I. Cover page

Project Title:

Community Air Monitoring in California with Promoted Community Engagement and Partnership

Applicant Information:

- California Air Resources Board
- 1001 I St Sacramento, CA 95814
- Michael Miguel, (916) 322-0960, michael.miguel@arb.ca.gov
- DUNS Number: 195930276

Set-Aside: No set-aside

Brief Description of Applicant Organization:

The California Air Resources Board (CARB) is charged with protecting the public from the harmful effects of air pollution and developing programs and actions to fight climate change and reduce exposures to air toxics. CARB's mission is to promote and protect public health, welfare, and ecological resources by effectively reducing air pollutants while recognizing and considering effects on the economy. CARB is the lead agency for climate change programs and oversees all air pollution control efforts in California to attain and maintain health-based air quality standards and develop regulations to reduce exposures to unhealthy air pollutants.

Project Location:

La Viña, CA 93637 and Maywood-Vernon-Bell-East Commerce, CA 90023

Air Pollutant Scope:

- Particle Pollution (ultrafine, PM2.5, or PM10), including aerosol composition (metals, ions, elemental carbon, organic carbon, etc.) and PM precursors
- Hazardous Air Pollutants (HAPs), commonly referred to as air toxics (e.g., hexavalent chromium, lead, nickel, cadmium, BTEX, formaldehyde)

Budget Summary:

EPA Funding Requested	Total Project Cost
$499,100	$499,100

Project Period:

November 1, 2022– November 30, 2025

Short Project Description:

The project will utilize community engagement and partnership to co-design and implement air quality monitoring in two distinct environmental justice (EJ) communities in California with the goal to inform the development of a statewide community air monitoring program and guide the enhancement of CARB's air toxics program.

II. Workplan

Section 1 Project Summary and Approach

A. Overall Project

CARB seeks $499,100 in grant funds under the American Rescue Plan Grant Competition for Enhanced Air Quality Monitoring for Communities (EPA-OAR-OAQPS-22-01) to conduct community-scale air quality monitoring in partnership with residents and representatives of two EJ communities in California impacted by health disparities exacerbated by COVID-19. This proposal's pilot project augments the lessons learned through CARB's implementation of various programs addressing local scale air quality issues to inform the development of future statewide community air monitoring plans and provide enhancements to CARB's air toxics program.

CARB established the Community Air Protection Program (CAPP)[1] to implement Assembly Bill (AB) 617, passed by the California Legislature in 2017. CAPP ensures that all Californians benefit equitably from our State's air quality and climate efforts, especially those who live in the areas of California most severely impacted by air pollution. The CARB Board has selected seventeen communities to implement CAPP, of which fifteen are developing or implementing Community Air Monitoring Plans (CAMPs). The community steering committees convened by the air districts provide a platform for community members to voice their opinion on building these CAMPs tailored to the community's unique monitoring needs. The Community Air Grants Program[2] created under the AB 617 process provides funds to community-based organizations for technical assistance and to support their efforts in this process. Many of these grants support community-based monitoring and community engagement. CARB recently developed the Study of Neighborhood Air near Petroleum Sources (SNAPS)[3] program to better characterize air quality in communities near oil and gas operations through limited-term, intensive air quality monitoring with a particular focus on production facilities.

The implementation of these programs has provided state, local, and community partners valuable lessons, experience, trust-building, and a foundation in community engagement to develop community-led local-scale air quality monitoring plans to identify and address the community's concerns. These will be the guiding principles to inform and build future statewide community air monitoring systems. CARB will use the grant monies to directly engage with community members in co-designing monitoring plans, including training residents to participate in monitoring and air quality sampling through partnerships with community-based organizations.

Implementing these programs has required CARB to engage with communities more directly and profoundly through participation in many discussions across many communities across California. The lesson of engaging early and often is applied to CARB's Air Toxics Program. Through this program, CARB has engaged with community groups across the state to identify their air toxics concerns. This has helped direct CARB in developing strategies for future emissions reduction opportunities such as through regulatory Airborne Toxics Control Measures (ATCMs). CARB's community engagement has helped CARB identify its plan to evaluate measures to reduce air exposures to toxic metals. CARB's Air Toxics Program[4] is a comprehensive program that is driven by legislation and requires CARB to identify air toxic pollutants, assess the need for emission controls, and develop statewide ATCMs. The Program also includes a component that requires facilities to report their emissions, local air districts to prioritize the risks from these facilities, require significant risk facilities to conduct health risk assessments, and to reduce these risks to the community. An important component of the program also addresses the risk to children and other sensitive receptors from air toxics.

