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## **Community Air Monitoring Plan for the South Sacramento – Florin Community**

### **Element 1: Community Partnerships**

Historically, state and local air agencies have focused their efforts to improve air quality at the regional scale, using a top-down approach to implement air quality strategies. The Assembly Bill (AB) 617 (Assembly Bill 617, 2017) legislation shifted that paradigm and provided an innovative pathway to address air quality challenges by using a bottom-up approach, where policy discussions are initiated at the community level. To support and provide guidelines to local air districts implementing AB 617, the California Air Resources Board (CARB) developed the Community Air Protection Blueprint (Blueprint), which emphasizes forming partnerships with members of the selected community, including the formation of a steering committee, to assist in the development of a Community Air Monitoring Plan (CAMP) (CARB, 2018). Community members who live or work in the community have valuable experience with local air quality concerns and their participations will play a critical role in the success of the Community Air Protection Program (CAPP). These community-lead efforts are necessary to ensure the development of community strategies to improve local air quality that are aligned with community priorities and needs.

The Sacramento Metropolitan Air Quality Management District (Sac Metro Air District or District) understands the importance of fostering community engagement to create meaningful change. To initiate this collaboration, the District reached out to the members of the South Sacramento – Florin community to form the Air Quality Steering Committee (Steering Committee) that will help develop the CAMP, be an advocate for air quality, and provide insight into the community's concerns and priorities. By forming this partnership with the community and creating a forum for discussion, the District better understands the community's local air quality concerns and has incorporated their input and feedback into the development of this plan.

#### **1.1. Steering Committee Outreach Process**

The Blueprint outlined that the Steering Committee shall include people who live, work, or own a business within the community, including but not limited to, community residents, small businesses owners, facility managers/workers, and community-focused organizations. In addition, the Steering Committee may include people from local community-based environmental justice organizations, local government agencies, health personnel, academic researchers, and labor organizations.

The District solicited applications from those in the community who might be interested in serving on the Steering Committee and who would provide different perspectives. District staff contacted local elected officials, local community-based organizations, environmental justice organizations, and CARB for their assistance in identifying potentially interested Steering Committee members. The District also participated in neighborhood association meetings to present its AB 617 efforts, including the opportunity to serve on the Steering Committee. Additionally, the District used online mapping software and the yellow pages to help identify potentially interested groups in the selected community area. The District prepared a Steering

Committee invitation and sent out approximately 200 invitations along with the application to the following groups on October 22, 2018 through electronic mail and/or regular U.S. mail:

- Medical facilities
- Public and private schools
- Colleges
- Day care facilities
- Elderly facilities
- Local businesses
- Homeowner associations or mobile parks
- Faith-based organizations
- Community residents, including those recommended by local elected officials

The District hosted an evening public meeting on November 1, 2018, at the Southgate Public Library, to provide general information on the District's AB 617 efforts and the general goals of the Steering Committee for the South Sacramento-Florin community.

### **1.2. Steering Committee Members Selection Process**

The District received 15 applications at the outreach meetings, through electronic mail, or an online submittal form. The applications were screened based on the criteria set forth in the Blueprint. Of the 15 applicants, 12 satisfied the criteria. The District recommended those 12 applicants to the selection panel for review and consideration.

The selection panel consisted of five environmental or community professionals who have a strong interest in air quality and represent public and nonprofit organizations in Sacramento County along with one City Council Member and one County Supervisor who both serve on the District board and represent portions of the South Sacramento-Florin community. In addition to our local elected representatives, the panel members represented Organize Sacramento, CARB's Environmental Justice Unit, Breathe California, Sacramento Area Council of Governments (SACOG), and Sacramento Housing and Redevelopment Agency. The panel agreed with the District's recommendations. The District followed this selection process when a seat on the steering committee became vacant. Table 1-1 shows the active steering committee members.

**Table 1-1: Steering Committee Members\***

<b>Name of Primary Member (Alternate)</b>	<b>Community Affiliation</b>	<b>Groups Representing</b>
<b>Bill Knowlton - Chair</b>	Works in community	Mack Road Partnership & ReImagine Foundation
<b>Patricia E. Shelby - Vice Chair</b>	Lives in community	North Laguna Creek Neighborhood Association
<b>Jennifer Ablog</b>	Works in community	Kaiser Permanente
<b>Bishop Chris Baker</b>	Lives in community	Advocate for Education
<b>Shirley Banks</b>	Lives in community	Self
<b>Rhonda Henderson</b>	Lives in community	North Laguna Creek Valley Hi Community Association
<b>Tido Thac Hoang</b>	Represents community organizations**	Vietnamese American Community of Sacramento
<b>Gary Johansen</b>	Lives and works in community	North Laguna Creek Neighborhood Association
<b>Joelle Toney</b>	Represents community organizations**	District 8
<b>Vincent J. Valdez (Roger Aguiler)</b>	Lives in community	United Latino Environmental Justice Committee
<b>Denise R. McCoy</b>	Represents community organizations**	Sacramento ACT
<b>Vacant</b>	To Be Determined	

\*The active member list as of September 20, 2019. One invited member has not attended or participated in any meetings. Another member, Evelyn Craine, informed the Steering Committee that she was unable to continue her service. Her resignation was accepted at the July 23, 2019 Steering Committee meeting. Per the charter, these positions have been re-opened.

\*\* Community organizations include elected official offices, faith-based organizations, and business organizations.

### **1.3. Charter and Participation Agreement**

At the first Steering Committee meeting, committee members and the District discussed the committee's goals and objectives, member's qualifications, roles, and responsibilities. The District provided a draft charter, which served as a starting point for the Steering Committee to make key decisions about their committee and to revise and edit as they deemed appropriate. The charter was reviewed and discussed. The Steering Committee made key decisions and provided feedback on what to include in the charter, and the District revised the initial draft. The Steering Committee adopted the charter with minor modifications at the second Steering Committee meeting. As part of the charter, Steering Committee members who wanted to serve were expected to sign the agreement of participation form, which states that the member has

agreed to the conditions of the charter. A copy of the final charter and agreement of participation form are available in Appendix A.

#### **1.4. The Steering Committee Meeting**

As stated in the charter, the Steering Committee meets at least once a month (unless determined otherwise and agreed upon by the steering committee and District) in the evening at a location in or near the selected area. Additional meetings are held on an as-needed basis. The date, time, and location of the meetings, and number of attendees are provided in Appendix B, which is available on the District website and updated regularly. The District secures the meeting locations and notifies the Steering Committee of the meeting dates, times and locations. Beginning with the second Steering Committee meeting, the agendas were released to the Steering Committee prior to the meeting for Steering Committee members' input and feedback. All Steering Committee meetings are public meetings, and public participants are welcomed. The Steering Committee meeting agenda, meeting minutes, and presentation materials are posted on the District's dedicated webpage for the CAPP (see Section 1.6 for more information).

