South Sacramento – Florin Community

Draft Community Air Monitoring Plan (CAMP)

Peer Reviews and Public Comments with

Sac Metro Air District Responses

June 16, 2020

Overview:

The District received eight comment letters and took comments from the Steering Committee and public during two Steering Committee meetings. In addition, the District requested peer reviews from three independent air quality and monitoring experts/organizations: 1) Dr. Anthony Wexler, Distinguished Professor and Director, UC Davis Air Quality Research Center with Minmeng Tang, Ph.D. Student, UC Davis Atmospheric Science Graduate Group, and Chris Niedesk, Ph.D. student, UC Davis Agricultural and Environmental Chemistry Graduate Group; 2) Hilary Hafner and Steve Brown, Ph.D., Sonoma Technology, Inc and 3) South Coast Air Quality Management District.

Public comments closed on May 8, 2020. This document contains: 1) "Summary Comments" that summarize the comments that are similar and the District responses to those summarized comments and 2) The exact comment and Sac Metro Air District's individual response to that comment.

Summary Comments:

<u>Summary Comment #1:</u> We received several comments on the data quality indicators (DQI). Some comments suggested adding DQI for all parameters and monitors or strengthening some DQI. Other comments suggested we should deploy monitors side-by-side or temporarily site the trailer next to monitors to help establish DQI or ensure the monitors meet the established DQI.

Response: The DQI are listed in Element 6, and this section has been revised to include additional DQI for some monitors. Element 6 has also been updated to include an explanation of why it is not appropriate for some monitors to have a DQI (e.g. precision for meteorology parameters). With regards to side-by-side monitoring, all low-cost monitors are collocated at a regulatory monitor before the monitors are deployed into their locations in the community. The collocation provides a comparison of the low-cost monitors data to the data collected by the regulatory monitor. In addition, a Clarity sensor and an AQY-1 will be collocated at a regulatory station so that there will be an indication of data quality as it relates to federally regulated monitors over extended periods. Collocation is described in Element 9. Once the lowcost monitors are in the community, using the trailer and collocating it with each low-cost monitor have several logistical challenges, including the location/space and power needed for the trailer and the amount of time to collocate at 21 different monitoring sites. The District believes that collocating the low-cost monitors with a regulatory monitor prior to being used in the field will provide an estimate of data quality. Collocation with the regulatory monitor will demonstrate that the data obtained from low-cost monitors is reliable and capable of meeting the objectives of the CAMP in conjunction with the Phase 2 and Phase 3 monitors.

<u>Summary Comment #2:</u> We received several comments on the data completeness criterion of 75%. Several comments states that the 75% data completeness seems low. One comment suggested that data completeness criterion be higher than 75% and closer to the performance of the equipment. Another comment thought the 75% threshold was a minimum acceptable criterion and reasonable, with the understanding that the goal is to get 100% data completeness.

Response: The DQI, including the 75% data completeness criterion, should be understood as a minimum standard for accepting the data and not an objective. The District agrees that DQI such as data completeness typically exceed the DQI shown in Table 6-1. The purpose of the DQI is to establish whether the monitors are fit for the purpose. As such, it is appropriate to establish DQI that represent the minimum acceptable value that is acceptable rather than a value that is achieved in practice. The District operates all monitors with the goal of being as complete as possible. This is true for this monitoring plan and the District's regulatory monitoring network. In addition, aligning DQI objectives with the regulatory monitoring network provides a basis for the establishment of protocol for the collection of data obtained and for standardizing the monitoring data to compare to other air quality data in other areas in Sacramento.

<u>Summary Comment #3:</u> We received several comments on the process of ensuring quality data is collected. Some comments suggested that the data review process be outlined in the CAMP or made available to the Steering Committee and public for review. Other comments were more specific on the details of the data review process, which included the algorithms information, data flagging procedures, required checks on calibration and flow rate, and process used for laboratory analysis.

<u>Response:</u> The District is developing the data review and quality assurance (QA) process. All raw data collected from the monitors are saved. The public can request that information at any time from CARB's AQview system, which will include QA checks developed by CARB. Reports using processed data will discuss the quality assurance criteria evaluated by the District in the report. A statement that the District will disclose QA procedures has been added to Section 10.2 of the CAMP.

Summary Comment #4: We received several comments on why the Federal Reference Method (FRM) and Federal Equivalence Method (FEM) standards are or are not appropriate for monitors in AB 617. Several comments asked for clarification to why the professional-grade equipment used in the CAMP may not be held to these federal monitoring standards. One other comment stated that the FRM and FEM standards are not appropriate for monitors used in AB 617.

<u>Response:</u> FRM) and FEM are "category" designations that the Environmental Protection Agency (EPA) gives certain air quality equipment for the purpose of determining whether an area is in attainment or non-attainment for a particular pollutant (e.g. Particulate Matter 2.5, Nitrogen Dioxides (NO2)). Monitors designated as FRM/FEM are a subset of professional high-quality grade monitors that are designated for a specific purpose. High-quality monitors can

meet or exceed standards equivalent to FRM/FEM standards and are not FRM/FEM designated monitors.

Regulatory monitoring standards include stringent siting requirements. The District agrees that AB 617 monitoring is not for federal regulatory purposes and closer to special purpose monitoring. Applying all stringent federal monitoring requirements typically intended to monitor for regional air quality are not fit for purpose in this program and additional flexibility should be desired to meet Steering Committee objectives and outcomes. However, the District believes that using some FRM/FEM data quality standards for the professional-grade monitors provide a basis for the establishment of protocol for the collection of data obtained and for standardizing the monitoring data to compare to other air quality data in other areas in Sacramento. The District will operate the monitors such that they provide high quality and representative air quality data.

<u>Summarize Comment #5:</u> We received several comments to have more information on data analysis. A comment wants more details on data analysis, and other comments suggested that analysis should show how the air monitoring data are related with other data sources like public heath, income, and race data.

Response: Element 13 describes the data analysis of the monitoring information and has been updated to include more information and details of the data analysis that will be performed. The District believes that linking the air monitoring data to other data sources is valuable, however, those types of analysis is beyond the scope of the air monitoring plan. The purpose of the monitoring plan is to collect the appropriate air quality data and to make it available to others, so that analysis like health analysis can be performed. The District hopes to share the results of the monitoring with other interested group like the public health and planning agencies, so they are aware this information is available.

<u>Summary Comment #6:</u> We received several comments on the reorganization of the objectives or suggestions to replace an objective. Several comments suggested that the objectives should be reordered to prioritize the objectives that are more related to monitoring. One other comment suggested that all objectives were of equal value and a clarifying statement should suffice. Other comments suggest that the public outreach and education objective was already an implicit requirement of AB 617 and should be replaced with different objective.

<u>Response:</u> The District worked with the Steering Committee to develop the objectives for the CAMP, and the Steering Committee have not decided to change the objectives. Based on the suggestions in the comments for reorganization, the listing order of the objectives have changed. Additional language has been added to clarify that objectives are not in any priority order. The list of concerns, actions, and objectives has been changed to use letters instead of numbers to reduce any implication that the concerns are in a priority order.

<u>Summary Comment #7:</u> We received several comments on the monitoring schedule and timeline. Several comments emphasized the need for the CAMP monitoring to capture the seasonality of specific pollutants and to consider this for the deployment of Phase 2. There

was also a request to establish criteria for when Phase 3 monitoring would be deployed and define the duration of Phase 3.

<u>Response:</u> The District has discussed the sampling strategy with the Steering Committee and understands that the Steering Committee wants summer and winter months sampled. The data from Phase 2 are being used as a screening tool to inform where the Phase 3 monitoring trailer will be sited. Actual deployment for Phase 2 and subsequent tasks is highly dependent on outside factors such as equipment availability, ability to secure access to monitoring sites, and impacts of the COVID-19 pandemic. Phase 3 will provide a longer monitoring time frame to ensure seasonal variation is captured. The decision of when and where to place the Phase 3 trailer will be discussed with the Steering Committee when data from Phase 2 is available and the Phase 3 trailer is ready for deployment.

Summary Comment #8: We received several comments on the importance of:

- Outreach and public engagement
- Forming a Technical Advisory Group (TAG)
- The intersection of air quality, environmental justice, and susceptibility to COVID-19

<u>Response:</u> The District acknowledges and agrees these are all critical components of AB 617 and will continue work on integrating these aspects into the program. The Steering Committee will play a key role in determining the details to these components.

Public comments & letters received with Sac Metro Air District's responses

Letter L1

Comments on

South Sacramento – Florin Community Air Monitoring Plan By Earl Withycombe May 8, 2020

General

The South Sacramento – Florin Community Air Monitoring Plan (Plan) is generally well conceived and structured. The use of a tiered monitoring approach is cost-effective, but may extend the monitoring program for up to two years depending on the proposals to quantify seasonal variability and the uncertainty regarding commencement of the third phase (Phase III) of air quality monitoring.

L1-1

The U.S. Environmental Protection Agency (U.S. EPA) requires the development of a Quality Assurance Project Plan (QAPP) for any data collection or analysis project that is fully or partially funded by the agency. This requirement has been in place since 1998, and the agency has published a series of guidance documents dictating the contents of a QAPP. The Steering Committee should give serious consideration to the addition of Plan components that conform with QAPP requirements.¹

L1-2

Pollutants

The primary emission source concern of the Steering Committee, as summarized in the Executive Summary, is on-road vehicular traffic, especially that on California State Route 99. The pollutants emitted by on-road vehicle traffic include oxides of nitrogen (NOx), toxic air contaminants (TAC), and Diesel particulate matter (DPM). Attachment 1 contains an emission inventory for several federal air quality standard pollutants showing the relative contribution of on-road motor vehicles to the total emission inventory in Sacramento County.²

L1-3

The Plan focuses on quantifying the levels and distribution of PM_{2.5} concentrations as a marker for DPM in the study area in Phase 1, but does little to address levels and distributions of NOx in either Phase 1 or Phase 2. PM_{2.5} concentrations in Sacramento County comply with federal air quality standards, but exceedances of the federal NOx standard of 0.10 ppm – 1 hour average occur at the CARB monitoring station at 13th and T Streets annually. NOx is an oxidant gas that, in elevated concentrations, causes inflammation of airways and contributes to upper airway diseases including asthma and chronic bronchitis. Attachment 2 presents screenprints of daily maximum 1-hour NOx

¹ https://www.epa.gov/quality/quality-assurance-project-plan-development-tool, accessed on May 6, 2020.

² https://www.arb.ca.gov/app/emsinv/2019ozsip/fcmasterdetail_sip2019.php, accessed on May 4, 2020.

concentrations recorded at this downtown site in 2017 through 2019. The 13th and T Street site is located 0.26 miles from State Route 50 and 0.81 miles from Interstate 5.

By comparison, the next nearest NOx monitoring site to the study area is the Del Paso Manor station, which is about 1.82 miles from Interstate 5 and about 8.57 miles. Far fewer exceedances of the federal 1-hour NOx are recorded at this site. This difference demonstrates that substantial variations in NOx concentrations occur spatially across the Sacramento region. Like PM_{2.5}, NOx concentrations near freeways can be up to double those measured a mile away. Because of these gradients, the Plan should include NOx monitoring using low-cost sensors in Phase I of the Plan to determine how substantial the differences in NOx concentrations are across the study area.

Data Quality Indicators

Table 6-1 lists Data Quality Objectives for each monitor proposed for use in the Plan. In the paragraphs preceding Table 6-1, mention is made of data quality indicators (DQI) for U.S. EPA approved Federal Reference Method (FRM) and Federal Equivalence Method (FEM) monitors. FRM and FEM monitors are carefully certified by U.S. EPA as the data produced by these instruments serves as the basis for air quality regulatory decisions, such as whether an area is determined to attain federal ambient air quality standards or not. The reference to FRM and FEM monitors in the Plan is misplaced as AB 617 monitoring is conducted for <u>research</u>, not <u>regulatory</u>, purposes. Likewise, some of the DQIs (labeled as Data Quality Objectives) in Table 6-1 borrow from the U.S. EPA regulatory framework that is not applicable to this Plan.

The DQIs in Table 6-1 should reflect quality goals for the monitoring conducted under this Plan. There is no reason to list any indicator as "Not Applicable". Values for these indicators should be included and set on the basis of manufacturer's test data, regulatory agency test data, or actual monitoring experience. The reason for establishing values for all DQIs is to alert monitoring and management staff at the Sacramento Metropolitan Air Quality Management District (District) when corrective action is needed as a result of monitor construction defect, mis-installation, mis-operation, mis-calibration, or operational failure. In the absence of DQIs for precision, bias, accuracy, sensitivity, and completeness, District staff cannot judge whether the data or operational parameters being recorded fall within an approved uncertainty range.

One of DQI levels in Table 6-1 that has been borrowed from the U.S. EPA regulatory monitoring framework is the 75% goal for completeness. This goal is used in the regulatory framework to determine whether sufficient data has been collected during an hour, day, season, or year on which to base a regulatory decision that carries substantial consequences. For typical FRM, FEM, and meteorological sensor operation, this is a relatively easy goal to achieve. Examples of this capability can be seen in the completeness statistics for meteorological sensors operated by the District and the California Air Resources Board in Sacramento County as shown in screenprints

L1-3 (cont)

L1-4

L1-5

L1-6

L1-6 (cont)

in Attachment 3. In these screenprints from CARB's Air Quality Monitoring Information System (AQMIS) report data completeness as "Obs for Year", or hours of data recorded per 8,760-hour years. These screenprints demonstrate, for example, average levels of data completeness at all sites listed were 84.8% in 2017, 84.8% in 2018, and 85.8% in 2019. Based on these data, the data completeness goal of the meteorological monitors used in the Plan should be nothing less than 85%. With such a goal established, District staff will know that sensor maintenance or replacement is needed if data capture levels fall below 85%.

Another example of actual data completeness levels can be seen in the NOx monitoring tables in Attachment 2. The blank days in each of these table in the middle of months represent days in which the monitor was not recording data in conformance with all applicable protocols. The numbers of complete monitoring days in these tables for the two monitoring sites ranges from 350 to 365 days per year. This range equates to data completeness levels from 95.9% to 100%. As a result, the data completeness goal for NOx monitoring using FRM instruments should be nothing less than 95%. Whenever data completeness levels for such instruments in monitoring under the Plan falls below this level, this should be a signal to District staff that more maintenance is needed. Without realistic DQIs embedded in Table 6-1 of the Plan, District staff will not be held accountable for unacceptable levels of monitor performance.

A final example involves the Clarity Nodes that are now being deployed to monitor PM_{2.5} at fixed locations. The South Coast Air Quality Management District in Southern California tests low-cost monitors, including the Clarity Node, and publishes theirs findings online, including data of precision, accuracy, and data completeness. Their test report for the Clarity Node states that the data recovery (data completeness) level for each unit tested was higher than 97%.³

Measured performance data for every monitor included in the Plan is available online in one form or another. These data should be added to Table 6-1 where there are currently blanks or default minimum values.

<u>Temporal Representativeness</u>

Section 6.4 (Temporal Representativeness) of the Plan states that "staff reviewed historical air monitoring data and wind patterns by season". The findings that staff made and conclusions drawn from this review should be discussed either in the Plan or in an appendix.

Aeroqual AQY 1

Section 7.1.1.2 indicates that "the District will deploy one Aeroqual 1 monitor during Phase 1. If only one of these monitors is acquired, determining the actual precision of this instrument will be unattainable. The Plan should consider the acquisition of a

³ http://www.aqmd.gov/docs/default-source/aq-spec/field-evaluations/clarity-node---field-evaluation.pdf?sfvrsn=6, accessed on May 6, 2020.

minimum of two of these monitors so that their precision can be establishing in pre-deployment side-by-side testing.

L1-9 (cont)

L1-10

VOC Canisters and Sampling System

Section 7.1.3.1 of the Plan states that the District will use a Xonteck Model 901 Canister Sampler or equivalent to collect air samples for laboratory analysis. From the Equipment and Laboratory Cost table presented to the Steering Committee on September 24, 2019, it appears that the District is proposing to purchase an equivalent ATEC 8001-2P Canister Sampler at a cost of \$20,000. The Plan does not indicate whether the District will have a use for this instrument after the Phase III monitoring project is completed. Given that the instrument collects samples that must be analyzed by a third party laboratory, continued use of the instrument after Phase III would impose a demand on successive District budgets. If the instrument is not proposed to used by the District for ongoing research work like Phase III tasks, then the Steering Committee and the District may want to consider either renting this instrument for only the Phase III work or purchasing a used version of the 8001-2P. Used versions of this instrument are available for sale on the Internet for as low as \$1,500.4

The option of either renting or purchasing used instruments also applies to the Air Metrics MiniVol Samplers (Section 7.1.2.2), the sorbent tube sampling system (Section 7.1.3.2) and the Met One SASS (Section 7.1.3.6), all of which require the laboratory analysis of samples that imposes ongoing costs to the District.

