

Exhibit C1 - Scope of Work

Task 1: Work Plan Development

- **Element 1: Coordinate**

Develop the plan for coordinating WHCC, CWDB, CCV, Tzunu and the various other grants to build, deploy, obtain data and maintain the small and large TAMS, and begin to finalize the locations.

- **Element2: Building Plans**

Develop building plans and specifications for the small and large TAMS, taking into consideration ease of building and the functions of each system.

- **Element 3: List of Materials**

Develop a list of materials considering the small and large TAMS' building plans and specifications.

- **Element 4: Acquire Materials**

Do a trade study considering the cost, specifications, reliability and location of each of the materials and acquire them.

Task 2: Monitoring

- **Element 1: Form Community Partnerships**

LEAP will leverage expertise from an already established Community Steering Committee (CSC) to function as an advisory to further the objectives of this grant. It has been recognized that in order to build community capacity and enhance public health impact LEAP must engage community members in all stages of the process for the present project. This includes participant recruitment, execution of community hazard/asset mapping (Basara and Yuan 2008), air monitoring site selection and operation, development and implementation of a public health action plan, interpretation and dissemination of results, and project evaluation.

CSC members will be involved in the decision of where to site monitors in a network with community participation or input. LEAP will engage the community in designing the air quality monitoring network, collecting data, and analyzing and utilizing the results. LEAP will refine previously developed, scientifically rigorous site selection methods and include community knowledge of important sources of air pollution, cumulative hazards, and vulnerable populations. LEAP will facilitate discussions with community members to identify neighborhoods of concern and to conduct community mapping to identify assets if necessary as well as environmental hazards that either are sources of air pollution or may act cumulatively to affect the health of the neighborhoods' residents.

Tzunu is a Latinx oriented multilingual public relations agency located in Sacramento. Tzunu will be launching a public relations campaign to make sure that residents of rural Fresno, Kings and Tulare Counties are aware of the TAMS and participate in the Community Steering Committees and IVAN.

- **Element 2: State the Community-Specific Purpose for Air Monitoring**

The region is primarily agricultural, and residents are exposed throughout the year to varying levels of pesticides, dust, smoke from ag-burning, and air pollution from the hundreds of daily diesel trucks serving the ag industry. The area is also a dumping ground

for chemical waste near Kettleman City and bio-sludge near Huron. Residents are also exposed to the Interstate 5 and Highway 99 corridor and its heavy diesel traffic, dust and emissions from confined animal facilities, emissions from the numerous regional landfills, and fugitive emissions from the oil and gas industry. The region is also exposed to asbestos residues and selenium accumulation. The incidence of the air-borne respiratory disease, Valley Fever, derived from soil fungus is on the rise.

