# Exhibit C1 - Scope of Work

### **SECTION 3: SCOPE OF WORK**

The Soboba Tribal Community Air Monitoring Collaborative aligns with the goals and objectives of the Community Air Grants Program by enabling Soboba Environmental Department and Tribal community to monitor and take action to improve local air quality. This involves a coordinated monitoring strategy using cost-effective real-time monitoring technologies, educational content, workforce development, Tribal capacity building, and outreach to the Soboba community to engage, educate, and empower the Tribal community to improve air quality on the Reservation.

## Project Objectives, Milestones, and Outcomes

The project will meet the needs of the Tribal community by detecting and measuring pollutants that impact air quality on the Reservation. With the involvement of technical consultants, the project also helps build Tribal capacity by training Soboba staff on how to utilize sensors to achieve monitoring objectives, interpret air quality data, and understand how data can be used to inform mitigation and pollution reduction strategies. Additional training will be conducted to strengthen the technical capacity on air quality regulations and monitoring strategies to foster the Tribe's goals of establishing a long-term air program. This will empower the Tribal community to reduce exposure from harmful pollutants and engage with stakeholders and regulatory agencies to improve local air quality.

The following table shows the specific project objectives, milestones, and expected outcomes. The project milestones listed below are incorporated into various tasks described in the project scope. By completing these milestones, the Soboba Tribal Community Air Monitoring Collaborative will meet the project objectives and lead to the outcomes described below.

| Task                                 | Project<br>Milestones                          | Expected Benefits and Outcome   |
|--------------------------------------|--|---|
| Task 1 – Work<br>Plan Development    | Kickoff Meeting                                | Establish relationships between project partners  |
|                                      | Work Plan Finalization Update QAPP             | Develop planning documents to guide efficiency and effectiveness of project tasks   |
| Task 2 –<br>Monitoring               | 1. Build 5 Air<br>Quality Monitors             | Build five (5) low-cost air quality monitors  |
|                                      | 2. Deploy Air<br>Quality Monitoring<br>Network | Install calibrated air quality monitors that will transmit data to the community website in real-time                                   |
|                                      | 3. Build<br>Community<br>Website               | Ensure that the monitoring network continues to collect and report accurate air quality information                                     |
|                                      |  | Develop a Tribal resource that displays real-time air quality data  |
| Task 3 –<br>Community<br>Outreach    | Develop Educational Content                    | Engage Tribal members through social media, newsletters, and other avenues most used by community members                               |
|                                      | 2. Develop<br>Communications<br>Plan           | Educate Tribal members and students on importance of air quality and how to mitigate health impacts                                     |
|                                      | 3. Outreach to<br>Tribal Community             |   |
| Task 4 –<br>Workforce<br>Development | 1. Training<br>Sessions                        | Improve technical capacity for Soboba<br>Environmental Department on air<br>quality monitoring  |
| Task 5 –<br>Reporting                | 2. Biannual reports                            | Submit biannual reports will allow for the efficient execution of the project and ensure that any challenges and successes are reported |

| Annual data analysis reports | Develop baseline assessment using collected data                               |
|------------------------------|--|
|                              | Recommend future monitoring activities and process for air program development |

## Project Scope

The scope of work is broken out into five (5) main tasks that will be completed from March 2022 through March 2025. This start date and timeline is subject to award, contracting, and initial disbursement of grant funds. Task objectives are structured support needs of the Soboba community and achieve the goal of empowering the Tribe to improve local air quality.

## <u>Task 1 – Work Plan Development</u>

## **Objectives**

- Enhance the effectiveness of project team and performance of project tasks
- Develop resources to support future monitoring activities

### Task 1.1 - Kickoff Meeting

A kickoff meeting will be held with staff members from Soboba and Blue Tomorrow. Project goals, objectives, and responsibilities will be reviewed. The project timeline and dates for milestones will be discussed.

## Task 1.2 - Work Plan Development

Blue Tomorrow and Soboba will work collaboratively to develop a work plan following the five elements of the air grants for technical projects. This will detail community support and participation; the community-specific purpose for monitoring; identify the scope of actions; and define the air monitoring objectives. Many of these elements that are described in this proposal will be expanded on.

In addition, a Soboba Tribal Quality Assurance Project Plan for air monitoring activities will be developed for this project and follow the guidelines of the U.S. EPA. This will include monitoring equipment specifications, monitoring locations, frequency, and duration, along with data quality objectives, quality controls and assurance measures, and data management.

