

Improving Neighborhood Air Quality



AB 617: Community Health Protection Program

Elizabeth Yura
Community Health Protection Officer
Executive Committee
July 23, 2018

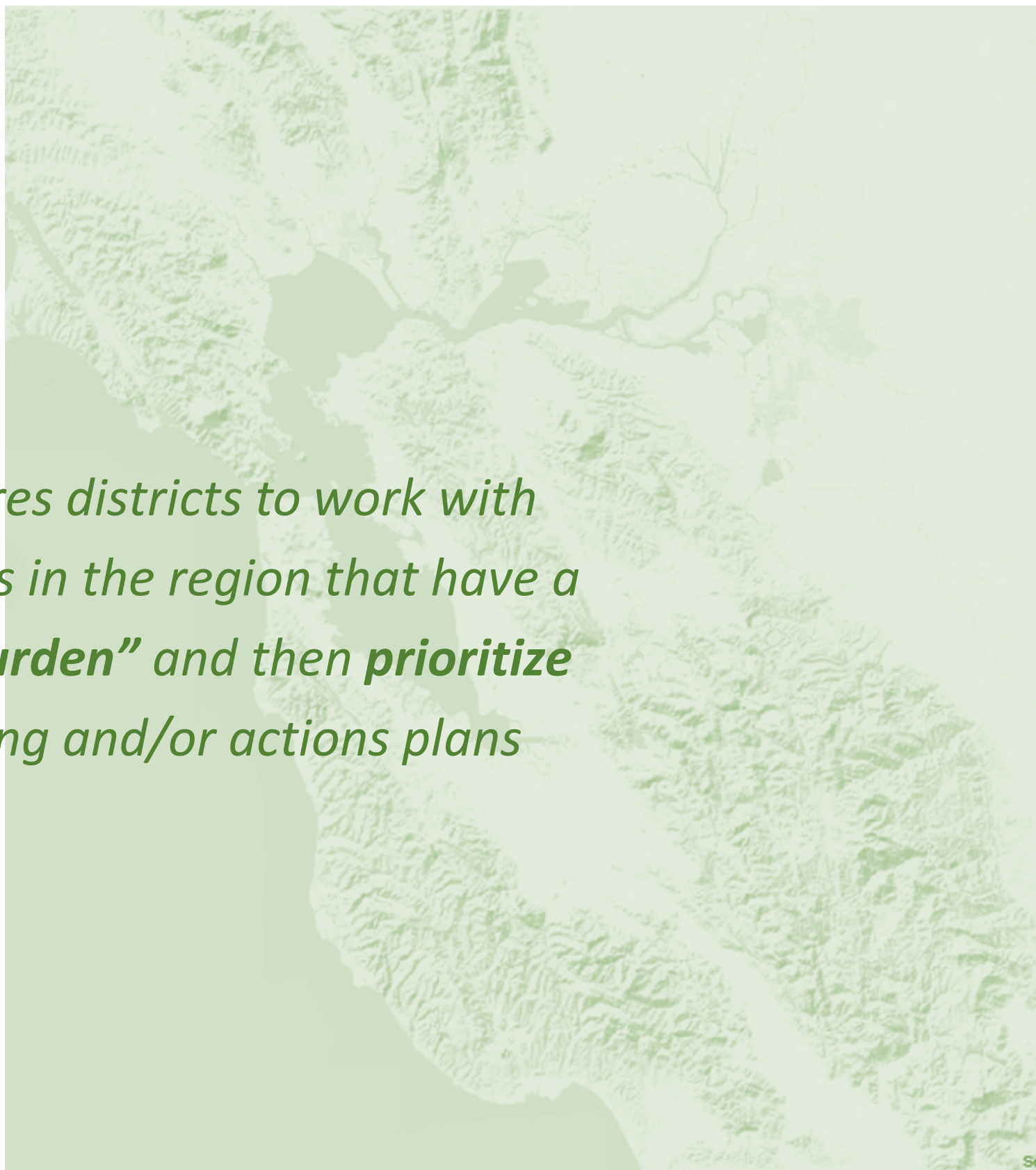
- 
- 1 AB 617 Overview
 - 2 Spring Workshops
 - 3 Community Recommendations
 - 4 What's Next

1 AB 617 Overview

- Originated in negotiations of Cap & Trade Program (AB 398)
- Responds to concerns with continued high levels of air pollution in local communities
- Directly addresses toxics and criteria pollutants in the most impacted communities

2 AB 617 Overview

*Under AB 617, the state requires districts to work with communities to select all areas in the region that have a “**high cumulative exposure burden**” and then **prioritize** areas for community monitoring and/or actions plans over the next 6 years.*



1 AB 617 Overview

- Community Participation
- Eliminate Air Quality Disparities
- Reduce Health Burdens
- Continuous Evaluation and Improvement