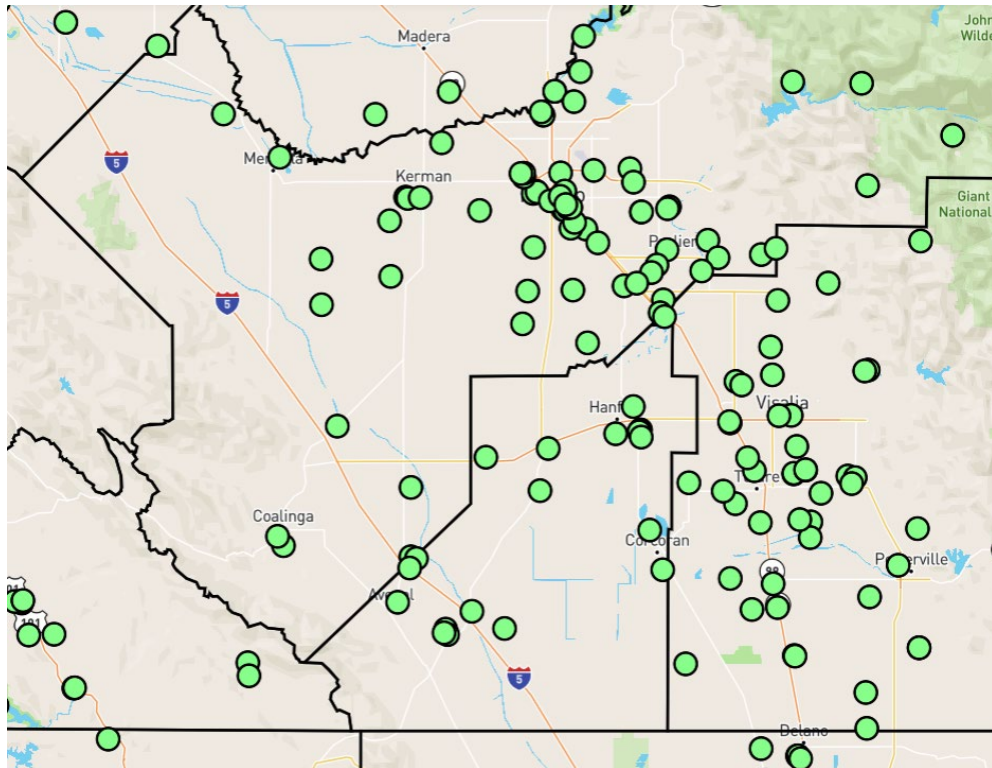


Figure 7: [CalRecycle map](#) of waste facilities in Fresno, Kings and Tulare Counties.

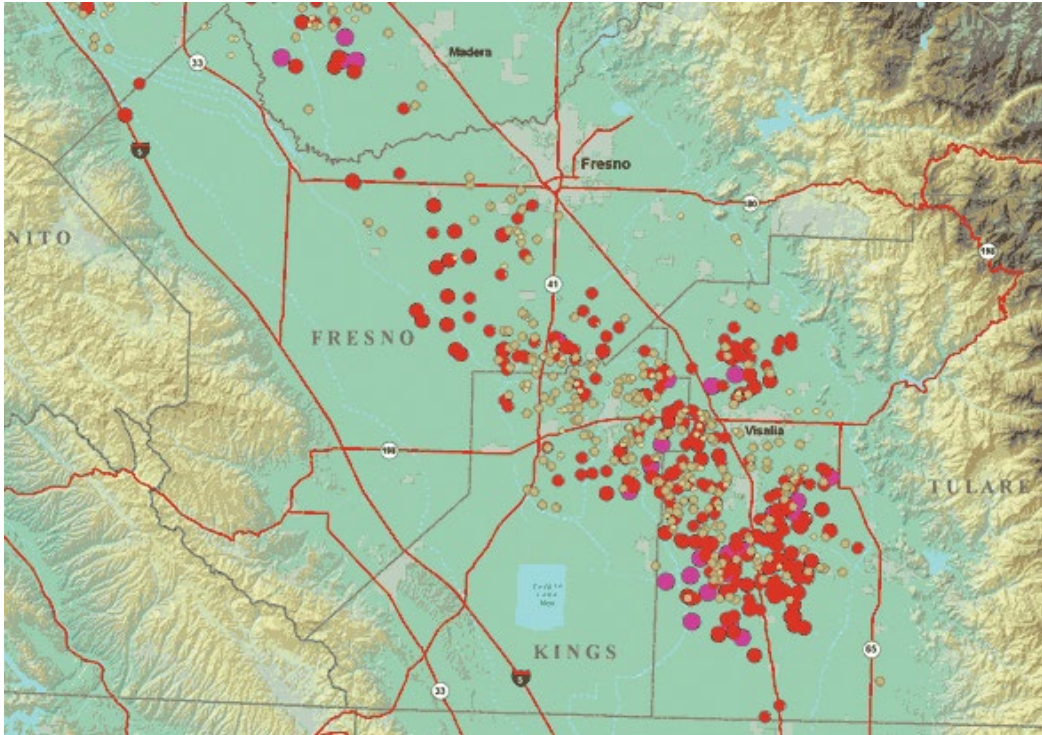


Figure 8: [USEPA Map](#) of dairies in Fresno, Kings and Tulare Counties.

• Element 3: Identify Scope of Actions

The ultimate goal is to build a comprehensive community-based air quality monitoring network. Transportable Air Monitor Stations (TAMS) will be used to form a Rural Valley Air Monitoring Network (RVAMN). LEAP will use a community-driven process to expand from the current 20 air quality monitors into a network of 30 TAMS. LEAP will drive the community science projects with the training of community members on the hardware/software used in the TAMS. LEAP will also maintain the IVAN reporting with the CSC. LEAP will work with Schools in Kings County (particularly with Dr. Patrick Sanchez, Superintendent of Reef-Sunset Unified School District) to create awareness of our local monitoring campaign and build relationships to embolden the *School Flag Program*.

Informed members of high-risk groups can use the TAMS with IVAN to limit their exposure to particulate matter (PM) by spending less time outdoors and reducing physical activity levels when air quality is unhealthy at monitors located near their home, work, school, or play areas. Reduction in exposure to particulate matter will reduce the occurrence of respiratory problem episodes in high-risk groups.

