CALIFORNIA
AIR RESOURCES BOARD

Community Air Protection

BLUEPRINT - APPENDICES

Detailed Program Requirements for Selecting Communities, Preparing Community Emissions Reduction Programs, Identifying Statewide Strategies, and Conducting Community Air Monitoring

August 2018

TABLE OF CONTENTS FOR THE APPENDICES

Please submit any written comments by September 24, 2018 to: https://www.arb.ca.gov/lispub/comm/bclist.php.

APPENDIX A.
PREFACE FOR THE APPENDICES

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Please submit any written comments by September 24, 2018 to: https://www.arb.ca.gov/lispub/comm/bclist.php.

I. INTRODUCTION

This *Final Draft Community Air Protection Blueprint for Selecting Communities, Preparing Community Emissions Reduction Programs, Identifying Statewide Strategies, and Conducting Community Air Monitoring* (Blueprint) document establishes the overall Program design, summarizes the main Community Air Protection Program (Program) elements, and describes the timeline for action.[1] To help build the Program, as described in this Blueprint, California Air Resources Board (CARB) staff have developed these appendices, which contain detailed implementation requirements including the following items that are required by Assembly Bill (AB) 617[2]:

- Statewide strategy to reduce emissions of criteria air pollutants and toxic air contaminants.
- Criteria and process for identifying and selecting impacted communities.
- Statewide air monitoring plan for the deployment of community air monitoring.
- Criteria for the development and implementation of community emissions reduction programs.

AB 617 requires CARB staff develop the statewide strategy and the statewide air monitoring plan by October 1, 2018.[3] The CARB Governing Board will meet in September 2018 to consider this Blueprint and consider the selection of communities, to meet the October 1, 2018 statutory requirements.[4]

In line with additional elements set out in AB 617, CARB staff have also developed an online Resource Center to support communities throughout California.[5] This online Resource Center provides the ability for CARB staff to deliver updates quickly to the public as new information becomes available. Information in the online Resource Center addresses AB 617 requirements for:

- Assessments of current air monitoring technologies and community air monitoring systems.[6]

[1] Appendix I provides a glossary to clarify the terms used in this document; it does not contain official definitions to be used for other purposes.
[2] Assembly Bill 617, Garcia, C., Chapter 136, Statutes of 2017, modified the California Health and Safety Code, amending § 40920.6, § 42400, and § 42402, and adding § 39607.1, § 40920.8, § 42411, § 42705.5, and § 44391.2. See Appendix H for complete bill language.
[3] California Health and Safety Code § 44391.2 and § 42705.5(b).
[4] California Health and Safety Code § 44391.2 and § 42705.5(b).
[5] Appendix F provides more detail on CARB's online Resource Center.
[6] California Health and Safety Code § 42705.5(b).

- Technology clearinghouse.[7]
- Other community resources.

CARB will compile a list of documents, tools, and information to support effective implementation of the Program and make them available in the online Resource Center by October 1, 2018.

II. PROGRAM ELEMENTS

The Program established under AB 617 is comprehensive and includes community-focused elements designed to achieve emissions reductions and improve public health in communities with high cumulative exposure burdens (Figure A-1). The legislation also includes additional requirements that work together to support emissions reductions in communities through: accelerated installation of pollution controls on industrial sources like oil refineries, cement plants, and glass manufacturers; expanded air quality monitoring within communities; increased penalties for violations of emissions control limits; and greater transparency and improved public access to air quality and emissions data through enhanced online web tools. Each of these elements is addressed in greater detail in these appendices and in the online Resource Center.

Figure A-1 Community-Focused AB 617 Elements

[7] California Health and Safety Code § 40920.8.

CARB and the State's regional air districts have specific roles and responsibilities in implementing the requirements of AB 617. Our agencies are committed to working closely with community residents and stakeholders to implement the Program. This includes also consulting with the Scientific Review Panel and Office of Environmental Health Hazard Assessment during the development of the Program. Figure A-2 and Figure A-3 summarize the roles and responsibilities for CARB and the air districts, respectively, based on the AB 617 statutory requirements.[8]

Figure A-2 CARB AB 617 Statutory Responsibilities

STATE

- Identifying communities with high cumulative exposure burdens and selecting communities for deployment of community air monitoring and/or development and implementation of community emissions reduction programs, annually, as deemed appropriate.
- Developing a statewide strategy, including measures to reduce emissions and exposure, methods for identifying contributing sources, and criteria to serve as the benchmark that air districts must meet when developing and implementing community emissions reduction programs.
- Preparing a statewide air monitoring plan to assess current monitoring technologies and existing community monitoring programs, and provide criteria and guidance for developing future community air monitoring.
- Establishing and maintaining an emissions control technology clearinghouse.
- Establishing a statewide uniform system of annual emissions reporting for certain categories of sources.
- Implementing and enforcing CARB regulatory programs.
- Program review and oversight.

[8] Assembly Bill 617, Garcia, C., Chapter 136, Statutes of 2017, modified the California Health and Safety Code, amending § 40920.6, § 42400, and § 42402, and adding § 39607.1, § 40920.8, § 42411, § 42705.5, and § 44391.2. See Appendix H for complete bill language.

Figure A-3 Air District AB 617 Statutory Responsibilities

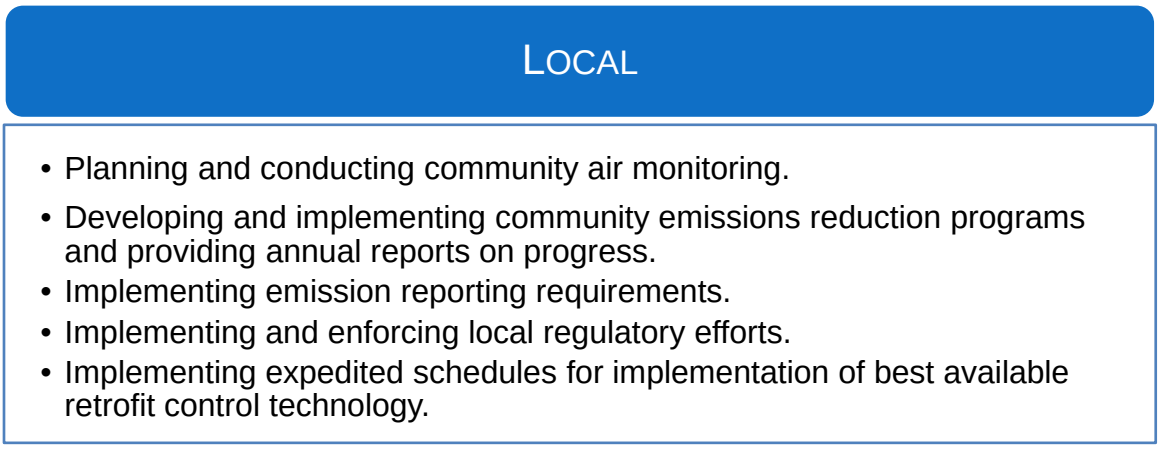


Figure A-4 provides a summary of major Program and AB 617 milestones. Additionally, in support of this effort, staff are moving forward in implementing both the emissions reporting requirements[9] and the Technology Clearinghouse.

[9] The data received from the new annual emissions reporting system will be used to inform: the statewide assessment completed by CARB staff during the annual community selection process, source attribution developed as part of a community emissions reduction program, and to help track progress of community emissions reduction programs.

Figure A-4 Summary of Milestones[10]

JULY 2017
- AB 617 signed by Governor Edmund G. Brown Jr.

BY OCTOBER 2018
- CARB Governing Board selects communities for action in the first year and sets the Program requirements; CARB launches the online Resource Center which includes the Technology Clearinghouse to help identify the cleanest pollution control technologies and air monitoring assessments.

BY LATE 2018
- Air districts convene community steering committees for first-year communities and begin to develop the community emissions reduction programs and community air monitoring plans.

BY JANUARY 2019
- Air districts develop expedited schedules for implementing best available retrofit control technologies, which must be implemented by the end of 2023.

BY JULY 2019
- Air districts deploy monitoring in first-year communities selected for community air monitoring.

BY OCTOBER 2019
- Air districts adopt programs in first-year communities selected for community emissions reduction programs.

BY DECEMBER 2019 AND ANNUALLY THEREAFTER
- CARB Governing Board considers the selection of additional communities, as deemed appropriate, for community emissions reduction programs and community air monitoring plans.

BY EARLY 2020 AND ANNUALLY THEREAFTER
- CARB Governing Board action on air districts' community emissions reduction programs.

BY OCTOBER 2020 AND ANNUALLY THEREAFTER
- Air districts provide annual reports for community emissions reduction programs.

BY DECEMBER 2020 AND ANNUALLY THEREAFTER
- Within one year of the selection of additional communities, air districts adopt community emissions reduction programs and implement/deploy community air monitoring.

BY SEPTEMBER 2023
- CARB Governing Board updates the statewide strategy, which must be updated at least once every five years.

[10] CARB staff will provide periodic updates to the CARB Governing Board.

Table A-1 links the terms used in this Blueprint with the language in AB 617.

Table A-1 Mapping Program Terms with Language in AB 617

Program Terminology	AB 617 Terminology	California Health and Safety Code Section
Assessment of communities	"An assessment and identification of communities with high cumulative exposure burdens for toxic air contaminants and criteria air pollutants."	§ 42705.5(c) § 44391.2(b)(1)
Community air monitoring	"…any district containing a location selected…shall deploy a community air monitoring system in the selected location or locations…."	§ 42705.5(c)
Community air monitoring data portal	"…board shall publish the air quality data on its Internet Web site."	§ 42705.5(e)
Community emissions reduction programs	"…the districts… shall adopt…a community emissions reduction program to achieve emissions reductions for the location selected…"	§ 44391.2(c)(2)
Community selection (for community air monitoring)	"…board shall select, concurrent with the monitoring plan… and based on an assessment of the locations of sensitive receptors and disadvantaged communities, the highest priority locations around the state to deploy community air monitoring systems, which shall be communities with high exposure burdens for toxic air contaminants and criteria air pollutants."	§ 42705.5(c)
Community selection (for community emissions reduction programs)	"… board shall select, concurrent with the strategy, locations around the state for preparation of community emissions reduction programs. The state board shall select additional locations annually thereafter, as appropriate."	§ 44391.2(c)(1)
Disadvantaged community	"…means a community identified as disadvantaged pursuant to [California Health and Safety Code] Section 39711…"	§ 42705.5(a)(2)

(continued on next page)

PROGRAM TERMINOLOGY	AB 617 TERMINOLOGY	CALIFORNIA HEALTH AND SAFETY CODE SECTION
Resources for community air monitoring	"…board shall prepare… a monitoring plan regarding the availability and effectiveness of toxic air contaminant and criteria air pollutant advanced sensing monitoring technologies and existing community air monitoring systems, as well as the need for and benefits of establishing additional community air monitoring systems…."	§ 42705.5(b)
Source attribution (for community emissions reduction programs)	"A methodology for assessing and identifying the contributing sources or categories of sources …and an estimate of their relative contribution to elevated exposure to air pollution in impacted communities…"	§ 44391.2(b)(2)
Statewide strategy	"…board shall prepare… a statewide strategy to reduce emissions of toxic air contaminants and criteria air pollutants in communities affected by a high cumulative exposure burden. The state board shall update the strategy at least once every five years…."	§ 44391.2(b)
Statewide system of annual emissions reporting	"…board… shall establish a uniform statewide system of annual reporting of emissions of criteria pollutants and toxic air contaminants for a stationary source."	§ 39607.1(b)(1)
Technology Clearinghouse	"…board shall establish and maintain a statewide clearinghouse that identifies the best available control technology and best available retrofit control technology for criteria air pollutants, and related technologies for the control of toxic air contaminants…."	§ 40920.8(a)

III. PROGRAM REVIEW PROCESS

While this Blueprint establishes Program elements and requirements, Program implementation will be a dynamic and iterative process. CARB is committed to ongoing collaboration with communities, air districts, affected industry, and other stakeholders to continually review and improve the Program. AB 617 requires CARB to update Program elements periodically and obtain approval from the CARB Governing Board.[11] In addition, the online Resource Center allows the Program to evolve by adding new features and materials as they become available. If necessary, CARB's Executive Officer may clarify Program requirements by adopting changes to this Blueprint, by issuing advisories or additional guidance to enable effective implementation of the Program, provided that such changes are consistent with AB 617 and the goals established by the CARB Governing Board. CARB staff will also provide periodic updates to the CARB Governing Board.

As part of this Program review process, CARB staff will review air district annual progress reports, conduct additional analyses to track implementation progress, and seek opportunities to improve Program guidance. This may include development of new processes for engagement and coordination, or updated criteria. CARB will also conduct outreach to communities to obtain detailed perspectives on Program progress and success. This could include surveys to solicit community perspectives to supplement air district reports, CARB community meetings, and other activities. Learnings from initial Program implementation and outreach will serve as strong models for action and help build more effective programs for future communities with high cumulative exposure burdens. CARB staff will make this information publicly available by posting it in the online Resource Center, along with CARB points of contact and links to air district webpages and other resources to improve Program implementation.

[11] California Health and Safety Code § 42705.5(d) and § 44391.2.

[This page is intentionally left blank.]

APPENDIX B.
IDENTIFICATION, ASSESSMENT, AND SELECTION OF COMMUNITIES

TABLE OF CONTENTS

LIST OF FIGURES

Please submit any written comments by September 24, 2018 to: https://www.arb.ca.gov/lispub/comm/bclist.php.

APPENDIX B – IDENTIFICATION, ASSESSMENT, AND SELECTION OF COMMUNITIES

I. INTRODUCTION

An important element of the Community Air Protection Program (Program) is selecting communities around the State with high cumulative exposure burdens for criteria air pollutants and toxic air contaminants to focus further efforts to improve air quality in these communities in addition to the statewide strategies and Program elements that will be providing reductions in impacted communities across the State. Assembly Bill (AB) 617[54] requires that the California Air Resources Board (CARB) Governing Board annually consider selection of communities for either community emissions reduction programs, community air monitoring, or both, as appropriate. The CARB Governing Board will consider selection of the first set of communities by October 1, 2018.[55] This appendix outlines the annual process and criteria for identifying, assessing, and recommending communities for CARB Governing Board consideration and selection, as deemed appropriate.