2

What is AB 617

Community Input

Available Information



Select All Communities



Prioritize Communities



Monitoring

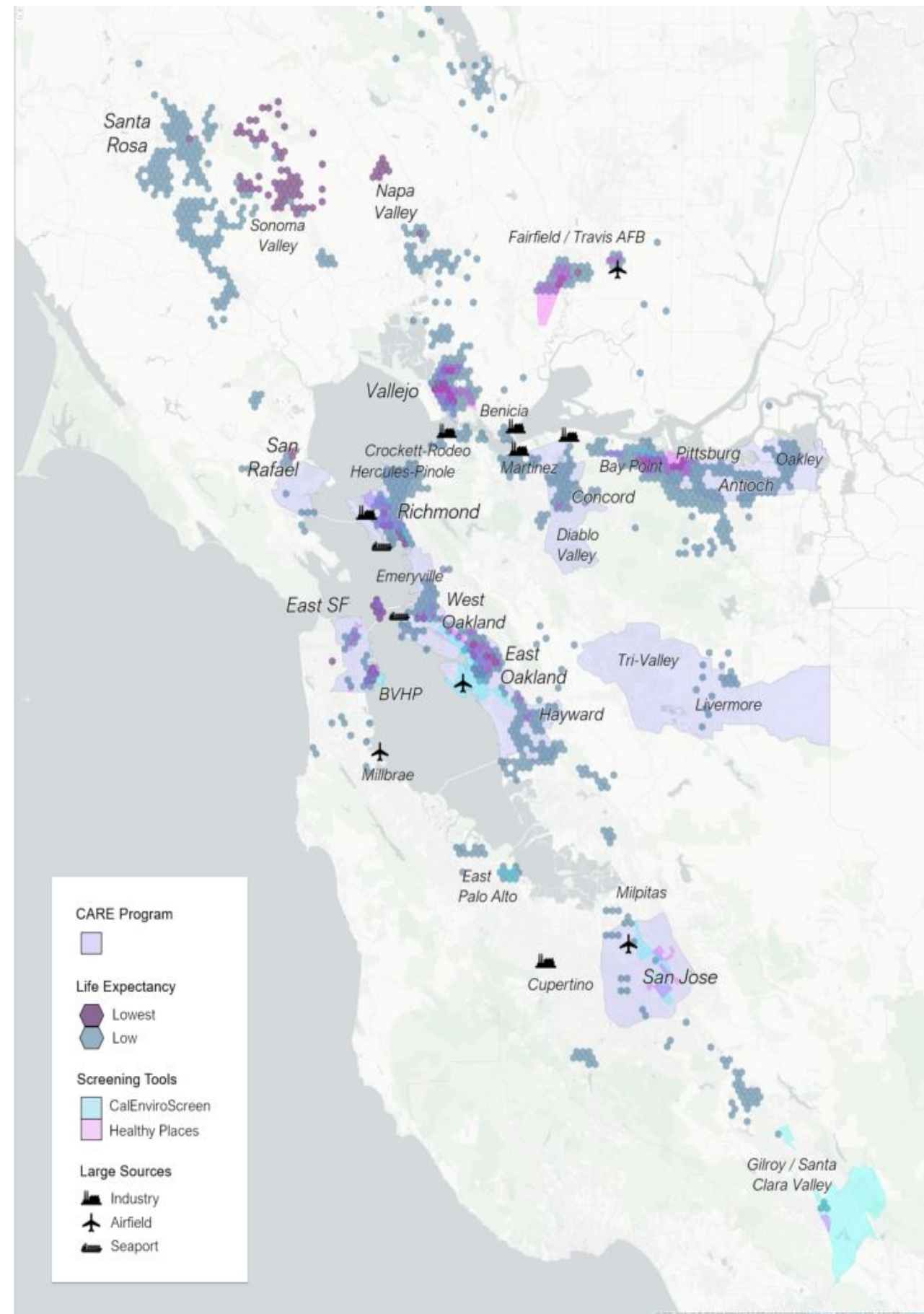
and/or

Action Plan

AB 617 requires state to select additional communities for monitoring and/or action plans annually, beginning Oct 2019

AB 617 Overview

- CARE
- Areas with large sources
- Areas with health and pollution impacts
- Areas with low life expectancy



2

Spring Workshops

Workshops held from Jan 31 through June 20th

- Discussed how to select ALL AB 617 Communities
- Local sources of pollution and impacts on community
- Criteria for prioritizing communities
- Incentives for mobile sources of pollution

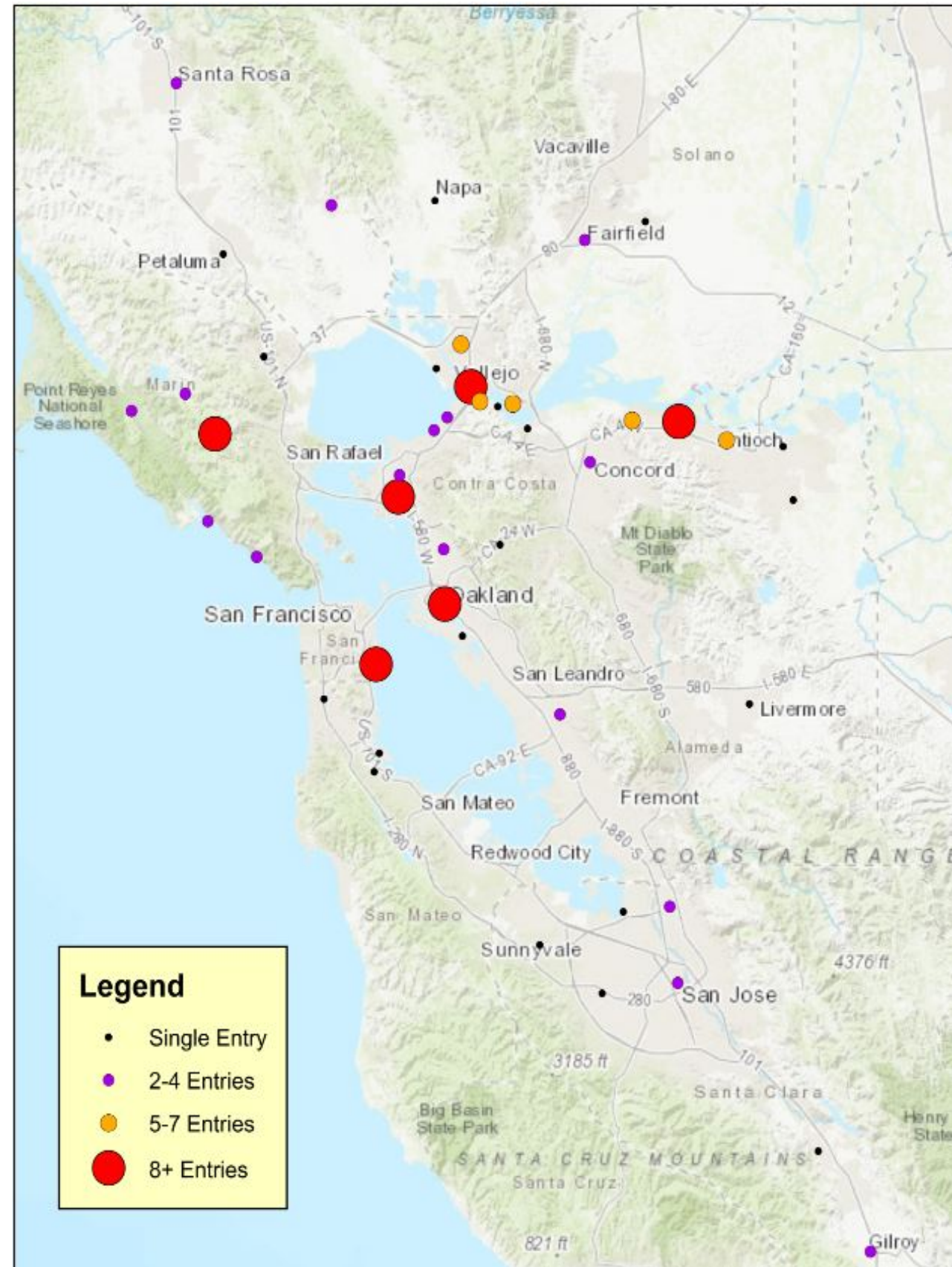
Consider communities with:

- Refineries and other large facilities
- Woodsmoke
- Odors
- Multiple transportation sources
- History of contamination, violations, or environmental injustice

Spring Workshops

Community Priorities:

- Marin, due to concerns over woodsmoke
- West Oakland
- Richmond
- Pittsburg-Bay Point area
- Vallejo
- East San Francisco



3 Community Recommendations

Criteria Used to Prioritize Communities

Air Quality

Fine particles
Toxics

Health

Life expectancy
Lung disease
Heart disease

Other

Known sources
Air quality data
Previous planning
Collaboration
Capacity

3

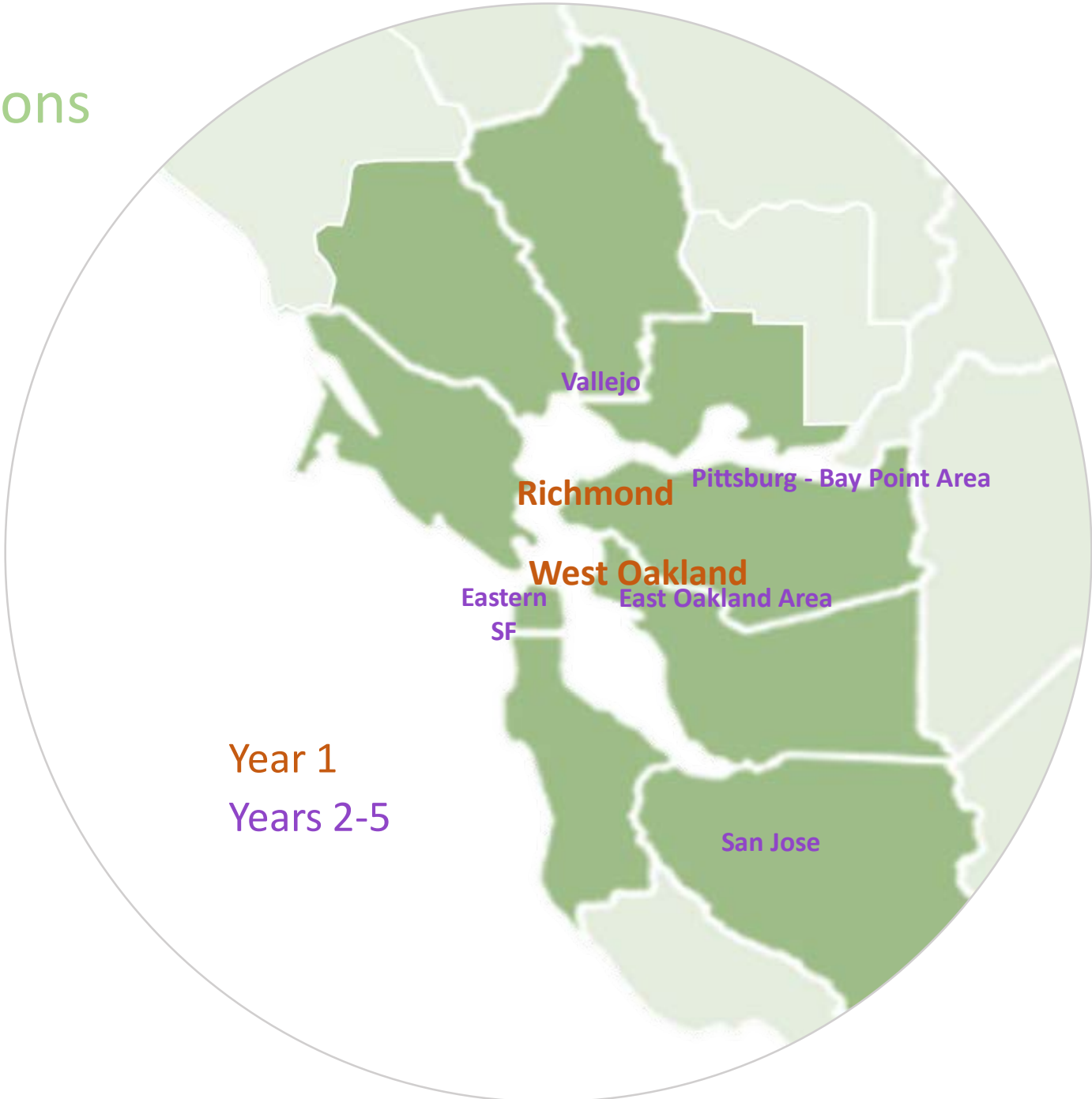
Community Recommendations

Year 1

West Oakland – action plan

Richmond – monitoring plan

Public comment period July 5 through July 16; some comments received



West Oakland

Action Plan

- Very high mobile source emissions
 - Port of Oakland largest single source of DPM
 - Roadways contribute significantly to PM_{2.5}
- High health burden
- High socio-economic vulnerability
- Concerns about new development at Port of Oakland and Oakland Army Base
- Goal of zero emissions environment
- Leverage previous and ongoing collaboration and research

