout room will also have a notetaker and support staff.
- CSC members can share your feedback through group discussion, Zoom chat, or using Google Docs.
- Facilitators will provide a brief report back.

# Activity Instructions

CSC members will review the **OAK Airport** Example Actions and discuss the following questions:

- What resonates with you about these actions?
- What is something that we have not addressed through these actions?

A large teal shape that starts as a triangle at the top right and tapers to a thin line at the bottom right, covering the right side of the slide.

# Report Back: Key Takeaways

A vertical teal line on the left side of the slide, positioned to the left of the main title.



# Next Steps

1. The example action documents will remain open for comment for a week until **5pm on Thursday, March 20th**. Links will be added to the chat and emailed out.
2. The Transportation & Mobile Sources team will work to incorporate your feedback.



**BREAK!**

# Commercial & Industrial Draft Strategies and Actions - Part 1

Alicia Parker and Eric Lara, Bay Area Air District

# Overview

The Commercial & Industrial Focus Area will be presented in two parts:

- Part 1 (tonight) includes draft strategies and actions for controlling fugitive dust and reduced reliance on backup generators
- Part 2 (April CSC meeting) includes draft strategies and actions related to health risk assessments, improved permitting, enhanced enforcement, and small commercial and industrial sources

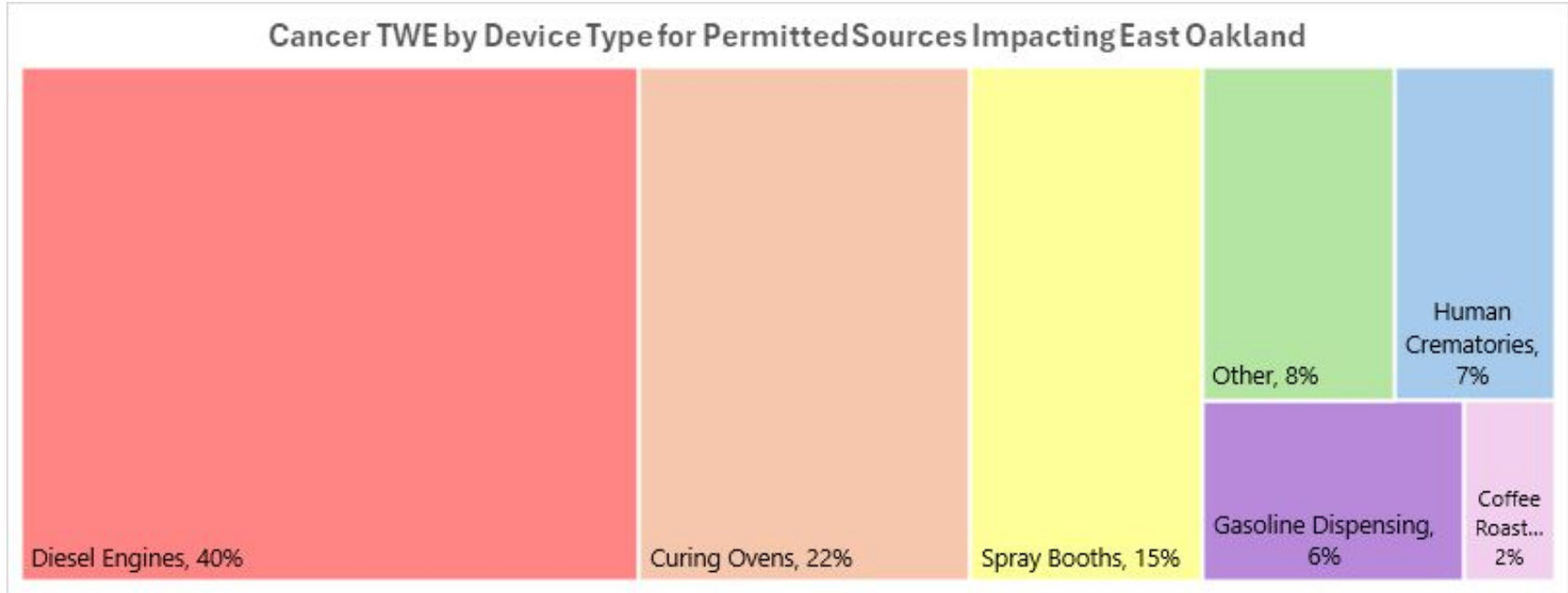
