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**Ada E MÃ¡rquez Comments - CEQA Comment Letter Appendix A
Ref (4 of 8)**

Additional submitted attachment is included below.

Eligible Projects

On-road Vehicles

\$32.0M

On-road Vehicles

Cars & Charging Stations



Trucks



Buses





Eligible Projects

Off-road Vehicles & Equipment

\$44.4M

Off-road
Vehicles
And
Equipment

**Cargo
Equipment**



**Ag
Equipment**



**Marine &
Locomotive**



**Other
Off-road**



Eligible Projects

Trip Reduction

Shuttles & Ridesharing



Pilot Services

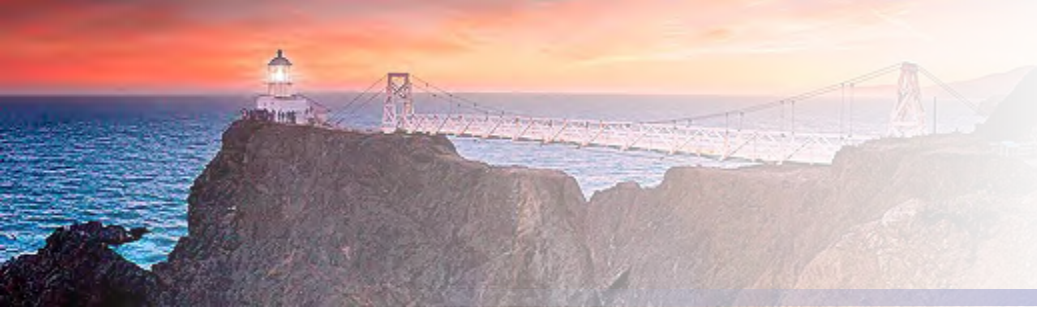


Bicycle Projects



\$6.2M

Trip Reduction



Eligible Projects Other & Passthrough

**Lawn &
Garden**



**Wood
Smoke**



**Climate
Protection**



**County
Programs**



\$5.1M

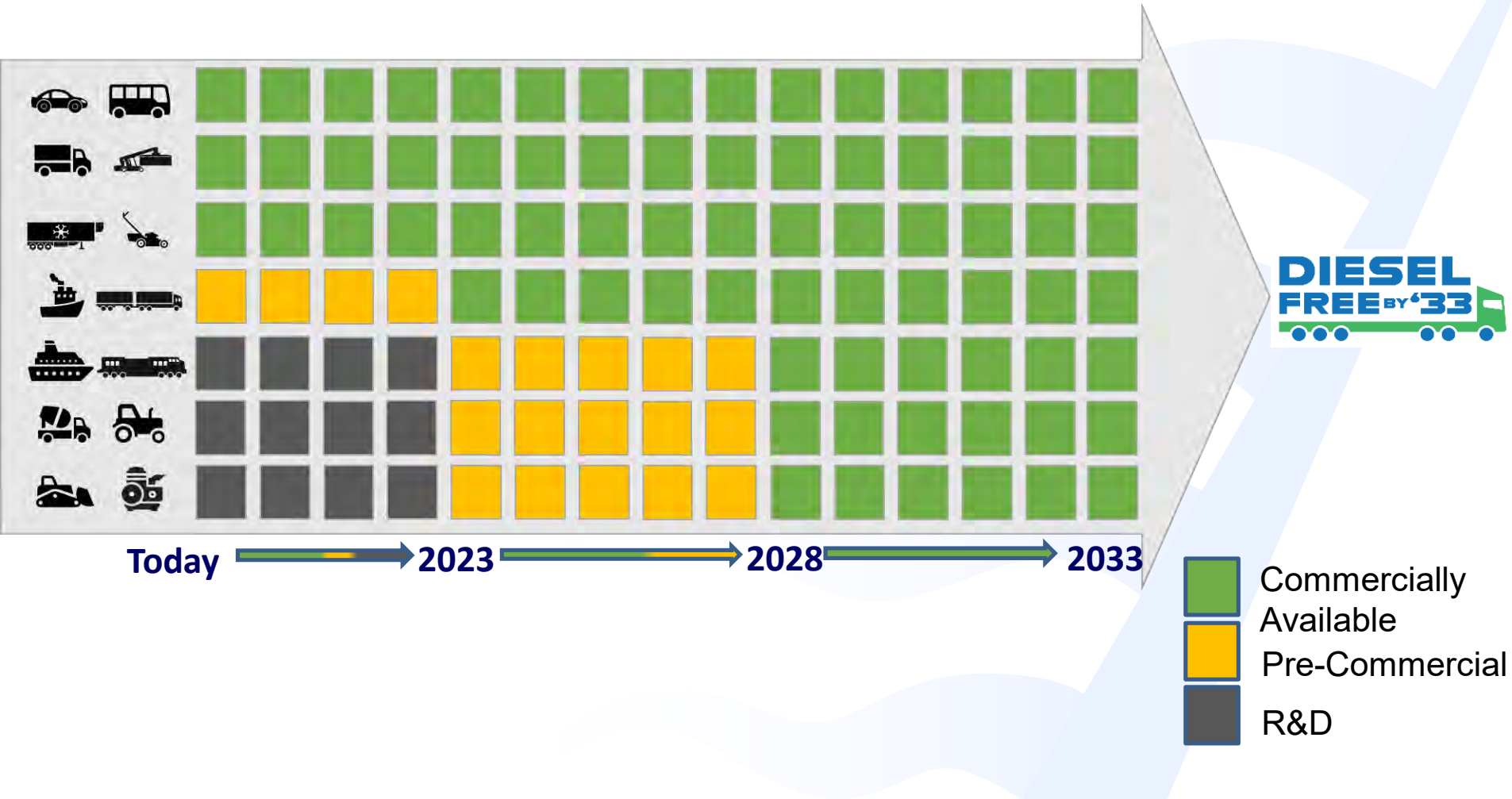
Other

\$9.5M

Passthrough

Supporting Air District Initiatives

Path to Diesel Free by '33



Supporting Air District Initiatives

Bay Area Electric Vehicle Trends & Goals

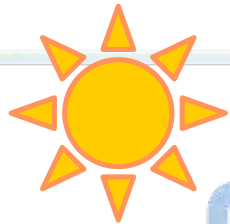
 7,750 public charging ports

Over \$15M invested to date

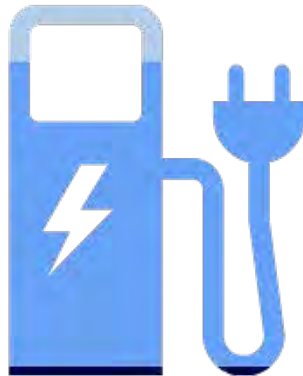
3% of the cars are EVs



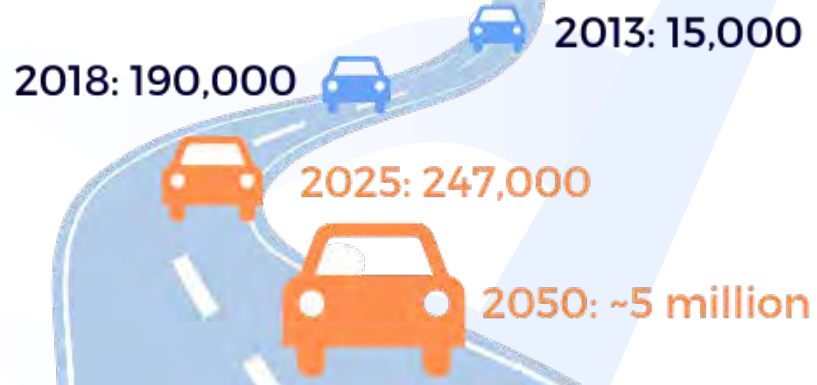
10+ EV Incentive Programs



~25% of funded stations included renewables



Progress towards our EV Adoption Goals



Supporting Air District Initiatives

Advanced Technology Demonstrations

\$2.9M to deploy 11 electric trucks & haulers for commercial delivery service



\$3M to deploy hydrogen-powered ferry for passenger service



Supporting Air District Initiatives

Early Emissions Reductions at Port of Oakland

Equipment Type	*DPM Inventory (tons)	
	2005	2017
Oceangoing Vessels	208.5	42.2
Harbor Craft	13.4	6.1
Cargo Handling Equipment	21.2	1.6
Trucks	15.9	0.3
Locomotives	2.0	0.3
Other	--	0.3
Total	261	51

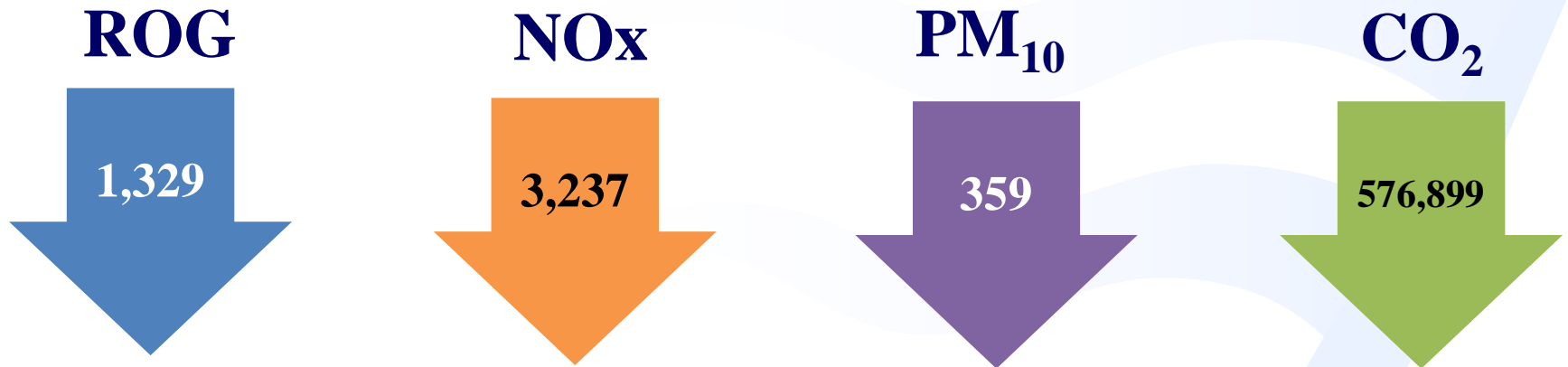
>\$100M in grants invested at Port of Oakland including:

- Retrofitted/replaced <1,900 drayage trucks
- Installed shorepower at 14 berths
- Replaced >1,090 on-road trucks