Sensors and monitoring hardware proposed for this project have been evaluated by Blue Tomorrow through collocation with Federal Equivalent Methods (FEM) at CARB monitoring stations in Bakersfield, Arvin, Lost Hills, and Santa Maria, California. Blue Tomorrow found that Alphasense ozone sensors track closely with FEM instruments after calibration. Plantower has been evaluated by the South Coast Air Quality

Management District's Air Quality – Sensor Performance Evaluation Center for particulate matter detection and received a strong correlation rating with FEM methods.

#### Task 1 Results

The success of Task 1 will be measured by the development of project planning materials and the establishment of relationships between Soboba, Blue Tomorrow, and Tribal Community. Task 1 will produce meeting notes from the Kickoff Meeting, Technical Work Pan, and Quality Assurance Project Plan.

## Task 2 - Monitoring

## Objectives

- Develop an air monitoring network that measures air pollution levels in real-time on the Soboba Reservation
- Collect baseline data on air pollution levels on the Reservation

## Task 2.1 Monitor Development

Once the sensors and other hardware components are acquired, Blue Tomorrow will develop five (5) custom air quality monitors. The monitors will be equipped with sensors that continuously detect and measure concentrations of ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), and particulate matter (PM) 2.5 & PM 10. The monitors will also capture relevant meteorological data, including temperature, humidity, atmospheric pressure, wind speed, and wind direction. The monitors will be equipped with hardware that wirelessly transmits the data to a cloud database. All of these components will be placed in a weatherproof box to ensure the monitors are weather resistant. Four (4) monitors will be sited on Tribal lands – one at the Noli Indian School, one at the Soboba preschool, one at the Soboba Indian Health Clinic, and one at Tribal housing on the Reservation. One monitor will be collocated at the CARB monitoring station in Riverside to use for calibration.

### Task 2.2 – Monitor Calibration

Once monitors are developed, all sensors will be evaluated simultaneously to track data performance and consistency. Monitors will then be calibrated by collocating at the Riverside CARB monitoring station to inform calibration coefficients and multivariable algorithms that will be applied to the raw measurements transmitted by the sensors. An initial screening for outliers will be conducted through the database for negative values and positive readings above realistic thresholds. Additional data review will be conducted for another layer of data quality assurance.

## Task 2.3 - Network Installation

Soboba and Blue Tomorrow will deploy four (4) air quality monitors on Soboba Tribal lands. Monitor installation will be performed by Blue Tomorrow with Soboba staff in attendance to learn about the installation process and monitor components. Once the

monitors are installed, they will begin transmitting data to the cloud database. The other monitoring unit will be used for calibration as described below.

## Task 2.4 – Website Development

A website will be developed that displays air quality data transmitted wirelessly from the monitors in real-time. After network installation, data transmitted to the website will be evaluated for consistency with the database and any potential errors. Once the website is finalized and testing complete, it will be made accessible to the Tribal community. Through the website, Tribal members will have access to current air quality levels and past data. The website will also contain links to educational materials (produced in Task 3), summary reports (Task 5), relevant news articles, and information on the air monitoring project.

## Task 2.5 - Data Quality Control & Assurance

Blue Tomorrow will be responsible for reviewing raw data and calibrating monitors. This task involves periodic checks of the raw data collected by the monitors on the database and website. This will ensure that the monitors and website continue to record and report, respectively, accurate air pollutant levels. For criteria air pollutants (PM, ozone, nitrogen dioxide) pollutant concentrations will be averaged to compare results with regulatory thresholds and Air Quality Index health indicators. Calibration of the monitors will be performed regularly throughout the course of the project. This will involve periodic cycles of collocating CARB station in Riverside and rotating monitors throughout the network on Tribal lands.

Task 2.6 – Network Maintenance, Technical Support and Replacement Hardware As part of Blue Tomorrow's data review, sensor performance will be monitored to identify if maintenance or sensor replacement is needed. Soboba staff will perform maintenance, and Blue Tomorrow will continue to provide support by ordering replacement parts, helping to troubleshoot issues, and continuing data analysis, calibration, and website maintenance.

Blue Tomorrow will provide ongoing technical support to Soboba staff for maintenance activities. This includes developing guidance documents and providing phone support to Soboba.

Blue Tomorrow will order replacement hardware, as needed. It is anticipated that pollution detection sensors will have an operating lifespan of one-year and will need to be replaced multiple times to have a functioning monitoring network throughout the duration of the project.

### Task 2 Results

The success of Task 2 will be measured by several deliverables associated with the establishment of the air quality monitoring network. These include the development of five (5) air monitors; development of the community website; installation of the air monitors; and maintaining and operating the network for up to 30 months. The progress of Task 2 will be communicated in biannual administrative reports to CARB.