# Backup Generators

Backup generators (BUGs) are in widespread use across numerous facilities and can be significant emission sources when considered collectively, even though individually their emissions may be relatively small.

This is especially true when considering cancer Toxicity Weighted Emissions (TWE) for permitted sources, for which backup generators and other diesel engines are a key source.

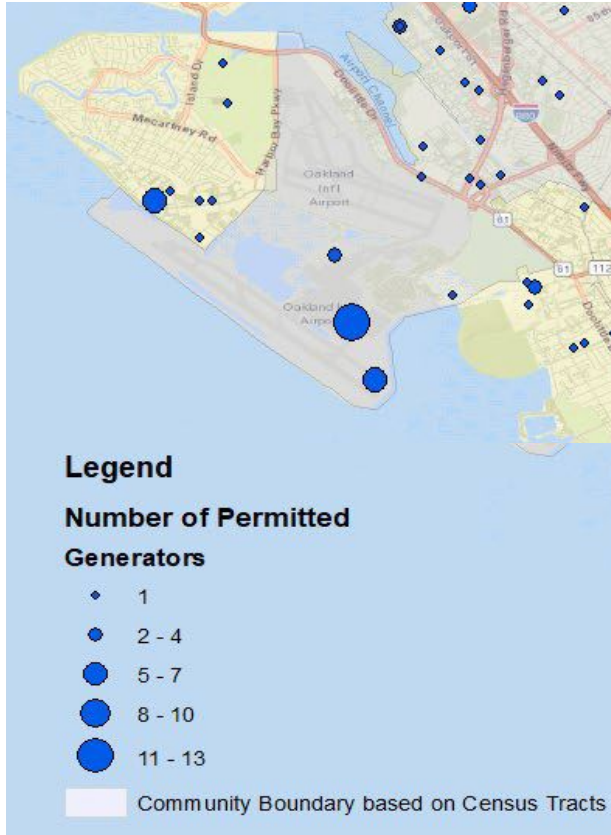
Toxicity Weights  
relative measures of  
potential hazard posed  
by chemicals

# Backup Generators



Diesel engines account for 40% of cancer TWE from permitted sources in East Oakland.

# Backup Generators



Example of a generator used at an airport.

Source: East Oakland Emissions Inventory: A Closer Look at Permitted Sources, Figure 6

OAK has a concentration of BUGs; BUGs are found throughout E. Oakland

Source: East Oakland Emissions Inventory: A Closer Look at Permitted Sources, Figure 5

# Fugitive Dust

- Background and Context
- Sources and Case Studies
- Regulatory Overview
- Rule Amendment Concepts
- Discussion and Next Steps



# Particulate Matter (PM) Background

PM<sub>10</sub> is a type of air pollution made up of tiny particles that can be inhaled into the lungs, potentially causing health problems, especially for those with breathing issues.



Source: <https://compliance-assurance.com/veo-course-opacity.php>



# Sources of Fugitive Dust



---

Bulk Material Handling Sites

---

Disturbed Surface Sites

---

Construction Projects

---

Earth Moving Activities

---

Paved and Unpaved Roads

# Activities of Concern



- Fugitive dust is often episodic and caused by mechanical or wind driven events
- Chemical composition of fugitive dust may vary depending on the source or activity

