Statewide Mobile Monitoring Initiative (SMMI): Frequently Asked Questions

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Introduction and Background

What is SMMI?

SMMI stands for the Statewide Mobile Monitoring Initiative. SMMI is designed to attain a comprehensive dataset of criteria pollutants, toxic air contaminants, and greenhouse gases, create a data portal for public to access and visualize SMMI data, and conduct inclusive community engagement to better understand and address community concerns. This project provides an opportunity to complement AB 617 statewide air monitoring activities by engaging communities beyond those currently selected under the Community Air Protection Program, providing data to fill air monitoring gaps and support additional actions to reduce emissions and exposure. It is intended to provide valuable information to increase understanding of current air pollutant concentrations measured in a subset of communities across the state (e.g., AB 617 Consistently Nominated Communities). Data will support focused community and agency action, such as identifying areas of concern to help prioritize locations for more comprehensive community-scale air monitoring. In addition, SMMI will help CARB learn more about mobile monitoring techniques that may be suitable for future monitoring projects.

How is SMMI funded?

SMMI is part of California Climate Investments, a statewide initiative that puts billions of Cap-and-Trade dollars to work reducing greenhouse gas emissions, strengthening the economy, and improving public health and the environment - particularly in disadvantaged communities. CARB received $27M through legislative appropriation in the Budget Act of 2022 for SMMI (CARB Statewide Mobile Monitoring Initiative Expenditure Record).

What does the scope of work for this project include?

SMMI includes 7 main tasks:

- Task 1 – Hold a virtual public kickoff meeting.
- Task 2 – Form Project Expert Group (PEG) to guide and steer SMMI.
- Task 3 – Develop a community engagement plan in collaboration with the PEG.
- Task 4 – Design Community Air Monitoring Plans (CAMPs).
- Task 5 – Conduct mobile monitoring.
- Task 6 – Data reporting and visualization.
- Task 7 – Project wrap-up and final virtual public meeting to conclude the project, present findings, and explore follow-up activities.

Where can I find information on SMMI?

CARB will continue to provide up-to-date information on CARB's SMMI website. This website includes background information, documents (such as the SMMI RFP and Aclima's technical proposal), and links to Aclima's public website materials.

Contractor Selection

Who is the contractor and how were they selected?

CARB awarded Aclima, Inc a $26.88 million contract to carry out SMMI through a competitive solicitation process called a Request for Proposal (RFP). Aclima is a California Public Benefit Corporation that specializes in hyperlocal air quality mapping and analysis. All SMMI RFP materials are available on CaleProcure. The contractor responded to the RFP by submitting a technical proposal, which is available on CARB's SMMI website. The contractor was selected by an evaluation committee through a rigorous evaluation process against the minimum qualifications and technical evaluation criteria established in the RFP.

How was the RFP designed and what technical requirements were in the RFP?

The RFP was designed based on information collected through a Request for Information (RFI) and air quality concerns from overburdened communities. The RFP considered the availability of monitoring technologies and challenges to address air quality, toxic, and climate issues. Example air pollutants, emission sources, and monitoring areas were listed in the RFP, which CARB compiled through community engagement, data collected by CARB's monitoring networks, and scientific literature. The priorities in the RFP were designed to leverage the strengths of mobile monitoring to focus on screening for potential sources that can lead to follow-up monitoring and action.

Explicit scoring criteria were included in the RFP to guide selection of a proposal that was the most technically qualified. Proposers were required to meet the following minimum technical requirements to score full points:

- Identifies approach to apply existing platforms and capabilities that meets specified RFP mobile monitoring definition.
- Identifies pollutants that can be measured and provides a comprehensive justification of the utility of the selected pollutants.
- Maximizes benefits to priority populations and discusses spatial coverage that can be accomplished.
- Provides justification for prioritization of certain locations based on anticipated sources of concern, pollution burden, demographics, and priority population designation.