Spare Low-Cost Monitors

Section 9.1 of the Plan indicates that the Aeroqual and Clarity Node low-cost monitors are not user serviceable. As a result, the Plan should state how many spares of the monitors will be acquired for instrument replacement in the event of failure. In the absence of spare monitors in inventory, data completeness will suffer as District staff undertake acquisition and receipt of replacement monitors.

L1-11

Data Review Procedures

Section 10.1 of the Plan states that "the District implements data review procedures to reduce these errors in the final, reviewed dataset. The Plan should explicitly state what these procedures are in honoring its commitment to transparency. The procedures can be described in an appendix to the Plan.

L1-12

Data Download Schedule

Section 10.1.2 of the Plan indicates that air quality data collected by low-cost monitors will be downloaded from the manufacturers' websites. The Plan should identify the

L1-13

⁴ https://spwindustrial.com/atec-model-2200-canister-air-sampler-atmospheric-technologyenvironmental/?gclid=CjwKCAjwwMn1BRAUEiwAZ_jnEtyWnCcNLdaTUX0nC3WMO0lpcCO_P0DhEQVMGWnjmtox UW9HNi0LhRoCXeAQAvD_BwE, accessed on May 6, 2020.

frequency at which data will be downloaded and how it will be reviewed for quality assurance.

L1-13 (cont)

Automated Data Review

Section 10.2.3 of the Plan states that "data from monitors with ability to transmit data will be checked automatically by the datalogger". The Plan should detail the explicit algorithms or limits that will be programmed into the dataloggers for flagging data that is out-of-range, repeating, or too variable.

L1-14

Unfinished footnote 15 should also be completed.

L1-15

Commencement of Phase III

Section 11.1.3 of the Plan states "the third phase will be deployed after enough monitoring data is collected from the enhanced screening monitors, which is expected to be determined after some Phase II monitoring". The Plan should explicitly state what criteria will be used to made this determination, or what goals must be achieved to constitute "enough" monitoring.



Attachment 1 Sacramento County 2020 Emission Inventories by Pollutant

		al Average Day Emission Inv	ventory				
Source:	CARB CEPAM 2						
<u>AREA</u>	SOURCE TYPE	CATEGORY	SUB CATEGORY	<u>NOx</u>	ROG	<u>PM10</u>	PM2.5
SACRAMENTO COUNTY	STATIONARY	FUEL COMBUSTION	ELECTRIC UTILITIES	0.500	0.102	0.104	0.104
SACRAMENTO COUNTY	STATIONARY	FUEL COMBUSTION	COGENERATION	0.003	0.001	0.001	0.000
SACRAMENTO COUNTY	STATIONARY	FUEL COMBUSTION	OIL AND GAS PRODUCTION (COM	0.004	0.001	0.000	0.000
SACRAMENTO COUNTY	STATIONARY	FUEL COMBUSTION	MANUFACTURING AND INDUSTRI	0.141	0.025	0.028	0.027
SACRAMENTO COUNTY	STATIONARY	FUEL COMBUSTION	FOOD AND AGRICULTURAL PROCE	0.140	0.021	0.013	0.013
SACRAMENTO COUNTY	STATIONARY	FUEL COMBUSTION	SERVICE AND COMMERCIAL	0.678	0.063	0.077	0.077
SACRAMENTO COUNTY	STATIONARY	FUEL COMBUSTION	OTHER (FUEL COMBUSTION)	0.188	0.037	0.008	0.008
SACRAMENTO COUNTY	STATIONARY	WASTE DISPOSAL	SEWAGE TREATMENT	0.000	0.018	0.000	0.000
SACRAMENTO COUNTY	STATIONARY	WASTE DISPOSAL	LANDFILLS	0.032	0.564	0.008	0.008
SACRAMENTO COUNTY	STATIONARY	WASTE DISPOSAL	INCINERATORS	0.040	0.002	0.011	0.003
SACRAMENTO COUNTY	STATIONARY	WASTE DISPOSAL	SOIL REMEDIATION	0.000	0.000	0.000	0.000
SACRAMENTO COUNTY	STATIONARY	WASTE DISPOSAL	OTHER (WASTE DISPOSAL)	0.000	0.224	0.000	0.000
SACRAMENTO COUNTY	STATIONARY	CLEANING AND SURFACE COATIN	LAUNDERING	0.000	0.024	0.000	0.000
SACRAMENTO COUNTY	STATIONARY	CLEANING AND SURFACE COATIN	DEGREASING	0.000	0.884	0.000	0.000
SACRAMENTO COUNTY	STATIONARY	CLEANING AND SURFACE COATIN	COATINGS AND RELATED PROCES	0.000	1.633	0.000	0.000
SACRAMENTO COUNTY	STATIONARY	CLEANING AND SURFACE COATIN	PRINTING	0.000	1.087	0.000	0.000
SACRAMENTO COUNTY	STATIONARY	CLEANING AND SURFACE COATIN	ADHESIVES AND SEALANTS	0.000	0.475	0.000	0.000
SACRAMENTO COUNTY	STATIONARY	CLEANING AND SURFACE COATIN	OTHER (CLEANING AND SURFACE	0.000	0.260	0.000	0.000
SACRAMENTO COUNTY	STATIONARY	PETROLEUM PRODUCTION AND N	OIL AND GAS PRODUCTION	0.000	0.531	0.000	0.000
SACRAMENTO COUNTY	STATIONARY	PETROLEUM PRODUCTION AND N	PETROLEUM REFINING	0.000	0.000	0.000	0.000
SACRAMENTO COUNTY	STATIONARY	PETROLEUM PRODUCTION AND N	PETROLEUM MARKETING	0.003	1.981	0.000	0.000
SACRAMENTO COUNTY	STATIONARY		OTHER (PETROLEUM PRODUCTIO	0.000	0.000	0.000	0.000
SACRAMENTO COUNTY	STATIONARY	INDUSTRIAL PROCESSES	CHEMICAL	0.065	0.362		0.022
SACRAMENTO COUNTY	STATIONARY	INDUSTRIAL PROCESSES	FOOD AND AGRICULTURE	0.002	0.374		0.086
SACRAMENTO COUNTY	STATIONARY	INDUSTRIAL PROCESSES	MINERAL PROCESSES	0.187	0.052		0.19
SACRAMENTO COUNTY	STATIONARY	INDUSTRIAL PROCESSES	METAL PROCESSES	0.006	0.005		0.005
SACRAMENTO COUNTY	STATIONARY	INDUSTRIAL PROCESSES	WOOD AND PAPER	0.000	0.022		0.113
SACRAMENTO COUNTY	STATIONARY	INDUSTRIAL PROCESSES	ELECTRONICS	0.000	0.000		0.002
SACRAMENTO COUNTY	STATIONARY	INDUSTRIAL PROCESSES	OTHER (INDUSTRIAL PROCESSES)	0.018			0.002
SACIONIVILIATO COONTT	31711101171111	INDUSTRIBLET ROCESSES	Stationary Source Total	2.007	9.089		0.669
			Stationally Source Total	2.007	3.003	1.010	0.003
SACRAMENTO COUNTY	AREAWIDE	SOLVENT EVAPORATION	CONSUMER PRODUCTS	0.000	10.024	0.000	0.000
SACRAMENTO COUNTY	AREAWIDE	SOLVENT EVAPORATION	ARCHITECTURAL COATINGS AND I	0.000			0.000
SACRAMENTO COUNTY	AREAWIDE	SOLVENT EVAPORATION	PESTICIDES/FERTILIZERS	0.000	0.294		0.000
SACRAMENTO COUNTY	AREAWIDE	SOLVENT EVAPORATION	ASPHALT PAVING / ROOFING	0.000			0.010
SACRAMENTO COUNTY	AREAWIDE	MISCELLANEOUS PROCESSES	RESIDENTIAL FUEL COMBUSTION	2.309	6.482	5.042	4.861
SACRAMENTO COUNTY	AREAWIDE	MISCELLANEOUS PROCESSES	FARMING OPERATIONS	0.000		1.008	0.149
SACRAMENTO COUNTY	AREAWIDE	MISCELLANEOUS PROCESSES	CONSTRUCTION AND DEMOLITIO	0.000	-		1.046
SACRAMENTO COUNTY	AREAWIDE	MISCELLANEOUS PROCESSES	PAVED ROAD DUST	0.000			0.804
SACRAMENTO COUNTY	AREAWIDE	MISCELLANEOUS PROCESSES		0.000	0.000		0.802
			UNPAVED ROAD DUST				
SACRAMENTO COUNTY	AREAWIDE	MISCELLANEOUS PROCESSES	FUGITIVE WINDBLOWN DUST	0.000			0.065
SACRAMENTO COUNTY	AREAWIDE	MISCELLANEOUS PROCESSES	FIRES	0.012	0.044		0.06
SACRAMENTO COUNTY	AREAWIDE	MISCELLANEOUS PROCESSES	MANAGED BURNING AND DISPOS		0.106		0.148
SACRAMENTO COUNTY	AREAWIDE	MISCELLANEOUS PROCESSES	COOKING	0.000	0.132		0.909
SACRAMENTO COUNTY	AREAWIDE	MISCELLANEOUS PROCESSES	OTHER (MISCELLANEOUS PROCES	0.000			0.000
			Areawide Source Total	2.370	22.900	24.351	8.147

Source:	CARB CEPAM 2	al Average Day Emission II	,				
AREA	SOURCE TYPE	CATEGORY	SUB CATEGORY	NOx	ROG	PM10	PM2.5
ANLA	300KCL TTFL	CATEGORI	30B CATEGORT	INUX	NOG	FIVITO	F IVIZ.3
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	LIGHT DUTY PASSENGER (LDA)	1.881	2.713	1.017	0.426
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	LIGHT DUTY TRUCKS - 1 (LDT1)	0.390			
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	LIGHT DUTY TRUCKS - 2 (LDT2)	1.166			
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	MEDIUM DUTY TRUCKS (MDV)	1.112	1.411		-
			, ,				
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	LIGHT HEAVY DUTY GAS TRUCKS -	0.378			
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	LIGHT HEAVY DUTY GAS TRUCKS -	0.047	0.048		
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	MEDIUM HEAVY DUTY GAS TRUCK		0.063		
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	HEAVY HEAVY DUTY GAS TRUCKS	0.003	0.002		
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	LIGHT HEAVY DUTY DIESEL TRUCK				
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	LIGHT HEAVY DUTY DIESEL TRUCK				
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	MEDIUM HEAVY DUTY DIESEL TRU	3.099	0.174	0.165	0.106
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	HEAVY HEAVY DUTY DIESEL TRUCI	4.682	0.160	0.135	0.083
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	MOTORCYCLES (MCY)	0.267	0.976	0.004	0.002
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	HEAVY DUTY DIESEL URBAN BUSE	0.019	0.003	0.004	0.001
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	HEAVY DUTY GAS URBAN BUSES (0.005	0.001	0.002	0.001
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	SCHOOL BUSES - GAS (SBG)	0.003	0.002	0.004	0.002
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	SCHOOL BUSES - DIESEL (SBD)	0.347	0.005	0.028	0.013
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	OTHER BUSES - GAS (OBG)	0.028	0.012	0.004	0.002
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	OTHER BUSES - MOTOR COACH - I	0.080	0.004	0.004	0.002
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	ALL OTHER BUSES - DIESEL (OBD)	0.143	0.011	0.007	0.005
SACRAMENTO COUNTY	MOBILE	ON-ROAD MOTOR VEHICLES	MOTOR HOMES (MH)	0.071	0.006	0.007	0.004
			On-Road Motor Vehicle Total	15.999	8.155	2.249	1.023
SACRAMENTO COUNTY	MOBILE	OTHER MOBILE SOURCES	AIRCRAFT	1.419	0.407	0.071	0.073
SACRAMENTO COUNTY	MOBILE	OTHER MOBILE SOURCES	TRAINS	0.609	0.018	0.010	0.00
SACRAMENTO COUNTY	MOBILE	OTHER MOBILE SOURCES	COMMERCIAL HARBOR CRAFT	0.011	0.001	0.000	0.000
SACRAMENTO COUNTY	MOBILE	OTHER MOBILE SOURCES	RECREATIONAL BOATS	0.442	1.899	0.118	0.090
SACRAMENTO COUNTY	MOBILE	OTHER MOBILE SOURCES	OFF-ROAD RECREATIONAL VEHIC	0.008	0.147	0.001	0.00
SACRAMENTO COUNTY	MOBILE	OTHER MOBILE SOURCES	OFF-ROAD EQUIPMENT	3.438	3.158	0.230	0.193
SACRAMENTO COUNTY	MOBILE	OTHER MOBILE SOURCES	FARM EQUIPMENT	1.072			
SACRAMENTO COUNTY	MOBILE	OTHER MOBILE SOURCES	FUEL STORAGE AND HANDLING	0.000			
			Other Mobile Source Total	6.999			
			Grand Total	27.375	46.523	28.712	10.26
			On-Road Motor Vehicle Portion	58%	18%	8%	10%

Attachment 2 Daily Maximum 1-hour NOx Concentrations at 13th & T Street and Del Paso Manor Stations 2017-2019

13th & T Streets - 2017

				Doile	Sac y Max 1 Hr.	ramento-T		n Doto				
				Dalij		2017	ŭ	on Data				
Day	Jan	Feb	Mar	Apr	May	Per Million June	(ppm) July	Aug	Sep	Oct	Nov	Dec
1	0.011	0.072	0.114	0.019	0.016	0.011	0.006	0.021	0.051	0.007	0.054	0.146
2	0.012	0.029	0.129	0.036	0.012	0.015	0.004	0.010	0.070	0.059	0.023	0.062
3	0.017	0.015	0.115	0.041	0.015	0.006	0.007	0.016	0.038	0.037	0.026	0.017
4	0.020	0.022	0.015	0.019	0.018	0.006	0.007	0.019	0.017	0.075	0.012	0.013
5	0.030	0.051	0.009	0.041	0.015	0.019	0.007	0.004	0.019	0.115	0.036	0.041
6	0.025	0.012	0.026	0.008	0.012	0.008	0.022	0.003	0.012	0.068	0.055	0.118
7	0.029	0.022	0.068		0.009	0.007	0.023	0.006	0.007	0.032	0.099	0.201
8	0.007	0.033	0.102		0.017	0.013	0.026	0.006	0.027	0.015	0.036	0.160
9	0.014	0.026	0.068		0.027	0.009	0.006	0.006	0.012	0.045	0.022	0.178
10	0.014	0.020	0.061	0.020	0.007	0.006	0.007	0.007	0.041	0.089	0.045	0.160
11	0.012	0.010	0.049	0.019	0.006	0.014	0.007	0.007	0.024	0.014	0.074	0.213
12	0.057	0.041	0.063	0.030	0.016	0.016	0.008	0.006	0.015	0.067	0.054	0.166
13	0.065	0.049	0.091	0.019	0.015	0.034	0.007	0.006	0.008	0.100	0.027	0.191
14	0.055	0.081	0.085	0.023	0.011	0.018	0.009	0.006	0.006	0.091	0.084	0.180
15	0.053	0.073	0.039	0.034	0.019	0.016	0.015	0.008	0.029	0.090	0.050	0.167
16	0.050	0.031	0.034	0.036	0.008	0.019	0.022	0.008	0.008	0.125	0.013	0.038
17	0.088	0.020	0.056	0.019	0.030	0.013	0.015	0.010	0.007	0.124	0.037	0.063
18	0.036	0.016	0.031	0.019	0.030	0.011	0.007	0.006	0.017	0.115	0.055	0.168
19	0.015	0.009	0.017	0.018	0.050	0.011	0.018	0.005	0.018	0.011	0.066	0.179
20	0.010	0.009	0.013	0.014	0.032	0.016	0.009	0.004	0.024	0.091	0.035	0.043
21	0.014	0.011	0.019	0.020	0.019	0.016	0.011	0.006	0.029	0.073	0.069	0.049
22	0.019	0.045	0.014	0.020	0.027	0.017	0.010	0.013	0.024	0.059	0.059	0.058
23	0.033	0.097	0.045	0.010	0.018	0.007	0.009	0.016	0.018	0.082	0.050	0.087
24	0.073	0.053	0.025	0.012	0.007	0.004	0.008	0.008	0.046	0.093	0.038	0.086
25	0.088	0.042	0.020	0.022	0.006	0.003	0.009	0.020	0.058	0.132	0.047	0.083
26	0.034	0.049	0.009	0.010	0.020	0.004	0.008	0.051	0.055	0.131	0.039	0.107
27	0.095	0.080	0.036	0.014	0.018	0.005	0.019	0.021	0.084	0.139	0.027	0.145
28	0.102	0.089	0.007	0.013	0.007	0.006	0.012	0.042	0.073	0.069	0.051	0.146
29	0.130		0.026	0.017	0.006	0.007	0.007	0.008	0.017	0.028	0.131	0.112
30	0.130		0.007	0.015	0.009	0.007	0.008	0.009	0.034	0.010	0.138	0.156
31	0.167		0.017		0.013		0.008	0.051		0.036		0.141
MAX:	0.167	0.097	0.129	0.041	0.050	0.034	0.026	0.051	0.084	0.139	0.138	0.213
Graphit												
MIN:	0.007	0.009	0.007 ect Format	0.008	0.006	0.003	0.004	0.003	0.006	0.007	0.012	0.013

