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DISTRICT

**AGENDA: 4**

# **Update on the AB 617 Richmond/San Pablo Community Air Monitoring Plan**

**Community Equity, Health and Justice Committee Meeting  
May 6, 2021**

**Dan Alrick, Principal Air and Meteorological Monitoring Specialist  
[dalrick@baaqmd.gov](mailto:dalrick@baaqmd.gov)**

**Dr. Julie Walsh, Monitoring Outreach Team**

# Presentation Outcome



- Hear updates about the Richmond/San Pablo Community Air Monitoring Plan (CAMP) and how it will inform the Community Emissions Reduction Plan (CERP) process

# Presentation Outline



- About the Community Air Monitoring Plan
- Highlights from the ongoing monitoring projects
- About the Monitoring Outreach Team and their mission
- Next steps for data analyses and informing the CERP process

# Presentation Requested Action



- None; informational item

# Overview of the Monitoring Plan



- Monitoring Plan Steering Committee met from April 2019 to July 2020 to develop the CAMP
- CAMP development ended summer 2020
- Inside the CAMP:
  - Why Richmond-San Pablo was selected
  - Steering Committee's work to identify concerns and select monitoring projects
  - Technical information for monitoring projects
- Now in implementation phase



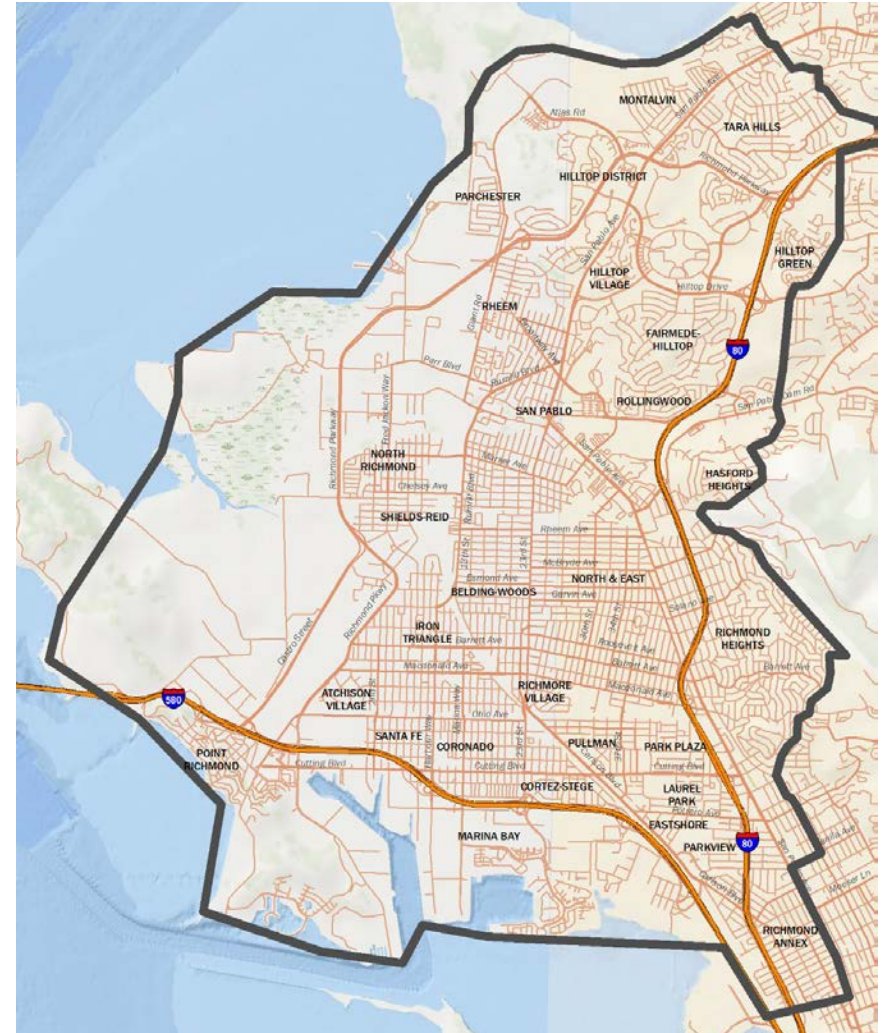
## AB 617 Richmond-San Pablo Community Air Monitoring Plan

(Cover of the Monitoring Plan)

# Air Monitoring Projects and Datasets



- Existing air monitoring data
  - Air District monitoring sites
  - Chevron monitoring sites and fenceline
- New air monitoring under the CAMP
  - Aclima mobile monitoring
  - Groundwork Richmond/Ramboll sensor network
  - PSE/APEN sensor network
  - Air District air toxics mobile monitoring
- Other monitoring projects related to but not included in the CAMP