#### **1.5. Level of Community Involvement**

The Steering Committee is expected to provide guidance to the District on how to perform the following functions. The details of each function will be discussed in the later chapters.

- State the community-specific purpose for air monitoring
- Prioritize community air quality concerns
- Identify scope of actions
- Define air monitoring objectives
- Establish roles and responsibilities
- Identify proposed monitoring areas
- Help develop air monitoring deployment schedule
- Help the District communicate results to support action

#### **1.6. District Community Air Protection Program Website**

The call for community engagement and inclusion is essential to the CAPP. The District has launched a dedicated webpage to be accessible and transparent with the public. The website provides all the information in one place, such as an overview of the CAPP, Steering Committee application, community meetings updates, maps for the community, Community Air Monitoring Program, emission reduction plans and retrofit pollution control, incentives, and key correspondence. The District uses the webpage as the principal tool to disseminate information, and the District will update the page regularly. The District's Program webpage can be found at:

<http://www.airquality.org/Air-Quality-Health/Community-Air-Protection>

Additional details about what information is presented on the District Program website is provided in Element 14.

#### **1.7. Dedicated Contact Person**

The primary contact to address questions on the CAMP is:

Janice Lam Snyder

Sacramento Metropolitan Air Quality Management District

Program Manager for Air Monitoring, Planning and Data Analysis

Phone: 916-874-4835

Email: [jlam@airquality.org](mailto:jlam@airquality.org)

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## **Element 2: Community-Specific Purpose for Air Monitoring**

The purpose of this CAMP is to define the objectives, goals and strategies for the South Sacramento – Florin community air monitoring. The information provided by community air monitoring can be used to educate and provide awareness about air pollution impacts, help identify the sources and amount of air pollution in the community, and provide information to help develop strategies to reduce or mitigate air pollution impacts and exposure. The information discussed in this section supports this purpose and includes a description of the selected community, reasons for conducting the air quality monitoring, community-specific air quality concerns, and relevant air monitoring information, including data gaps that this monitoring will aim to address.

### **2.1. Community and Boundary Identification**

The Sac Metro Air District recommended to CARB the South Sacramento – Florin community as one of the priority communities in Sacramento to be included in the first year of the State's CAPP. On September 27, 2018, this community was selected by CARB to conduct community air monitoring. The Final Assessment of Proposed Monitoring Locations (Technical Assessment) (Sac Metro Air District, 2018) describes the criteria the District used to develop its priority communities. The District evaluated communities based on their exposure to air pollution and related health risk impact, proportion of disadvantaged and low-income residents, presence of sensitive populations, and socioeconomic factors. The Technical Assessment supported the high priority of community air monitoring in the South Sacramento – Florin community to better understand the community air quality and to evaluate the need for mitigation or emission reduction strategies. The initial community boundary, shown as the dotted black line in Figure 2-1, was established by the recommendations provided in the Technical Assessment. Through deliberations with the Steering Committee and input from the public, the community boundary was expanded to include additional areas surrounding the initial community boundaries. The Steering Committee identified potential priority air pollution sources (stationary, area-wide, and mobile) and provided local knowledge of issues and concerns in the community that was not captured in the original boundary. The expansion of the boundary included adjacent disadvantaged areas, sensitive receptors (schools, day care centers, licensed healthcare facilities), emission sources, and other areas where people may be at risk due to their proximity to known air pollution sources.

The final community boundary for the South Sacramento – Florin community is shown in Figure 2-1. The community is located south of downtown Sacramento along Highway 99 and is primarily a residential area with a population of about 138,000 people.<sup>1</sup> The population characteristics were used to identify the initial community and it included community health indicators, linguistic isolation, income levels, unemployment, and poverty. Complete details of the selection process are contained in the Technical Assessment.

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<sup>1</sup> Population estimates are based on SACOG Transportation Area Zones.





To identify the community-specific air quality needs, the District called upon the Steering Committee and the public to identify local concerns. The committee members stressed the importance of creating awareness of air pollution impacts on communities, especially in underserved areas and near sensitive receptors, such as schools, parks, and young children.

Emissions from mobile sources and businesses, and increased asthma rates in the community were also identified as community concerns.

The Steering Committee, with input from the public, identified the following air quality issues, primarily located within the community<sup>2</sup>. All issues identified were grouped into the categories shown below. The top issues were used to develop the air monitoring objectives (see Monitoring Plan Element 4) and scope of actions (see Monitoring Plan Element 3), which were used in the development of this plan. The list below is provided as it was provided to the committee when voting for the priority issues, with additional footnotes for clarification and to provide information that was provided to the committee during meetings. The list presented to the committee was unranked and is presented here in the order presented to the committee.

#### Stationary Source Emissions<sup>3</sup>

- Campbell Soup (no longer active)<sup>4</sup>
- Wastewater treatment plant
- Stationary sources along Gerber and French Road<sup>5</sup>
- Natural gas turbine (outside the community boundary)<sup>6</sup>

#### Mobile Source Emissions

- Airport emissions
- Idling trucks/traffic on Mack Road and Stockton Boulevard
- Traffic from the truck stop on Stockton Boulevard
- Traffic on Franklin Boulevard
- Emissions from Highway 99
- Vehicles idling at light rail and train crossings
- Train emissions

#### Area Wide Source Emissions

- Emissions from small businesses (for example: nail salons and auto body shops)<sup>7</sup>
- Construction dust
- Emissions from gas-powered equipment and blowers used for landscaping
- Fireplaces (residential wood burning)

#### Natural Source Emissions

- Wildfires

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<sup>2</sup> Additional sources, such as the Sacramento Executive Airport and truck stops were located outside the community but because of the prevailing wind direction, concern was expressed that those sources may impact the community.

<sup>3</sup> The sources included in the list is not a comprehensive list of all sources in the community. This includes only the sources that were specifically identified by the steering committee as a concern.

<sup>4</sup> Campbell Soup is no longer active, but the steering committee members referred to this area as the Campbell Soup area. Current occupants include a Macy's fulfillment center, a Bloomingdale's fulfillment center, and Silgan Containers, a food packaging manufacturer.

<sup>5</sup> Type of sources was not specifically identified by the steering committee.

<sup>6</sup> The steering committee was referencing the Sacramento Power Authority, which is a Title V sources immediately outside of the boundary.