Each year's process will include the following three steps:

- *Step 1*: *Identification* – CARB staff developed, and will update annually, a broad list of communities for inclusion in the Program, drawing from recommendations from air districts, from community member nominations, consultation with the Office of Environmental Health Hazard Assessment (OEHHA), and from CARB's own understanding of air pollution data. CARB will publicly post this list in the summer each year.
- *Step 2: Assessment* – CARB staff will consult with community stakeholders and work with air districts and OEHHA annually to assess the cumulative air pollution exposure burden in each community on the list based on the factors outlined throughout this appendix. CARB will publicly post this statewide assessment in early fall each year.
- *Step 3: Selection* – CARB staff will review and provide annual recommendations, as appropriate, on the selection of communities for inclusion in the Program each year. Each year, the CARB Governing Board will consider the selection of additional communities for focused action for either community emissions reduction programs, community air monitoring, or both, as appropriate. The selection of communities will also include a description of near-term actions to be taken across the State to underscore efforts that will be taken to reduce emissions and exposure in all highly burdened communities.

[54] Assembly Bill 617, Garcia, C., Chapter 136, Statutes of 2017, modified the California Health and Safety Code, amending § 40920.6, § 42400, and § 42402, and adding § 39607.1, § 40920.8, § 42411, § 42705.5, and § 44391.2. See Appendix H for complete bill language.
[55] California Health and Safety Code § 42705.5(c) and § 44391.2(c)(1).

CARB staff are setting a strong science-based foundation to identify and prioritize communities that experience high cumulative exposure burdens. In selecting communities, AB 617 specifies that the underlying assessment shall:[56]

- "Prioritize disadvantaged communities and sensitive receptor locations."
- Utilize "one or more of the following: best available modeling information, existing air quality monitoring information, existing health data based on consultation with the Office of Environmental Health Hazard Assessment…and the monitoring results obtained pursuant to (California Health and Safety Code) 42705.5."

The following sections of this appendix outline the specific criteria and processes for identifying, assessing, and selecting communities with high cumulative exposure burdens.

II. IDENTIFICATION

To create the broad list of communities for inclusion in the Program, CARB staff will annually solicit recommendations from community organizations, community members, and air districts. CARB staff have developed specific criteria and a process to collect nominations from communities and recommendations from air districts via an annual solicitation. In February 2018, CARB staff released a *draft Process and Criteria for 2018 Community Selections* document to guide first year community self-nominations and the air district recommendation process.[57] Public comments and discussion on that draft forms the basis for the process that will be used in future years and is described in this appendix.

Community members and community-based organizations have first-hand knowledge of local air quality impacts and concerns. In addition, as air districts are tasked with developing and implementing community air monitoring and community emissions reduction programs, it is critical they be engaged in the process of working with local communities in the community selection process. In consultation with OEHHA, CARB staff will review information available at the statewide level to identify any gaps and supplement the lists received from community members and air districts to ensure a comprehensive statewide list. The result will be an inclusive, publicly posted master list of communities to support each year's selection process. CARB staff will post a list of the community self-nominations and air district community submittals, on the Program's webpage: https://ww2.arb.ca.gov/our-work/programs/Community-Air-Protection-Program-AB617.

[56] California Health and Safety Code § 44391.2.
[57] Technical criteria, requirements for public process, and timelines for the 2018 community self-nominations and air district recommendations are provided in CARB's *draft Process and Criteria for 2018 Community Selections* available at: https://ww2.arb.ca.gov/our-work/programs/Community-Air-Protection-Program-AB617.

Each year, CARB will use this master list and any new nominations, data, and methodologies to evaluate and recommend communities to the CARB Governing Board for community emissions reduction programs, community air monitoring, or both, as appropriate. CARB staff will provide an assessment and recommendations in an annual report that will be available for public review and comment to support consideration by the CARB Governing Board.

COMMUNITY SELF-NOMINATIONS

To self-nominate a community, community-based organizations and community members should provide a short write-up that includes:

- Community location (e.g., boundaries, census tract, identifying city markers).
- Whether the community is nominating itself for deployment of community air monitoring, development of a community emissions reduction program, or both.
- A brief description of the community such as identifying characteristics, socio-economic factors, and existing public health data.
- A brief description of the air pollution concern. If available, include information on sources of air pollution and data on air pollution impacts to the community.

Community self-nominations can be submitted at any time to either CARB or the appropriate air district. CARB staff will forward the community self-nomination received to the appropriate air district to include in their technical assessment of communities. As noted above, if an air district does not complete a technical assessment for the self-nominated community, CARB staff will ensure that this is completed in the statewide process. CARB staff may also contact the community member or group to solicit additional information to ensure a comprehensive evaluation process.

AIR DISTRICT RECOMMENDATIONS

As part of the annual solicitation requirements, CARB staff have established a two-step process for air district submittals. Step one is detailed in this section and step two is detailed in the “Assessment” section of this appendix. In the first step, air districts will submit to CARB an initial list of all communities being considered in their district, based on the results of an initial technical assessment. The deadline for this submittal will be provided each year by CARB. For example, in the first year of the Program this deadline was April 30, 2018.

APPENDIX B – IDENTIFICATION, ASSESSMENT, AND SELECTION OF COMMUNITIES

In the first step, air districts will provide at least the following information in its submittal of all initial communities:

- A list and brief description of all communities with high cumulative exposure burdens that the air district is recommending.
- Additional specific information for each community that is a candidate for recommendation, including descriptions of the community's identifying characteristics and preliminary geographic boundaries.
- Assessment results using CalEnviroScreen 3.0 or the most recently updated version of CalEnviroScreen.[58]
- Description of additional tools or data sources (if used) to identify communities and results.
- Description of the process to refine the list of communities.
- Description of air district's relationships with members of the communities that are candidates for recommendation or community-based organizations located in those communities.
- Description of the proposed public outreach approach and schedule to determine which communities will be included in the final recommendation.
- Other information used, including information submitted by community members that helped in community identification.

In response to CARB's annual solicitation, air districts that previously submitted a list of communities for consideration in a prior year, need to provide information in the steps above for new communities the air district is adding to their list. The air district should also include any new or updated information or data that is relevant for previously submitted list.

[58] Office of Environmental Health Hazard Assessment, CalEnviroScreen, June 30, 2017, available at: https://oehha.ca.gov/calenviroscreen. [Accessed April 5. 2018].

III. ASSESSMENT

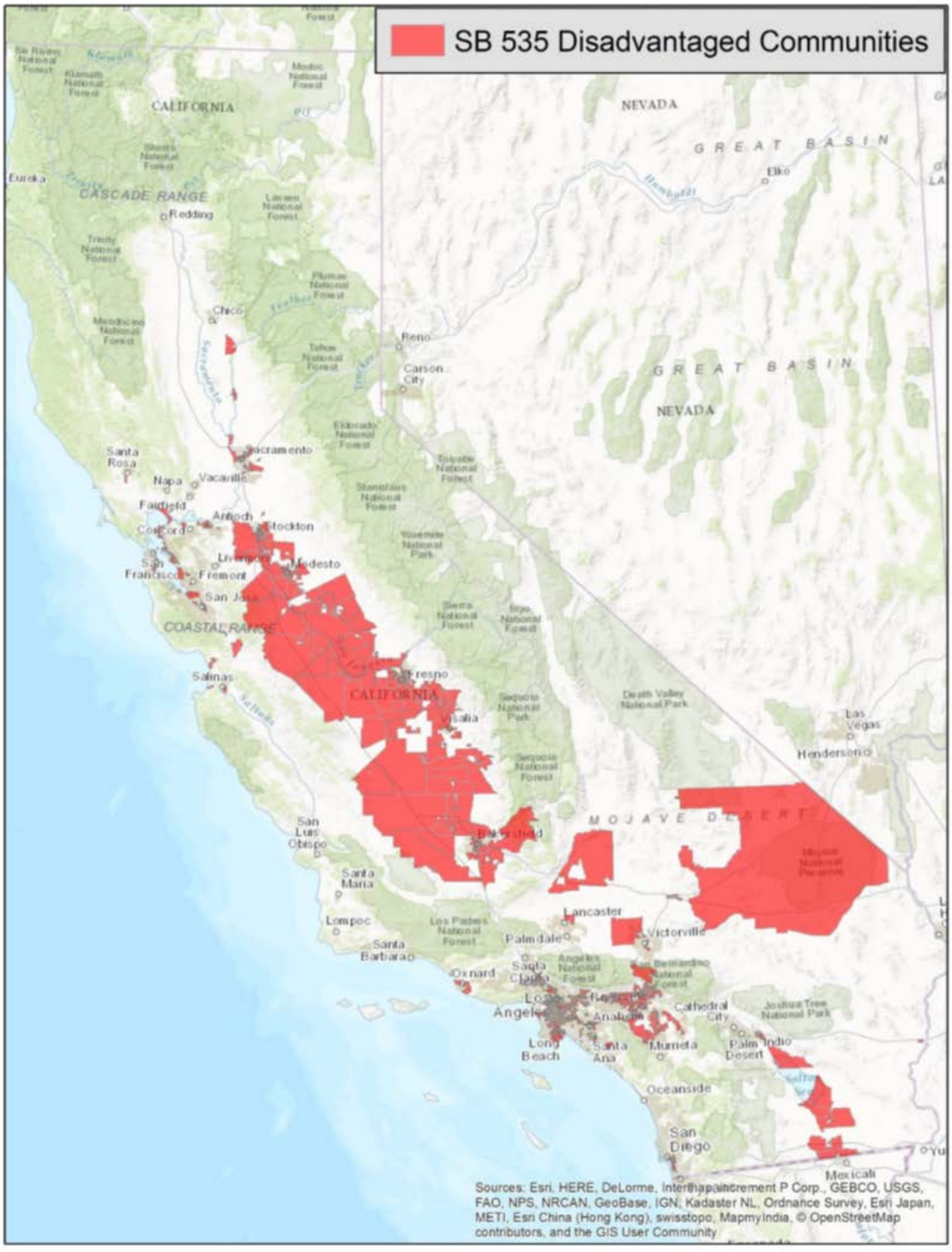
To inform the annual process for review and consideration of specific communities to the CARB Governing Board, CARB staff will work with air districts to conduct an assessment of all community recommendations provided by community members and air districts, as well as any additional communities identified by CARB staff and in accordance with the language of Assembly Bill 617.[59] This assessment will also include identifying disadvantaged communities and locations with sensitive receptors.[60] Disadvantaged communities are identified by the California Environmental Protection Agency pursuant to Senate Bill 535.[61] Figure B-1 indicates disadvantaged communities in California.

The assessment will evaluate factors to characterize the cumulative exposure impacts within each community and help inform staff's recommendations to the CARB Governing Board. The factors include, but are not limited to:

- *Exposure to air pollution –*
    1. Concentrations of ozone, particulate matter, and toxic air pollutants from measurements, air quality modeling, or other information quantifying air pollution exposure burden.
    2. Density of air pollution sources and the magnitude of emissions within the community from mobile and stationary pollution sources.
    3. Cancer risk estimates based on existing or new air quality modeling that characterizes the burden faced by the community.
- *Sensitive populations –*
    4. Sensitive populations including children, individuals with preexisting health conditions, and the elderly at homes, schools, hospitals, and day care centers located in close proximity to mobile and stationary emissions sources of concern, including roadways.
- *Other measures of vulnerability to air pollution –*
    5. Existing public health data that are representative of the incidence or worsening of disease related to air quality such as the prevalence of asthma, heart disease, low birth weights, and premature mortality.
    6. Socio-economic factors, such as poverty levels and unemployment rates.

[59] Assembly Bill 617, Garcia, C., Chapter 136, Statutes of 2017, modified the California Health and Safety Code, amending § 40920.6, § 42400, and § 42402, and adding § 39607.1, § 40920.8, § 42411, § 42705.5, and § 44391.2. See Appendix H for complete bill language.
[60] California Health and Safety Code § 44391.2(b)(1).
[61] Senate Bill 535, DeLeon, Chapter 830, Statutes of 2012, California Health and Safety Code § 39711.

Figure B-1 Disadvantaged Communities *(Census Tracts from CalEnviroScreen 3.0)*



Please submit any written comments by September 24, 2018 to: https://www.arb.ca.gov/lispub/comm/bclist.php.

APPENDIX B – IDENTIFICATION, ASSESSMENT, AND SELECTION OF COMMUNITIES

Under the second step for air district's that submit community recommendations to CARB, air districts will provide a detailed local assessment of the factors for each community under consideration in their region, which will complement CARB's statewide assessment.

In addition to data layers available within CalEnviroScreen, the list below highlights data sources that can be used by air districts and communities in developing their assessments and recommendations.[62] This may include additional data available at the regional level such as local community air monitoring, modeling, and health studies. These data sources may change over time and CARB staff will include a revised list of data sources in each year's solicitation. CARB staff will also draw on many of these data sources in preparing staff's annual statewide assessment to support community recommendations to the CARB Governing Board. As part of this process, CARB staff will develop and post a statewide assessment to summarize the data used to help support selection of the recommended communities. This template will be updated periodically as the Program evolves.[63] The revised version will be included in each year's community recommendation solicitation. The data sources include:

- *State information* –
    - Additional data layers available within CARB's Environmental Justice Screening Method, including sensitive receptor and hazard proximity data.
    - CalEnviroScreen 3.0 or newer results, including social and health metrics, such as poverty level and asthma hospitalizations.
    - California Emission Inventory for mobile, area-wide, and stationary sources.
    - The California Healthy Places Index.[64]
    - CARB Pollution Mapping Tool.
    - Statewide air quality monitoring data for pollutants not included in CalEnviroScreen 3.0.
- *Air district information* –
    - Community-scale emission inventories.
    - Community air quality monitoring and special studies.[65]

---

[62] More information on data sources that can be used by air districts in developing assessments and recommendations is available at: https://ww2.arb.ca.gov/our-work/programs/Community-Air-Protection-Program-AB617.

[63] More information and the template for statewide assessments is available at: https://ww2.arb.ca.gov/our-work/programs/Community-Air-Protection-Program-AB617.

[64] Public Health Alliance of Southern California, *The California Healthy Places Index*, 2018, available at: http://healthyplacesindex.org/.

[65] Examples of studies include: (1) Bay Area Air Quality Management District, Community Air Risk Evaluation Program (CARE), available at: http://www.baaqmd.gov/plans-and-climate/community-air-risk-evaluation-care-program and (2) South Coast Air Quality Management District, Multiple Air Toxics Exposure Study (MATES), available at: http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v.