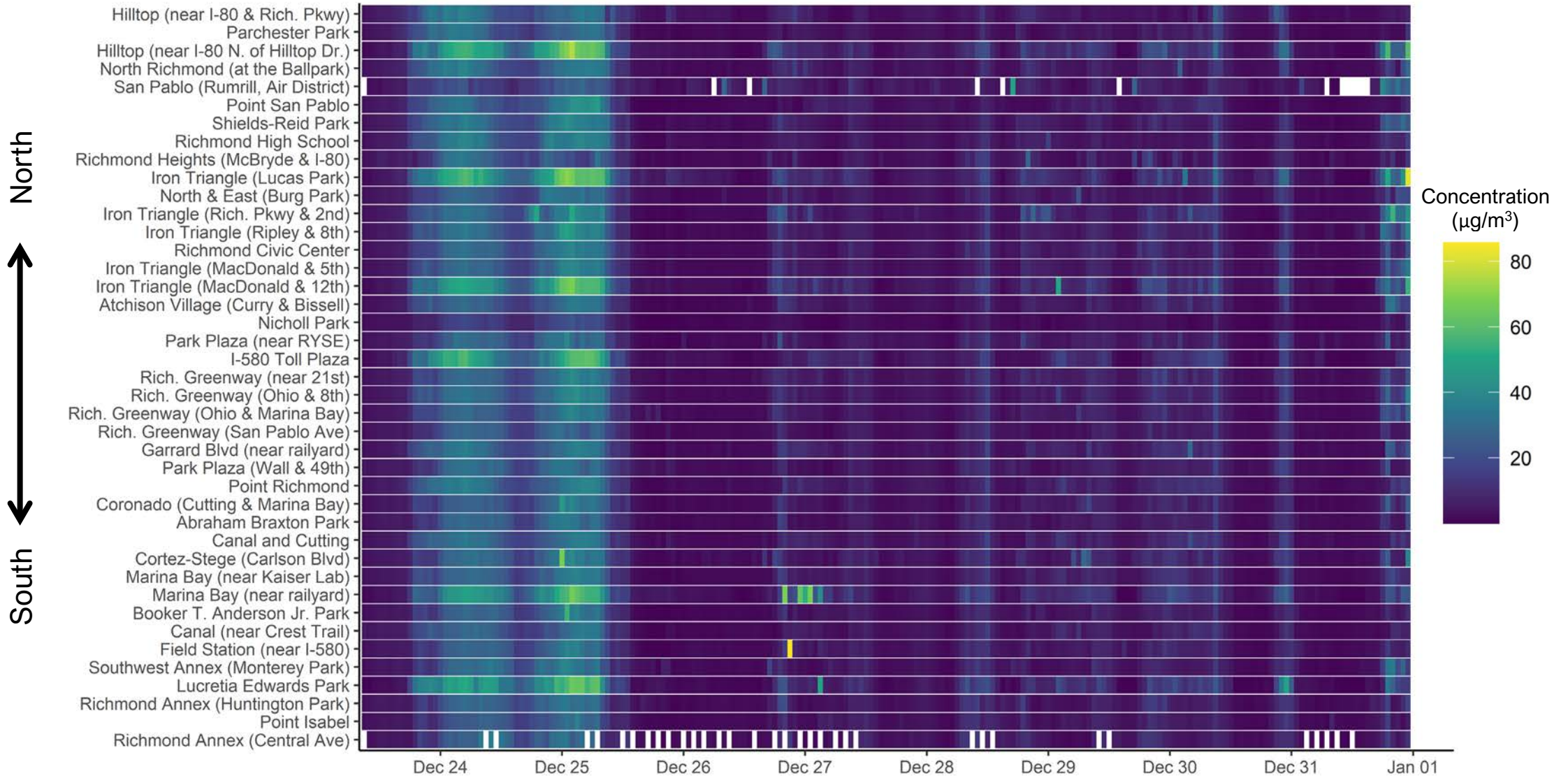
Richmond-San Pablo Monitoring Plan Study Area

# Initial Findings and Confirmations



- PM<sub>2.5</sub> levels across the area show similar day-to-day variability, consistent with regional conditions
- Worst PM<sub>2.5</sub> days are driven by fires and wintertime episodes
- Shorter-term, more-localized events with higher pollutant levels are also evident and need additional analysis to understand possible contributing factors
- Differences in data from sensor networks vs. regulatory monitoring data need further exploration

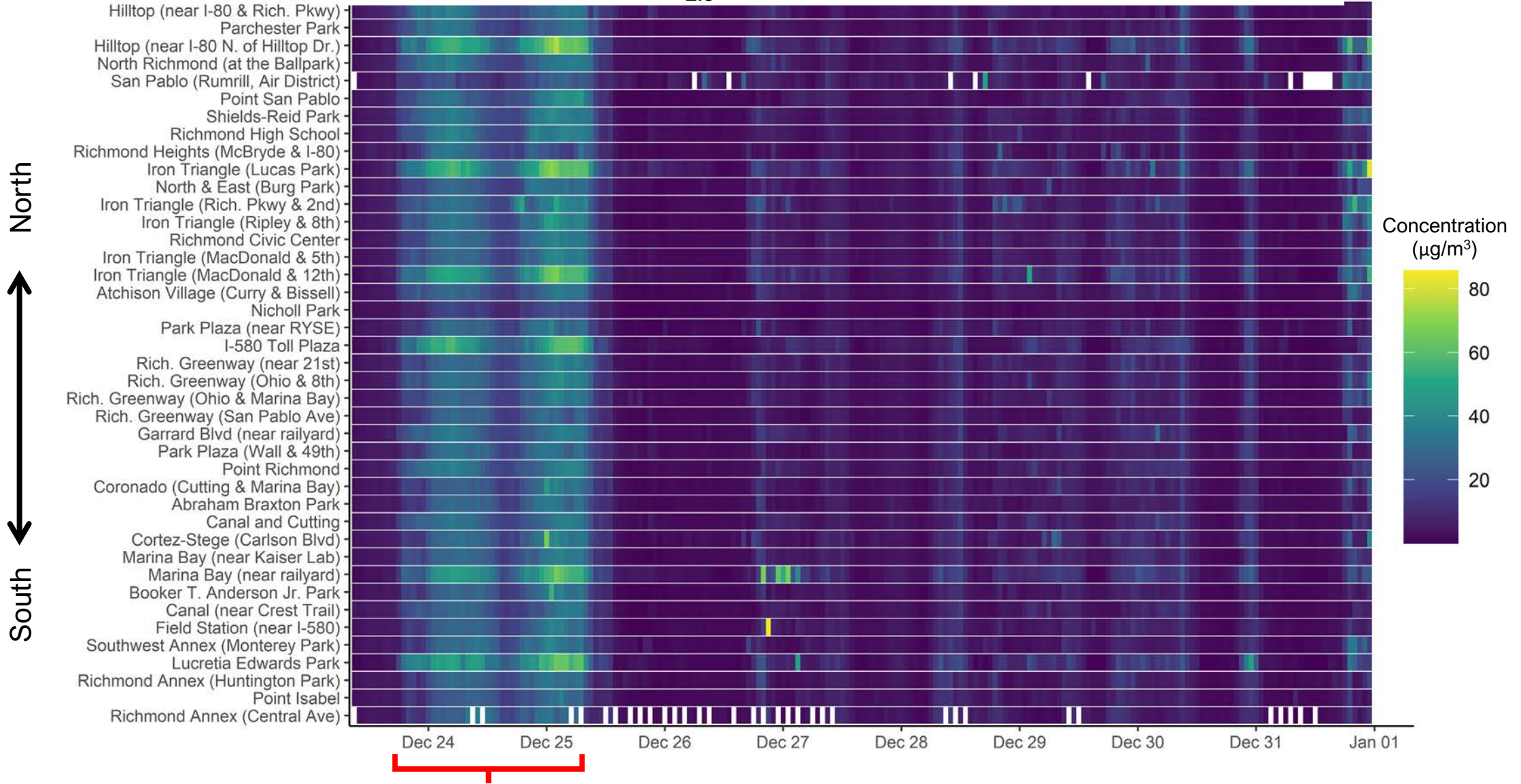
# Heatmap of Hourly PM<sub>2.5</sub> Concentrations, December 24-31, 2020



