# Meeting Roles and Expectations

**CSC Purpose:** To guide strategies for community air monitoring and emissions reduction plans for this AB 617 community, and track progress on community plans.

<table>
<thead>
<tr>
<th>SCAQMD</th>
<th>Note taker</th>
<th>Co-host</th>
<th>Committee members</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Organize meeting logistics</td>
<td>• Take notes</td>
<td>• Help facilitate discussions</td>
<td>• Provide input on discussion items</td>
</tr>
<tr>
<td>• Provide agenda and meeting materials</td>
<td>• Prepare a summary and post it online</td>
<td>• Help SCAQMD staff review materials</td>
<td>• Provide prompt feedback and response (e.g. filling out surveys, replying to emails, etc)</td>
</tr>
<tr>
<td>• Present key information</td>
<td></td>
<td>• Help SCAQMD staff with meeting logistics</td>
<td>• Engage with other committee members and members of the public</td>
</tr>
<tr>
<td>• Address committee concerns and answer questions</td>
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<td></td>
<td>• Serve as a liaison to your networks within the community</td>
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* Based on feedback from the CSC members, we are working on getting a facilitator

**Expectations:**
- Presenters will be concise
- Everyone should help us stay on time by staying on topic
- Aim to build consensus
Where we are now

- Identify Community Air Quality Concerns
  - Committee Input
  - Technical Data

Where we are going

- Oct 2018 - Jan 2019
- Jan 2019 - Mar 2019
- Mar 2019 - Oct 2019

- Prioritize Sources of Emissions and Areas with High Exposure Concerns
  - Target areas/pollutants for air monitoring
  - Target sources/places for emissions or exposure reduction

- Develop Strategies to Reduce Emissions and Exposures and Metrics for Tracking Progress
  - Community Air Monitoring Plan
  - Community Emissions Reduction Plan
Today's Meeting Objectives

- Provide summary of air quality concerns and complete discussion on community boundaries
- Provide information on air monitoring, and ideas for air monitoring through AB 617
- Prepare for next steps (prioritize air quality issues and develop strategies to address them)
- Follow up on committee logistical items
Air Quality Concerns and Community Boundaries
Recap: How were Year 1 AB 617 communities identified?

We first identified communities using a broadly inclusive approach.

Preliminary list includes each of the following:

1. **Top 25%** of MATES IV air toxics cancer risk
2. **Top 25%** of CalEnviroScreen 3.0 score
3. Community nominations (148 nominations received through 5/17/2018)
4. Communities with the highest density of schools within 1,000 feet of industrial land use
CalEnviroScreen 3.0 (OEHHA)

**Pollution Burden**
- **Exposures**
  - Ozone
  - PM2.5
  - Diesel PM
  - Pesticide Use
  - Traffic
  - Drinking Water Contaminants
  - Toxic Releases from Facilities

- **Environmental Effects**
  - Solid Waste Sites and Facilities
  - Cleanup Sites
  - Groundwater Threats
  - Impaired Water Bodies
  - Hazardous Waste Generators and Facilities

**Population Characteristics**
- **Sensitive Populations**
  - Asthma
  - Cardiovascular Disease
  - Low Birth-Weight Infants

- **Social and Economic Factors**
  - Poverty
  - Unemployment
  - Educational Attainment
  - Housing Burdened Low Income Households
  - Linguistic Isolation

OEHHA: Office of Environmental Health Hazard Assessment (State agency)
Main findings:

- Diesel Particulate Matter (PM) accounted for 2/3 of air toxics cancer risk.
- Ports (ships), rail yards and goods movement corridors (trucks) are large sources of diesel PM.
Map of communities under consideration for AB 617

- 55 communities identified in SCAQMD
- Census Tract boundaries
- Group Census Tracts by known air quality issues, natural and political boundaries

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swefram, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
CalEnviroScreen 3.0 ranking in communities under consideration

CalEnviroScreen considers pollution burden, environmental effects, sensitive populations as well as social and economic factors.
Many disadvantaged areas

But resources are limited
Southern Boundary
Using the Santa Ana river as a natural boundary
Schools and daycares
Most of the sensitive receptors are located north of the boundary
Schools and daycares

Most of the sensitive receptors are located north of the boundary.

