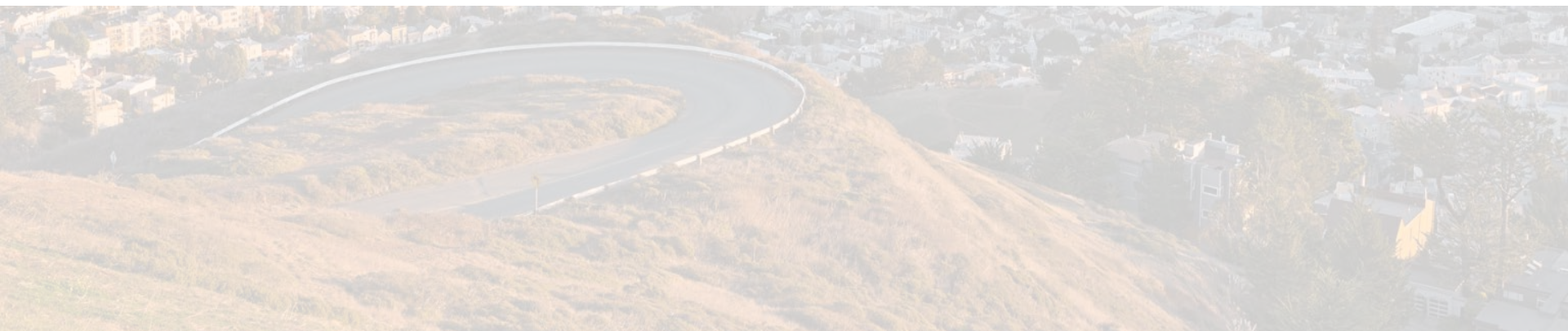


BARC Executive Director's Update

Allison Brooks, BARC Executive Director
BAAQMD Executive Committee Meeting
November 6, 2019



BARC Work Plan, 2020-2022

Resilient Bay Area

1. Advanced Adaptation Planning (SB1 Planning Grants)
2. Adapting to Rising Tides (ART) Bay Area
3. Horizon/Plan Bay Area: Integrating Sea Level Rise
4. Regional Adaptation Framework
5. Advocacy at State Level: Resilient Bay Area

Carbon-Free Bay Area

1. AB617 Implementation: Focus on Mobile Sources
2. Building Electrification

Achieving Racial Equity

1. Level Playing Field approach to Inter-Agency Projects
2. BARC and the Government Alliance on Race and Equity

Areas for
BARC/Air
District
collaboration

AB617 Implementation: West Oakland Community Action Plan

BARC Activities:

1. **Work with BAAQMD, MTC, and Local Steering Committee** to identify key action items for implementation that achieve local & regional goals.
2. **Support implementation** through:
 - Funding, grants
 - Added Institutional capacity, staffing & project management

Relevant Agency Planning Goals



Plan Bay Area 2040

- Meet increased regional GHG target of **19% reduction in per capita passenger vehicle GHG emissions by 2035** (Climate Protection, SB 375 2018 update)
- **Reduce adverse health impacts** associated with air quality, road safety and physical inactivity by 10%. (Healthy and Safe Communities)
- **Increase non-auto mode share by 10%**. (Transportation System Effectiveness)



Clean Air Plan

- **Promote the use of clean fuels and low- or zero-carbon technologies** in trucks and heavy-duty equipment. (ES/4-6)
- **Reduce motor vehicle travel** by promoting transit, bicycling, walking and ridesharing. (ES/4-6)
- Direct new development to areas that are **well-served by transit, and conducive to bicycling and walking**. (ES/4-6)

AB617 Implementation: Activities to Date

- Leadership from MTC/ABAG and BAAQMD helped form initial cross-agency work team. Focus on moving from plan to implementation:
 - How to support Local Steering Committee, help enhance local capacity
 - Need for coordination across agencies to develop unified strategy, use resources effectively
- BARC staff attending Local Steering Committee meetings

Building Electrification

BARC Activities:

1. In collaboration with Air District staff, BARC staff are co-managing the development of a **Local Government Building Decarbonization Toolkit** to be launched in early 2020.
2. Phase 2 of the project will focus on **assisting specific local governments** in adopting decarbonization strategies (e.g., model ordinances, reach codes).

Relevant Agency Planning Goals



Clean Air Plan

- **Switch from natural gas to clean electricity, or other renewable energy**, for space and water heating, clothes drying, cooking, and other domestic uses. (ES/3)
- **Promote energy and water efficiency in both new and existing buildings.** (ES/4-6)



Thank You!