13th & T Streets - 2018

						ramento-T		<u> </u>				
				Daily	y Max 1 Hr.	Avg Oxides 2018	s of Nitroge	en Data				
						Per Million						
Day	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
1	0.103	0.073	0.008	0.016	0.026	0.019	0.007	0.007	0.010	0.023	0.102	0.050
2	0.124	0.122	0.041	0.021	0.017	0.044	0.008	0.009	0.009	0.011	0.088	0.052
3	0.122	0.109	0.028	0.054	0.005	0.018	0.007	0.021	0.005	0.019	0.048	0.034
4	0.058	0.068	0.024	0.017	0.013	0.012	0.005	0.031	0.007	0.006	0.072	0.026
5	0.033	0.074	0.075	0.010	0.012	0.009	0.009	0.009	0.008	0.028	0.023	0.025
6	0.044	0.081	0.083	0.012	0.004	0.008	0.027	0.044	0.009	0.012	0.114	0.060
7	0.031	0.086	0.069	0.005	0.020	0.006	0.011	0.011	0.047	0.007	0.084	0.223
8	0.047	0.102	0.033	0.022	0.012	0.011	0.005	0.017	0.009	0.029	0.010	0.078
9	0.015	0.141	0.041	0.036	0.006	0.004	0.011	0.046	0.012	0.038	0.150	0.044
10	0.077	0.080	0.049	0.013	0.016	0.005	0.025	0.017	0.017	0.027	0.147	0.069
11	0.073	0.030	0.050	0.010	0.007	0.021	0.010	0.010	0.012	0.037	0.142	0.117
12	0.049	0.051	0.043	0.042	0.007	0.027	0.009	0.006	0.022	0.047	0.165	0.086
13	0.046	0.117	0.010	0.029	0.003	0.014	0.013	0.009	0.010	0.040	0.114	0.118
14	0.018	0.104	0.019	0.018	0.006	0.007	0.006	0.008	0.018	0.037	0.185	0.085
15	0.030	0.044	0.028	0.009	0.006	0.008	0.005	0.007	0.007	0.054	0.156	0.042
16	0.074	0.081	0.014	0.025	0.010	0.006	0.007	0.008	0.010	0.138	0.219	0.032
17	0.058	0.042	0.024	0.039	0.020	0.004	0.007	0.012	0.013	0.095	0.172	0.065
18	0.015	0.024	0.047	0.033	0.007	0.008	0.014	0.014	0.012	0.069	0.143	0.064
19	0.032	0.044	0.070	0.036	0.004	0.006	0.008	0.006	0.057	0.084	0.182	0.025
20	0.074	0.054	0.048	0.053	0.004	0.006	0.009	0.012	0.085	0.088	0.187	0.019
21	0.039	0.041	0.012	0.018	0.010	0.013	0.004	0.006	0.062	0.022	0.068	0.025
22	0.016	0.024	0.009	0.036	0.008	0.019	0.004	0.014	0.008	0.026		0.027
23	0.099	0.072	0.025	0.034	0.005	0.019	0.006	0.007	0.012	0.020		0.020
24	0.021	0.071	0.012	0.018	0.013	0.023	0.009	0.007	0.062	0.072		0.018
25	0.031	0.029	0.012	0.016	0.011	0.005	0.018	0.016	0.042	0.050	0.000	0.010
26	0.063	0.016	0.007	0.006	0.005	0.011	0.007	0.004	0.065	0.095	0.038	0.044
27	0.045	0.058	0.030	0.010	0.011	0.007	0.007	0.006	0.061	0.039	0.043	0.023
28	0.077	0.031	0.039	0.014	0.021	0.009	0.008	0.006	0.007	0.012	0.014	0.013
29	0.117		0.028	0.008	0.021	0.032	0.005	0.007	0.011	0.018	0.013	0.067
30	0.113		0.045	0.015	0.007	0.011	0.013	0.025	0.016	0.014	0.099	0.046
31 MAX:	0.124 0.124	0,141	0.036	0.054	0.007 0.026	0.044	0.014 0.027	0.016 0.046	0.085	0.055 0.138	0.219	0.014 0.223
Graphit)	0.124	0.141	0.003	0.054	0.026	0.044	0.027	0.046	0.005	0.136	0.219	0.223
	0.045	0.040	0.007	0.005	0.000	0.004	0.004	0.004	0.005	0.000	0.040	0.040
MIN:	0.015	0.016	0.007 ect Format	0.005	0.003	0.004	0.004	0.004	0.005	0.006	0.010	0.010

13th & T Streets - 2019

				Daily	Sac y Max 1 Hr.	ramento-T Avg Oxides		en Data				
					Parte	2019 Per Million	(nnm)					
Day	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
1	0.034	0.022	0.044	0.052	0.028	0.026	0.007	0.007	0.012	0.042	0.146	0.005
2	0.116	0.009	0.034	0.016	0.032	0.003	0.009	0.012	0.007	0.065	0.116	0.024
3	0.106	0.011	0.038	0.024	0.029	0.010	0.014	0.010	0.007	0.037	0.106	0.035
4	0.138	0.006	0.021	0.008	0.005	0.016	0.006	0.005	0.021	0.059	0.128	0.025
5	0.150	0.050	0.053	0.031	0.004	0.020	0.006	0.010	0.007	0.056	0.113	0.040
6	0.008	0.072	0.009	0.028	0.008	0.007	0.005	0.011	0.008	0.082	0.092	0.044
7	0.022	0.150	0.014	0.008	0.009	0.019	0.005	0.006	0.005	0.086	0.075	0.009
8	0.048	0.071	0.011	0.016	0.008	0.006	0.006	0.006	0.008	0.069	0.150	0.011
9	0.021	0.011	0.009	0.010	0.006	0.018	0.006	0.008	0.012	0.016	0.096	0.054
10	0.043	0.014	0.007	0.012	0.012	0.041	0.005	0.009	0.013	0.080	0.086	0.044
11	0.021	0.044	0.012	0.009	0.004	0.043	0.009	0.011	0.031	0.135	0.130	0.033
12	0.051	0.031	0.069	0.021	0.003	0.042	0.009	0.015	0.045	0.117	0.117	0.027
13	0.063	0.038	0.010	0.027	0.008	0.006	0.006	0.020	0.056	0.050	0.108	0.026
14	0.051	0.007	0.028	0.008	0.005	0.005	0.006	0.038	0.033	0.077	0.024	0.017
15	0.019	0.017	0.056	0.012	0.009	0.004	0.015	0.031	0.007	0.088	0.052	0.049
16	0.008	0.016	0.046	0.034	0.013	0.004	0.009	0.026	0.008	0.040	0.087	0.060
17	0.014	0.025	0.061	0.036	0.010	0.009	0.013	0.004	0.041	0.021	0.099	0.060
18	0.045	0.010	0.069	0.043	0.010	0.034	0.008	0.004	0.016	0.045	0.082	0.033
19	0.039	0.024	0.082	0.042	0.026	0.006	0.006	0.006	0.025	0.021	0.033	0.053
20	0.009	0.026	0.017	0.008	0.030	0.006	0.004	0.007	0.055	0.056	0.021	0.085
21	0.049	0.016	0.027	0.013	0.008	0.016	0.006	0.014	0.048	0.022	0.094	0.093
22	0.030	0.089	0.023	0.013	0.016	0.016	0.013	0.021	0.037	0.068	0.080	0.047
23	0.089	0.025	0.014	0.031	0.018	0.010	0.007	0.011	0.018	0.089	0.078	0.075
24	0.083	0.020	0.045	0.028	0.005	0.009	0.018	0.004	0.043	0.044	0.107	0.044
25	0.103	0.026	0.024	0.010	0.004	0.007	0.017	0.006	0.042	0.130	0.050	0.017
26	0.061	0.019	0.012	0.020	0.004	0.007	0.007	0.020	0.046	0.099	0.026	0.016
27	0.056	0.007	0.011	0.006	0.006	0.007	0.012	0.012	0.005	0.004	0.016	0.069
28	0.145	0.030	0.023	0.006	0.007	0.008	0.012	0.005	0.010	0.044	0.019	0.053
29	0.068		0.074	0.008	0.013	0.009	0.006	0.006	0.012	0.042	0.045	0.018
30	0.082		0.025	0.017	0.007	0.006	0.007	0.015	0.016	0.076	0.021	0.073
31	0.047		0.031		0.020		0.015	0.013		0.154		0.058
MAX:	0.150	0.150	0.074	0.052	0.032	0.043	0.018	0.038	0.056	0.154	0.150	0.093
GraphIt)												
MIN:	0.008	0.006	0.007 ect Format	0.006	0.003	0.003	0.004	0.004	0.005	0.004	0.016	0.005

Del Paso Manor - 2017

				Daile		ento-Del Pa		n Data				
				Dalij	у мах т пт	Avg Oxide: 2017	s or Mill oge	en Data				
						Per Million						
Day	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
1	0.006	0.100	0.077	0.011	0.015	0.008	0.004	0.013	0.024	0.003	0.016	0.075
2	0.007	0.024	0.091	0.016	0.010	0.008	0.004	0.009	0.020	0.055	0.015	0.073
3	0.005	0.006	0.088	0.027	0.012	0.007	0.006	0.016	0.014	0.036	0.013	0.019
4	0.019	0.009	0.007	0.019	0.012	0.003	0.009	0.014	0.008	0.098	0.006	0.006
5	0.027	0.026	0.006	0.018	0.007	0.014	0.007	0.003	0.008	0.076	0.020	0.034
6	0.028	0.004	0.023	0.038	0.006	0.012	0.012	0.003	0.008	0.041	0.049	0.098
7	0.018	0.013	0.055	0.004	0.005	0.007	0.018	0.007	0.005	0.024	0.049	0.111
8	0.002	0.012	0.065	0.010	0.008	0.006	0.015	0.011	0.018	0.010	0.030	0.095
9	0.009	0.009	0.045	0.023	0.029	0.009	0.004	0.007	0.008	0.021	0.010	0.103
10	0.002	0.014	0.060	0.013	0.003	0.004	0.007	0.008	0.017	0.043	0.019	0.090
11	0.013	0.007	0.051	0.012	0.003	0.004	0.005	0.011	0.013	0.026	0.039	0.144
12	0.070	0.026		0.016	0.007	0.005	0.006	0.006	0.020	0.049	0.030	0.156
13	0.057	0.034		0.009	0.006	0.011	0.009	0.004	0.005	0.064	0.017	0.110
14	0.023	0.053		0.036	0.004	0.011	0.011	0.005	0.004	0.037	0.042	0.102
15	0.056	0.038		0.026	0.010	0.011	0.014	0.005	0.011	0.043	0.023	0.156
16	0.050	0.015		0.014	0.006	0.017	0.016	0.005	0.007	0.058	0.007	0.025
17	0.078	0.006		0.009	0.028	0.011	0.012	0.007	0.007	0.053	0.023	0.044
18	0.019	0.005		0.008	0.029	0.008	0.009	0.007	0.005	0.072	0.067	0.106
19	0.010	0.003		0.009	0.027	0.008	0.011	0.005	0.018	0.007	0.072	0.120
20	0.004	0.004		0.012	0.007	0.011	0.007	0.002	0.009	0.033	0.016	0.060
21	0.003	0.006		0.015	0.010	0.016	0.010	0.006	0.011	0.046	0.069	0.017
22	0.007	0.023		0.005	0.011	0.008	0.008	0.008	0.017	0.044	0.046	0.064
23	0.009	0.053		0.002	0.013	0.007	0.005	0.010	0.012	0.039	0.044	0.075
24	0.078	0.054	0.006	0.006	0.005	0.005	0.006	0.009	0.028	0.048	0.028	0.078
25	0.085	0.016	0.014	0.008	0.002	0.002	0.009	0.013	0.030	0.067	0.040	0.053
26	0.056	0.034	0.006	0.004	0.003	0.004	0.009	0.049	0.031	0.080	0.016	0.079
27	0.079	0.055	0.025	0.009	0.003	0.005	0.015	0.032	0.050	0.068	0.021	0.117
28	0.071	0.053	0.006	0.007	0.003	0.008	0.014	0.024	0.031	0.034	0.036	0.10
29	0.077		0.031	0.011	0.003	0.010	0.004	0.010	0.018	0.014	0.066	0.165
30	0.116		0.003	0.016	0.004	0.008	0.004	0.011	0.028	0.005	0.085	0.140
31	0.121		0.005		0.006		0.006	0.023		0.023		0.106
MAX:	0.121	0.100	0.091	0.038	0.029	0.017	0.018	0.049	0.050	0.098	0.085	0.16
raphlt												
MIN:	0.002	0.003	0.003	0.002	0.002	0.002	0.004	0.002	0.004	0.003	0.006	0.00

Del Paso Manor - 2018

				Daily	Sacram y Max 1 Hr.	ento-Del Pa Avg Oxides 2018		en Data				
					Parts	Per Million	(ppm)					
Day	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
1	0.081	0.053	0.004	0.011	0.009	0.014	0.004	0.008	0.005	0.020	0.052	0.007
2	0.096	0.071	0.025	0.022	0.008	0.017	0.006	0.010	0.008	0.008	0.047	0.051
3	0.081	0.047	0.011	0.028	0.005	0.008	0.006	0.011	0.004	0.012	0.037	0.058
4	0.049	0.041	0.016	0.013	0.012	0.010	0.003	0.009	0.007	0.005	0.043	0.036
5	0.018	0.080	0.069	0.010	0.011	0.006	0.007	0.008	0.010	0.021	0.037	0.019
6	0.046	0.035	0.073	0.004	0.003	0.006	0.021	0.019	0.008	0.012	0.051	0.061
7	0.026	0.080	0.082	0.002	0.010	0.004	0.014	0.012	0.020	0.005	0.064	0.068
8	0.033	0.070	0.028	0.011	0.012	0.007	0.004	0.014	0.008	0.017	0.018	0.074
9	0.010	0.098	0.040	0.020	0.005	0.003	0.006	0.017	0.007	0.029	0.097	0.031
10	0.045	0.057	0.038	0.008	0.009	0.004	0.013	0.020	0.013	0.018	0.110	0.089
11	0.049	0.035	0.053	0.008		0.011	0.010	0.009	0.013	0.023	0.089	0.035
12	0.084	0.041	0.047	0.028	0.003	0.010	0.006	0.004	0.007	0.038	0.083	0.055
13	0.047	0.058	0.006	0.025	0.001	0.011	0.008	0.010	0.008	0.024	0.082	0.074
14	0.012	0.080	0.016	0.011	0.003	0.006	0.005	0.006	0.020	0.019	0.093	0.046
15	0.034	0.056	0.015	0.003	0.002	0.007	0.003	0.004	0.005	0.041	0.100	0.032
16	0.042	0.092	0.007	0.010	0.005	0.004	0.007	0.009	0.005	0.050	0.116	0.016
17	0.017	0.043	0.013	0.039	0.009	0.003	0.008	0.011	0.013	0.048	0.099	0.041
18	0.008	0.016	0.028	0.016	0.006	0.008	0.010	0.007	0.012	0.043	0.067	0.028
19	0.033	0.057	0.080	0.031	0.003	0.008	0.008	0.004	0.039	0.059	0.084	0.019
20	0.056	0.049	0.021	0.033	0.002	0.005	0.014	0.012	0.029	0.032	0.099	0.016
21	0.024	0.045	0.005	0.010	0.009	0.007	0.003	0.003	0.047	0.023	0.036	0.014
22	0.006	0.039	0.003	0.018	0.004	0.014	0.003	0.008	0.010	0.023	0.004	0.024
23	0.059	0.082	0.012	0.020	0.002	0.013	0.007	0.007	0.013	0.022	0.002	0.015
24	0.024	0.077	0.006	0.012	0.007	0.008	0.007	0.006	0.045	0.033	0.022	0.011
25	0.013	0.023	0.008	0.011	0.004	0.003	0.011	0.007	0.027	0.066	0.037	0.007
26	0.058	0.027	0.002	0.007	0.009	0.008	0.011	0.003	0.044	0.063	0.097	0.038
27	0.055	0.025	0.014	0.005	0.006	0.005	0.008	0.004	0.030	0.025	0.025	0.023
28	0.052	0.020	0.032	0.004	0.014	0.005	0.008	0.005	0.011	0.008	0.008	0.011
29	0.106		0.033	0.004	0.012	0.011	0.006	0.007	0.003	0.022	0.008	0.058
30	0.104		0.031	0.009	0.004	0.015	0.010	0.010	0.005	0.027	0.050	0.036
31	0.126		0.013		0.004		0.015	0.010		0.042		0.014
MAX:	0.126	0.098	0.073	0.039	0.014	0.017	0.021	0.020	0.047	0.066	0.116	0.089
raphlt												
MIN:	0.006	0.016	0.002	0.002	0.001	0.003	0.003	0.003	0.003	0.005	0.002	0.007

