

Comments on the Community Air Monitoring Plan for the South Sacramento – Florin Community

As of May 5, 2020, the District received the following comments on the draft Community Air Monitoring Plan (CAMP) released in March 2020. The comments listed below are from Steering Committee Members, members of the public, and outside peer-review air quality experts. The District is releasing these comments in an effort to promote transparency, promote dialogue and share information with Steering Committee Members and the public. The comment deadline for the draft CAMP is May 8, 2020. Once all the comments have been received, the District will work to create a document that lists all comments with the District's responses and/or updates to the CAMP.

This is only a list of comments and does not include any responses or updates to the plan.

Oral comments received at the April 14, 2020 Steering Committee Meeting

- Comment #1: A steering committee member stated that the list of concerns listed in the CAMP Element 3 were out of order. He noted that the concerns started with public outreach and that he thought monitoring should be the primary concern for the monitoring plan. His proposed new ordering was:
1. Emissions from Highway 99 (Currently #2)
 2. Emissions impacts from businesses (Currently #4)
 3. Increasing rates of asthma and respiratory problems in the community (Currently #3)
 4. Need to increase air quality education and outreach efforts (Currently #1)
- Comment #2: A steering committee member suggested that the CAMP should contain language that allowed the District to be flexible in how it implements the plan due to unforeseen circumstances. The member noted that the Steering Committee may need similar language to allow flexibility in implementing the CAMP due to COVID-19 and the shelter-in-place order.
- Comment #3: A public commenter stated that it would be helpful for Element 3 of the CAMP to categorize health disparities by race and income so racial and wealth equity issues could be addressed.
- Comment #4: A public commenter stated that Element 2.2 should note that public comment at Steering Committee meetings was stifled from March to November of 2019.
- Comment #5: A public commenter stated that the explicit outreach and education goals were implicit already and that the Steering Committee should consider replacing the outreach and education goal to not be business as usual.

Written comments received via email from Hilary Hafner, Sonoma Technology, Inc. (STI) on April 20, 2020

From: Hilary Hafner <Hilary@sonomatech.com>
Sent: Monday, April 20, 2020 3:41 PM
To: Janice Lam Snyder <JLam@airquality.org>
Cc: Steve Brown <steveb@sonomatech.com>
Subject: Review of CAMP docs

*** THIS EMAIL ORIGINATED OUTSIDE AIRQUALITY.ORG ***

Hi Janice,

Thanks for having us take a look at the CAMP documents. Steve and I had only a few comments. The document is good!

CAMP summary:

I think it is important to have the pollutants and sampling duration/intervals in each Phase.

- P. 2 Phase I: add *NO2 and PM* after Clarity Node monitors
- P. 2 Phase I: Add *ozone* after AQY 1
- P. 2 Phase I: Add that *the low-cost sensors will be hourly or sub-hourly duration.*
- P. 2 Phase II: add continuous *1-hr* monitoring for BC
- P. 2 Phase II: Add *VOC and mini-vol sampling is 24-hr duration, every sixth day.*
- P. 2 Phase III: add in 1-hr duration for BAM, ozone, NOx. 24-hr for carbonyls.
- P. 3 in the table, I recommend putting in the sample duration in parentheses after the word Continuous to be very clear on what interval is being measured.

Full CAMP document

- P. 2-10 low cost sensors. Suggest adding that there is a limited pollutant list for low-cost sensors
- P. 2-11 mobile monitoring. Suggest changing – limited to pollutants than can be ~~continuously~~ monitored at high time resolution (*e.g., on the order of seconds*).
- P. 3-2 concern #3: when *and what type of mask* to wear if air quality is poor.
- P. 4-1 Table 4-2. Suggest adding duration to use of the word continuous (*e.g., 1-hr, 1-min.*). Would be helpful to list make and model here of equipment, but could instead refer to element 7
- P. 4-5 should we consider in the initial screening phase that if some sites correlate highly with each other, it may be worth moving one of them to a “next tier” of locations? Or, that it is more important to get a complete year with all the seasons?
- P. 6-5 suggest adding *Spatial Representativeness and Siting Criteria* to the title
- P. 6-7 suggest mentioning timing the 1-in-6 day sampling with EPA schedule.
- P 7-7 Suggest mentioning that the Clarity node is going to use a solar solution
- P. 7-7 Aeroqual. There is a typo with using Clarity rather than AQY 1 in the text. Suggest noting the sampling interval in these descriptions
- P. 7-8 Aethlabs – not really a low cost instrument, perhaps mid-cost is more appropriate?
- P. 7-9 suggest adding sampling interval (most are 1-hr) to each instrument description
- P. 7-5 typically for quality assurance, it is best to state the gas cylinder certification requirement
- P. 8-3. Section 8.2 needs a brief summary on what is meant by traffic and stationary screening (assuming these are referring to areas with those sources dominating?)

