

Great Basin Unified
Air Pollution Control District

AB 617 Grant Report
Community Air Protection Program

FINAL Grant Report for G17-CAPP-11
Fiscal Year 2017-2018

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1.0 District's AB617 Annual and Final Report – 2017-2018 Grant

As described in the Community Air Protection Blueprint (October 2018), the Great Basin Unified Air Pollution Control District's (District) goal for the program is to conduct community-level air quality monitoring, especially in those communities where little or no air quality monitoring has been conducted in the past. The District, though low in population density (2 persons/square mile), nonetheless has concerns that the air pollution impacts to those rural communities need to be evaluated. The AB617 program grant award has provided the resources to address this need. In the first year of the grant, the District has selected communities for monitoring, selected and deployed sensors, and developed communication and public outreach material to meet the goals of AB617.

This document constitutes the District's first annual report and the final report for the 2017-2018 grant. The document covers the time period from grant execution to the end of January 2019. Work from February 2019 to June 2019 will be covered in the 18/19 Annual Grant Report for Grant G18-CAPP-11. The steps taken during this period while implementing the program are described in detail below. These steps summarize the design of the District's program as well as the work completed and fulfill the grant reporting requirements.

2.0 Summary of Work Completed and Work in Progress

2.1 Site Selection

The first step in the process of designing the monitoring portion of the community air protection program involved the identification of communities by District staff in which monitoring would be conducted. The next step was the development of a set of criteria that would be used to determine when monitoring would be conducted in a given community. The District developed a ranking system, based on the criteria, to aid in the decision-making process for monitor deployment. Communities identified as the highest priority were ranked as Tier 1 locations. The criteria developed by the District to aid in ranking the communities for monitor deployment are as follows:

- a) What communities have had little or no monitoring in the surrounding area?
- b) What communities have experienced the highest particulate matter (PM) impacts either from windblown dust and/or from wildfires?
- c) What communities have expressed concerns about those impacts?
- d) What communities have a public space, e.g., school, day-care center, fire station, where a PM monitor could be installed?
- e) What communities/public spaces have consistent line power and internet service for the PM monitor?
- f) What communities/public spaces are receptive to such an installation?

2.2 Low-Cost Sensor Selection

The next step in the process was to select low-cost PM sensor/monitor with low power consumption, internet connectivity, and that would be relatively unobtrusive. The sensor also had to have been tested by some authoritative body and have compared relatively favorably to EPA-reference or equivalent method monitors. The District researched and found a sensor that met its requirements in the Purple Air PA-II air quality sensor.

2.3 Sensor Deployment

Within identified communities, District staff researched and then contacted agencies, schools or other appropriate locations to host sensor installations. Operations staff then deployed the sensors. The Purple Air PA-II PM sensors have been deployed and installed by District staff in the following community locations based on the District's criteria:

1. Benton, Mono County
2. Big Pine, Inyo County
3. Bishop, Inyo County
4. Markleeville, Alpine County
5. Woodfords, Alpine County

The Purple Air PA-II-SD sensors, which contain an SD card, were procured by the District for installation at existing District PM monitoring stations to use as quality control check sensors for the community monitoring network. Some of these locations are also within communities and provide additional data to permanent monitoring stations. These sensors have been deployed at the following sites:

1. Bishop/NCORE Monitoring Station, White Mountain Research Center, Inyo County
2. Keeler Monitoring Station, Keeler, Inyo County
3. Lee Vining Monitoring Station, Lee Vining, Mono County
4. Mammoth Monitoring Station, Mammoth Lakes, Mono County

Additional communities without monitoring have been selected and will have sensors deployed in the 19/20 Fiscal Year.

2.4 Communication and Public Outreach

District staff developed a webpage specific to the Community Air Protection Program and the District's use of low-cost sensors. The page provides an explanation of the purpose and limitations of low-cost sensors. Additionally, it has a link to all sensor data within the District boundaries. District staff have shared this resource at Governing Board meetings, with other agencies' public information officers, and interested members of the public. The sensor data are used in conjunction with permanent and portable District monitors and other resources for health advisories and providing real time data to the public.

3.0 Program Costs August 2018- January 2019

The document covers the time period from grant execution to the end of January 2019 and covers work done under 17/18 Grant G17-CAPP-11. Work from February 2019 to June 2019 will be covered in the 18/19 Annual Grant Report for Grant G18-CAPP-11 submitted next year. A grant disbursement request form for the total 17/18 has been submitted with this report.

Task	Staff Time Worked (August 2018- January 2019)	Cost
Identifying Monitoring Locations	25	\$ 1,468.00
Selecting Sensor/Monitor Technology	6.5	\$ 381.68
Sensor Deployment and Maintenance	64	\$ 3,758.08
Communication, Public Outreach and Website	19	\$ 1,115.68
Administrative Time & Reporting	8	\$ 469.76
Cost of Purple Sensors, labels, mounting equipment, installation materials, etc.	n/a	\$ 2,261.23
Total Cost Performed by District	--	\$ 9,454.43
Total Invoiced to CARB (17/18 Grant Amount)	--	\$ 5,618.00