CARB will use grant monies to procure equipment and showcase how communities can develop and support comprehensive community air monitoring programs now and in the future. This project follows a

novel approach of extensive community engagement to monitor air toxics of concern with the potential of revealing new and emerging pollutants. CARB will use the requested grant funds of $499,100 to:

- Generate data to help accelerate California's regulatory efforts to reduce air toxics emissions in communities overburdened by these exposures
- Foster community engagement, participation, and capacity building through stipends
- Purchase samplers, canisters, and low-cost sensors to support monitoring
- Support chemical speciation using analytical labs
- Support monitoring efforts of our project partner, the Department of Pesticide Regulation (DPR)
- Develop tools for data analysis and communication

The project's proposed communities have been strongly recommended for inclusion in the CAPP program based on public outreach, community collaboration, and public comments during CAPP's annual community selection process. La Viña, CA, is a primarily rural and agricultural community and Maywood-Vernon-Bell-East Commerce, CA, is a highly industrialized and urban community.

B. Project Significance

This project supports CARB's efforts to reset the AB 617 program by working with communities eligible for the program but not yet selected. Applying the lessons learned from the AB 617 CAMPs will help CARB expand efforts to partner with community-based organizations supporting community-focused monitoring efforts. This project will also inform future strategies and actions under the Air Toxics Program. Both communities chosen for this project are disproportionately impacted by poor air quality and suffer from health disparities exacerbated by COVID-19. The La Viña community is primarily Spanish-speaking and represents an opportunity for CARB to demonstrate effective partnership through culturally competent and accessible engagement.

La Viña is an unincorporated EJ community in Madera County within the San Joaquin Valley Air District. As per the 2019 American Census Survey[5], this community has a population of 211, and 100% of its residents are of Hispanic descent. About 96% of La Viña residents live below the poverty line. The income per capita of La Viña is $4,563, which is only about 10% of the State's ($36,955). There are no hospitals, childcare facilities, or nursing homes within this community (Attachment C - Maps). The La Viña Elementary School is the only nearby educational facility.

La Viña is an agricultural community, and many of its residents work in agriculture-related fields[6]. Food and agricultural processing facilities are the largest stationary source emitters in La Viña, contributing to almost all stationary source PM2.5 and ROG emissions. According to CARB's preliminary draft estimates[7], farming equipment is responsible for 83% of PM2.5 and 46% of ROG emissions from mobile sources. Farming operations made up 97% of ROG emissions from area-wide sources. Cooking, farming operations, and unpaved road dust contribute to 30%, 27%, and 9% of PM2.5 emissions from area-wide sources, respectively[7]. The community is representative of many other communities in the Central Valley; therefore, findings in La Viña will be valuable for many other agricultural communities in the region.

Exposure to pesticides is a significant concern for community members. CARB will rely on its partnership with the DPR in the current AB 617 communities of Shafter[8] and Eastern Coachella Valley[9] to work together with La Viña community members to expand pesticide monitoring in that area.

Maywood-Vernon-Bell-East Commerce (Attachment C - Maps) is an EJ community in Los Angeles County within the South Coast Air District that spans 13 square miles. As per CalEnviroScreen[10] (CES) 4.0, this community has about 102,000 residents, with about 95% of Hispanic descent, followed by whites (about 3%), African Americans (about 1%), and Asian Americans (about 1%). The community's

socioeconomic factors rank within the 99th, 98th, 94th, and 93rd-percentile within the State for education, linguistic isolation[11], poverty, and unemployment, respectively, showing significant burdens.