Allison Brooks
Executive Director, BARC
November 6, 2019



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

Particulate Matter (PM) Health Protection Symposium

(Advisory Council Meeting of October 28, 2019)

*Presentation to Executive Committee,
Board of Directors*

By BAAQMD Advisory Council

November 6, 2019



PM Focus: Context

- Following three years of **intense wildfire smoke**, focus on **reducing diesel PM** emissions, and conclusion that PM is overwhelming **health risk driver** in Bay Area air
- Air District asked Advisory Council to **focus on PM**
- Provide Advisory Council's take on **latest and best science**, in science-affirming way
- **Assist Air District** to identify further PM measures that would most move public health needle, especially in most impacted communities



PM Symposia: Overview

- Convened by Advisory Council as **series of meetings**
- Engage **nationally-recognized experts**, including leading experts previously engaged at the Federal level
- **Support Air District** in identifying health-focused “target” guidelines based on latest science, beyond standards already in effect
- Facilitate **Advisory Council feedback** on Air District planning
- Include **local stakeholders**
- Provide **national leadership**

Key Points

- The National Ambient Air Quality Standard (NAAQS) Science Review Process Worked Well Until 2017
- EPA Administrators Pruitt and Wheeler Have Broken the Process
- Particulate Matter Science Review By the EPA Clean Air Scientific Advisory Committee (CASAC) is Highly Deficient: Appropriate to Look Elsewhere
- Disbanded CASAC PM Review Panel Reconvened Itself
- Key Findings of the Independent Particulate Matter Review Panel



Particulate Matter: Spotlight on Health Protection



BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

Date: Oct. 28, 2019 Time: 9:00 am - 4:45pm Advisory Council Chair: Mr. Stan Hayes Facilitator: Jeff McKay

Agenda Items

8:30 AM	Registration/Coffee and light breakfast	Atrium
9:00 AM	Welcome	Board Room
9:25 AM	PM Health Effects Panel	Board Room
11:05 AM	Break	Atrium
11:15 AM	Joint Discussion: Health Effects Panel	Board Room
12:00 PM	Lunch with Keynote Speaker – Former EPA Administrator Gina McCarthy	Yerba Buena
1:15 PM	PM Exposure & Risk Panel	Board Room
2:55 PM	Break	Atrium
3:10 PM	Joint Discussion: Exposure & Risk Panel	Board Room
4:00 PM	Advisory Council Deliberation	Board Room

Additional information

This is a meeting of the BAAQMD Advisory Council.

Public comment will take place during welcome remarks.

For ADA related assistance, please contact Areana Flores at aflores@baaqmd.gov.

375 Beale Street, Suite 600, San Francisco, California 94105 • 415.749.5000 • baaqmd.gov



Particulate Matter:

Spotlight on Health Protection

- ~160 registrants
- 2 panels
 - PM Health Effects
 - PM Exposure & Risk
- 9 leading experts

Gina McCarthy

- **Former EPA Administrator**
- Finalized the Clean Power Plan and the Clean Water Rule
- Professor of the Practice of Public Health in the Department of Environmental Health at Harvard T.H. Chan School of Public Health
- Director of the Center for Climate, Health, and the Global Environmental
- Member of the Board of Directors of the Energy Foundation and Ceres
- M.Sc. in Environmental Health Engineering, Planning and Policy from Tuft's University





Jason Sacks, M.P.H.

- Senior Epidemiologist in the Center for Public Health & Environmental Assessment within U.S. EPA's Office of Research and Development
- **Assessment lead for the Particulate Matter Integrated Science Assessment (Draft PM ISA)**
- Key leadership roles in synthesizing the health effects evidence of air pollution for various National Ambient Air Quality Standards reviews
- International training on U.S. EPA's Environmental Benefits Mapping and Analysis Program – Community Edition
- M.P.H. from Johns Hopkins University in 2003



Michael Kleinman, Ph.D.

- UC Irvine Professor of Environmental Toxicology
- Co-Director of the Air Pollution Health Effects Laboratory in the Department of Community and Environmental Medicine
- Adjunct Professor in College of Medicine
- **Serves on the Air District Advisory Council**
- Ph.D. in Environmental Health Sciences from New York University
- **CA Scientific Review Panel on Toxic Air Contaminants; CA Air Quality Advisory Committee**



John R. Balmes, M.D.