Del Paso Manor - 2019

				Deile		ento-Del Pa		Dete				
				Daliy		Avg Oxides 2019		еп рата				
Day	Jan	Feb	Mar	Apr	Parts May	Per Million June	(ppm) July	Aug	Sep	Oct	Nov	Dec
1	0.010	0.021	0.035	0.021	0.024	0.016	0.029	0.012	0.005	0.036	0.087	0.001
2	0.087	0.002	0.016	0.015	0.016	0.002	0.019	0.013	0.005	0.037	0.076	0.019
3	0.091	0.003	0.025	0.010	0.015	0.015	0.017	0.008	0.010	0.020	0.039	0.015
4	0.094	0.003	0.026	0.014	0.021	0.017	0.007	0.006	0.016	0.011	0.060	0.028
5	0.063	0.024	0.029	0.016	0.001	0.041	0.006	0.009	0.013		0.090	0.047
6	0.002	0.085	0.003	0.012	0.013	0.020	0.004	0.019	0.012		0.062	0.036
7	0.009	0.087	0.008	0.004	0.017	0.014	0.003	0.009	0.003		0.060	0.003
8	0.025	0.053	0.004	0.021	0.005	0.006	0.009	0.025	0.003	0.060	0.071	0.014
9	0.004	0.005	0.004	0.029	0.008	0.015	0.009	0.025	0.009	0.010	0.048	0.047
10	0.036	0.009	0.011	0.020	0.014	0.025	0.008	0.003	0.008	0.029	0.030	0.053
11	0.008	0.047	0.061	0.028	0.013	0.025	0.021	0.011	0.037	0.057	0.048	0.037
12	0.027	0.023	0.028	0.022	0.002	0.031	0.021	0.014	0.021	0.032	0.057	0.025
13	0.047	0.004	0.009	0.051	0.017	0.026	0.006	0.022	0.035	0.029	0.055	0.018
14	0.052	0.003	0.022	0.005	0.028	0.047	0.004	0.021	0.013	0.078	0.014	0.009
15	0.012	0.008	0.074	0.043	0.015	0.016	0.015	0.031	0.003	0.046	0.045	0.025
16	0.003	0.017	0.042	0.016	0.004	0.002	0.021	0.017	0.013	0.032	0.034	0.078
17	0.006	0.030	0.029	0.019	0.005	0.019	0.010	0.007	0.033	0.014	0.042	0.077
18	0.030	0.032	0.071	0.023	0.004	0.029	0.016	0.002	0.011	0.034	0.058	0.017
19	0.023	0.049	0.042	0.020	0.010	0.011	0.017	0.009	0.020	0.013	0.020	0.033
20	0.003	0.007	0.009	0.002	0.017	0.013	0.007	0.007	0.031	0.031	0.016	0.076
21	0.013	0.023	0.045	0.016	0.007	0.015	0.004	0.013	0.028	0.027	0.056	0.053
22	0.021	0.042	0.018	0.030	0.011	0.009	0.012	0.018	0.014	0.057	0.070	0.026
23	0.080	0.017	0.008	0.087	0.007	0.004	0.013	0.014	0.020	0.043	0.063	0.047
24	0.058	0.019	0.020	0.018	0.003	0.008	0.020	0.004	0.021	0.046	0.050	0.031
25	0.074	0.017	0.011	0.023	0.002	0.059	0.018	0.003	0.037	0.075	0.046	0.010
26	0.045	0.006	0.013	0.019	0.003	0.014	0.012	0.012	0.039	0.058	0.023	0.011
27	0.048	0.004	0.010	0.004	0.002	0.011	0.008	0.017	0.010	0.003	0.009	0.066
28	0.082	0.025	0.012	0.003	0.015	0.024	0.007	0.023	0.005	0.035	0.019	0.076
29	0.080		0.038	0.013	0.049	0.018	0.009	0.010	0.009	0.062	0.019	0.010
30	0.036		0.033	0.028	0.035	0.006	0.005	0.008	0.014	0.058	0.016	0.035
31	0.052	0.007	0.031	0.007	0.032	0.050	0.265	0.009	0.000	0.072	0.000	0.054
MAX:	0.094	0.087	0.074	0.067	0.049	0.059	0.265	0.031	0.039	0.078	0.090	0.078
Graphit												
MIN:	0.002	0.002	0.003	0.002	0.001	0.002	0.003	0.002	0.003	0.003	0.009	0.001
Downloa	u Data: Qt	uick of Sele	ect Format									

Attachment 3 Sacramento County Wind Data Completeness 2017 - 2019

Sacramento Wind Data Completeness

2017 Average Observations Per Year = 7432 = 84.8% Completeness



				[)ata Sele	Sacrar ection fo	nento or Re	o Cou sultar	nty nt W	ind Data				
et	Only S	creened Data	*	for	Januar	y ▼	1	•	to	January	▼	1	▼ in	2017
		Use Data for		ALL SITE	s				o	or		Oı	NLY IF C	HECKE
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SV	SAC			В	ryte					7067				
SV	SAC			Fair (Daks #2					8472				
SV	SAC			Folsom-N	atoma Stree	et				8658 p				
SV	SAC		9	acramento	o-Bercut Dri	ive				8016 p				
SV	SAC		Sa	cramento-l	Del Paso M	anor				8699 p				
SV	SAC		Sad	ramento-E	Executive A	irport				8615 p				
SV.	SAC		Sac	ramento-G	Soldenland	Court				3594 p				
SV	SAC		Sacr	amento In	ternational /	Airport				8675 p				
SV	SAC		S	cramento	Mather Air	port				6032 p				
SV	SAC			Sacrame	nto-T Stree	t				8670 p				
SV	SAC			Sloug	hhouse					8646 p				
SV	SAC			SOC	ARBCV1					4242 p				
SV	SAC			SOCA	ARBUS1					6020 p				
SV	SAC			Twitch	ell Island					8611				

Sacramento Wind Data Completeness

2018 Average Observations Per Year = 7512 = 85.8% Completeness



				D	ata Se	Sacra lection f	mento or Res	County ultant V	Vind (Data		
iet	Only S	creened Data	•	for	Janua	гу ▼	1	▼ to	De	cember ▼	31	▼ in 2018
		Use Data for		ALL SITE	5				or		On	ILY IF CHECKE
Bas	Cnty			Site	Name				C	bs for Year		
SV	SAC			Br	yte					7108		
SV	SAC			Fair 0	aks #2					7691		
SV	SAC			Folsom-Na	toma Str	eet				8705 p		
SV	SAC		9	Sacramento	-Bercut D	rive				8648 p		
SV	SAC		Sa	cramento-D	el Paso I	Manor				8726 p		
SV	SAC		Sac	cramento-E	xecutive i	Airport				8723 p		
SV	SAC		Sacr	amento Int	ernationa	l Airport				8740 p		
SV	SAC		S	acramento	Mather A	irport				6568 p		
sv	SAC			Sacramer	to-T Stre	et				8751 p		
SV	SAC			Sloug	nhouse					8669 p		
sv	SAC			SOCA	RBCV1					8274 p		
SV	SAC			SOCA	RBUS1					1684 p		
sv	SAC			SOCA	RBUS2					3950 p		
SV	SAC			Twitche	ll Island					7811		

Sacramento Wind Data Completeness

2019 Average Observations Per Year = 7430 = 84.8% Completeness



				[Sata Select	Sacrar	nento or Res	Cou sulta	inty nt W	ind Data			
t	Only S	creened Data	•	for	January	•	1	•	to	December 1	31	•	in 2019
		Use Data for		ALL SITE	:s				c	or	_(ONLY	г Снеске
as	Cnty			Site	Name					Obs for Yea	г		
V	SAC			В	ryte					7046			
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V	SAC			Fair (Daks #2					8340			
٧	SAC		F	Folsom-N	atoma Street					4849			
V	SAC		S	acrament	o-Bercut Drive					8585 p			
٧	SAC		Sac	ramento-	Del Paso Man	or				8756			
V	SAC		Sac	ramento-l	Executive Airpo	ort				8714 p			
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V	SAC		Sa	cramento	Mather Airpor	t				6518 p			
V	SAC			Sacrame	nto-T Street					8715			
V	SAC			Sloug	ghhouse					8383			
V	SAC			SOC	ARBCV1					8084 p			
V	SAC			SOC	ARBUS1					6196 p			
٧	SAC			SOC	ARBUS2					6159 p			
V	SAC			Twitch	ell Island					8723			

Letter L1 – Letter from Earl Withycombe, May 8, 2020

L1-1 – This comment is on the overall approach of the CAMP and expresses concern that the timeline to complete all monitoring may take two years to complete.

The District acknowledges this comment and the potential monitoring timeframe.

L1-2 – This comment recommends the implementation of a Quality Assurance Project Plan (QAPP) based on U.S. Environmental Protection Agency (EPA) guidance documents.

The District has reviewed the EPA's QAPP guidance. Except for some changes that are required for the community-driven nature of the AB617 program, the CAMP meets the material requirements of a QAPP, and a separate QAPP document is not necessary.

L1-3 – This comment characterizes the pollution of concern. It then states that the CAMP does not address levels and distributions of oxides of nitrogen (NO_x) and describes the spatial variability of NOx at nearby monitoring stations.

The federal EPA has not adopted a National Ambient Air Quality Standard for NO_x but has for Nitrogen Dioxide (NO₂) (Reference: https://www.epa.gov/criteria-air-pollutants/naaqs-table).

Phase 1 of the monitoring includes the deployment of 22 low-cost monitors. Due to the power requirement of these sensors and lack of access to electricity at most sites, the District selected to use 21 Clarity Node low-cost sensors that run on solar power. All 21 sensors measure for both $PM_{2.5}$ and NO_2 and are used to help characterize spatial variance. The last sensor is an Aeroqual AQY 1, which monitors for $PM_{2.5}$, NO_2 and ozone, and it has not been deployed due to finding a location with power. These low-cost sensors are being extensively studied by South Coast Air Quality Management District's AQSpec Program and has reported promising test results on reliability for monitoring PM2.5. Using low-cost NO_2 monitors are intended to be used only as screening tools due to their technical limitations but will help to provide spatial variability information.

While there is merit in the comment to monitor for NOx, the District believes that it would more important to monitor for NO_2 rather than NOx because there is an established federal health standard for NO_2 . Monitoring for a pollutant with a standard will help the District determine the air quality impact against a specific threshold and will indicate if further monitoring is needed when the collected data exceeds the standard. The option of adding more low-cost sensors for NOx in Phase 1 is a possibility, if this is the direction provided by the steering committee and if there are units with the same capabilities to use solar power, but it will compromise the resources available for Phases 2 and 3.

L1-4 – This comment states that Federal Reference Method (FRM) and Federal Equivalence Method (FEM) standards are not appropriate for monitors used for AB617.

The District agrees that AB617 monitoring is not for federal regulatory purposes since the focus is characterizing community-level monitoring and not regional air quality. AB617 monitoring air quality data are intended to be used to meet the monitoring objectives set forth by the Steering Committee and to potentially inform a Community Emission Reduction Plan (CERP) in the future. Therefore, using some FRM/FEM data quality standards for the professional-grade monitors provide a basis for the establishment of protocol for the collection of data and for standardizing the monitoring data to compare to other air quality data in other areas in Sacramento. This is consistent with protocols for

non-regulatory monitors that the District operates across Sacramento that are used for purposes such as air quality forecasting.

L1-5 – This comment states that the District should establish Data Quality Indicators (DQI) for all parameters and monitors and that no indicator should be listed as "not applicable."

Element 6 has been revised. Revisions include additional DQI for some monitors (e.g. professional-grade $PM_{2.5}$) or discussion of why a specific criterion is not appropriate (e.g. precision for meteorology data).

L1-6 – This comment describes the data completeness of monitoring dataset and recommends data completeness requirements for the CAMP based on those datasets.

The District has revised the description of DQI in Element 6 for clarity. The DQI should be understood as a minimum standard for accepting the data and not an objective. Specifically, the minimum criterion is also a standard threshold in the conduct of other air quality monitoring, including as it applies to data collected by regulatory networks. Thus, it is not to be understood as a goal or a ceiling, but rather a floor or minimum target. Data not meeting the DQI must be evaluated and discussed before being used and may be rejected if they are not determined to be acceptable. A statement has been added to Element 13 to stated that the DQI will be evaluated when the data are analyzed.

The District agrees that DQI such as data completeness typically exceed the DQI shown in Table 6-1. The purpose of the DQI is to establish whether the monitors are fit for the purpose. As such, it is appropriate to establish DQI that represent the minimum acceptable value that is acceptable rather than a value that is achieved in practice. The District operates all monitors with the goal of being as complete as possible.

The South Coast Air Quality Management District's AQSpec Program has used collocation of low-cost monitories with regulatory monitors to evaluate nearly 60 different sensor technologies. To date, these various sensors have been a part of many studies and played a key role in community air quality monitoring such as the West Oakland Environmental Indicators Project (WOEIP) and the Identifying Violations Affecting Neighbors (IVAN). Thus, there is a growing confidence by the air quality scientific community that these sensors are an adequate approach to air monitoring and will become ubiquitous in future air quality monitoring. The District has developed DQI to increase confidence that the data obtained using this CAMP is suitable for characterizing the community air quality.

L1-7 – This comment states that performance data are available for every monitor in the CAMP and that the data should be added to Table 6-1 of the CAMP.

See responses L1-5 and L1-6.

L1-8 – This comment states that in Section 6.4, the findings that staff made and conclusions drawn from the review should be discussed either in the Plan or in an Appendix.

The District has included the wind patterns by season in Appendix D, but no reference to that data was included in Section 6.4. A reference to the data reviewed by Staff has been added to Section 6.4. The District has added historical air monitoring data to Appendix D.

L1-9 – This comment states that the District should purchase two Aeroqual AQY 1 monitors and deploy the monitors side-by-side so their precision can be established pre-deployment.

The District will collocate all low-cost monitors at a regulatory monitoring station prior to deploying them to the field. The District will collocate one Clarity and one Aeroqual AQY 1 at a regulatory monitoring station while the low-cost monitors are deployed to the field. This collocation provides a comparison of the low-cost monitor data to the data obtained by a regulatory monitor. In addition, a Clarity sensor and an Aeroqual will be collocated at a regulatory station so that there will be an indication of data quality as it relates to federally regulated monitors over extended periods. Collocation is described in Element 9.

L1-10 – This comment suggests that renting or buying used equipment may be a more appropriate option than buying equipment used in the CAMP.

The District has reviewed the option to purchased used equipment and decided that purchasing new equipment was appropriate. Previous District experience suggests that equipment has a useful lifespan, and after that lifespan, the cost and effort of maintaining that equipment increases significantly due to parts degradation, increased maintenance requirements, and equipment failures.

The District has obtained quotes for the cost of equipment rental for some for the professional-grade monitors. The cost for a full year of equipment rental was at least 75 percent of the purchase cost of new equipment. The CAMP does not have a definite endpoint, so the cost of equipment rental would exceed the cost of purchasing new equipment after the first year.

L1-11 – This comment recommends that the District purchase spare low-cost monitors to insure data completeness.

