

## Exhibit C1 - Scope of Work

### Section 3. Scope of Work

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The goal of the Paskenta Tribal Air Monitoring Project is to provide resources to the Tribal community that they can use to reduce their exposure to harmful air pollutants. A project scope has been constructed to meet the following specific objectives, that when completed, will achieve this overarching goal.

#### ***Specific Objectives***

- Detect air pollutants of concern
- Promote workforce development
- Provide air quality data to the Tribal community
- Provide educational materials to the Tribe to reduce exposure to air pollution

#### ***Measurements of Success***

Success in achieving these objectives will be measured by completing various deliverables and milestones for each project task. These include the following:

- Develop project work plan to efficiently complete tasks
- Develop (4) air quality monitors that detect PM 2.5, PM 10, and ozone.
- Develop a website for the Tribal community that displays real-time air quality data
- Deploy air monitors on the Reservation and Tribal health clinics
- Develop educational content for the Tribal community
- Develop and implement a communication plan to engage the Tribal community
- Provide training for a Paskenta Tribal member
- Develop reports on project progress and findings of data collected through the project

#### ***Project Scope***

The following scope of work describes each task and subtask that will be completed in order to achieve these goals. The scope also explains how success will be measured, along with individual objectives for each subtask.

#### **Task 1 – Work Plan Development**

##### ***Deliverable/Milestone***

- Develop project work plan to efficiently complete tasks

Task 1 will result in Kickoff Meeting notes and the finalized Work Plan. The Work Plan will be submitted to the grantor for review. The Kickoff Meeting and Work Plan will establish next steps and deliverables for the project.

### ***Task 1.1 – Kickoff Meeting***

A kickoff meeting will be held with staff members from Paskenta and Blue Tomorrow. Project goals, objectives, and responsibilities will be reviewed. The project timeline, logistics for installing monitors, design criteria for the community website, and community outreach strategies and materials will be discussed. The presence of Paskenta Tribe members will ensure that the project meets Tribal priorities and addresses their concern for their local air quality. Task 1.1 will begin the partnership and collaboration efforts between Paskenta and Blue Tomorrow.

### ***Task 1.2 – Work Plan Development***

Paskenta and Blue Tomorrow staff will develop the Work Plan based on the discussion from the Kickoff Meeting. Project timelines, responsibilities, and project goals will be finalized within the Work Plan.

## **Task 2 – Monitoring**

This project adheres to elements 1-5 from the CARB Blueprint Appendix E. This is described in detail through the various subtasks in Task 2 and other parts of this application.

### ***Deliverable/Milestone:***

- Develop (4) air quality monitors that detect PM 2.5, PM 10, and ozone.
- Deploy air monitors on the Reservation and Tribal health clinics

Task 2 will be completed after each milestone – the development, calibration, and installation of the four intended air quality monitors- is successfully reached. Once the sensors send real-time data of the air pollutant levels, Blue Tomorrow will ensure the reliability of these readings and begin to collect the air quality data. Successful completion of Task 2 will be reported through the display of air quality levels on the air quality website.

### ***Task 2.1 – System Development***

Blue Tomorrow will acquire the necessary parts to assemble four custom air quality monitors. This includes the low-cost sensors to detect PM 2.5, PM10, and Ozone. Nitrogen Dioxide sensors will also be acquired to aid in calibrating ozone sensors. Additional hardware components will also be acquired for solar power and wind speed and direction.

Once the sensors and other hardware components are acquired, Blue Tomorrow will build assemble (4) custom air quality monitors. In addition to sensors that continuously detect and measure concentrations of ozone (O<sub>3</sub>), and particulate matter (PM) 2.5 & PM 10. The monitors will also capture relevant meteorological data, including temperature, humidity, and pressure. In addition to the sensors, 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.

The initial monitoring units will be collocated at a Tehama County Air Pollution Control District monitoring station in Red Bluff to calibrate the sensors. Collocation will inform calibration coefficients and multivariable algorithms that will be used to calibrate the raw measurements picked up by the sensors. An initial screening for outliers will be conducted through the database for negative values and positive readings above realistic thresholds.

Every four (4) months after installation the sensors will be replaced by trained Paskenta staff with sensors that have recently been calibrated. The sensors that are removed from the monitoring units will be returned to Blue Tomorrow and if in good working order they will be recalibrated for future use in the project. By doing this the monitoring units will maintain their calibration and sensors will regularly be calibrated for any drift that may occur during their operation.

### ***Task 2.2 – Monitor Installation***

Blue Tomorrow will deploy four (4) air quality monitors on the Paskenta Reservation and Tribal Health Clinics in Corning and Red Bluff (Attachment B). Monitors will be installed on existing railings or on fence posts away from structures that could impede air flow. Once the monitors are installed, they will begin feeding data to the community website that will display data in real-time. Monitoring locations have been selected to provide good coverage throughout the Tribal Community. The strategic placement of the air quality monitors will allow the community to be aware of air quality levels at different areas throughout the Reservation and areas where Tribal members and descendants reside.