- Professor of Medicine at UC San Francisco
- Professor of Environmental Health Sciences in the School of Public Health at UC Berkeley
- Director of the Northern California Center for Occupational and Environmental Health
- Authored over 300 papers on occupational and environmental health-related topics
- **Physician Member of the California Air Resources Board**



H. Christopher Frey, Ph.D., F. A&WMA, F. SRA

- Glenn E. Futrell Distinguished University Professor of Environmental Engineering in the Department of Civil, Construction, and Environmental Engineering at North Carolina State University
- Adjunct professor in the Division of the Environment and Sustainability at the Hong Kong University of Science and Technology
- Fellow of the Air & Waste Management Association and of the Society for Risk Analysis
- Ph.D. in Engineering and Public Policy from Carnegie Mellon
- **Former Chair/Member, EPA Clean Air Scientific Advisory Committee (CASAC)**
- **Former Chair/Member, 10 different CASAC NAAQS Review Panels**
- **Chair, Independent PM Review Panel**



Lauren Zeise, Ph.D.

- **Appointed by Gov. Brown as Director of the California Office of Environmental Health Hazard Assessment in December 2016**
- Former Chief of the cancer unit at the California Department of Health Services
- Leading role in OEHHA's development of CalEnviroScreen
- Co-led the team that developed the hazard trait regulation for California's Safer Consumer Products program
- Member, fellow, former editor, and former councilor of the Society for Risk Analysis
- 2008 recipient of the Society's Outstanding Risk Practitioner Award
- Ph.D. from Harvard University



Julian Marshall, Ph.D.

- **Kiely Endowed Professor of Environmental Engineering at University of Washington with a focus on air quality management**
- Founded and runs the Grand Challenges Impact Lab, a UW study abroad program in Bangalore, India
- Associate Editor for Environmental Health Perspectives and Development Engineering
- Published over 100 peer-reviewed journal articles
- Ph.D. in Energy and Resources from UC Berkeley



Scott Jenkins, Ph.D.

- Senior Environmental Health Scientist in EPA's Office of Air Quality Planning and Standards (OAQPS)
- **Currently leading EPA's review of the National Ambient Air Quality Standards (NAAQS) for Particulate Matter (PM)**
- Howard Hughes Postdoctoral Research Fellow in the Department of Cell Biology at Duke University
- Ph.D. in Behavioral Neuroscience from the University of Alabama at Birmingham



Phil Martien, Ph.D.

- **Director of the Assessment, Inventory, & Modeling Division at the Bay Area Air Quality Management District**
- Leading role in the Technical Assessment of AB617's West Oakland Community Action Plan
- Leading role in the Technical Assessment of the Air District's 2017 Clean Air Plan: Spare the Air, Cool the Climate
- Leading role in the Air District's Community Air Risk Evaluation Program
- Ph.D. from UC Berkeley



**PM Health Effects
Panel**



**PM Exposure & Risk
Panel**

**Advisory Council Discussion with
Experts**

BAAQMD's Questions

Example Response

- Are current PM standards sufficiently protective? **Emphatic NO – definitely not for PM_{2.5}.**
- How has the PM health evidence been strengthened? **Better “exposure” models, much larger study populations at much lower levels than before.**
- What new health effects are now recognized? **Strengthening of some causality determinations, but largely the focus is still premature mortality, respiratory morbidity, and cardiovascular morbidity.**
- New endpoints like cancer and central nervous system effects? **Opinions differ.**
- New sensitive groups, like children and lower socioeconomic status, SES, populations? **Growing recognition of “at risk” groups.**
- Are all types of PM equal? **Probably not.** Or, are some more dangerous than others? **Probably. But, more work needed. No components are as yet ‘exonerated.’**
- How severe are PM health risks? **Premature mortality is severe.**
- What additional health benefits can be achieved by further reducing PM to below current standards? **Difficult to quantify with certainty but on the order of tens of thousands of deaths nationally.**

Discussion Questions (EXAMPLE, DO NOT CITE)

Are current PM standards sufficiently health protective?

NOT PROTECTIVE, STANDARDS SHOULD BE LOWERED

Are some species of PM more dangerous than others?

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

What is role of ultrafine particles (UFPs)?

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

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)?