The CSC will engage community members and groups through public forums and other forms of outreach, creating educational materials to convey the health benefits of community air monitoring data. Materials will be in easy-to-understand format, accessible

using the communities' primary languages. The CSC will be responsible for identifying meeting locations which are the most accessible to community members, providing translation of materials to Spanish, conducting meetings in the community's primary language whenever possible, providing trainings to community members, developing meeting agendas, activities, presentations and materials, drafting and disseminating meeting notes, and integrating CSC feedback into project activities. The CSC will participate in a hazard mapping activity to identify safe, public locations, schools, libraries or homes for siting air monitoring sensors according to EPA siting criteria.

Residents will be equipped with data they can use to better identify when residents can reduce exposure to pollution. Their increased knowledge will create capacity about the process required to set up and maintain monitors, and community members will be empowered to collect air data for themselves. With this new information and capacity, the community will be better prepared to engage and collaborate with government concerning air monitoring, emissions reductions and policy than in the past. Increased availability of actionable independent data and technical capacity to operate the hardware and software network components allow residents to have greater control over their lives and enhance the health of their community members. At this point the organization will be able to focus on advocacy work around air quality issues.

LEAP will also be tapping into a set of WiFi weather stations as part of each of the TAMS. This is an Ambient brand, or its equivalent, that is equipped with sensors to measure temperature, pressure, precipitation, wind and intensity of sunlight.

The rural San Joaquin Valley deserves to have accurate air quality monitoring to ensure that the schools are well informed to restrict outdoor activities when necessary. CCV has been successful in working with schools, and LEAP intends to learn from them as it innovates the effort to engage schools and help them maintain the program to inform families and children on the status of air quality.

• **Element 4: Define Air Monitoring Objectives**

✓ **Phase I Calibration:**

- LEAP will collect data for the CEHTP so that they can develop a conversion algorithm for monitors.
- Once the algorithm LEAP will test its accuracy.

✓ **Phase II New Site Selection:**

- LEAP will work with the CSC and the CEHTP to develop siting protocols for the TAMS based on data analysis and areas of concern presented by the community at the first CSC meeting.
- LEAP will prioritize potential TAMS sites according to proper siting guidelines (EPA and ARB) and determine how final sites will be selected.

- LEAP will conduct second CSC meeting to finalize sites based on input from CSC and data analysis by LEAP, Comite ALMA, the Promotorxs VERDES and CEHTP.
- ✓ **Phase III Monitor Deployment:**
 - After review of training materials by CEHTP, LEAP will (1) conduct training workshops for CSC, Comite ALMA and the Promotorxs VERDES, and (2) purchase, assemble, install, operate, and maintain TAMS.
- ✓ **Phase IV Data Dissemination:**
 - LEAP will conduct a third CSC meeting to identify community needs in the areas of outreach, communication, and dissemination.
 - LEAP will develop a communication plan with Tzunu, Comite ALMA, the Promotorxs VERDES and CEHTP.
 - LEAP will conduct fourth CSC meeting to get input from members on data and information needs related to the monitoring data.
- ✓ **Phase V Descriptive Analysis:**
 - LEAP will work with CSC, Comite ALMA and the Promotorxs VERDES to deliver information needs to Tzunu for descriptive analysis for creating a presentation of key messages and results to a general audience.
- ✓ **Phase VI Communication and Community Action:**
 - LEAP will conduct a fifth CSC meeting to review the analysis results, identify the target audiences and develop a community action plan.
 - LEAP will develop a limited evaluation plan with Comite ALMA, the Promotorxs VERDES and Tzunu.
 - LEAP will conduct sixth CSC meeting and report back evaluation results.

TAMS will be installed in accordance with EPA and ARB siting guidelines and require no modifications, trenching, or conversion of siting locations. The novel protocol used to site selection for the TAMS addresses several barriers that regulatory networks face in meeting community needs. Regulatory monitoring networks are sparse, often do not have monitors in locations that are most relevant to communities, and may not be trusted by community members. The increased availability of small, low-cost TAMS will make it feasible for researchers to establish denser networks. In addition, TAMS provide many other community benefits, including light, renewable energy, WiFi access and charging.

The siting methodology is distinguished by the deliberate integration of community and scientific priorities. Community participants consistently emphasized the importance of scientific quality, while a primary goal among research partners was to ensure that it meets community needs.