*Diesel Particulate Matter

Results and Highlights

Regionwide Cumulative Emissions Reduced (tons) Since 2015



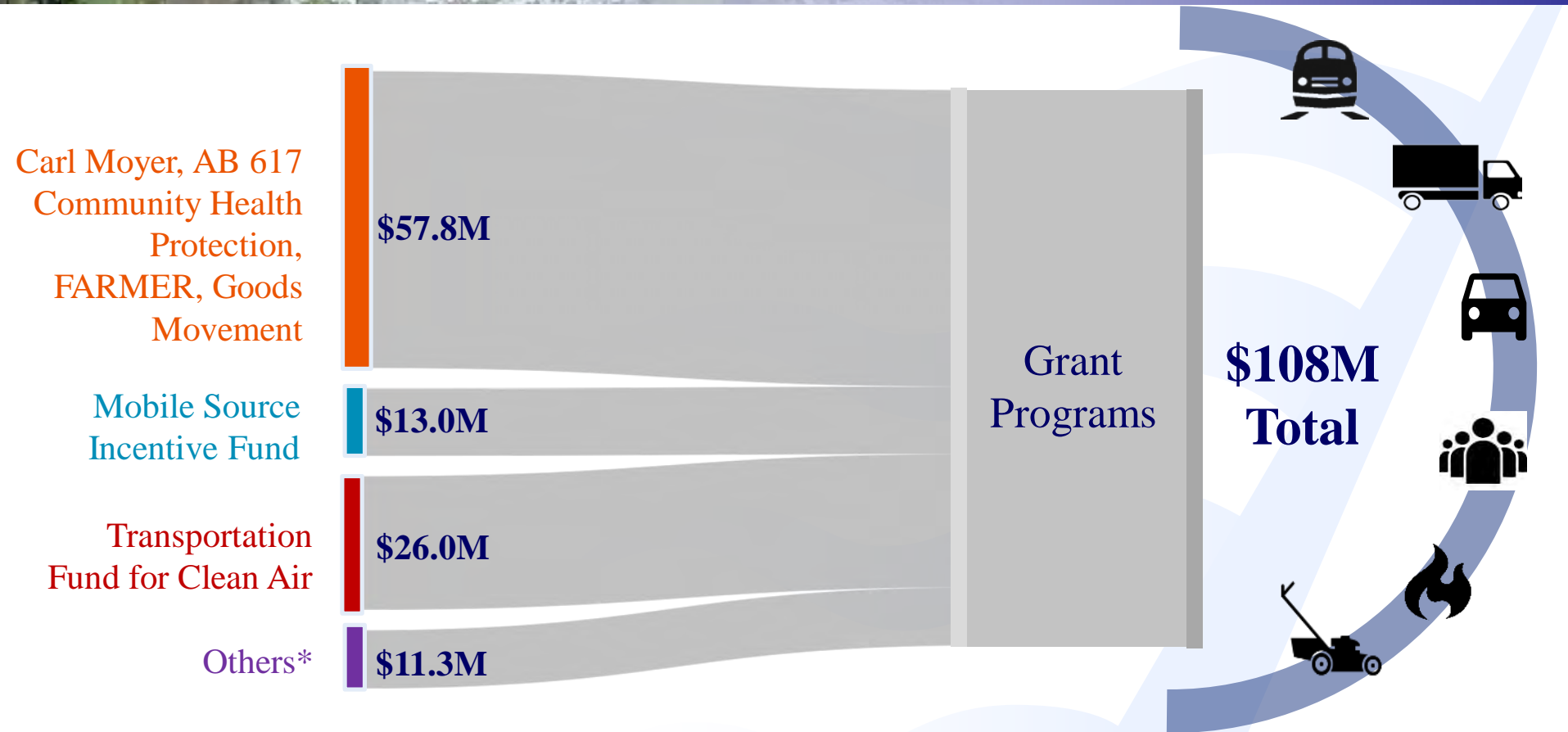
Highlights 2015 - 2019

- 1,000+ EV charging stations
- ~40 miles of bikeways
- 1,200+ woodstoves and fireplaces
- >100 ZE transit and school buses

**53% of funds
in CARE areas**

Next Steps

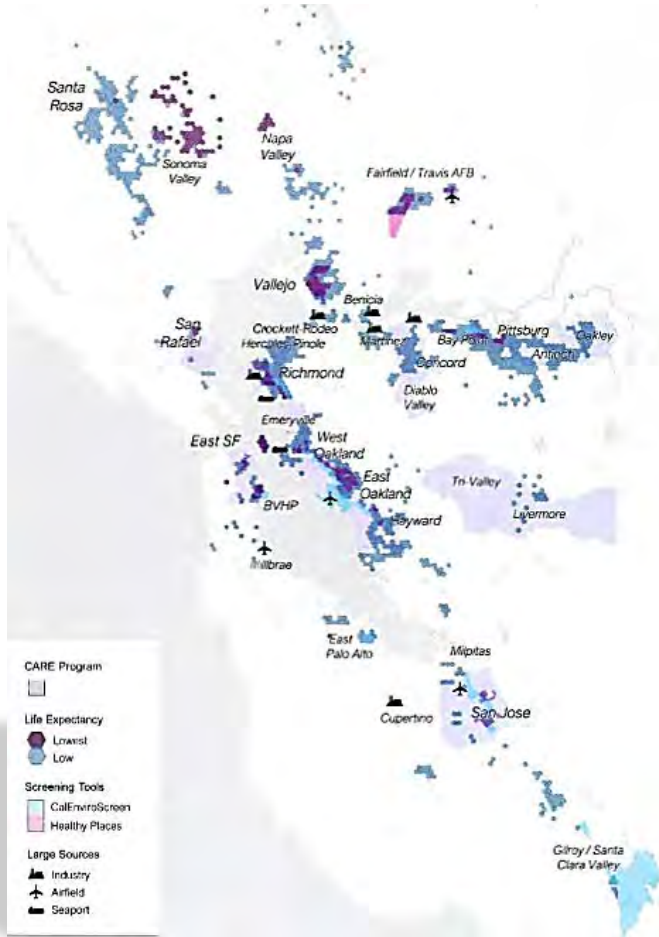
Incentive Revenues for 2020 (in millions)



* Others include Clean Cars for All and Climate Tech Finance (loan guarantee)

Next Steps

New & Expanded Grant Programs



- Secure new sources of funding
- Expand eligibility and initiate new programs
 - Expediting public health benefits in disproportionately impacted areas
 - Prioritizing programs that provide co-benefits

Particulate Matter Exposure CARB Health Research and Rule

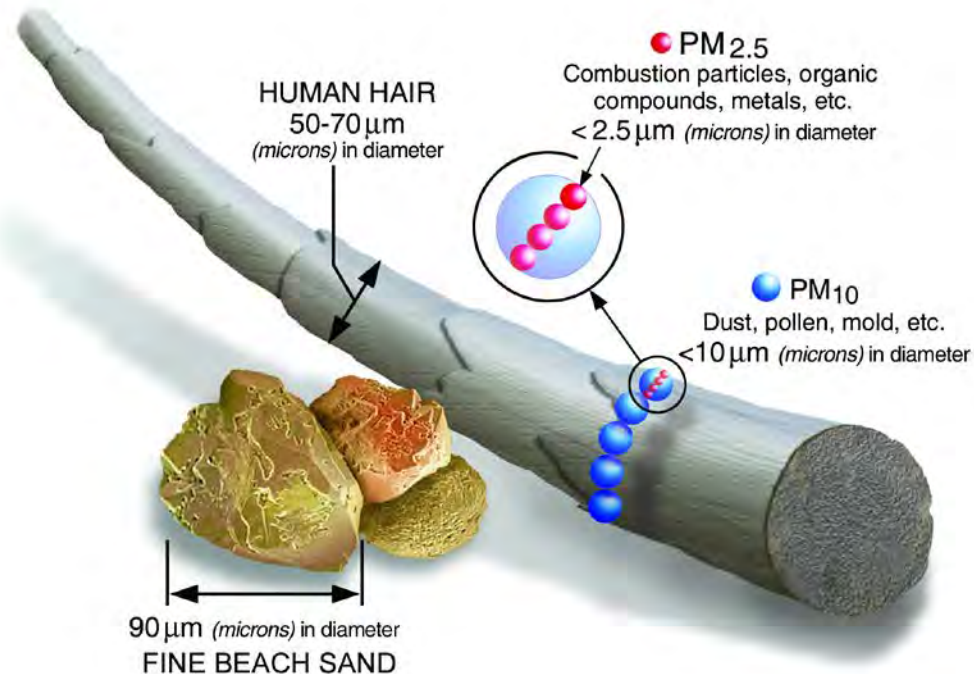
Álvaro Alvarado
California Air Resources Board
December 9, 2019

PM Exposure is an Important Public Health Concern

- Why are we concerned about PM?
 - Lots of evidence for health impacts
- If PM_{2.5} ↓ to background levels, could prevent (annually) about:
 - 7,200 premature deaths
 - 1,900 hospitalizations
 - 5,200 emergency room visits