### ***Task 2.3 – System Operations and Maintenance***

The air monitoring network is anticipated to be operational for 2.5 years after installation of the monitors are completed. Blue Tomorrow will be responsible for data review, quality control and assurance. Raw data will be reviewed for outliers and system errors. Periodic system checks will be completed by Blue Tomorrow to notify Paskenta of sensor maintenance or replacement needs. when maintenance is necessary. Paskenta will conduct maintenance activities, after the training (Task 4) is complete, with technical support from Blue Tomorrow. Periodic recalibration and replacement of the sensors will be performed every 4 months and as necessary to account for sensor drift. This will

ensure that the monitors and website continue to record and report accurate air pollutant levels.

### **Task 3 – Community Engagement**

#### ***Deliverable/Milestone***

- Develop a website for the Tribal community that displays real-time air quality data
- Develop educational content for the Tribal community
- Develop and implement a communication plan to engage the Tribal community

The success of Task 3 will be measured by the development of the air quality website and education materials, along with their utilization by the Tribal community. The website will be able to track user activity and can be used as another measure for the successful community engagement.

#### ***Task 3.1 – Website Development***

A community website will be developed that displays air quality data transmitted wirelessly from the monitors in real-time. Tribal members and other community residents will have access to the website and will be able to check current air quality levels and review past data. The website will also contain links to educational content (developed in Task 3.2), summary reports, relevant news articles, information about community meetings, and nearby regulatory monitors.

#### ***Task 3.2 – Educational Content Development***

Educational content will be produced for the Tribal community on topics that are aimed at reducing exposure to harmful air pollutants. These may include materials on health effects of air pollution, how to interpret air quality information from the website, recommended air purifiers, how to build a DIY air purifier using MERV filter, where to find protective masks, and other tips for mitigating effects of wildfire smoke. Materials may include stand-alone documents or videos that can be shared through social media or downloaded from the website.

#### ***Task 3.3 – Community Outreach***

A communications plan will be developed that outlines various approaches for engaging the Tribal community. These are likely to include social media, listservs, newsletters, bulletins, Tribal meetings, and events. For each approach, specific content will be developed and included in the plan. This will help increase the number of Tribal members that use the community website as a resource to access educational materials and inform outdoor recreation activity decisions.

### **Task 4 – Workforce Development**

### ***Deliverable/Milestone***

- Provide training for a Paskenta Tribal member

The success of Task 4 will be measured by the completion of training activities for Tribal members.

Instruction and training materials will be provided to Tribal government staff during a training session. This training will provide guidance on basic maintenance of the monitors and how to interpret data from the low-cost sensors. This training will enable Paskenta staff to perform routine maintenance and replace sensors with recently calibrated ones ensuring the sensors report as accurate data as possible. Blue Tomorrow will continue to provide support and training as need over the course of the project.

### **Task 5: Reporting**

#### ***Deliverable/Milestone***

- Develop reports on project progress and findings of data collected through the project

Task 5 will result in the development of administrative reports that will be submitted to CARB on the progress, challenges, and successes of the project. A project summary report will also be produced that contains the findings from the air monitoring activities and any recommendations for future monitoring.

#### ***Task 5.1 – Administration & Quarterly Reports***

Paskenta will be responsible for updating CARB on project progress and submitting the necessary biannual reports. Blue Tomorrow will provide assistance summarizing relevant project tasks that have been completed to date. This task will ensure that all reporting requirements are met and CARB stays apprised of project activities and accomplishments.

#### ***Task 5.2 – Project Summary Report***

At the conclusion of the project, a summary report will be developed that includes an analysis of the data collected by the monitoring network, lessons learned during the project, and recommendations and outlined next steps. The summary report will include relevant graphs, tables, diagrams, and pictures. It will also have information from the air quality trainings and educational content that can be referenced during future activities.

#### ***Anticipated Benefits***

The Paskenta Tribal Air Quality Monitoring Project is an effort to educate the Tribal community about their local air quality. This area has been heavily impacted by wildfire smoke, including most recently from the 2018 Camp Fire, the 2020 August Complex Fire, and the 2021 Dixie Fire (Attachment A). These fires have resulted in hazardous air quality that is a danger to the health of the Tribal community, especially amongst children, the elderly and those with preexisting medical conditions. This project is needed to provide information the community can use to reduce exposure, improve their health, and result in lasting benefits for the Tribe.

Some of the specific outcomes that will result from this project include the following:

- Strengthened community capacity to monitor local air quality
- Documentation of type and amount of air pollutants
- Tribal government staff trained to use low-cost air quality monitors and interpret data
- Tribal community members educated on local air quality issues
- Recommendations for reducing exposure to poor air quality
- Recommendations for future targeted monitoring activities

These outcomes all support the overarching goal to provide resources to the Tribal community to reduce their exposure to harmful air pollutants.