

## **Element 14 – Communicate Results to Support Action**

Element 14 of the Community Air Monitoring Plan (CAMP) describes how the air quality monitoring data will be communicated. The District is asking the Steering Committee for their comments on how results of the air monitoring should be communicated.

To help the Steering Committee provide comments, the District is providing a summary of what should be in Element 14 based on the Community Air Monitoring Blueprint, examples of monitoring plans, and examples of how community air monitoring data have been communicated for other programs. Some of the examples provided are websites, that are used to display current or historic air quality data. The potential ways to communicate results are not limited to the elements provided, and they are provided as examples of what other air monitoring programs have done to communicate results.

### **Summary of Element 14:**

Element 14 should describe how the District will communicate air monitoring results. The element should describe how the District will present unreviewed data, laboratory reports, and finalized data. The Steering Community and District should establish a transparent process for sharing the monitoring information, including ongoing progress, progress updates, and final results of the air monitoring program.

The element can also describe the elements that will be contained in progress and final reports. The final report should contain at least a summary of the air monitoring activities, the reasons for the air monitoring, a description of how monitoring data were collected, validated, analyzed, and communicated, recommendations for the next steps, and a plan to communicate the data. Additional information that can be included in the interim or final reports include air quality trends, source attribution, evolution of whether air monitoring milestones have been reached, and other considerations.

Actions that should be considered include both short term actions, such as whether a child should play due to current air quality, and long-term actions, such as working with planning groups to reduce air pollution in the community.

Element 14 should also include what other information will be made available on the District Community Air Monitoring website, such as materials presented to the Steering Community, fact sheets, lab reports, or other information.

### **Example Planning Documents:**

Sac Metro AQMD has provided excerpts of the Imperial County APCD, San Diego APCD, and San Joaquin Shafter monitoring plan documents. Complete versions of the documents are linked below. The excerpts provide an example of what other districts have in their monitoring plans. The San Diego AB 617 community was a monitoring-only community when the CAMP was created. The Imperial and San Joaquin AB 617 communities are air monitoring and emission reduction program communities.

Links to websites that display air quality information have also been provided. These websites are a way that air monitoring data can be displayed in real time (e.g. Sac Metro Community Air Monitoring page and IVAN website) or as a summary of monitoring results (e.g. Mates IV).

### Example Planning Documents:

- Imperial County APCD CAMP (Element 14<sup>1</sup> begins on page 79): [https://c1b3e492-1448-4e62-b7f8-7aaf61550a90.filesusr.com/ugd/99eb03\\_4aacc3a0f9b34bbbbc9c908b8ba628bc.pdf](https://c1b3e492-1448-4e62-b7f8-7aaf61550a90.filesusr.com/ugd/99eb03_4aacc3a0f9b34bbbbc9c908b8ba628bc.pdf)
- San Diego Portside Community CAMP (Element 14 begins on page 127): [https://www.sandiegocounty.gov/content/dam/sdc/apcd/PDF/AB\\_617/AB-617%20Elements%20and%20Required%20Criteria\\_San%20Diego\\_June%202019.pdf](https://www.sandiegocounty.gov/content/dam/sdc/apcd/PDF/AB_617/AB-617%20Elements%20and%20Required%20Criteria_San%20Diego_June%202019.pdf)
- Shafter Community CAMP (Both Element 14 begins on page 21 [both English and Español versions]): [http://community.valleyair.org/media/1306/shafter\\_camp\\_v1\\_2019\\_july.pdf](http://community.valleyair.org/media/1306/shafter_camp_v1_2019_july.pdf) (English), <http://community.valleyair.org/media/1354/shafter-camp-v1-jly-2019-spanish.pdf> (Español)

