

**Bayview Hunters Point/
Southeast San Francisco
Community Emission Reduction Plan (CERP)
Community Steering Committee # 3**

March 19, 2024

**Southeast Community Center
1550 Evans St. San Francisco, CA 94124**



Welcome and Agenda Review

YOU ARE HERE! CERP Timeline Overview

Initialization Phase
"Scope and Organize"
(Jan-Mar 2024)

Plan Preparation Phase
"Assess"
(Apr-June 2024)

Core Planning Phase
"Plan"
(Jul-Dec 2024)

Plan Adoption
"Implement"
(Jan-May 2025 and beyond)



Theme:
**PARTNER WITH
COMMUNITY**

Key Goals:

- Set-up CSC Structure
- Establish Co-Leadership Team
- Review/Define Plan Boundaries
- Review and Build Community Profile

Key Deliverables:

- ___ CSC Charter (in progress)
- ___ CSC Approved Plan Boundaries (in progress)
- ___ Draft Community Profile

Theme:
**UNDERSTAND THE
CHALLENGES**

Key Goals:

- Review AQ Technical & Enforcement Data
- Develop Initial Visions & Principles
- Define Key Issues and Problems and plan-level goals

Theme:
**DEFINE THE
SOLUTIONS**

Key Goals:

- Research other CERPs for Successful Approaches
- Gain consensus on plan outline
- Develop specific objectives, goals, and action strategies

Theme:
**COMMIT TO ACTION &
MUTUAL ACCOUNTABILITY**

Key Goals

- Develop Draft Plan for Review
- Seek Plan Adoption
 - CSC
 - BAAQMD
 - CARB
- Prepare Annual Implementation Plan
- Annual Progress Reports

Report back on Guiding Principles, Governance Structure, Charter Update

Charter Update

- Review Charter Draft
- Questions/Comments
- Next steps

Introductions and Glossary Match Exercise

Technical Advisory Group

Technical Advisory Group Members

- Lauren Weston, Acterra
- Trinity Vang, Brightline Defense
- James Dahlgren, Ret Env.
Toxicologist
- Veronica Shepard, SFDPH
- Neeta Thakur, UCSF
- Matt Wolff SFDPH
- Lily Wu, OEHHA
- Danielle Ngo, SF Planning
- Rich Berman, SF Port
- David Beaupre, SF Port Alternate

Air Quality Foundations

*Stephen Reid; Assessment, Inventory
and Modeling Division (AIM)*

*Michael Flagg; Meteorology &
Measurements Division (M&M)*

Air Quality Foundations

Key Discussion Topics

- Air pollutants and their sources
- Health effects of air pollution
- Understanding air quality
- Next steps for CERP and questions

Types of Air Pollutants

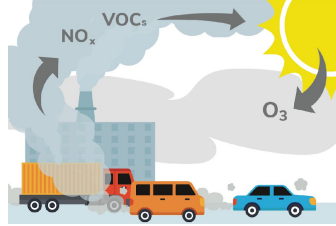
Criteria Pollutants

Toxic Air Contaminants



Particulate Matter (PM)

Microscopic particles of soot, dust, or other matter, including tiny liquid droplets



Ozone (O₃)

A highly reactive gas that is created in the atmosphere from the interaction of other pollutants in the presence of sunlight