<sup>7</sup> Additional area sources such as smog shops and landscaping equipment were discussed at meetings but were not included in the list of examples provided to the committee when voting for the top issues

Public Outreach/Education

- Need to increase education and outreach efforts
- Educate small business on air quality impacts
- Provide air quality awareness at local schools
- Complaint database

Health-related Issues

- Carcinogens and environmental allergens
- Increasing rates of asthma and respiratory problems in the community, and for sensitive at-risk groups (also can be categorized under impact on sensitive receptors)

Impact on sensitive receptors

- Children walking to school and crossing intersections<sup>8</sup> 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

Others

- Economic ramifications/negative impacts on the economy
- Indoor air quality/air pollution
- Voltage lines/transformer stations

Steering Committee members selected their individual top five issues from the above list. The District and the Steering Committee agreed that the top four issues that received the most votes are the priority issues to be addressed with community air monitoring. These top four air quality issues are discussed in more details in Monitoring Plan Elements 3 and 4.

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

**2.3. Previous and Ongoing Air Quality Reports and Studies**

Based on best available data, the District's Technical Assessment identified communities disproportionately impacted by air pollution as well as those without historical community-level air quality data. This CAMP outlines a strategy to collect air quality data to promote the community's air pollution awareness and to help characterize the emission sources that contribute to the elevated air pollution to this community. The studies, reports, and data, summarized in Table 2-1<sup>9</sup>, provide an overview of the information used as a basis to prioritize

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<sup>8</sup> Specific intersections were not identified in the prioritization survey, but Steering Committee members have discussed pedestrians crossing the Cosumnes River Blvd/Calvine Road freeway overpass to get to and from school.

<sup>9</sup> Web links for electronic copies of the reports and/or studies, if available, are included in the References Section of this Monitoring Plan.

the pollutants and pollution sources such as mobile, stationary, and area-wide sources or the lack of information within the selected community.

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**Table 2-1: Summary of Air Quality Studies and/or Reports**

<b>Air Quality study/report/data</b>	<b>Data avail. within area</b>	<b>Overview and type of analysis conducted</b>	<b>Results/Summary</b>
Wintertime Air Toxics from Wood Smoke in Sacramento (Sonoma Technology, Inc., 2018)	Yes	This study measured hazardous air pollutants (HAPs), black carbon (BC), particulate matter (PM), and wood smoke tracers in environmental justice (EJ) communities and non-EJ communities from December 2016 to January 2017. This study compared intra-community HAP concentrations and concluded that EJ communities are more impacted by mobile emissions when compared to non-EJ communities. Wood smoke contributed to the HAP emissions, but it had little influence on the ambient HAP concentrations.	Northern part of the South Sacramento – Florin Community was included as part of one of the EJ areas in the wood smoke study. Despite the fact that our emission inventory shows more PM emissions in Sacramento County being are from wood burning activities, results from this study indicated that the dominant source of HAPs in the community is more likely related to mobile source emissions rather than wood smoke emissions. These results helped reinforce the Steering Committee concern for understanding the impact from Highway 99 and the need for mobile emissions monitoring in the community.
Sacramento County Ambient Air Quality Monitoring Data (Sac Metro Air District, 2015)	No	The 2015 Air Quality Monitoring Network Assessment concluded that the air monitoring stations are strategically located in Sacramento County to provide sufficient regional air quality information. See Figure 2.2. The air quality data from these monitors is used to show compliance with federal and state air quality health standards. Air monitoring stations may provide localized air quality information if they are located within a community.	Currently, there are no air monitoring stations in the South Sacramento – Florin Community. The nearest air monitoring station is the Sacramento T Street station, which is located approximately 6 miles north of the community.

**Table 2-1: Summary of Air Quality Studies and/or Reports**

Air Quality study/report/data	Data avail. within area	Overview and type of analysis conducted	Results/Summary
CARB Modeling (CARB, 2018)	Yes	<p>Modeling was completed by CARB using 2012 emission inventory for Sacramento County. Modeling showed emission concentrations for diesel PM (DPM), DPM cancer risk, toxic VOCs cancer risk, heavy metals and PM with an aerodynamic diameter of 2.5 micrometers or less PM<sub>2.5</sub>. CARB's modeling was updated using 2016 emission inventory data.</p> <p>From 2012 to 2016, the overall cancer risk has been reduced due to the reduction in emissions as a result of state and local regulations.</p>	<p>While stationary, area-wide and mobile sources all contribute to toxic impacts, the largest is mobile sources. Mobile source impacts are greatest along Highway 99, which intersects the community. The cancer risk modeling indicates that eastern side of Highway 99 and areas near on/off ramps on Highway 99 have higher cancer risk than the western part of the highway, primarily due to meteorology. Results from this modeling indicate the need to monitor for mobile-related pollution in the area.</p>
Emission Inventories	Yes	<p>The District has county-wide emission inventories for criteria pollutants and VOC, which is precursor to ozone. The emission inventories are divided by emission source categories, such as mobile sources, stationary sources, and area-wide sources. The District also has some emission inventories for known toxic stationary sources.</p>	<p>Community-scale emission inventory is being developed for the selected community. Some source category methodologies to develop emission inventory will be based on surrogate information from the community (i.e. population, fuel usage, purchase records) that will provide the best emission estimates. Community air monitoring will help fill in some of the data gap and may be used to identify other potential emission sources not identified by the emission inventory.</p>
Meteorological Parameters	No	<p>The nearest meteorological station is at the Sacramento Executive Airport (KSAC), where parameters such as wind speed and direction, temperature, pressure, and precipitation are measured.</p>	<p>KSAC is located near the South Sacramento – Florin Community and the meteorological conditions from KSAC may be representative of the meteorological conditions in the community.</p>