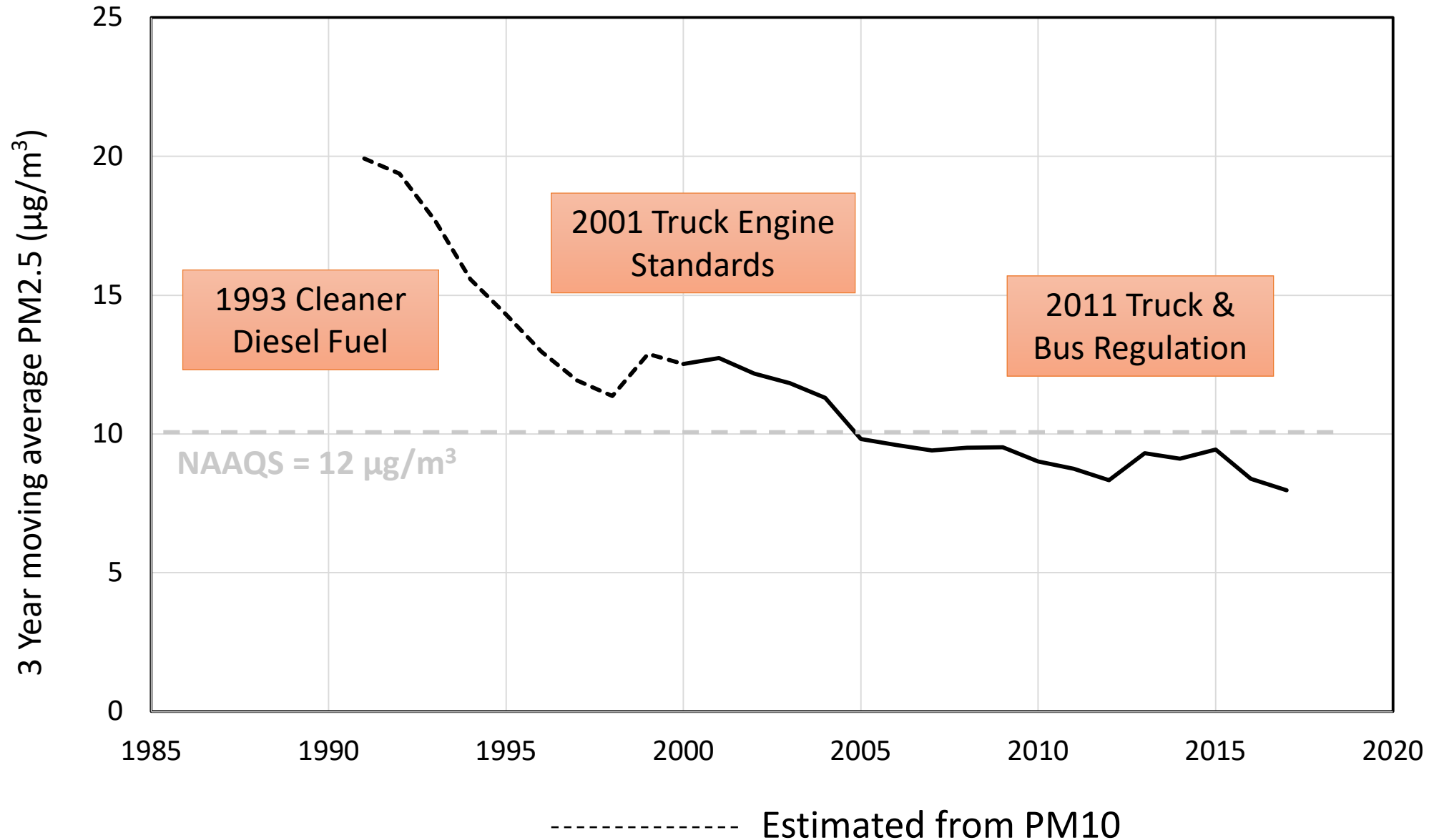


But That's Not All – Additional Evidence of PM's Negative Health Impacts



- Strong evidence for increased:
 - Asthma attacks
 - Respiratory symptoms
- Probable association with:
 - Work loss days
 - Restricted activity days
 - Adverse brain effects

PM2.5 Trend in the San Francisco Bay Area Air Basin

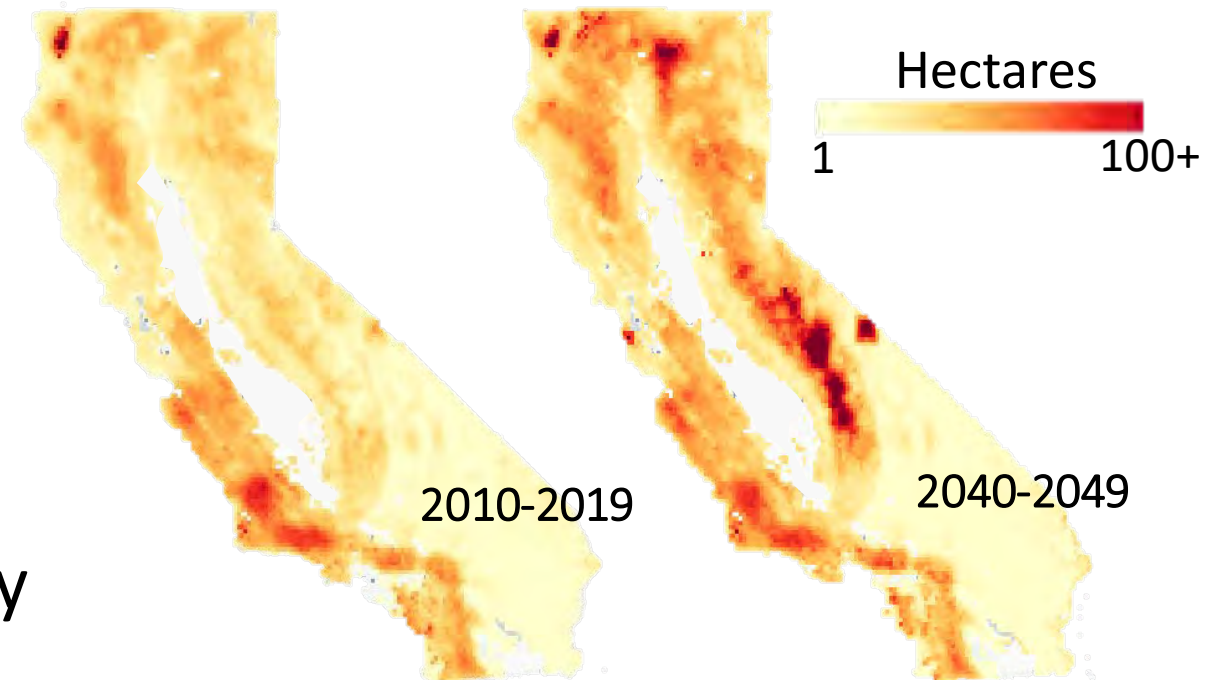


CARB's Current Efforts and New Challenges

Wildfire-related PM Exposures

- Millions of Californians exposed to wildfires in 2018
- Wildfires: more frequent & intense with climate change
- Little known about health impacts
 - PM emitted during fire; post-fire ash
 - More structure/vehicle fires
- Particular concern: children & elderly

Forecast Average Annual Area Burned



Source: CalAdapt.org

CARB Research: Wildfire Health Impacts in Rhesus Macaques

- Infant monkeys in outside enclosures unintentionally exposed to wildfire smoke (Miller, UC Davis)
- As adolescents & young adults:
 - Impaired immune function
 - Changes in lung structure
 - Reduced lung function
 - Changes passed to next generation



© CNPRC, UC Davis

CARB Research, in progress: Wildfire Emissions



- Understanding and mitigating wildfire risks (Goldstein, UC Berkeley)
 - Mobile measurements (in-house research with UC Berkeley & UC Riverside)
- NASA aircraft: investigating wildfire emissions & downwind air quality (Blake, UC Irvine)

PM from Brake & Tire Wear



BRAKE WEAR

- Successful reduction of regional PM from vehicle exhaust
- Vehicle tailpipe emissions most important regionally
- Non-tailpipe emissions may have localized importance
- Uncertainties in emissions & health impacts



TIRE/ROAD WEAR

CARB Research, in progress: Brake & Tire Wear

- Quantifying brake & tire wear emissions (Kishan, Eastern Research Group)
- Examining real-world brake & tire emissions and exposure to downwind communities (Jung, UC Riverside)
- In-house laboratory research projects
- Understanding potential health impacts (Jerrett, UCLA)



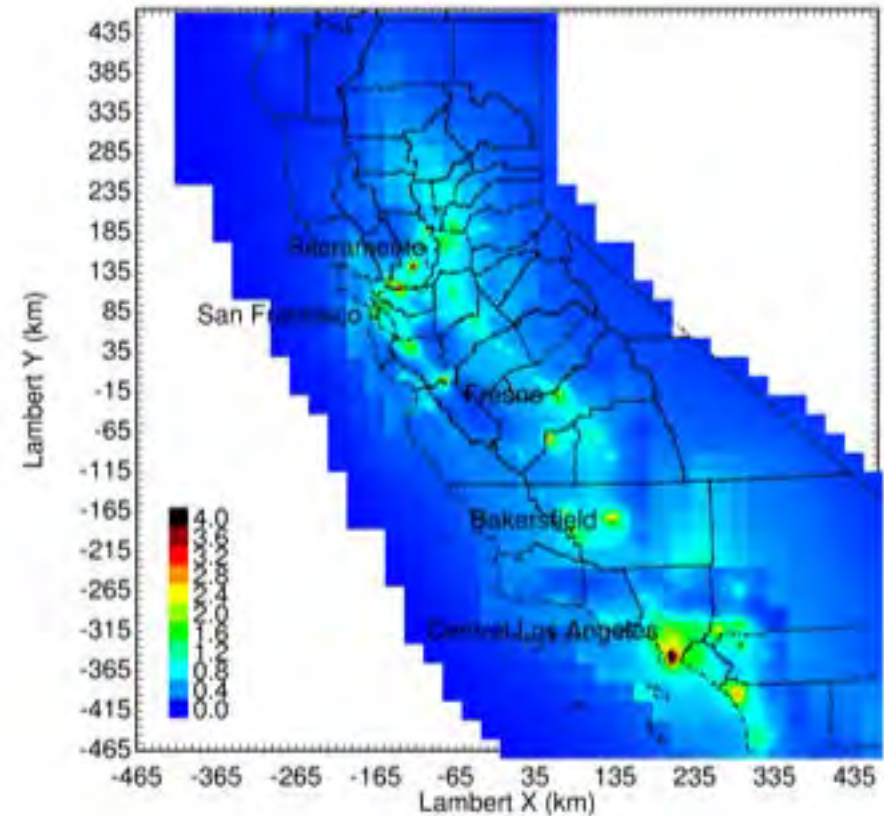
Health Risk from Ultrafine PM (UFPM)

- Potential exposure risks:
 - High numbers & chemicals attach to surface
 - Once inhaled, can go deep into lung
 - Can enter bloodstream, travel to organs
 - UFPM highly variable (space & time)
 - Sparse historical data

CARB Research: Health Effects of UFPM

- Monitoring, modeling, and health impacts of UFPM (Kleeman, UC Davis)
- Preliminary results suggest increased risk of premature death with higher exposure

Ultrafine Mass Concentration



CARB Research, in progress: Short-term PM Exposure

- White paper: reviewing short-term PM exposure impacts (Kleinman, UC Irvine; in progress)
- Air monitoring in AB 617 communities
 - Localized pollutant exposures
- Determine if need to address short-term exposures



Statewide Mobile Source Strategies Overview

Heavy Duty Trucks



Warehouses



Passenger Cars



Trains



Heavy Duty Trucks

- Advanced Clean Trucks regulation
- Heavy-duty vehicle inspection and maintenance
- Innovative Clean Transport
- Airport Shuttles
- Low NOx Omnibus Rule



Warehouses

- Freight Handbook
- Transport refrigeration unit regulations
- Drayage truck regulation amendments
- Cargo handling equipment amendment



Passenger Cars

- Advanced Clean Cars 2
- Catalytic converter theft reduction



Trains

- Reduce idling for all rail yard sources
- Potential development of regulation to reduce emissions for locomotives