Data from Groundwork Richmond sensor network + Air District's San Pablo regulatory station



# Heatmap of Hourly PM<sub>2.5</sub> Concentrations, December 24-31, 2020



Regionally higher PM<sub>2.5</sub> levels Dec 24

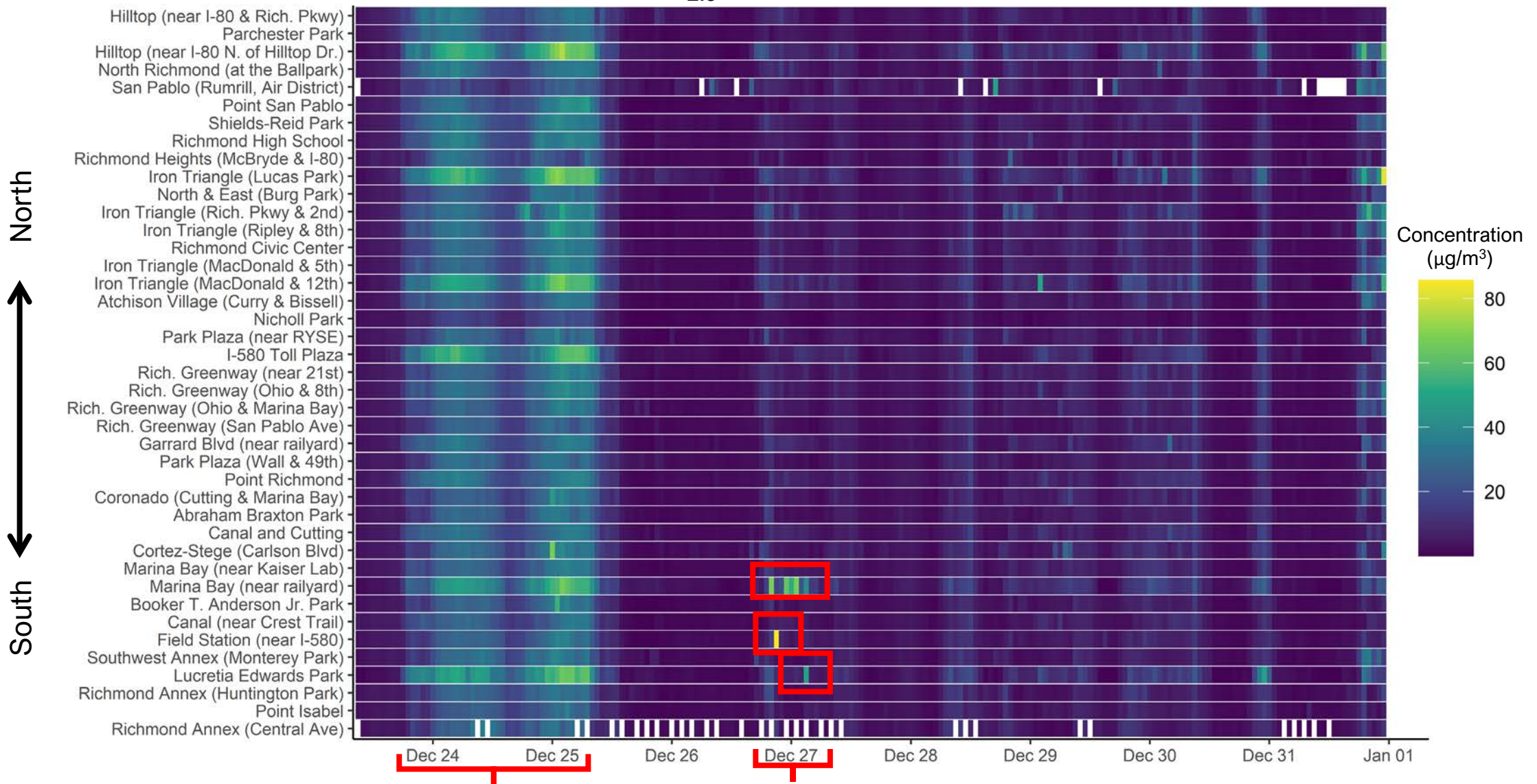
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Community Equity, Health and Justice Meeting

