Statewide Mobile Monitoring Initiative (SMMI): Frequently Asked Questions

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Introduction and Background

What is the Statewide Mobile Monitoring Initiative?

The Statewide Mobile Monitoring Initiative (SMMI) is a CARB project to collect neighborhood-level air quality data across 64 communities in California. Many of these communities were identified under Assembly Bill 617 as priority areas with higher pollution burdens and related health concerns. CARB contracted Aclima to use sensor-equipped vehicles to measure pollutants—including criteria pollutants, toxic air contaminants, and greenhouse gases—while driving public streets. SMMI provides detailed local data so communities and agencies can better pinpoint areas of concern, target potential pollution-reduction actions, and prioritize future air monitoring efforts.

For questions about the contract background and solicitation process, please see the *SMMI Contract Background FAQ*.

How was the Statewide Mobile Monitoring Initiative funded?

The initiative is part of California Climate Investments, a statewide initiative that puts billions of Cap-and-Invest dollars to work reducing greenhouse gas emissions, strengthening the economy, and improving public health and the environment—particularly in disadvantaged communities.

CARB received $27 million through legislative appropriation in the *Budget Act of 2022* for the Statewide Mobile Monitoring Initiative.

Mobile Monitoring

What were the main objectives of the Statewide Mobile Monitoring Initiative?

Broadly, the monitoring objectives were:

- Identify potential air pollutant emission sources.
- Identify disproportionate air pollution impacts.

Both objectives helped investigate the concerns raised by the communities where monitoring took place.

Who carried out the project?

The contractor Aclima, Inc., along with their subcontractors, conducted mobile monitoring, community engagement, and data delivery and analysis. The CARB Statewide Mobile Monitoring Initiative project team oversaw implementation of the contract.

Where did the mobile monitoring take place?

Aclima conducted mobile monitoring across 64 communities consistently nominated under Assembly Bill 617 as priority areas for elevated pollution and health impacts. The exact areas to be monitored were chosen with input from community members and documented in *Community Air Monitoring Plans*.

Aclima was also required to conduct at least 60% of monitoring in areas that benefit *California Climate Investments Priority Populations*.

Did monitoring take place in 62 or 64 communities?

The 64 communities identified as priority areas for AB 617 program support (*AB 617 Consistently Nominated Communities*) was used to guide where monitoring occurred. Because two pairs of neighboring communities were combined into shared engagement and monitoring plans, the project has 62 Community Air Monitoring Plans. That's why 62 or 64 communities may be referenced, depending on the context.

What air pollutants were monitored?

The list of pollutants monitored includes criteria pollutants, toxic air contaminants, and greenhouse gases.

Criteria pollutants are common outdoor air contaminants—such as ozone, particulate matter ($PM_{2.5}$ and PM_{10}), and nitrogen dioxide—that are regulated by the federal government because they are widespread and can negatively affect human health.

Toxic air contaminants are substances that can cause serious health impacts even at very low concentrations. Examples include chemicals like benzene and formaldehyde,

which can come from fuel use, industrial operations, and certain consumer products. Toxic air contaminant data was gathered through brief monitoring surveys in certain SMMI communities

Greenhouse gases, including carbon dioxide and methane, trap heat in the atmosphere and drive climate change.

For the complete list of pollutants measured through the Statewide Mobile Monitoring Initiative, please refer to *Appendix I*.

What approaches were used to conduct mobile air monitoring?

Mobile monitoring followed Community Air Monitoring Plans developed in collaboration with the Project Expert Group and community members. The initiative used two monitoring approaches:

1) **Broad area monitoring:** Aclima conducted mobile monitoring using 42 mobile platforms—vehicles equipped with specialized air-quality sensors—in each of the 62 communities for 9 months. The pollutants measured by the sensors included criteria pollutants, methane, ethane, and black carbon. On average, each census block was measured about 20 times, with vehicles operating day and night to capture different conditions.

2) **Targeted area monitoring:** This approach focused on monitoring smaller locations over shorter periods of time. Community members helped choose the specific places where monitoring took place. Depending on the source of concern and pollutants to be measured, monitoring was assigned to Aclima's vehicles or to Partner Mobile Laboratories (PMLs). The three PMLs—operated by UC Berkeley, UC Riverside, and Aerodyne—collected air toxics measurements and were deployed to high-priority areas identified through community engagement. Because PMLs are limited, communities received only a few days of these specialized measurements.

For more information, please see *Aclima's technical proposal*, *community-specific CAMPs*, and *CAMP Appendices.*

When did mobile monitoring occur?