Richmond

Monitoring Plan

- High emissions from stationary and mobile sources
 - Refinery, chemical plant, landfills, water treatment facility, metal scrapping, marine terminals, freeways, port
- High health burden
- High socio-economic vulnerability
- Regional monitoring data are not consistent with observed health issues
- More monitoring to evaluate which sources may be contributing to issues
- Leverage ongoing data analysis and monitoring work

Other Large Source Communities

Actions

- New refinery rules to require fence line monitoring and emissions tracking, Rule 12-15
- Reduce health risks from facilities that have the highest health impacts, Rule 11-18
- Further emissions reductions through improved control technology – BARCT
- Review new permitting practices to further reduce local emissions and exposure
- Mitigate health risks from new and modified sources, Rule 2-5

Woodsmoke Communities

Actions

- Provide additional incentives toward replacement of older wood-burning devices for cleaner heating alternatives
- Consider additional strategies to strengthen wood burning rule (Rule 6-3) and enforcement

Landfill/Organics Communities

Actions

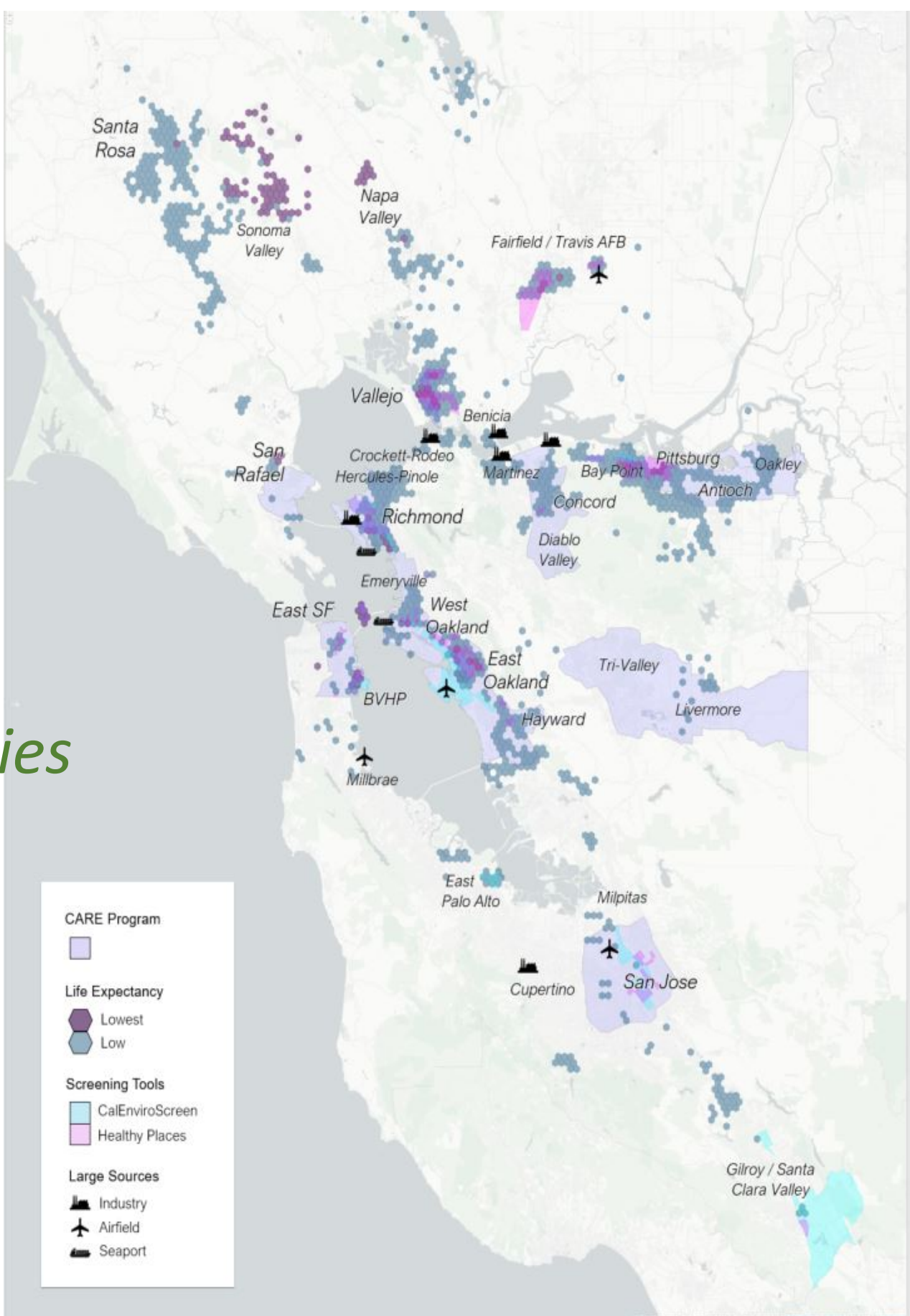
- Develop new regulations that support the District's Organics Recovery Strategy to ensure best practices and limit emissions in the growing organic waste sector
 - Compost Operation
 - Organics Material Handling
- Amend odorous substances regulation (Regulation 7) to help strengthen odor standards and enhance enforceability of the rule
- Develop basin-wide methane strategy to better quantify and reduce methane emissions
- Mitigate health risks from new and modified sources, Rule 2-5