May 6, 2021

Bay Area Air Quality Management District

# Heatmap of Hourly PM<sub>2.5</sub> Concentrations, December 24-31, 2020

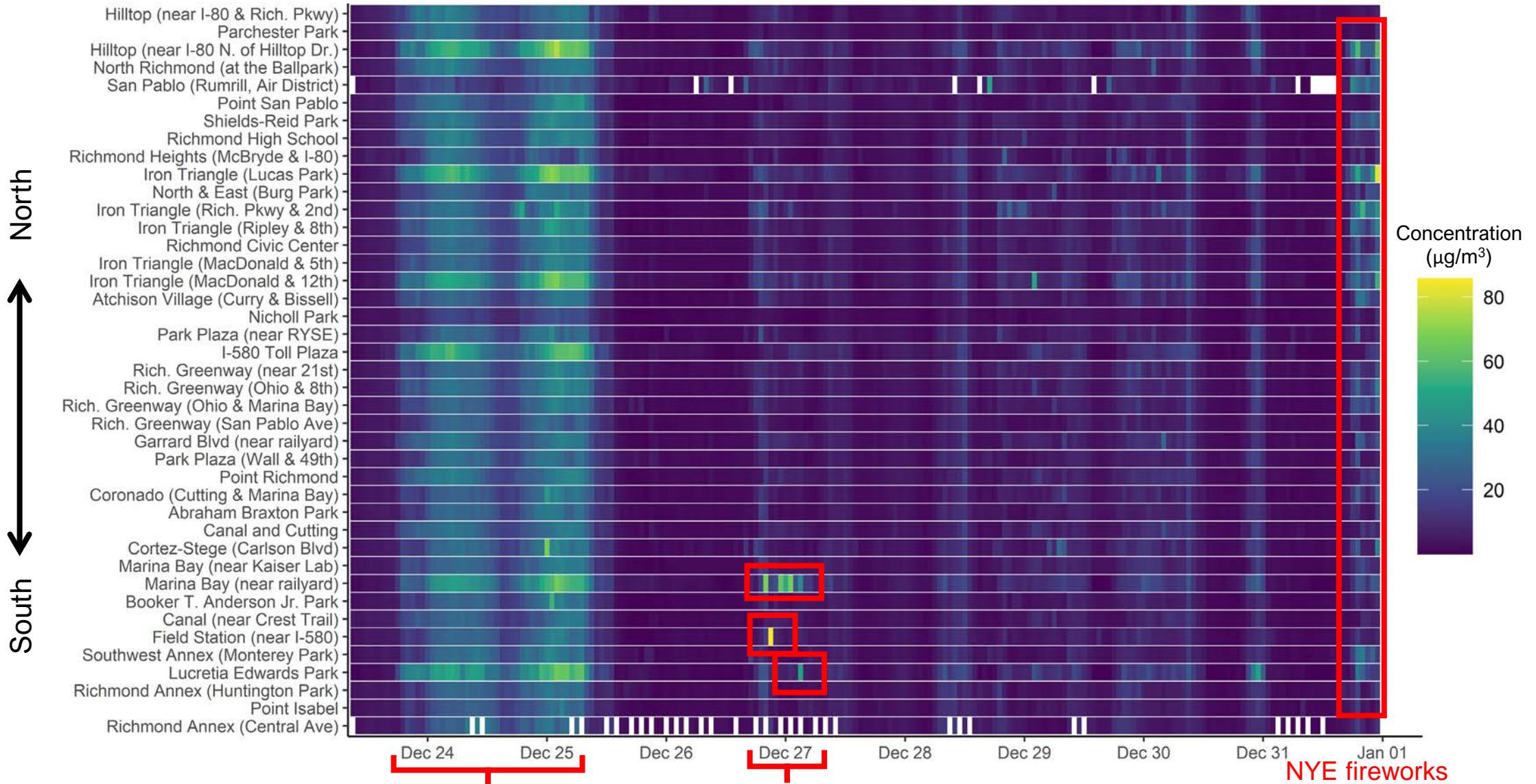


Regionally higher PM<sub>2.5</sub> levels Dec 24

Locally higher PM<sub>2.5</sub> around Marina Bay

Data from Groundwork Richmond sensor network + Air District's San Pablo regulatory station

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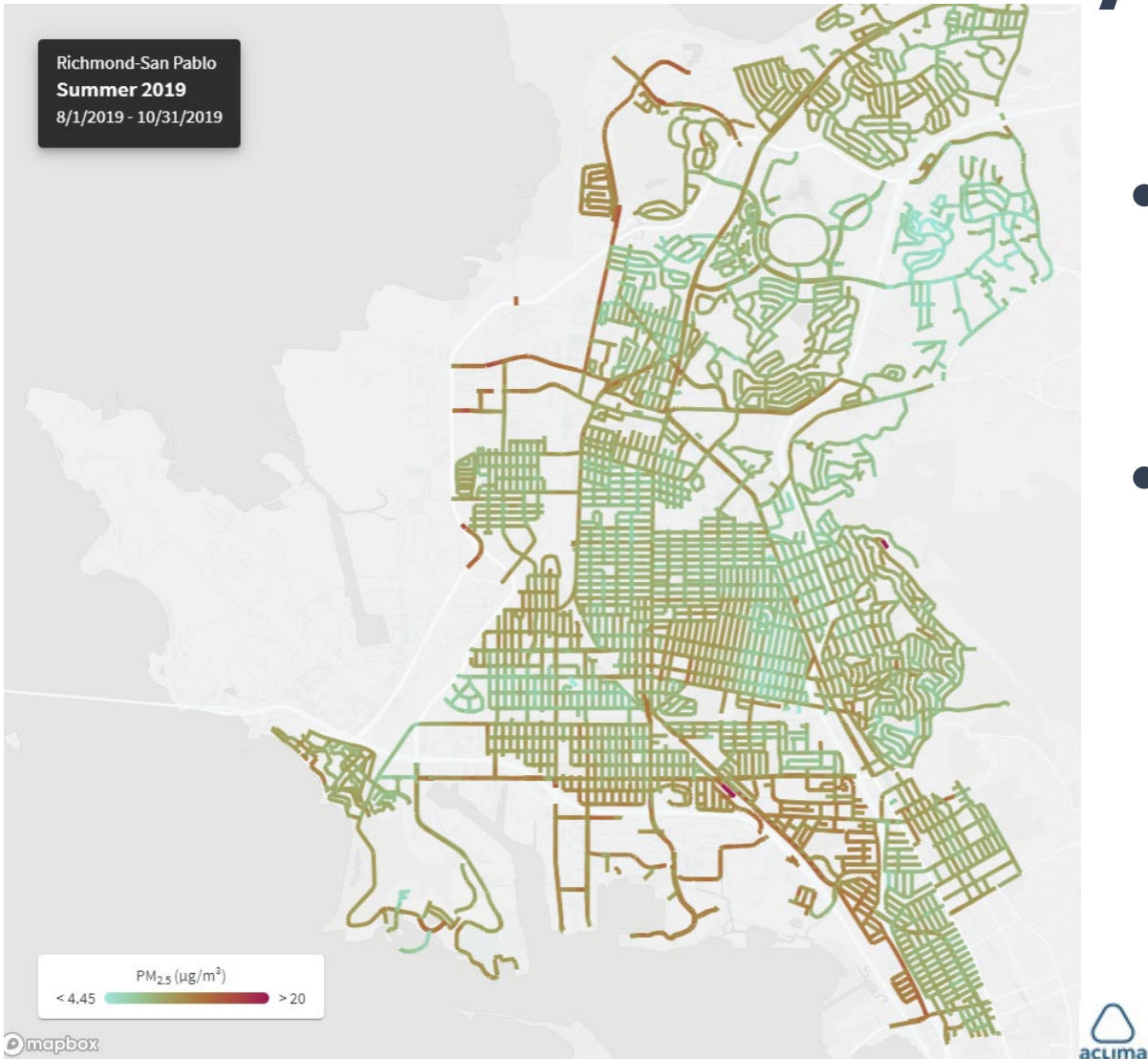