Monitoring occurred at the same time across all communities for up to 9 months. Broad area monitoring ran from June 30, 2025 through March 31, 2026. This included

monitoring on all days of the week and at all times of day, during and outside normal business hours.

Targeted area monitoring occurred for specified days within each community and covered limited time periods, typically three to ten monitoring days per community. For more information, please see the *Community Air Monitoring Plans and Appendices*.

What types of pollution sources were monitored?

Examples of pollution sources monitored include:

- Oil and gas activities (extraction, production, and distribution).
    - Potential pollutants of concern: BTEX (benzene, toluene, ethylbenzene, xylene), PAHs (polycyclic aromatic hydrocarbons), 1,3 butadiene
- Metalworking and metal finishing
    - Potential pollutants of concern: metals, acrolein,1,3-butadiene, BTEX
- Goods movement and transportation hubs (warehouses, distribution centers, railyards, and airports)
    - Potential pollutants of concern: diesel particulate matter, PAHs, BTEX, acrolein, 1,3-butadiene, carbonyls)
- Cement plants and mineral processing facilities
    - Potential pollutants of concern: arsenic and other metals
- Sterilization facilities and commodity fumigators
    - Potential pollutant of concern: ethylene oxide
- Chemical manufacturing
    - Potential pollutants of concern: BTEX, PAHs,1,3-butadiene, ethylene oxide, carbonyls, formaldehyde)

How were source types prioritized?

Pollution source types were generally prioritized based on the following factors:

- The most common source types identified through community concerns
- Pollutants known or suspected to pose the highest health risk in California (e.g. OEHHA health guidance values, SCAQMD MATES studies)
- *CARB's Air Toxics "Hot Spots" Emissions Inventory*

- Other relevant data sources such as criteria pollutant and greenhouse gas emissions, enforcement data (e.g. EPA ECHO), nuisance odors, and/or population density
- *CalEnviroScreen 4.0*
- Available monitoring capabilities

Final targeted air monitoring assignments and objectives can be found in *Appendix H and each Community Air Monitoring Plan.*

What are the strengths and limitations of mobile monitoring?

Mobile monitoring works differently from fixed air monitors, so it has advantages and drawbacks:

Strengths

- Covers more places: Vehicles can move and map large areas, reaching streets and neighborhoods that fixed monitors can't.
- High spatial detail: Measurements can be made block-by-block to help identify hotspots and local pollution patterns.
- Flexible and responsive: Routes and timing can be adjusted to follow community concerns or investigate specific sources.

Limitations

- Less continuous data at one spot: Because a vehicle passes by briefly, there are long gaps between visits, so data are not continuous at any single location.
- Typically, fewer pollutants and lower precision than fixed stations: Mobile systems usually measure a smaller set of pollutants and with less precision than fixed regulatory monitors.
- Not intended for regulatory determinations: Mobile monitoring is best for screening, mapping, and prioritizing followup. Regulatory decisions under the Clean Air Act rely on fixed site monitors that use U.S. EPA approved Federal Reference or Equivalent Methods (FRM/FEM) and meet siting criteria. If results are needed for regulatory purposes, a follow-up study using U.S. EPA approved methods would be required.

Community Participation and Engagement

How can community members continue participating in the Statewide Mobile Monitoring Initiative?

Community members can continue participating by sending any thoughts or questions to *SMMI@arb.ca.gov* (or to the contacts shared at public meetings). As products complete review and approval, results and explanations will be posted on CARB's SMMI website.

How did the initiative engage with communities?

Aclima subcontracted Engagement Leads—individuals from nearly 40 community-based organizations—to carry out community engagement during the Statewide Mobile Monitoring Initiative. This work followed the *Community Engagement Plan*, which was developed in collaboration with the Project Expert Group and community groups.

What is the Project Expert Group?

A Project Expert Group (PEG) was formed following the project kick-off in September 2024 to help guide engagement and decision-making throughout the project period. The PEG was a diverse group that included community experts (such as members of community-based organizations), community leaders, researchers, air districts, state and government agency staff, and businesses. The group had 18 members, and more than half represented communities that had been identified under Assembly Bill 617 as priority areas because they experienced higher pollution burdens and related health impacts.

Data and Results

What is the status of data review and results preparation?

Mobile monitoring successfully completed in March 2026, collecting nearly 10 billion air quality measurements across California. CARB's contract with Aclima concluded June 12, 2026. We are now conducting independent review and analysis to ensure the information we share is accurate, reliable, and easy to understand. Careful analysis

will take time because this is one of the largest air monitoring datasets in California. We will announce specific release dates once the analysis is further along. We intend to release results in phases so the public can access information as soon as it is ready. Updates will be posted to the SMMI webpage. You can subscribe to the Community Air topic to be notified when final dates are set.