What's Next

- Work with communities to prepare for action and/or monitoring plans
- Establish community partnerships and relationships
- Develop a shared understanding of local air quality and other related concerns
- Community-led sensor program

What's Next

Funding available to all identified AB 617 communities



What's Next

Last Year (FY2017/18)

- \$50 million to Bay Area for local emission reduction projects: clean trucks, buses, locomotives, construction and agriculture equipment
- Over \$1 million to Bay Area communities for technical assistance

This Year (FY2018/19)

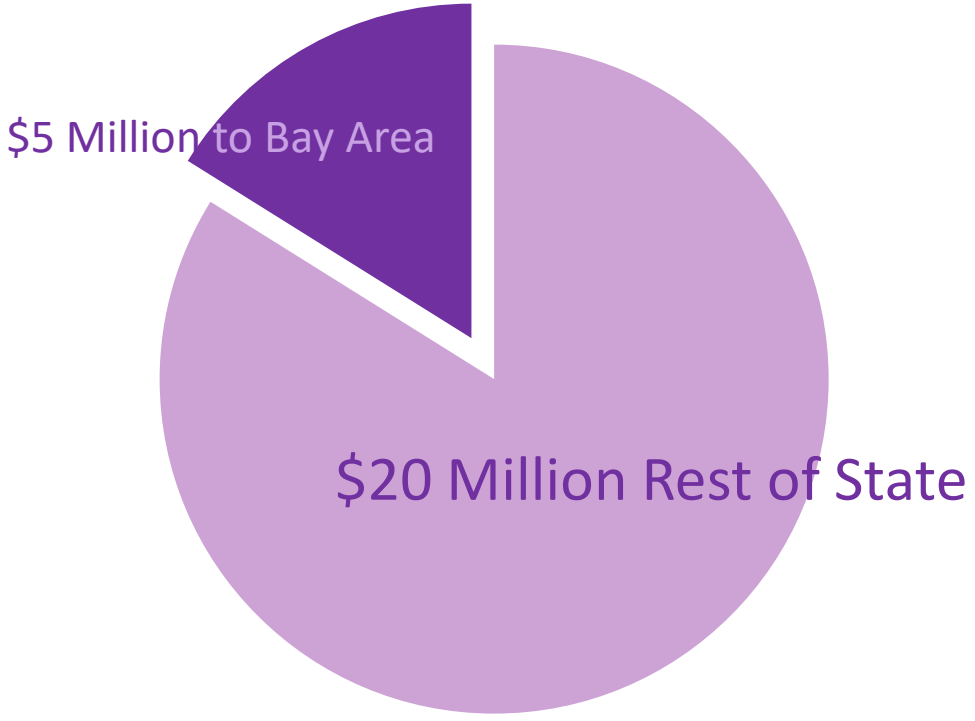
- Approximately \$50 million to Bay Area for mobile and stationary source emission reduction projects as well exposure reduction measures
- Up to \$10 million statewide for technical assistance

4

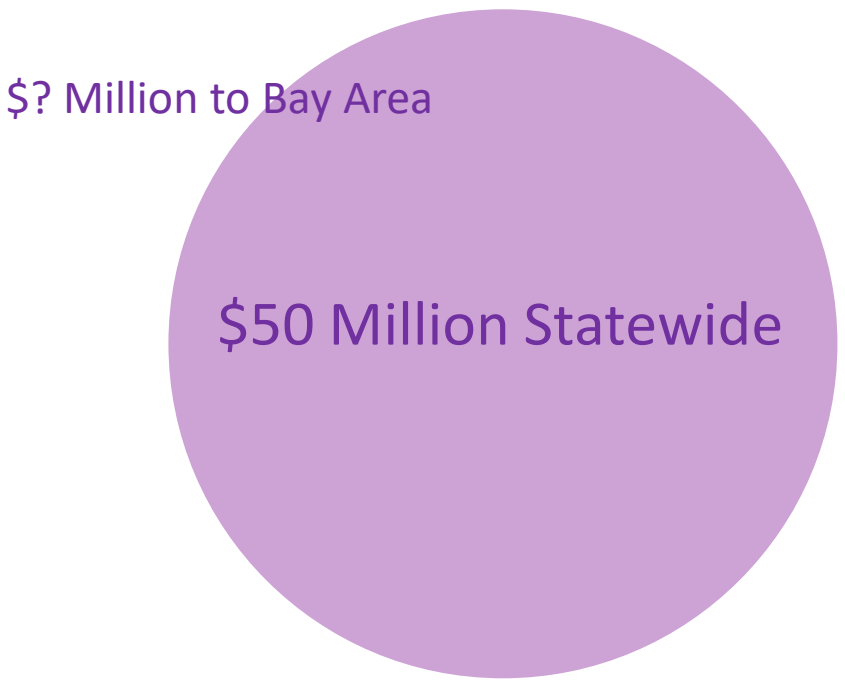
What's Next

Air District Resources

FY 2017/18



FY 2018/19



A stylized illustration of a community scene in shades of green. It features houses, trees, a sun, birds, and various people: two adults walking, a child on a bicycle, a person with a cane, and a stroller. The scene is set against a background of a wavy green line.

Recommended Action: Staff recommends that the Board of Directors approve the Year 1 -5 communities for the state's Community Air Protection Program.