Regionally higher PM<sub>2.5</sub> levels Dec 24

Locally higher PM<sub>2.5</sub> around Marina Bay

Data from Groundwork Richmond sensor network + Air District's San Pablo regulatory station

# Aclima PM<sub>2.5</sub> Report



- Aclima mobile monitoring conducted August-October 2019
- Web-based report now available highlighting areas where PM<sub>2.5</sub> levels were persistently elevated  
<https://rspreport.aclima.tools/>

# Monitoring Outreach Team (MOT)



- Five members from the Monitoring Plan Steering Committee
- Core responsibilities:
  - Help prepare and review materials for quarterly monitoring updates
  - Plan and conduct outreach efforts
- Monthly meetings since October 2020



# Quarterly Updates



- Project status reports, data availability, analyses, and findings are summarized in quarterly updates
- March 2021 update included:
  - Fact sheets with initial analyses of selected air toxics and PM<sub>2.5</sub> data
  - Web-based report prepared by Aclima on measured PM<sub>2.5</sub> levels
- Posted on Air District website and emailed to key community stakeholders

**Benzene and Health**

The table below provides information on benzene and established health guidance. It is important to note that benzene is only one air toxic pollutant, and that **other air toxics may have different health impacts and be larger drivers behind cumulative health impacts**. Air quality modeling, as opposed to air monitoring, is often better suited for assessing those cumulative impacts.

Sustained exposure to average benzene concentrations of 1.3 to 4.5 micrograms per meter	increase in cancer risk of no
1.3 to 4.5 micrograms per meter	seen largely below 1.3 µg/m <sup>3</sup> .
Benzene is 1.0 ppb. This is	Benzene is 1.0 ppb. This is
stained exposures over a	stained exposures over a
benzene in Richmond and San	benzene in Richmond and San

8.0 ppb. Hourly average  
g stations were mostly well  
t Richmond monitor in

MARCH 2021

**Initial Analyses of Air Monitoring Data: PM<sub>2.5</sub>**

As implementation of the Richmond-San Pablo Community Air Monitoring Plan proceeds, the Air District is continuing to gather, prepare, and assess data from existing air monitoring networks. Initial analyses of PM<sub>2.5</sub> data are described on the next few pages. PM<sub>2.5</sub> stands for particulate matter with particle diameters of 2.5 micrometers and smaller, also referred to as fine particulate matter. These initial analyses aim to provide an overview of PM<sub>2.5</sub> levels in Richmond-San Pablo, examine variations in air quality over time, and identify locations with persistent or unexpected areas of higher pollution levels.

**A Look Back at Air Quality in 2020**

The calendar on the right shows daily [Air Quality Index \(AQI\)](#) values for PM<sub>2.5</sub> in 2020, as reported at the Air District's regulatory monitoring station in San Pablo<sup>1</sup>. The AQI, much like an air quality "thermometer," translates daily air pollution concentrations into a number on a scale between 0 and 500. The numbers in this scale are divided into six color-coded health ranges, based on the EPA 24-hour health-based standard.

In 2020, the AQI was in the Good or Moderate categories on most days. **Wildfire smoke** contributed to unhealthy air quality at times, notably from late August to early October. In general, daily fluctuations in air quality are driven by **changes in weather patterns and emissions**. The pandemic also affected pollution emission patterns in 2020.

**Exploring PM<sub>2.5</sub> Levels in Richmond-San Pablo**

In addition to data from the Air District's regulatory monitor in San Pablo, PM<sub>2.5</sub> data are also available from lower-cost sensors that are now in place in many locations across the Richmond-San Pablo area. Data from sensor networks can provide real-time air quality information and help qualitatively track changes in air quality over time in different neighborhoods<sup>2</sup>. Data from the network of Clarity air quality sensors installed as part of the [Groundwork Richmond Air Rangers](#) project are the focus of the next few pages. A "heatmap" like the one shown on the next page is one way to visualize data at many locations over time and identify **pollution events and patterns**.