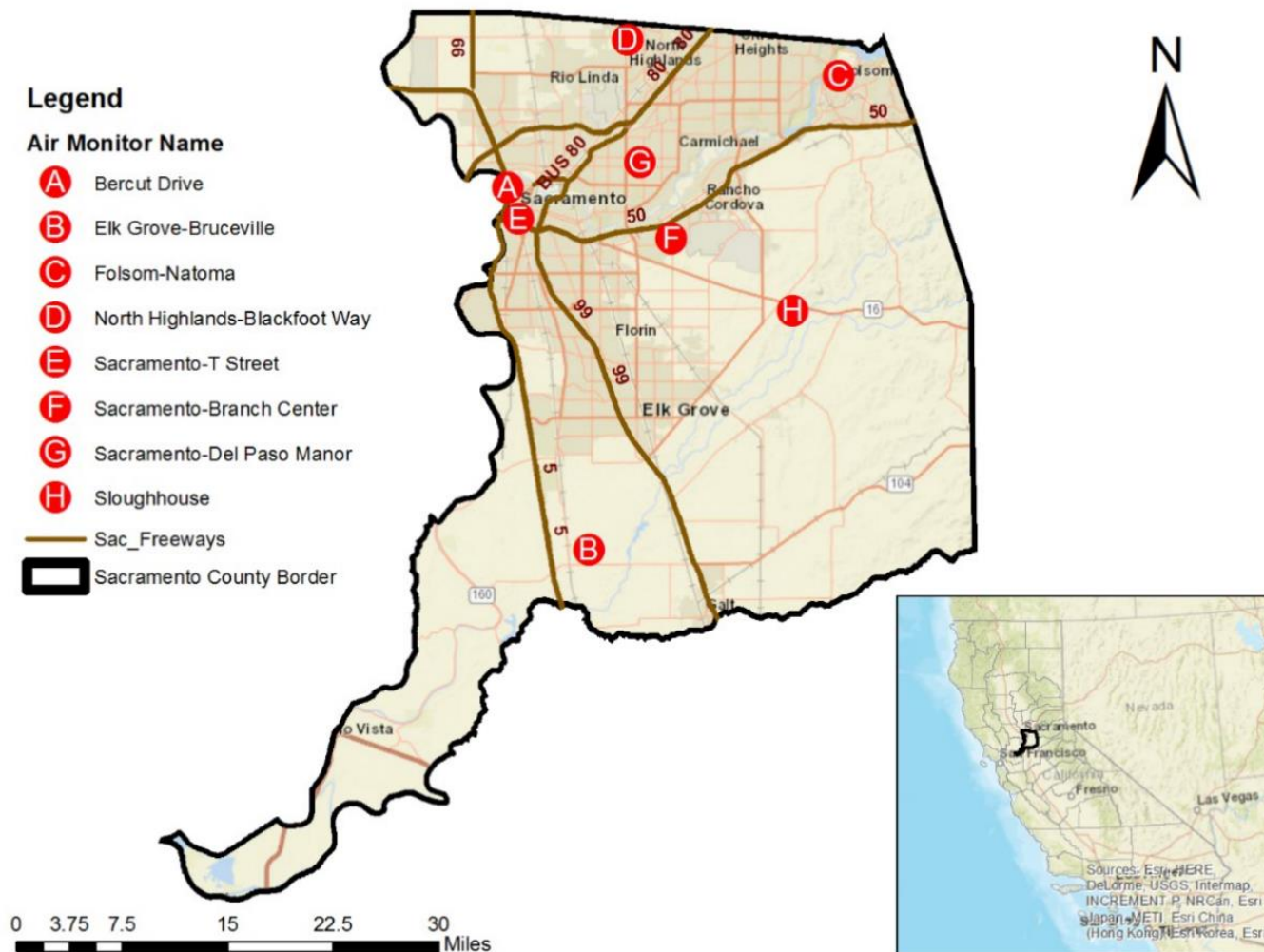


Figure 2-2 Sacramento County Air Monitoring Stations

## **2.4. Gaps in Community Air Monitoring the Study Will Address**

There are eight air monitoring stations in Sacramento County that are used to monitor the air pollution and provide air quality information. These stations are intended to represent regional air quality and are primarily used to demonstrate compliance with regional air quality standards rather than understanding air pollution at a community scale. The District's air monitoring stations are typically sited to capture the highest concentrations of criteria pollutants in a Metropolitan Statistical Area (MSA), which can span large areas ranging from 169 to 29,100 square miles. In addition, some of these monitoring stations have been sited to support a regional understanding of air pollution behavior, such as upwind and downwind sites, and monitoring for air pollution precursors. The 2018 Sacramento Air Monitoring Network Plan (Sac Metro Air District, 2018) describes each monitoring location and its related programs and objectives.

Community air monitoring objectives are like regional objectives but focus on understanding air pollution on a community (microscale) level. There are currently no existing monitoring stations for air quality or meteorology in the South Sacramento – Florin community, and little is known about the localized ambient air pollution, its spatial and temporal variability, or the exposure of nearby receptors. This plan proposes to deploy air quality monitors in the community to provide community-level air quality information to help identify and understand the emission contributions from air pollution source categories. This information will help develop effective measures to reduce air pollution exposure and health-related risks.

The ability to address these air monitoring data gaps will be critical in determining which emission reduction strategies will be the most effective in reducing air pollution exposure and related health risks. The following data gaps were identified:

- Lack of localized air monitoring and meteorological information in the South Sacramento – Florin community.
- Lack of ambient speciated air quality data (toxics, gas or particulates)
- Lack of information on air quality information at sensitive receptors locations; such as schools, day cares, hospital facilities, elderly homes, etc.
- Lack of real time community air pollution information during air pollution events
- Lack of air quality information for areas where there seems to be excessive idling (schools, fast food drive thru, etc.).
- Insufficient number of meteorology within the community.

## **2.5. Alternative Approaches to Investigating and Addressing Air Quality**

The District explored several different approaches to investigate and address the air quality needs in the community. The District will be using a combination of the conventional, professional-grade monitoring equipment and low-cost sensors to address community air quality concerns:



- Low-cost sensors: The District is proposing to include low cost sensors, a screening tool to show relative air pollution concentrations and trends in the community. The advantages of using low cost sensors are:
  - They are relatively inexpensive.
  - They can be deployed in sufficient quantity to increase the spatial gradient information.
  - They are low maintenance.
  - They have high time resolution (e.g., 1-minute sampling).
  - They have established online data portals for public viewing in real time.

On the other hand, low cost sensors provide less reliable data than professional-grade monitors and are extremely limited in the type of pollutants they monitor. Despite these limitations, low cost sensors may play an important role in addressing the Steering Committee's priority to increase air quality awareness and education. The real-time information on the relative air quality conditions in the community can help the community make informed decisions that will minimize its air pollution exposure.

- Conventional, professional-grade monitoring equipment: The District is proposing the use of stand-alone professional-grade monitors in specific locations in the community where there known emissions air pollution sources. The District determined that the use of stand-alone professional-grade monitors in specific locations would complement the data obtained by the existing monitoring network and the low-cost monitors included in Phase 1. The District proposes including the use of professional-grade monitors at specific locations during Phase 2 of the monitoring program. The data provided by these stations would help evaluate what type of known emissions sources may be contributing to the air pollution burden. This information will also be used to address the Steering Committee's concern about the impacts from mobile and stationary sources.
- Portable equipment: The District is developing a portable air monitoring station that can offer capability and measurement rigor approaching the capability of a fixed air monitoring station but with the ability to be moved and set up in locations of special interest. The District proposes the use of this portable air monitoring station at locations of special interest in Phase 3 of the air monitoring program.