NEW HEALTH EFFECTS AND GROWING RECOGNITION OF “AT RISK” GROUPS IMPORTANT (SUCH AS 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 IN EARLY STUDIES, OTHER STUDIES ONGOING, MORE RESEARCH NEEDED



Advisory Council: Initial Deliberation

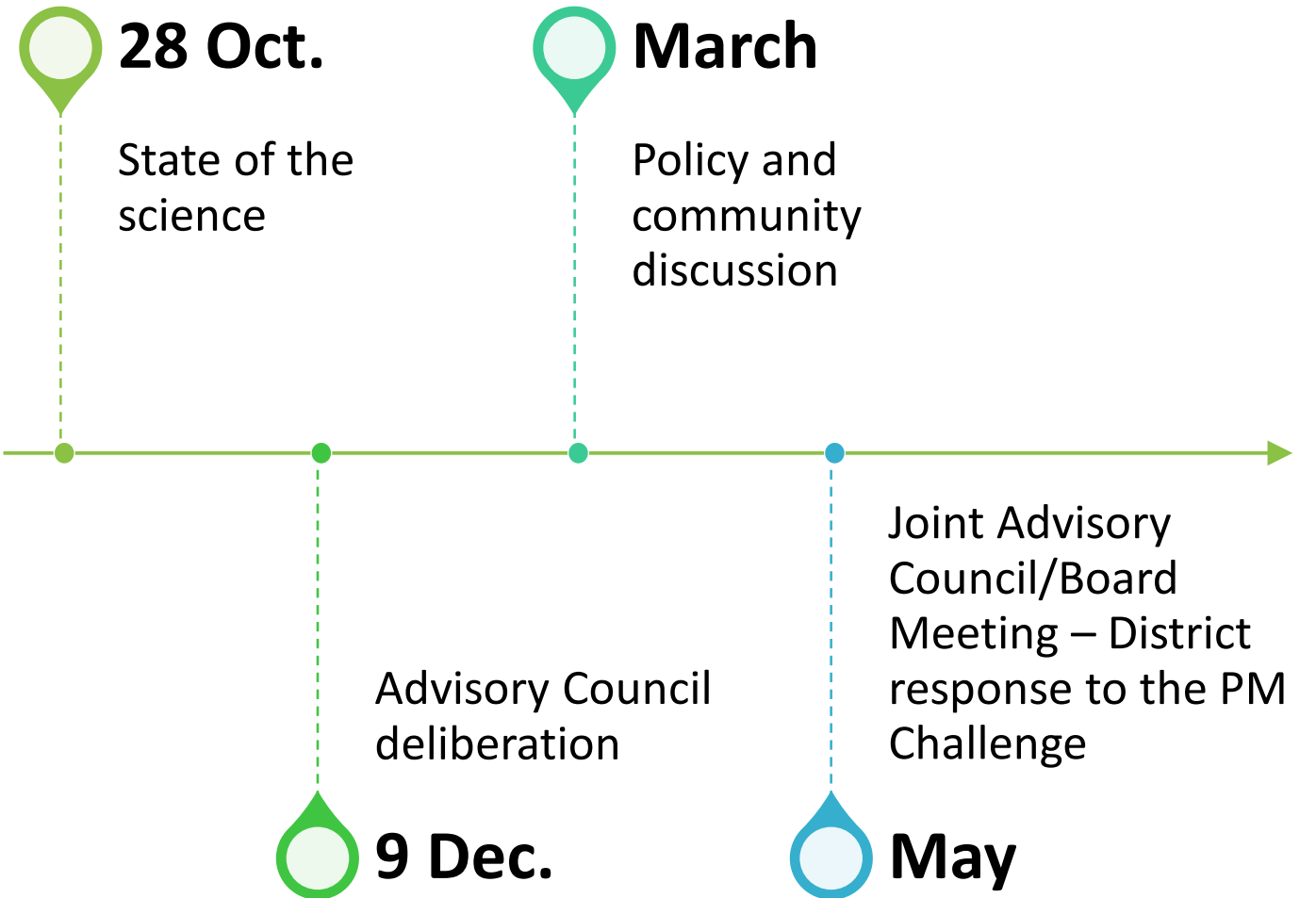
Sense of the Council

- The current standards are *not adequately health protective*.
- Further reductions in PM will realize significant *additional health benefits*.
- We need *more science, and we should act*.

