AB 617 Community Air Protection Program

Scientific Review Panel March 4, 2019
Today’s Topics

• Update on Program Actions
• Proposed Areas of Engagement with SRP
• Profile of Initial Communities
• Overview of Emissions Reporting Requirements
UPDATE ON PROGRAM ACTIONS
Blueprint for Program Implementation

Defines statewide strategies and sets requirements for:

- Public engagement and community partnerships
- Selecting communities
- Conducting community air monitoring
- Developing community emissions reduction programs
Initial 10 communities serve as statewide models
Air districts are working with communities to develop:

• Community emissions reduction programs (Oct 2019)
• Community air monitoring (July 2019)
PROPOSED AREAS OF ENGAGEMENT WITH THE SRP
AB 617: Scientific Topics Related to Air Toxics in Communities

Office of Environmental Health Hazard Assessment

March 4, 2019
SRP consultation role in:

- CARB’s preparation of a monitoring plan regarding the availability and effectiveness of toxic air contaminant and criteria air pollutant advanced sensing monitoring technologies and existing community air monitoring systems, as well as the need for and benefits of establishing additional community air monitoring systems. [Health and Safety Code Section 42707.5(b)]

- CARB’s preparation of a statewide strategy to reduce emissions of toxic air contaminants and criteria air pollutants in communities affected by a high cumulative exposure burden. The state board shall update the strategy at least once every five years. [Health and Safety Code Section 44391.2(b)]
Scientific Topics for the SRP

I. Health Risk Values for Contaminants in AB 617 Communities
II. Addressing Cumulative Exposures in Communities
III. Tracking Community Health Benefits Through Indicators
I. Health Risk Values for Contaminants in AB 617 Communities

**Background**

- Data from AB 617 communities:
  - Emissions inventories
  - Air quality monitoring
- Likely missing guidance on health risks
- Health guidance values needed

**Approach**

- Priority Substances
- Guidance Values
- Current methods ("Hot Spots")
- Expedited methods
# I. Health Risk Values for Contaminants in AB 617 Communities

## Potential Work Products
- Summary of chemical-specific information from AB 617 communities.
- Proposed priority substances in AB 617 communities for development of health guidance values, and the rationale for their selection.
- Proposed new or updated health guidance values for priority substances.

## Timeline
- **First year communities:**
  - Air monitoring by July 2019.
- Emissions inventories in Spring 2019, using existing data.
- Initial materials to SRP in late 2019.
II. Addressing Cumulative Exposures in Communities

**Background**

- Communities face burdens from multiple sources of air pollution.
- Currents approaches available.
  - Cumulative risk methods (e.g., “Hot Spots” methodology)
  - Screening tools (e.g., CalEnviroScreen)
- Do not fully capture community risks and impacts.

**Approach**

- Draw from the data collected and/or developed in the AB 617 communities.
- Explore how cumulative impacts may be better understood and assessed.
- Apply existing approaches.
- Consider novel approaches to more fully and accurately characterize health risks.
II. Addressing Cumulative Exposures in Communities

### Potential Work Products

- Case studies from AB 617 communities showing cumulative impact/risk concerns. Include the extent to which existing tools are able to address cumulative risks.
- Potential ways to supplement or enhance existing approaches to cumulative impacts analysis.

### Timeline

- Community emissions inventories will become available in 2019 and on an ongoing basis.
- Initial materials describing case studies to the SRP in late 2019.
- Development of materials proposing ways to enhance analysis of cumulative risks and impacts [Later phase].
## III.

### Tracking Community Health Benefits Through Indicators

#### Background

- Demonstrating health benefits of emissions reductions has scientific and data management challenges.

- Potential chemical exposures, doses, and subsequent health effects can be assessed with different degrees of ease and reliability.
  - Biomonitoring / biomarkers
  - Morbidity/mortality; health surveillance

#### Approach

- Stakeholder-engaged process.

- Convene experts in public forum:
  - Different scientific disciplines.
  - SRP members.
  - AB 617 community members.

- Introduce scientific topics.

- Consider challenges.

- Identify potential near-term metrics or measures that could be helpful.
III. Tracking Community Health Benefits Through Indicators

Potential Work Products

- Public symposium or forum.
- Presentations from subject matter experts.
- Focus on community-based participatory research approaches.
- Potential topics:
  - Use of biomonitoring and/or biomarker data
  - Use of health outcome data
  - Best practices for community-academic research partnerships.