Maywood-Vernon-Bell-East Commerce is an urban community. According to CARB's preliminary draft estimates[7], PM2.5 from wood and paper accounts for 12%, while manufacturing and industrial processes contribute to 9% of PM2.5 emissions from stationary sources. Mobile sources are the largest sources of NOx and DPM emissions (75% and 88%, respectively). Commercial cooking PM2.5 and consumer products ROG emissions are the largest area-wide sources (16% and 25%, respectively).

Section 2 Community Involvement

A. Community Partnerships

Central California Asthma Collaborative[12] (CCAC) is a non-profit organization with a mission to increase capacity for asthma-related education and advocacy in Fresno and Madera counties, as well as organizing and supporting other county asthma coalitions across the San Joaquin Valley. CCAC will assist in meaningful community engagement, including members from Madera Youth Leaders to participate in sampling and monitoring activities and advise CARB on how best to engage residents in sampling design, data integrity, and interpretation of data.

The Central California Environmental Justice Network[13] (CCEJN) serves as a hub for environmental activism in the Central Valley, aiming to empower communities and secure children's future by eliminating negative environmental impacts in low-income and communities of color. CCEJN has been engaged since 2014 in multiple community air monitoring programs across the San Joaquin Valley that include a variety of methodologies (i.e., grab samples/bucket samples, temporary stationary monitoring, permanent stationary monitoring). To support AB 617 community air monitoring, CCEJN is partnering closely with the statewide collaborative Allies in Reducing Emissions[14] and the region-wide collaborative San Joaquin Valley Environmental Justice Collaborative, which is comprised of CCEJN, Central Valley Air Quality Coalition[15], and CCAC to assess and measure air quality in EJ communities heavily burdened by pollution due to their proximity to oil and gas facilities, distribution centers, incinerators, and biomass facilities.

Leadership Counsel for Justice and Accountability[16] (Leadership Counsel), located in the San Joaquin and Eastern Coachella Valley, works alongside the most impacted communities to advocate for sound policy and eradicate injustice to secure equal access to opportunity regardless of wealth, race, income, and place. Leadership Counsel partners with a dedicated community group of about 40 La Viña residents, with whom they have been working for several years. Leadership Counsel will be a crucial partner in community engagement in La Viña, and their extensive knowledge and experience in addressing local issues will help CARB prioritize sources of concern for monitoring.

CCEJN has partnered with the Leadership Counsel in La Viña to install air monitors potentially. CCEJN will be a crucial partner in engaging community members on monitor placement and building partnerships for community-led sampling wherever possible. The technical expertise provided by CCEJN could help foster community engagement to assist in sampling.

The DPR Air Program[17] has collaborated with CARB and various air districts and assisted with the AB 617 communities of Oakland, Imperial, Shafter, Wilmington/Carson/West Long Beach, and Easter Coachella Valley on pesticides concerns. As the primary regulating government entity over pesticides, DPR provides each community with background on pesticide use in the area and presents technical expertise on current air monitoring technologies and techniques. The community of La Viña is ranked 5th on DPR's list initial top 30 ranked communities for fumigants monitoring. DPR is partnering to support community engagement and provide technical guidance and support of pesticide monitoring in La Viña.

CARB and the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment[18] (OEHHA) partnered in recent years to address community concerns related to health effects of pollutants and also identify air toxics, including pesticides, that can be prioritized for monitoring in certain AB 617 communities. CARB will rely on OEHHA to provide guidance on toxics monitoring and data interpretation. Additional community partnerships have been made with groups like the Coalition for Clean Air[19], Communities for a Better Environment, East Yard Communities for Environmental Justice[20], California Communities Against Toxics, Comite Pro-Uno, and the Del Amo Action Committee[21] to address air toxics in several communities within the South Coast region. These groups are well established and are actively engaged in many of CARB's regulatory programs that address air toxic-related regulations and projects that reduce emissions of toxic air pollutants within southern California communities.

B. Community Engagement

CARB will rely on its established relationships with the project partners to develop community-specific engagement processes to strengthen the relationship with the community through several phases of the project design, implementation, and results dissemination.