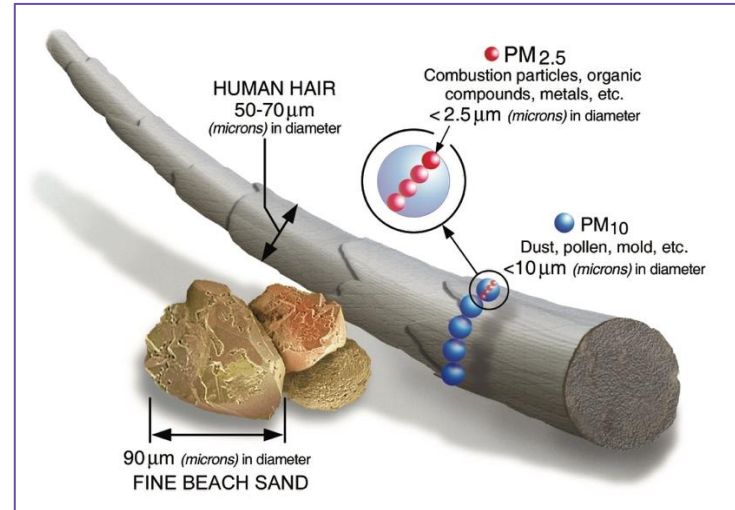


Hundreds of pollutants that are known or suspected to cause cancer or other serious health effects (e.g., volatile organic compounds, diesel particulate matter, metals)

Air pollutants

A Closer Look at Fine Particulate Matter (PM_{2.5})

- Fine inhalable particles with diameters of 2.5 micrometers (μm) or smaller
- These small particles can travel deep into the lungs and bloodstream
- EPA has recently revised the Annual PM_{2.5} National Ambient Air Quality Standard (NAAQS) from $12 \mu\text{g}/\text{m}^3$ to $9 \mu\text{g}/\text{m}^3$
- No safe level of PM_{2.5}

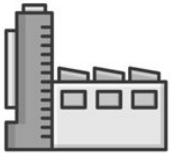


Size comparison of PM_{2.5}, PM₁₀, human hair, and sand. (Source: U.S. EPA)

Sources of Air Pollution

Stationary Sources

Point Sources



Facilities with sources that have been issued a permit or registered by the Air District

Area Sources



Small, dispersed sources such as fireplaces, restaurants, and dust sources

Mobile Sources

On-road Sources



Vehicles that travel on roadways, such as cars, trucks, and buses

Off-road Sources



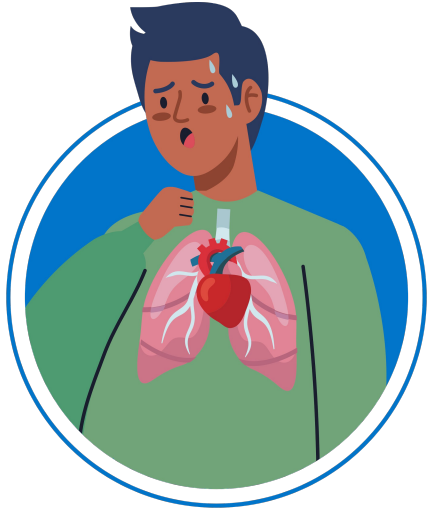
Vehicles and equipment such as trains, airplanes, ships, and bulldozers

Health Effects of Air Pollution

- Air pollution harms human health
- People most affected include:
 - Sensitive groups like children and the elderly
 - Those with existing health conditions
 - Those living and working near sources of air pollution



Health Effects of Air Pollution



- Cause nausea, dizziness, headaches, chest pain
- Cause eye, nose, and throat irritation
- Make it more difficult to breathe
- Increase the likelihood of heart attacks
- Increase respiratory disease including asthma attacks
- Decrease lung function
- Decrease life expectancy

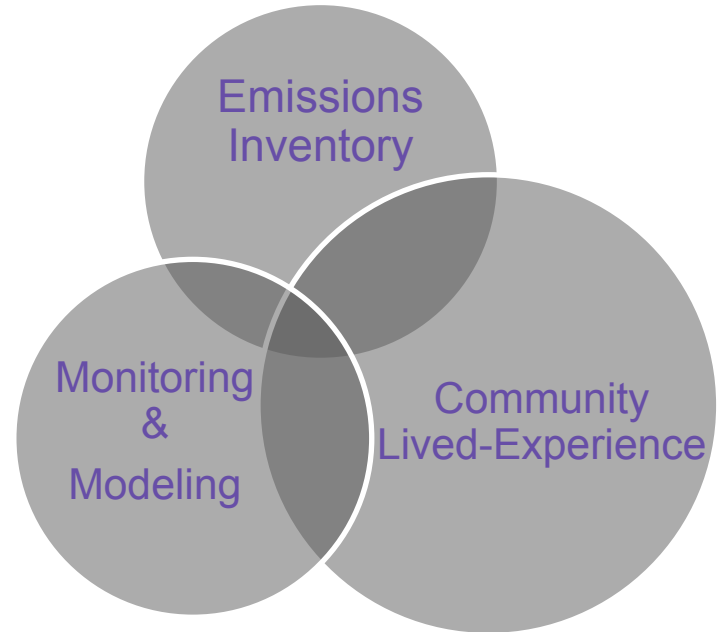
Questions?