  - Regional or local air quality modeling.
  - Health risk assessments and other health-based studies, surveys, health impact assessments, and data.

- *Federal resources –*
  - National Emission Inventory.
  - Risk Screening Environmental Indicators model.
  - U.S. Environmental Protection Agency Environmental Justice Screening and Mapping Tool.
  - National Air Toxics Assessment.

To support ongoing improvements in data sources and evaluation methodologies, CARB and the Department of Toxic Substances Control (DTSC) are contracting with a consortium of researchers to provide analytical support to identify appropriate datasets and to develop novel indicators that can be integrated into existing cumulative impacts screening approaches such as CalEnviroScreen.[66] Statute implemented by both CARB[67] and DTSC[68] require method development to assess cumulative impacts and integrate indicators of community vulnerability for the implementation of regulatory programs and community monitoring. The contract includes several opportunities for the public to engage with the researchers, including quarterly meetings to discuss progress. At the end of the contract, the researchers will present their results and their report will be available in the online Resource Center. In addition, new data from community air monitoring will become available in subsequent years of the Program that can also strengthen the community identification and selection process.

Based on this analysis, air district submittals will include specific recommendations for selection of communities for air monitoring and/or emissions reduction programs.[69]

In refining their list of communities into a recommendation of communities to be selected for action that year, air districts must conduct a public process to outreach to communities under consideration to help inform their recommendations. As part of their outreach efforts, each participating air district will:

---

[66] Integrating a community cumulative impacts framework in the implementation of AB 617 and SB 673. (2018) Morello-Frosch, R., Pastor, M., Sadd, J, Cushing, L., London, J. and English, P. CARB/DTSC Contract Number 17RD035.
[67] California Health and Safety Code § 42705.5 and § 44391.2.
[68] Senate Bill 673, Lara, Chapter 611, Statutes of 2015, California Health and Safety Code § 25200.21 and § 25200.23.
[69] CARB staff expect in most cases, nominations that come directly from communities will be included as part of the air district's assessment. In cases where they are not, CARB staff will conduct a similar analysis of the factors above to ensure equal consideration in the community assessment and selection process. This may include contacting the self-nominating community member of group to make sure staff fully understand the community issues.

- Hold at least one public workshop for all stakeholders.
- Hold community-level meetings in areas within the air district such that members from each community under consideration can easily participate:
    - Coordinate with community leaders and community-based organizations to determine the appropriate place and time for the meetings.
    - Provide interpretation services and/or materials to communities in appropriate languages.

Air districts should also consider additional factors in recommending specific communities for community air monitoring and/or community emissions reduction program preparation that year, including but not limited to:

- Existing community air monitoring and/or emissions reduction efforts.
- Community organization administrative and technical resources.
- Anticipated community, government, and business stakeholder resource needs for capacity building, mitigation, public process, etc.

The following information covers the remaining minimum community recommendation requirements. The deadline for this submittal will be provided each year by CARB. For example, in the first year of the Program the deadline was July 31, 2018.

- List of all communities recommended for action that year, including community descriptions, identifying characteristics, preliminary geographic boundaries, and applicable census tract(s):[70]
    - A description of any air district assessments of communities identified for recommendation.
    - A description of each community's capacity and interest to participate and engage in air quality activities, including a summary of the air district's relationships with members of the recommended communities or community-based organizations located in the recommended communities.
- Description of the process used to refine the list communities.
- If the communities are recommended for community air monitoring, a description of the known air quality data needs.
- If the communities are recommended for community emissions reduction programs, provide the following information:

[70] For the first year, CARB requested that air districts also include recommended communities for air monitoring and/or emissions reduction programs for years 2 through 5 and years 6 and beyond. In subsequent years, it is anticipated that the community priorities will be re-evaluated with any new data and public input and these initial recommendations could be updated in subsequent annual solicitations.

- Description of air quality challenges affecting the community, and potential sources.
- Confirmation that emissions sources are well-characterized in the community.
- Confirmation that air monitoring results are available that characterize the high air pollution exposure burden experienced by the community well enough to inform community emissions reduction program development.
- Confirmation that sufficient data and resources are available to produce source attribution results for use in strategy development within the necessary time frames prescribed by AB 617.[71]

IV. SELECTION

CARB staff will develop annual recommendations on the selection of communities for inclusion in the Program. Each year, the CARB Governing Board will consider staff's recommendations at a public meeting, as appropriate.

The full number of California communities with high cumulative air pollution exposure burdens will far exceed a single year's capacity to successfully develop and implement community monitoring or community emissions reduction programs. Therefore, the recommendations for communities to be considered will also include a description of near-term actions to be taken in communities statewide, to underscore efforts to reduce emissions and exposure in disproportionately burdened communities. See Appendix D for a description of statewide actions.

As part of CARB staff's recommendation to the CARB Governing Board, staff will evaluate additional considerations to inform the Board's consideration of communities, particularly in the initial years of the Program's implementation. These considerations include:

- *Regional diversity* – Building capacity and supporting existing community-led efforts and solutions in multiple air districts.
- *Sources* – Selecting a mix of communities with varying air pollution sources to support development of a range of emission reductions strategies that used as a model for other, similar communities. The pollution source mixes that CARB will consider to support strategies that benefit different types of highly burdened communities include, but are not limited to:
  - Freight-related pollution sources.
  - Specific industrial sources that are common in disproportionately burdened communities (e.g., metal plating and recycling facilities; oil and gas production and refining).

[71] California Health and Safety Code § 44391.2(c)(2).

- Urban mixes of traffic, commercial, and residential sources of air pollution.
- Rural sources of air pollution (e.g., agricultural burning, fugitive dust).
- Pollution sources along the U.S.-Mexico border.

Communities included in the statewide assessment will either be selected by the CARB Governing Board for a community emissions reduction program and/or community air monitoring, or will remain on the candidate list for future year consideration. CARB and air districts will also continue to implement broader State and regional programs to improve air quality so all highly burdened communities will see ongoing benefits prior to additional action through the AB 617 process in future years. These efforts include CARB and air district freight-related measures, statewide and local climate investments, and enforcement of emissions rules and regulations throughout the State, which are described in Appendix F.

APPENDIX C.
CRITERIA FOR COMMUNITY EMISSIONS REDUCTION PROGRAMS

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Please submit any written comments by September 24, 2018 to: https://www.arb.ca.gov/lispub/comm/bclist.php.

I. INTRODUCTION

Community emissions reduction programs are the cornerstone of the Community Air Protection Program (Program). Assembly Bill (AB) 617[1] requires the California Air Resources Board (CARB) Governing Board, in consultation with specified stakeholders, to annually consider the selection of communities for the preparation of community emissions reduction programs, as deemed appropriate.[2] Once CARB selects a community, the applicable air district must develop and adopt the community emissions reduction program within one year of selection and provide annual progress reports.[3] Each community emissions reduction program will also be reviewed by CARB staff, based on the checklist in Table C-1. CARB staff will then develop a recommendation and make it available for public review and comment, before presenting each community emissions reduction program to the CARB Governing Board for consideration. The CARB Governing Board may take one of four actions in considering a community emissions reduction program: approve, conditionally approve, partially approve, or reject (collectively represented as a CARB Governing Board action). Figure C-1 provides an overview of the community emissions reduction program process.

Figure C-1 Overview of Community Emissions Reduction Program Process

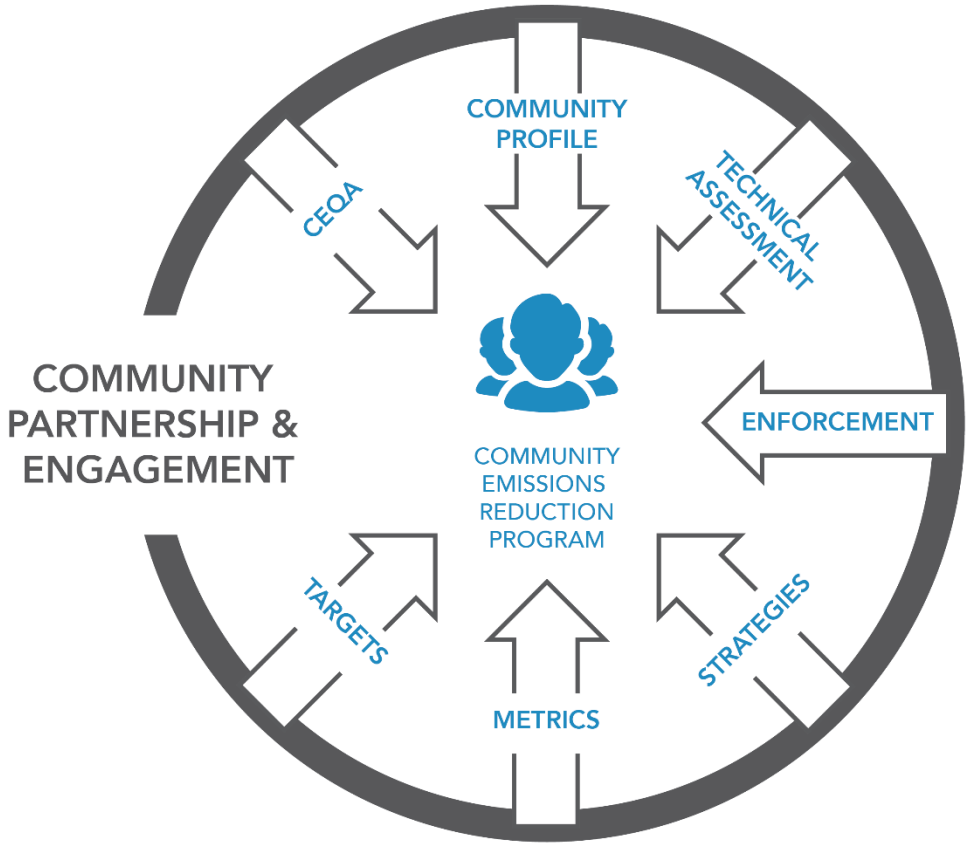
The purpose of the community emissions reduction programs is to focus and accelerate new actions to provide direct reductions in air pollution emissions and exposure within overburdened communities. AB 617 directs CARB to develop criteria for the community emissions reduction programs and includes a set of minimum criteria and elements, while providing the flexibility for CARB to establish additional criteria, as needed.[4]

CARB has identified specific minimum requirements for each element required by AB 617 – emissions reduction targets, emissions and exposure reduction strategies, an implementation schedule, and an enforcement plan – as well as for additional elements

[1] Assembly Bill 617, Garcia, C., Chapter 136, Statutes of 2017, modified the California Health and Safety Code, amending § 40920.6, § 42400, and § 42402, and adding § 39607.1, § 40920.8, § 42411, § 42705.5, and § 44391.2. See Appendix H for complete bill language.
[2] California Health and Safety Code § 44391.2(c)(1).
[3] California Health and Safety Code § 44391.2(c)(2) and § 44391.2(c)(7).
[4] California Health and Safety Code § 44391.2(b).

that are necessary for air districts to develop and implement an effective community emissions reduction program. Figure C-2 provides an overview of the required elements of a community emissions reduction program.

Figure C-2 Community Emissions Reduction Program Required Elements



The requirements included in this appendix apply to an air district who is required to prepare a community emissions reduction program. CARB has developed criteria for each element to ensure a consistent quality and rigor across all communities and to be clear as to what CARB will evaluate when considering approval of a community emissions reduction program. Air districts must provide sufficient information in the community emissions reduction program submittal and annual reports for CARB to assess whether they meet the minimum requirements.

The criteria set out in this appendix provide a comprehensive framework for development of community emissions reduction programs, while recognizing that each community may have different emissions sources, sensitive receptors, and air quality challenges. Understanding these elements is important to ensuring that the design of

each community emissions reduction program is tailored to community-specific needs, and each community emissions reduction program will have community-specific goals, targets, strategies to implement new actions, and metrics. Community emissions reduction programs must include meaningful engagement and partnerships with community members to develop these community-specific solutions through a collaborative process. CARB staff also encourage the air districts to exceed these minimum requirements, in partnership with community residents and community-based organizations, and support community-driven efforts.

The requirements for community emissions reduction programs include:

- Establishing a community steering committee to guide development of the program elements, with core representation from community members who live, work, or own businesses in the community (e.g., community residents, small businesses, facility managers/workers, school personnel).
- Developing a strong technical foundation for understanding the sources of air pollution impacting the community.
- Characterizing current public health data in the community related to air pollution.
- Setting specific, quantifiable emissions reduction targets to be achieved within five years, along with annual milestones and commitments for specific compliance and technology/control technique deployment goals.
- Identifying applicable regulatory, enforcement, incentive, and permitting strategies to implement new actions and the most stringent approaches for reducing emissions, with a focus on zero emission technologies where feasible.
- Identifying needed land use and transportation strategies to implement and define specific actions for engaging with local government agencies to actively promote these strategies.
- Developing an enforcement plan to ensure effective implementation and engagement with community members on addressing compliance issues.
- Defining specific, quantifiable metrics to track progress.

In addition, a robust public process and specific requirements for annual reporting and continued assessment and modification will provide stakeholders with the opportunity to hold agencies accountable, provide ongoing input throughout the development and implementation of the community emissions reduction programs, and follow progress over time to ensure each community experiences real, quantifiable emissions reductions and reductions in air pollution exposures.

To ensure expeditious implementation, CARB staff will collaborate closely with communities, affected industry, and the air districts throughout the development of the community emissions reduction program, including identification of appropriate mobile source strategies and reduction plan elements under CARB's authority. If necessary, CARB may issue programmatic advisories or guidance to provide clarity on any aspect of the community emissions reduction programs requirements.

The remaining portions of this appendix include: a discussion of health-based air quality objectives; requirements for community emissions reduction program development; CARB's review process; requirements for ongoing implementation; and a review checklist that summarizes the community emissions reduction program requirements.

II. HEALTH-BASED AIR QUALITY OBJECTIVES

Cumulative air pollution exposure impacts are driven by multiple air pollutants, and our understanding of the interactions between pollutants and the potential for synergistic health impacts between air pollutants is still an emerging field of research. Community emissions reduction programs will therefore focus on reducing individual criteria air Community emissions reduction programs will therefore focus on reducing individual criteria air pollutant and/or toxic air contaminant emissions to address the impacts of exposure to multiple pollutants. While each community faces distinct health-based challenges, broad health-based air quality objectives provide a consistent foundation for determining the appropriate levels of emissions reductions for community emissions reduction programs.