Thank you



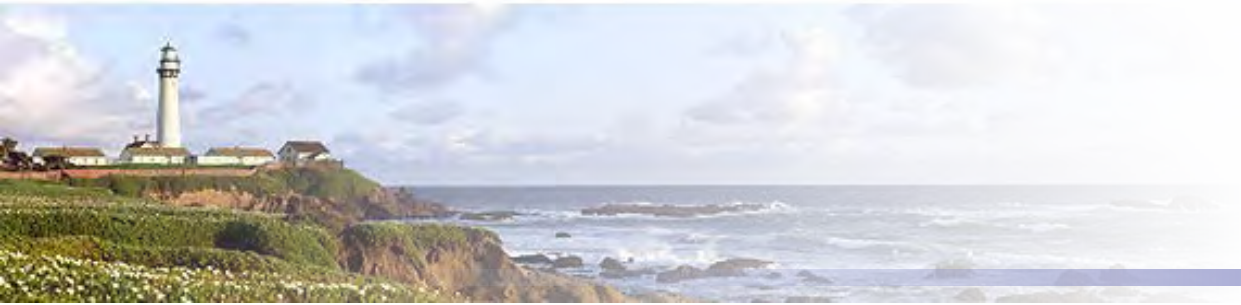
BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

Update on Particulate Matter (PM) Air District Work:

PM Rules and Regulatory Development

**Victor Douglas
Rule Development Manager**

**Advisory Council Meeting
December 9, 2019**



Overview

- Approaches to Regulate PM
- PM Rules and Regulations
- Current and Future Efforts
 - Regional attainment
 - Localized impacts
 - Gap analysis



Regulation of PM

- **Three Ways to Regulate PM:**
 1. **Originally regulated as a Nuisance**
 - Open burning (original Reg 1)
 - Dust and aerosol (original Reg 2)
 2. **Criteria (i.e., regional)**
 3. **Toxic (i.e., local/community level)**
 - Diesel PM



Regional Approach

- Attainment of ambient air quality standards
- Control of Primary PM
 - Filterable
 - Condensable
- Control of Secondary PM
 - Oxides of Nitrogen (NO_x)
 - Sulfur Dioxide (SO₂)

A photograph of a white lighthouse on a rocky cliff overlooking the ocean. The sky is blue with some clouds. The lighthouse is the central focus of the image.

PM Rules & Regulations

- Regulation 2: Permits
- Regulation 5: Open Burning
- Regulation 6: Particulate Matter
- Regulation 9: Inorganic Gaseous Pollutants
- Regulation 11: Hazardous Pollutants
- Regulation 12: Miscellaneous Standards of Performance

The background of the slide features a scenic view of the Golden Gate Bridge in San Francisco, California. The bridge's iconic orange-red towers and suspension cables are visible against a clear blue sky. In the foreground, the water of the bay is calm, and a small building is situated on the left side of the frame. The overall image is bright and clear, providing a professional and recognizable backdrop for the presentation.

PM Rulemaking Efforts

- 2012 – **Rule 2-2 amendments** to add New Source Review permitting requirements for PM_{2.5}
- 2012 – **New Rule 9-13** to reduce PM emissions from Portland cement kilns
- 2013 – **New Rule 6-4** and **new Rule 12-13** to reduce PM emissions from metal foundries and shredding facilities



PM Rulemaking Efforts

- 2015 – **Rule 6-3 amendments** to further reduce wood smoke from wood-burning devices
- 2016 – **New Rule 9-14** to reduce precursors of secondary PM from petroleum coke calcining operations
- 2018 – **New Regulation 6, new Rule 6-6, and Rule 6-1 amendments** to reduce PM emissions from fugitive dust sources
- 2019 – **Rule 6-3** to extend No Burn Days for the Wildfire Response Program



2018 PM Rules

- New Regulation 6 for common definitions and test methods
- New Rule 6-6 for prohibition of trackout
- Rule 6-1 amendments for general requirements and bulk material handling
- Reduce PM emissions from fugitive dust sources
- Expected emission reductions of 1.6 tpd PM_{10} , 0.2 tpd $PM_{2.5}$



Current and Future Efforts

- Continued **regional** efforts on further PM reductions (e.g., Rule 6-5: PM from FCCUs)
- Source categories and rule efforts identified in planning efforts
- Additional areas from gap analysis
 - Restaurants
 - Wood smoke
 - Indirect and magnet sources
 - PM as a toxic pollutant



Current and Future Efforts (cont.)

- To address **localized** PM issues
- Regulatory framework for site-specific localized PM impacts
- Existing localized approaches for toxics
 - Air District Rule 11-18 for Air Toxic Emissions from Existing Facilities
 - AB 2588 Air Toxic Hot Spots Program



Discussion

Questions?

Discussion Questions

Are current PM standards sufficiently health protective?

Are some species of PM more dangerous than others?

What is role of ultrafine particles (UFPs)?

Should form of target expand to account for more than just mass?

How should we include draft PM ISA's new "likely-causal" health endpoints (nervous system effects, cancer) and new more sensitive populations (children, lower socio-economic status)?

What are health impacts of high-concentration acute events (e.g., wildfires)? How should we compare them to day-to-day PM impacts?

Discussion Questions

What are major sources of PM in the Bay Area?

What PM levels exist in Bay Area? What health risks do they pose?

How much additional health benefit can be achieved?

How should we account for spatial scale of effects (i.e., regional versus local-scale impacts, including proximity to major sources)?

How should we determine which measures would most move public health needle?

Deliberation Questions

What is bullseye in clean air target? How clean is clean enough?

How will we know when we get to target? What metrics should we use to track progress?

How do we combine criteria pollutants and toxics? Cancer and non-cancer health endpoints?
Short- and long-term effects?

How can we make sure everyone is treated fairly?

How can we ensure that everyone breathes clean air?

What are most important actions that can be taken now? And, in future?

Discussion Questions (DRAFT)

Are current PM standards sufficiently health protective?

NOT SUFFICIENTLY PROTECTIVE; MORE STRINGENT STANDARDS NEEDED

Are some species of PM more dangerous than others?

QUITE POSSIBLY BUT NOT ENOUGH INFORMATION; NO PM COMPONENTS “EXONERATED” THOUGH

What is role of ultrafine particles (UFPs)?

NOT YET CLEAR, BUT TOX STUDIES OF CONCERN; NEED UFP FEDERAL REFERENCE METHOD; MORE MONITORING; EPI STUDIES NEEDED

Should PM “target” expand to account for more than just mass?

IN RESEARCH, ABSOLUTELY; IN REGULATION, TOO SOON, UNLESS HIGHLY RISK-AVERSE

How should we include draft PM ISA’s new “likely-causal” health endpoints (nervous system effects, cancer) and new more sensitive populations (children, lower socio-economic status)?

STRONGER EVIDENCE, NEW HEALTH EFFECTS; GROWING RECOGNITION OF “AT RISK” GROUPS (E.G., CHILDREN AND LOW SES); NEED TO CONSIDER

What are health impacts of high-concentration acute events (e.g., wildfires)? How should we compare them to day-to-day PM impacts?

NOT WELL-KNOWN SCIENTIFICALLY, BUT OF CONCERN; DATA ON SUB-DAILY EXPOSURES TOO LIMITED AS YET; POTENTIALLY SERIOUS EFFECTS REPORTED IN EARLY STUDIES; NEW STUDIES ONGOING; MORE RESEARCH NEEDED

Discussion Questions (DRAFT)

What are major sources of PM in the Bay Area?

**WEST OAKLAND: PM2.5, TOP 3 – PORT (17%), STREET (17%), HIGHWAY (16%);
DIESEL PM, TOP 3 – PORT (57%), STREET (7%), HIGHWAY (8%)**

What PM levels exist in Bay Area? What health risks do they pose?

**WEST OAKLAND: PM2.5 = 8.7 ug/m3 (ALL SOURCES, AVERAGE), LOCAL SOURCES = 1.5 to 2.2 ug/m3 (BY NEIGHBORHOOD);
DIESEL PM = 0.7 ug/m3 (AVERAGE);
HYPER-LOCAL HOT SPOTS COULD BE HIGHER**

How much additional health benefit can be achieved?

REDUCING ANNUAL PM2.5 FROM 12 ug/m3 TO 10 ug/m3 COULD REDUCE RISK BY 10-15%; THOUSANDS FEWER DEATHS IN U.S. EACH YEAR

How should we account for spatial scale of effects (i.e., regional versus local-scale impacts, including proximity to major sources)?

**SPATIAL SCALE IMPORTANT; REGIONAL- VS. LOCAL- VS. HYPER-LOCAL-SCALE IMPACTS
WEST OAKLAND: PM2.5 CONCENTRATION – OVERALL, 80% FROM REGIONAL SOURCES, 20% FROM LOCAL SOURCES;
DIESEL PM CONCENTRATION – OVERALL, 40% FROM REGIONAL SOURCES, 60% FROM LOCAL SOURCES; HYPER-LOCALIZED HOT SPOTS COULD BE HIGHER**

How should we determine which measures would most move public health needle?

NEED MORE SCIENCE, AND NEED TO ACT NOW; OPTIONS TO BE DETERMINED; DISTRICT STAFF TO IDENTIFY

Deliberation Questions (DRAFT)

What is bullseye in clean air target? How clean is clean enough?

XXX

How will we know when we get to target? What metrics should we use to track progress?

XXX

How do we combine criteria pollutants and toxics? Cancer and non-cancer health endpoints? Short- and long-term effects?

XXX

How can we make sure everyone is treated fairly?

XXX

How can we ensure that everyone breathes clean air?

XXX

What are most important actions that can be taken now? And, in future?

XXX

SUMMARY: Community Particulate Matter Discussion February 27, 2020

NOTE: A full transcript of the event is available from the stenographer. This summary aims to capture key themes in advance of the submission date for background materials for the next PM Symposium.

Overview

Community members, grassroots organization leaders, and Air District staff members met at the Bobby Bowens Center in Richmond on the evening of February 27, 2020 to gather community input on particulate matter (PM) impacts, monitoring, and regulatory efforts. The event was organized by a Design Team of community leaders with assistance from Elinor Mattern of the Air District's Community Engagement Section. Approximately 30 people attended to express their concerns regarding PM, its sources, and its health effects.