Proposers' monitoring capabilities were also required to achieve or exceed the following (to score maximum points):

- Ability to measure pollutants classified as criteria, greenhouse gases, and air toxics.
- Proposed methods have pollutant-specific Limits of Detection (LoDs) adequate for measuring near ambient concentrations typical in California.
- Ability to quantify localized pollutant concentration enhancements, both temporally and spatially.
- Three complete mobile monitoring platforms that can be employed for this project.
- Ability to conduct monitoring outside of standard business hours (Monday through Friday, 6 p.m. to 8 a.m. and weekends).

What was the timeline for SMMI development and contractor selection?

Date	Deliverable
2023	
September 18	Budget Bill Jr. signed
September 20	Request for Information (RFI) and air quality concerns survey released
October 6	Last day to submit RFI questions
October 16	Release of answers addendum
November 16	RFI response due date *(18 responses received)*
November 16 - January 22	Complete scope of work with information from RFI
2024	
January 22	Request for Proposal (RFP) available to prospective proposers
February 12	RFP questions submittal deadline
February 20	Questions and answers addendum posted
March 18	Final date for proposal submission to CARB *(3 proposals received)*
March 18 - April 5	Proposal evaluation
April 5	Posting of intent to award notice *(Aclima, Inc.)*
April 16	Agreement sent to successful proposer; AB 106 signed by the Governor and chaptered (Chapter 9, Statutes of 2024) to fix SMMI encumbrance and liquidation dates
April 24	Signed agreement returned to CARB for countersignature
May 3	Agreement submitted for processing
May 20	Anticipated date for agreement approval and execution
June 14	Agreement approved and executed

Mobile Monitoring

What are the overarching monitoring objectives of SMMI?

The two primary monitoring objectives are 1) to identify potential air pollutant emission sources and 2) identify disproportionate air pollution impacts. These two objectives support investigation of the majority of concerns relayed through community engagement.

Who will be responsible for SMMI mobile monitoring?

Aclima, Inc. and their subcontractors will conduct tasks specified in the RFP, such as community engagement, mobile monitoring, data management, and data analysis and visualization. The CARB SMMI project team will oversee implementation of the contract.

Where will mobile monitoring take place?

The contractor is required to conduct at least 60% of monitoring to benefit California Climate Investments Priority Populations. Aclima will conduct mobile monitoring across the 64 consistently nominated AB 617 communities. Specific monitoring areas have been determined through a community engagement process and documented in community air monitoring plans.

What are general strengths and limitations of mobile monitoring?

Because of the nature of mobile monitoring and how it differs from stationary monitoring, there are inherent strengths and limitations to the approach.

- Mobile monitoring can cover more area at a higher spatial resolution than stationary networks (i.e. fewer spatial gaps in coverage). However, because mobile monitoring vehicles can only spend a limited period of time at a given location, there may be gaps in time for that location where monitoring data is not available.
- Mobile monitoring sensors and instruments can gather valid data on a wide variety of important pollutants for informing community action, but to achieve high spatial resolution, gather data on fewer pollutants and at lower precision and accuracy than is possible in stationary networks. As a result, mobile monitoring sensors are not certified by the U.S. EPA for gathering data that can be compared against national ambient air quality standards (NAAQS) and used in regulatory actions under the Clean Air Act. For regulatory action, a follow-up study using U.S. EPA-approved monitoring methods may be necessary.
- While mobile monitoring can provide a significant amount of information across a given geographic area, monitoring vehicles may only be present in that area for a limited period of time. This may mean rare events or seasonal patterns are not captured in the dataset.

What are Aclima's monitoring capabilities and capacity?

Aclima, in partnership with its subcontractors (UC Berkeley, UC Riverside, and Aerodyne), will conduct mobile monitoring using 42 mobile platforms and 3 mobile laboratories. The mobile laboratories will be operated by subcontractors. Aclima mobile platforms will focus on criteria pollutants, methane, ethane, and black carbon with primary objectives to identify local sources and determine the areas impacted by these sources. Partner mobile laboratories are equipped with the state-of-the-art instrumentation (e.g., proton transfer reaction mass spectrometry (PTR-MS)) to provide comprehensive analysis of air toxic contaminants (e.g., benzene and formaldehyde).