### Example Reports and Data Presentation:

- West Oakland 100 x100 Report: <https://pubs.acs.org/doi/pdf/10.1021/acs.est.9b00282>
- South Coast AQMD MATES IV Report: <http://www.aqmd.gov/docs/default-source/air-quality/air-toxic-studies/mates-iv/mates-iv-final-draft-report-4-1-15.pdf?sfvrsn=7>
- South Coast AQMD Mates IV Carcinogenic Risk Map: <https://scaqmd-online.maps.arcgis.com/apps/webappviewer/index.html?id=470c30bc6daf4ef6a43f0082973ff45f>
- Sac Metro AQMD Wood Smoke Study Report: [http://www.airquality.org/ProgramCoordination/Documents/Wintertime%20Air%20Toxics%20from%20Wood%20Smoke%20in%20Sacramento\\_Final%20Report.pdf](http://www.airquality.org/ProgramCoordination/Documents/Wintertime%20Air%20Toxics%20from%20Wood%20Smoke%20in%20Sacramento_Final%20Report.pdf)
- Sac Metro AQMD 2018 Air Toxics “Hot Spots” Report: <http://www.airquality.org/StationarySources/Documents/Final%202018%20AB2588%20Annual%20Report.pdf>
- Sac Metro AQMD Community Air Monitoring Webpage: <http://www.airquality.org/Air-Quality-Health/Community-Air-Protection/Community-Air-Monitoring>
- IVAN Imperial Community Air Monitoring Webpage: <https://ivan-imperial.org/air/map>
- EPA AirNow Webpage: [https://airnow.gov/index.cfm?action=airnow.local\\_city&zipcode=95814](https://airnow.gov/index.cfm?action=airnow.local_city&zipcode=95814)
- Denver Love My Air Webpage: <http://www.denveraq.com/>

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<sup>1</sup> All page references are to the pdf page number.

## APPENDIX E – STATEWIDE AIR MONITORING PLAN

### COMMUNICATE RESULTS TO SUPPORT ACTION

Communicating results is critical for ensuring that the air monitoring results in effective action. The community steering committee must establish a transparent process for systematic information sharing and communication. The monitoring plan must indicate how results will be delivered and discussed with community members, decision makers and organizations that have influence to take actions for a specific community. Air districts must communicate ongoing monitoring activities, provide interim progress updates, and publish final results.

The plan should detail what information will be provided on the designated air district webpage (e.g., web portals, factsheets, notices, timeline, meeting agendas, deliverables) and the frequency at which material will be provided and updated. The frequency and content that will be included when updating CARB must be documented.

The plan should also lay out the general content and frequency of reports. The final report includes, at a minimum:

- A summary and timeline of air monitoring with background on the reasons for air monitoring.
- A discussion of how data were collected, validated, analyzed, and disseminated to address the stated community-specific purpose for air monitoring.
- Recommendations and next steps, which may include recommendations for ongoing air monitoring to track progress or verify results achieved by community emissions reduction programs.
- A dissemination plan describing how the data will be disseminated and discussed with appropriate decision makers so that it may lead to the intended action.

AB 617 requires air districts report community air monitoring data to CARB.<sup>12</sup> Air quality data generated under the Program will be made available on CARB's webpage to ensure that community air monitoring data are publicly accessible. To this end, CARB will work to establish or recommend consistent data exchange standards to be used for community air monitoring. These uniform data formatting requirements will inform users about the conditions under which data were collected and will ensure that all community air monitoring data are compatible with CARB's statewide data portal. When established, formal data exchange standard requirements will be available in the community air monitoring toolbox in the online Resource Center.

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<sup>12</sup> California Health and Safety Code § 42705.5(e).

San Diego APCD CAMP

## **Monitoring Plan Element 14: COMMUNICATE RESULTS TO SUPPORT ACTION**

The AB 617 air monitoring program in the Portside Communities is going to generate a large-volume of data. This will necessitate looking at summary statistics to interpret the data, especially when comparing data across the community. The District will not ignore peak values in the data analysis, but since these are included in the calculation of summary statistics, sites with higher measured concentrations will show higher summary statistics.