Update on the Governor's Global Climate Action Summit

Executive Committee Meeting

July 23, 2018

Lisa Fasano

Communications Officer

Summit Update

- Finalization of *Statement of Purpose*
- Recruiting Signatories
- Status of the event
- Requests for Board Members

Contractor Effort

- O'Rorke
 - Event logistics
 - Securing speakers
- California Strategies
 - Government pitch talking points
 - Strategy for additional signatories

Statement of Purpose

- Finalized *Statement of Purpose*
 - Document highlights the challenge
 - Key component is sharing ideas
 - Sets framework for potential future meetings
- Diesel Free by '33 Website is live
 - Industries, Governments, Mayors can sign on-line
 - Includes background, event info

Recruiting Signatories

- Targeting CA, US & int'l local elected officials; Bay Area employers that use or supply diesel equipment
- Sent to Bay Area Governments with letter from Jack
- Presented to MTC/ABAG Board committees
- Current signers: the Mayors of Berkeley, San Jose, Newark, Mountain View, Saint Helena, and Benicia

Status of the Event

Title: *United Against GHGs: Diesel-free by '33*

Date: Wednesday, September 12, 2018

Format: Speakers in Yerba Buena & Board Rooms

- Daylong event
- Lunch provided
- Networking reception

Participants: 280+

Event Agenda

- | | |
|---------|--|
| 9:00am | Welcome and Keynote Address |
| 10:00am | Lobby group photo op w/keynote |
| 10:15am | Break |
| 10:30am | Panel on integration of diesel/health/climate
(Community leader, health expert, local elected official) |

Event Agenda cont.

- 11:00am Signing ceremony, media event
- 12:00pm Networking Lunch
- 12:45pm “Making It Happen” (concurrent sessions)
- Session 1: Show Me the Money*
- funding, financing for reducing diesel
 & GHGs
- Session 2: Show Me My Options*
- technologies, policies for reducing diesel
 & GHGs

Event Agenda cont.

- | | |
|--------|--|
| 2:00pm | Break |
| 2:15pm | “Making It Happen” sessions repeat (with new speakers) |
| 3:30pm | UN Association Video |
| 3:45pm | Youth Speakers |
| 4:00pm | Afternoon Keynote |
| 4:50pm | Networking Reception |

Recommend the Board of Directors:

- Sign the Statement of Purpose
- Encourage your elected colleagues to sign

Technology Implementation
Office (TIO) Update and
Summary of Steering Committee
Meeting



Executive Committee Meeting
July 23, 2018
Derrick Tang, Manager

Stationary Incentive Program



Goal: To reduce GHG emissions from regulated facilities

- As outlined in 2017 Clean Air Plan

Approach:

1. Identify low-cost technologies for facilities to reduce operating costs and emissions
 - Assess technologies and connect them with facilities
2. Provide low-cost financing to accelerate technology implementation
 - Run pilot program while minimizing risk

Stationary Incentive Program: Connecting technologies and customers



Technology Developers
and Companies



TIO Value: TECHNOLOGY EVALUATION, MATCHMAKING, and FINANCING

Technology Assessment Goal



To have an updatable tool to guide Air District's matchmaking and incentives that evaluates:

Impact

- GHG emissions reductions
- Economics

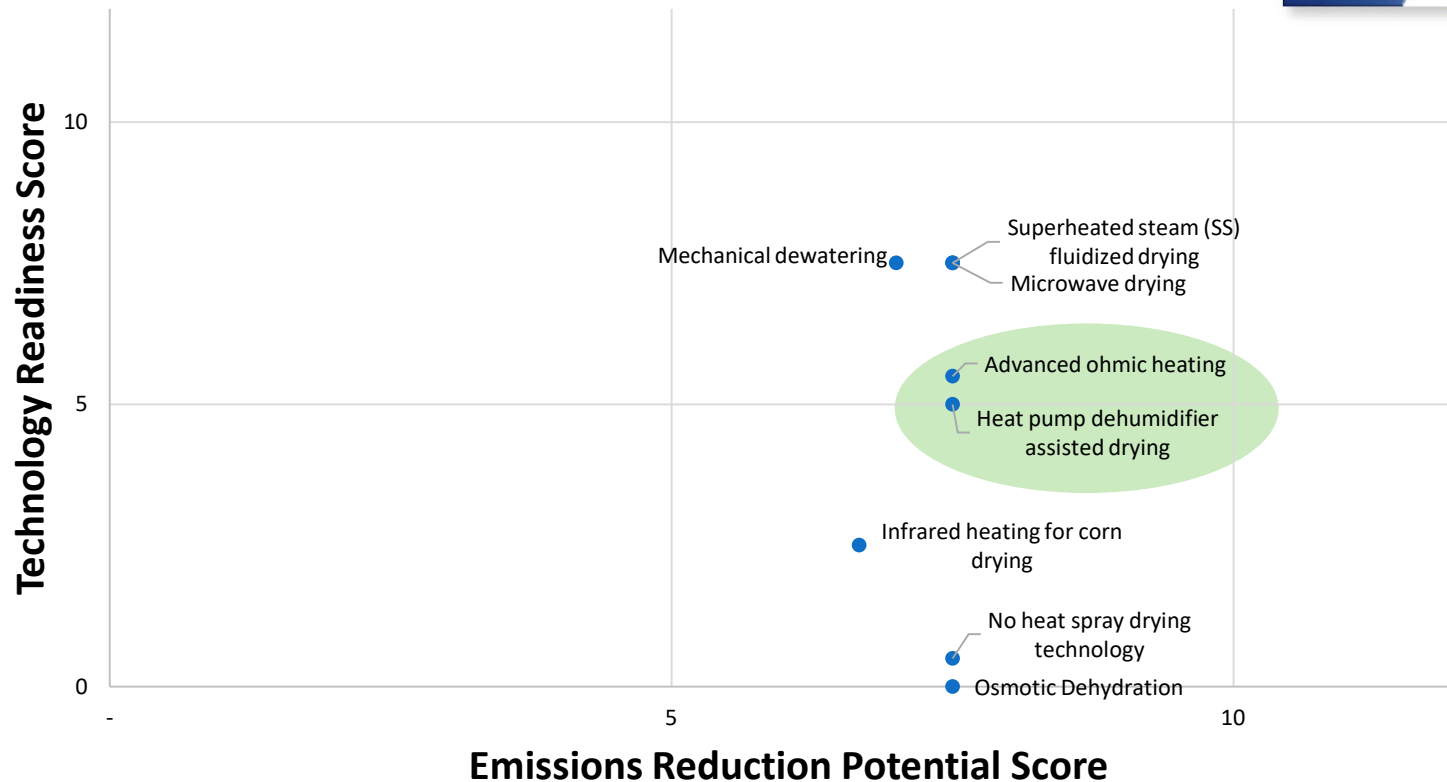
Timing

- Technology readiness
- Possible District action

Risks

- Market barriers
- Policy barriers

8 Example Cooling and Heating Technologies (out of 187 Total Technologies Evaluated)



Technology Readiness Score: Measures *technology maturity* (research, pilot, demonstration) and *provider maturity* (early startups vs. multiple established vendors)

Emissions Reduction Potential Score: Measures emissions reduction vs. baseline at the *process level*, *Air District level*, and *national level* based on respective emissions data.

Example Project: Ohmic Heating for Food Processing Plant



- Fast heating method for food products
- >15% reduction in energy use and carbon emissions
- High potential to scale in national and global markets
- Clear payback period:
~\$60k annual cost savings
per ~\$100k installation



Facilities: Needs & Wants



Awareness

- A **clearinghouse** of emissions-reducing technologies
- Events and opportunities for **matchmaking**

Technology Fit

- Target facilities that have **current or planned** construction or rehabilitation
- New technologies should be **low-maintenance**

Financing

- **Public** facilities are very interested in financing options
- **Private** facilities may have internal financing but are still interested in technology assessment and matchmaking
- **Longer loan terms** preferred (~30 years)

Proposed Agreement with IBank



Financing + Technology Evaluation



Goal: Address critical barriers for facilities to implement new technologies

Barriers

TIO Added Value

Awareness of technologies	Identify new technologies and provide engineering review and project inspections
Awareness of financing programs	Identify new borrowers and provide technical assistance
Availability and terms of financing	Lower interest rates and cover initial fees

Key Financing Terms of Proposed Revolving Loan Program



\$4M initial TIO revolving loan fund

- Deployed at \$1-2M per year over next 3 years
- # projects/year: 5-10
- Targeting \$3M in loans and \$1M in loan guarantees



Current programs

Loans for municipalities, universities, schools, hospitals

- \$500K to \$30M
- 2% to 3% interest

Loan guarantees for small businesses

- up to \$2.5M
- up to 80% guarantee



Proposed Air District program

- Offer Air District funds at 0% to reduce interest
- 10% to 25% of total loan plus up to \$185,000 in fees for first projects

- Increase IBank's standard loan guarantee amounts to encourage more banks to provide loans
- Up to additional 10% loan guarantee

Revolving Loan Program Guidelines



Air District agreement with IBank would establish **Program Guidelines** to define categories of projects eligible for Air District financing:

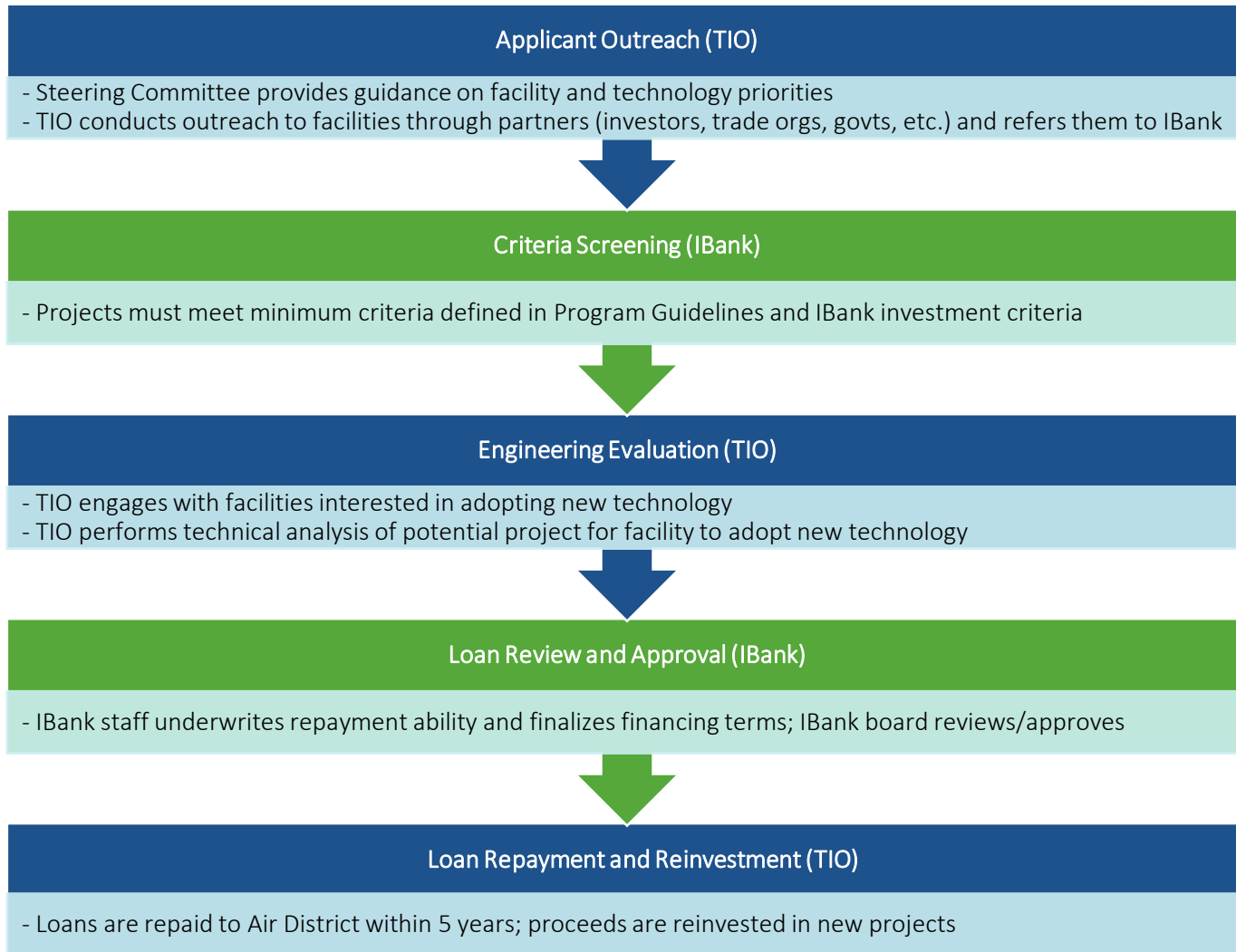
- Facility located in Bay Area
- Specific technology categories, based on results of tech assessment
- Maximum Air District participation per project
 - \$1M in a single loan or \$250k in a single loan guarantee
- Air District portion of loan is repaid in 5 years or less
- Air District funds are drawn down on project-by-project basis