All sites meet the EPA and CARB. While not directly related to monitor siting decisions, long-term deployment of the TAMS must take into consideration potential challenges, costs, and staffing requirements to maintain, repair, and replace TAMS components.

- **Element 5: Establish Roles and Responsibilities**

- ✓ **Individual Roles and Responsibilities**

Individual roles and responsibilities will be established at a kickoff meeting according to the [Organizational Chart](#) with all team members present, and these roles and responsibilities will be maintained during the entire grant term. The flexible direction of the LEAP proposal is emphasized at the kickoff meeting, with the role maintained but subject to change.

- ✓ **TAMS do not generate noise or odors at any levels.**

Any permits required from public agencies will be regarding co-locating on agencies' (School Districts') property. Necessary permits required with governmental agencies and public utilities in the Fresno, Kings and Tulare Counties area have either already been permitted verbally or LEAP does not foresee barriers to obtaining them. Some of the locations may be with small business partners or homeowners.

- ✓ **Concept Integration**

The LEAP project merges aspects into an integrated whole, which are delineated below. LEAP's public relation firm, Tzunu Strategies, will work together to promote community outreach.

1. Informational aspects of the project include the relocation of TAMS. Community meetings on air monitoring, educational materials, facilitation costs, and printed media (surveys, fact sheets, and other community outreach materials) will need to evolve.
2. Participatory parts of the project include the subcontract of technical assistance groups for methane monitor assessment and direction as well as training LEAP in assembly and maintenance, community planned events such as convening of CSC, charrettes, community needs assessments when determining siting, and reporting results.
3. Technical category projects are the backbone of the overall proposed three-year project.
4. Air monitoring support and expansion of particulate matter and methane monitors will be expanded,
5. Design of the hardware and software of conversion algorithms for both particulate and methane monitoring and the monitor stations will be improved.

LEAP will utilize the technical guide (created by our TA partner, CCV) for training purposes for the CSC community, Comite ALMA and the Promotorxs VERDES. LEAP

will also conduct training workshops for the CSC and AIRE partners that require technical assistance in establishing or expanding their air monitoring network.

Task 3: Community Engagement

LEAP will work with Tzunu to promote community outreach activities, including CSC participation, and technical work that encompasses TAMS assembly to community training and operation of network. Below are the areas that the project proposes to draw upon from the conceptual categories. LEAP does not plan to limit activities to those listed as the project evolves throughout time. An amalgamation is necessary for this project to be successfully executed to achieve the goals set out by AB 617 and for the proposed community air monitoring efforts.

Informational – Community meetings and outreach by LEAP and CSC will be conducted as part of the community communications to inform key audiences about IVAN, and air PM and methane monitoring. There will be production of multilingual materials to educate the community about air quality and how to improve health through community air monitoring data. Below are the areas that the project proposes to draw upon from the conceptual categories. LEAP does not plan to limit activities to those listed as the project evolves throughout time. An amalgamation of the three categories is necessary for this project to be successfully executed to achieve the goals set out by AB 617 and for the proposed community air monitoring efforts.

Participatory – LEAP, Tzunu, Comite ALMA and Promotorxs VERDES for the project will be heavily involved throughout. CSC members will also be involved in the selection of data dissemination and design of the communication strategies; these processes will be repeated in the TAMS expansion. The methane monitoring component of the project will be in beta stage as far as a communication strategy.

Technical – LEAP and CCV will work together on the technical aspects of the project. The project proposes air monitoring support in two respects. The first is building upon the established IVAN Air network for monitoring PM, and the second is implementing the methane monitoring plan. The design for PM monitoring is already established, but the methane monitoring component needs to be fully conceptualized and enacted for this project. Data collected by these monitoring networks will be made available through IVAN platforms, methane in beta, and by maintaining IVAN up-to-date for the community.

Task 4: Workforce Development

• Element 1: Train

Workforce development will consist of building, deploying, operating, collecting data for and maintaining the 30 TAMS, as well as being involved in gathering community outreach. The workforce will consist of existing LEAP staff and paid welfare-to-work (NEO) trainees from the community. Trainers will be West Hill Community College and LEAP staff. The

program of two classes of twenty people is funded for eleven months each by a grant from the California Workforce Development Board (CWDB). Trainees will start at \$15 per hour and will be part of the rapidly expanding renewable energy, EV and micromobility industries.