- Section 9.2.2 suggest calibrate sampler *flowrate*
- Section 10.2.2 Data review procedure. Suggest adding will check that the concentration range, calibration results, flow rate check results were within specifications.
- Section 13 data analysis. Would like to see more on the goals and expected outcomes of the data analysis in each phase. For example, for Phase 1 is the main outcome a map of NO2 and PM concentration in the community with some statistical assessment of variability among sites and which sites vary/don't vary together? With this analysis the a single site could be used to represent multiple sites, which would help to identify where to put phase 2 monitors.

Not sure where this would go, but it would be helpful to be more quantitative about the number of samples to be collected in Phase 3 (or approximate/caveated) or how long each measurement will run calendar-wise if it is other than 1 year.

It would be great to add a timeline/gant chart with the phases to show what is overlapping or sequential.

Suggest collocation occurs at both start and end of study for low-cost sensors.

Look forward to chatting.

Hilary R. Hafner
Chief Operating Officer
Sonoma Technology, Inc.

Written comments received via email from Vincent Valdez, Steering Committee Member, on April 24, 2020

From: vincent valdez <vvaldez63@sbcglobal.net>
Sent: Friday, April 24, 2020 12:36 PM
To: Janice Lam Snyder; Ron Jimenez Kof C; David Yang; Herman Barahona; Tido Hoang; Denise Mccoy; Mark Loutzenhiser; Patricia Shelby; Bill Knowlton; Shirley Banks; Rhonda Henderson; SDW Upchurch; Saldana Jose@ARB; samar.lichtenstein@arb.ca.gov; Jaime Lemus; csinglefather@comcast.net; Joelle Toney; veronica.eady@arb.ca.gov; Ariel Ambruster; nlcna@outlook.com
Subject: CAMP suggestions

*** THIS EMAIL ORIGINATED OUTSIDE AIRQUALITY.ORG ***

As I previously stated in our CAMP in its draft form as stated in the Executive Summary page IV (4) reads



- Concern 1. Need to increase air quality education and outreach efforts
- Concern 2. Emissions from Highway 99/traffic
- Concern 3. Increasing rates of asthma and respiratory problems in the community
- Concern 4 Emissions impacts from businesses

This order of Concerns is reflected in our Draft CAMP on pages 3-1 and 3-2 in describing Scope of Actions, 4-1 and 4-2 in Air Monitoring Objectives, 6-6 in Spatial Representativeness, 12-(1,2,3) in Process for Evaluating Effectiveness if there are any other areas of the CAMP I have missed please add them.

My suggestion is the order of Concerns to be changed to reflect the data we will be collecting

- Concern 1 Emissions from Highway 99/traffic
- Concern 2 Emissions impacts from businesses
- Concern 3 Increasing rates of asthma and respiratory problems in the community
- Concern 4 Need to increase air quality education an outreach efforts

Thank you for letting me be of Service

 Vinnie V 

Oral comments received at the April 28, 2020 Steering Committee Meeting

Comment #1: A steering committee member stated the 75% completeness for data collection seems too low.

Comments #2-13: A steering committee member provided the following comments:

2. The District needs to explain data quality for low cost monitors (e.g. $RMSE < \sigma_{reference}$)
3. Explain why professional-grade monitors may not be held to FRM/FEM requirements
4. The District needs to explain why 75% completeness is an acceptable standard.
5. The District needs to explain why some monitors do not have DQI objectives requirements
6. It is not appropriate to reference the accuracy for SASS, VOC, and carbonyl samplers to the laboratory SOP. Please explain.
7. In Section 6.4, the CAMP references documents reviewed by the District. These documents should be available to the Steering Committee. There should be a clickable link to any documents used by the District to create the CAMP.
8. What will be done with monitoring equipment after monitoring? Why isn't equipment being rented?
9. How many of each monitor are being used? It doesn't say in Element 7.
10. Section 10.1 references a data review process. That process should be available to the Steering Committee and public.
11. The Appendix is confusing. There should be a link whenever a document is referenced. There should be a clickable link to any documents used by the District to create the CAMP.
12. The District should consider using ACLIMA. Their data are easy to understand, exceeds federal standards and precise.
13. Would the Phase 3 monitoring see impacts from the Title V power plant or the airport?

Comment #14 A steering committee member said that the District should explain why professional-grade monitors may not be held to FRM/FEM requirements and said that equipment should meet federal requirements so there are no exceptions on what it won't do.

Comment #15 A steering committee member noted that there should be outreach in other languages, especially Vietnamese.

Comment #16-17 A steering committee member provided the following comments:

16. The objectives were of equal value and that the order did not reflect priority.
17. They are comfortable with the 75% completeness as a industry standard with the understanding that the District will attempt more completeness.

Comment #18-19 A steering committee member provided the following comments:

18. They disagreed with Comment #16 and thought that readers would infer priority from the repeated ordering of the objectives.
19. The District needs to explain why equipment might not meet federal standards

Comment #20 A member of the public said that a Technical Advisory Committee could be used to help rebuild trust between the steering committee and the District.