**PATH TO CLEAN AIR**

**Richmond (7th Street), 2011-2019**

Occurrences of higher air toxics

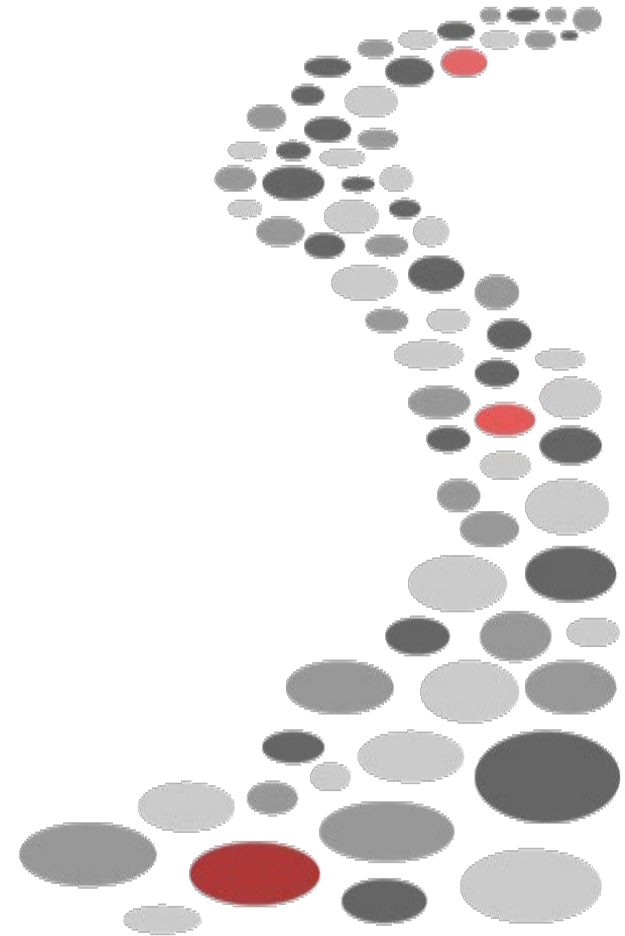
project<sup>3</sup>, are intended to provide bring project will use mobile bographic variability in air toxics

Screenshots from the Q1 2021 quarterly monitoring update

# What's Next for the Monitoring Plan



- Continue with data analyses
- Next quarterly update is expected by late June
- Data collection for Air District air toxics monitoring project
- Findings and confirmations will help inform the Community Emission Reduction Plan & other Air District efforts





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**AGENDA: 5**

**Consideration of AB 617 Richmond-North  
Richmond-San Pablo Community Emissions  
Reduction Plan Steering Committee Proposed  
Stipend for Co-Chairs**

**Community Equity, Health and Justice  
Committee Meeting  
May 6, 2021**

**Veronica Eady, Sr. Deputy Executive Officer  
veady@baaqmd.gov**



# Presentation Outcome



- Recommended Board Action to decide the proposed stipend for the Co-Chairs that will be selected by the Richmond-North Richmond-San Pablo (Path to Clean Air) Area Community Emissions Reduction Plan (CERP) Community Steering Committee.

# Background



- On March 3, 2021, the Bay Area Air Quality Management District Board of Directors voted to establish a 31-member community steering committee.
- On April 1, 2021, the Committee voted to approve the stipend amount set at \$100 per member.

# Background



The Steering Committee Co-Chairs will be responsible for:

- 1-2 orientation meetings with Air District staff.
- Presiding over Community Steering Committee meetings.
- Meeting multiple times per month with Air District staff to plan agendas and prepare for administering the Steering Committee meetings.
- Providing direction for Air District to develop Community Emissions Reduction Plan Report.
- Presenting for the Air District Board and Committees as needed.

# Requested Action



The Committee is requested to act on the recommendation:

Air District staff recommend that the stipend amounts for Co-chairs be set to \$300 per CERP Steering Committee meeting attended.



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AGENDA: 6

# Update on Transparent and Equitable Funding Expenditures and AB 617 Community Monitoring

Community Equity, Health and Justice Committee Meeting  
May 6, 2021

Greg Nudd  
Deputy Air Pollution Control Officer  
[gnudd@baaqmd.gov](mailto:gnudd@baaqmd.gov)

# Outcome



- Approval of Transparent & Equitable Funding Project.
- Committee and community learn about and provide feedback on community monitoring funding sources and expenditures.

# Requested Action



- The Committee is requested to act on the staff recommendation: Approve Transparent & Equitable Funding Project.
- Informational only: Community Monitoring Funding and Expenditures.

# Outline



Transparent & Equitable Funding Project

Community Monitoring Information Request

Funding Sources and Limitations

Community Monitoring Expenditures

County Level Expenditures

County Demographics

Improving Location Specific Data



# Transparent & Equitable Funding



- Respond to both the specific community requests and to the most recent memo prepared by Air District Board of Directors' Chair Chavez and Secretary Bauters.
- Set the groundwork for a more inclusive and participatory budgeting process for programs that benefit communities, especially inequitably burdened communities.
- Create a framework for including racial equity as a performance metric for Air District external funding programs.

# Transparent & Equitable Funding Scope



- Research current data availability regarding funding distribution.
- Make recommendations for improved data collection and tracking of funding distribution processes.
- Clearly communicate current AB 617 program budget and components.
- Describe and map funding distribution into communities with existing data.
- Assess and improve how funding opportunities are communicated to communities.
- Update maps and narrative as improve data collection process.

# Transparent & Equitable Funding Roadmap & Timeline



## Transparent & Equitable Funding Roadmap

Research	AB 617	Distribution	Opportunities
Fall 2020 – April 2021	February - June	February - August	March - October
Data Analysis	Narrative	Funding Sources	Needs Assessment
Constraints	Budget	CARE/Disadvantaged	Communication Plan
Recommendations	Community Monitoring	Black/AA Communities	Implementation

# Community Monitoring Request



- Sources of revenue, public and private received and used for community monitoring and affiliated work;
- Restrictions, limitations or other requirements placed on those funds.
- Whether the funding source is ongoing or one-time in nature;
- Expenditure by county and baseline population data.
- Type of expenditure made, e.g. capital investments, staff time, contract services, or operations & supplies.

