

Exhibit C1 - Scope of Work

Section 3. Scope of Work

Project Goals

The overall goal of the Morongo Community Air Monitoring Network Enhancement Project is to improve the resiliency of the Morongo Tribe and surrounding community by detecting air pollutants and communicating to the community when air quality reaches harmful levels. This project will support the continuation of the air monitoring network and website (morongoair.com), which was funded through the 2019 AB617 Community Air Grants. The project will also expand on community education and outreach and develop a quality assurance project plan (QAPP).

The Morongo Community Air Quality Monitoring Network, funded through the 2019 grant cycle, has been a tremendous success and well received and appreciated by the local community. The 2019 project laid the foundation of developing and establishing a community-based air monitoring network and website. Continued operation of this monitoring network will be cost effective since the monitors, website, and partnerships are in place. The goal of the current 2021 proposal is to continue the air monitoring project for another three years while further enhancing community engagement and education, and developing a QAPP. The QAPP will be a tool to help ensure quality data is collected by the air monitoring network and it will be used to further train staff on quality assurance and control (QA/QC) procedures and communicate with other Tribes in the area the importance of QA/QC.

Objectives

- Objective 1 – Ensure the highest quality data is collect through the Tribe’s air monitoring efforts and there is a clear work plan that will be followed.
- Objective 2 – Providing real-time air quality information to inform the community of current air pollution levels on the reservation.
- Objective 3 – Informing and tracking the effectiveness of emissions reductions and other measures to improve air quality.
- Objective 4 – Educating the Tribal community about local air quality.
- Objective 5 – Collaboration with other regional tribes to develop or bolster their air monitoring programs.
- Objective 6 – Improving the EPD’s capacity to utilize various air quality monitoring technologies and approaches.
- Objective 7 – Conduct analysis on air quality data for trends or conditions that lead to harmful air quality.

Task 1 – Project Planning

Objectives addressed by Task 1:

Objective 1 – Ensure the highest quality data is collect through the Tribe’s air monitoring efforts and there is a clear work plan that will be followed.

Task 1.1 Work Plan Finalization – Staff members from the Morongo EDP, Blue Tomorrow, the community air district, and representatives from the local community will coordinate a meeting to kick off the project. The technical work plan will be finalized and submitted to CARB for approval. The timeline of each project task and deliverable will be finalized.

Task 1.2 Quality Assurance Project Plan – The information contained in the technical work plan will be built upon to develop a Quality Assurance Project Plan for the air low-cost air quality monitoring network on the Morongo Reservation. The QAPP will adhere to USEPA guidance standards. A QAPP for this project would ensure data collected by the air quality was of the highest quality and would document and standardize quality assurance and quality control procedures that are being conducted.

Deliverables:

- Technical Work Plan
- Quality Assurance Project Plan

Benefits:

- Efficient project plan for project execution.
- Clear understanding and documentation of responsibilities by project personnel.
- Quality data that has been evaluated through well-documented validation procedures.
- Documented procedures that can be shared with other tribes and future staff for training and education purposes.

Task 2 – Air Quality Monitoring

Objectives addressed by Task 2:

Objective 2 – Providing real-time air quality information to inform the community of current air pollution levels on the Reservation.

Objective 3 – Informing and tracking the effectiveness of emissions reductions and other measures to improve air quality.

Task 2.1 Data Review and Calibrations – The condition of the existing air quality monitoring network will be evaluated and appropriate calibrations will be conducted. Members of the Morongo EDP and Blue Tomorrow staff members will work together to ensure the air monitors are recording as accurate of data as possible following the QAPP and Work Plan developed through Task 1. Air quality monitor system checks will be performed every other week to ensure sensors are operating properly and maintained or replaced as necessary. Calibrations will be performed on a quarterly basis or more frequent if necessary. Calibrations will continue to be conducted by collocating the community air monitors at the Tribe's FRM and FEM air quality monitoring station.

Task 2.2 Maintenance – The trained members of the Morongo EDP staff will maintain and replace sensors as necessary, following maintenance guides that were developed through the 2019 CAG funding. Blue Tomorrow staff will monitor the data being recorded through the website and other reporting measures and inform Morongo staff if maintenance is required outside of regular maintenance schedules that will be included in the work plan and QAPP. Blue Tomorrow will provide site-visits at least once a year to inspect monitors and assist with maintenance. The Morongo community website will be maintained, backed up, and security updates will be performed monthly. Cloud databases will be updated as new calibration and data quality controls are developed by Blue Tomorrow over time. Cellular data telemetry, cloud database, and website services will be maintained for the 36-month performance period of the project.

Task 2.3 Replacement Parts – Air quality sensors will be continuously monitored for damages, performance, and drift, and replacement parts will be purchased as necessary. Replacement parts will be configured by Blue Tomorrow prior to shipping to Morongo staff for integration into air monitors.

Deliverables:

- System checks spreadsheets documenting sensor performance (up to 78 over course of 3 years)
- Quarterly calibration reports (12 over the course of the project)
- Four maintained and fully functioning air monitors
- Database of three years of continuous measurements of PM2.5, PM10, Ozone, Nitrogen Dioxide, Volatile Organic Compounds, ambient temperature, relative humidity, barometric pressure, and wind speed and direction

Benefits:

- Maintaining a reliable public facing website where the community can see current air quality.
- Air quality monitoring that will inform community of poor air quality so that they can take measures to reduce exposure.
- Detailed air quality data to track trends and emissions reduction over time.
- Quality checks and assurances of collected data.