Input from community members centered on the following issues:

Localized PM data availability

- Desire for data beyond West Oakland
- Desire for real-time, continuous, publicly accessible localized monitoring
- Consolidating/sharing community-collected data (e.g. PurpleAir)

Toxicity of different PM species

- Concerns regarding severity of problems from refineries and other permitted sources (e.g. cement plant, concrete crushers, metal processing facilities)
- Skepticism regarding wood burning as a major driver of health impacts

Lack of observable results from prior rulemaking

- 2017 Clean Air Plan
- Crude slate inventory
- General enforceability issues

Potential for problems to worsen

- Issuance of new permits
- Emerging indoor air concerns (e.g. vapor intrusion) beyond the scope of the Air District
- Climate impacts
- Lengthy time horizon prior to implementation (e.g. diesel PM rules took 10 years)

This summary provides a brief background on the event. Additional details regarding these community concerns and the Air District's clarifications in reply are noted in the transcript.

Background

The February Community Discussion in Richmond was part of a series of Bay Area events focused on health effects of PM. This series began in October of 2019 and will culminate in a set of findings from the Air District's Advisory Council to be delivered to the Air District Board. The Community Discussion preceded a planned symposium that was to be held in Oakland, originally scheduled for March 24th, 2020, but postponed due to COVID-19, at which representatives from local community organizations would present to the Advisory Council regarding local PM efforts, needs, and priorities. The purpose of the Community Discussion was to gather additional community input and engagement prior to that next Symposium.

The following community leaders worked together to organize the event with assistance from Elinor Mattern of the Air District's Community Engagement Section:

- Katherine Funes - New Voices Are Rising
- Richard Gray - 350 Marin
- Jed Holtzman - 350 Bay Area
- Ashley McClure - California Climate Health Now
- Steve Nadel - Sunflower Alliance
- Ken Szutu - Vallejo Citizen Air Monitoring Network
- LaDonna Williams - All Positives Possible

A list of community members who attended the event is provided in the attached Appendix, along with information on the missions of the organizations with which they are affiliated.

Structure

The gathering began at 5pm with informal sharing of a meal, followed by introductions from discussion facilitators Azibuike Akaba (Senior Public Information Officer, Air District) and Laura Neish (Executive Director, 350 Bay Area). Jed Holtzman (350 Bay Area) also offered welcoming remarks. Brief presentations by Air District staff preceded the discussion portion of the event:

- Goals of the PM Symposium Series (Greg Nudd)
- Major Sources of Fine Particulate Matter (Phil Martien)
- Current & Potential Rules to Reduce PM (Jacob Finkle)
- Policy Approaches for Particulate Matter (Victor Douglas)

Attendees asked questions and contributed comments following each presentation in addition to participating in the discussion portion of the gathering. Facilitators concluded the event at 8pm. The content of these exchanges is summarized thematically in the following section. Details on Air District presentations are omitted as this information is also being shared in the PM Symposia and details are recorded in the transcript of the Community Discussion.

Key Concerns Expressed by Community Members and Air District Replies

Localized PM data availability

“I think the public needs to have more access to what is going on.”

Desire for data beyond West Oakland. Several community members expressed frustration with the repeated presentation of West Oakland information, as such information has not been provided for other areas. For some community members, this emphasis on West Oakland felt “disrespectful” to other communities.

Air District reply: The localized analysis piloted in West Oakland is a very new approach, so it requires cautious expansion. Vehicle-mounted monitors are in the process of collecting data for the entire Bay Area. Richmond data is now available. Information for other communities will be rolled out over the next couple of years.

Desire for real-time, continuous, publicly accessible localized monitoring. Community members seek the capability to access “readouts” in real time to determine local air quality, particularly in the presence of unusual odors or flares. Concerns were expressed regarding current monitoring accuracy, with the example given of normal readings following permitted-facility accidents. An additional concern was the perception that polluters are not required to pay for monitoring: “Currently all this cost falls onto the community and we don’t have the money. And if we don’t have the money we don’t have the monitoring and the business pollutes freely.”

Air District reply: Monitoring is continuous and publicly accessible but not in real time. The Air District hopes to move toward real-time monitoring, but presently both sample analysis and data analysis create lags. Permitted facilities are required to conduct and pay for their own monitoring, and the Air District performs tests to confirm the accuracy of that monitoring.

Consolidating/sharing community-collected data (e.g. PurpleAir). As organizations and community members have begun collecting air monitoring data themselves using technology such as PurpleAir, they are seeking a means of consolidating and sharing those data. Steve Nadel of the Sunflower Alliance asked whether the Air District is working on that effort.

Air District reply: There is a new third-party “Bay Air Center” (independent of the Air District) that will provide technical support for monitor selection and siting. The California Air Resources Board has agreed to centralize air quality sensor data through their grant program. This process is likely to be challenging.

Toxicity of different PM species

“Just presenting the percentages [from different sources] doesn’t give the full picture of toxicity. Not all particulate matter is created equal.”

Concerns regarding higher severity of PM health effects from permitted sources. Depiction of PM contributions from different sources as percentages of a total raised concerns for attendees who stated that some types of PM are more toxic than others. Many comments in the meeting focused on permitted sources, including oil refineries, metal processing facilities, and concrete crushers. Community representatives want to understand where the “fault lines” lie in terms of permitted facility PM fallout — for example, a community may be downwind of a refinery yet not be considered a “refinery community” depending on where boundaries are drawn.

Air District reply: Compounds that are known to be toxic (e.g. toxic metals) are independently tracked. However, there is insufficient information regarding the toxicity of undifferentiated PM, which is why the Air District takes a precautionary approach assuming all PM to be highly hazardous. Regarding impacts from permitted facilities, studies are currently being conducted by the Air District to better understand PM emissions from refineries and to track exposures from local sources of PM in disproportionately burdened communities. Additionally, new rules regarding fluidized catalytic cracking units are in the final stages of development. With respect to the East Oakland AB&I metal foundry, the Air District is involved in resolving issues with Rules 11-18 and 12-13 regarding air toxics and PM.

Skepticism regarding wood burning as a major driver of health impacts. A significant amount of skepticism was expressed by community members regarding wood burning as a leading PM health issue. Air District measurement and monitoring methods were questioned. There was apparent frustration with the implied equating of wood smoke to refinery smoke.

Note: A community member who was not able to be present at the gathering, Richard Gray of 350 Bay Area, stated upon reading the transcript that in the San Geronimo area where he lives residential wood burning does have a substantial negative impact on air quality. He expressed that certain weather patterns can cause this wood smoke to remain in the immediate area rather than dissipate, and that problems associated with that smoke exposure have prompted numerous residents to relocate.

Air District reply: Data collection on wood burning involves not only surveys and modeling but also filter analysis to reveal the components of localized PM: “We can tell what is on those filters and what fraction is from wood burning.” However, it is expected that wood burning is more prevalent in some areas than others, which will be clarified in the forthcoming community-level studies. Current science indicates that wood smoke is highly toxic.

Lack of observable results from prior rulemaking

“It seems like implementation is a problem.”

2017 Clean Air Plan. Jed Holtzman of 350 Bay Area stated that many of the solutions that the Air District is currently presenting were already in the 2017 Clean Air Plan and asked what institutional constraints are preventing implementation. He also described an existing rule

requiring facilities to conduct health impact assessments and stated that two and a half years after the rule had been developed this is still not happening.

Air District reply: New approaches are being implemented to speed up the process. This PM Symposium Series is designed to ensure that the full impact of PM — as reflected in the science and the community — is clear to decision makers. In addition to the health costs, the economic costs of PM are being calculated in order to further incentivize action. Additionally, the Air District is pursuing innovative means of clarifying jurisdiction for local sources of PM, such as “magnet sources” like warehouses that attract truck traffic.

Crude slate inventory. Rule 12-15, requiring accurate crude inventories, was brought up by Shoshana Wechsler of 350 Bay Area/Sunflower Alliance, who asked for the status of this data.

Air District reply: There have been some reporting difficulties because legal constraints prevented the Air District from specifying formats for data collection. A means of requiring standardized reporting has now been identified and this information will soon be available.

General enforceability issues. Several issues with enforceability were raised, such as lack of moisture content measurement at construction sites to limit dust, and citations of violations being limited to “visibility” issues following fires at permitted facilities. Ken Szutu of the Vallejo Citizen Air Monitoring Network suggested that perhaps rather than arranging community meetings with the Air District’s rulemaking teams, these meetings should be centered on the departments responsible for enforcement.

Air District reply: The Air District does not have “police powers.” The enforcement process is carried out by the District Attorney. The Air District strives to work collaboratively with permitted facilities to ensure compliance.

Potential for problems to worsen

“You can’t stop the cold air coming in if you close a window on one end and then open a different one on the other.”

New permits continue to be issued. Much attendee support was expressed for a comment from LaDonna Williams of All Positives Possible that, despite all the discussion about reducing emissions, the Air District continues to issue permits to new sources.

Air District reply: The Air District is statutorily obligated to issue permits. However, the aim is to put the brakes on emissions in areas that are already overburdened. The Air District is developing an approach intended to consider existing PM exposures in the community in order to ensure that burden is not increased.

Emerging indoor air concerns. Residents are experiencing problems with toxic vapor intrusion of polychlorinated biphenyl (PCB) and trichlorobenzene (TCB) compounds in their water delivery systems. They asked how the Air District can help.

Air District reply: Although household indoor air is not within its authority, the Air District is seeking to collaborate with the Water Control Board and will be involved in a multi-agency workshop to try to speed resolution of this problem.

Climate impacts. A community member inquired about the connection between the health impacts under discussion and the public health threat of the climate crisis.

Air District reply: The 2017 Clean Air Plan demonstrates the linkages, with one of its three pillars focusing on health.

Lengthy time horizon prior to changes being implemented. Citing the example of diesel PM rulemaking taking 10 years, concern was expressed that the present process may be many years away from producing meaningful change: “How do we compress that?”

Air District reply: With the Board’s buy-in, we can start working on elements of our strategy without having to wait years. We are working to compress that timeline.