Rialto, Colton & some portions of South San Bernardino will be considered in **year 2-5 of program implementation**.
For more details…

- SCAQMD recommendations to CARB for Year 1 communities and implementation schedule: http://www.aqmd.gov/docs/default-source/ab-617-ab-134/submittal-to-carb.pdf

- CARB staff report describing statewide strategy and Year 1 communities https://ww2.arb.ca.gov/sites/default/files/2018-09/2018_community_recommendations_staff_report_revised_september_11.pdf

And now, let’s discuss this community (San Bernardino, Muscoy)…
Community-Identified Air Quality Concerns
Based on Air Quality Mapping Activity in Meeting #1

<table>
<thead>
<tr>
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<th>Number</th>
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<tbody>
<tr>
<td>Stationary Sources</td>
<td>20</td>
</tr>
<tr>
<td>Mobile Sources</td>
<td>43</td>
</tr>
<tr>
<td>Sensitive Receptors</td>
<td>8</td>
</tr>
<tr>
<td>Total Unique Concerns</td>
<td>71</td>
</tr>
</tbody>
</table>
Stationary Source Concerns
(20 unique sources)

Stationary Source Air Quality Concerns
(20)

The size of the bubble represents how many times the same concern came up in the mapping activity.
Mobile Source Concerns
(43 unique sources)

• **On Road:**
  - Mainly truck idling/parking
  - Warehousing truck traffic identified at unique locations multiple times

• **Off Road:**
  - 3 train stations
  - Airport
  - Recreational off-roading

• **Combo:**
  - Railyards were the main concern; mentioned multiple times
Where people spend time
(8 unique locations)

Many people were concerned about schools and homes near freeways and the rail yard.
**Impacted Community**: Area of the community where people live, work, go to school, and spend the majority of their time.

**Emissions study area**: Region that includes the sources that affect the Impacted Community.
Community concerns were taken into consideration.

Majority of community concerns fall within the proposed impacted community boundary.

Regions within and near the emissions study area will also benefit from the emissions reductions.

Warehouse related mobile sources will be addressed, even if the warehouses are located outside the emissions study area.
Stretch break

Come back in 5 minutes
Developing Community Air Monitoring Objectives

Thursday, January 17, 2019
Muscoy PAL Center

Dr. Andrea Polidori
Advanced Monitoring Technologies Manager
South Coast Air Quality Management District
Why Do We Monitor Air Pollution?

Identify
- Pollutants of interest
- Sources of emissions

Estimate
- Community Exposure
- Effects of emission reduction strategies

Assist with
- Developing Emissions Reductions Plans
- Improving air pollution control programs and tracking progress

Inform
- Members of the public
- Planners and regulators

Air Monitoring Purpose
What Are The Major Sources Of Air Pollution in this Community?
Sources of Air Pollution and Monitoring Challenges

San Bernardino and Muscoy Community

Industrial/Facility, Commercial/Buildings, and Residential Use
Commercial and Industrial Land Use

Monitoring Challenges

- Complex variety of emission sources
- Variety of air pollutants
- Large study area
- Monitor siting
- Complex meteorology
Different Types of Air Monitoring

- Community Monitoring
- Mobile Surveys
- Response to Public Complaints
- Toxic “Hot Spots” Monitoring AB 2588
- San Bernardino Monitoring Station
- Regional Monitoring
- Investigative
- Multiple Air Toxics Exposure Study
- Citizen Science & Health Studies
- Emission Source Monitoring
- Low-Cost Sensor Networks
What types of monitoring are we doing in San Bernardino / Muscoy?

• SCAQMD has been conducting monitoring in this community ahead of AB 617 monitoring schedule
  • Permanent monitoring programs (Fixed Network, Regulatory)
  • Sensor deployment in communities (EPA STAR Grant)
    • Visit monitoring posters to learn more
  • Other monitoring studies (MATES, sensor networks, NASA ROSE, ENRRICH study)
    • Visit monitoring posters to learn more
  • Complaints (1-800-CUT SMOG®)

• We will work with Community Steering Committees to ensure we are addressing the top priorities

• We use a combination of methods
  • Traditional methods – Criteria pollutants (FRM, FEM, EPA Guidance)
  • Advanced methods – Air toxics (sensors, remote sensing, mobile platforms)
Permanent Monitoring Programs
(Fixed Network, Regulatory)

- 40+ permanent air monitoring sites
- 12,100 miles traveled per week
- 223 air monitors
- 21,000+ data points per week

Particle and gas monitoring
- Criteria pollutants, VOCs, carbonyls, UFP, BC, metals, other air toxics

Multiple air monitoring programs
- BioWatch
- PAMS
- NATTS
- STN
- Speciated PM2.5
- Near Road
- Ncore
- ARB Toxics network
Air Monitoring near BNSF Rail Yard (MATES IV)

**Reasoning:**
- Black carbon is a surrogate for diesel pollution in urban areas
- Ultrafine particles come from combustion (e.g. engines)

**Findings:**
- Black carbon and ultrafine particles concentrations were **higher** compared to typical levels in the region
Sensor Deployment in San Bernardino