Task 3 – Community Engagement

Objectives addressed by Task 3:

Objective 4 – Educating the Tribal community about local air quality.

Objective 5 – Collaboration with other regional tribes to develop or bolster their air monitoring programs.

Task 3.1 Outreach Content Creation – Develop education materials detailing how the community should utilize the real-time data and respond to harmful levels of air quality. Content will be generated for a variety of ages and community groups including Morongo School students, Tribal General Membership, employees, and elders.

The additional educational content developed through this project will include:

- Quarterly newsletter article within the EPD Quarterly Newsletter (4 per year, 12 total).
- Routine social media posts utilizing the EPD existing social media platform including information on accessing the data, understanding the air quality index, and air alerts when air pollution levels reach unhealthy limits. (6 per year, at a minimum)
- Project posters and flyers describing the project, providing basic information on air pollution, and methods to protect public health during high air pollution events.
- Activity for Morongo School Students related to the project which can be presented during an existing school event.

Task 3.2 Community Outreach – Conduct community meetings with interested stakeholders to share progress of the project and ensure those community members' needs are being met. Morongo EPD staff who have existing relationships with other Morongo Departments, the Morongo School, and the overall local community will conduct the majority of community outreach.

Outreach activities will utilize the communication and outreach pathways noted in Section 2, and include:

- Staffing an informational table at routine community events including General Membership Meetings.
- Presenting information to Morongo School students.

- Presenting information at community events including the Annual Earth Day event, Cultural Days, Family Dinners, Back to School events, and other community events.
- Native American High School Internship Program

Task 3.3 Annual ‘State of the Air’ Community Presentation (x2) – Morongo EPD staff will formally present the data analysis and summary to Morongo Tribal Council and General Membership annually during a scheduled community meeting.

Task 3.4 Collaboration with neighboring Tribes and Tribal Environmental Staff – Morongo EPD staff will develop and present formal and informal presentations about the project at local and regional tribal environmental meetings, to assist other tribal organizations with developing similar community monitoring projects.

Deliverables:

- 12 quarterly community newsletter articles
- Minimum of 18 social media posts
- Project poster and flyer for use and handout at community events
- Presentation for delivery at community events and tribal environmental meetings

Benefits:

- Education and raising awareness of local air quality in all ages and groups of the community from students to elders.
- Development of materials that can be used throughout the project timeline and for years after the project.
- Building and strengthening air quality monitoring and awareness among other regional tribes.
- Engagement to support workforce development of Native American High School Interns.

Task 4 – Workforce Development

Objectives addressed by Task 4:

Objective 6 – Improving the EPD’s capacity to utilize various air quality monitoring technologies and approaches.

Task 4.1 Ongoing Technical Support – Members of Morongo’s EPD have been trained on the maintenance, upkeep, and monitoring the status of the air quality monitoring network. Additional guidance documents will be developed as needed to support Morongo staff and training. During operations and maintenance activities, Native American High School Interns will also be trained to understand sensor technologies, maintenance, air quality monitoring approaches, and other aspects of the system. Blue Tomorrow will be on-call for all maintenance conducted by Morongo staff and provide troubleshooting steps if needed.

Deliverables:

- Updated and current guidance documents for sensor maintenance

Benefits:

- Training of Morongo staff in new and emerging low-cost sensor technologies.
- Support to make monitor repairs and maintenance efficient and keep time and cost down.
- Training of EPD Native American High School Interns.

Task 5 – Reporting

Objectives addressed by Task 5:

Objective 7 – Conduct analysis on air quality data for trends or conditions that lead to harmful air quality.

Task 5.1 Data Analysis Reports – Two data analysis reports will be produced during the three years of continued operation of the Morongo community air monitoring network. Data analysis consists of additional quality check of the data and calibrations. Outliers and data that has known data quality concerns is removed. Air quality data is averaged depending on the pollutant and the standard EPA averaging time for that pollutant (i.e. PM2.5 and PM10 is averaged over 24hrs). After averaging pollutants are compared to their AQI thresholds to determine when and how frequently concentrations exceeded AQI level (moderate, unhealthy for sensitive groups, etc.). Additionally, data analysis and reports will contain concentration statistics (i.e. 98th percentile, minimum and maximum concentration, etc.) and website analytic statistics to track website visitation. These reports provide a valuable resource for the Morongo community as they summarize and document yearly air quality from the community air monitoring network.

Task 5.2 Grant Reporting – Biannual reports will be submitted to CARB to communicate and track progress of the project. Progress, expenditures, and challenges will all be communicated through these annual reports. Reports will provide a tracking mechanism of budget spending and task completion.

Deliverables:

- Two data analysis reports
- Six biannual grant reports

Benefits:

- Summarizing and communicating the large amount of data collected by the monitoring network.
- Tracking performance and progress of the monitoring data and project over time.
- Communicating project progress and expenditures to CARB.