How will communities and the public be able to access data and results?

CARB will publish each data product on our website as soon as review is complete. We'll also provide a timeline for the phased release as soon as it's available. The data products will include:

- Finalized monitoring data for each region and pollutant in standardized, comma-separated values (CSV) format to ensure broad compatibility with commonly used data analysis tools and software.
- Esri StoryMaps and supporting analyses for each of the communities.

How should Aclima's broad area monitoring data be used, and what shouldn't it be used for?

Broad area mobile monitoring using the Aclima vehicles is well-suited to identifying local hotspots and showing relative differences across a community. Because the vehicles can cover many streets, the data add fine-scale spatial detail that helps locate potential sources and prioritize follow-up investigations. Future monitoring can return to areas of concern to track qualitative changes over time.

However, mobile monitoring sensor results are not intended for regulatory decisions. They cannot be compared to the National Ambient Air Quality Standards (NAAQS) and shouldn't be used alone for enforcement. Mobile sensor data also shouldn't be used to quantify individual or community health risks, and U.S. EPA does not set health-based standards for the short-term sampling typical of many sensor readings.

The mobile sensors' ability to collect accurate results can also be affected by temperature, humidity, co-pollutants, and variable environmental conditions so routine checks, calibration, and corrections are needed. Aclima has provided quality-assurance documentation to CARB, which CARB is reviewing and will provide when complete.

What actions might result from Statewide Mobile Monitoring Initiative?

The initiative was carried out to generate a high-quality mobile air monitoring dataset. While the dataset may help inform future work, it is not intended to directly drive regulatory or policy decisions. CARB, Air Districts, community groups, regulatory agencies, researchers, and other parties will be able to use the data to evaluate specific air pollution questions. Examples of actions include:

- **Identify Potential Leak Events:** Elevated pollutant levels, such as methane, may indicate a possible leak and where documented can be shared with appropriate authorities (see *CARB's SMMI Event Notifications webpage*)
- **Investigate Pollution Hotspots:** When data shows that certain areas have consistently high levels of pollutants, especially near schools, homes, or other sensitive locations, it provides a reason to look more closely. That might mean conducting additional air monitoring, identifying the location of specific pollution sources, or investigating with enforcement resources.
- **Improve Land Use and Green Space Decisions:** Understanding where and when pollution occurs can inform decisions about how to update zoning rules, where to plant trees, and which land uses should be kept away to prevent impacts to the health of nearby neighborhoods.
- **Address Traffic and Truck Pollution:** Some communities deal with a higher burden from highways, freight corridors, and heavy traffic. This data can help identify those areas and support solutions such as anti-idling enforcement, better traffic flow, or improvements to truck routes, schedules, and enforcement.
- **Support Health Assessments:** This data can help focus health-risk assessments in areas experiencing higher pollution burdens.
- **Build and Strengthen Community Air Plans:** This data can be used in combination with other relevant data to inform *Local Community Emissions Reduction Plans* (L-CERPs), developed with and for communities to tackle their specific air quality concerns and goals.
- **Unlock Funding:** Documented air-quality data strengthens applications for community organizing and pollution reduction grants (like *CARB's Community Air Grants*) and other funding sources to expand monitoring and support community-driven solutions to protect local air quality.

- **Measure Progress Over Time:** This data provides a starting point, especially in communities that previously lacked sufficient air-monitoring data, so that future monitoring can investigate the air quality benefits of actions to reduce emissions.

When will the results be released?

CARB is conducting in-depth analysis, quality assurance, and refinements to SMMI data and visualization tools. We anticipate beginning to release results in late 2026, starting with Esri StoryMaps and Aclima criteria-pollutant datasets. Products will be posted on the CARB website as they are reviewed and approved, and we will share a timeline for the phased release as soon as it's available.

Why isn't the data available right now?

SMMI produced billions of measurements across over 60 communities. Before releasing results, CARB must complete extensive quality checks and prepare plain-language explanations and visuals so the public can use the information confidently. This kind of dataset is both powerful and easy to misinterpret without clear context. Mobile sensor data involve short, non-continuous samples and lower-cost instruments, which expand coverage but add uncertainty. Because of this, the results require extra interpretive care compared with fixed-site monitors. Taking time to review, verify, and contextualize the findings helps ensure the results are reliable and actionable. CARB is finalizing quality-assurance documentation, refining Esri StoryMaps and supporting analyses, and will publish datasets and visualizations on a rolling basis once they are available.