**Purpose:**
- to engage,
- educate and
- empower California communities on the use and applications of "low-cost" air monitoring sensors, in:
  - Communities in Environmental Justice areas
  - Communities near specific sources of air pollution

**U.S. EPA STAR Grant**

Visit monitoring posters to learn more

[Map showing sensor locations]
AB 617 Community Monitoring Design

Transitioning into AB 617 Monitoring
AB 617 Monitoring Efforts

Regulatory monitoring stations

Low-Cost Sensor Networks

Mobile Platforms
New Approaches in Air Pollution Monitoring

Mobile Platforms
- Limited to Governments, Industry, and Researchers
- Covers a Large Area, Identifying Hot-Spots and Emissions Sources, High-Time Resolution
- Scientific Reports and Summaries

Traditional Monitoring
- Compliance Monitoring, Enforcement, Trends, Research
- Government Websites, Permit Records, Research Databases

Low-Cost Sensors
- Expanded Use by Communities and the Public
- Citizen Science, Educational Tool, High-Time Resolution Real-Time Data
- Community Engagement, Increased Data Availability

Visit monitoring posters to learn more
## Air Monitoring Benefits and Limitations

<table>
<thead>
<tr>
<th>Applications</th>
<th>Reference Monitors</th>
<th>Low Cost Sensor Networks</th>
<th>Mobile Monitoring &amp; Surveys</th>
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<tbody>
<tr>
<td>Track progress</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
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<tr>
<td>Identify emission sources</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Identify “hot-spots”</td>
<td>✔️</td>
<td>✔️</td>
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<table>
<thead>
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<th>Benefits</th>
<th>Reference Monitors</th>
<th>Low Cost Sensor Networks</th>
<th>Mobile Monitoring &amp; Surveys</th>
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<tbody>
<tr>
<td>Compliance action</td>
<td>🟡</td>
<td>🟡</td>
<td>🟡</td>
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<tr>
<td>Good detection capability</td>
<td>🟡</td>
<td>🟡</td>
<td>🟡</td>
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<tr>
<td>Continuous data</td>
<td>🟡</td>
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<tr>
<td>Real time data</td>
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<table>
<thead>
<tr>
<th>Limitations</th>
<th>Reference Monitors</th>
<th>Low Cost Sensor Networks</th>
<th>Mobile Monitoring &amp; Surveys</th>
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<tbody>
<tr>
<td>High Cost</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Number of pollutants detected</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Low accuracy/precision</td>
<td>❌</td>
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Working with the CSC Group

1. Define Goals and Objectives of Air Monitoring (CSC Meeting #3)
2. Identify Pollutants of Interest and Recommend Appropriate Monitoring Technologies (CSC Meeting #3)
3. Develop Community Air Monitoring Plan (May 1st, 2019)
4. Begin Air Monitoring in Priority Areas (July 1st, 2019)
Questions?
CSC charter
and other important items

1. Updated CSC charter
   • Very few comments received – only minor wording changes for clarity
   • Please sign and return to SCAQMD staff today, or by Jan 24, 2019

2. Biographies
   • Please email to ab617@aqmd.gov as soon as possible so we can post on the webpage

3. Community Tour, including Facility Tour(s)
   • Purpose: Providing committee members with an opportunity to share and gain a further understanding of key concerns in the community, as well as operations and clean air technologies at facilities
   • Any volunteers/suggestions?
Current progress

What we’ve done so far:

• Discussed background on:
  • AB 617 program
  • Air pollution basics
  • Air pollution data in this community
  • Air monitoring technologies
• Gathered input on community air quality issues
• Gathered input on community boundaries

Likely topics for Meeting #3:

• Prioritization of air quality issues
  • To address through air monitoring and/or emission reduction plans
• Potential strategies
• Enforcement overview
• Update on RECLAIM/BARCT rule development (possibly Meeting #4)
**Technical Advisory Group (TAG)**

**Purpose:** Provide technical input on data and methods for modeling, monitoring, inventory

Current volunteers from this CSC:

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
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<tbody>
<tr>
<td>Andrea Vidaurre</td>
<td>Center for Community Action and Environmental Justice (CCAEJ)</td>
</tr>
<tr>
<td>Andreas Beyersdorf</td>
<td>California State University San Bernardino</td>
</tr>
<tr>
<td>Tammy Yamasaki</td>
<td>So Cal Edison</td>
</tr>
</tbody>
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All meetings are open to the public

First TAG meeting is being scheduled for **February 2019**
Thank you for the hard work!

More information on AB 617: www.aqmd.gov/AB617

Email: AB617@aqmd.gov

Follow us @SouthCoastAQMD