# Funding Sources



## Community Air Protection Grants

Provided by state to implement AB 617.

~\$9 million/year.

## AB 617 Fee

Passed in June 2020. Applies to Title V facilities.

~\$1 million/year.

## Schedule X

Adopted in May 2016. Covers costs of Community Air Monitoring Program.

~\$1 million/year.

# Funding Limitations



## Community Air Protection Grants

- For AB 617 implementation.
- Steering committees, emissions reduction and monitoring plans, enforcement costs, air monitoring, reporting emissions, and BARCT.
- Staff, capital costs, and professional services.
- Have used funds to provide grants.

## AB 617 Fee

- For AB 617 implementation.
- BARCT and other AB 617-related rule making.
- Monitoring of stationary sources.
- Modeling, emissions inventory related to stationary sources.
- Staff, capital costs, and professional services.

## Schedule X

- For Community Monitoring Program.
- Evaluation of existing monitors, siting and designing new monitors, installing monitors, and data collection.
- Staff, capital costs, professional services, indirect costs.

# Expenditures



## Community Monitoring Expenditures, November 2016 – February 2021

Expenditure Type	Total Expenditures	Percent of Total Expenditures <sup>1</sup>
Capital Costs (equipment)	\$ 1.0 million	17%
Professional Services	\$ 3.4 million	57%
Staff Time	\$ 1.5 million	25%
Total	\$ 5.9 million	100%

Aclima = \$3.2 million, 55% of total

<sup>1</sup>Percentages may not add to 100 due to rounding.

# Expenditures by County



- Air District expenditures are not tracked by county.
- Most Air District expenditures, including for community monitoring, are currently tracked at the regional level.
- In July 2020, however, new billing codes were developed to track expenditures in West Oakland and Richmond-North Richmond-San Pablo.
- The hyper-local mobile monitoring work, contracted to Aclima, was billed by county, enabling reporting of some additional monitoring costs by county.
- *Data represents only the best information we have; county-level data is not a complete picture of total community monitoring expenditures by county.*



# Expenditures by County (cont.)



County	Monitoring Expenditures <sup>1</sup>	Percent of Total Expenditures
Alameda Labor Professional Services	\$ 440,000 N/A 440,000	7%
Contra Costa Labor Professional Services	\$ 621,548 181,298 440,000	10%
Marin/Sonoma Labor Professional Services	\$ 640,000 N/A 640,000	11%
Napa/Solano Labor Professional Services	\$ 640,000 N/A 640,000	11%
San Francisco Labor Professional Services	\$ 40,000 N/A 40,000	1%
San Mateo Labor Professional Services	\$ 280,000 N/A 280,000	5%
Santa Clara Labor Professional Services	\$ 760,000 N/A 760,000	13%
<b>Total</b>	<b>3,421,298</b>	<b>58%</b>

<sup>1</sup>County-level expenditures data represents the best information we have. Data is not a complete picture of total community monitoring expenditures by county

# County Demographics



	Total Population	White*	Black/ African American*	American Indian, Alaska Native*	Asian*	Native Hawaiian, Pacific Islander*	Two or More Races*	Hispanic or Latino (of any race)
<b>Alameda</b>	1,656,754	31.4%	10.3%	0.3%	29.9%	0.8%	4.5%	22.4%
<b>Contra Costa</b>	1,142,251	43.8%	8.4%	0.2%	16.5%	0.5%	4.7%	25.6%
<b>Marin</b>	259,943	71.2%	2.1%	0.2%	5.8%	0.1%	3.8%	16.0%
<b>Napa</b>	139,623	52.4%	2.0%	0.3%	8.0%	0.2%	2.6%	34.1%
<b>San Francisco</b>	874,961	40.5%	5.0%	0.2%	34.1%	0.3%	4.2%	15.2%
<b>San Mateo</b>	767,423	39.2%	2.2%	0.2%	28.3%	1.3%	4.0%	24.4%
<b>Santa Clara</b>	1,927,470	31.5%	2.3%	0.2%	36.3%	0.3%	3.6%	25.5%
<b>Solano</b>	441,829	38.0%	13.5%	0.3%	15.0%	0.9%	5.5%	26.5%
<b>Sonoma</b>	499,772	63.2%	1.5%	0.5%	4.0%	0.3%	3.3%	26.7%

Source: 2019 U.S. Census Bureau American Community Survey, 5-year estimates data profile

\*Not Hispanic or Latino

# Improving Location Specific Data



- As part of Air District's *Transparent & Equitable Funding Project*, staff is collecting additional data to demonstrate, where possible, expenditures by location.
- Will include all expenditures across all programs, not only community monitoring.
- All programs, including community monitoring, will be reviewed to determine if location data can be better tracked.

# Feedback Requested



- The Committee is requested to act on the staff recommendation: approve Transparent & Equitable Funding Project.
- Discussion of community monitoring funding sources, expenditures and improving location specific data going forward.



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AGENDA: 7

# **Assembly Bill (AB) 617 Fiscal Year Ending (FYE) 2022 Program Plan**

**Community Equity, Health and Justice Committee Meeting  
May 6, 2021**

**Greg Nudd  
Deputy Air Pollution Control Officer  
[gnudd@baaqmd.gov](mailto:gnudd@baaqmd.gov)**

# Outcome



Committee and community learn about and provide feedback on the Air District's initial plans for AB 617 work for Fiscal Year Ending (FYE) 2022.

# Requested Action



Information Only. No Action Requested.