CARB will leverage best practices learned from community engagement in the current AB 617 communities and apply them in La Viña and the Maywood-Vernon-Bell-East Commerce. CARB and its community partners will work together to identify key stakeholders that could include residents, faith-based organizations, city councils, businesses, local government, and other actively engaged groups within the community to guide the development of a project plan. For example, CCEJN could help obtain support from Madera Coalition for EJ's Youth Leadership Academy to strengthen community engagement further and perform the project effectively. In February of 2022, CARB announced the selection of a round of community air grantees as part of the CAPP. One of the grants was awarded to the CCAC, representing a coalition of San Joaquin Valley organizations to work directly with the La Viña community to develop a community-led emissions reductions strategy, informed by the findings of the La Viña monitoring project.

CARB will work with its partners to engage community members from the start of the project. Initial kick-off meetings can serve as a platform to identify key stakeholders, address project scope and timelines, and develop a plan for continued community engagement (such as quarterly meetings). CARB and its partners will utilize available data and information to develop a preliminary community profile that includes air quality concerns often raised by the community members. Through early phases of engagement, community input will guide further refinement of that profile and the development of a project plan. Active engagement and listening sessions between CARB and these communities are also a critical step in informing the communities on how to become involved in identifying and monitoring sources of air toxics. Stipends are budgeted to compensate community members for their valuable time, feedback, and direct participation in monitoring activities, throughout the process. In addition, CARB will learn how to make monitoring projects more accessible for all project phases, including sharing and interpreting findings.

It is expected that such engagement would lend into a development of a robust project plan that could include, but not limited to, building awareness within each community of the monitoring effort and resolving community questions and concerns; guiding monitor placement through community prioritization and review of preliminary screening monitoring (if applicable); and reviewing preliminary and finalized results to ensure the summarized and interpreted monitoring data are accessible and understood. The lessons learned in implementing AB 617 CAMPs, based on 14 elements as defined in Appendix E[22] of the CAPP Blueprint, will further enhance the development of the project plan.

CARB and its partners will develop project milestones and data visualization tools to provide periodic updates to the community stakeholders. CARB has designed the Community Air Quality Portal[23], Community Hub,[24] and the Technology Clearinghouse[25] in recent years to support the AB 617 program

that could guide the development of similar tools if needed for this project. In addition, CARB and its partners will work with the community stakeholders to provide periodic progress updates via in-person or remote meetings or using a hybrid approach and a progress report if needed. CARB will work with project partners to develop a language justice approach for the La Viña community, including interpretation and document translation services for meetings, written documents, presentations, and online tools.

Section 3 EJ and Underserved Communities

As discussed under Section 1.ii, La Viña is a small, unincorporated EJ community in Madera County that is majority Latinx and low-income and faces a disproportionate pollution burden due to extremely heavy pesticide application, dust, vehicle exhaust, a processing plant at a nearby winery, and other sources. Residents of La Viña have advocated to CARB and to the San Joaquin Valley Air Pollution Control District for multiple years now to bring the AB617 program to their community.

As per CES4.0[10,26], the census tract that houses La Viña is in the 93rd-percentile of all census tracts statewide in terms of pollution burden. The resident's exposure to PM2.5 and pesticide are also among the highest in the State, at the 90th and 92nd-percentile, respectively. Residents also suffer from higher rates of asthma, low birth weight, and cardiovascular diseases than most of the State, at the 69th, 87th, and 83rd-percentile, respectively.

According to their local elected official, La Viña is also one of the communities most impacted by COVID-19 in Madera County. CCEJN has worked with residents who have tested positive, been hospitalized, and spent time in the ICU due to COVID-19. The community continues to voice concerns that worsening air quality can exacerbate dust episodes, and folks with COVID-19, asthma and other respiratory conditions struggle even more to breathe.

The community of La Viña has self-nominated for inclusion in the AB 617 for multiple years now. The CES data, CARB's emissions inventory, and above all, the testimonies of community stakeholders establish the cumulative air quality burden this community faces from multiple sources. CARB and its partners look forward to utilizing grant monies to begin a focused monitoring campaign within the community. In addition to providing a snapshot of La Viña's air quality, this pilot project shall serve as a model for future air monitoring in other communities. The air quality data obtained shall also guide the development of mitigation strategies up to the extent possible based on the representativeness of data collected and the availability of funds to implement those strategies.