Mobile monitoring will start with a broad area monitoring strategy, through which Aclima will conduct mobile monitoring in communities over a 9-month period using its 42 platforms. Partner mobile laboratories will also be deployed to areas identified during community engagement with a focus of characterizing the chemical composition in the vicinity of known or suspected sources for approximately one week in each community. Mobile monitoring will be planned to capture representative air pollutants in each community to achieve monitoring objectives. For more information, please see Aclima's technical proposal, community-specific CAMPs and CAMP Appendices.

What air pollutants will be monitored?

The list of pollutants proposed to be monitored includes criteria pollutants, toxic air contaminants, and greenhouse gases. The air pollutants include Particulate Matter ($PM_{2.5}$ & PM_{10}), Black Carbon (BC, surrogate for diesel PM) , Ozone (O_3), Carbon Monoxide (CO), Carbon Dioxide (CO_2), Nitrogen Oxides (NO & NO_2), Methane (CH_4), Hydrogen Sulfide (H_2S), Benzene, Toluene, Ethyl Benzene, Xylenes (BTEX), Formaldehyde, Acrolein, Ethylene Oxide, 1,3-Butadiene, Carbonyls, Polycyclic Aromatic Hydrocarbons (PAHs), Metals, and Methyl bromide. A full list can be found in Appendix I.

When will monitoring occur?

Monitoring will occur simultaneously across all communities for up to 9 months, with broad area monitoring beginning in June 2025. Monitoring will include coverage across all days of the week and times of day, including within and outside of standard business hours. For more information, please see the community-specific CAMPs and CAMP Appendices.

What methods are employed to meet monitoring objectives?

Mobile monitoring will be carried out following the CAMPs developed in collaboration with the PEG and community members (please view individual CAMPs for more details). Mobile monitoring will be conducted through a mixed fleet strategy:

1) Broad area monitoring: Aclima Mobile Platforms (AMP) will conduct 9 months of monitoring in each community with an average of 20 repeat measurements distributed across all residential and major roads to provide adequate coverage throughout the monitoring areas. The Aclima fleet is suited to temporal characterization due to the ability to drive around-the-clock and can also be used for spatial characterization for source types or proxies supported by Aclima's core pollution measurement suite.
2) Targeted area monitoring: Partner Mobile Labs (PML) UC Berkeley, UC Riverside, and Aerodyne will focus on detailed chemical speciation around locations of concern and exploration of the spatial impact of those pollutants. The assignment of a particular target area to the AMP fleet versus a PML will largely be determined by the source of concern and the suite of pollutants necessary to characterize the source.

Quality assurance plans have been developed to ensure data quality throughout the duration of monitoring.

What types of sources might be monitored?

Source types of interest include:

- Oil and Gas Extraction, Production, and Distribution (subset of pollutants of concern: BTEX, PAHs, 1,3 butadiene)
- Metalworking and finishing (subset of pollutants of concern: metals, acrolein,1,3-butadiene, BTEX, arsenic)

- Warehouses and distribution centers, ports, and railyards, especially those with high volumes of heavy duty trucking associated (subset of pollutants of concern: diesel PM, PAHs, BTEX, acrolein, 1,3-butadiene, carbonyls)
- Airports (subset of pollutants of concern: acrolein, 1,3-butadiene, carbonyls, diesel PM, BTEX, formaldehyde)
- Cement plants and mineral processing facilities (subset of pollutant of concern: arsenic and other metals)
- Sterilization facilities and commodity fumigators (subset of pollutant of concern: ethylene oxide)
- Chemical manufacturing (subset of pollutants of concern: BTEX, PAHs,1,3-butadiene, ethylene oxide, carbonyls, formaldehyde)

How will source types be prioritized?