Further Exploration

- Treating PM as an *air toxic*
- Expanded monitoring of *UFP*
- Health effects of *acute PM exposures*, e.g., wildfire smoke
- Identifying *PM species* that are particularly dangerous
- Assisting District in identifying strategies having *“highest bang for buck”* for health protection
- Pursuing strategies that have *climate and other co-benefits*

PM Symposium Series





Assembly Bill (AB) 617 Implementation: Update and Next Steps

Executive Committee Meeting
November 6, 2019

Elizabeth Yura
Community Engagement & Strategic Policy

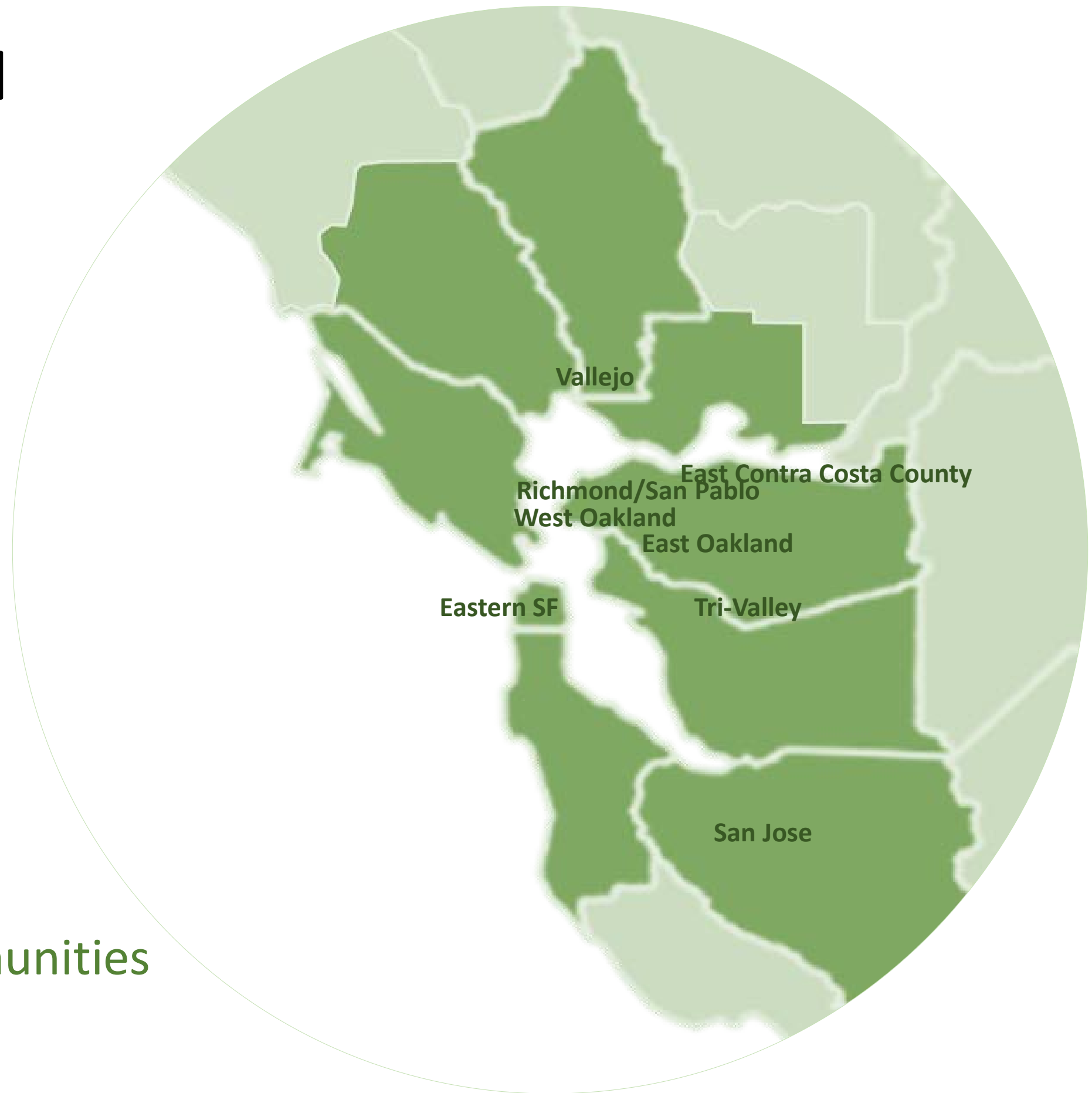
2019 Accomplishments

- Completed West Oakland Community Action Plan
- Working towards draft Richmond-San Pablo Monitoring Plan
- Began initial screening monitoring
- Distributed \$350 thousand for building capacity to high priority AB 617 communities
- Distributed \$59 million in mobile incentives since 2017



AB 617 2020: Regional

- Environmental Justice Working Group
- Rulemaking
- Criteria & Toxics Rule Reporting
- Inter-Governmental Coordination
- Regional Modeling and Monitoring
- Incentives to AB 617 communities