The Maywood-Vernon-Bell-East Commerce community has some of the worst pollution burdens within the State, as the maximum CES score is at the 99th-percentile. Residents are exposed to various sources of pollution in the community, including traffic (100^{th}-percentile), lead from housing (100^{th}-percentile), EnviroStor[27] cleanup sites (99^{th}-percentile), and hazardous waste facilities (99^{th}-percentile). PM2.5, diesel PM, and modeled toxic releases ranked within the 88^{th}, 99^{th}, and 92^{nd}-percentile, respectively. Residents also suffer from higher rates of asthma, low birth weight, and cardiovascular diseases than most of the State, at the 95th, 89th, and 97th-percentile, respectively. An air monitoring program within this community will provide CARB and other regulatory agencies the information needed to make informed decisions on its subsequent mitigation actions. For example, the monitoring of air toxic metals and the purchase of the technologies to do this will provide CARB the data needed to further its evaluation of the sources and emissions of air toxic metals within this community and the ability to assess changes in the community in future assessments and regulatory actions.

Section 4 Environmental Results; Outcomes, Outputs, and Performance Measures

A. Expected Project Outputs and Outcomes, Performance Measures and Plan

The project will develop a methodology to monitor air toxics levels in the EJ communities with an emphasized element of community engagement. The method will include selecting communities, identifying the toxic air pollution problems in the communities, conducting community-level monitoring on air toxics, analyzing the air pollution data collected, interpreting the analysis results, and providing these results to local communities and local decision-making agencies. We will leverage the extensive CAMP development materials created for AB 617 (Appendix E of the CAPP Blueprint[22]). A critical component of CAMP development is making the data and results transparent and accessible to the public to ensure community members can understand and use the data to support community and local governmental actions. The method will be developed and demonstrated with two pilot studies in two distinct EJ communities in California (La Viña and Maywood-Vernon-Bell-East Commerce) as discussed above. The project will also suggest an approach on how public agencies can work with local community members to conduct community-level air toxics monitoring and have the communities be greatly involved in and exposed to the scientific processes in the monitoring project. A detailed list of expected project outputs, outcomes as well as performance measures is included in Table 2.

B. Timeline and Milestones

The project will be completed within three years upon the receipt of the grant funds. Table 1 shows the timeline of the project. Communities will be involved at the very beginning of the project, and the processes of open bidding and procurement will be conducted based on the inputs from the communities. As a community-led effort, community engagement will be a major component throughout the project, with periodic meetings, training sessions, and other formats of interactions. We will conduct one year of measurement campaigns in each community, and the actual schedule of the two campaigns will be determined based on the availability of the resources. The timeline below provides the estimated time window for the two campaigns.

Table 1. Project Timeline

Tasks	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Community meetings on project planning												
Open bidding for lab analysis												
Procurement of equipment												
Community training on sampling and operation												
Community monitoring												
Sample analysis												
Data review, analysis and interpretation												
Community meetings and interactions on monitoring results												
Data publication												
Quarterly report												
Final report												