Initial prioritization was based on (in no particular order of importance):

- ☐ The most common source types from community concerns
- ☐ Pollutants known or suspected to be associated with 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
- ☐ Monitoring capabilities

Final targeted air monitoring assignment approaches can be found in Appendix H.

Community Participation and Engagement

How can community members participate in SMMI?

There are several ways community members can participate in SMMI. Community members can fill out the community air quality concerns survey, and send any thoughts and concerns to SMMI@arb.ca.gov or to other contacts shared during public meetings. .

To better help community members understand the content of the final report in an accessible manner, Aclima and CARB staff will organize online meetings by air district (or sub-group within air district if necessary) to explain project results, answer questions, have community members share their experiences engaging with the project, and discuss possible next steps. These meetings will occur in May 2026 and more information will be available on our website.

How is community engagement carried out during SMMI?

Aclima works with their subcontracted Engagement Leads, which include individuals from more than 40 community-based organizations, to carry out community engagement. Community engagement is

guided by the Community Engagement Plan, which has been developed by working with the Project Expert Group (PEG) and community groups, following the CARB's community engagement model.

What is the Project Expert Group?

The Project Expert Group (PEG) is a diverse and inclusive group, consisting of community experts (e.g. members of community-based organizations (CBOs)), community leaders, researchers, air districts, state and government agency staff, businesses. The PEG consists of 18 members with over 50% of members directly representing the CAPP CNCs. Information about PEG members and meeting materials can be found on Aclima's website. PEG members are compensated for the expertise and knowledge they provide. The group meets at least 4 times per year.

Data and Results

What are the data reporting requirements?

The contractor must provide CARB mobile monitoring data in discrete monthly intervals beginning 4 months after monitoring has commenced. CARB will receive all raw and finalized monitoring data. The State of California will own all data associated with this project in perpetuity with no use limitations and the data will remain in the public domain to maintain transparency. The contract also requires high-level description of data processing (without violating the contractor's confidential business information and intellectual property). Finalized data is defined as data in its reportable and stored format that has undergone quality assurance and quality control procedures prior to any aggregation for public visualization.

How will communities and the public access data?

CARB will make the finalized monitoring data available for public access through the CARB AQview website at the conclusion of SMMI. Data for each region and pollutant will be provided in standardized, comma-separated values (CSV) format to ensure broad compatibility with commonly used data analysis tools and software. ESRI StoryMaps and supportive analyses will be hosted on the CARB website to help communities identify potential sources of concern. Only finalized quality assured data will be incorporated into public facing visualizations. Aclima and CARB will work with communities and the PEG to identify the most valuable mobile monitoring data visualizations to communicate results to the public.

What actions may result from SMMI?

SMMI is intended to generate a high-quality mobile air monitoring dataset. While the dataset may help inform future actions, it is not designed to serve as a basis for direct regulatory or policy decisions. When monitoring has concluded, CARB, Air Districts, community groups, regulatory agencies, researchers, and other parties are encouraged to leverage the data to address specific air pollution concerns.

Some example potential actions may include:

- Identify fugitive emissions (e.g., pipeline leaks)

- Inform future monitoring (e.g., Community Air Grant funded monitoring, follow-up mobile monitoring)
- Support local community emission reduction plan development and upcoming rulemaking activities
- Notify relevant entities of air pollution emergencies

What is the timeline for presentation and discussion of results?

Prior to the conclusion of the contract on May 19, 2026, Aclima and CARB staff will host a series of online meetings. These webinars will provide an opportunity to present preliminary project findings, respond to questions, share stakeholder and community experiences, and begin discussions on potential next steps. These sessions will primarily focus on early insights rather than fully developed analyses or interpretations, as data collection will have only concluded in March 2026.

Following the end of the contract period, CARB will continue to conduct in-depth data analysis, refine ESRI-based visualizations, and maintain engagement with stakeholders and community members to share final findings and explore opportunities for follow-up actions.