Toxic air contaminants contribute to a community's cumulative exposure burden. While California's long-term fuel and technology transformation efforts to reduce toxic air contaminants will significantly reduce health risk associated with poor air quality throughout the State, many communities currently experience disproportionate exposures to toxic air contaminants. Exposure to toxic air contaminants can increase the risk of both acute and chronic health effects and cancer, and many communities currently experience disproportionate exposures to toxic air contaminants. Diesel particulate matter continues to be a concern in many communities; however, other toxic air contaminants can also contribute to localized health risk including metals such as hexavalent chromium and lead, air toxics related to fossil fuel production such as

benzene[5] and toluene,[6] and compounds associated with combustion including polycyclic aromatic hydrocarbons and dioxins.

The California Office of Environmental Health Hazards Assessment establishes threshold concentrations for toxic air contaminants at which exposure does not trigger non-cancer health effects, known as reference exposure levels. Although reference exposure levels represent safe exposure levels for non-cancer health effects, there are no safe exposure thresholds for carcinogens. Efforts to significantly reduce exposure to toxic air contaminants therefore rely on identifying technologies and practices that offer the maximum level of emissions reductions achievable.

For criteria air pollutants, the U.S. Environmental Protection Agency and the State of California have set health-protective ambient air quality standards that establish health-protective levels for the following pollutants: ozone, particulate matter 10 microns or less in diameter (PM10), particulate matter 2.5 microns or less in diameter (PM2.5), carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. California has also set additional air quality standards for sulfates, vinyl chloride, visibility reducing particles, and hydrogen sulfide. California is in attainment with many of these standards, including carbon monoxide, sulfur dioxide, sulfates, vinyl chloride, and visibility reducing particles, with limited areas that have localized nonattainment issues for lead, hydrogen sulfide, and nitrogen dioxide. However, challenges remain to achieve standards for PM2.5 and ozone in a number of regions of the State.[7] Meeting State and federal PM2.5 and ozone standards is therefore the current focus of California's criteria air pollutant programs, and ongoing regional planning efforts will continue to drive further emissions reductions in impacted communities.

Ozone is a regional air pollutant that is formed through complex chemical reactions in the atmosphere. While significant work remains to meet ozone standards in many areas of the State, ozone pollution is driven by regional rather than localized source contributions and is most appropriately addressed through regional air quality improvement efforts like the State Implementation Plan. On the other hand, PM2.5 concentrations are the result of both regional and local contributions, and controlling PM2.5 at the local level can reduce disparities in exposure experienced in communities

[5] Sources of benzene include: oil refineries, petroleum storage facilities, mobile sources/fuels, solvents/coatings, cement plants, etc. Office of Environmental Health Hazard Assessment, *Benzene Reference Exposure Levels, Final Report*, June 2014, available at: https://oehha.ca.gov/media/downloads/crnr/benzenerelsjune2014.pdf.

[6] Sources of toluene include: oil refineries, coke ovens, mobile sources/fuels, solvents/coatings, etc. Office of Environmental Health Hazard Assessment, *Toluene Reference Exposure Levels, Public Review Draft,* December 2017, available at: https://oehha.ca.gov/media/downloads/crnr/publicreviewdrafttoluene120117.pdf.

[7] The latest PM2.5 and ozone designations for both State and federal standards are available at: https://www.arb.ca.gov/desig/adm/adm.htm.

with high cumulative exposure burdens. Exposure to PM2.5 is also the dominant cause of criteria air pollutant health impacts such as exacerbation of respiratory and cardiovascular disease, and premature mortality.

To address disproportionate localized air quality impacts and a special consideration of sensitive receptors, community emissions reduction programs will focus on two objectives:

- Maximizing progress on reducing exposure to toxic air contaminants that contribute to cumulative exposure burdens within selected communities.
- Reducing exposure caused by localized PM2.5 sources to achieve healthful levels of PM2.5 within the community.

There may also be other nonattainment issues within the community for localized criteria air pollutants that need to be addressed (e.g., lead, PM10). In addition, continued reductions in PM2.5 concentrations can deliver additional health benefits. In developing strategies to include in the community emissions reduction programs, air districts may want to consider opportunities to achieve further reductions in PM2.5 to help reduce the cumulative exposure burden within the community.

In addition to reducing toxic air contaminant and PM2.5 emissions, many of the strategies included in community emissions reduction programs may deliver reductions in other air pollutants, including greenhouse gases and ozone precursors. These co-benefits can contribute to statewide and regional emissions reduction efforts, delivering additional local health benefits.

III. REQUIREMENTS FOR COMMUNITY EMISSIONS REDUCTION PROGRAM DEVELOPMENT

This section contains the minimum requirements for developing a community emissions reduction program, including: community partnerships and public engagement; understanding the community (e.g., socioeconomic factors, health burdens); developing emissions reduction targets and strategies to achieve those targets; an enforcement plan; and metrics to track progress toward achieving real, quantifiable emissions reductions.[8] A brief overview of the California Environmental Quality Act (CEQA) requirements that apply to community emissions reduction programs is also included.

[8] CARB acknowledges that there may be cases where a community emissions reduction program fails to meet certain procedural requirements but is still being developed in the spirit of these requirements.

COMMUNITY PARTNERSHIPS AND PUBLIC ENGAGEMENT

Each community has unique air quality challenges, and local community members have first-hand knowledge of necessary information, including emissions sources, sensitive receptor locations, and cultural context. Community participation and engagement is critical to developing and implementing successful community emissions reduction programs, and air districts need to foster these active community partnerships.

COMMUNITY STEERING COMMITTEE

Providing an inclusive venue for discussion and meaningful participation of community members is critical to ensuring a collaborative process in developing and implementing community emissions reduction programs and consideration of community-specific challenges and opportunities.

Understanding a community's air quality challenges and developing effective solutions requires the expertise and participation of a variety of stakeholders. Community residents, business owners, and people who work within a community all have first-hand knowledge of the impacts of air pollution within their community and potential solutions. Governmental agencies including air districts, CARB, local health departments and other health organizations, schools, and land use and transportation agencies also have valuable expertise and will be involved in implementing various aspects of the community emissions reduction program.

Building an effective community emissions reduction program will require consistent and frequent engagement with community members and other stakeholders at all stages of the development process. To facilitate community participation and guidance on community emissions reduction program development and implementation, the air district must establish an inclusive, multi-stakeholder community steering committee. To ensure that the committee members can inform the early stages of community emissions reduction program development, the air district should hold a public meeting to discuss the process for convening a steering committee once the community has been selected by CARB. The air district should then hold the first meeting of the community steering committee within 60 days of community selection.

PURPOSE

The purpose of the community steering committee is to support active community involvement and collaboration in the community emissions reduction program process by providing a forum for identifying community issues and potential solutions with all

CARB staff will evaluate the extent to which deviations from these requirements are acceptable on a case-by-case basis and will communicate findings in writing.

relevant parties. Committee members will be responsible for discussing a variety of topics including: determining the final geographic boundaries of the community; community issues and contributing sources to develop a shared understanding of the community's air pollution challenge; who has responsibility and authority to address those issues; proposed strategies for the community emissions reduction programs; mechanisms for engaging with other agencies; approaches for additional community outreach; and other topics of interest to the committee. The committee will discuss the major elements of the community emissions reduction program as they are developed including: community engagement; the community profile and technical assessment; targets and strategies; the enforcement plan; and metrics to track progress.

PARTICIPATION

The community steering committee must be comprised primarily of community members, which includes participants who live, work, or own businesses within the community (e.g., community residents, small businesses, facility managers/facility workers, school personnel). The air district is responsible for convening the committee and should partner with local community-based organizations to promote broad community engagement and participation. Examples of community focused committee structures (e.g., Transformative Climate Community Program;[9] Comité Civico del Valle[10]) are available in the online Resource Center. To further encourage a comprehensive discussion of issues impacting the community and needed solutions, CARB recommends the air district bring in additional participants from city/county agencies, land use planning agencies, transportation agencies, local health departments (e.g., hospitals, clinics, physical rehabilitation centers, public health counseling services), academic researchers, and labor organizations, as appropriate. CARB staff will participate as observers to support discussion related to CARB strategies and resources and will provide technical support and other input, along with staff from the Office of Environmental Health Hazard Assessment, as appropriate.

OPERATION

The first meeting of the community steering committee should include a discussion of the air quality challenges within the community and relevant existing emissions reduction efforts to provide a common starting point for all committee members.

In convening and coordinating the community steering committee, the air district should work with the steering committee to establish a charter to clearly set out the committee

[9] More information on the Strategic Growth Council's Transformative Climate Community Program is available at: http://www.sgc.ca.gov/programs/tcc/.
[10] More information on the Alliance Healthcare Foundation, Comité Civico del Valle is available at: https://alliancehealthcarefoundation.org/comite-civico-del-valle/.

process and structure.[11] Elements of the charter that should be considered include the following topics:

- Committee objectives.
- Roles and responsibilities.
- Meeting frequency.
- Meeting dates, times, and locations to ensure accessibility.
- Use of facilitation services.
- Use of interpretation services at community steering committee meetings and broader public outreach efforts.

PUBLIC PROCESS

In addition to the active collaboration with the community steering committee, the air districts are to engage in a robust public process to provide opportunity for broad engagement both during community emissions reduction program development and throughout implementation. This outreach should include multiple meeting formats and be designed for maximum accessibility for a variety of stakeholders.

In developing the community emissions reduction programs, the air districts should conduct meetings in each of the following formats with the associated requirements:

- *Workshops* – The air districts should hold at least two workshops over the course of the community emissions reduction program development. The workshops should present proposed air district community emissions reduction program elements as they are being developed and solicit public input on programmatic design, priorities, and any other issues the steering committee or air districts would like to discuss. The workshops should provide an opportunity for a community representative of the community steering committee to present the community perspectives.
- *Community meetings* – Community meetings provide an informal opportunity for community residents to engage with the members of the steering committee and the air district to share the needs of the residents and discuss community emissions reduction program elements as they are being developed.
- *Air district board hearings* – Air district public board hearings provide a formal opportunity for air district boards to provide comments and recommendations, and for community members and other stakeholders to provide written and oral testimony. Air district staff must present the community emissions reduction

[11] The community steering committee must comply with open meetings laws such as the Bagley-Keene Act and the Brown Act, as appropriate.

program to the local board for adoption within one year of selection by the CARB Governing Board and should provide an opportunity for a community representative of the community steering committee to present the community perspectives. The air district's presentation should discuss how the community steering committee's discussions informed each element of the community emissions reduction program.

Required outreach elements include:

- *Materials and interpretation services in appropriate languages* – Accessibility refers not only to meeting timing and locations, but also to the ability for non-English speakers to participate fully in ongoing discussion. The specific languages required will depend on the particular community and will be determined by the air district, with input from the community steering committee. Air districts should ensure that materials are provided in appropriate languages and that interpretation services are available at all workshops and air district public board hearings as appropriate.
- A *designated contact person at the air district for each community emissions reduction program* – Each air district should identify a contact person to address general questions regarding community emissions reduction programs and Community Air Protection Program implementation for each selected community.
- *A dedicated webpage for each community selected for community emissions reduction program preparation* – The air district should develop a dedicated webpage for each community emissions reduction program that is available to the public. The air district's primary webpage should include a prominent link to the community-specific webpage, which should at a minimum contain:
    - Phone number and e-mail address for the dedicated contact person.
    - An up-to-date outreach calendar and notices for workshops and community steering committee meetings.
    - Any draft materials that will be shared at air district workshops and public board hearings.
    - Links to any relevant air quality data for the community.
    - A link to CARB's Community Air Protection Program webpage.

  This information should be available in appropriate languages, with the specific languages in addition to English depending on the community and interpretation services provided at each meeting. The information should also be distributed broadly to a variety of groups (e.g., environmental justice groups, faith-based organizations, schools) and through various avenues such as the internet, paper mailings, local print, radio, and television media as appropriate and at least five days in advance of each meeting.

OUTREACH SUMMARY

Community emissions reduction programs should include a summary of the first year of public outreach and an overview of the planned approach for public engagement moving forward. Future updates on public engagement should be included in the progress reports. The summary will discuss the key takeaways from public engagement, including from both the steering committee and the perspectives heard during the broader public process, to ensure that CARB staff and the CARB Governing Board have a clear understanding of what input was considered and how it was assessed.

The outreach summary should also include:

- The community steering committee charter.
- Dates, times, locations, sign-in sheets, agendas, and next steps for all community steering committee meetings.
- Dates, times, locations, and number of participants at all workshops.
- The name of the interpreter used at any steering committee meeting or workshop, if applicable.
- Links to presentation materials and minutes/notes for all workshops and air district public board hearings.
- Any community steering committee invitations sent or other relevant correspondence.

UNDERSTANDING THE COMMUNITY

COMMUNITY PROFILE

In developing the community emissions reduction programs, air districts will prepare a community profile, which will provide context to understand the community attributes and pollution and public health challenges. The community profile will provide a general overview of the community and include a discussion of community issues, including types of pollution impacting the community, a characterization of public health data to establish a current baseline and socioeconomic factors. Some of this community-level information may have been identified through the community assessment and selection process.

TECHNICAL FOUNDATION

Conducting a technical assessment is a necessary step in community emissions reduction program development. The technical assessment, informed by community input, serves several purposes within the context of community emissions reduction program development and implementation, including: establishing a baseline understanding of the air pollution challenges in the community, identifying the key air pollutants and sources for programmatic focus, supporting the development of targets and strategies, and providing a mechanism to track progress. This assessment will provide the baseline from which emissions reductions can be measured.

REQUIRED ANALYTICAL TASKS

Various data sources exist to support the technical assessment, and generally multiple datasets and analytical approaches will be needed to inform the assessment and potential solutions in a community. The technical assessment will rely on results from a variety of analyses to characterize emissions in the community and inform community emissions reduction program development and implementation. In many cases, community ground-truthing exercises can be useful to validate and enhance emissions and exposure analyses.