Material  
handling

Material  
storage

Material  
processing

Material  
disturbance

Material  
transfer

Material  
trackout

# Case Study: Gallagher & Burk Inc.

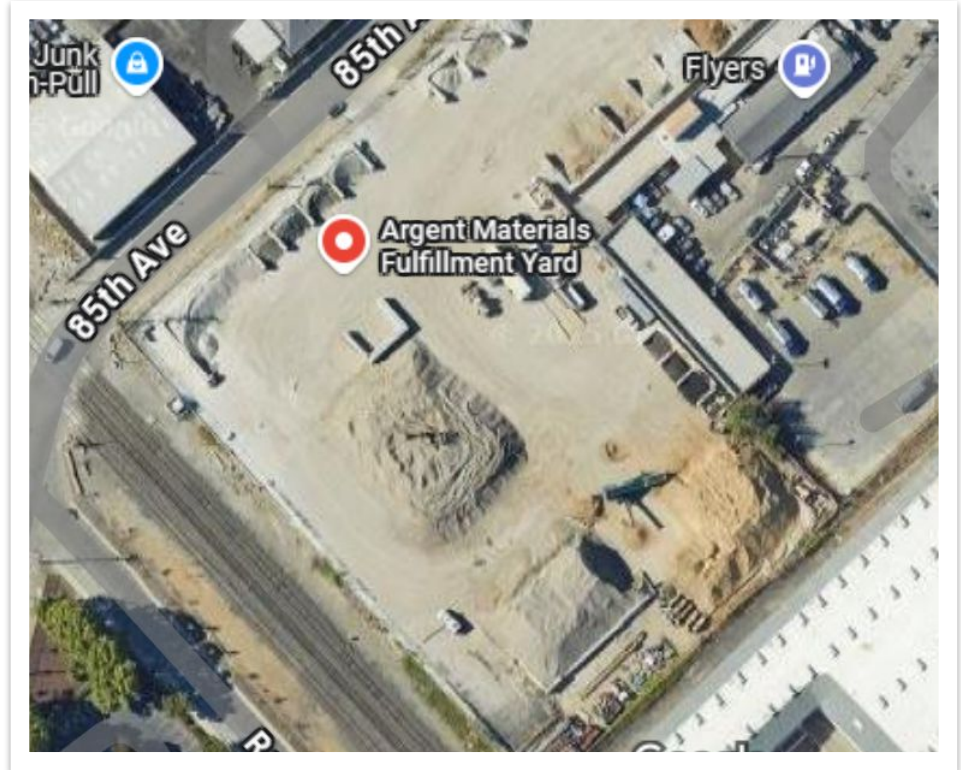
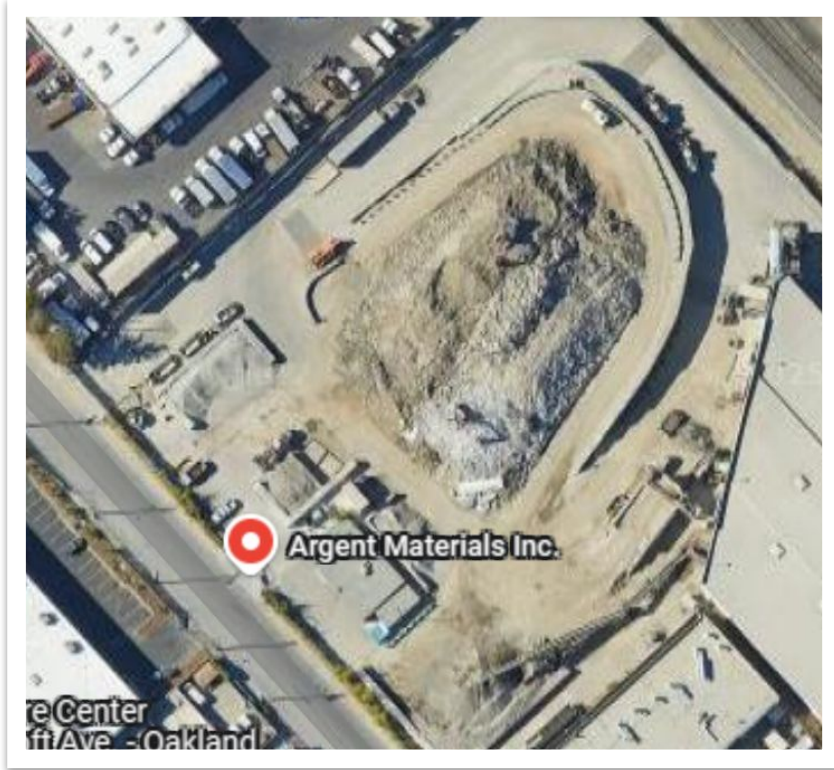