The District anticipates that the portable station will provide a range of air monitoring information like the range offered by fixed stations, with real-time measurement of many air pollutants. The data collected by the portable station will be important in addressing the Steering Committee's priority of determining the range of emissions from specific mobile, area-wide, and stationary sources that may contribute to the elevated levels of risk and burden in the community.

- Mobile monitoring: The District is exploring the use of an outside vendor to conduct mobile monitoring, which is where a vehicle with mounted monitoring equipment drives on the roadways and freeways and collects air quality data. Mobile monitoring can give a snapshot of the emissions for a specific time at a specific location. Multiple runs would be necessary to understand the emissions spatial and temporal characteristics. In addition, mobile monitoring is limited to only pollutants that can be continuously monitored. Additional detailed emission information with different type of monitoring instrument would be needed to help perform a source attribution analysis. The District continues to explore the use of mobile monitoring to help address the community's objectives.

## Element 3: Scope of Actions

### 3.1. Actions that air monitoring aims to support

With input from the Steering Committee and the public, the scope of actions was discussed, identified, and prioritized during Steering Committee meetings. Listed below are concerns and associated desired actions that were identified as results from implementation of the CAMP. These actions will help define what data can be used to support desired outcomes, set the context for the planning process, and will be used to develop actionable control strategies to reduce community exposure to air pollution. Shown below is the scope of actions that was identified for each of the four concerns.

#### **Concern #1**

Need to increase air quality education and outreach efforts

##### **Desired Action**

#### **Implement better and more targeted public outreach and education efforts.**

Communication is a key factor in making the public become aware of the air quality issues in their respective communities. The public outreach and engagement should be able to reach all groups, including the minority population and young adults, and should be conducted using multiple methods, such as social media and door hangers. Steering Committee members noted that the lack of air quality awareness and education was evident during recent wildfires, where children were seen exercising in wildfire smoke and appearing to disregard health advisories. The following are specific desired actions developed to help address this concern:

- Partner with the Sacramento City Unified School District and Elk Grove Unified School District to educate students on air quality
- Develop a public air quality awareness plan, which would include methods to notify the community
- Develop a central repository/location where the public can find out more information
- Provide information in multiple languages
- Increase efforts to reach more people through social media

#### **Concern #2**

Emissions from Highway 99/traffic

##### **Desired Action**

**Implement strategies to mitigate mobile source emissions impacts from Highway 99 and for other traffic within the community.** The data collected through this project will be important because it may be used to advocate for changes or solutions at a local and state level. Several of these strategies will require county-wide implementation and cooperation with many local and state agencies. Some of the desired actions to address the concern of the impacts from Highway 99 or other areas of high traffic may be using District programs that incentivize clean mobile source technology. Possible incentive projects that could be implemented include addition or improvement to electrical vehicle charging and sharing infrastructure, diesel vehicle trade-in programs, replacement of dirty school buses with electric school buses, Clean Cars 4 All or Car Share program, and alternative transportation share programs, like the Jump Bikes.

Steering Committee members also stated that more enforcement of regulations on trucks needs to be done in the community. Another suggestion was to look into innovative programs, such as the use of tolls, to help incentivize more clean technology opportunities in the community. These actions would need coordination with other local and state agencies. To help achieve this desired action, the Steering Committee requested that there should be communication and cooperation with other agencies. The following are specific desired actions identified to help address this concern:

- Locate electrical vehicle charging and sharing infrastructure at the most used off-ramps
- Provide incentive funding for alternative modes of transportation such as carpooling /telecommuting
- Increase enforcement of truck regulations in the community
- Increase communication with other applicable agencies, such as SACOG

### **Concern #3**

Increasing rates of asthma and respiratory problems in the community

#### **Desired Action**

**Provide individuals within the community with the information needed to make decisions based on community air quality data.** The desired actions reflect concerns expressed by the Steering Committee regarding the health effects from air pollution, particularly asthma and other respiratory problems. Some Steering Committee members disclosed that this concern directly impacted them or someone they know. Part of the issue is air quality awareness, which is related to Concern #1. Although current programs exist to notify people of high pollution days, monitoring data could be used to support communication of health impacts and to improve access to community-specific data. The monitoring data could support increased and potentially more targeted education in lower income areas and higher minority populations within the community to inform residents. The specific actions for this concern are listed below:

- Work with local health officials to inform community about impacts of poor air quality and availability of air quality data.
- Provide air quality information to the public so they can make informed decisions (e.g. when they should wear a mask if air quality is poor)

### **Concern #4**

Emissions impacts from businesses

#### **Desired Action**

**Understand more fully the potential emissions contributions from small businesses to the nearby community areas and develop ways to mitigate those contributions.** The Steering Committee wanted to ensure that the desired actions do not unnecessarily harm small businesses. They expressed some desire to promote incentives and education programs as priorities with small businesses to help reduce their emissions and impacts to the community. Steering Committee members recognized that this is an excellent opportunity to invest in clean technologies; however, existence of these programs may not be widely known within the community, and better education and outreach might be necessary. The following are specific desired actions for this concern:

- Determine if small businesses are contributing to poor air quality in the community
- Increase education on incentives/grants that are available

- Promote incentive programs to businesses and identify opportunities to invest in clean air technologies

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## **Element 4: Air Monitoring Objectives**

### **4.1. Air Monitoring Objectives**

The following air monitoring objectives were developed by the Steering Committee based on the individual concerns that were identified in Monitoring Plan Element 2. These objectives were designed to support desired actions listed in Monitoring Plan Element 3. Additional details about the how the data will be used is included in later elements of this CAMP.

**Objective 1:** *Increase air quality awareness in the community by making air quality information readily accessible and easy to understand.*

**Discussion:** In Concern #1, the Steering Committee discussed the lack of air pollution awareness in their community, especially the adverse effects due to exposure to poor air quality. To address this objective, monitoring at schools and providing real-time air quality data will be a priority.

**Objective 2:** *Monitor for traffic related air pollutants (criteria and toxics). Determine the spatial distribution of pollution from traffic on Highway 99 and whether these emissions are significant at schools and hospitals.*

**Discussion:** In Concern #2, the Steering Committee expressed concerns about the potential emission impacts from Highway 99 and general traffic emissions in the community. They expressed a need to better understand the impacts from traffic related pollution and to be able to use this information to support programs to reduce these emissions. To address this objective, monitoring for traffic related pollutants along the freeway and high traffic areas will be a priority.