Technical assessments include:

- An assessment and description of the existing high cumulative air quality exposure burden within the community that identifies:
    - A list of the key air pollutants driving the exposure burden in the community and current air quality levels.
    - A list of the key sources and source categories both within and directly surrounding the community.
- An assessment of sensitive receptor locations within the community and how land use issues impact exposure.
- A community-level emissions inventory, which estimates air pollutant emissions of the mobile sources (e.g., cars, heavy-duty trucks, locomotives), area-wide sources (e.g., fireplaces, charbroilers, fugitive dust), and stationary sources (e.g., oil refineries, auto body shops, manufacturing facilities) contributing to the high cumulative air quality exposure burden within the community. CARB will provide guidance for development of emissions inventories, based on best available data, in the online Resource Center.[12] Developing more granular community-scale emissions inventories is critical for understanding existing baseline emissions and tracking future emission reductions within a community.

[12] Appendix F provides more detail on CARB's online Resource Center.

- An assessment of the benefits of existing air quality policies and programs in reducing emissions within the community.
- An assessment of compliance with air quality rules and regulations for sources impacting the community, consistent with the enforcement plan.

The source attribution tasks described below, along with CARB's recommended source attribution technical approaches provided in the online Resource Center, provide a methodology for assessing, identifying, and estimating the relative contribution of sources or categories of sources, including but not limited to mobile, stationary, and area-wide sources, to elevated exposure to air pollution in impacted communities.[13] Community emissions reduction programs will include a source attribution analysis that:

- Assesses the share of mobile, area-wide, and stationary source emissions contributing to the high cumulative exposure burden in communities selected for the implementation of community emissions reduction programs and aid in the development of applicable emissions reduction targets and strategies.
- Helps differentiate between the share of pollution contributed by sources within or directly surrounding the community versus the portion from regional or background pollution outside the community.
- Is based on appropriate, representative approach(es) and input data in order to characterize the relative contribution of emissions sources to a community's high cumulative exposure burden. Representative input data may be from recent or historical studies of the community. As a result, air districts must describe the appropriateness and representativeness of the proposed approaches as well as the data source, vintage, and representativeness of input data utilized in implementing each chosen approach in their source attribution results. Data collection efforts for air quality, emissions inventory, or other data types required for source attribution can continue throughout the implementation of community emissions reduction programs.
- Uses one of CARB's recommended source attribution approaches, which are provided in the online Resource Center along with requirements for the development or application of new or equivalent approaches that may be developed over time.

Air districts and communities implementing community air monitoring should keep data collection efforts associated with prospective source attribution approaches in mind as community emissions reduction programs and/or community air monitoring are considered.

[13] California Health and Safety Code § 44391.2(b)(2).

As part of their submittal of the community emissions reduction program to CARB, air districts are to include documentation of data sources and methods and a discussion of any data gaps, the implications of these data gaps, and potential opportunities to improve technical analysis in the future.

Minimum Data Requirements

Several air districts have already conducted detailed analytical work at the community level and have granular, robust data on community-level emissions and exposure. These high-resolution datasets can support a detailed source attribution analysis for strategy development in communities with more complex mixes of contributing sources. In other cases, community emissions reduction program strategies will be focused on broader source categories and more detailed source resolution may not always be necessary, particularly in communities that may have only a small number of source types contributing to the exposure burden.

In developing the community emissions reduction programs, air districts will rely on the best data and methodologies available that are representative for the community. Our understanding of sources, pollutants, receptors, and health impacts in communities will continue to improve in coming years through enhanced community monitoring, new emissions reporting requirements, and an ongoing emphasis across the State and air district efforts to focus on community-level assessment. This increasing granularity in data will support improved analytical and strategic approaches or tools to address and monitor community-specific air pollution problems going forward. The data received from the new annual emissions reporting system will be used to inform: the statewide assessment completed by CARB staff during the community selection process, source attribution developed as part of a community emissions reduction program, and to help track progress of community emissions reduction programs.

Developing Targets and Strategies

Emissions Reduction Targets

AB 617 requires that community emissions reduction programs include emissions reduction targets.[14] Establishing specific, quantifiable, and measurable targets is critical to guide strategy development and track progress over time. In recognition of the significant health impacts associated with elevated exposure in identified communities, these specific, quantifiable emissions reduction targets are to be achieved within five years.

[14] California Health and Safety Code § 44391.2(c)(3).

To address the air pollution disparities that exist in highly impacted communities, with a special consideration of sensitive receptors, and achieve the health-based air quality objectives discussed earlier, community emissions reduction programs must:

- Focus and accelerate actions to provide direct emission reductions within the community to maximize reductions in exposure to applicable toxic air contaminants.
- Focus and accelerate actions to provide direct emission reductions within the community to achieve healthful levels of PM2.5 and other air pollutants with localized nonattainment issues, if applicable.

CARB has established a process for air districts to develop appropriate quantifiable targets for each community emissions reduction program based on the health-based air quality objectives discussed previously and informed by the technical assessment elements described in the prior section. The emissions reduction targets should be calculated to achieve emissions reductions relative to the year in which the community was selected. Targets should also commit to air quality benefits beyond existing reductions that are expected to occur from planned rules and regulations. The targets must be developed in consultation with the community steering committee and be consistent with the process laid out in this document.

In consultation with the community steering committee, community emissions reduction programs must identify and include specific, quantifiable emissions reduction targets for applicable pollutants contributing to the cumulative exposure burden including: directly-emitted applicable toxic air contaminants, PM2.5, and any other identified pollutants (e.g., lead, PM10) as defined in the technical assessment.

Developing Emissions Reduction Targets

To establish the emissions reduction targets, community emissions reduction programs will first establish specific, numerical goals for compliance and for the deployment or implementation of technology and control techniques that can deliver emissions reductions. These reductions will focus on the identified pollutants and associated precursors contributing to the cumulative exposure burden. The community emissions reduction programs will then calculate the emissions reductions associated with these goals to establish emissions reduction targets that ensure steady progress towards meeting the air quality objectives. The community emissions reduction programs are to include specific, quantifiable emissions reduction targets based on the emissions reduction potential associated with achieving the goals. Figure C-3 provides an overview of the process for establishing an emission reduction target.

Figure C-3 Process for Establishing an Emissions Reduction Target

The purpose of the compliance goals, technology deployment and control techniques are two-fold: first, to determine the magnitude of the emissions reduction targets; and second, to provide numerical, visible actions that community members and other stakeholders can track as the community emissions reduction program is implemented.

The technical assessment will have identified the mobile, stationary, and area-wide sources causing localized impacts within the community. The community emissions reduction programs will include:

- Commitments to achieve numerical goals for compliance for the identified mobile, stationary, and area-wide sources.
- Commitments to achieve numerical goals for deploying or implementing available technologies or control techniques that provide the greatest emissions reduction potential for the identified mobile, stationary, and area-wide sources.

CARB staff will work with the air district on the goals related to mobile sources under CARB's authority.

To develop the compliance goals, the community emissions reduction program will assess compliance with the air quality rules and regulations for the mobile, stationary, and area-wide sources of the identified pollutants and applicable precursors, consistent with the enforcement plan, then establish specific compliance goals to be achieved within five years. Compliance goals could include goals for increasing compliance to specific levels for individual rules or regulations or achieving incremental improvements in compliance levels over time, with specific mechanisms to improve compliance defined in the enforcement plan.

To develop the technology and control technique goals, the community emissions reduction program will identify source-specific technologies and control techniques that can reduce emissions of the identified pollutants and applicable precursors, with a focus on zero emission technologies where feasible. Specific, numerical goals will then be

established for deployment or implementation of these technologies and control techniques to be achieved within five years. For example, the goals could include: reducing dust from a specific number of miles of unpaved roads; deployment of a certain number of zero emission buses, replacement of a specific number of older residential wood stoves with cleaner models, and installation of a specified number of control devices at industrial facilities, such as refineries. The community emissions reduction program must consider the technologies identified in the Technology Clearinghouse, but may also use other sources. CARB staff will work with the air district on the compliance and deployment and implementation goals related to mobile sources under CARB's authority.

The same source types within a community may emit toxic air contaminants, PM2.5, and PM2.5 precursors and the same technologies can be used to meet the compliance and technology and control technique goals and emissions reduction targets.

PROXIMITY-BASED GOALS

In some cases, even with the cleanest technologies deployed, proximity to emissions sources may continue to pose health risks, particularly for individuals who are especially vulnerable to the impacts of air pollution such as children, the elderly, and individuals with certain medical conditions. Addressing the cumulative exposure burden in communities may require additional, location-based actions that go beyond specific strategies to reduce emissions, such as changes to facility design to reduce exposure, new truck routes to avoid populated areas, installation of air filtration systems at schools or homes, setbacks, or vegetative barriers to reduce pollution dispersion from emissions sources.

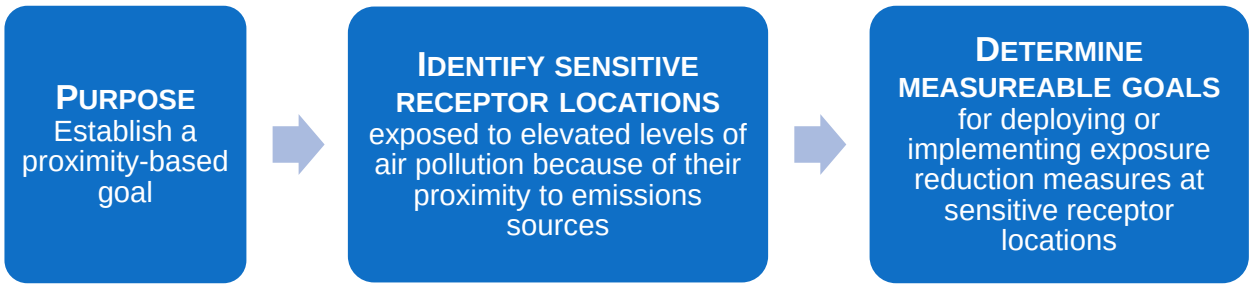
CARB recognizes that, in many cases, the authority for implementing these goals will reside with local government agencies. Air districts (and CARB where appropriate) will identify appropriate strategies and approaches to engage with these agencies in an effort to obtain these goals where the air district's regulatory authority is limited. Defining specific proximity-based goals and exposure reduction strategies provides a more effective and transparent basis for this engagement process with local government agencies.

To determine proximity-based goals, the community emissions reduction program will:

- Identify the sensitive receptor locations that are exposed to elevated levels of air pollution because of their proximity to emissions sources.
- For the identified sensitive receptor locations, establish measureable goals for deploying or implementing exposure reduction measures.

These measureable goals could range from the installation of a certain number of air filtration systems, to goals for specific minimum setback requirements from significant sources, to goals for a reduction in the number of trucks along a route, or a reduction in fence-line concentrations. Figure C-4 provides an overview of the process for establishing a proximity-based goal.

Figure C-4 Process for Establishing a Proximity-Based Goal



EMISSIONS AND EXPOSURE REDUCTION STRATEGIES

After defining the emissions reduction targets, along with associated goals, air districts, working with the community steering committee, need to identify the strategies necessary to meet these goals and targets. In addition to strategies that will deliver the necessary reductions to be achieved within the five-year timeframe, air districts should also identify annual milestones that can provide more immediate reductions. These strategies should also establish a path towards continuing longer-term reductions in PM 2.5 and toxic air contaminants within the community.

The systematic development of targets and strategies should not delay action that can quickly deliver emissions and exposure reductions. CARB encourages immediate implementation of any feasible activities identified in parallel with program development.

The scope of strategies included in each community emissions reduction program will be informed by the technical assessment and the types of sources contributing to elevated pollution levels and the nature of the goals and targets. CARB has identified emissions and exposure reduction approaches that all community emissions reduction programs should draw from to ensure a comprehensive and rigorous evaluation of potential reduction strategies.

Each community-level emissions and exposure control strategy should incorporate a combination of mechanisms to adequately reduce emissions and exposure, with CARB and the air district responsible for strategies in accordance with their respective authorities. Per the requirements of AB 617, community emissions reduction programs must identify cost-effective measures to achieve the targets.[15] CARB has established criteria that include an assessment of strategies that provide reductions within the community in six categories:

- Regulations.
- Facility risk reduction audits.
- Air quality permitting.
- Enforcement.
- Incentive programs.
- Land use, transportation, and mitigation strategies.

Community emissions reduction programs should include new strategies to address air pollution from stationary, mobile, and area-wide sources that contribute to the cumulative emissions and exposure burden.

Each community emissions reduction program will consider the scope of sources impacting the community and the specific types of strategies within each category discussed below at a minimum, evaluate applicability, and develop community-specific strategies to include in the community emissions reduction program.

In some cases, existing planning efforts such as State Implementation Plans and regional Sustainable Communities Strategies can provide a starting point for identification of strategies for focused implementation within the community. However, air districts should also evaluate additional strategies needed to meet the emissions reduction targets and proximity-based goals within the community and may pursue any additional types of strategies not included in this list as necessary to achieve the targets.

The air district will develop the list of strategies to be included in the community emissions reduction program in collaboration with the community steering committee. This includes a discussion of all potential opportunities identified and why potential new strategies that were applicable to the community's air quality challenges were not selected, including those identified by the community steering committee. The result should include new strategies to address air pollution from stationary, mobile, and area-wide sources that contribute to the cumulative emissions and exposure burden.

[15] California Health and Safety Code § 44391.2(c)(2).

REGULATORY STRATEGIES

- *Include the best available retrofit control technologies (BARCT) expedited schedule* – AB 617 requires that any air district in nonattainment for one or more criteria air pollutants adopt an expedited BARCT schedule for "each industrial source" subject to the State's Cap-and-Trade program as of January 1, 2017; the schedule must consider community public health and clean air benefits, cost-effectiveness, and air quality and attainment benefits.[16] The community emissions reduction programs must identify the categories of sources impacting the community that will be subject to these requirements and ensure review and implementation of BARCT measures as applicable.
- *Identify new air district rules and regulations* – The community emissions reduction program must evaluate, identify, and include proposed new or amended air district rules, if appropriate, to deliver further reductions from sources within or directly surrounding the selected community that are impacting the community. The community emissions reduction program must evaluate the most stringent control limits and exemption and applicability provisions in developing new or amended rules, while considering how the State's overall move to cut greenhouse gases and criteria air pollutants may affect facilities as applicable within the community. This evaluation should also consider other approaches such as:
    - Activity limits and other operational requirements.
    - Indirect source rules and other facility-based approaches.
    - Enforceable agreements.
    - Transportation control measures.