## Typical Site Considerations:

- Unpaved roads onsite
- Trackout onto paved roads
- Bulk stockpiles creating dust
- Windblown dust
- Materials close to the fenceline
- Heavy equipment operations
- Vehicle traffic on and offsite
- Material transfer points



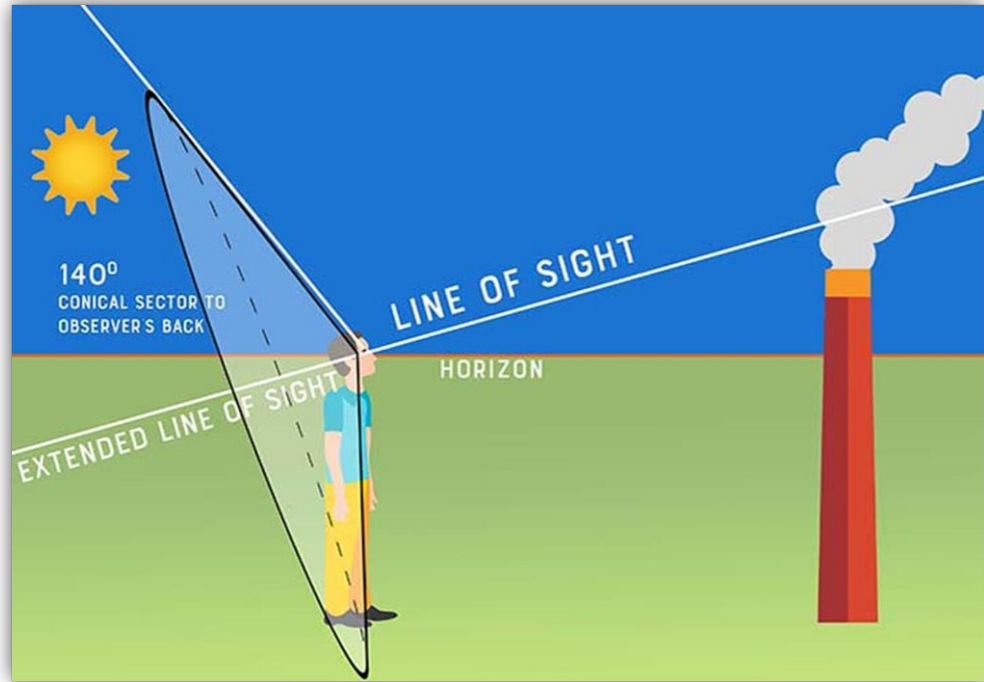
# Case Study: Argent Materials Inc.



# Air District Rules 6-1 and 6-6

Current Requirements Specific to Fugitive Dust:

- **Rule 6-1: General Requirements**
  - Standardized opacity test methods for visible emissions
  - Bulk material handling requirements
- **Rule 6-6: Prohibition of Trackout**  
(Adopted 2018)
  - Minimization measures to reduce trackout
  - Prohibition of visible emissions during clean up of trackout



Source: <https://compliance-assurance.com/veo-course-positions.php>

# Recap of White Paper

## Impetus:

WOCAP and PTCA measures identified fugitive dust for further study

Advisory Council prioritization in PM Reduction Strategy Report

## Goals:

Identify and explore opportunities to reduce localized PM emissions, increase compliance, and improve practical enforceability of requirements