Comments #21-#27 A member of the public provided the following comments:

21. The numbering of the goals provides an intuitive sense of urgency
22. Community outreach/information is implicit in AB617 and that should not be a stated goal.
23. Outreach materials should include materials in Vietnamese.
24. If outreach is a goal, it should include more than what has been done.
25. The steering committee should be provided with information about strategies that are available as a result of the monitoring of emissions from Highway 99.
26. There should be a health analysis tied to the monitoring as a tangible deliverable.

Comments #27-#29 A member of the public provided the following comments:

27. He supports forming a technical advisory group.
28. The information should be understandable to schools and local neighborhoods.
29. He supports efforts to reduce emissions in the greater Sacramento area and wants to understand the budget and whether that is a limiting factor.

Comments #30-#33 were made by a member of the public:

30. It is concerning that the goals aren't geared toward having pristine data quality.
31. The District should justify the use of non-deterministic language, such as the case of "data may be used to target emission reductions."
32. The language in the CAMP does not always put community stakeholders first.
33. There is an imbalance in the air quality expertise between the District and the community.

Comments #34-#36 were made by a steering committee member

34. The District should explain why the Campbells Soup facility and the airport are not within the boundary when the steering committee wanted it in.
35. The CAMP should identify all the agencies and non-profits it has consulted with to create the CAMP.
36. The District should comment on why the EJ communities and Title V facilities are not in the map on page 2-3.

Written comments received via email from Dr. Anthony Wexler and team, UC Davis Air Quality Research Center, on May 5, 2020

CAMP Review

Anthony Wexler, Distinguished Professor and Director, Air Quality Research Center
Minmeng Tang, PhD student, Atmospheric Science Graduate Group
Chris Niedek, PhD student, Agricultural and Environmental Chemistry Graduate Group
University of California, Davis

Low-cost sensors evaluated by AQ-SPEC

- Aeroqual AQY very good except NO₂ 24 hour average only ok
- Clarity Node PM_{2.5} good but not as good as the AQY
- Aethlabs MA-200 not evaluated

Pg 3-1

- Concern 1: involve middle school and high school science teachers to integrate into curriculum. One great way to reach parents and families is through their children. And great to help kids understand why science is important by using air quality as something they can relate to.
- Concern 2: Sound walls and trees bounding highway 99 to confine pollutants there and help clean some out.
- Concern 2: The remediation list does not include highway 99 issues.
- Concern 2: Volkswagen settlement funds may be available to help pay for EV charging stations.

Pg 3-2

- Concern 3: Can we get CA Dept. of Public Health to let us know if incidence of asthma and other illnesses is actually higher here than in greater Sac area?

Pg 4-1

- Element 4, Objective 1: Monitor at schools
- Element 4, Objective 2: Air cleaning at schools
- Element 4, Objective 3: get CA Dept of Public Health to help out here

Pg 4-2

- Should also measure ozone – Table 4-1 (an ozone measurement was not listed)
- This and several other pages – should measure elemental carbon too to get the traffic contribution

Pg 4-5

- Time of year is important since inversions in Winter
- Phase 2 and 3 are only 6 months so must be the right 6 months
- Kids are not in school in summer

Pg 6-1

- Bring trailer to some of the low-cost sensor sites to get side-by-side comparison and estimate of data quality

Pg 6-5

- Would be good to have local meteorological measurements, especially wind direction, in Phase 1 and 2 in addition to Phase 3, in order to help identify the source location.

Pg 6-6

- For regional air quality regulatory purposes, you do not want sensors near sources, but for this study near sources or at least in neighborhoods nears sources seems like a better way to meet objectives.

Pg 7-1

- Clarity Node: Is there is a way to store locally on an SD card say in case the internet connection breaks down?
- The Aeroqual and the Clarity should be checked frequently since low cost sensors have a history of breaking down frequently.
- NO2 measurements are not very reliable from these low cost sensors so will not be useful for tracking vehicle and power plant emissions. Another reason to bring the trailer to these sensors periodically to check on their performance.

Pg 7-2

- With the Aethlabs instrument, you can probably replace the SD card with a USB cable run to a hobbyist computer to get the data in real time. We did this with the PurpleAir sensor.

Pg 7-3

- The description of the MetOne BAM says PM2.5 and PM10 – which one?

Pg 7-4

- SASS pre-weighed nylon and Teflon cylinders. Should that be filters?

Pg 7-9

- Might need more black carbon measurements to see the spatial distribution in more detail.

Pg 9-1, section 9.1 – same as comment on Pg 6-1

Pg 10-3 – same as on pg 7-1 regarding parallel storage on SD cards

Pg 13-1

- It would be helpful to have more detail about objectives of the data analysis.
- Relate the data collected to public health data, especially asthma incidence.

Pg 14-2, Table 14-1 – same as comment on Pg 3-1, Concern 1