  The community emissions reduction program must at a minimum reference the Technology Clearinghouse to identify rules, regulations, technologies, or practices available that could offer emissions or exposure reduction opportunities within the selected community.
- *Coordinate with CARB to identify CARB measures as appropriate* – CARB has included several new statewide regulatory measures in Appendix F and will be implementing these over the coming years. In cases where the sources covered by these new measures contribute to the exposure burden in a selected community, the community emissions reduction programs should incorporate these measures.

  CARB will work with the air districts on identifying any additional CARB strategies that may be appropriate in the selected community, with the CARB Governing Board ultimately responsible for determining which measures CARB will implement.

  CARB and air districts will continue developing regulatory and incentive actions through separate public processes. Subsequent implementation will be conditional

[16] California Health and Safety Code § 40920.6(c).

on the successful completion of applicable public processes, necessary financing approvals, technical feasibility analyses, economic competitiveness, safety, and environmental reviews.

FACILITY RISK REDUCTION AUDITS

- *Review facility risk reduction audits for selected facilities and identify and list facilities that will be required to update their emissions reduction plans* – AB 617 requires an assessment of which facilities' risk reduction audits and emission reduction plans an air district should review and update and authorizes air districts to reopen[17] existing plans to strengthen them as appropriate.[18] In the technical assessment, air districts will have identified the major sources contributing to health risk in the community.

  The community emissions reduction program must list the facilities within and directly surrounding the selected community that are required to report toxic air contaminant emissions and identify whether the air district has designated the facility as high, intermediate, or low risk pursuant to AB 2588.[19] The air district also needs to identify which of these facilities have existing risk reduction audits and emission reduction plans and select facilities for plan review. The community emissions reduction program should explain how facilities were selected for review.

AIR QUALITY PERMITTING

- *Permitting requirements* – The Technology Clearinghouse includes best available control technologies (BACT) and best available control technologies for toxic air contaminants (T-BACT) determinations for air districts across the State. The air district will use the Technology Clearinghouse as a reference in developing BACT and T-BACT technology determinations for any new or modified source permitting processes within or directly surrounding the selected community.

ENFORCEMENT STRATEGIES

- *Identify and include near-term enforcement strategies to improve compliance with existing rules* – Identify any noncompliance issues within or directly surrounding the selected community and include near-term enforcement strategies. Enforcement of rules and regulations is the responsibility of CARB and air district staff and it is critical to ensuring that CARB and air district policies achieve the anticipated

[17] Air districts may also require updates and resubmissions of emission reduction plans for reasons outside of AB 617, consistent with existing authorities (e.g., California Health and Safety Code § 44391(i)).
[18] California Health and Safety Code § 44391.2(b)(3).
[19] Assembly Bill 2588, Air Toxics "Hot Spots" Information and Assessment Act, Connelly, Statutes of 1987, California Health and Safety Code § 44300; more specifically, the reporting requirements are shown in California Health and Safety Code § 44360(a).

benefits. Targeted enforcement of existing rules and regulations can be implemented within communities without requiring new regulatory processes, presenting an opportunity to rapidly address community concerns and quickly deliver emissions reductions. The enforcement strategies should be linked to the results of a compliance assessment and a three-year enforcement history, as described in the "Enforcement Plan" section of this appendix.

Incentive Program Strategies

Air district and CARB incentive funding exists to support the introduction and expedited deployment of the cleanest technologies beyond what is required by regulation. In many cases, deploying these cleaner technologies can contribute to regional air quality goals while providing localized benefits. Incentive programs have played a key role in promoting adoption of next generation technologies and accelerating their deployment to achieve immediate reductions.

- *Identify incentive-based strategies* – Identify and discuss existing funding programs that apply to sources in the community, if any, and how they will be used to support achieving the targets and goals. Also identify and discuss potential funding opportunities that can be used to achieve further reductions and identify specific actions the air district and CARB will take to secure additional funds as necessary (e.g., leveraging other incentive programs such as the Low Carbon Transportation Incentives, Volkswagen Environmental Mitigation Trust, or air district funding programs).

  CARB recommends that the air districts reference the Technology Clearinghouse to identify promising technologies to incorporate into incentive programs. CARB will collaborate with the air districts on implementing incentive programs and potential new funding opportunities for mobile sources.

- *Include outreach strategies to promote identified funding opportunities* – A key component of incentive programs is ensuring that the public is aware of the funding opportunities. Community emissions reduction programs should discuss how they will provide information on incentive programs to community members and business owners in the community.

Land Use, Transportation, and Mitigation Strategies

In many communities, the proximity of emissions sources to nearby sensitive receptors like schools, homes, day care centers, and hospitals further exacerbates the cumulative exposure burden. Land use and transportation planning processes can also help address these proximity issues, as well as health protective mitigation measures and practices, like indoor air filtration and urban greening to help reduce exposure. Land use decisions rest in the first instance with local government planners and officials. The

State of California General Plan Guidelines: 2017 Update[20] makes it clear that these planners have an obligation to consider air quality and environmental justice in their land use decisions. CARB and the air districts do not have direct authority over land use zoning and permitting or transportation plan development, but land use considerations may figure into air quality planning as well, so air quality officials have an important role to play as they work with city and county governments. They can actively engage with these processes to promote improved decision making and outcomes. The community emissions reduction program will:

- *Identify and include community-specific land use strategies to promote through engagement with local government agencies* – There are a number of strategies that cities and counties can implement to reduce emissions and exposure. The community emissions reduction program must, as appropriate, consider each of these strategy types, identify which would be appropriate in the community-specific context, identify the applicable implementing agency, and work with them to encourage specific strategies, such as:
    - Planning permit conditions to require increased setbacks for specific source types like manufacturing facilities or oil and gas operations to reduce sensitive receptor proximity.
    - Planning permit conditions to require buffer zones for specific source types.
    - "Green zone" policies to establish exposure-reducing development requirements for specific areas.
    - Zoning code amendments to prevent or reduce new permitting of incompatible land uses.
    - Processes to terminate existing incompatible land uses within selected communities.
    - General plan updates focused on environmental justice and air quality, through the Senate Bill 1000[21] process, or other general plan updates.
    - Strategies to promote urban greening.
    - Measures in the applicable Metropolitan Planning Organization's Senate Bill 375[22] Sustainable Communities Strategy that can be implemented within the community.
    - Environmental justice-related components of regional or local plans that can be implemented within the community.

  CARB recommends that the air districts refer to the online Resource Center to identify and include any appropriate additional land use strategies that may be applicable to the community.

[20] Governor's Office of Planning and Research, State of California General Plan Guidelines: 2017 Update, July, 31, 2017, available at: http://www.opr.ca.gov/planning/general-plan/.
[21] Senate Bill 1000, Leyva, Chapter 587, Statutes of 2016, California Government Code § 65302(h).
[22] Senate Bill 375, Steinberg, Chapter 728, Statutes of 2008, Government Code § 65080(b)(2).

- *Identify and include community-specific transportation strategies to promote through engagement with State and local government agencies* – Several types of transportation strategies can deliver emissions and exposure reductions in communities. The community emissions reduction program must, as appropriate, consider each of these strategy types, identify which would be appropriate in the community-specific context, identify the applicable implementing agency, and develop specific strategies to promote:
    - Alternative truck routing.
    - Geo-fencing within designated areas.
    - Strategies to reduce vehicle miles travelled and encourage active transportation.
    - "Green zone" policies to implement transportation strategies within certain areas.
    - Preferential access to facilities for the cleanest technologies.
    - Incorporation of zero emission vehicles and equipment into project development, construction, and operation.
    - Measures in the applicable Metropolitan Planning Organization's Senate Bill 375[23] Sustainable Communities Strategy that can be implemented within the community.
    - Environmental justice-related components of regional or local plans that can be implemented within the community.

  CARB recommends that the air districts refer to the online Resource Center to identify and include any appropriate additional transportation strategies that may be applicable to the community.
- *Identify specific mitigation strategies that can further reduce exposure within the community* – Even with robust regulation and deployment of advanced technologies, there may be cases where exposure to emissions sources continues. The community emissions reduction program must incorporate specific strategies to further reduce the impacts of ongoing emissions. The community emissions reduction program must as appropriate consider each of the following types of mitigation strategies, identify which would be appropriate in the community-specific context, identify the applicable implementing agency, and select specific strategies to deploy within the community:
    - Installation of air filtration at sensitive receptor locations.
    - Installation of solid barriers or vegetative buffers between emissions sources and sensitive receptors.
    - Implementation of school flag and other notification programs to communicate air quality information to the community.
    - Urban greening projects.

[23] Senate Bill 375, Steinberg, Chapter 728, Statutes of 2008, Government Code § 65080(b)(2).

CARB recommends that the air districts refer to the online Resource Center to identify and include any appropriate additional mitigation strategies that may be applicable to the community.

- *Identify and include engagement strategies and implementation mechanisms to promote the identified land use, transportation, and mitigation strategies* – Air districts can engage with land use and transportation planning processes in multiple ways, and many of the land use or transportation strategies may be interrelated. The community emissions reduction program must identify specific opportunities and approaches to coordinate with the appropriate agencies to promote the land use, transportation, and mitigation strategies identified. The community emissions reduction program must, as appropriate, consider:
    - Writing CEQA comment letters on proposed projects that would impact the community, such as increased pollution burden due to indirect sources (e.g., increased truck traffic).
    - Utilizing CalEnviroScreen indicators and other existing data sets to provide an analysis of existing environmental burdens in order to set the baseline conditions and metrics to improve air quality and reduce cumulative exposure burdens.
    - Direct meetings with staff or elected officials.
    - Direct meetings with facility owners and/or equipment operators.
    - Formation of a cooperative information sharing process with land use permitting agencies to review proposed projects that would impact the community.
    - Participation in public meetings on proposed projects that would impact the community.
    - Development of memoranda of understanding with cities, counties, transportation agencies, other public agencies, or facility owners or equipment operators.
    - Direct air district implementation of strategies within the air district's jurisdiction.

For major projects that would impact communities, CARB and air districts should coordinate wherever possible to follow-up on comment letters and the environmental review process. CARB recommends that the air districts refer to the online Resource Center to identify and include any appropriate additional engagement mechanisms that can be used to support the identified strategies. CARB will also engage with State and local government agencies to support the identified land use, transportation, and mitigation strategies as appropriate.

IMPLEMENTATION SCHEDULE

Air districts need to develop an implementation schedule for the identified strategies in each community emissions reduction program. Schedules will include near-term and annual actions, as well as actions to achieve the specific, quantifiable emissions reduction targets within the five-year implementation timeframe. To demonstrate continued progress beyond the five-year implementation timeframe, air districts will also estimate and describe the ongoing community benefits these strategies will provide for an additional five years.

For each new strategy selected, provide the following, as applicable:

- A description of the strategy.
- The expected emissions and/or exposure reductions by pollutant from each proposed strategy.
- Cost-effectiveness, calculated in accordance with the air district's cost-effectiveness methodologies, along with appropriate documentation.
- Implementation roles and responsibilities, including authority.
- A timeframe for consideration by an air district's board or the CARB Governing Board.
- A timeframe for any necessary coordination with other agencies.
- A timeframe for implementation.
- A description of how the technical assessment informed strategy development, including a discussion of priority pollutants and sources.
- The perspectives of the community steering committee and other public recommendations.

ENFORCEMENT PLAN

Enforcement of regulations by CARB and air district staff is critical to achieving regional and local air quality goals. AB 617 requires that community emissions reduction programs include an enforcement plan.[24] A strong and effective enforcement plan can ensure that existing and future regulatory efforts are successfully reducing emissions and improving air quality and public health.

[24] California Health and Safety Code § 44391.2(c)(3).

The enforcement plan should be tailored to address specific community issues and be informed by a baseline understanding of current enforcement efforts at each source in the community, as well as the concerns of local community members. Many of the enforcement provisions may also be integrated into other elements of the community emissions reduction program, including the technical assessment, targets and goals, and reduction strategies.

Enforcement responsibilities are jointly shared between CARB and the air districts, with CARB primarily responsible for enforcement of mobile sources and air districts primarily responsible for area-wide and stationary source enforcement. There are also cases where CARB has established memoranda of understanding with the air districts to delegate enforcement authority. In developing the enforcement plan, CARB and the air district staff will partner together to build on existing enforcement efforts and identify the best path forward for enforcing air quality rules and regulations within and directly surrounding the community. This section discusses the purpose of the enforcement plans; provides an overview of the typical enforcement process and techniques; and presents the requirements for CARB and the air districts in developing these community-specific enforcement plans.

PURPOSE

The primary function of enforcement activities is to deter noncompliance and improve compliance rates with air quality rules and regulations. Enforcement efforts can also be a useful tool in engaging community members and promoting new solutions to air quality issues in communities.

The community emissions reduction program enforcement plans should be designed to achieve five key objectives, as applicable:

- Enhanced enforcement of existing regulations.
- Identification of robust enforcement mechanisms for new regulations.
- Development and implementation of solutions to resolve violations, including coordination with other agencies as appropriate.
- Development of new emissions and exposure reduction strategies based on enforcement activities and results.
- Enhanced community participation in supporting CARB and air district enforcement efforts.

ENFORCEMENT PROCESS AND TECHNIQUES

Both CARB and the air districts have existing enforcement processes, and the enforcement plan developed pursuant to the community emissions reduction program will enhance these existing efforts to assist in delivering local emissions reductions. Enforcement efforts require coordination between community members, CARB, the air districts, and facility or equipment owners.

Community members can play an active role in supporting enforcement activities conducted by CARB and air district staff. Residents of heavily burdened communities often have a strong understanding of the impacts of air pollution, and sometimes air pollution violations, in their community. Both CARB and air districts have systems for reporting potential violations, referred to as "complaints." The implementation of the enforcement plan will contribute to the development of improved methods for resolving complaints and reducing air pollution impacts in the community, which can promote active community outreach and communication.

Technology is also becoming increasingly important for enforcement. Traditional enforcement is inspection-based: staff inspect an air pollution source and evaluate compliance against regulatory or permit requirements. Researching and incorporating new technologies, where feasible, may assist and enhance enforcement work in communities. Surveillance techniques can provide evidence for violations during times when inspectors are not at the pollution source. Enforcement plans can draw upon technology to enhance and inform enforcement techniques and provide information to help inform and potentially resolve community concerns.