A major challenge to this air monitoring effort will be to communicate the results to the community, especially since many members of the community may not be familiar with air pollutant concentration data or statistical calculations. The District will make a concerted effort to communicate the results in terms that can be understood by the community. A key component to this effort will be to keep the community aware of the data collection process and to frequently update them on the preliminary results. Additional details on how the data will be communicated with the community are provided in the following subsections.

### **14.1 Information Sharing and Communication with Community**

The District maintains a website that displays current information regarding air pollution. All ambient monitoring information has a dedicated link on the webpage. Similarly, AB 617 information has a dedicated link on the webpage. All real-time AB 617 monitoring information will have a dedicated link on the AB 617 page so the public can view the data.

The District will have quarterly community meetings to disseminate the monitoring data. Senior Monitoring staff will attend these meeting to explain and answer any questions regarding the air monitoring data.

### **14.2 How Results will be Delivered to Stakeholders**

The District will communicate monitoring data and monitoring reports as follows:

- Raw, Black Carbon-continuous data in real-time will be available on the District website.
- Laboratory data and reports on the District website with a section devoted to AB 617 monitoring data (report to include the evaluation process from Element 12.1 of this document).
- Interpretation of the air monitoring data in English and Spanish.
- In quarterly community meetings.

As discussed in Element 12, the District plans to monitor the air in the Portside Communities for a minimum of five years. Assuming, all District criteria are met, as defined in Section 12, reports will be generated that include the following:

- Rationale for why monitoring was conducted in the Portside Communities.
- Summary of operational schedules for all sampling locations.
- An equipment inventory of equipment/air quality parameters at each location.
- Sampling frequency for the equipment at each location.
- Monitoring results for each location will be summarized by:
  - ✓ Diurnal patterns
  - ✓ Time-of-day patterns to traffic congestion (where and when possible)
  - ✓ Day-of-week
  - ✓ Time-of-year/season
  - ✓ Correlation with wind direction/wind speed

- ✓ Comparison of continuous BC to EC-manual integrated 24-hour samples
- Monitoring results from the entire Portside Communities network of sites will be evaluated for trends and pollutant concentration gradients across the network. This analysis will be used to document:
  - ✓ The relative impact from mobile versus stationary source pollutants in and around the Portside Communities
  - ✓ The cumulative impacts from emissions on air pollution concentrations in and around the Portside Communities
    - This will be used to determine if there are emission sources that are significantly impacting downwind areas with pollutants that could be reduced by additional emission control strategies
  - ✓ Air quality trends to document any reductions in measured air pollution concentrations that can be attributed to emission reduction measures undertaken in and around the Portside Communities over the course of the air monitoring program.

### **14.3 Information Provided on Webpages and Frequency of Updates**

The District maintains webpages that make air monitoring data available to the public. Real-time (i.e., continuous (hourly) data that are preliminary (not validated)) monitoring data are available 24 hours per day, 365 days per year at:

[http://airquality.sdapcd.org/air/data/web\\_report.htm](http://airquality.sdapcd.org/air/data/web_report.htm)

This page is updated hourly, roughly 10 minutes after the top of hour (Note: data are reported in Pacific Standard Time year-round.). These data are also sent to the CARB database on an hourly basis.

An archive of daily data reports going back multiple-years is also available on the District's website at:

<http://jtimmer.cts.com/>

Real-time, continuous data collected for the AB 617 air monitoring program will be included in these data files. These data will include the real-time black carbon and meteorological data.

Laboratory data will be posted to the District's website on a quarterly basis after the data have been analyzed at the laboratory and reviewed by District chemists.

CARB is also planning on developing a website which will be known as the AB 617 Community Air Quality Viewer (AQ-View). District data uploaded to CARB will also be available for viewing on this data portal. The CARB data portal will be designed to include real-time data collected from community-based low-cost sensors (there will be drop-down menus to display data of various types and reliability).

### **14.4 Report Generation and Schedules**

Review of laboratory-based data takes longer to be made public due to laboratory procedures and cross-checks. The data from the EC-manual and Toxics-VOCs will be posted for public viewing in quarterly batches. For example, first quarter data will be reviewed for validity, as well as the trends analysis

listed in Element 13; the results will be posted on the District’s website at the end of the second quarter. A schedule of data reporting timelines for AB 617 data is provided in Table 14-1.