The District agrees that spare low-cost monitors would provide additional reliability and is in the process of acquiring additional Clarity Node monitors. The District has some ability to service the Aeroqual AQY 1 monitors to provide additional reliability.

L1-12 – This comment states that the District should explicitly state data review procedures either within the CAMP or an appendix to the CAMP.

The District is developing the quality assurance process. The District has extensive experience applying quality assurance project plans to the conduct of air quality monitoring and it is expected that those controls will be applied to AB 617 to the extent possible. All raw data are saved, public can request the information from CARB's AQview system. Data not meeting the 75 percent completeness will not be validated as accurate. Reports using processed data will discuss the quality assurance criteria evaluated in the report. A statement that the District will disclose QA procedures has been added to Section 10.2 of the CAMP. Element 13 has been revised to include a description of the data analysis that will be conducted, including a discussion of the data review process used in the analysis.

L1-13 – This comment states that the CAMP should identify how frequently data are download and how it will be reviewed for quality assurance.

A statement has been added to Section 10.1.2 to indicate that low-cost monitors transmit data every 18 minutes (Clarity) or 1 minute (Aeroqual) and the aethalometer data will be collected when sample media at the monitoring station are replaced. See also response to comment L1-12.

L1-14 – The comments states that the CAMP should explicitly detail the algorithms or limits programmed into dataloggers for flagging data that is out-of-range, repeating, or too variable.

See response to comment L1-12.

L1-15 – This comment states that footnote 15 should be completed.

The footnote has been revised.

L1-16 – This comment states that the CAMP should state the criteria used to determine when to place the third phase monitoring should be explicit or what goals must be achieved to constitute "enough" monitoring.

The decision of when and where to place the Phase 3 trailer will be discussed with the Steering Committee when data from Phase 2 is available and the Phase 3 trailer is ready for deployment. This information has been added to Section 11.1.3.

Sacramento CAMP:

The Sacramento CAMP is written very well and satisfies all the air monitoring checklist items in the CARB blueprint.

There's a comprehensive discussion on the process of developing the CAMP and gathering CSC and public input. The CAMP provides a clear description of the existing monitoring network and capabilities, and how these resources will be leveraged for AB 617. The air monitoring concerns are categorized and monitoring strategies are developed based on each air quality concern, considering the target pollutants. The air monitoring strategy is to conduct monitoring in three phases, which is a great strategy for focusing subsequent monitoring with established air monitoring methods. The QA section provides sufficient information, including DQI tables for various sampling and monitoring methods, which will ensure the quality of the data collected is appropriate for the objectives of the monitoring. The low cost sensors selected are a good choice for the stated purposes, although it is not clear how exactly the micro-Aeth will be utilized. All proposed mobile measurements will be conducted by contractors.

Areas for improvement:

- In phases 2 and 3 of monitoring it is mentioned that air toxics samples (PM and VOCs) will be collected and analyzed. It is not clear how the 3 hour samples will be taken or for what purpose. The 3 hour sample, unless taken from near a major source, will not be sufficient for subsequent chemical analysis.
- In the proposed monitoring to address the air quality concerns related to "small business", the actual business locations should be clearly identified along with the target pollutants. In this context upwind/downwind air monitoring should also be addressed/discussed. Currently the target pollutant seems to be VOCs, but it is not clear if the APCD is going to perform near-source monitoring, fenceline monitoring, upwind/downwind monitoring, etc. Also, continuous monitoring for VOCs should be considered for near-source or fence-line monitoring applications.
- Some of the DQIs described in the QA section conform to the EPA program guidelines, but a more complete and rigorous DQI list including "precision" and other more relevant indicators should be provided. The requirements for DQIs for low cost sensors have been relaxed greatly and simplified. Requirements for lab measurements have large error allowance and in most cases will pass the QA checks (consider tightening these requirements).

L2-1

L2-2

L2-3

L2-4

L2-5

Letter 2 – Letter from Jason Low of South Coast Air Quality Management District (SCAMQD), May 7, 2020

L2-1 – This comment describes the overall strategy of the CAMP and offers a general opinion of the strategy.

The District acknowledges the comment.

L2-2 – This comment provides a general opinion on the quality assurance (QA) parts of the CAMP. The comment notes that it is not clear how the MicroAeth will be utilized. It also notes that mobile measurements will be conducted by contractors.

The use of the MicroAeth is described in several sections. It's use as a black carbon monitor is described in Sections 7.2.1.3 and 7.2.2.3. Quality control procedures are described in Section 9.2.3. Deployment, the pollutant monitored, and the sampling frequency are described in Table 11-1.

The District does not intend to collect measurements with a mobile monitor and will not use contractors to conduct sampling. Some of the analytes associated with mobile sources will be collected in sampling media retrieved by District staff and analyzed by contracted laboratories.

L2-3 – This comment states that it is not clear how 3-hour samples will be taken and notes that they are unlikely to be enough for chemical analysis.

The District will be collecting 24-hour samples. Table 4-2 has been edited to remove other example sampling periods to be explicit.

L2-4 – This comment questions the monitoring methods that will be used to identify emissions from small businesses and states that it is not clear if the District is going to perform near-source, fence line, or upwind/downwind monitoring.

As part of the selection of priority areas, the Steering Committee discussed potential areas impacted by air pollution (see March 26, 2019, Steering Committee Minutes). These maps included the locations of small businesses and industrial sources and were later used to determine the priority monitoring areas. The District also assessed potential pollutants of concern from these sources to determine what pollutants should be monitored. Potential monitoring sites were identified by the Steering Committee members to best capture the potential of emissions from these facilities. In some instances, the original location recommended for sampling was not selected because of access constraints or the lack of adequate space to site the monitor. The District will continue to refine the sampling locations in Phase 2 and 3 to be consistent with the recommendations of the Steering Committee.

L2-5 – This comment states that the DQI list should be provided, including precision. The comment recommends tightening DQI requirements.

The DQI for low-cost monitors have been relaxed and simplified from the requirements for regulatory monitors because low-cost monitors cannot be challenged and evaluated in the same ways regulatory monitors can be evaluated with calibration standards. The low-cost monitors are intended to be used as a screening tool to identify areas where monitoring should be conducted in subsequent phases. The District will rely on collocating the low-cost monitors with regulatory monitors prior to deployment as the basis for evaluating the performance of low-cost monitors.

Letter L3

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 PM2.5 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 L3-1

L3-2

L3-3

L3-4

L3-5

L3-6

L3-7

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.

L3-9

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?

L3-12

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.

L3-13

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

L3-14

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.

L3-15

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

L3-16

Letter 3 – Letter from Dr. Wexler, Tang, and Neidek, University of California Davis, May 5, 2020

L3-1 – This comment notes the characteristics of the low-cost sensors.

No response is required.

L3-2 – This comment recommends involving middle and high school science teachers to integrate monitoring into the curriculum.

The District will work with the Steering Committee to develop communication tools for priority audiences, including children and students, as specified in Element 14.3. These communication tools may include working with schools and teachers to integrate air monitoring into class curriculum.

L3-3 – This comment discusses strategies for mitigating emissions from Highway 99. It states that sound walls and trees bounding Highway 99 confine pollutants. It also notes that the remediation list does not include Highway 99 issues. The comment also notes that Volkswagen settlement funds may help pay of electric vehicle (EV) charging stations.

The listed concerns and desired actions are summaries of discussions shared by Steering Committee members during the Steering Committee meetings. The District believes that sound walls and tree barriers are potential mitigation strategies that could be adopted by local and state agencies. The CAMP has been revised to include the suggestion of adding sound walls and tree barriers as examples of "working with local and state agencies" on potential county-wide strategies. These examples have been added to the discussion in Section 2.0.

L3-4 – This comment asks whether the California Department of Public Health can provide data on asthma and other illnesses in the area.

Department of Public Health data is aggregated at the county level and cannot provide information on whether the community is more impacted than the rest of Sacramento County. The District is aware of other data sources and has reviewed, for example, the data used to create the California Healthy Places Index (HPI). Based on the HPI data, two of the three census blocks used by the District to recommend the South Sacramento-Florin community as an AB617 community had asthma-related emergency room admissions in the top ten percentile for Sacramento County. These high emergency room admission rates indicate that asthma does appear to be worse within the community than the Sacramento County average. It should also be noted that the asthma-related emergency room visits are not directly measured but are a spatially modeled, age-adjusted value.

The District also reviewed other databases such as the CalEnviroScreen and the Community Health Needs Assessments when determining the initial and final community boundaries.

The District air monitoring data will be available for public agencies such as the Department of Public Health to use in their research. The District also intends to share the results of the monitoring with other interested group like the public health and planning agencies, so they are aware of the data and can make use of this information.

L3-5 – This comment recommends objectives for the CAMP, including monitoring at schools, air cleaning at schools, and getting help from the California Department of Public Health.

The District has worked with the Steering Committee to develop the objectives for the CAMP. The District also notes that ten of the 21 deployed Clarity monitors are located at schools, per the Steering Committee's suggestion.

The District acknowledges the proposed mitigation strategy and may implement some or all of them as part of a CERP or outside of the AB617 process. Building inter-agency relationships is a critical component of the CERP process and the District has noted this suggestion for future action. The District has added the California Department of Public Health to the agencies listed in Section 4.5 for potential outreach.

See also response L3-3.

L3-6 – This comment references Page 4-2 and Table 4-1 and recommends that ozone and elemental carbon be measured.

Table 4-1 shows several examples of known emission sources in the community and the potential pollutants of concern. This table does not indicate which pollutants will be monitored for in the monitoring plan. The pollutants to be monitored are identified in Table 4-2, which includes monitoring for ozone in Phase 1 using an Aeroqual AQY 1 and in Phase 3 using professional grade monitors and organic and elemental carbon in Phase 3 using professional grade monitors.

The District is also monitoring for black carbon using aethalometers in Phases 2 and 3. Black carbon pollution is associated with traffic emissions and will be used to evaluate the impact emissions from vehicle traffic on air quality.

L3-7 – This comment discusses when monitoring will be conducted. It notes that it is important to monitor during winter, that the right 6 months of monitoring should be selected, and that kids are not in school during summer.

The District shares the commenter's concerns about the timing of the data collected. Summertime monitoring is important because summer typically has the highest ozone concentrations and typically includes a significant portion of outdoor activities by all ages including youth recreational sports. The District has discussed the sampling strategy with the Steering Committee and understands that the Steering Committee wants summer and winter months sampled.

L3-8 – This comment states that the District should bring the trailer to some low-cost sensor sites to get a side-by-side comparison and estimate of data quality.

Using the trailer and collocating it with each low-cost monitor have several logistical challenges, including the location/space and power needed for the trailer and the amount of time to collocate at 21 different monitoring sites. Collocating the low-cost monitors with a regulatory monitor prior to being used in the field provide an estimate of data quality and demonstrate that the data obtained from low-cost monitors is reliable and capable of meeting the objectives of the CAMP. Also note that the Clarity sensors and AQY-1 were extensively evaluated as part of the South Coast Air Quality Management District's AQSpec Program, which help showed that these low-cost sensors can meet the established DQI.

See response to comment L1-9 and L2-5, which address collocation for additional information.

L3-9 – This comments states that it would be good to have meteorological measurements, especially wind direction in Phases 1 and 2 to help identify the source location.

The District acknowledges the limitation of having meteorological data only in Phase 3. The District is reviewing the potential to add a meteorology station to a Phase 2 site. In addition to potentially adding meteorology to a Phase 2 site, meteorology data from the Sacramento Executive Airport are available. The meteorology station is located approximately 1.5 miles from the South Sacramento-Florin community and is expected to provide wind speed and direction data that are representative of the community.

L3-10 – This comment states that monitoring should occur near sources or in neighborhoods near sources to meet objectives.

The District agrees with this comment. The monitors should be located in areas near the source or at sensitive receptors, like schools, to meet the objectives. The District has worked with the Steering Committee to determine priority areas for monitoring, in which sources were of consideration. The District has also worked with schools to locate almost half of the Phase 1 monitors at schools, which was designated by the Steering Committee.

The District will work with the Steering Committee to determine where the Phase 3 monitoring station should be located. The location will be based on discussion with the Steering Committee about community priorities. These discussions will include results from Phase 1 and Phase 2 monitoring.

L3-11 – This comment states concerns about low-cost monitor reliability and makes recommendations to mitigate potential issues caused by reliability issues.

The Clarity Node monitors are non-serviceable and cannot be modified to have local backup storage. Data from all low-cost monitors is sent to a datalogger and the District's database on a continuous basis, so monitors can be reviewed remotely, and broken monitors can be detected quickly. All monitors will be collocated with a regulatory monitor prior to being used in the field, per Element 9. A statement about ongoing collocation has been added to Element 9.

See response to comment L1-3, which addresses challenges of NO₂ monitoring. See response to comment L2-5, which addresses collocation.

L3-12 – This comment requests clarification on whether the BAM will monitor $PM_{2.5}$ or PM_{10} and whether the sample media will be cylinders or filters.

The BAM 1020 being used as a PM2.5 monitor. The BAM 1020 is being used as a PM_{2.5} monitor. The CAMP has been revised to remove the reference to PM10.

The CAMP has been revised to indicate the SASS will use pre-weighed filters.

L3-13 – This comment states that black carbon measurements might be needed to see spatial distribution in detail.

The monitoring will include monitoring for black carbon at six locations as part of Phase 2.

L3-14 - This comment is the same as comments L3-8 and L3-11.

See responses to comments L3-8 and L3-11.

L3-15 – This comment states that it would be helpful to have more information about the data analysis and states that the data collected should be related to public health data.

See response to Comment L1-12, which addresses the data analysis.

The District will reach out to public health agencies and others with the necessary expertise to relate air quality measurements to public health data. The California Department of Public Health has been included as a stakeholder in Section 4.5

L3-16 – This comment is the same as comment L3-2.

See response to comment L3-2.

Letter L4

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!

L4-1

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?)

L4-2

L4-3

L4-5

L4-6

L4-7

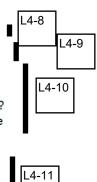
- Section 9.2.2 suggest calibrate sampler flowrate
- Section 10.2.2 Data review procedure. Suggest adding will check that the concentration range, calibration results, flow rate check results were within specifications.
- Section 13 data analysis. Would like to see more on the goals and expected outcomes 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.





Letter 4 - Email from Hillary Hafner of Sonoma Technology Inc, (STI), April 20, 2020

- L4-1 This comment is a general comment on the CAMP and does not require a response.
- L4-2 This comment is a series of technical edits to add clarity of the monitoring described in the CAMP.

Based on a follow-up discussion with the commenter, this comment does not apply to the CAMP but was addressing a summary document.

L4-3 – This comment requests clarification on what type of mask would be appropriate to wear.

The type of mask to be worn would depend on the pollutants causing air quality issues. The CAMP has been edited to clarify.

L4-4 – This comment suggests editing Table 4-2 to clarify the monitoring described in the CAMP.

A statement has been added Table 4-2 to clarify that continuous means that multiple measurements are taken per hour, typically once every 15 minutes.

L4-5 – This comment asks how the data from the screening phase can be used to determine monitoring locations for later phases.

See Comment L1-16.

L4-6 – This comment is a series of technical edits to add clarity of the monitoring described in the CAMP.

Most of these technical edits have been incorporated into the CAMP. The District reviewed the discussion of the Aeroqual AQY 1 and does not believe it has been misidentified as a Clarity Node. The District discusses the Aethlab MA300 as a low-cost monitor within the context of this CAMP because it more closely matches the description of low-cost monitors for purposes of this CAMP.

L4-7 – This comment states that Section 8.2 needs a summary of what is meant by traffic and stationary screening.

A summary of what is meant by the screening areas shown on the map has been added to the CAMP.

L4-8 – This comment suggests that Section 9.2.2 should refer to the calibration of the sampler flowrate.

The CAMP has been revised per the comment.

L4-9 – This comment suggests stating the concentration range, calibration results, and flow rate check will be part of the data review in Section 10.2.2.

See comment L1-12.

L4-10 – This comment says that the data analysis should be described in more detail and suggests some changes.

Element 13 has been revised to include a description of the data analysis that will be conducted, including a discussion of the data review process used in the analysis.

L4-11 – This comment suggests stating the number of samples collected in Phase 3 or how long each measurement will run.

The duration of the Phase 3 monitoring has not been determined and will be determined through consultation with the Steering Committee and evaluating the progress towards the objectives and available resources from the state.

L4-12 – This comment suggests including a Gantt chart and collocation of low-cost monitors both before and after deployment.