Through the enforcement process, those found to be in violation are required to come into compliance, and usually also pay a penalty. In some cases, CARB or air districts may allow the responsible party to satisfy part of the monetary penalty by voluntarily offsetting a portion of their civil penalty by performing or funding one or more Supplemental Environmental Projects. These are projects not otherwise required by law that benefit air quality by reducing emissions, reducing exposure to air pollution, or preventing future air quality violations. CARB runs an active program where projects proposed by disadvantaged community groups are matched to violators willing to fund those projects through a Supplemental Environmental Project. Through the community emissions reduction program, community members may identify projects that would benefit their community. If the project meets requirements, it may be funded through the Supplemental Environmental Project program.

ENFORCEMENT PLAN REQUIREMENTS

CARB and the air district will work together to develop and implement enforcement plans as a component of the community emissions reduction program. CARB is committed to providing a variety of enhanced enforcement activities in each selected community related to our enforcement responsibilities, and CARB will work closely with the air district throughout the development of the enforcement plan to identify community-specific enforcement needs.

The enforcement plan should consider the following elements:

- *A three-year enforcement history covering enforcement and compliance issues in the community* – To inform the development of targets, strategies, and the enforcement plan itself, the air districts shall construct and analyze an enforcement history covering at least three years before community selection. This history includes:
    - A summary of complaints received and their resolution.
    - A listing of all permitted facilities, including facility type.
    - Number of inspections conducted, including type, date, and location.
    - Notices of violation and notices to comply issued, including date, location, regulation cited, and description of issue.
    - An assessment of compliance with existing CARB and air district rules and regulations within and directly surrounding the community.
    - A discussion of opportunities for enhanced enforcement activities, including community outreach and communication, based on the historical data.

  CARB will provide this same information for CARB mobile programs in the community, and will work closely with air district staff to analyze and draw conclusions from the historical data.
- *A compliance goal to support achieving the emissions reduction targets within the community* – To inform the emissions reduction targets and support emissions reduction, the enforcement plan will include compliance goals for mobile, stationary, and area-wide source types that contribute to the cumulative exposure burden within the community. CARB will collaborate with the air district on the compliance goals related to mobile sources subject to CARB's rules and regulations.
- *Specific approaches to enhance complaint reporting, industry compliance, and enforcement-related community outreach within the community* – The air district and CARB will work together to identify approaches to enhance complaint reporting, outreach, and enforcement within the community. The historical enforcement assessment will point to opportunities for improved enforcement efforts within the community. The enforcement plan will identify specific approaches to address these opportunities.

CARB will work with the air district to improve the complaint reporting process, including improved reporting methods and procedures to speed response. The enforcement plan will establish a transparent process for follow-up on complaints so that community members will understand how their complaints are being addressed.

- *Formation of a dedicated team to conduct community-level outreach* – Conducting community-level outreach is key to understanding community concerns, including identification of potential violations or unpermitted sources. The air district and CARB will convene a team to work together, engaging actively with the community steering committee, and focusing on responding to community concerns.
- *A process to track enforcement activities and identify potential solutions based on enforcement results* – The enforcement plan will describe how the air district will track and assess enforcement activities in the community. CARB will provide data on its program activities in the community for tracking. Tracking and assessing enforcement activities can provide valuable insight into ongoing air quality and regulatory issues. These lessons can inform technical analyses to characterize community-level air quality challenges and highlight opportunities for improved implementation. In addition to tracking these enforcement activities, CARB and the air districts will identify solutions based on enforcement results.
- *A discussion of potential enforcement mechanisms for each new regulatory strategy included in the community emissions reduction program* – As the air districts are developing new emissions reduction strategies, they will include a discussion of how they plan to enforce new requirements. In some cases, this may fall under existing enforcement programs, but these mechanisms will also incorporate any new data that can support identification of issues, including monitoring, as well as innovative enforcement techniques.

  As CARB and the air districts identify and develop new mobile source emissions reduction strategies, CARB will collaborate closely with the districts on identifying improved enforcement mechanisms. This collaboration could include memoranda of understanding with the air districts to delegate enforcement authority, so that both CARB and air district staff can enforce requirements in the community, as appropriate.

CARB will also collaborate with the air districts to develop, include, and implement community-specific provisions as appropriate for each of the following general actions:

- *Community enforcement program* – CARB will develop and implement a new program that will be offered to communities across the State, discussed in Appendix F. The program will cover topics like the fundamentals of enforcement, how the enforcement process works, instructions on filing a thorough complaint, and what to expect from the enforcement process after filing a complaint. Through this program, community members will be able to better support CARB or air district enforcement processes.

By building capacity within the community to support State and local enforcement efforts, community members will be able to help develop solutions to community issues.

- *Enhanced CARB program enforcement* – CARB will conduct enhanced enforcement activities in areas impacted by mobile sources. Enforcement may be focused on specific types of motor vehicles operating in the community, and the need identified by the historical compliance assessment. CARB may also increase stationary source enforcement in programs it enforces, such as requirements for landfills, oil and gas facilities, or refrigerant management systems, and may increase enforcement for consumer products regulations if warranted.

METRICS TO TRACK PROGRESS

Identifying metrics to track progress is critical for understanding whether the community emissions reduction programs are achieving their objectives. The community emissions reduction programs must include specific metrics and associated data sources that can be used to track progress in each selected community. No single metric alone can capture progress on its own, but taken together this suite of metrics will provide valuable insight and necessary accountability at the community level.

REQUIRED METRICS

AB 617 requires that the community emissions reduction programs result in emissions reductions, which can be demonstrated based on monitoring or other data.[25] The community emissions reduction programs must identify and describe how progress on achieving emission reductions for specific categories of sources will be tracked on an annual basis and track emissions for any pollutant that has an identified emissions reduction target. CARB will collaborate with the air district to support community-level mobile source emissions tracking, as appropriate.

ANNUAL IMPLEMENTATION METRICS

The community emissions reduction program must include specific, quantifiable metrics to track progress annually on:

- The emission reductions achieved and progress towards meeting the individual emissions reduction targets for each pollutant.
- The compliance and technology deployment and implementation goals for sources of identified pollutants.
- The proximity-based goals.

[25] California Health and Safety Code § 44391.2(c)(5).

- The status of rules and regulations adopted or other strategies implemented.
- The dollar amount invested and number of projects implemented in and/or benefitting the community if incentive strategies are part of the community emissions reduction program.
- Additional enforcement activities such as:
  - Inspections conducted including type, date, and location.
  - Notices of violations issued including date, recipient, and regulation cited.
  - Number of complaints received by type and their resolution.
  - Percentage of notices of violations/notices to comply that have been resolved.
  - Any additional compliance metrics relevant to enforcement issues in the community.

Air Quality and Exposure Metrics

The strategies implemented through the community emissions reduction programs are designed to improve air quality in selected communities. To assess whether these efforts have been effective, air districts will identify specific mechanisms and metrics that will be used to track air quality and exposure progress over time. These could include any number of approaches, such as: monitoring data if it is available in the community; air quality modeling to predict air quality concentrations; or modeled cancer and non-cancer risk. It is important to note, however, that as new strategies are developed and deployed, it may take several years to see significant reductions in exposure that can be measured at the community scale. It may also take time to deploy new monitoring systems necessary to measure these changes and to develop and run community-specific air quality models. These air quality and exposure metrics are therefore most appropriate for final assessment at the five-year milestone, though interim assessments and monitoring will inform CARB, air district, and community understanding of a community emissions reduction program's implementation and effectiveness as it goes into force.

Recommended Additional Metrics

CARB recommends that the community emissions reduction programs include additional metrics to track progress in the following areas, as appropriate.

Implementation Metrics

The air districts may consider including additional metrics to track implementation progress, including:

- Number of public meetings held in the community and number of people in attendance.
- Number of interactions with city and county governments to address local exposure to air pollution.

METRICS ON ADDITIONAL CO-BENEFITS

In addition to the measures tied explicitly to air pollution and implementation, there may be additional co-benefits associated with community emissions reduction programs. CARB recommends that the community emissions reduction programs include metrics to track additional co-benefits, such as trainings, outreach, workforce development, or technical capacity-building.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CARB and the air districts are required to comply with CEQA insofar as activities required by statute are projects subject to CEQA.[26] In its development and approval of a community emissions reduction program, air districts (as CEQA lead agencies) will need to determine if CEQA is triggered and if so, the appropriate CEQA analysis required and consult with CARB. For every project that is not exempt, CEQA requires the appropriate level of environmental review be conducted before that project may be considered for approval.[27] With regard to activities required by AB 617, this review will generally be conducted during an air district's community emissions reduction program development process, but additional review may sometimes be needed during CARB's review process.

CARB, in its consideration of the air district's community emissions reduction programs, will generally rely on the CEQA analysis completed by the air districts. In certain situations (i.e., where CARB has to add to the air district's community emissions reduction program to make it approvable), CARB may have to conduct additional CEQA analysis under its certified regulatory program. Close and early coordination between CARB staff and the air districts will be essential in identifying the agencies' respective CEQA obligations.

---

[26] California Environmental Quality Act, Public Resources Code § 21000 et seq.; CEQA Guidelines, Title 14, California Code of Regulations § 15000 et seq. A project is defined in CEQA to mean in part an "activity which may cause either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment" and is undertaken by a public agency. California Public Resources Code § 21065.

[27] For non-exempt community emissions reduction program projects, at a minimum, an initial review of the project and its environmental effects must be done. Depending on the potential effects of the community emissions reduction program, a further and more substantial review may be required in the form of an environmental impact report or equivalent document, or a negative declaration or mitigated negative declaration or equivalent document.

IV. CARB REVIEW

The air districts have one year to develop and adopt community emissions reduction programs, which will then be forwarded to CARB for consideration and approval, if all criteria are met. Each community emissions reduction program will be reviewed by CARB staff, based on the checklist in Table C-1. CARB staff will then develop a written staff report with staff's assessment and recommendation, including next steps associated with the recommendation. CARB staff will make the written report available for public review and comment before presenting each community emissions reduction program to the CARB Governing Board for action. The CARB Governing Board may take one of four actions in considering a community emissions reduction program: approve, conditionally approve, partially approve, or reject (collectively represented as a CARB Governing Board action).

As the reviewer and approver of community emissions reduction programs, CARB's responsibility is to ensure that community emissions reduction programs have been designed with sufficient rigor and technical foundation to deliver the needed community benefits. In reviewing air district submittals, CARB will assess the community emissions reduction programs with respect to both completeness and adequacy. Assessing for completeness involves reviewing the community emissions reduction programs to ensure they include all the required elements. Evaluating for adequacy assesses the extent to which each required element is responsive to the criteria included in this appendix, is appropriate to the specific community needs, and will reduce air pollution exposure in the community.

CARB staff will recommend approval of community emissions programs that include all of the required elements and have a robust and specific set of goals, targets, strategies, and enforcement approaches. The CARB Governing Board will review district's proposed targets during the community emissions reduction program review and may not approve a community emissions reduction program if the targets are not consistent with this document or governing law, or if they are not supported by substantial evidence in the record developed by the air district. Community emissions reduction programs that may require additional documentation or consideration of certain elements will be recommended for either partial or contingent approval, depending on the strength of the remaining elements. CARB staff will recommend rejection for community emissions reduction programs that are missing significant elements or are inadequate in their likelihood of delivering emissions reductions within the community.

In considering approval of community emissions reduction programs, the CARB Governing Board may establish requirements for community emissions reduction program updates to the Governing Board and/or identify specific interim implementation

milestones to gauge progress or appropriately adjust the community emissions reduction program.

AB 617 requires that CARB act on submitted community emissions reduction programs within 60 days of receipt.[28] This provides a narrow window for CARB staff to review submittals and develop recommendations for the CARB Governing Board action. CARB is committed to working closely with the air districts and the community steering committees throughout community emissions reduction program development to expedite this process.

V. IMPLEMENTATION REQUIREMENTS

After the CARB Governing Board has approved a community emissions reduction program, additional requirements apply for implementation, including a continued public process and reporting.

COMMUNITY PARTNERSHIPS AND PUBLIC ENGAGEMENT

As with development of the community emissions reduction programs, community participation and engagement is a key piece to ensuring successful implementation. In implementing the community emissions reduction programs, the air district will:

- *Continue to uphold the broad accessibility requirements identified in the "Requirements for Community Emissions Reduction Program Development" section of this appendix* – This includes:
    - Identifying a contact person to address general questions regarding community emissions reduction programs and implementation of the Community Air Protection Program for each selected community.
    - Providing materials and interpretation services in appropriate languages at all workshops and air district public board hearings.
- *Maintain the community steering committee* – Air districts must maintain the community steering committee to support implementation over the course of the community emissions reduction program. The steering committee should meet at least quarterly and provide guidance on implementation, including tracking of metrics over time and the development of progress reports.

[28] California Health and Safety Code § 44391.2(c)(4).

- *Maintain the dedicated webpage for each community selected for community emissions reduction program preparation* – The air districts should maintain the dedicated webpage for community emissions reduction program development with all the previously required elements and include the following additional elements:
    - A dashboard for progress on all community emissions reduction program goals and targets.
    - Draft and final annual progress reports as they are released.
- *Hold air district board hearings* – During implementation, air district staff should present a community emissions reduction program update at least once a year to their board in advance of the release of the annual report.

ANNUAL PROGRESS REPORTS

AB 617 requires air districts to develop annual progress reports on the status of implementation of their community emissions reduction programs.[29] This section covers the required content, public noticing, and timing of these reports.

As community emissions reduction programs are implemented over time, CARB and the air districts will have the opportunity to identify promising new strategies for either targeted or statewide implementation. CARB will review the annual progress reports and assess the potential for strategies to be incorporated into the Technology Clearinghouse, online Resource Center, and/or Program revisions as appropriate.

MINIMUM REQUIREMENTS

The annual progress reports are the primary mechanism to monitor progress on the community emissions reduction programs. The annual progress reports will include the following items:

- *A status update on all strategies included in the community emissions reduction program* – The status update includes:
    - Whether the item has gone to the air district board or the CARB Governing Board, if applicable.
    - If the strategy is already being implemented, the steps have been taken to-date.
    - If the strategy has not been implemented, any updates, including public outreach efforts that are supporting strategy development.

[29] California Health and Safety Code § 44391.2(c)(7).

  - If a strategy is past its planned implementation date but has not yet been implemented, an explanation of why, a proposed new timeframe or substitute strategy, and a discussion of how the overall emissions reduction targets will still be achieved within the five-year timeframe.
  - Characterization of health-related emissions and exposure reduction benefits of any strategies under development or implemented.
  - Any additional items that may be relevant.