Tasks with community engagement

Tasks completed by CARB staff

Table 2. Expected Project Outputs, Outcomes, and Performance Measures

Categories	Outputs	Outcomes	Performance Measures
Method development	• An integrated approach on community air toxics monitoring with an emphasized element of community engagement	A methodology to guide future community air toxics monitoring	• Project Final Report • Quarterly progress reports • Meeting and training materials • Feedback from the communities
Identification of air pollution	• Collective information from the communities on the air pollutants of interest and impacting sources • Suggested monitoring locations and periods • Analysis results from existing air quality data and community-level emission inventories	Initial understanding of air pollution problems in the communities to design the sampling plan	• Identified air pollutants of concern • Map and details information on potential monitoring sites • Analysis reports of the existing data
Deployment of equipment to conduct air quality monitoring	• Filter and canister samples at multiple sites in the two communities collected by community members • List of targeted speciation of PM and VOCs based on the inputs from the communities • Monitoring network with low-cost sensors for continuous measurement of $PM_{2.5}$, black carbon, CO and NO_2	A collaborative sampling method for the community members to lead and be heavily involved in	• Equipment purchased for sampling and monitoring • Co-designed sampling plan from CARB and the communities • Number of total samples and valid samples collected • Number of days for sensor monitoring
Community-specific assessments of air pollution data	• Concentration levels of various air pollutants in the communities • Spatial and temporal variations of air pollutant concentrations • Potential sources information related to the air pollutants	Enhanced understanding of air pollution problems in the communities	• Raw and processed air quality data from the project • Analysis reports on the data collected • Tools for data analysis and visualization • Feedback from the communities on the data analysis results
Air quality data availability	• Quality-assured data with transparency provided to the public for download and visualization	Ease to access and visualize the data	• Tools for public access and data download • Feedback from the communities on data accessibility and visualization
Promotion of partnerships and community involvement	• Meetings with communities to collect their concerns and discuss the results from the project • Training and demonstrations provided to the communities on how to collect samples and operate sensors • Involvement of community members to collect air samples and operate sensors with stipends provided	Heavy involvement of community members in the monitoring process and exposure of community members to the technologies	• Numbers of community meetings and training sessions • Meeting and training materials • Feedback from the communities on training, sample collection, and sensor operation • Capacities of communities to conduct similar monitoring projects independently
Reports	• Quarterly progress reports and project final report	Effectively track the progress of the project and address issues	• The time when the progress reports and final report are delivered

Section 5 Quality Assurance Statement

Please see the Optional Attachment for the Quality Assurance Statement.

Section 6 Programmatic Capability and Past Performance

A. Past Performance and Reporting Requirements

With respect to grant management, CARB has accepted several U.S. EPA grants in the past three years, including Section 105 Air Pollution Control Financial Assistance Grant (Grant Number A-00901315), PM 2.5 Monitoring Network Grant (Grant Number PM-98960901), and the State Clean Diesel Grant (Grant Number DS-00T87901). Each of these recent grants represents a continuation of a multi-year, multi-million dollar grant from the U.S. EPA. For each grant, CARB has completed all grant agreement terms and completed (or expects to complete) the approved work plans to expeditiously apply funds to shared U.S. EPA and CARB air quality goals. CARB has documented progress on these grants through submittal of required reports and inputting collected data into state and national databases, as appropriate per the grant terms.

Moreover, CARB has been charged with administering the Community Air Grants, as part of the AB 617 effort to support the community-based organizations to participate in the AB 617 process and to build capacity to become active partners with the government to identify, evaluate, and ultimately reduce air pollution and exposure to harmful emissions in their communities. Since 2018, a total of $15 million has been awarded to almost 50 community-based organizations and tribal governments for education and community air monitoring projects, with $10 million in addition for this year. CARB's experience in the Air Grant Program has established solid working relationships with communities for successfully implementing the proposed project.

B. Staff Expertise

The major participants for this project consist of staff members from multiple CARB Divisions, with diverse areas of expertise in community outreach and engagement, air toxics emission and community impacts, ambient air monitoring, and air quality data analysis. Detailed information for all the key staff is listed below, and the resumes are included in the attachment.

Table 3. Key Staff for the Project

Name	CARB Division	Title	Expertise
Robert Krieger	Transportation and Toxics Division	Air Resources Supervisor II	Air toxics emission and community impacts
Chandan Misra	Office of Community Air Protection	Air Resources Supervisor I	Community outreach and engagement
David Ridley	Monitoring and Laboratory Division	Air Pollution Specialist	Air quality monitoring and data analysis
Yanju Chen	Air Quality Planning and Science Division	Air Resources Supervisor I	Air quality monitoring and data analysis
Jennifer Magana	Office of Community Air Protection	Air Pollution Specialist	Community outreach and engagement, bilingual