- *What else would you like to know about air pollutants and the health effects of air pollution?*

Understanding Air Quality

How do we know what is in the air?

- Community Lived Experience
- Emissions Inventory
- Air Quality Modeling
- Air Monitoring

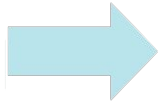


Understanding Air Quality

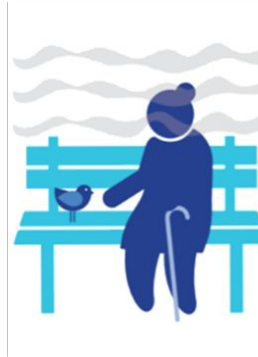
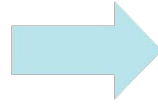
Tracing the Path from Emissions to Health Effects



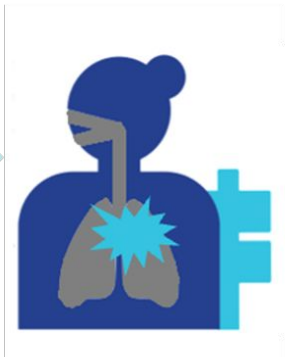
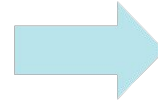
Emissions



Ambient Concentrations



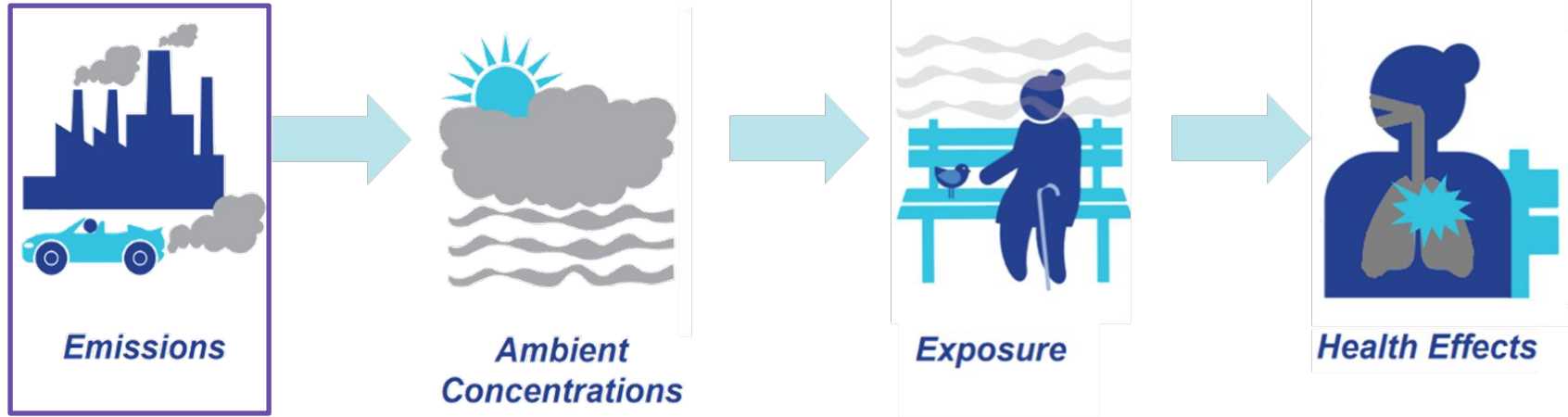
Exposure



Health Effects

Understanding Air Quality

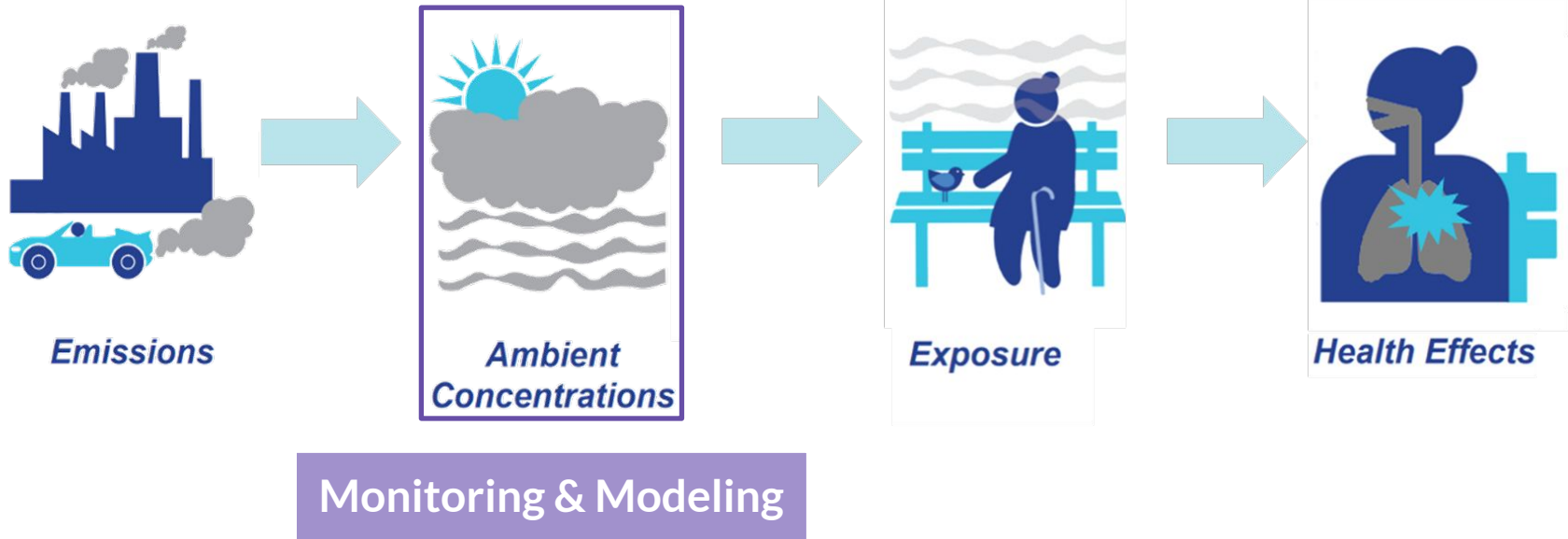
Tracing the Path from Emissions to Health Effects