## Task 3 - Community Engagement

## Objective

Provide resources to empower the community for reducing exposure to poor air quality

## Task 3.1 – Educational Content Development

Educational materials will be developed for meetings and the website and made available on the website. These materials will be targeted for both the Tribal community and schools. These may involve alignment with curriculum on STEM subjects, ArcGIS StoryMaps, and other visual tools for explaining air quality on the reservation. Additional materials may include topics on community health issues related to air quality and measures Tribal community members can take to reduce exposure to harmful air pollutants. Other content explaining the website functionality will also be included, such as describing AQI (what it is, how to interpret it, and how it is calculated), different air pollutants and their associated health risks, and providing additional air quality monitoring resources.

## Task 3.2 – Community Educational Sessions

A total of four (4) educational sessions will be organized with the Noli Indian School and (or) other Tribal community groups. The community workshops will be an opportunity for community members and students to learn about air quality issues and ask questions. Presentations and (or) educational handouts will be developed and each meeting will have a defined theme such as: Local air pollution and sources, types of air pollutants, wildfire impacts to air quality; and ways to limit personal exposure. Information from these sessions and discussions will be available on the community air monitoring website.

#### Task 3.3 – Community Outreach

Activities outlined in the communications plan will be executed during the first year of network operations. For example, social media may be used to notify the Tribal community of the website and include education materials on air pollution and how to use the website. Outreach may also include providing a way for the community to submit feedback, such as potential observational data, air quality concerns, or volunteering space for relocating monitors. The communications plan may outline additional outreach activities as well, including a newsletter.

#### Task 3 Results

The success of Task 3 will be measured through the number of successful educational sessions, outreach strategies employed, and community members reached. The traffic to the air quality monitoring network website is able to be tracked and monitored and used as a quantitative measure of outreach.

## Task 4 - Workforce Development

## Objective

- Provide workforce development for the Tribe
- Improve technical capacity for air quality monitoring

## Task 4.1 – Training for Air Monitoring Network

Blue Tomorrow will develop materials and conduct trainings for Soboba's Environmental Specialist that will oversee maintenance activities. The objectives of the trainings are to teach Soboba staff members how to interpret data from the monitors and how to perform basic maintenance on the monitors. These trainings will increase the capacity of the Tribe to monitor its own air quality and provide workforce development that will support the establishment of a future monitoring program; one of the core objectives of this project.

## Task 4.2 - Technical Workshops

A total of four (4) technical workshops will be organized with Soboba Environmental Department for air quality subjects. Blue Tomorrow will develop materials and lead the workshops to review topics such as 1) sensor technologies; 2) air monitoring strategies and methods; 3) air quality regulations; and 4) health implications for pollution exposure. These workshops will be designed to enhance the capacity of the Soboba staff and aid in the establishment of a future air program on the Reservation.

### Task 4 Results

The completion of Task 4 will be marked by the successful training of Soboba Tribe members in maintenance and upkeep on the air monitors, as well as a broader and more in-depth training on air quality monitoring for increased long-term capacity. Each training session and successfully trained Soboba member will represent a measurement of success.

## Task 5 - Reporting

### Objective

- Adhere to grant administrative requirements
- Document air quality levels through the monitoring activities

### Task 5.1 – Biannual grant reporting

Soboba will be responsible for updating CARB on project progress and submitting the necessary biannual reports during the grant performance period. Blue Tomorrow will aid in summarizing relevant project tasks that have been completed to date, when necessary. This task will ensure that all reporting requirements are met and CARB stays apprised of project activities and accomplishments.

## Task 5.2 - Annual summary reports

After the first and second year of monitoring a summary report will be developed that includes an analysis of the data collected by the monitoring network during the previous year, notes from the community meetings, lessons learned during the project, information about the air quality regulatory landscape, and an outline of next steps. The summary report will include relevant graphs, tables, diagrams, and pictures. The reports will be made available on the Soboba community air monitoring website as well as presented at the annual data analysis presentations.

## Task 5 Results

Task 5 will be measured by the completion of biannual grant reports and the annual summary reports.

### **SECTION 4: BUDGET**

## Total Funding Requested: \$197,776

The project timeline is based on an anticipated start date of March 2022, depending on grant award and contracting, and has been structured so that the network is operational for 30 months.

All project budget items noted in this section are cost estimates and are subject to change. These costs are separated into the following categories: Soboba personnel, Subcontractors, Equipment, Supplies and Services, and administration. A description of what is included in each category is provided below as well as the tasks that involve the respective categories. The budget spreadsheet has costs broken down for each task based on these categories.