See response to comment L2-5, which addresses collocation.

The timeline for deployment has been described in the CAMP. Actual deployment for Phase 2 and subsequent tasks is highly dependent on outside factors such as equipment availability, ability to secure access to monitoring sites, and impacts of the COVID-19 pandemic. In addition, the decision of when and where to place the Phase 3 trailer will be determined with the Steering Committee when data from Phase 2 is available and the Phase 3 trailer is ready for deployment.

Letter L5

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

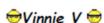
Concern 1 Emissions from Highway 99/traffic

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



L5-1

Letter 5 – Email from Vincent Valdez, Steering Committee Member, April 24, 2020

L5-1 This comment suggests reordering the concerns listed in the Executive Summary, element 3, and other places in the CAMP.

The concerns, actions, and objectives have been reordered based on the suggestion. Additional language has been added to Section 3.1 to clarify that concerns are not in any priority order. The list of concerns, actions, and objectives has been changed to use letters instead of numbers to reduce any implication that the concerns are in a priority order.

Letter L6

Sac Metro Air Quality Management District

Comments of Draft Community Air Monitoring Plan for South Sacramento AB 617:

Thank you for this opportunity.

My comments on **ES**:

Page i, of the **Executive Summary**, states that AB 617 is supposed to be taking an "environmental justice approach" and that "collaboration between the community and the local air district is a critical component of AB 617." This aspect of AB617 has not been met. South Sacramento community residents and others from EJ communities within a quarter mile of the northern and westernmost parts of the AB 617 boundaries have been entirely absent from this process. This northwest corner of the boundaries was selected as Priority Area 1 by the Community Steering Committee (CSC), after they were presented with slides on cancer risk, traffic volumes, and permitted sources. This Priority Area 1 has very few residents due to its siting as an industrial park; however, it is surrounded by low income communities of color on three sides, and other industrial sources on the northernmost side.

Other examples of this include, but are not limited to:

- 1). A hostile process initially that eliminated verbal public comments, by switching to a process where the public submitted handwritten comments that were addressed during the final 10 minutes of the two-hour AB617 Steering Committee meetings in the first year. This has been corrected; and I don't mean to dwell on the past but rather to prepare you for my later comments; those are to the effect that the CAMP being commented on here, was in part shaped by early mistakes.
- 2). The CSC was provided with data on cancer risk, traffic volumes, permitted sources, that was very helpful in helping us prioritize the areas of concern. However, the CSC only became aware of these things, including the Title V sources (across the street from the boundaries), AFTER they had voted on and finalized the boundaries. Thus, many of the people who AB 617 was intended to protect, were left out of the process entirely, and denied their right to use their voice in the deciding of environmental policies affecting them. Some of these people live within 200 yards of the boundaries, and pollution sources that are also not included in the boundaries. This needs to be mentioned and explained. I can elaborate on the boundary vote itself to make my point, but for the sake of not being inflammatory, will forego that.
- 3). Because EJ communities were not included in the boundaries, the residents from those communities have been denied a seat at the table on the CSC committee. For example, when a seat became vacant on the steering committee and a woman from the

L6-1

L6-1 (cont)

community applied, she was turned down because although she lived in an EJ community - she was not within the boundaries that were decided before we had sufficient information to make an informed decision. Several communities, within one half mile of the boundaries, and having been identified by CalEnviroSrceen as having health disparities are not included. These include areas of South Sacramento with very dense apartments housing very low income and monolingual people, living on top of or next to pollution. This needs to be mentioned and explained.

The CSC should have been provided with information about potential air pollution from known stationary and mobile sources in the area, as well as information about health disparities in the communities, before the boundary vote, so that the CSC could make boundary determinations based on having access to that information. As a result, many stationary sources including ALL five of the Title V stationary sources are outside of the boundary and are not being monitored. One CSC member told me that he found out (by accident) about the Title V sources when he asked what the stars were on a map of the boundaries that the CSC was shown AFTER the boundaries were finalized.

In summary, not informing the CSC of known air pollution sources, and giving misleading information during the boundary determination process about communities identified by CalEnvironScreen, along with muting the community during public comments does not allow for active participation and self-determination and goes against the most basic spirit of AB 617 – a community driven process.

The AB 617 process in South Sacramento and CAMP, are built on a foundation that is not entirely community driven. While there are representatives and residents of the community on the AB 617 Community Steering Committee, I would find it hard to believe they were aware of the cancer risks, traffic volumes, permitted sources, and health disparities when they decided the boundaries, and built upon that with further votes. Thus, the initial, and final boundaries did not include the areas of South Sacramento with the highest cumulative impacts, paired with some of the lowest income rates. Despite the boundaries being expanded, they still failed to include areas with great cumulative impacts, in very close proximity (hundreds of feet in some cases) to homes and sensitive receptors, as well as a Title V facility located directly across the street from the boundaries.

Sacramento County is developing an EJ plan that has captured many of the most disadvantaged communities in South Sacramento. Their map captures communities located within a half mile of the AB 617 boundaries that face as many, if not more, air pollution concerns than any community in Sacramento. These communities are not within the South Sacramento AB 617 footprint

boundaries. (https://planning.saccounty.net/PlansandProjectsIn-

Progress/Documents/Environmental%20Justice%20Element/EJ_Communities_NonEJ_

L6-2

In the **Executive Summary**, a list of concerns, goals, and objectives, by priority, that will form the basis for the CAMP, are provided.

L0-3

They are as follows:

Elements 3 and 4 describe the scope of desired actions identified by the Steering Committee and identify the objectives for air monitoring, which are tied to each of the four highest priority concerns that were developed by the Steering Committee.

Those concerns, actions, and objectives are:

Concern 1 – Need to increase air quality education and outreach efforts. Action 1 – Implement better and more targeted public outreach and education efforts. Objective 1 – Increase air quality awareness in the community by making air quality information readily accessible and easy to understand.

This request for education was raised by several steering committee members with regards to their own level of air quality education at the start of the process, and not the communities'; the belief being that it would improve the quality of their input throughout the AB 617 process in South Sacramento. Regarding the outreach request from the steering committee, it was also made at the start of the process to address an immediate need to increase public participation. There were often meetings with only one member of the public, if that. When the Priority Area 1 was voted on, several CSC members requested outreach in surrounding areas to recruit for the CSC. It was not provided at this key juncture.

Listing Air Quality Education and Outreach as the number 1 priority is unneeded. This concern/objective/goal can be satisfied with several flyers, and a few public meetings; without any real change being affected to characterize the pollution affecting the people of South Sacramento. Air quality education and outreach are assumed components of AB 617; thus, this item should be a continual component of the entire AB 617 process; and not a stand-alone item. If it must be included, then I request that the steering committee be opened up to new membership on an ongoing basis, to make the

most of the outreach. Spanish translation is not enough, South Sacramento is the most diverse community in all of Sacramento with many ethnicities and neighborhoods that are being left out of this process. The Air District should look at providing grassroots nonprofits with grants to do outreach, and not punt it to other agencies.

L6-3 (cont)

The Air District should not be the only ones educating us on areas outside their expertise, or selecting unilaterally who those teachers will be. A TAG can serve well here, but only if the selection process is fairly discussed with all voices on the CSC, and the public's being heard. We should be able to invite guest speakers on topics like land use planning, public health, environmental justice, etc. (I doubt any of us on the CSC, as residents or advocates, knew about any of those when we started-and made critical decisions)

_6-4

Summed up, the number one concern of the CSC, was a lack of characterization of the emissions in their community, and how those emissions are affecting their health. That was the summation of all their comments. However, not being familiar with the language of regulatory agencies, I couldn't word it so precisely. So, I found a translator and interpreter.

L6-5

Concern 2 – Emissions from Highway 99/traffic. Action 2 – Implement strategies to mitigate mobile source emissions impacts from Highway 99 and other traffic within the community. Objective 2 – Monitor for traffic-related air pollutants. Determine the spatial distribution of pollution from traffic on Highway 99 and whether these emissions are significant at schools and hospitals.

L6-6

While emissions from traffic on city streets and Highway 99 are a major concern, the spirit of AB 617 legislation includes a primary focus on criteria pollutants and toxic air pollutants. As mentioned in the comments regarding Priority 1, the CSC often asked for AQ education to better understand the pollutants in their community, so they could better prioritize them.

There are currently many ongoing and innovative efforts to address mobile source emissions in California. Monitoring for traffic or highway emissions, while critical to understanding the impacts on the community, may not allow for new strategies, beyond those already being deployed to address vehicle emissions. If one of the goals of the monitoring is to move to a CERP (as indicated in this document), then land use

L6-6 (cont)

L6-7

L6-8

planners, and public health officials should be included in this process now. With their help, the CSC could consider rerouting truck traffic in the neighborhoods most burdened by logistics centers, as part of a CERP.

The map of the community tour provided to the CSC, to familiarize them with the community, clearly shows that the steering committee was not able to tour the Southgate Industrial Park, which is surrounded by low income neighborhoods that are mostly people of color (slide 8

http://www.airquality.org/AB617/Documents/Steering%20Committee%20Meeting%208 %20Final.pdf): They didn't get see the body shops and large paint booths, that sit across the railroad tracks from homes, or an elementary school (Bowling Green). Nor were they provided a firsthand view of the many logistics centers or the cold storage facility located within the Southgate Industrial park. The roads within the Industrial Park are well suited for tour buses. The notes from the community tour indicate a CSC member was concerned about the industrial sources along Franklin Boulevard. (http://www.airquality.org/AB617/Documents/Community%20Tour%20Notes.pdf), as they relate to sensitive receptors. Again, not wanting to be inflammatory, I'll refrain from calling out staff who responded to requests from the CSC to tour the area by saying, "we have a bus that can't navigate many streets." I am providing pictures of this area for your information and context.

Because this information WAS NOT (by not being able to see the sources within the industrial park, during the community tour) provided to the CSC; and their lack of information around the strategies that could be developed by monitoring the highway; and their lack of awareness around the disadvantage in the communities immediately proximate to Priority Area 1, I believe the decision to focus on Highway 99 could have been different if that information would have been provided.

Concern 3 – Increasing rates of asthma and respiratory problems in the community. Action 3 – Provide individuals within the community with the information needed to make decisions based on community air quality data. Objective 3 – Determine air quality at sensitive receptor locations and whether air quality changes by season and location for these sensitive receptors.

This concern should be moved #2, and should follow the characterization of emissions in the community.

This priority can easily be revised to provide a deliverable such as a health analysis report for the community that explains how the characterized emissions can affect their

health. As this camp reads, it sounds more like an early warning system. Sac Metro already provides air alerts that anyone can access via a mobile device. Thus, Action 2 would NOT bring any new benefits to help people understand the characteristics of a community's air. By changing this priority to create a deliverable such as a health analysis report, the community can continue to grow in their Air Quality education.

L6-8 (cont)

Given recent reports around environmental justice communities being the most impacted by COVID-19, this priority should be re-assessed, or considered more deeply. Possible outcomes/goals could include helping South Sacramento's AB 617 community to build resiliency for pandemics, as well as understanding the relationships between respiratory problems, and their constructed environment.

L6-9

Concern 4 – Emissions impacts from businesses. Action 4 – Understand more fully the potential emissions contributions from businesses to the nearby community areas and develop ways to mitigate those contributions. Objective 4 – Determine which source categories the emissions are coming from and whether the emissions from the sources contribute significantly to poor air quality in nearby areas.

L6-10

The concerns, actions and objectives identified above guide the design of the air monitoring program.

CAMP should clearly indicate community interests in body and paint shops. Many on the CSC, after learning of it, were concerned about the Title 5 facility that is not included within the boundaries. There was also concern for the low-income neighborhoods sandwiched between, or surrounding, the municipal airport and/or the industrial park (Priority Area 1). There are paint booths less than 1/4 mile from the existing boundaries, that are yards from homes in that low-income community.

In my comments below, I provide a specific example of how the CSC's priority Area 1 is further downplayed.

_6-11

CAMP DRAFT DOCUMENT

The following comments are on the places in the document where I found errors.

Stationary Source Emissions3 · Campbell Soup (no longer active)4 · Wastewater treatment plant · Stationary sources along Gerber and French Road5 · Natural gas turbine (outside the community boundary)6 Type of sources was not specifically

identified by the Steering Committee, but air pollution sources in the area include a concrete and aggregate seller, a recycler, a food packaging manufacturer, autobody shops, and repair shops

L6-11 (cont)

On an almost daily basis, a large plume of steam can be seen coming from the old Campbell Soup Factory. The plume is blowing towards florin in the morning, and then, many afternoons, towards a very impacted community (Rainbow Park) that is divided by Hwy 99, has dense low-income housing, and a dense automobile repair industry surrounding it. The CSC had asked what was being emitted, and was told, "we think its steam", so they quit pursuing the question.

_6-12

Separately, the footnote #5 for this section indicates that the CSC was concerned with stationary sources along French Road. However, the CSC was also concerned about the stationary sources along Franklin Boulevard, including a Title V facility and the Southgate Industrial Park. The notes from the community tour indicate a CSC member was concerned about the industrial sources along Franklin Boulevard, (http://www.airquality.org/AB617/Documents/Community%20Tour%20Notes.pdf), as they relate to sensitive receptors sandwiched between them and Highway 99. When provided with a map of permitted sources within the boundaries, cancer risk, and traffic volumes, the CSC voted to prioritize this very area. The monitoring plan does not reflect that mandate.

L6-13

The CAMP, as written further reflects the downplaying of emissions and concerns in Priority Area 1. That they are not listed here concerns me. That a power plant or factory (I believe) is listed as "Campbells Soup-no longer active." and not what it really is, is concerning.

L6-14

Does anyone know that a daycare appears to be operating directly across the street from a Title V and major logistics center? And that on the same side of the street on either side are two large logistics centers, and that right next door to them immediately next to the daycare, are a smog shop and major recycler?

see below

Impact on sensitive receptors · Children walking to school and crossing intersections8 where these are located at high traffic areas or the Highway 99 corridor (also can be categorized under mobile source emissions) · Effects on the many underserved populations, including young children, need to be better understood · Impacts on neighborhoods

Lb-15

The community tour for the benefit of the CSC, also did not traverse the primary walking route for kids going to Luther Burbank HS, from Bowling Green. That route is often lined with Heavy Duty Diesel Trucks from the logistics or cold storage center in Southgate Industrial Park. The route is also very close to urban housing, located next to an elementary school, and across from several paint shops and a smog shop (maybe 100 yards from the school).

L6-15 (cont)

2.3. Previous and Ongoing Air Quality Reports and Studies Based on best available data, the District's Technical Assessment identified communities disproportionally impacted by air pollution as well as those without historical community-level air quality data.

L6-16

EJ reports/studies should be included in this section, as should some of the many reports on citizen monitoring, community engagement, public, and land use-also as resources for the CSC. These would help the CSC learn of success in other communities; and possibly how to apply them here.

Element 3

3.1. Actions that air monitoring aims to support

L6-17

Throughout the document, the CAMP indicates a potential to create a Community Emissions Reduction Plan (CERP) as a result of what is learned through the air monitoring. It should be noted that much is already known about existing technologies that can reduce emissions today. To wait for a CERP to promote those, is to deny justice, today, to the people living next to pollution sources. These can be addressed today through incentives and/or enforcement.

In short, all the action items listed lack sufficient specificity to be meaningful. None one of the listed actions, as worded, provides the community with much more than business as usual.

I suggest

Action 1 - Characterize air emissions in south Sacramento for Toxic Air Contaminants criteria pollutants, including PM from diesel, but also toxics from small businesses in proximity to communities.

L6-17 (cont)

Action 2 - Create a health analysis report for the community based on TAC and Criteria pollutants emissions measured in the community. Work with health professionals at OEHHA or the Department of Health (county or state) and also with Sac County EJ planners. Consider ways to incorporate resiliency during a health crisis.

Action 3 - Develop CSC expertise, in relationships with professionals from the following fields: public health, land use, regulatory law & policy, and EJ to start. These folks could serve on the steering committee or a TAG. These experts should be selected by the steering committee.

Action 4 - Provide CSC with a new tour of the community, that includes Southgate Industrial Park, and the neighborhoods around it, including sensitive receptors. This should be in addition to previous suggestions already listed. And this would should happen before CAMP is finalized.

Action 5-Outreach and Education

Share monitoring results with the community, as they arise, or in quarterly meetings. Develop AQ materials that advocates can use to conduct outreach. Increase outreach to boost public participation at CSC meetings. Open CSC to new members on an ongoing basis, and conduct outreach to recruit new CSC members (this should be a given and Action 3 replaced with a deliverable to the community such as a TAG and more participation on the steering committee by professionals).