- **Element 2: Build**

The trainees will build [small and large TAMS](#), which have PM 2.5, PM 10 and methane monitors, cellular hotspot communications, renewable solar power, battery storage, charging, lights and a weather station. The small unit is called a Smart Street Light and the large unit is called the MORBUG (an acronym by the CEC for **MO**bile **R**enewable **B**ackUp **G**eneration). Both TAMS are partially funded by a CARB Clean Mobility Option grant, and a CEC MORBUG grant. The charging is for smart phones, computers and electric micromobility connected through a cellular hotspot (WiFi). The trainees will learn the operation of the network of TAMS and shared micromobility management.

- **Element 3: Deploy**

All TAMS will be deployed throughout rural Fresno, Kings and Tulare Counties at existing and new sites. Depending on community response, TAMS may be relocated. For instance, if a point source of air pollution is identified, it is possible to relocate TAMS to map the plume of pollution throughout the community. The 20 existing sites will be converted to TAMS and the 10 new sites will be serviced by TAMS. Altogether there will be 30 TAMS deployed.

- **Element 4: Maintain**

Data collection and routine maintenance is necessary for the TAMS, even though they report through a cellular hotspot. If the hotspot is down, data can be downloaded manually at the site. The key is to establish a system of routine maintenance so that the system rarely goes down.

Task 5: Reporting

- **Element 1: Monthly**

Beginning one month after the start of the grant and continuing to the end of the grant term, LEAP will submit a monthly invoice and report. Included will be a record of all (1) payroll logs, recording the number of hours, date, purpose and payroll stubs, (2) expenses and receipts, (3) travel, and (4) a progress report on all activities.

- **Element 2: Annual**

After full grant execution, LEAP will submit annual reports to CARB beginning one year after the start of the grant, and continue annually through the end of the grant term. Reports will be submitted electronically to the CARB program designee, and at a minimum will include:

- i. Report number, title, name of Grantee, date of submission, and grant number.
- ii. Reporting on costs associated with specific project tasks, including but not limited to (a) meeting facilitation and travel, (b) hiring technical experts or consultants, (c) conducting community needs assessments as they relate to AB 617, (d) identifying sources of emissions in communities, (e) identifying locations for monitoring, (f) deploying community-based monitoring systems, (g) data analysis, (h) workforce development, (i) developing air quality communication programs, and (j) attending CARB / district meetings or other AB 617 implementation meetings or events.
- iii. Reporting on how the grant is being utilized to meet the goals of Assembly Bill 617.
- iv. Reporting on how the project meets the criteria for providing direct, meaningful, and assured benefits to disadvantaged and low-income communities or households, and community needs according to CARB guidance.
- v. A summary of work completed and in progress since the last progress report.
- vi. Grant funds remaining and expended.
- vii. An expenditure summary showing all Community Air Grant funds for which reimbursement was requested since the last report.
- viii. Any challenges or barriers encountered in the implementation of LEAP's project.

- **Element 3: Final**

LEAP will submit a Final Report to CARB by the end of the grant term. At a minimum, the Final Report will include all required information contained in the annual report, as well as an accounting summary of funds expended and a summary of how the goals of the program were achieved.

Task 6: Administration

- **Element 1: Monthly Invoice**

Beginning one month after the start of the grant until the end of the grant term, LEAP will submit a monthly invoice.

- **Element 2: Grant Management**

- ✓ **Performance Evaluation**

For this project, there will be a phased public health action planning and implementation process. In addition to its primary function to inform the placement of PM and methane monitors, the mapping exercise will generate information about the types and locations of environmental and health concerns in the community. To maximize the impact of the mapping efforts, Phase 1 of the translational portion of the project will focus on developing and implementing strategies for action in response to the mapping results. Because these mapping results will directly inform the project's air monitoring activities and

subsequent next steps, using asset/hazard mapping results for public health action planning and implementation will be important.

·**Reduce air pollution exposure among schoolchildren:** Conduct outreach and dissemination targeted toward schools and school districts to issue alerts to schools when PM with a beta methane display. This effort would include development of materials outlining recommendations for possible actions when particulate matter and methane are too high, such as conducting physical education classes indoors or closely monitoring asthmatic children.

·**Improve the health of neighborhoods:** Conduct outreach and dissemination of hazard and asset mapping results to advocate for increases in specific assets shown to be lacking or for decreases in specific hazards shown to be prevalent through the mapping exercise. The target audiences for these efforts would depend on the assets and hazards identified in the community mapping exercise.

·**Increase identification, reporting, and reduction of environmental hazards:** Conduct outreach and capacity building for community residents to identify hazards and report environmental violations to IVAN, which a dedicated staff person at the California Department of Toxic Substances Control will be able to review, verify, and (if needed) initiate action toward a resolution.