## Methods:

Holistic review and gap analysis of rules in other air districts and states

Knowledge assessment of current best strategies to address fugitive dust

# White Paper Findings

Dust Control  
Plans and  
registration  
requirements

Improve trackout  
guidelines and  
requirements

Moisture content  
and stabilization  
testing of  
stockpiles

General Best  
Management  
Practices  
(BMPs)

Control  
strategies during  
high winds

Large roadway  
and construction  
projects  
requirements

Expand property  
line requirement  
at all sites

Improve  
permitting  
requirements



# Key Perspectives Heard

Public comments received and/or meetings held with:

- Association of Environmental Professionals (AEP)
- Spruce Road Coalition (Neighborhood Group)
- West Oakland Environmental Indicators Project
- California Council for Environmental and Economic Balance
- Richmond, North Richmond & San Pablo Co-Lead
- October 2024 Stationary Source Board Meeting
- East Oakland Community Steering Committee (*this meeting*)

# Key Perspectives Heard (Cont.)

Community Perspectives	Implementation Considerations	Environmental & Regulatory Alignment
<ul style="list-style-type: none"><li>• Increased street sweeping can lead to cleaner streets</li><li>• Concerns about a lack of enforcement and oversight</li><li>• Unpermitted sites operate without requirements</li></ul>	<ul style="list-style-type: none"><li>• Controls may be too costly</li><li>• May require additional staff time, planning, and resources</li><li>• Could increase administrative burden</li></ul>	<ul style="list-style-type: none"><li>• Potentially significant impact on water resources</li><li>• Ensuring consistency with existing city/county requirements is critical for successful implementation</li></ul>

# Next Steps



# QUESTIONS AND ANSWERS



# Closer Look at Draft Actions for Review

**Strategy Name** — **Strategy 1.** Reduce exposure from fugitive dust, material handling and construction activities

**Strategy Objective** — **Strategy Objective:** Exposure from sources of fugitive dust, including from materials handling, recycling, disposal, and construction activities is minimized...

**Action #** — 

#	Action	Timeline
---	--------	----------

**Draft Action** — 

1.1	<b>Rule amendments to address fugitive dust:</b> Air District will develop and propose rule amendments, as recommended in the Air District's Fugitive Dust White Paper...	
-----	---	--

**Lead Agency** — **Lead:** Air District

Anticipated implementation timeline

There is a comment box under each action to record the CSC's thoughts and feedback

# We want to hear from you! Activity Overview

- We will have 3 breakout rooms focused on **Commercial and Industrial actions**.
- CSC members will join a group discussion led by a facilitator. Each breakout room will also have a notetaker and support staff.
- CSC members can share your feedback through group discussion, Zoom chat, or using Google Docs.
- Facilitators will provide a brief report back.

# Activity Instructions

CSC members will review the **Commercial & Industrial** Draft Actions and discuss the following questions:

- What resonates with you about these actions?
- What is something that we have not addressed through these actions?

A large teal triangle pointing downwards from the top right corner of the slide, serving as a background element.

# Report Back: Key Takeaways

A vertical teal line on the left side of the slide, positioned to the left of the main title.



# C&I Part 2 in April

Some of the background and context for Part 2 of the C&I strategies was presented at previous CSC meetings.

To maximize time to review draft strategies and actions in small groups, we propose: **CSC members review previous CSC meetings where Air District permitting and enforcement processes were described**; Air District to provide links to slides and video recordings of specific meetings.



# THANK YOU



# FEEDBACK ON MEETING & NEXT STEPS

Fill out the post-meeting survey:

- English:  
<https://forms.gle/B2SYLBNg6aUorF5u6>
- Spanish:  
<https://forms.gle/Du8m9thM85jyCy7p7>

The next CSC meeting will be held  
**Thursday April 10, 2025.**