Timeline

Questions & Discussion
PROFILE OF INITIAL COMMUNITIES
Considerations in Selecting Initial Communities

- Mix of communities representing different regions and sources
- Establish foundation for additional communities going forward
- Consistent with resources available for successful implementation
# Bay Area

<table>
<thead>
<tr>
<th>Community</th>
<th>Key Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Oakland</td>
<td>Port, Freight, Trucks</td>
</tr>
<tr>
<td>Richmond</td>
<td>Urban, Refineries, Freight</td>
</tr>
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## Sacramento

<table>
<thead>
<tr>
<th>Community</th>
<th>Key Sources</th>
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</thead>
<tbody>
<tr>
<td>South Sacramento - Florin</td>
<td>Urban, Residential, Freeway</td>
</tr>
</tbody>
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## San Joaquin Valley

<table>
<thead>
<tr>
<th>Community</th>
<th>Key Sources</th>
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</thead>
<tbody>
<tr>
<td>South Central Fresno</td>
<td>Urban, Residential, Industry</td>
</tr>
<tr>
<td>Shafter</td>
<td>Rural, Oil &amp; Gas, Pesticides</td>
</tr>
</tbody>
</table>
## South Coast

<table>
<thead>
<tr>
<th>Community</th>
<th>Key Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilmington/West Long Beach/Carson</td>
<td>Trucks, Ports, Refineries</td>
</tr>
<tr>
<td>East LA Neighborhoods/Boyle Heights/West Commerce</td>
<td>Urban, Rail, Industry</td>
</tr>
<tr>
<td>San Bernardino/Muscoy</td>
<td>Trucks, Warehouses, Rail</td>
</tr>
</tbody>
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## Imperial

<table>
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<th>Community</th>
<th>Key Sources</th>
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</thead>
<tbody>
<tr>
<td>Calexico/Heber/El Centro</td>
<td>Border, Rural</td>
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</table>
## San Diego

<table>
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<tr>
<th>Community</th>
<th>Key Sources</th>
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</thead>
<tbody>
<tr>
<td>Barrio Logan/West National City/Logan Heights/Sherman Heights</td>
<td>Port, Small Industry</td>
</tr>
</tbody>
</table>

![Barrio Logan/West National City/Logan Heights/Sherman Heights](image1.jpg)

![Port, Small Industry](image2.jpg)
OVERVIEW OF EMISSIONS REPORTING REQUIREMENTS
Regulation for Criteria Pollutant and Toxic Air Contaminant Emissions Reporting
Annual emissions data for specified stationary sources

Uniform, statewide reporting system

Allows for collection of other relevant facility-level data

Provides options for data certification or verification
• In December, the CARB Board approved for adoption the Criteria and Toxics Reporting (CTR) Regulation
• Prior to finalization, the Board directed staff to update the regulation
  • Modify the applicability criteria
  • Revise definitions, reporting requirements, and report contents
Regulatory Elements

Applicability
• Who is subject to reporting?

Reporting Requirements
• Data reporting
• Uniform contents

Implementation
• CARB and Air District collaboration
Next Steps

• Coordination with community representatives, air districts and industry stakeholders
• Public workshops March 5th to 14th
• Spring 2019: Release 15-Day formal comment package (2nd 15-day, if necessary)
• Provide final documents to OAL for review and approval
Contact Us

Criteria Pollutant and Air Toxics Reporting

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916.323.4887
Outline:
• What information is in the Pesticide Use Reports database
• Proposed pesticide emission inventory
PUR: Pesticide Use Report Database (1990, 81 million)

≈80% Production Ag: Reports per app.

≈20% “Everything Else”: Summaries per month

- Orchard
- Field
- Vegetable
- Livestock
- Post harvest
- Structural
- Landscapes
- Golf
- Rights of Way

Field Crops (food, feed, fiber)

Orchard Crops, forestry, ornamentals

Vegetable Crops, nurseries, greenhouses

Livestock Post Harvest Structural Landscapes Golf courses Rights of Way
### Key information included in pesticide use reports

<table>
<thead>
<tr>
<th>Information</th>
<th>Production Ag Reports (each application)</th>
<th>Non-Production Ag and Non-Ag Reports (monthly summary)</th>
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</thead>
<tbody>
<tr>
<td>Product applied</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Crop/site treated</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Amount applied</td>
<td>Yes</td>
<td>Monthly total</td>
</tr>
<tr>
<td>Date applied</td>
<td>Date and time</td>
<td>Month</td>
</tr>
<tr>
<td>Application method</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Acres/units treated</td>
<td>Yes</td>
<td>Monthly total</td>
</tr>
<tr>
<td>Location</td>
<td>Townshp/rng/sec</td>
<td>County</td>
</tr>
</tbody>
</table>
• **Proposed** – DPR pesticide active ingredient (AI) emission inventory
  
  – Need to develop emission factors (fraction of AI that drifts or volatilizes) by AI and application method
  
  – Estimate AI emissions for each production agriculture application by: pounds AI applied × emission factor
  
  – Calculate annual total AI emissions for various spatial scales
  
  – Based on pesticide use report data, initially for fumigants and organophosphates