



Benicia Community Air Monitoring Program (BCAMP)

Mission, Capabilities, Status
for

6/13/23 Valero CAP Meeting

BCAMP Basics

- 501c3 Non-profit organization founded in 2019, 501c3 status granted in 2020
- Purpose:
 - to independently hold, operate, and maintain air monitoring equipment for the benefit of the Benicia community
 - to measure local ambient air quality in real time and archive and report data collected
 - to provide education on health and air quality
 - to operate a public access website to report such collected information
- 5-year funding grant provided through the Good Neighbor Steering Committee

BCAMP: Operational in 20202

- Site: Vacant communications building on Ruszel Woodworks Property
 - Building leased by BCAMP
 - Room is air-conditioned to keep instruments within required temperature range
- Contractor: Argos Scientific Inc.
 - Argos expertise and experience is key to the success of BCAMP
- Equipment included: meteorological instruments and an array of state-of-the-art air monitoring instrumentation (see next slides)

Air Monitoring Equipment

Testing for:	Equipment Type	Minimum Detection Limit
Benzene	Open-path UV	3 ppb
Toluene	Open-path UV	2.5 ppb
Xylene	Open-path UV	2.5 ppb
Sulfur Dioxide	Open-path UV	30 ppb
Hydrogen Sulfide	Point Monitor	2 ppb
Black Carbon	Point Monitor	0.05 microgram / m ³
Particulate Matter: 10, 2.5, & 1 micron	Point Monitor	5 micrograms / m ³
Ozone	Point Monitor	10 ppb

Meteorological Equipment

- Sonic Anemometer for Wind Speed and Direction
- Barometer for pressure
- Temperature and Humidity Sensor

Calibration: Methods and Schedule

- Methods:
 - UV - sealed certified gas cells
 - H₂S - NIST traceable reference gas
 - Ozone - NIST traceable reference gas
 - Black carbon - flow checks and instrument supplier calibration kit
 - PM 2.5 - validation with gravimetric standard method
- Schedule
 - Gas cells: monthly
 - All: multipoint calibration checks monthly
- Metrological station - calibrated by manufacturer annually

Location



Ideal location: Close to highway, railroad, refinery/asphalt plant, and port

Website Features

- Link: <https://www.fenceline.org/bcamp/>
- Real-time data
 - Measured values: 24 hour plot, continuously updated along with hourly average wind direction arrow
 - Gauge showing % of 1 hour acute exposure limit
- Data History
- Links to report an air quality issue
- Reference links for additional information

Summary: BCAMP is an information resource for the benefit of the community

- Data provided can be used by the community and by researchers to:
 - Help locate high emission sources
 - Ascertain the impact of wildfire smoke
 - Aid emergency responders in the event of a release event
 - And.....so much more
- Data will be more valuable when used in combination with more monitoring stations in the area