**Objective 3:** *Determine the air quality at sensitive receptor locations and whether air quality changes by season and locations for these sensitive locations*

**Discussion:** In Concern #3, the committee discussed how it will be important to collect data that may help local health officials determine if there is a correlation between air pollution and rates of asthma and respiratory problems in the community. To address this objective, monitoring near sensitive groups such as where children are likely to be (parks, recreational centers, and schools), elderly facilities, and hospitals will be a priority. Continuous monitoring for criteria pollutants such as PM and ozone can provide air quality data to compare to federal and state health standards.

**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*

**Discussion:** In Concern #4, the Steering Committee identified several priority areas of concern where business related emissions may be significant. There is a desire to understand the potential impact of business-related emissions to nearby areas. To address this objective, the District will monitor near clusters of stationary sources and measure concentrations of specific air toxics related to these sources. This monitoring will help determine which source categories are likely to pose the most significant health impact.

## 4.2. Community Air Monitoring Design

This CAMP is designed to help meet the objectives identified in Section 4.1. Community air monitoring will provide the current air quality conditions, help identify the emissions contribution from different source categories, and evaluate the air quality concerns identified by community Steering Committee. Monitoring will be conducted to examine air quality for sensitive receptors, spatial and temporal trends, and air quality fluctuations due to changes in meteorology, traffic, and hours of operation at commercial and industrial sources.

The results from this monitoring should enable the community to better understand the air quality in their community. The air quality data can be used for source attribution (i.e. determination of how much air pollution is contributed by each air pollution source), which will help determine the emission source categories influencing air quality in the area. Specific parameters will be targeted in order to identify the types and source of emissions. Table 4-1 shows examples of known source categories in the South Sacramento – Florin community and its associated pollutants of concern.

**Table 4-1: Example of Known Sources and Potential Pollutants of Concern**

Source	Potential Pollutants of Concern
Diesel Combustion (Internal Combustion Engine, Heavy Duty Trucks, Trains, Construction)	BC, OC, CO, NO <sub>x</sub> , NO <sub>2</sub> , Speciated PM (metals), VOC, PM mass
Coating Operations/Auto Body Shops	VOC (including aromatics, chlorinated compounds)
Gasoline Dispensing Facilities	VOC (including benzene and toluene)
Residential Wood Smoke	Speciated PM, PM mass, BC, OC
Light Duty Vehicles	VOC, Speciated PM (toxic metals), PM mass, BC, OC, CO, NO <sub>x</sub>
Aircraft	Speciated PM (Pb), PM mass
Wildfire	PM mass, BC, OC

Key: PM – Particulate Matter; BC – Black Carbon; OC – Organic Carbon; CO – Carbon Monoxide; NO<sub>x</sub> – Nitrogen Oxide; VOC – Volatile Organic Carbons; and Pb - Lead

The District worked with the Steering Committee and the public on the community air monitoring locations and design. The design of the monitor strategy consists of three phases: 1) Increasing spatial information and providing real-time air quality with low cost sensors (initial screening), 2) enhance screening with stand-alone monitors, and 3) professional monitoring with portable monitoring station.

**Phase 1 – Initial Screening:** Low cost sensors will be placed at or near schools and other sensitive receptors. Information from PM low cost sensors helps determine the localized PM

concentration that may come from traffic, residential wood smoke, wildfire smoke and bus idling at schools, and can increase awareness in the community. Sensors will be located throughout the community (See Monitoring Plan Element 8 for locations of sensors) and be used as screening tools to determine potential areas where further monitoring needs to be conducted.

**Phase 2 – Enhance Screening:** Stand-alone monitors will consist of stationary professional-grade equipment to collect more specific emissions information, including black carbon, toxics compounds (gaseous and PM). Information from stand-alone monitors will help determine what area has the highest emission concentration. This monitoring will assist in determining the general area to site the portable trailer in Phase 3.

**Phase 3 – Professional Monitoring:** The portable trailer is an air monitoring station on wheels where a suite of professional-grade equipment can operate to help identify specific emission information. The equipment will include instruments for continuous measurements and air sampling for laboratory analysis. The information collected from the equipment in the portable trailer will be used to help identify the emissions contributions from different types of sources.

#### **4.3. Types of Data Needed and Measurements to Be Made**

Table 4-2 shows the types of data to be collected and measurements to be made in Phases 1, 2 and 3. The monitoring will include other measurements, such as meteorological parameters (e.g., temperature, wind speed, and wind direction), to help better understand the trajectory and chemical reactions of the emitted pollutants. Where available, this information will be compared to traffic patterns, hours of operation at commercial and industrial facilities, times when children are in school or outside, construction activities, and other information to determine periods of time when impacts may be higher. The collected air quality data will also help determine how pollution levels vary with location and over time. The collected air quality data will be reviewed to determine whether there are significant trends in the data. Ultimately, this information will be used as a basis for making decisions to protect public health and improving air quality awareness within the community.



**Table 4-2: Pollutant Monitoring**

Type of Site	Parameters		Frequency
<b>Phase 1: Low Cost Monitoring</b>	Particulate Matter (PM)	PM <sub>2.5</sub>	Continuous
	Gaseous	Ozone, nitrogen dioxide (NO <sub>2</sub> )	Continuous
<b>Phase 2: Stand Alone Professional/ Mid-Grade equipment</b>	PM	Black Carbon	Continuous
		Toxic Metals	Samples (e.g., 3 hours, 12 hours, 24 hours); Requires Lab Analysis
	Toxic Chemicals (Gaseous)	VOC – U.S. Environmental Protection Agency (EPA) Toxic Organics Method 15 (TO-15)	Samples (e.g., 3 hours, 12 hours, 24 hours); Requires Lab Analysis
<b>Phase 3: Portable Monitoring (Trailer)</b>	Particulate Matter	PM <sub>2.5</sub>	Continuous
		Black Carbon	Continuous
		Organic Carbon/Elemental Carbon	Continuous
		Toxic Metals	Samples (e.g., 3 hours, 12 hours, 24 hours)
	Gaseous	Oxides of Nitrogen (NO <sub>x</sub> /NO <sub>2</sub> )	Continuous
		Ozone	Continuous
	Toxics Chemicals	VOC - EPA TO-15*	Samples (e.g., 3 hours, 12 hours, 24 hours); Requires Lab Analysis
		Carbonyls	Samples (e.g., 3 hours, 12 hours, 24 hours); Requires Lab Analysis
	Meteorology (Weather)	Wind Direction	Continuous
		Wind Speed	
		Temperature	
		Humidity	
		Precipitation	

\* The TO-15 Method consists of a list of 67 organic compounds, which can be expanded to 100.