**Table 14-1: Timelines for Reporting Laboratory Data**

	<b>Receive Data</b>	<b>Review Lab Data</b>	<b>Post Lab Data</b>	<b>Discuss with Public</b>	<b>Report Lab Data to CARB</b>
VOCs	Weekly	Quarterly	**Quarterly	**Quarterly	Bi-annually
Metals	Quarterly	Quarterly	**Quarterly	**Quarterly	Bi-annually
Elemental C	Quarterly	Quarterly	**Quarterly	**Quarterly	Bi-annually
Black C	Continuous	*Quarterly	**Quarterly	**Quarterly	Bi-annually

\*BC data will be posted on our website continuously. Officially vetted data will be reported quarterly.

\*\*90 days after the conclusion of a quarter.

Imperial APCD CAMP

## 15 Element 14 – Communicate Results to Support Action

### 15.1 Element 14 Overview

Air monitoring results must be clearly and effectively communicated in order to ensure that they result in effective action. Results of air monitoring will be discussed with Community members, decision makers, and organizations that are able to take action in ICAPCD. Ongoing monitoring activities, interim progress updates, and final results will be communicated to the above entities. Information will be made available on the District and CARB webpages.

### 15.2 Communicating Results of Regulatory Monitoring

Results of the regulatory monitoring and data analysis will be made available to members of the Community in various ways. Firstly, the AQI for each of the five regulatory monitors in Imperial County (including the two within the Community) is posted on the homepage of the Imperial Valley Air Quality website.<sup>89</sup> The AQI is the most straightforward method of communication of air quality data to the public. It provides a concise summary of local conditions for a given pollutant in the form of a single indicator, which is calculated based on the most recent concentration measurement collected for that pollutant. At any given moment, there is an AQI for ozone, PM<sub>2.5</sub>, and PM<sub>10</sub>, the highest of which is presented as the AQI on the website and disseminated through other sources. In addition to the Imperial Valley Air Quality website, the AQI is communicated to the public via various other means including email (users can opt in to email updates on the same website), the Imperial Valley Air Quality mobile application, and ICAPCD's social media accounts on Facebook,<sup>90</sup> Twitter,<sup>91</sup> and Instagram.<sup>92</sup>

As described in Chapter 13, the AQI is calculated and communicated to the public as part of the USEPA's AirNow program, using monitoring data that has not yet undergone the quality assurance processes of data validation and verification. Once those are finished, the data is certified and uploaded into the USEPA's AQS. Members of the Community and the public in general can access the raw monitoring data both before and after it is certified by visiting the USEPA website for outdoor air quality data and querying the desired daily data based on geographic area and monitor site.<sup>93</sup>

CARB is currently developing the AQ View portal to store AB 617 monitoring data and make it available to the public. ICAPCD will coordinate with the AQ View team at CARB to ensure the successful transmission of community monitoring data. After AQ View has been fully developed,

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<sup>89</sup> CARB and ICAPCD. Imperial Valley Air Quality. Available at: <http://imperialvalleyair.org/index.cfm>. Accessed: September 2019.

<sup>90</sup> Available at: <https://www.latest.facebook.com/Countyair/>. Accessed: September 2019.

<sup>91</sup> Available at: [https://www.instagram.com/county\\_air/](https://www.instagram.com/county_air/). Accessed: September 2019.

<sup>92</sup> Available at: [https://twitter.com/county\\_air](https://twitter.com/county_air). Accessed: September 2019.

<sup>93</sup> USEPA. Outdoor Air Quality Data: Download Daily Data. Available at: <https://www.epa.gov/outdoor-air-quality-data/download-daily-data>. Accessed: September 2019.

the Steering Committee will evaluate the information available on the site to ensure it meets their needs.