APPENDIX - Attendee List for Community Particulate Matter Discussion – 2/27/2020

Organization	Representative(s) Attending (+ Organizational Role)	Website	Notes on Organization Mission (based on websites)
350 Bay Area	Jed Holtzman (Senior Policy Analyst)	https://350bayarea.org/	Bay Area organization supporting policies that promote clean energy, eliminate fossil fuels, and facilitate just and socially equitable solutions to ensure a livable planet for future generations.
350 Contra Costa	Jackie García	https://350bayarea.org/350contracosta	Contra Costa team of 350 Bay Area (see above)
All Positives Possible	LaDonna Williams (Programs Director), Pat Dodson and Janniece Murray	https://www.guidestar.org/profile/61-1588146	East Bay nonprofit supporting efforts of low-income communities of color to confront crises of environmental health and injustice.
Bayview Hunters Point Resident	Dr. Raymond Tompkins	N/A	N/A
California Climate Health Now	Ashley McClure, Cynthia Carmichael	https://www.climatehealthnow.org/	California physicians and health professionals “who recognize climate change as the public health and equity emergency of our lifetimes.”
Communities for a Better Environment	Andrés Soto	http://www.cbecal.org/	California environmental justice organization focused on global climate issues and local transformation toward sustainable communities. Provides organizing skills, leadership training, and scientific and legal assistance.
Groundwork Richmond	Jen Fong	http://www.groundworkrichmond.org/	Richmond environmental organization helping youth develop leadership potential through science, technology, engineering, arts, and math.
Higher Ground Neighborhood Development Corp.	Khariyyah Shabazz (Assistant Programmatic Director) and Reggie Archie	http://www.highergroundndc.com/	Oakland-based neighborhood development corporation focused on youth.
Interfaith Climate Action Network of Contra Costa County	Will McGarvey,	http://www.ican-cc.org/	Contra Costa County organization educating faith and non-faith communities about mitigating climate change and providing advocacy on their behalf to ensure oppressed community voices are heard by policymakers, industries, and other organizations.

New Voices Are Rising/Rose Foundation	Katherine Funes (Youth Engagement Co-Director) & 3 youth	https://rosefdn.org/new-voices	Oakland-based project seeking to increase civic participation within underrepresented communities, increase young people's commitment to environmental justice, and reduce air and water pollution in the SF Bay Area. Part of the Rose Foundation for Communities and the Environment.
No Coal in Oakland	Misao Brown	https://nocoalinoakland.info/	Oakland-based organization campaigning to stop the threat of coal being transported by rail into Oakland for export overseas.
No Coal in Richmond	Jaime Perez	https://ncir.weebly.com/	Richmond-based organization supporting phase-out of coal and pet coke operations to protect health.
Physicians for Social Responsibility	Robert Gould (President), Jeff Ritterman (Vice President of Board of Directors)	http://sfbaypsr.org/	Bay Area chapter of organization seeking to promote public policies that protect human health from climate change and environmental degradation as well as nuclear war and other weapons of mass destruction, gun violence, and other social injustices.
Rodeo Citizens Association	Janet Pygeorge, Charles Davidsen	https://rodeocitizensassociation.org/	Non-profit organization devoted to issues concerning the unincorporated community of Rodeo, California. Their primary purpose is to address local concerns to health, safety and the environment.
Sierra Club Bay Chapter	Dave McCoard (Co-Chair of Energy Committee)	https://www.sierraclub.org/san-francisco-bay	SF Bay Area chapter of national grassroots environmental organization. Chapter has nearly 40,000 members. Issues include energy and climate, sustainable communities, parks and open space, environmental justice, water, and wilderness and wildlife.
Sunflower Alliance	Steve Nadel and Shoshana Wechsler	https://www.sunflower-alliance.org/	Bay Area citizen group focused on halting fossil fuel production and transport, particularly in the East Bay.
Vallejo Citizen Air Monitoring Network	Ken Szutu (Chair)	http://citizenairmonitoringnetwork.org/vallejo/	Vallejo citizen group collecting and publicizing local air quality data to enable rapid response to air quality problems.
Youth vs Apocalypse	2 youth	http://youthvsapocalypse.org/	Bay Area group of diverse young climate justice activists (ages 10-18) working to lift the voices of youth, in particular youth of color, and fight for a livable climate and an equitable, sustainable, and just world through policy advocacy. Supported by 350 Bay Area.

Community Reflections from Feb. 27 Community Summit on PM

Jed Holtzman, MEM
Senior Policy Analyst



on behalf of the
BAAQMD Network

To view a video recording of the following presentation please visit: http://baha.granicus.com/MediaPlayer.php?publish_id=86baaa39-9531-11ea-a2af-0050569183fa. This presentation starts 46 minutes and 30 seconds into the recording (0:46:30). It ends at one hour, 10 minutes, and 10 seconds (1:10:10).



Intro/Context

The federal government is moving backwards on PM regulation.

California must lead the nation—and as usual, we here must lead the state—in reducing PM emissions to protect both public health and public coffers.

The current coronavirus pandemic highlights the necessity to prioritize steep PM reductions—particularly in frontline, overburdened, and disadvantaged communities, and those that have experienced environmental injustice and racism.

Intro/Context

Communities' excess exposure to PM makes them significantly more vulnerable to the impacts of SARS-CoV-2 and the other health and environmental challenges that will be expected with ongoing climate warming.

We request that the Advisory Council make the strongest possible statement to the Board on the need for aggressive Air District action to reduce PM to the maximum extent feasible, in order to protect public health.

We need BAAQMD action on all cylinders, we need robust rulemaking, and we need it yesterday. Delay translates directly into death and suffering of Bay Area residents, at the rate of thousands per year.

Regional/Local

To even hope to meet a health-protective PM target, we need to attack it from both directions, using both regional AND local approaches.

Regional Approach

There is no safe level of PM exposure, the concentration-response curve is linear, and we could keep saving lives by further reducing PM emissions.

The Air District should set the lowest PM standard available to protect public health given the overwhelming data. If this requires coordinating with ARB and the legislature to take leadership, it won't be the first time.

Setting a truly health-protective PM standard in the Bay Area will provide the impetus for an effective PM Reduction Plan, with all feasible measures needed to achieve attainment of the standard.

Local Approach

For locally significant sources of PM, staff is proposing to employ a toxic health risk approach.

Given the incredible failure with the implementation of Rule 11-18 on toxic risk reduction, how does the District think it is going to lean this approach to handle all needed PM reductions from local stationary and magnet sources as well?

And how will those reductions come at a relevant time scale, given thousands of deaths per year of delay?

Local Approach

How can we identify problematic local sources and deal with them faster? We can't wait until all burdened communities get AB 617 designation, which is all the more unlikely now in the post-pandemic budgetary environment.

The status quo Air District process on toxics is not working and will not work on the timescale in which we need to see reductions.

So do you ramp up the HRA staff and workflow at the District by more than 10x? Or do you come up with an alternate regulatory strategy? Something must change.

Regional/Local

Whether locally or regionally, our common concerns are the strength and breadth of regulations and the speed and robustness of their implementation.

Paying to Pollute

Penalties for violations of Air District rules with any primary or secondary PM emissions impacts must be increased substantially to reflect the true costs to the Air District and public health.

Both greater penalties for violations and an augmented enforcement regime at facilities are needed to incentivize compliance and provide serious disincentives for multi-billion dollar companies to pollute.

In-plant or in-community reductions of PM should be required instead of allowing trading in PM credits, and a very large (e.g., 20-to-1) offset rate could be employed for out-of-community offsets to ensure reductions stay local.

Permitting

Currently, AD staff is looking at reforming your permit program to take into account cumulative impact of emissions sources, rather than looking at each new permit as taking place on a clean slate.

We need to see other reforms in the permitting system at the Air District—for example:

- To close loopholes—for example, the piecemealing of larger projects into small components to remain under legal and regulatory thresholds and minimize the appearance of project impacts.**
- To change calculation methodologies that have resulted in over-permitting facilities (e.g., the 6th refinery problem).**

Cost-Benefit Analyses

Air District cost-benefit analyses need to take into account a broader portfolio of monetized health damages beyond the limited subset currently employed.

AD staff is pursuing updating the PM health values used in these analyses, which will make the comparison between costs to a facility and costs to public health less imbalanced and more accurate. We support this critical work, which the state should have moved on many years ago.

This does not replace the need to include the many health benefits/averted health costs that a regulation could achieve when engaging in socioeconomic analyses.

Authority & Measurement

There are so many places where the Air District doesn't have authority and can't ensure emissions will come down as needed to protect—so where you do have authority, you need to take maximal action.

PM counters that at least provide ballpark figures would be superior to subjective opacity determinations.

Conclusions

PM pollution is every bit as injurious and deadly as it was when you met in October and December, but now we are all moving forward trying to address this difficult challenge in a more trying environment.

In this environment, it is even more important than ever to identify and prioritize major sources of PM with a rapid timeline of control.

The most important thing we have learned from this crisis can be summarized in the old Boy Scout motto: BE PREPARED. The Air District can help prepare us for the next health crisis by greatly reducing PM emissions and improving our baseline health and safety.

Thanks!

jed@350bayarea.org

COVID WHILE BLACK

Context for the Following Presentation

By LaDonna Williams, All Positives Possible

COVID While Black is the lived experiences of Bayo Vista in Rodeo CA, and South Vallejo CA, two frontline African American severely disadvantaged communities located along the shores of the Carquinez Strait. They share a bridge, a strait, invisibility and environmental racism. In addition they suffer from some of the highest negative health rates in the region from living by polluting refineries, petroleum storage companies, huge tanker ships traveling through the Carquinez Strait (transporting millions of tons of gas & oil) releasing scores of toxins into the Carquinez waters and air, and a Wastewater Raw Sewage Treatment Plant located in their neighborhoods.

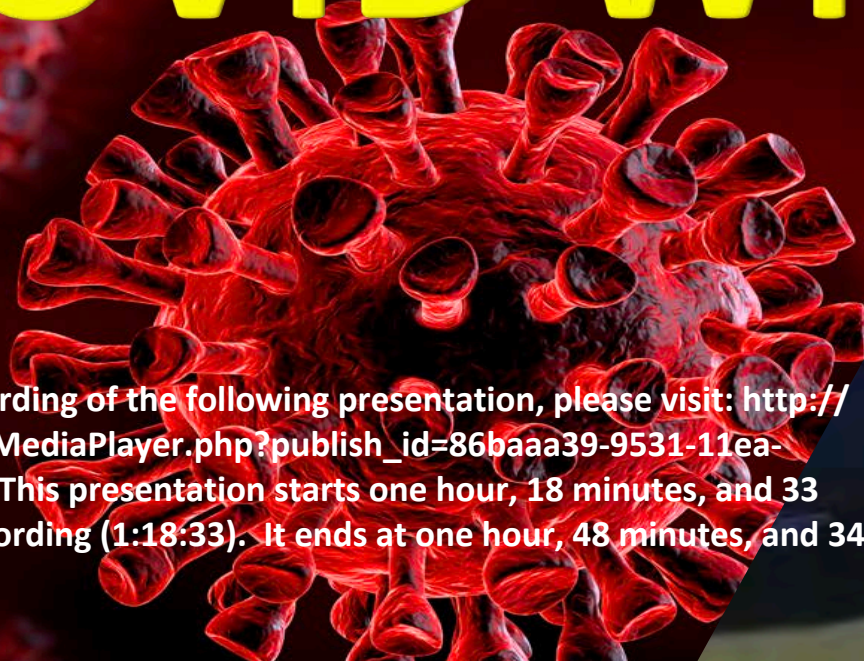
Further negative impacts from the devastating wildfires, nearby polluting industries, and now COVID-19 undoubtedly are causing heightened physical and mental health trauma, resulting in epic levels of negative health, financial, environmental and mental health crisis on these already overburdened communities. Their lived experiences dealing with unexplained skin lesions, and tumors, bloody noses, high rates of asthma, Bell's Palsy, premature hair loss, headaches, heart attacks, diabetes, high blood pressure, cancers and death, prematurely burying their families and friends remain largely ignored, invisible to agencies and elected officials. While the white communities like Tormey are personally escorted to safety by officials with their lived experiences being top priority, low-income African American communities like Bayo Vista and South Vallejo are left to shelter in place fending for themselves as agencies and elected officials continue to permit even more increases of toxic emissions into their neighborhoods, routinely telling these residents there's no threat to their health or environment.