Emissions Inventory

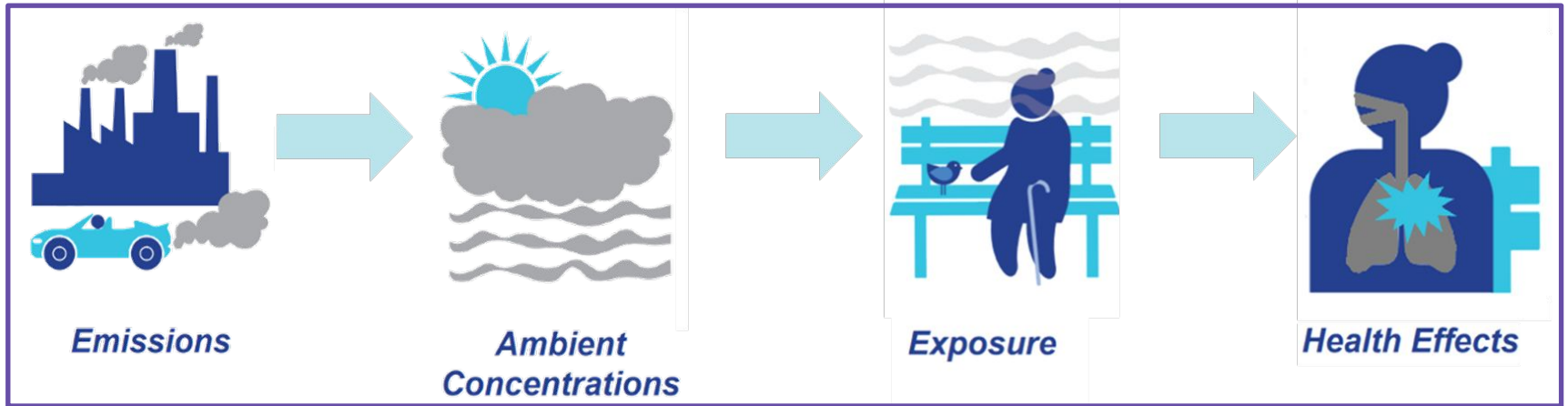
Understanding Air Quality

Tracing the Path from Emissions to Health Effects



Understanding Air Quality

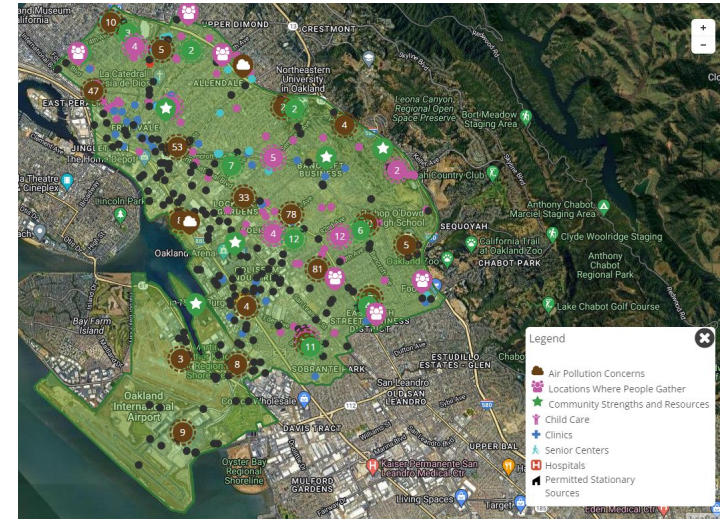
Tracing the Path from Emissions to Health Effects



Community Lived - Experience

Community Lived Experience

- Community knowledge and lived-experience are critical to understanding local air quality issues
- All sources of data have their limitations
- Community perspective brings valuable context to the other types of tools we use
- Participatory research and community-based science are also valuable tools
- Ways of capturing information about lived-experience:
 - Social Pinpoint, Surveys, Ground truth mapping

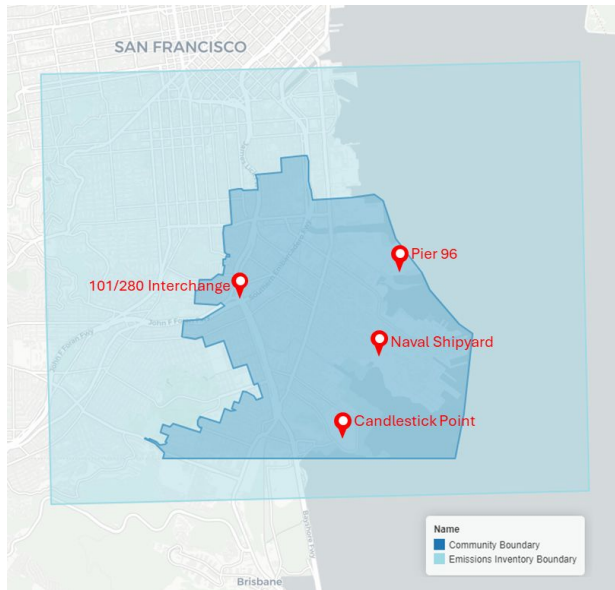


Questions?