Regarding activity related directly to the Monitoring Plan and Emissions Reduction Program, stakeholders and other members of the Community can refer to the special website created for AB 617 and managed by the District.<sup>94</sup> This website is regularly updated by the District with new information related to AB 617 efforts, such as agendas and minutes from Steering Committee meetings. Visitors to the website also have the option to subscribe to the AB 617 mailing list to receive email updates when news becomes available. In terms of the more specific outcomes of the Monitoring Plan and findings from the monitoring results, Community members and stakeholders will be able to refer to an Annual Progress Report. This report will be made available on the Imperial AB 617 website following its completion at the end of each calendar year. It will include:

- A summary and timeline of air monitoring with background on the reasons for air monitoring.
- A discussion of how data were collected, validated, analyzed, and disseminated to address the purpose for air monitoring.
- Recommendations and next steps, including recommendations for ongoing air monitoring to track progress and verification of results achieved by the Emissions Reduction Program.
- A dissemination plan describing how the data will be disseminated and discussed with appropriate decision makers so that it may lead to the intended action.

### **15.3 Communicating Results of Community Monitoring**

Results of the community monitoring and data analysis will be made available to members of the Community in various ways. As discussed in Section 15.2, CARB is currently developing the AQ View portal to store AB 617 monitoring data and make it available to the public. Upon the installation of the AB 617 Community Monitors, CCV will coordinate with the AQ View team at CARB and ICAPCD to ensure the seamless transmission of community monitoring data. The results of the community monitoring and data analysis will also be made available to the public through an Annual Progress Report, as described in Section 15.2. It may also be made available through the IVAN-Imperial website.<sup>95</sup> However, the details of that are yet to be determined.

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<sup>94</sup> ICAPCD. AB 617 Imperial County – Calexico, Heber, El Centro Corridor. Available at: <https://www.icab617community.org/>. Accessed: September 2019.

<sup>95</sup> IVAN Air Monitoring Imperial Valley Air Quality. Available at: <https://ivan-imperial.org/air>. Accessed: September 2019.

San Joaquin Valley APCD Fresno CAMP

## XII. EVALUATING MONITORING PLAN EFFECTIVENESS

Data from the South Central Fresno community monitoring campaign will be analyzed on an ongoing basis to ensure that data quality objectives are met and the data is able to meet all the community air monitoring objectives outlined in this community air monitoring plan. The real-time and final data will be evaluated to inform the public and allow the District and CARB to appropriately assess the local air quality in the South Central Fresno community. District staff will regularly assess data capture status, completeness, and validity. Any error that limits the District's ability to meet the community air monitoring plan objectives will be identified and the District will take the appropriate corrective actions.

## XIII. ANALYZE AND INTERPRET DATA

As air quality data is collected from the South Central Fresno community air monitoring network, the District will conduct an extensive review and validation process to ensure the highest quality data possible. This data validation process will be subjected to multiple levels of review to maximize the quality assurance process. Interpretation and analysis of monitoring data will differ based on whether the dataset is laboratory-based or of a continuous nature.

### Laboratory Data

For some VOC speciation and filter-based analyzers, the District will likely be contracting with laboratories to perform chemical analyses, as needed. District staff will post the results of the laboratory analysis on the District website after it has undergone the appropriate review process.

### Continuous Data

Continuous monitoring data will be reported to the District website and the CARB AQ-View statewide data portal as preliminary data on an hourly basis. At the end of each month, the preliminary data will undergo multiple levels of review by District staff to ensure that the data is of the highest quality, and to ensure that the analyzers were operated in accordance with the vendor manuals and District protocols.

## XIV. COMMUNICATE RESULTS TO SUPPORT ACTION

All collected preliminary and final data will be summarized and shared by the District through the following platforms:

- **District's website:** hourly for continuous data, quarterly for laboratory data
- **CARB's AQ View portal:** hourly for continuous data, quarterly for laboratory data

- **Community Steering Committee meetings:** Annually, or as requested by committee
- **Annual report:** Final, quality assured data published on District website

District staff will also share final monitoring results with community residents upon completion of the monitoring campaign.