#### 4.4. Duration of Monitoring

Air monitoring equipment will begin deployment by July 1<sup>st</sup> and will be deployed in three phases, which are described below. Details about each phase are included in Element 8 of this CAMP.

1 Phase 1 – Initial screening

- Begin deployment of low-cost sensors by July 1, 2019 to initiate monitoring in the community
- Deploy approximately 22 low cost sensors<sup>10</sup> by (FILL IN)
- Real time data will be provided
- Leave low cost sensors in place for at least a year and consult with Steering Committee to determine if and where they may want to redeploy for additional screening areas

2 Phase 2 – Enhanced screening

- Deploy enhanced screening monitors (FILL IN)
- Install one enhanced monitoring sites in each of the six priority areas.
- Monitor enhanced screening locations for at least XX months
- Frequency of sample collection of toxics is schedule to be a 1 in 6 day sampling
- Send samples to laboratory for chemical analysis
- Determine the locations to monitor with the portable monitoring station in Phase 3.

3 Phase 3 – Professional monitoring with a portable monitoring station

- Deploy one portable monitoring station in (FILL IN)
- Monitor for at least (XX) months per location
- Toxic samples are scheduled to be collected at a frequency of 1 in 6 sampling days

Air quality monitoring will be conducted for at least one year, which will give the District the opportunity capture the potential for seasonal variation. Additional monitoring beyond the defined monitoring period might be necessary, depending on when monitoring can be conducted in certain areas, whether monitoring is possible in the ability to monitor in all the recommended areas, and whether areas where additional monitoring needs to be conducted in additional areas to better characterize the air quality throughout the community.

The duration of the monitoring can vary depending on the type of equipment used at each monitoring location. As part of the development of the monitoring plan, the air quality data will be continually evaluated to determine if monitors need to be relocated. Monitors might be moved due to high or low air quality concentrations in certain areas to better identify sources and their range of influence. Modifying this CAMP is discussed in greater detail in Element 12.

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<sup>10</sup> The final number of sensors deployed will be dependent on the ability of the District to secure locations to install monitors. If locations cannot be secured, it may be less.

#### **4.5. Using Air Monitoring Data to Inform Decisions That Results in Action**

Community air monitoring will provide the public with a better understanding of the severity of localized air quality impacts in the South Sacramento- Florin community as well as help determine the size of the impacted area and evaluate trends based on time and location. The air monitoring data will help the District, the Steering Committee and the public to focus on specific control strategies with the goal of reducing air pollution exposures. Actions may include more targeted public outreach and education efforts and resources focused on source categories determined to be significant contributors to air pollution in the community. Resources could include the development or allocation of incentive programs or the development of regulations. Ultimately, the air monitoring data may be used to develop and pursue emission reduction actions and may be used during development and implementation of a community emission reduction plan if the South Sacramento-Florin community is selected by the CARB Governing Board.

## Element 5: Roles and Responsibilities

### 5.1. Responsible Parties, Roles and Interactions

This element of the CAMP discusses the roles and responsibilities of the responsible parties, including the District, CARB, selected Steering Committee members, and contractors. The District is responsible for the development and implementation of this CAMP. CARB's role is to provide technical support to the district. The Steering Committee, discussed in Monitoring Plan Element 1, serves as a liaison between the community and the District to provide key air pollution priorities and concerns, and to provide valuable local knowledge of the South Sacramento-Florin community. When necessary, contractors will be hired to provide laboratory services. All responsible parties will use best practices to address environmental justice issues.

Table 5-1 lists the affiliation of the parties and their roles and responsibilities.

**Table 5-1: Key participants and their roles**

<b>Affiliation</b>	<b>Title</b>	<b>Roles and Responsibilities</b>
Sac Metro Air District  <b>Oversight: Executive Officer/Air Pollution Control Officer</b>		<ul style="list-style-type: none"> <li>Establishes the formation of Steering Committee to facilitate communication with community members regarding the community air monitoring program</li> <li>Works with the Steering Committee and public</li> <li>Communicates directly with the community to understand their air quality concerns</li> <li>Informs the Steering Committee and public of the progress of the CAMP and encourages public participation</li> <li>Communicates information from the monitoring data to the Steering Committee and public</li> </ul>
District	Division Manager	<ul style="list-style-type: none"> <li>Provides oversight of CAMP development and implementation</li> <li>Makes periodic presentations to the District Board of Directors on the progress of the community air monitoring program</li> <li>Acts as a point of contact among the Steering Committee, CARB, and District</li> </ul>

**Table 5-1: Key participants and their roles**

<b>Affiliation</b>	<b>Title</b>	<b>Roles and Responsibilities</b>
District	Program Manager	<ul style="list-style-type: none"> <li>Assists the Division Manager to perform his roles and responsibilities</li> <li>Ensures proper implementation of the community air monitoring program</li> <li>Acts as the policy and technical advisor for the CAMP</li> <li>Acts as a point of contact for the Steering Committee, CARB, and District</li> <li>Coordinates staff resources to develop materials for community meetings and the CAMP</li> <li>Coordinates with the Chair and Vice-Chair of the Steering Committee to set the agenda of each Steering Committee meeting</li> </ul>
District	Program Supervisor (Planning and Data Analysis)	<ul style="list-style-type: none"> <li>Acts as an alternate point of contact among the Steering Committee, CARB, and District</li> <li>Leads Planning and Data Analysis team</li> <li>Coordinates the development of CAMP</li> <li>Coordinates with Steering Committee members to set up Steering Committee meetings, including dates, times, and locations</li> <li>Maintains notes and records for the Steering Committee meetings</li> <li>Ensures public materials are posted on website</li> <li>Reviews and advises on air quality data analysis work</li> </ul>
District	Program Supervisor (Air Monitoring)	<ul style="list-style-type: none"> <li>Leads the air monitoring team of the District</li> <li>Purchases equipment for community air monitoring program</li> <li>Ensures the air monitoring setup meets the program requirements</li> <li>Leads quality control and quality assurance effort for the air quality data</li> <li>Ensures that the real-time air quality data are available to the public</li> <li>Selects contractors to perform air quality monitoring work and equipment installation</li> <li>Reviews reports prepared by the contractors and makes them available to general public in a reasonable timeframe</li> <li>Oversees air monitoring-related contracts (e.g., laboratory analysis)</li> </ul>