As these communities brace for the next fiery explosions from nearby storage companies like NuStar Energy, or the toxic releases of white and black smoke emissions from the nearby Phillips 66 refinery causing further pollution in their air, while inhaling noxious odors from a close by Wastewater Raw Sewage Treatment Plant, located directly across the street from residents living in low income and/or public housing, and huge tanker ship's toxic spills releases causing more pollution. **Residents continue to plead for help demanding justice from agencies and elected officials with deaf ears who continue to rubber stamp, approve and permit millions of tons of toxic increases of emissions from countless polluters into severely disadvantaged neighborhoods.**

The impacts and suffering of severely disadvantaged communities must be treated as a state of emergency! Anything less is supporting environmental and systemic racism, against the most vulnerable populations with the least financial or legal support. **Contra Costa County Supervisors continue to rubber stamp expansions of the Phillips 66 refinery, permitting additional millions of tons/gallons of gas and oil and other toxic emissions into the air we breathe.** Across the bridge, Solano County Supervisors supported an out-of-country toxic cement plant from Ireland that would have been located in South Vallejo, less than a quarter mile from low-income housing, schools, and places of worship. We thank GOD for the community's strength and commitment to stop the Orcem cement plant from coming into the community. The elected officials, agencies, and church leaders who continue to permit and support expansions and increases of toxic emissions in severely disadvantaged neighborhoods, while claiming there is no significant risk associated with their approval of these operational expansions must be held accountable for the environmental injustices, deaths and racism in disadvantaged communities. C415



COVID WHILE BLACK



To view a video recording of the following presentation, please visit: http://baha.granicus.com/MediaPlayer.php?publish_id=86baaa39-9531-11ea-a2af-0050569183fa. This presentation starts one hour, 18 minutes, and 33 seconds into the recording (1:18:33). It ends at one hour, 48 minutes, and 34 seconds (1:48:34).

LaDonna Williams
All Positives Possible
www.allpositivesp.org

Bay O Vista
Rodeo, CA
10/15/19



SHITFECHHH
SHITFECHHH 😬😬

Low Income
Bay O Vista
Housing Units
Rodeo, CA
10/15/19



RODEO, CA
10/15/19





SOUTH VALLEJO CARQUINEZ BRIDGE 10/27/19



SOUTH VALLEJO CARQUINEZ BRIDGE HWY 80 10/27/19



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

AGENDA: 5

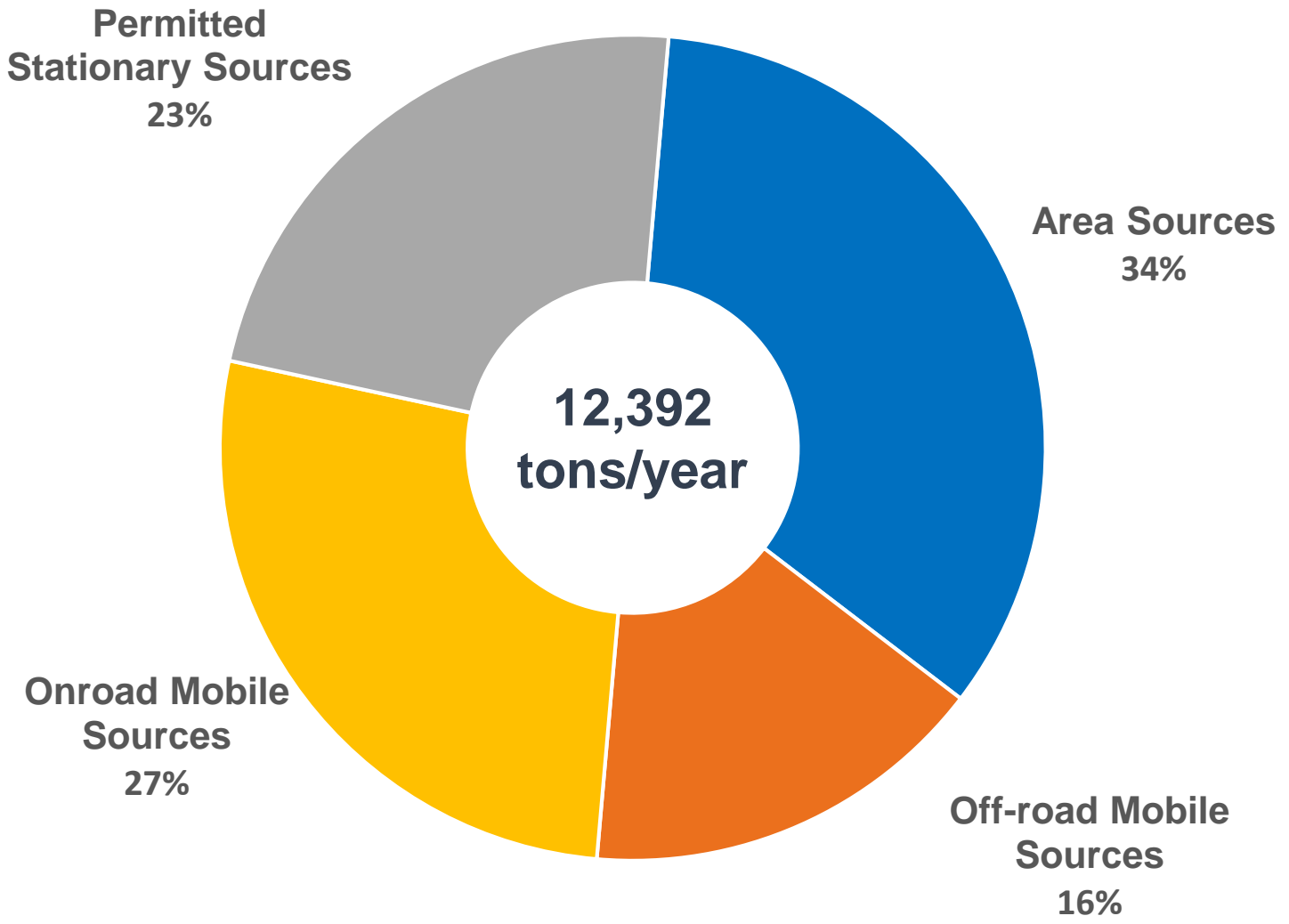
Update on Air District Particulate Matter (PM) Potential Policy Strategies