COVID-19 has shown us that the same communities that AB 617 was intended to protect, are also the same communities that are most impacted by this pandemic. It is well known that EJ communities have higher incidences of asthma and respiratory illnesses than do non EJ communities. If we believed that there was time to address these higher incidences of chronic respiratory conditions in our community, it may be time to reconsider.

When provided with the data they requested, the CSC itself prioritized one of Sacramento's most impacted, and thus most vulnerable communities, as Priority Area 1. However, that day was unique; and every meeting afterward chipped away at that vote, and this CAMP reflects that. I hope I've helped you see clearly now; and now that you know, please help see that genuine CSC vote through, by listing priorities, goals, and objectives that celebrate what YOU and the CSC did that one day-you collaborated. Lives depend on it, now more than ever. You can help.

I suggest we seriously consider the priorities, I've shared, to protect ourselves, our loved ones, and our community.

L6-18 (cont)

Thank You, Denise R. McCoy, Et al AB617 South Sacramento – Florin Steering Community Member

p.s. And let me say that I owe ya'll some reading material on the fine line between respectful engagement, and tone policing. Thank you.

Letter 6 – Letter from Denise McCoy, Steering Committee Member, May 7, 2020

L6-1 – This comment states that the environmental justice approach of AB617 has not been met and states that residents outside the community boundary have been entirely absent from the process. The comment provides additional examples of how the environmental justice approach has not been met, including the public comment procedure at meetings, the process used by the Steering Committee to determine the community boundary, and the rejection of a Steering Committee applicant who lived outside the boundary.

The District acknowledges and agrees that environmental justice and community collaboration are critical components of the AB 617 process. All community members, whether residents within the South Sacramento/Florin boundary or not, are welcome and encouraged to attend and participate in Steering Committee meetings. These meetings are open to the public. The District utilized email notifications and the District website to advertise meetings as well as paper flyers. The District encouraged Steering Committee members to invite community members who may be interested to attend. The District also provides handouts of all meeting materials at meetings.

The initial public comment process used at Steering Committee meetings allowed for public comment at the end of the meeting. However, meetings consistently ran over the scheduled two –hours, and this process was replaced by written comment cards so that members of the public could be called upon during the public comment period and to ensure that comments from all members of the public could be addressed either during the meeting or by follow-up should there be time constraints. When the public comment was called upon, the public was able to expand on their question/comment if needed. All comments received were included as part of the record. This was an attempt to be respectful of all participant's time and schedules. After a couple of meetings, the District acknowledges that the comment card method was also not ideal and has since switched to have public comment before Steering Committee decision points and at the end of the meeting. The District agrees that the current mechanism is a better approach.

For accepting Steering Committee members, the District ensures that applicant meet the requirements specified in the AB 617 Community Air Protection Blueprint, which states "The community steering committee will include community members who live, work, or own businesses within communities designated for focused action...with the majority representation from community residents" (Available here, pg 6).

L6-2 – This comment details the reasons the commenter does not believe the community boundary determination process was appropriate. The commenter states the District did not provide information regarding Title V sources, potential sources, or health disparities within the community prior to the Committee determining the boundary.

The initial community boundary selected by CARB was based on the District's Final Assessment of Locations for AB 617 Communities that evaluated the criteria set by AB 617. These criteria included locations of disadvantage communities (includes public health indicators), air pollution exposure (including cancer burden), and locations of sensitive receptors. This report was provided to all Steering Committee members. To help with the final boundary discussion, the District provided an overview of air pollution sources in and near initial boundary, including the locations of nearby Title V sources. The final boundary map was also the result of the local knowledge from the steering committee members who help identify sources and/or impacted areas. The District was responsive where possible when the Steering Committee requested for additional information. Ultimately, the Steering Committee

discussed and voted on a recommendation for the final community boundary and the District accepted the final boundary, as recommended by the committee, and forwarded it to CARB.

L6-3 – This comment states that Concern 1 [Education and Outreach] in the CAMP is meant to refer to education of the Steering Committee Members and not the public. The comment states that the education and outreach as the number 1 priority is unneeded. It requests that if the objective is included, that the Steering Committee be opened to new Steering Committee membership on an ongoing basis.

The Steering Committee decisions from January 24, 2019 Meeting and February 26, 2019 Meeting were that the Education and Outreach component refers to the public, specifically highlighting the need to for minority populations, and education to small businesses, schools and the general public.

Regarding the order of the Steering Committee Objectives as they appear in this document, please see response to L5-1.

Regarding the request for increased translation services, please see comment SC-17.

The District will work to fill vacancies as they arise using currently available resources. We will work with the committee to ensure necessary voices are represented on the committee, recognizing that in the current COVID-19 pandemic there has been a delay in this process.

L6-4 — This comment states that the District should not be the only group teaching the Steering Committee or selecting who should be teaching the Steering Committee. The comment states that a Technical Advisory Group (TAG) could be created and how it should be created. The comment states that [Steering Committee Members] should be able to invite guest speakers.

At the April 28, 2020 meeting, the Steering Committee appointed a committee member to research the formation of the TAG and bring back a proposal to the committee at a later meeting. The District supports the future formation of a TAG to facilitate technical discussions.

Requests for guest speakers should be submitted to the Steering Committee co-chairs and will be considered. Guest speakers have presented at past meetings including the Sacramento Tree Foundation, Dr. Johnathan London with UC Davis, and CARB.

L6-5 – This comment continues the discussion of Concern 1 from Comment L6-3.

See response to L6-3.

L6-6 – This comment discusses Concern 2 [Emissions from Highway 99] and concerns about the limited potential for the Steering Committee and District to mitigate the emissions. The comment states that land use planners and public health officials should be included in the process.

The District agrees and acknowledges that land use planners and public health officials are relevant groups to involve. As data is received through the CAMP process, the District will share this information with these groups to promote collaboration. Presentations from appropriate outside agencies and officials may be scheduled for future meetings contingent upon Committee consensus.

L6-7 – This comment describes how the bus tour of the community did not include the Southgate Industrial Park. The comment says that if the Steering Committee was aware of disadvantaged

communities near Priority Area 1 and if the Southgate Industrial park were included in the tour, the Steering Committee may have made different decisions about prioritizing Highway 99.

The Steering Committee was actively involved in developing the route for the community tour. The District shared the draft route on multiple occasions and the Steering Committee feedback was incorporated into the final route for the community tour.

During the community tour, Steering Committee members also shared with the tour participants their knowledge of a particular area that they were most familiar with and the concerns they have. In the Steering Committee meeting following the community tour (July 23, 2019 meeting), the Steering Committee members who attended the tour provided their thoughts on the experience. During the meeting, the District did not receive any adverse responses to the community tour or the route.

L6-8 – This comment discusses Concern, Action, and Objective 3 of the CAMP. The comment states the concern should be the #2 concern of the CAMP. It states that the priority can be revised to provide a deliverable such as a health analysis report. The comment states that the action of providing information to the community would not bring any new benefits because the District already provides air alerts.

Regarding the order of the Steering Committee objectives, see response to L5-1. See also response L3-15.

L6-9 – This comment notes the relationship between environmental justice communities and the COVID-19 pandemic and suggests that Objective 3 be reassessed with the proposed goal of building community resiliency for pandemics and understanding the relationship between respiratory problems and the constructed environment.

This comment is a general comment on the relationship between AB 617 and COVID-19 and does not require a response.

L6-10 – This comment discusses Action and Objective 4, related to emissions from businesses. The comment states that the CAMP should indicate community interests in body and paint shops and that the Steering Committee expressed concern about low-income neighborhoods near the municipal airport and the industrial park (Priority Area).

The District believes the language of the CAMP effectively incorporates the Committee's concerns about body and paint shops into Action and Objective 4. Usage of the term "businesses" does include body and paint shops.

L6-11 – This comment discusses the identification of stationary sources in the community, questions asked about emissions from the operations at the former Campbell Soup facility, and the District answer.

This comment refers to the stationary sources located near the northwest corner of the boundary at 47th avenue and Franklin boulevard, including the facility that generates the large plume of steam. This was referred to as the area where former Campbell Soup facility was located. The Campbell Soup facility is no longer active because they stopped operating in 2013. This area encompassed other facilities, including two existing Title V stationary sources. One facility is a Sacramento Municipal Utility District (SMUD) electric cogeneration facility called the Sacramento Power Authority that operates a natural gas turbine. As a part of the cogeneration process, the facility generates visible steam; the visible steam is

not the source of air pollutants from the facility. The District has identified this facility to the Steering Committee on several occasions, including in presentation on an overview of pollution sources at the January 24, 2019 meeting and at the start of the community tour where we started next to SMUD's facility. In addition, District staff from the Stationary Source Division attended all Steering Committee meetings and were available to answer questions regarding emissions sources in the community.

L6-12 – This comment refers to concerns along French Road and Franklin Boulevard. It states that the Steering Committee Member discussed concerns about industrial sources along Franklin Boulevard, that the Steering Committee voted to prioritize the area, and that the CAMP does not reflect that decision.

The CAMP reflects the priority areas decided upon via Steering Committee consensus at the April 23, 2019 Meeting #6 (Item 4, pg 5). The Committee determined Priority Area A, as titled in the meeting notes, to be the first priority area.

L6-13 – This comment expresses concern about how the District has discussed emissions in Priority Area 1. The comment states that by referring to the facility as "Campbells Soup-no longer active," the District is downplaying emissions and concerns in the area.

See response to L6-11.

L6-14 – This comment asks whether anyone is aware of a daycare operating near a Title V facility, two logistics centers, a smog shop, and a recycler.

The District appreciates this information and recognizes that there are sensitive receptors near sources of emissions in the community. The District believes that monitoring data collected as a result of this plan will help better inform the public.

L6-15 – This comment states that the community tour did not go down the primary walking route to Luther Burbank High School from Bowling Green and that the route is often lined with trucks. It describes other sources and receptors in the area.

The community bus tour partially covered this route up Franklin Blvd to Turnbridge Rd and included Bowling Green Elementary School as location #20 (<u>route map available here</u>). Also, see response to comment L6-7.

L6-16 – This comment states that environmental justice reports, and studies referenced by the District should be included in this section.

Additional sources of data beyond existing air quality data have been added to Element 2.5. These sources include traffic count, tree cover, resident aerobic capacity, educational attainment, and the distribution of racial and ethnic minorities.

L6-17 – This comment discusses the relationship of the CAMP to a CERP and potential emission reduction and mitigation. It states that the action items lack specificity to be meaningful and suggests revised action items.

The four action items and objectives of the Steering Committee were determined and voted upon via consensus across the February 26, 2019and March 19, 2019 Steering Committee meetings. For concerns regarding the order and wording of the Steering Committee's four objectives and accompanying actions, see response L5-1.

For the Action 1 suggestion, this action is part of the CAMP.

For the Action 2 suggestion, the District believes that linking the air monitoring data to other data sources is valuable, however, those types of analysis is beyond the scope of the air monitoring plan. The purpose of the monitoring plan is to collect the appropriate air quality data and to make it available to others, so that analysis like health analysis can be performed. The District intends to share the results of the monitoring with other interested group like the public health and planning agencies, so they are aware this information is available.

For the Action 3 suggestion, see response to Comment L6-4.

For the Action 4 suggestion, see response to Comment L6-7.

For the Action 5 suggestion, see responses to Comments L6-1 and L6-3.

L6-18 – This comment summarizes the impacts of other comments and closes the letter.

The District recognizes the relevance of disproportionate air pollution and the increased susceptibility it causes to respiratory illnesses such as COVID-19. The District agrees that the data supporting this relationship highlights the importance of the AB 617 program.

John Henkelman

From: Janice Lam Snyder

Sent: Monday, May 11, 2020 7:41 AM

To: John Henkelman **Subject:** FW: CAMP suggestions

Follow Up Flag: Follow up Flag Status: Flagged

From: vincent valdez <vvaldez63@sbcglobal.net>

Sent: Friday, May 8, 2020 4:23 PM

To: Janice Lam Snyder <JLam@airquality.org>; David Yang <DYang@airquality.org>

Subject: CAMP suggestions

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

Pg 2.7 Emission Inventory Some source category methodologies to develop emission inventory will be based on surrogate information from the community (i.e.population, fuel usage, purchase records). Community air monitoring will help fill in some of the data gaps and may be used to identify other potential emissions sources not identified by the emission inventory. Does not imply we are confident we are going to get good sampling from our monitors or useful data.

L7-1

Pg 4.4 Our monitoring sample is going to be 1 in every 6 months because that is what the budget allows. Maybe we should shorten the 6 month sampling periods and get better sampling of the seasons we are targeting.



Should we have some language to state that due to Covid 19 our air sampling is going to be of a different than normal condition due to less traffic and social distancing restraints. I feel our CAMP data will be impacted by Covid 19 conditions





Letter 7 - Email from Vincent Valdez, Steering Committee Member, May 8, 2020

L7-1 This comment states that the information in Table 2-1 does not imply we are confident we are going to get good sampling from our monitors or useful data.

The District believes the monitoring will produce useful data.

L7-2 This comment suggests shortening the six-month sampling periods for Phase 2 to get better sampling of the seasons that are being targeted.

The District has discussed the sampling strategy with the Steering Committee and understands that the Steering Committee wants summer and winter months sampled if possible. Collecting samples once every six days is a standard sampling practice for speciated air toxics data, including the EPA Photochemical Assessment Monitoring Stations (PAMS). The sampling strategy has been developed to capture representative data. The data from Phase 2 are being used as a screening tool to inform where the Phase 3 monitoring trailer will be sited. Phase 3 will provide a longer monitoring time frame to ensure seasonal variation is captured. Finally, District resource and staffing are not able to accommodate sampling at a significantly higher frequency (e.g. sampling one day in three).

One critical consideration for extended air monitoring is the strict budget constrains the program is operating under. While in principle the District agrees it would be reasonable to conduct air monitoring year round for multiple years in order to best characterize pollution trends in South Sacramento, the reality is the state of California has simply not provided sufficient resource to execute such an expansive approach. Thus, the District is doing as much as it is feasible given the limited resources provided by the state.

L7-3 This comment asks whether the CAMP should include some language to state that due to COVID-19, measured concentrations may not be representative of typical air quality.

The District acknowledges the impact of COVID-19 and will include it as part of the discussion of the results. Element 13 of the CAMP has been edited to include a statement indicating that the discussion will acknowledge the potential impact of COVID-19 on air quality.

Letter L8

Supplemental Comments on

South Sacramento – Florin Community Air Monitoring Plan

By Earl Withycombe

May 8, 2020

Phase III

Concern 4 of the Plan – Emissions Impacts from Businesses – offers Objective 4 – "determine which source categories the emissions are coming from and whether the emissions from the sources contribute significantly to pour air quality in nearby areas". This objective appears to drive the design of Phase III of the Community Air Monitoring Plan (Plan). The monitoring approach proposed in Phase III includes a mobile trailer equipped with research-grade instruments to detect specific hydrocarbon species, constituents of primary carbon, aerosolized metals, criteria pollutant gases, and PM_{2.5}.

The use of a mobile monitoring platform to quantify concentrations of criteria and trace pollutants suggests a lack of knowledge of unique pollutant hotspots that are presently unknown to the public and regulatory agencies. If this is the driving motivation behind Phase III, then the Plan may want to consider an alternative approach which may be outside the purview of the Steering Committee, but which may return more air quality benefit to the community for the expenditures proposed.

A lack of knowledge of unique pollutant hotspots is more efficiently and effectively resolved by expanded ground trothing by District enforcement inspectors, than by one-time mobile monitoring. Just as low-cost air quality monitors can be used in a network to quantify the gradient of pollutant concentrations across a large area, low-cost sensors to detect the presence of pollutants are available for source inspection. Adding hand held sensors to the toolbox of District enforcement inspectors will enable them to screen for source hotspots during annual or more frequent inspections, and cover an area more intensively than can be investigated by a mobile monitoring platform.

District enforcement inspector teams should, at a minimum, be equipped with:

- Draeger tube kits customized to the potential criteria and trace gases of community and regulatory concern;
- Infrared temperature sensors for quantifying the temperatures of process operations and exhaust plumes;
- Forward Looking Infrared (FLIR) cameras for observing hydrocarbon plumes;
- Portable flame ionization detectors for finding hydrocarbon leaks;
- Handheld hydrogen sulfide sensors;
- Handheld PM_{2.5} particle counters;
- Multi-gas detectors;

L8-1

- Handheld velocity meters; and
- Tablets for quick download and upload of inspection information to a District server.