Revolving Loan Program Guidelines Cont.



- Air District portion of losses in loans and loan guarantees are borne by Air District
- Air District liability cannot exceed Air District's portion of loans and loan guarantees
- Air District may terminate program and remaining unallocated funds are not committed
- Mechanism to update Program Guidelines periodically

Proposed Financing Process



TIO Next Steps



July

- Technology Assessment Matrix and Final Report completed

August

- Finalize legal agreement with IBank

September

- Outreach to facilities and financing partners about technology opportunities
- Identify initial projects for financing
- Climate Tech Marketplace September 13

Q4 2018 -
2019

- Ongoing project financing
- Convene technology developers and customers
- Evaluate progress of pilot loan program
- Assess opportunities for profit sharing and additional funding opportunities

TIO Steering Committee Meeting:
October 22 at 9:30am



Recommend the Board of Directors:

- 1. Authorize the Executive Officer/APCO to execute an agreement with the IBank not to exceed \$4,185,000 to fund a loan program for Bay Area industrial facilities*



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

AGENDA: 7

Advisory Council New Members

Jack P. Broadbent

Executive Officer/Air Pollution Control Officer

LINDA RUDOLPH

DIRECTOR OF THE CENTER OF CLIMATE CHANGE AND HEALTH, PUBLIC HEALTH INSTITUTE



Doctorate of Medicine,
University of California San Francisco
Master of Public Health, Epidemiology,
University of California Berkeley

- Previous Deputy Director for Chronic Disease Prevention and Public Health in the California Department of Public Health (CDPH)
- Previous Health Officer and Public Health Director for the City of Berkeley
- Founding Chair of the Strategic Growth Council's Health in All Policies Task Force
- Founding Chair California Climate Action Team's Public Health Work Group
- Previous Chief Medical Officer for Medi-Cal Managed Care
- Previous Medical Director for the California Division of Workers' Compensation

GINA SOLOMON

CLINICAL PROFESSOR OF MEDICINE, UNIVERSITY OF CALIFORNIA SAN FRANCISCO
PRINCIPAL INVESTIGATOR, PUBLIC HEALTH INSTITUTE



Doctorate of Medicine,
Yale University School of Medicine
Master of Public Health,
Harvard School of Public Health

- Serves on Environmental Protection Agency's Board of Scientific Counselors
- Serves on National Academy of Science (NAS) Board on Environmental Studies and Toxicology
- Serves on NAS Committee on Emerging Science for Environmental Health Decisions
- Previous Senior Scientist at the Natural Resources Defense Council
- Previous Deputy Secretary for Science and Health at the California Environmental Protection Agency
- Published work includes cumulative impacts and environmental justice, new tools in toxicology, the health effects of diesel exhaust, endocrine disrupting chemicals, pesticides, refinery safety, and the health effects of climate change



Council Report: We Agree That...

AGENDA: 7

- Particulate matter (PM) is dominant health risk driver for both air toxics and criteria pollutants in Bay Area.
- Major improvements since 2005, but air toxics cancer risk still averaged nearly 700 in million throughout Bay Area in 2014, and may be as high as three to four times that in most-impacted communities.
- Diesel PM is dominant contributor to air toxics cancer risk, both in most-impacted communities and regionally.
- Diesel PM, and particularly black carbon, is major contributor to PM non-cancer risk (premature death and illness).
 - Black carbon is also short-lived climate pollutant, and thus contributor to climate change health risk.
- Mobile sources, including on-road trucks and other vehicles, are major contributors to Diesel PM.



Council Report: Focus on Diesel PM

While we have more to do to identify and more fully evaluate scientific issues associated with specific District options:

- We concur that **District's focus on Diesel PM directionally correct and warranted**, and we strongly support that focus.
- We **encourage ambitious approaches**, including voluntary and aspirational “stretch” goals, in multi-faceted effort.
- We look forward to working with Board and Staff to **identify and evaluate effective Diesel PM-directed**, and other means, to improve air-related public health, both in most-impacted communities and regionally.
- We plan to **focus on this issue** moving forward, and will provide **updates to Board** on progress.