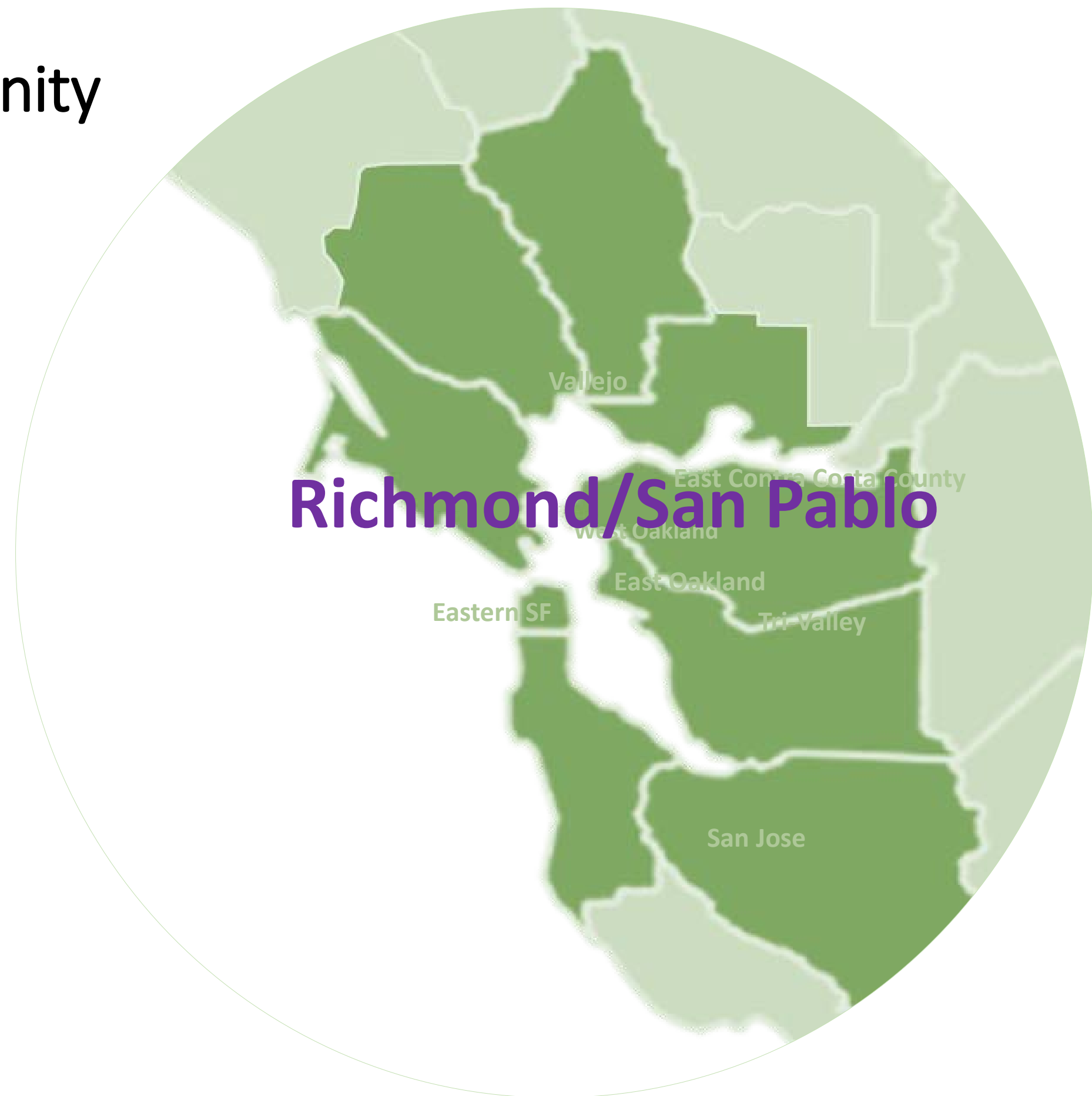
AB 617 2020: Community

- Implement Plan
- Collaborate with Port
- Track progress
- Update local emissions
- Track health indicators