- *What life experiences have introduced you to the issues of air quality?*

Emissions Inventory

Definition and Uses



Definition:

- An estimate of the amount of air pollution emitted by sources within a defined geographic area during a specified time period (e.g., one year)

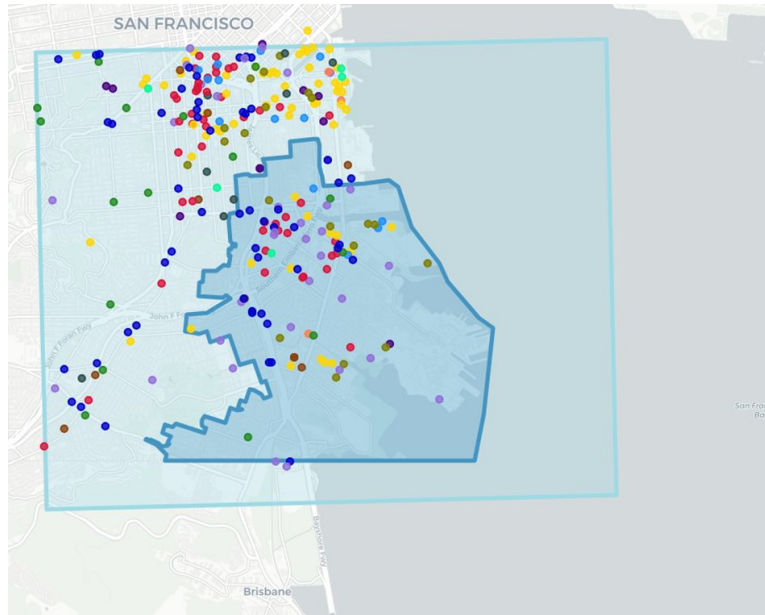
Purposes:

- Provides critical information about pollution and sources that supports the development of CERP strategies and actions
- Sets a baseline for emissions reporting and tracking
- Serves as input data for air quality modeling efforts to assess potential impacts of air pollution