**Table 5-1: Key participants and their roles**

<b>Affiliation</b>	<b>Title</b>	<b>Roles and Responsibilities</b>
District	Air Quality Instrument Specialist	<ul style="list-style-type: none"> <li>• Installs and maintain air monitoring equipment</li> <li>• Performs quality checks on equipment on a regular basis and documents all work in the log book</li> <li>• Calibrates the air monitoring equipment periodically to ensure data quality</li> </ul>
District	Air Quality Specialists/ Statistician	<ul style="list-style-type: none"> <li>• Ensures all the air quality data collected are in accordance with the air monitoring plan and applicable Standard Operating Procedures (SOPs)</li> <li>• Performs data quality control and quality assurance</li> <li>• Ships the air quality samples to contractors for laboratory analyses</li> </ul>
District	Communication Officer	<ul style="list-style-type: none"> <li>• Assists in the preparation of outreach materials</li> <li>• Assists in coordinating outreach activities</li> <li>• Conducts outreach to public</li> <li>• Responds to media inquires</li> </ul>
California Air Resources Board (CARB)		<ul style="list-style-type: none"> <li>• Provides technical assistance to the District on the development and implementation of the CAMP</li> <li>• Develops and maintains a database for measured air quality data</li> <li>• Participates in Steering Committee meetings</li> <li>• Provides information on statewide programs or efforts relating to the CAPP</li> </ul>
Steering Committee	Members	<ul style="list-style-type: none"> <li>• Provides input and feedback on the CAMP</li> <li>• Serves as a liaison between the District and the community</li> <li>• Assists in the identification of potential sources of air pollution and provides recommendations for locations to monitor these air pollutants</li> <li>• Assists District staff in public outreach activities</li> <li>• Attends monthly Steering Committee meetings</li> </ul>
Steering Committee	Chair and Vice Chair	<ul style="list-style-type: none"> <li>• Represents the Steering Committee in an official capacity</li> <li>• Works with the Steering Committee members to reach consensus</li> <li>• Disseminates information to the Steering Committee members</li> <li>• Facilitates Steering Committee meetings</li> <li>• Provides periodic updates to the District Board of Directors</li> <li>• Vice-Chair will assist and/or act as Chair if the Chair is unavailable</li> </ul>

**Table 5-1: Key participants and their roles**

<b>Affiliation</b>	<b>Title</b>	<b>Roles and Responsibilities</b>
Contractors		<ul style="list-style-type: none"><li>• Provides technical support to implement the CAMP</li><li>• Receives air monitoring samples from the District</li><li>• Follows approved or accepted protocol to perform laboratory analysis of samples</li><li>• When applicable, cleans sample equipment for redeployment</li><li>• Provides data, including method detection limits, accuracy, and precision, to the District</li><li>• Provides reports and evaluation results to the District</li></ul>

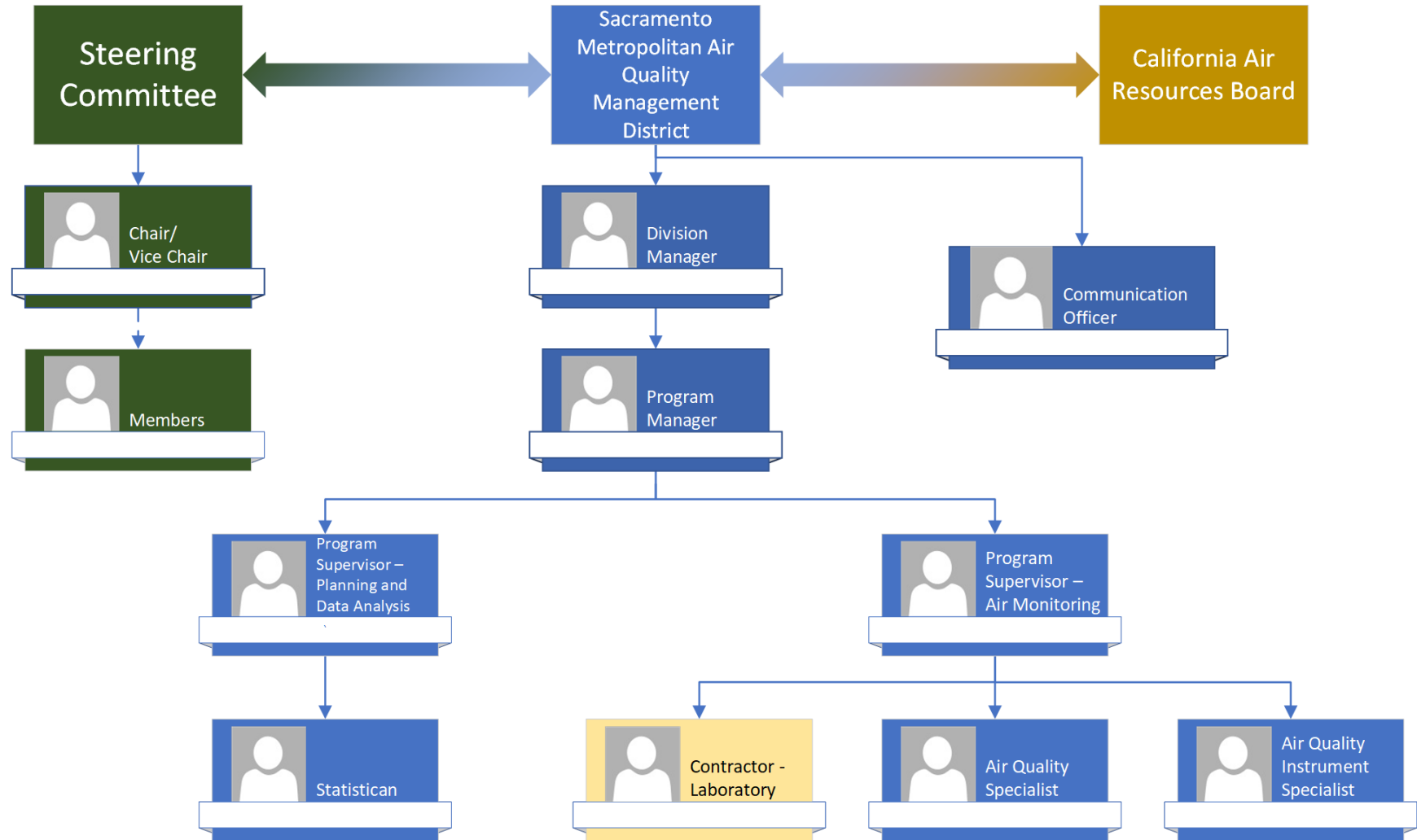


Figure 5-3: Organization Chart



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