·**Increase air quality (particulate matter and methane) monitoring and data utilization:** Conduct outreach and advocacy for (1) establishment of an email/text alert system that will notify residents on poor air quality days and provide recommendations for reducing exposure; (2) placement of additional air monitors including methane; (3) funding to support the maintenance of and continued reporting from the project's air monitors; and/or (4) increased enforcement for air quality violations. The target audiences of this campaign include the local air district and the California Environmental Protection Agency.

·**Reduce exposure:** Conduct outreach and advocacy targeting (1) county and municipal agencies for pavement of the dirt roads in Imperial County that are most likely to contribute to PM exposure to residents, and/or (2) the County Agricultural Commissioner to establish stricter or more effective agricultural burning regulations.

·**Provide neighborhood-level air quality data for planning decisions:** Conduct outreach and advocacy to encourage incorporation of the project's air data into transportation planning and other planning processes and assessments, such as California Environmental Quality Assessments and health impact assessments. The target audiences of this campaign include the Fresno, Kings and Tulare Counties' Public Health Departments and Planning and Development Services.

✓ **Results Dissemination**

LEAP anticipates that project staff and community participants will present the study results and other findings at scientific conferences, environmental justice meetings, and other relevant venues as opportunities arise. LEAP will work with the participants, including Tzunu, to develop presentations and talking points.

✓ **Summary plan for evaluating project processes and outcomes**

A critical component of a successful community-engaged research project involves developing and conducting an evaluation that is both relevant and responsive to community needs. This includes choosing evaluative methods that empower community members and involve them meaningfully in the design and conduct of the evaluation (Minkler and Wallerstein 2008). The evaluation component of the project will incorporate community priorities in all aspects of the evaluation, including design, implementation, and analysis. At the beginning of the project, LEAP will develop an evaluation plan through a group process with the project team and the CSC, described in detail below. Specifically, LEAP will focus on key dimensions of the project, such as:

-Partnership processes: Evaluation metrics may focus on effectiveness of communication, shared leadership, conflict resolution processes, and co-learning among the different project partners.

-Community input and relevance of research design and results: Evaluation metrics may focus on participant recruitment and retention, opportunities provided for community input, extent of community-informed placement of air monitors, relevance of results to community participants, and utility of results for driving public health actions.

-Public health actions: Evaluation metrics may focus on legislative or organizational policy changes, individual or community capacity building, dissemination of results, and sustainability.

-Evaluation Planning: LEAP and the CSC will review project goals, objectives, and activities, and develop a logic model to clarify the relationships between project inputs, activities, outputs, impacts, and context. Using this logic model, the group will then elucidate (1) evaluation questions of importance to the community; (2) evaluation metrics that are specific, measurable, relevant, and timely; (3) a data collection plan that includes collection methods, roles, and timeline; and (4) a data analysis and dissemination plan that engages the CSC in reviewing the results and synthesizing them into key lessons learned and next steps. LEAP will develop an evaluation plan based on this input and circulate it among the CSC for feedback.

-Data Collection: Data collection methods will be selected based on appropriateness and feasibility relative to the evaluation question and metrics. Anticipated collection methods and tools include (1) questionnaires administered semi-

annually to the project team and the CSC to evaluate partnership practices and make changes as needed; (2) questionnaires administered to mapping participants and monitor hosts prior to, immediately after, and in the years following trainings or data collection processes; (3) post-meeting evaluation forms distributed to all participants; (4) brief key informant interviews administered to CSC members. CEHTP and LEAP will lead the development of both quantitative and qualitative evaluation tools, which will be presented to the CSC for feedback and testing. CEHTP and LEAP will also coordinate the data collection.

-Data Analysis: Data for each evaluation component will be analyzed after collection, and results will be shared with the CSC to obtain community context and strategize how to incorporate lessons learned into the study design, improve project processes, and identify other potential implications for the project. CEHTP will lead the analysis of the evaluation data.

✓ **Maintaining Community Participation**

It is possible that this study could be challenged by a lack of participation and competing health concerns. However, the community organizers will play an important role in encouraging and maintaining participant engagement throughout study period by communicating project goals and benefits in a relevant and accessible manner; checking in with participants regularly; and ensuring participant needs are voiced and met. Participants will also receive stipends as compensation for time spent, as well as any travel ~~or childcare~~ costs incurred through this study, which otherwise may be deterrents to participation. Finally, participation will be assessed throughout the study period to determine if attrition is occurring and what additional outreach efforts are needed.