Section 7 Budget

A. Budget Detail

Table 4. Project Costs and Funding Requirements

Line Item & itemized Cost	Units/Hours	Unit Cost	Cost	EPA Funding
Equipment				
1 canister sampler	1	$15,000	$15,000	$15,000
6 PM samplers	6	$9,000	$54,000	$54,000
3 enclosures	3	$6,000	$18,000	$18,000
3 flow calibrators	3	$5,000	$15,000	$15,000
PM sampling consumables (packs of 50)	15	$320	$4,800	$4,800
10 solar-powered BC, PM, CO and NO2 sensor	10	$5,000	$50,000	$50,000
10 WiFi Access Points	10	$1,200	$12,000	$12,000
TOTAL EQUIPMENT			$168,800	$168,800
Supplies				
Canister shipping services	600	$30	$18,000	$18,000
Protective shipping boxes	12	$325	$3,900	$3,900
TOTAL SUPPLIES			$21,900	$21,900
Contractual				
TO-15A sample analysis (w/ canisters and cleaning service)	312	$400	$124,800	$124,800
XRF metals analysis	144	$150	$21,600	$21,600
Further sample analysis	144	$300	$43,200	$43,200
TOTAL CONTRACTUAL			$189,600	$189,600
Other				
Stipends for planning meetings (6 x 2hr meetings for 20 community residents)	240	$75	$18,000	$18,000
Stipends for training meetings (6 x 3hr meetings for 12 community residents)	216	$75	$16,200	$16,200
Subaward(s) for deployment, sampling, maintenance	984	$75	$73,800	$73,800
Stipends for meeting translation services	144	$75	$10,800	$10,800
TOTAL OTHER			$118,800	$118,800
Total Project Cost				**$499,100**

B. Reasonableness of Costs

CARB staff will be responsible for planning and organizing meetings to understand community concerns and determine potential monitoring locations in collaboration with community partners. CARB staff will develop training materials, vetted by community partners, for operation and maintenance of instrumentation as well as storage and shipping of sample media to contract labs. CARB staff will provide culturally competent training to community members, community group staff, and local college students that will participate in the monitoring operations. CARB staff will be in charge of data management, review, analysis, and data reporting back to the community. All associated personnel costs above, and the associated fringe costs and travel costs, are not part of the EPA funding request and will be contributed by CARB to the project.

Monitoring will involve a combination of canister sampling and filter-based sampling at both locations. CARB will supplement the canister samplers to achieve sampling at three sites per community (only one is requested as part of the budget). Six PM filter samplers are requested such that two different filters can be collected at three sites simultaneously. A flow calibrator is requested for each site in anticipation that a different community member may operate and maintain each location. Multi-pollutant sensors that are solar-powered provide simpler logistics for deployment. We may not be able to rely on WiFi signals at some locations, and therefore WiFi access points will be purchased to leverage wider cellular network coverage and provide real-time transmission of data from the sensors.

We anticipate canister sampling to cover either 1-in-7 day sampling for a full year (chronic sampling methodology) or 4-in-7 day sampling for 13 weeks (sub-chronic sampling methodology), which equates to 52 samples per site in both cases. We intend to set up three sites per community, dependent on logistics and coverage. This monitoring strategy requires 312 canister samples in total over both communities. We plan on taking 1-in-3 day filter samples at 3 locations in both communities for XRF metal analysis and perform a further 1-in-3 day sampling for other pollutants (e.g., hexavalent chromium in the South Coast community and EC and OC measurements in La Viña). Monitoring for 72 days will generate 24 filters per sampler per community (144 per community). We use these sample numbers to estimate the cost of consumables, the cost of lab analysis, and the number of hours of operation and maintenance for the subaward to community groups that will be trained to perform the monitoring. The exact requirements of the sampling will be determined during the community meetings at both locations based on community concerns, siting logistics, and community capacity for monitoring operations.

Stipends will be provided to community members that participate in the project planning and operations training in accordance with practices for many AB 617 steering committee meetings. The communities are majority Spanish-speaking; therefore, we have also budgeted for translation services. The stipends are based on three 2-hour planning meetings per community with 20 community member attendees and three 3-hour training meetings per community with 12 attendees. Translation services are budgeted based on the number of hours of meetings (72) for two translators. Any further translation services for documentation and reports will be provided by CARB.

The budget is designed for flexibility, owing to the community-led focus of this project. The equipment requested should provide flexibility in terms of both the pollutants that can be measured and the sampling frequency to adequately represent the pollution burden based on the concerns raised and guidance provided by the community in the planning meetings. The monitoring will provide valuable data that can be used for future emission reduction activities. For example, the data can inform CARB rule-making (e.g., for metals), trigger actions if recommended exposure levels are exceeded (e.g., for pesticide monitoring), and bolster community requests for future AB 617 selection and community emission reduction plan (CERP) development.