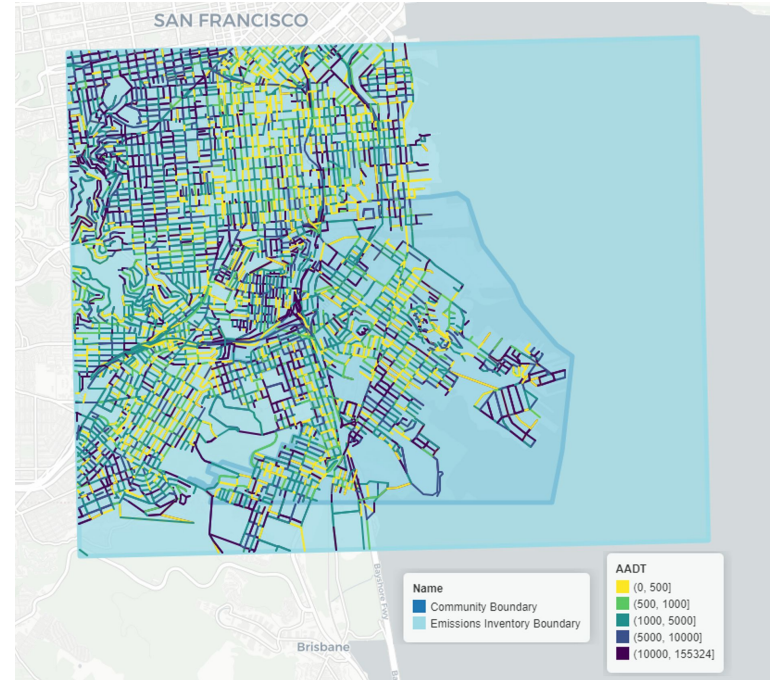
Emissions Inventory

Local Sources

Permitted Sources



Roadways



Emissions Inventory

Limitations

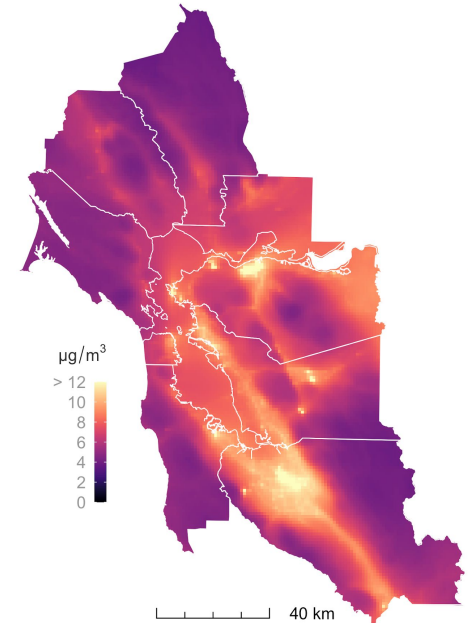
- Inventories usually focus on typical conditions, so events like accidental releases or fires may not be captured
- Some sources may be unknown or the inventory has yet to catch up
- Some estimates have higher uncertainty than we would like
- A source with relatively low emissions can have a large impact on local exposures due to its location, release characteristics, and prevailing winds
- Other information is needed: community experience, measurements, etc.

Air Quality Modeling

What can it tell us?

- Air quality models are computer programs that estimate the concentrations of pollutants in the air
- Models can provide predictions with detailed spatial and temporal coverage
- Models can also allow investigations of projected future conditions or “what if” scenarios
- Modeling results are uncertain and are impacted by the quality of the input data

Modeled Bay Area PM_{2.5}
Concentrations for 2018



Questions?

- *What emissions sources are currently of concern to the community?*

Air Monitoring

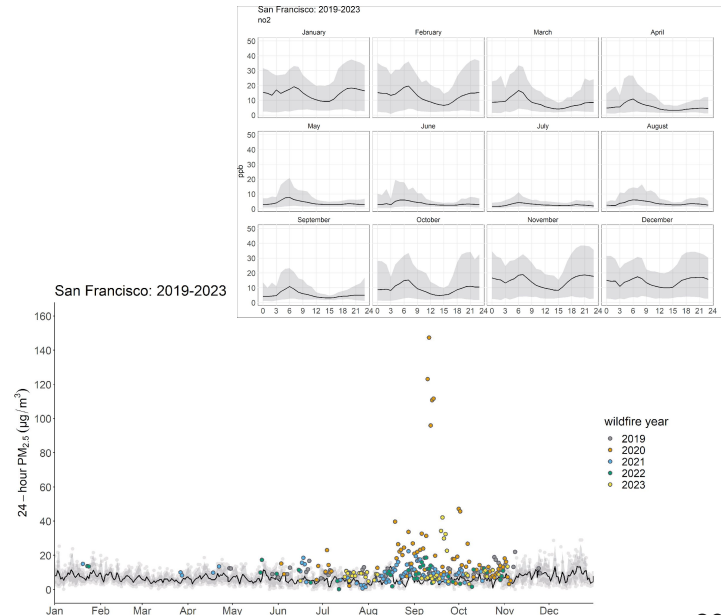
- Many ways to do air monitoring
 - Each approach has its strengths and limitations
- Monitoring approach depends on what types of questions you are trying to answer
 - Air District network
 - Sensors