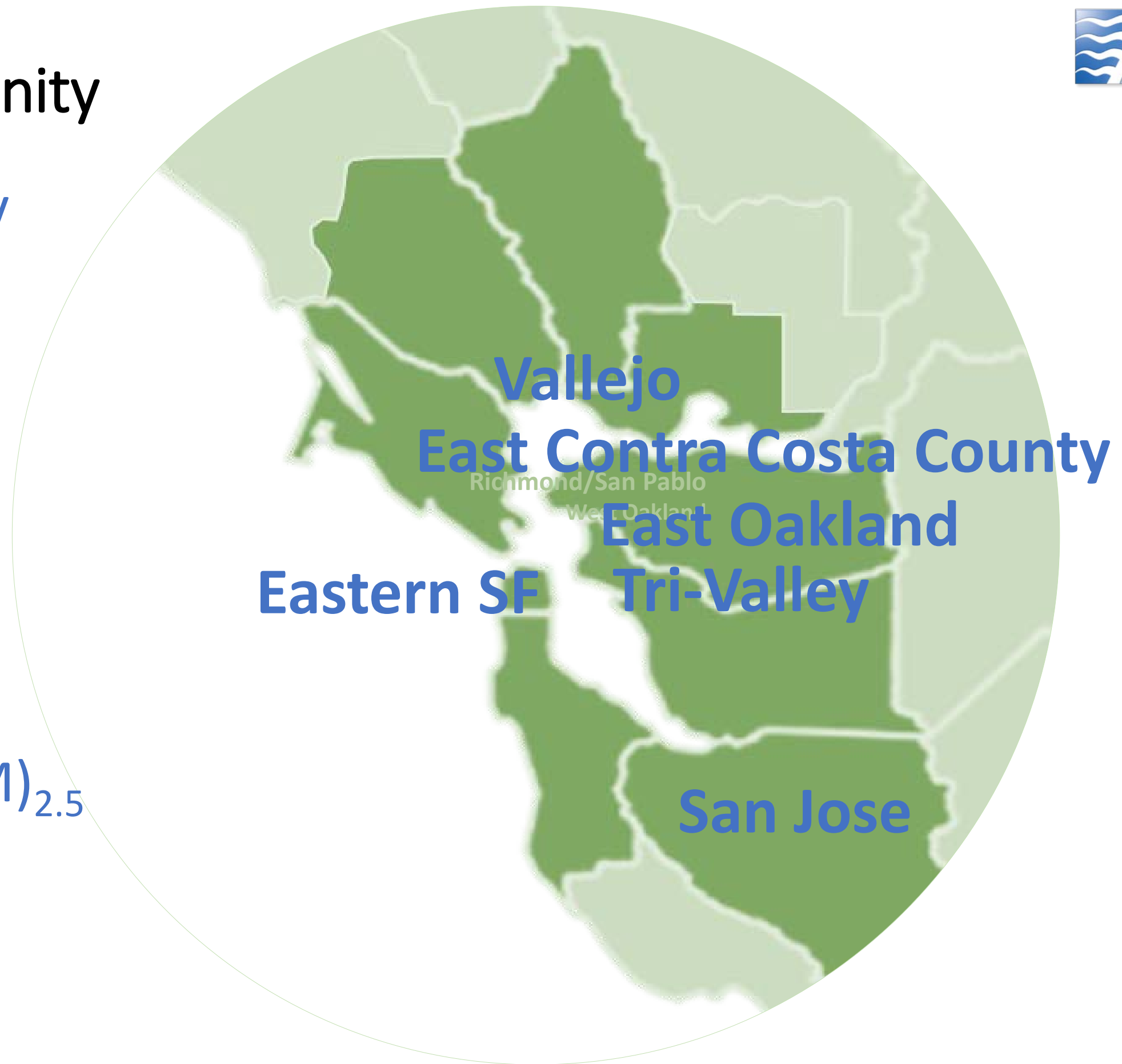
AB 617 2020: Community

- Develop and implement Monitoring Plan
- Evaluate new monitoring data
- Act on immediate strategies
- Pre-selection Community Emission Reduction Program (CERP) work
- Verify and validate emissions
- Review land use data
- Gather and track health data