L8-1 (cont)

Expanding and improving the capabilities of the District's enforcement inspector teams will pay substantial benefits in identifying and quantifying sources and characteristics of emissions that the District is not present aware of. Businesses will also benefit through knowledge of excess – and controllable - emissions resulting from maintenance failures, control equipment failures, and leaks.

Letter L8 – Letter from Earl Withycombe, May 8, 2020

L8-1 This comment states that it would be more efficient for the District to fund unique pollutant hotspots by deploying enforcement inspectors with low-cost air monitors to the community. The comment provides a list of sensors the inspectors should be equipped with.

The District agrees that there is a lack of community-level pollution information, which highlights the need for an air monitoring system to be deployed in the South Sacramento-Florin community. The District believes that the approach described in the comment letter would not provide the information needed to characterize pollution within the community or to meet the objectives of the CAMP. The Phase 3 monitoring described in the CAMP would provide the community with air quality data that has previously been absent. It will be difficult or impossible to meet all objectives of the CAMP without the implementation of a suite of professional grade air quality monitors. The District believes that it is important to have quantitative, professional-grade air quality data as part of the CAMP, especially if the data from the CAMP will be used to develop emission reduction strategies.

The approach suggested in the comment letter, to equip our enforcement inspectors with tools, has merit, but there are also some factors that limit the viability of this approach. First, data collected by inspectors would provide random snapshots of pollutant concentrations and could be beneficial. However, this would not provide the more continuous monitoring that can render a more clear and complete dataset that could be used to characterize seasonal and diurnal pollutant trends. Second, the approach is limited due to lack of funding and resources and, at this point in time, it would be cost prohibitive to acquire some of the suggested tools. It would also be a labor-intensive approach to identify pollutant plumes, account for meteorological effects, and attempt to trace them back to their sources as suggested. If there was an increase in state funding that could help the District acquire certain tools and staffing resources to enhance inspections, the District would be supportive of doing so. Lastly, some of the equipment described is only capable of providing qualitative pollutant measurements or cannot provide speciated pollutant information that would be most helpful to identify hot spots of particular chemicals.

It's worth elaborating on the District's current enforcement program for a fuller understanding of this program area. The District does increased inspection and enforcement activities in the AB617 community and did additional work this past year to verify operating auto coating businesses, especially in the Franklin/Florin sector, had required air quality permits. Countywide, all sources are inspected either annually or bi-annually to ensure equipment is operating legally. Inspectors perform extensive record reviews, e.g., operational, throughput, and purchase records, to understand the types of materials being used and processed at the facility and respective emission levels. The records provide an accurate assessment of the amount of emission being generated from a process. Inspectors also verify equipment is operating per permit requirements by walking through the facility, interviewing the operators and visibly inspecting equipment and process gauges, such as flow meters, to check for leaks and verify the physical integrity of the equipment.

Quantitative testing is also performed, like visible emission observations done on dust, smoke and combustion stacks. In some facilities, handheld monitors are used to detect leaks and other fugitive

emissions, like oil and gas production facilities. For some types of facilities, an annual source test or performance verification test is required to demonstrate equipment is properly operating or to provide quantified emissions. Source tests are often witnessed by the inspector and provide an accurate way of measuring emissions when combined with usage records.

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

- Comment SC-1: Steering Committee member Vincent Valdez 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)

See response to Comment L5-1.

Comment SC-2: Steering Committee Vice Chair Patricia Shelby 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.

Section 14.1 of the CAMP includes the statement that "It is important to note that the activities and tools listed below will remain fluid and flexible as access, resource, and needs may change over time, especially due to unforeseen circumstances." The District believes this statement provides the flexibility the comment is asking for.

Comment P-1: Joelle Toney, a community member, 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.

The District agrees that information such as health disparities by race and income are an important part of understanding equity issues. The purpose of the CAMP is to obtain community level-air quality data. The air quality data that is collected from the CAMP could be used in future efforts with the health disparities data to further the understanding of equity issues.

- . The District intends to share the results of the monitoring with other interested group like the public health and planning agencies, so they are aware of this data and can use this information.
- Comment P-2: Joelle Toney stated that Element 2.2 should note that public comment at Steering Committee meetings was stifled from March to November of 2019.

The following statement about public comments has been added to Section 1.4 The Steering Committee Meeting:

Steering Committee meetings have allowed for public comment. The District worked with the Steering Committee and CARB to determine the best mechanism to allow for public comments while keeping Steering Committee meetings on schedule and on topic. The methods used have included allowing public comment after each discussion topic, allowing public commenters to submit written comments on note cards, and allowing public comment at the end of the

meeting. In limited instances, public comment has been limited due to meetings running long and the Steering Committee meeting having to end when the meeting venue closed.

Comment P-3: An anonymous 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.

The Steering Committee identified this as an area to work on in conjunction with the District to better provide outreach.

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

Comment SC-3: Steering Committee member Vincent Valdez stated the 75% completeness for data collection seems too low.

See the response to Comment L1-6.

Steering Committee member Denise McCoy provided comments SC-4 through SC-15:

Comment SC-4: The District needs to explain data quality for low cost monitors (e.g. RMSE $< \sigma_{reference}$)

The terms have been defined the first time they are used and added to the list of abbreviations.

Comment SC-5: Explain why professional-grade monitors may not be held to federal regulatory monitoring requirements

Federal Reference Monitors (FRM) and Federal Equivalent Monitors (FEM) are "category" designations that the Environmental Protection Agency (EPA) gives certain air quality equipment for the purpose of determining whether an area is in attainment or non-attainment for a particular pollutant (i.e. Particulate Matter 2.5, Nitrogen Dioxides (NO2)). Monitors designated as FRM/FEM are a subset professional high-quality grade monitors that are designated for a specific purpose. FRM/FEM monitors are matched by stringent siting requirements. Federal regulatory monitoring requirements can provide limitations on both the equipment selected and the ability to site the monitors to meet the objectives identified by the Committee. High-quality monitors can meet or exceed standards equivalent to FRM/FEM standards and are not FRM/FEM designated monitors.

Some pollutants do not have FRM/FEM designation monitors (e.g. Speciated Toxics, Black Carbon, etc.). The data collected from these non-FEM/FRM are still considered of high quality. Many monitors the District operates are non-FRM/non-FEM but are used for purposes of forecasting daily air quality, special studies, federal air quality plans. Applying all the stringent federal monitoring requirements typically intended to monitor for regional air quality are not appropriate for the purpose in this program and additional flexibility is necessary to meet Steering Committee objectives and outcomes.

The three-phase monitoring strategy outlined in the CAMP leverages newer technology (low-cost to mid-grade monitors) with traditional professional grade monitors to tackle the characterization of community-level air quality. By using newer (lower cost) technology, it allowed for expansion of collecting air pollution data as a screening tool to inform the placement of the Phase 3 monitoring trailer. The newer technologies are used to complement the professional grades by providing information that is otherwise not known. Professional grade monitors that are not designated as FRM/FEM are still considered quality data and are used in this Plan to meet all of the Steering Committee's monitoring objectives, including understanding spatial distribution of air pollution in the community. In addition, it is important to note that low-cost sensors such as the ones being used as part of this CAMP are being extensively studied by South Coast Air Quality Management District's AQSpec Program and has reported promising test results on reliability for monitoring PM_{2.5}.

Finally, the District again notes that an FRM/FEM designation is not indication of quality, adequacy, or robustness of data. It is a designation that monitors can be used for a specific federal purpose. Non-regulatory networks, when deployed as the District has proposed, can meet or exceeds those data objectives.

Comment SC-6: The District needs to explain why 75% completeness is an acceptable standard.

See the response to Comment L1-6.

Comment SC-7: The District needs to explain why some monitors do not have DQI

objectives requirements

See response to Comments L1-5 and L1-6.

Comment SC-8: It is not appropriate to reference the accuracy for SASS, VOC, and carbonyl

samplers to the laboratory SOP. Please explain.

The accuracy for the SASS, samples collected in summa canisters, and carbonyl samples is dependent on the analytical method. The analytical methods selected are well established methods for analyzing air pollutants. A table showing laboratory DQI has been added in Element 6.

Comment SC-9: 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.

See response to Comment L1-8

Comment SC-10: What will be done with monitoring equipment after monitoring? Why isn't

equipment being rented?

See response to Comment L1-10.

Comment SC-11: How many of each monitor are being used? It doesn't say in Element 7.

Section 4.4 states that a total of 22 low-cost monitors will be deployed for Phase 1. Section 7.1.1.1 states that 21 Clarity Nodes will be deployed in Phase 1. Section 7.1.1.2 states that one Aeroqual AQY 1 will be deployed in Phase 1. Sections 4.4 and 8.2 state that six areas will be monitored with enhanced screening for Phase 2. Section 7.1.2 describes the monitors that will be used in Phase 2. Section 4.4. states that there will be one monitoring location for Phase 3. Section 7.1.3 states which monitors will be used in Phase 3.

Comment SC-12: Section 10.1 references a data review process. That process should be

available to the Steering Committee and public.

See response to comment L1-12.

Comment SC-13: 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.

See response to Comment L1-12.

Citations to referenced documents are provided. Links to publicly available documents are provided in the references section.

Comment SC-14: The District should consider using ACLIMA. Their data are easy to understand, exceeds federal standards and precise.

The data provided by ACLIMA can be useful for specific purposes. The monitoring objectives such as Objective B "Determine which source categories the emissions are coming from and whether the emissions from the sources contribute significantly to poor air quality in nearby areas" requires collecting specific air toxics information that ACLIMA are not currently able to provide. The three-phase monitoring strategy has been discussed with the Steering Committee throughout the Steering Committee meeting process. The equipment used during Phases 2 and 3 will be able to detect significant toxic species, including black carbon, benzene, lead, and over 100 other toxics.

The District's experience and discussions with ACLIMA does not indicate that the monitors used by ACLIMA exceed federal standards. ACLIMA currently uses low and/or mid-cost sensors to perform its monitoring.

Comment SC-15: Would the Phase 3 monitoring see impacts from the Title V power plant or the airport?

The Phase 3 monitoring measures pollutants that are emitted by the Title V power plant or the airport, including NO₂, PM_{2.5}, lead, and other pollutants. The professional-grade instruments are sensitive enough to see pollutant concentrations well below the regulatory standards.

Comment SC-16: Steering Committee member Rhonda Henderson 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.

See response to comment SC-5.

Comment SC-17 Steering Committee member Tido Thac Hoang noted that there should be

outreach in other languages, especially Vietnamese.

The District agrees that information should be provided in the languages spoken in the community. The details of the communication strategy, including the languages information will be provided in, will be determined as the Steering Committee determines the details of the communication as described in Section 14.3.

Comment SC-18 Steering Committee Vice Chair Patricia Shelby said it was her understanding

the objectives were of equal value and that the order did not reflect priority.

See response to comment L5-1.

Comment SC-19 Steering Committee Vice Chair Patricia Selby said she was comfortable with

the 75% completeness as an industry standard with the understanding that

the District will attempt more completeness.

See the response to Comment L1-6.

Comment SC-20 Steering Committee member Vincent Valdez stated he disagreed with

Comment SC-18 and thought that readers would infer priority from the

repeated ordering of the objectives.

See response to L5-1.

Comment SC-21 Steering Committee member Vincent Valdez stated the District needs to

explain why equipment might not meet federal standards

See response to comment SC-5.

Comment P-4 Earl Withycombe, 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.

The District is working with third party experts to provide additional technical expertise on the CAMP and the Steering Committee moving forward to create a TAG.

Jose Saldana, a resident in the community, provided comments P-5 through P-10.

Comment P-5 The numbering of the goals provides an intuitive sense of urgency.

See response to comment SC-1.

Comment P-6 Community outreach/information is implicit in AB617 and that should not be a

stated goal.

See response to comment P-3.

Comment P-7 Outreach materials should include materials in Vietnamese.

See response to comment SC-17.

Comment P-8 If outreach is a goal, it should include more than what has been done.

The District has worked with the Steering Committee to determine the priority audiences. Remaining details of the outreach will be determined by working with the Steering Committee to determine the details of the outreach as described in Element 14.

Comment P-9 The Steering Committee should be provided with information about strategies

that are available as a result of the monitoring of emissions from Highway 99.

See response to comment L3-3.

Comment P-10 There should be a health analysis tied to the monitoring as a tangible deliverable.

See response L1-12.

Herman Barahona of United Latinos, provided comment P-11 through P-13:

Comment P-11 Herman Barahona supports forming a technical advisory group.

See Response to Comment P-4.

Comment P-12 The information should be understandable to schools, churches, and local neighborhoods.

The District agrees that information targeted to specific groups should be designed to be understandable to the target groups. The District will work with the Steering Committee to provide information in ways appropriate for each audience as described in Element 14.

Comment P-13 He supports efforts to reduce emissions in the greater Sacramento area and wants to understand the budget and whether that is a limiting factor.

The District vision is clean air and air and a low-carbon future. The increased effort brought to the South Sacramento-Florin community does not override the District's overall goal of clean air and a low-carbon future for all.

There are several factors that limit the District's efforts to implement emission reduction programs, including the District's authority, budget, staff availability, jurisdiction, equipment availability, and ability for other agencies to commit to implement air quality emission reduction strategies.

Joelle Toney, a community member, provided comment P-14 through P-17:

Comment P-14 It is concerning that the goals aren't geared toward having pristine data quality.

The District has developed specific protocol such as Data Quality Indicators, SOPs and a CAMP to ensure that the data used in decision making is suitable for that purpose. The DQI will be used to evaluate whether the data are fit for the purpose of evaluating community-level air quality.

Comment P-15 The District should justify the use of non-deterministic language, such as the case of "data may be used to target emission reductions."

The non-deterministic language identifies the flexibility that will be necessary for future actions based on the data obtained from the CAMP. Because we do not know precisely where areas of high emissions will be or if the data will show elevated concentrations, the CAMP is structured to allow decisions to be made at specific points during the process based on the availability of information. Based on this stepwise approach, it is inappropriate to commit to targeted emission strategies before the data are collected and evaluated.

Comment P-16 The language in the CAMP does not always put community stakeholders first.

The purpose of a Steering Committee is to assist the District in the development of the Community Air Monitoring Plan. The Steering Committee consists of people who lives, work and owns or represent businesses in the community, and the Steering Committee members are community stakeholders. The recommendations and inputs from the Steering Committee were included in the CAMP. The language in the CAMP is a reflection of the concerns and issues that were expressed, and the recommendations provided by the Steering Committee. The Steering Committee members spent numerous meetings with District staff identifying potential sources and locations based on what steering committee members identified as problems in their community.

Comment P-17 There is an imbalance in the air quality expertise between the District and the community.

One purpose of AB617 is to help bridge the gap in air quality information and knowledge and create a partnership between the District and the community so that a deeper understanding of community air quality issues and needs can be addressed. The District has made concerted efforts to educate the Steering Committee members during meeting by providing education sessions on air quality monitoring, air quality pollutants, air quality standards, and other relevant information prior to receiving feedback and input from the Steering Committee. The District has provided other opportunities to educate steering community members and the community and continues to be available. District staff has been available by email, phone and during meetings to ask questions, and attended community events and meetings to better educate the general public on issues and concerns related to AB 617 and other air quality efforts. The District will continue to work with the Steering Committee and community to help build capacity in air quality knowledge.

Steering Committee member Denise McCoy provided comments SC-22 through SC-24:

Comment SC-22 The District should explain why the Campbell Soup facility and the airport are not within the boundary when the steering committee wanted it in.

During the establishment of the community planning boundaries, Steering Committee members discussed if Campbell Soup and the Airport should be included. The Steering Committee decided at the February 26, 2019 Steering Committee meeting not to include these sources, but that monitoring should still be done within the community to capture the potential for emissions from these facilities. Monitoring sites were established to capture the potential for emissions from these facilities although these sources were not included in the final community boundary.

Comment SC-23 The CAMP should identify all the agencies and non-profits it has consulted with to create the CAMP.

The District has listed the documents referenced. Links to many of the documents have been provided in the references section. Others the District has reached out to have provided public comment on the CAMP. Their comments and the District responses are included in this response document.

Comment SC-24 The District should comment on why the EJ communities and Title V facilities are not in the map on page 2-2.

This comment refers to the community boundary map on page 2-2 that was used to show the differences between the original boundary selected by CARB and final community boundary determined

by the Steering Committee. The purpose of this map on page 2-2 is not to identify EJ communities and Title V facilities. Appendix D includes additional maps including those showing nearby Title V facilities.