Advisory Council Meeting
May 12, 2020

Greg Nudd

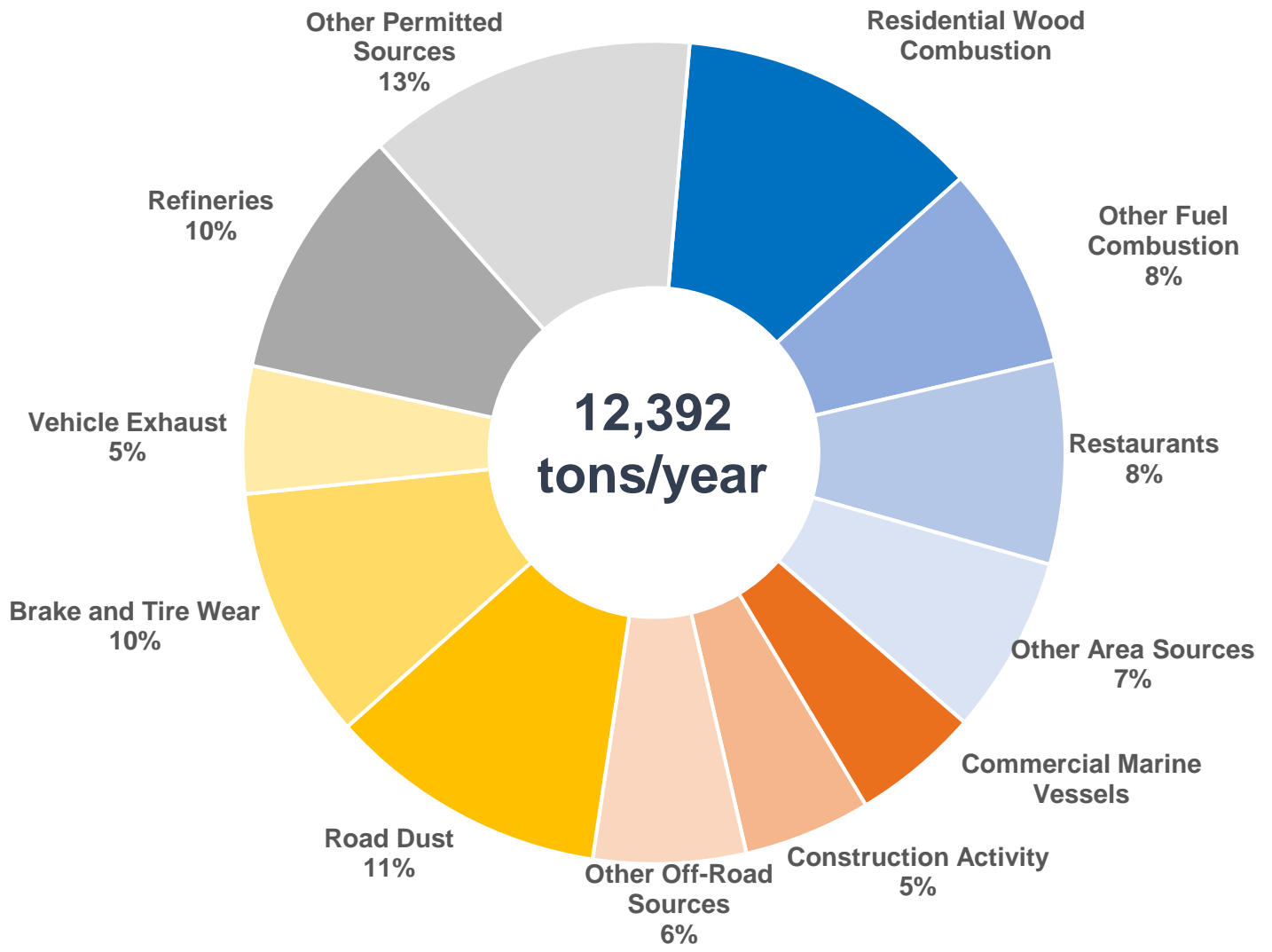
Deputy Air Pollution Control Officer

Major Sources of PM_{2.5} in the Bay Area



**2016 annual average,
directly emitted PM_{2.5}
emissions**

Major Sources of PM_{2.5} in the Bay Area

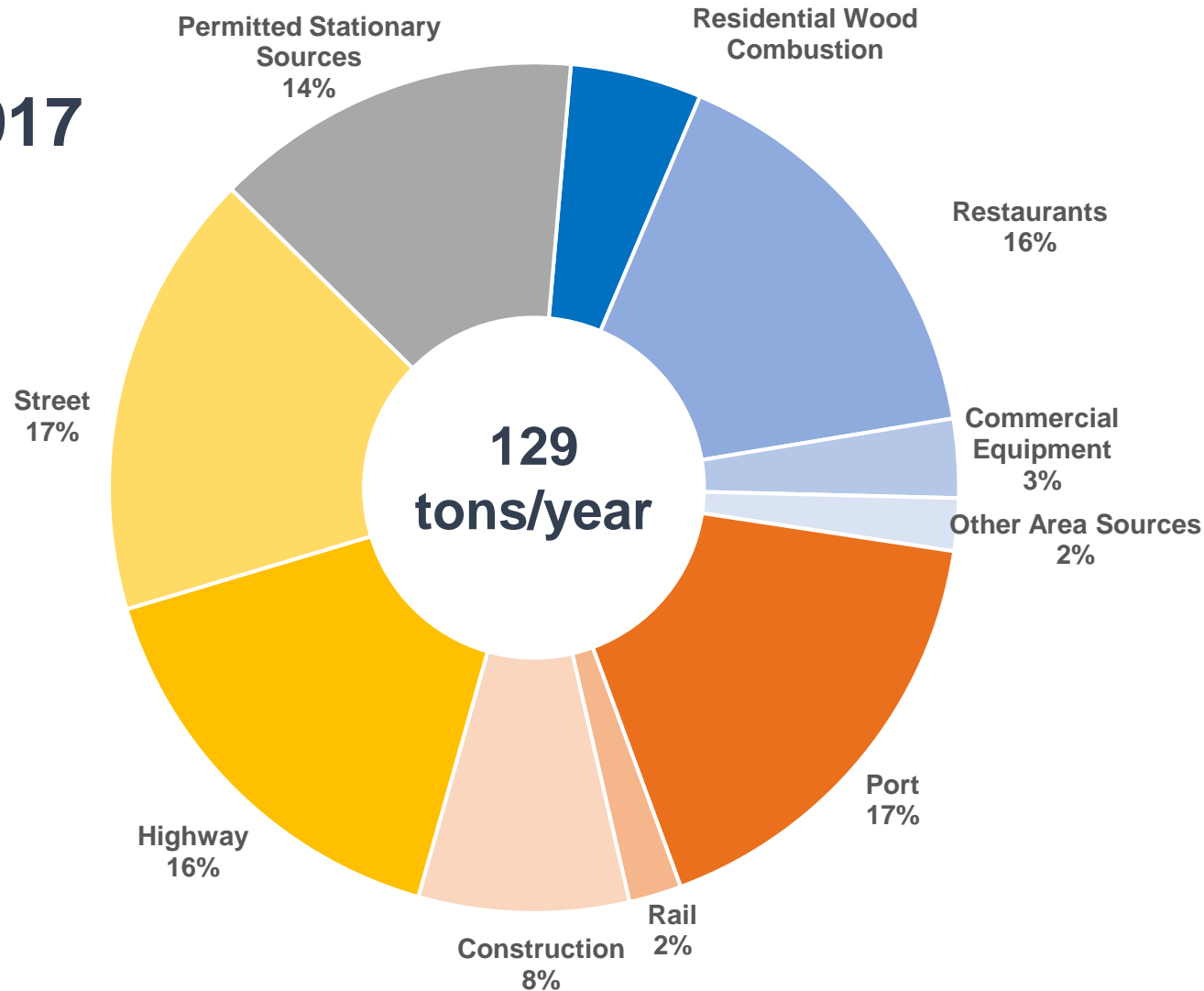


**2016 annual average,
directly emitted PM_{2.5}
emissions**

Major Sources of PM_{2.5} in West Oakland

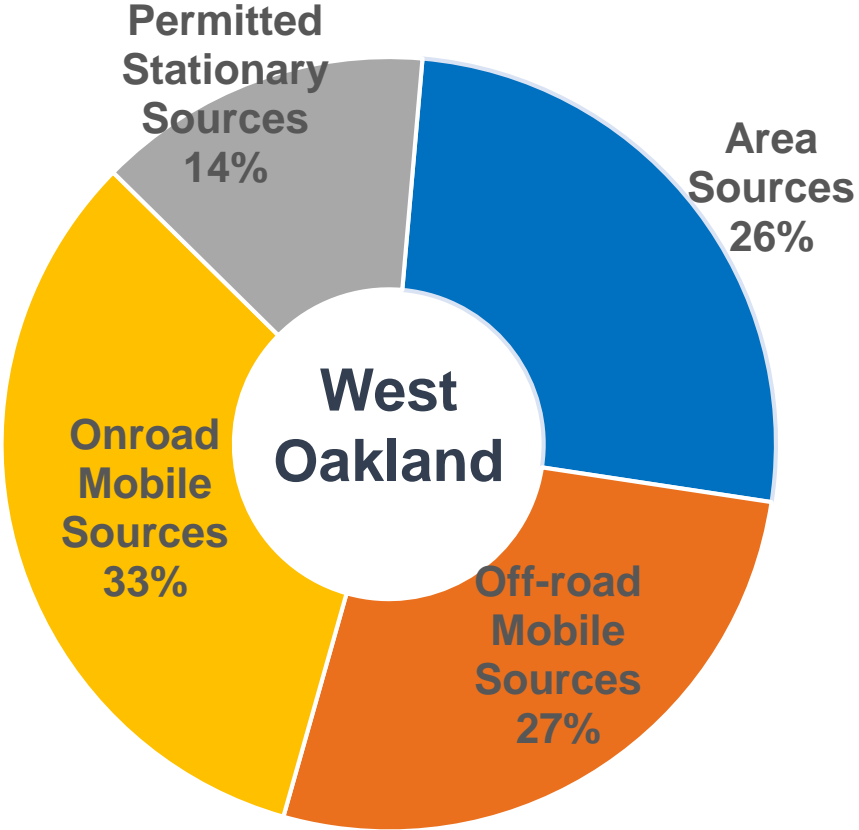


2017

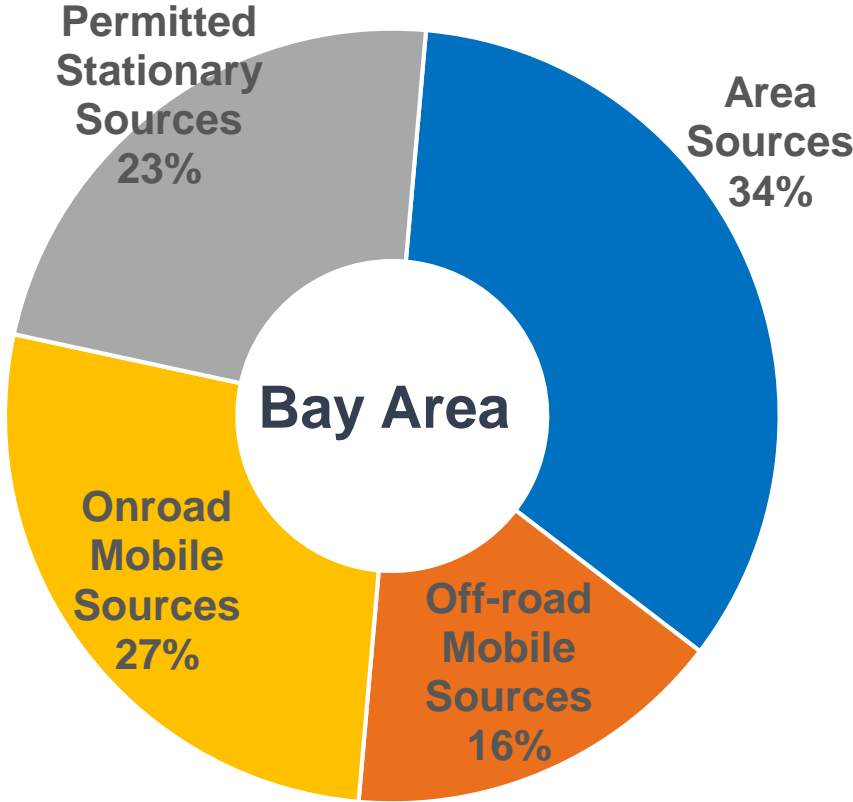


2017 annual average,
directly emitted PM_{2.5}
emissions

PM_{2.5} in West Oakland vs Bay Area



2017



2016

Current and Potential Actions



Mobile Sources

**Permitted
Stationary
Sources**

Area Sources

Magnet Sources

Current and Potential Actions



On Road Mobile Sources

**Regulatory Authority:
California Air
Resources Board
(CARB)**

- **Existing programs:**
 - Diesel Free by '33
 - Spare the Air
 - Incentives for trip reduction (shuttles, bicycles)
 - Vehicle Buy-backs
 - Commuter benefits rule
 - Air District Incentives Programs
- **Potential new programs:**
 - Encourage telework
 - Assist local programs to control road dust

Current and Potential Actions (cont.)



Off Road Mobile Sources

**Regulatory Authority:
CARB**

- **Existing Programs:**
 - Diesel Free by '33
 - Robust incentive programs for ships, trains, construction equipment
- **Potential New Programs:**
 - Push for stricter rules from CARB
 - Seek federal funding for electrification infrastructure

Current and Potential Actions (cont.)



Area Sources

**Regulatory Authority:
Air District**

- **Existing Programs:**
 - Restrictions on wood burning devices
 - Winter Spare the Air Program
 - Rule limiting charbroiler emissions
- **Potential New Programs:**
 - Require disabling of wood burning devices upon sale
 - Use regulatory authority to encourage electric space and water heating
 - Incentives for restaurant emission controls