 - Community-based projects



Air Monitoring

What can it tell us?

- Monitored concentrations reflect:
 - Combined impact from all sources
 - Local, regional, or out-of-area sources
 - Actual conditions on the ground
- Monitoring can help us understand:
 - Am I breathing poor air quality right now?
 - What may be causing air quality issues – are there emissions we don't know about?
 - Are there short-term peaks in air pollutants?
 - Is air quality getting better or worse over time?



Air Monitoring Limitations

- Only tells you what is happening at locations with monitors
- Not feasible to measure everything everywhere at all times
- Some types of monitoring (e.g., toxic air contaminants) are very resource intensive



Questions?

- *How do you use air monitoring data in your everyday life?*
- *How will we use air monitoring data to improve air quality?*

Wrap up and Action Steps

Next Steps and Questions

- April meeting is an opportunity to further discuss emissions or air quality topics specific to BVHP SESF
- Discuss where emissions are coming from in our area (known and unknown areas)
- Finalize the charter
- Finalize or discuss community boundaries

Questions?

Feedback on Meeting & Next CSC Meeting Date

Please fill out the post-meeting survey form.

Next Meeting will be **April 16, 2024**.

It is important that you register on Eventbrite for each meeting so that we can make any required accommodations.

Thank You!
See You on April 16!!