C. Expenditure of Awarded Funds

CARB has extensive experience in community engagement, equipment and contract procurement, deployment of monitoring campaigns, and data analysis and reporting. CARB will leverage the administrative services division (ASD) within the agency to ensure that equipment is purchased efficiently and subawards and contracts are drafted with appropriate language and released for bid as soon as possible. Once we have met with community organizations to confirm the concerns and scope of actions, the specific equipment and contracts required to address those concerns will be submitted to ASD. We will develop detailed timelines for the instrument acceptance testing, training, deployment, and maintenance

to stay on target with the proposed timeline. CARB will have regular meetings and communications internally and with stakeholders. We will work closely with the community organizations to manage and distribute the stipends to the community members and process invoices for any subaward and contractors in a timely manner.

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[1] Community Air Protection Program. https://ww2.arb.ca.gov/capp
[2] Community Air Grants. https://ww2.arb.ca.gov/capp-cag
[3] Study of Neighborhood Air near Petroleum Sources. https://ww2.arb.ca.gov/our-work/programs/study-neighborhood-air-near-petroleum-sources/about
[4] AB 617 and Air Toxics Informational Update. https://ww2.arb.ca.gov/sites/default/files/barcu/board/books/2021/102821/21-11-3pres.pdf
[5] U.S. Census Bureau (2019). American Community Survey 5-year estimates. Retrieved from Census Reporter Profile page for La Viña, CA. http://censusreporter.org/profiles/16000US0640872-la-vina-ca/
[6] Leadership Counsel for Justice and Accountability (2020). Support for the San Joaquin Valley Air Pollution Control District's AB617 Nomination of La Viña.
https://community.valleyair.org/media/2060/leadership-council-for-justice-and-accountability-la-vina-no-2.pdf
[7] Based on the latest SIP inventory with a 2017 base year (CEPAM 2019SIP v1.01). Available at:
https://ww2.arb.ca.gov/applications/cepam2019v103-standard-emission-tool
[8] Shafter Community. https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program/communities/shafter
[9] Eastern Coachella Valley Community.
https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program/communities/eastern-coachella-valley
[10] CalEnviroScreen 4.0. https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40
[11] Percent limited English speaking households.
[12] Central Valley Asthma Collaborative: http://cencalasthma.org/
[13] Central California Environmental Justice Network. https://ccejn.org/.
[14] Allies in Reducing Emissions Collaborative: https://airecollaborative.org/
[15] Central Valley Air Quality Coalition: http://www.calcleanair.org/
[16] Leadership Counsel for Justice and Accountability. https://leadershipcounsel.org/.
[17] California Department of Pesticide Regulation Air Program: https://www.cdpr.ca.gov/docs/emon/airinit/airmenu.htm
[18] California Office of Enironmental Health Hazard Assessment: https://oehha.ca.gov/
[19] Coalition for Clean Air: https://www.ccair.org/
[20] East Yard Communities for Environmental Justice : http://eycej.org/
[21] Del Amo Action Committee: https://delamoactioncommittee.org/
[22] Community Air Protection Blueprint - Appendix E. Statewide Air Monitoring Plan. https://ww2.arb.ca.gov/sites/default/files/2020-03/final_community_air_protection_blueprint_october_2018_appendix_e_acc_0.pdf
[23] Community Air Quality Portal. https://ww2.arb.ca.gov/community-air-quality-portal
[24] Community Hub. https://ww2.arb.ca.gov/capp-communities
[25] Technology Clearinghouse. https://ww2.arb.ca.gov/our-work/programs/technology-clearinghouse/technology-clearinghouse-tools
[26] The CalEnviroScreen score is for the entire census tract, which spans about 144 sq-mi. La Viña, at about 0.1 sq-mi, accounts for less than 1% of this census tract.
[27] DTSC(2017) - More information on EnviroStor is available at: https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/04/EnviroStor_Factsheet_2017.pdf