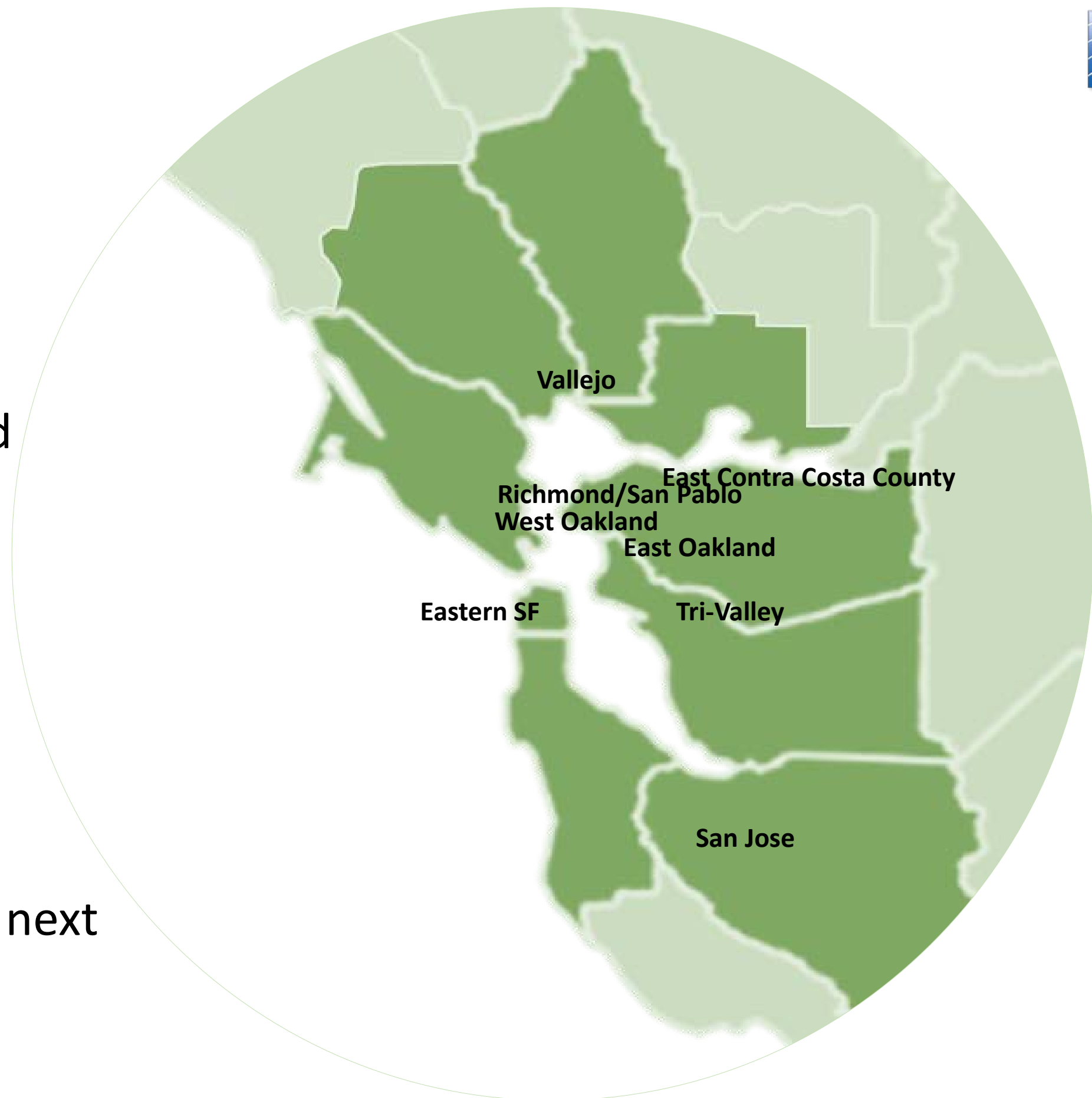
AB 617 2020: Community

- Implement community grants
- Build relationships
- Complete needs assessments
- Estimate drivers of particulate matter (PM)_{2.5} exposure
- Review land use data



Next Steps in Program Management

- Develop workplan for AB 617 Program
- Adjust staffing levels as needed
- Determine the level of effort possible with existing state funding
- Incorporate workplan into planning for next budget cycle
- Determine funding request for next Legislative session



Fiscal Year Ending (FYE) 2020 Staffing Augmentation



Executive Committee Meeting
November 6, 2019

Jack P. Broadbent, Executive Officer/APCO



FYE 2020 Staffing Augmentation



AB 617 Support



Restore and maintain our core programs



Management Reorganization



+ 10 Additional Staff



FYE 2020 Staffing Augmentation

Work Unit	Number of Staff	Funding Source	Budget Impact
Enforcement	2	Fee Recoverable	\$366,000
Engineering	2	Fee Recoverable	\$366,000
Executive Office	1	General Fund	\$183,000
Rules	1	Fee Recoverable	\$183,000
Planning	2	AB 617	\$366,000
Communities	2	AB 617	\$366,000
	10		\$1,830,000



FYE 2020 Staffing Augmentation

- 2.4% of total FYE 2020 Staffing Budget
- 1.5% of FYE 2020 General Fund Budget
- Will require continuance of Cost Recovery Policy