AB 617 Overview

Regional Work

Designated Communities

New and Pending Designation

Future Program



# AB 617 Overview



- Originated in negotiations regarding the extension of Cap & Trade program
- Responds to advocates' concerns regarding high levels of air pollution in historically disadvantaged communities
- Directly addresses toxics and criteria pollutants in the most impacted communities
- Initial communities serve as statewide models

## AB 617 Communities Statewide



# AB 617 Overview (cont.)

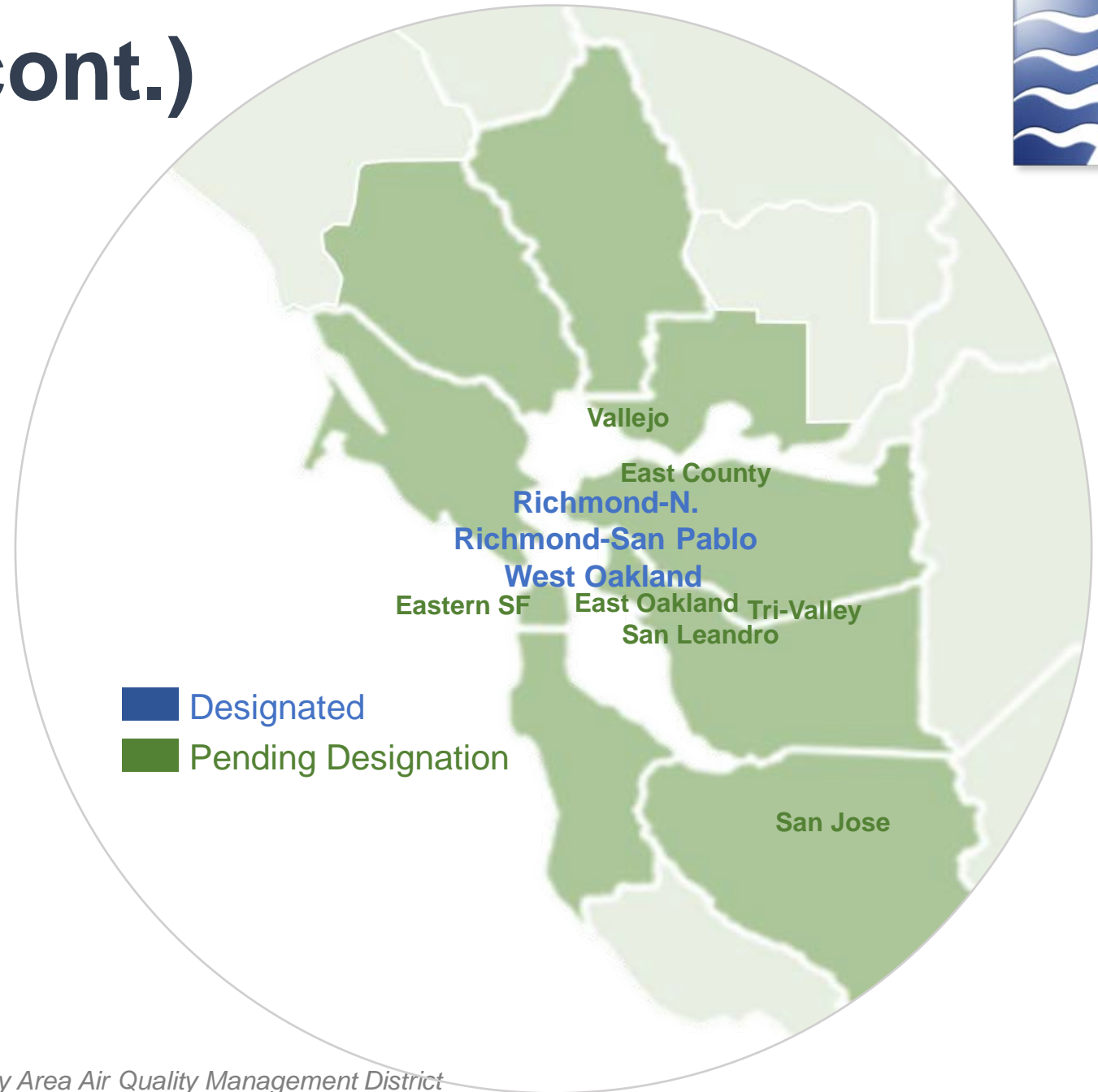


## Designated Communities

- West Oakland
- Richmond-North Richmond-San Pablo

## Communities Pending Designation

- East County (Contra Costa)
- East Oakland
- Eastern SF
- San Leandro
- San Jose
- Tri-Valley
- Vallejo



# AB 617 FYE 2022 Work Areas



Regional  
Work

Designated  
Communities

New  
Community

Communities  
Pending  
Designation

Future  
Program

# Regional Work



## Emissions

- Better understanding of PM<sub>2.5</sub> and toxics across all communities
- Better understanding of contributing sources of air pollution

## Planning

- Improved local government assistance
- Best practices: environmental justice general plan elements

## Monitoring

- Educational resources on monitoring and data interpretation
- Enhancement of mobile and portable monitoring capabilities
- Hyper-local monitoring data
- Emissions data from facilities

## Rules

- New Permitting Rule
- Refinery Heavy Liquid Leaks
- Organic Liquid Storage Tanks
- FCCUs
- Refinery Wastewater
- Dust: Construction/Concrete Batch Plants
- BUGs: Data Centers

# Designated Communities



## West Oakland

- *Owning our Air* Implementation
  - Annual Progress Report
- Enforcement Plan Implementation
  - Complaints, inspections, violations

## Richmond-North Richmond-San Pablo

- Implement Monitoring Plan
- Develop Community Emission Reduction Plan



## New Community Selection

- Community Selection Process
  - Criteria for selection
  - Community convenings
- Partner with New Community
  - Seat Steering Committee
  - Begin planning process

# Communities Pending Designation



## High Priority Communities

- Air quality fact sheets
- Hot Spots analysis
- Air Quality 101
- Interim community boundaries
- Major sources of air pollution
- Building capacity grants
- Community profile
- Inventory of planning efforts



## Future Program Ideas

- Develop and implement program with community:
  - Prioritization of work efforts
  - Community selection
  - Strategies
  - Implementation



# Next Steps



- Develop more detailed work program
- Estimate FYE 2022 program costs
- Report back with additional program and budget details

# Feedback Requested



## Discussion of AB 617 FYE 2022 Work Program