- *Updates on the metrics for tracking progress identified in the community emissions reduction program* – The community emissions reduction program will have identified a suite of metrics for tracking progress and a frequency for assessing these metrics, including progress toward achieving the emissions reduction targets. The progress reports includes information regarding changes in the community as reflected in the identified metrics, an overview of data sources, and a discussion of changes over time.
- *Updates on the community profile* – The community emissions reduction program will have included a community profile. Annual progress reports will include updates on changes in community attributes that were included in the community profile and incorporate new attributes as appropriate.
- *A qualitative progress assessment* – In addition to updates on discrete metrics, the annual progress reports will include a qualitative progress assessment. This includes a description of community engagement, data analysis, strategy development, and enforcement. Where appropriate, the air districts should highlight learnings that can be used to support communities with similar sources and air quality challenges.
- *Planned changes based on progress to-date* – In developing the annual progress report, the air districts will identify any programmatic changes based on progress to-date. This could include any number of modifications such as updating implementation schedules based on new data analysis, revising public outreach, or pursuing new enforcement activities. The annual progress report will identify if an update is needed to address any additional issues with implementation. This includes identification of how any updates will still ensure the emissions reduction targets will be achieved.
- *Updates on any interim implementation milestones identified by the CARB Governing Board in its initial consideration of the community emissions reduction program for approval or as discussed in any subsequent CARB Governing Board meetings* – In its oversight role, the CARB Governing Board may identify interim implementation milestones. The annual progress report will discuss progress towards these implementation milestones.

- *Completion of required elements* – If required elements have been completed, in accordance with an approved community emissions reduction program, describe the completion of the required elements.

CARB will provide the relevant information on mobile source strategies and emissions reduction progress for the annual reports.

Timing and Noticing

Annual reports must be made available to the public no later than October 1 of every year after community emissions reduction program implementation begins to support air district implementation and the CARB Governing Board direction on continued enhancements or modifications to the Program. Air districts must post the progress reports on the community emissions reduction program dedicated webpage, then issue a public notification that the report has been released, and last present the progress report to its board at a public hearing to discuss the contents.

CARB Review

CARB staff will review the annual progress reports to assess community emissions reduction program progress. CARB staff will report to the CARB Governing Board on key community emissions reduction program milestones, including emissions reductions and regulatory action. As part of this review and discussion with the CARB Governing Board, CARB staff will provide recommendations for any necessary changes to specific community emissions reduction programs as applicable. CARB staff will also determine whether there is a need for modifications to the overall Program annual reporting requirements, based on learnings or the completion of goals established in each community emissions reduction program.

VI. CHECKLIST FOR COMMUNITY EMISSIONS REDUCTION PROGRAM EVALUATION

CARB has developed a checklist to use in evaluating community emissions reduction programs (Table C-1). This checklist includes a high-level summary of the community emissions reduction program elements and is designed to both guide the air districts in developing the community emissions reduction programs and promote transparency in CARB's consideration and staff recommendations to the CARB Governing Board for action on submitted community emissions reduction programs.

Table C-1 Checklist for Community Emissions Reduction Program Evaluation

COMMUNITY EMISSIONS REDUCTION PROGRAM ELEMENT: HEALTH-BASED AIR QUALITY OBJECTIVES	
CRITERIA	✓
TOPIC: HEALTH-BASED AIR QUALITY OBJECTIVES	
Provide a description of the health-based objectives, including: • Maximizing progress on reducing exposure to toxic air contaminants that contribute to the cumulative exposure burden. • Reducing exposure caused by local sources to achieve healthful levels of PM2.5 within the community.	☐

COMMUNITY EMISSIONS REDUCTION PROGRAM ELEMENT: COMMUNITY PARTNERSHIPS AND PUBLIC ENGAGEMENT	
CRITERIA	✓
TOPIC: COMMUNITY STEERING COMMITTEE	

Provide documentation on the community steering committee:
• Date, materials, and attendance for a public meeting that discussed the convening process for the steering committee.
• Membership, including core community representation.
• Charter that covers the following topics:
  o Committee objectives.
  o Roles and responsibilities.
  o Meeting frequency.
  o Meeting dates, times, and locations to ensure accessibility.
  o Use of facilitation services.
  o Use of interpretation services at steering committee meetings and other outreach events.
	☐

COMMUNITY EMISSIONS REDUCTION PROGRAM ELEMENT: COMMUNITY PARTNERSHIPS AND PUBLIC ENGAGEMENT (CONTINUED)	
CRITERIA	✓
Provide documentation the air district board held a public board hearing when presenting the final program for air district board consideration.	☐
Provide documentation the air district provided materials in appropriate languages and interpretation services were available at workshops and public board hearings in accordance with the steering committee charter.	☐
Provide documentation of a dedicated public webpage for each community emissions reduction program that contains: • Phone number and e-mail address for a dedicated contact person. • An up-to-date outreach calendar and notices for workshops and community steering committee meetings. • Any draft materials that will be shared at air district workshops and public board hearings. • Links to any relevant air quality data for the community. • A link to CARB's Community Air Protection Program main webpage. • Access in multiple languages, as appropriate.	☐
Provide documentation that outreach materials were distributed broadly to a variety of groups through various avenues such as the internet, paper mailings, and local print, radio, and television media as appropriate at least five days in advance of each meeting.	☐
TOPIC: OUTREACH RESULTS SUMMARY	
Provide a summary of the results of the first year of public outreach and an overview of the planned approach for public engagement moving forward that includes: • Dates, times, locations, outreach mechanisms, sign-in sheets, agendas, meeting summaries, and next steps for all community steering committee meetings. • Dates, times, locations, and number of participants at all workshops. • Links to presentation materials and minutes/notes for all workshops and air district public board hearings. • Summary of steering committee's perspectives and other public input and documentation steering committee had opportunity to present at all meetings.	☐

COMMUNITY EMISSIONS REDUCTION PROGRAM ELEMENT: UNDERSTANDING THE COMMUNITY	
CRITERIA	✓
TOPIC: COMMUNITY PROFILE	
Provide a description of the community and include a discussion of community issues, including final geographic boundary, types of pollution impacting the community, a characterization of current public health data, and socioeconomic factors.	☐
TOPIC: TECHNICAL FOUNDATION	
Provide an assessment and description of the existing high cumulative air quality exposure burden within the community that identifies: • A list of the key pollutants driving the exposure burden in the community • A list of the key sources and source categories both within and directly surrounding the community.	☐
Provide an assessment of sensitive receptor locations within the community and how land use issues impact exposure.	☐

COMMUNITY EMISSIONS REDUCTION PROGRAM ELEMENT: UNDERSTANDING THE COMMUNITY	
CRITERIA	✓
Provide a community-level emissions inventory based on best available data and developed in accordance with CARB's community inventory guidance.	☐
Provide an assessment of the benefits of existing air quality policies and programs in reducing emissions within the community.	☐
Provide an assessment of compliance with air quality rules and regulations for sources within the community, consistent with the enforcement plan.	☐
Provide the source attribution analysis that assesses the share of mobile, stationary, and area-wide source emissions contributing to the air quality burden in the community, based on at least one of the source attribution approaches discussed in the online Resource Center.	☐
Provide supporting documentation on methodologies and data sources used in the technical assessment.	☐

COMMUNITY EMISSIONS REDUCTION PROGRAM ELEMENT: TARGETS AND STRATEGIES	
CRITERIA	✓
TOPIC: EMISSIONS REDUCTION TARGETS	
Specify emissions reduction targets to be achieved within five years for directly-emitted applicable toxic air contaminants, PM2.5, and any other identified pollutants (e.g., lead, PM10) as defined in the technical assessment, designed to maximize toxic air contaminant emissions reductions and achieve healthful levels of PM2.5.	☐
For the mobile, stationary, and area-wide sources of applicable criteria air pollutants and toxic air contaminants impacting the community, specify: • Commitments to achieve numerical goals for compliance with air quality rules and regulations. • Commitments to achieve numerical goals for deploying or implementing available technologies or control techniques, with a focus on zero emission technologies where feasible.	☐
TOPIC: PROXIMITY-BASED GOALS	
Specify proximity-based goals to reduce exposure at sensitive receptors: • Identify the sensitive receptor locations that are exposed to elevated levels of air pollution because of their proximity to emissions sources. • Specify measureable goals for deploying or implementing exposure reduction measures at sensitive receptor locations.	☐

COMMUNITY EMISSIONS REDUCTION PROGRAM ELEMENT: TARGETS AND STRATEGIES (CONTINUED)	
CRITERIA	✓
TOPIC: REDUCTION STRATEGIES AND IMPLEMENTATION SCHEDULE	
Regulatory Strategies: • Include the best available retrofit control technologies (BARCT) expedited schedule consistent with the statutory direction to cover "each industrial source" subject to the State's Cap-and-Trade program as of January 1, 2017. Identify the categories of sources impacting the community that will be subject to these requirements. • Identify proposed new or amended rules for sources in the community under the district's regulatory authority, as appropriate. o Document the evaluation process undertaken in identifying these measures, which include: Evaluation of the most stringent control limits and exemption and applicability provisions used in rules included in the Technology Clearinghouse. o Consideration of other approaches such as: o Activity limits and other operational requirements. o Indirect source rules and other facility-based approaches. o Enforceable agreements. o Transportation control measures. • Identify mobile source measures that CARB will provide.	☐
Facility Risk Reduction Audits: • List the facilities within and directly surrounding the community that are required to report toxic air contaminant emissions under existing statute and identify whether the air district has designated the facility as high, intermediate, or low risk. • Identify which of these facilities have existing risk reduction audits and emission reduction plans. • Document the review process and specify facilities that will require risk review plan updates and the timeframe required.	☐
Air Quality Permitting: • Reference how the Technology Clearinghouse will be used in developing BACT and T-BACT technology determinations for any new or modified source air district permitting processes within the community.	☐
Enforcement Strategies: • Identify near-term enforcement strategies included in the enforcement plan.	☐
Incentives-Based Strategies: • Identify existing funding programs and the specific project types that will be the focus of incentive programs to accelerate deployment of the cleanest technologies within the community. • Identify specific actions the air district and CARB will take to secure additional funding as necessary. • Include outreach strategies to promote identified funding opportunities.	☐

COMMUNITY EMISSIONS REDUCTION PROGRAM ELEMENT: TARGETS AND STRATEGIES (CONTINUED)	
CRITERIA	✓
Land Use Strategies: • Identify community-specific land use strategies that the air district will actively engage on and the applicable implementing agency. Document the review process undertaken in identifying these strategies, which includes consideration of the following approaches where applicable: o Planning permit conditions to require increased setbacks or buffer zones for specific source types. o "Green zone" policies to establish exposure-reducing development requirements for specific areas. o Zoning code amendments to prevent or reduce new permitting of incompatible land uses. o Processes to terminate existing incompatible land uses within selected communities. o General plan updates focused on environmental justice and air quality, through the SB 1000 process or other general plan updates. o Strategies to promote urban greening. o Measures in the applicable Metropolitan Planning Organization's Senate Bill 375 Sustainable Communities Strategy that can be implemented within the community. o Environmental justice-related components of regional or local plans that can be deployed within the community.	☐
Transportation Strategies: • Identify community-specific transportation strategies the air district will actively engage on and the applicable implementing agency. Document the review process undertaken in identifying these strategies, which includes consideration of the following approaches where applicable: o Alternative truck routing. o Geo-fencing within designated areas. o Strategies to reduce vehicle miles travelled and encourage active transportation. o "Green zone" policies to implement transportation strategies within certain areas. o Preferential access to facilities for the cleanest technologies. o Incorporation of zero emission vehicles and equipment into project development, construction, and operation. o Measures in the applicable Metropolitan Planning Organization's Senate Bill 375 Sustainable Communities Strategy that can be implemented within the community. o Environmental justice-related components of regional or local plans that can be deployed within the community.	☐
Mitigation Strategies: • Identify specific strategies to reduce exposure. Document the review process undertaken in identifying these strategies, which includes consideration of the following approaches where applicable: o Installation of air filtration at sensitive receptor locations. o Installation of solid barriers or vegetative buffers between emissions sources and sensitive receptors. o Implementation of school flag and other notification programs to communicate air quality information to the community.	☐

COMMUNITY EMISSIONS REDUCTION PROGRAM ELEMENT: TARGETS AND STRATEGIES (CONTINUED)	
CRITERIA	✓
Engagement Approaches: • Specify strategy-specific approaches for CARB and air district coordination with appropriate agencies to implement identified land use, transportation, and mitigation strategies. Document the review process undertaken in identifying these strategies, which includes consideration of the following approaches where applicable: o Writing CEQA comment letters on proposed projects that would impact the community. o Utilizing CalEnviroScreen indicators to provide an analysis of existing environmental burdens in order to set the baseline conditions and metrics to improve air quality and reduce cumulative exposure burden. o Direct meetings with staff or elected officials. o Direct meetings with facility owners and/or equipment operators. o Formation of a cooperative information sharing process with land use permitting agencies to review proposed projects that would impact the community. o Participation in public meetings on proposed projects that would impact the community. o Development of memoranda of understanding with cities, counties, transportation agencies, other public agencies, or facility owners or equipment operators. o Direct implementation of strategies within CARB or the air district's jurisdiction.	☐
Discuss any potential new strategies that were applicable to the community's air quality challenges that were not selected, including any identified by the community steering committee.	☐
TOPIC: IMPLEMENTATION SCHEDULE	
Implementation Schedule: • Specify for each new strategy, as applicable: o A description of the strategy. o The expected emissions and/or exposure reductions by pollutant from each proposed strategy. o Cost-effectiveness, calculated in accordance with the air district's cost-effectiveness methodologies, along with appropriate documentation. o Implementation roles and responsibilities, including authority. o A timeframe for air district board or CARB Governing Board consideration. o A timeframe for any necessary coordination with other agencies. o A timeframe for implementation, including immediate and annual actions over the five-year timeframe. o A description of how the technical assessment informed strategy development, including a discussion of priority pollutants and sources. o The expected benefits over an additional five years, beyond the five-year implementation timeframe, to demonstrate ongoing progress. o The perspectives of the community steering committee and other public recommendations.	☐

COMMUNITY EMISSIONS REDUCTION PROGRAM ELEMENT: ENFORCEMENT PLAN	
CRITERIA	✓
TOPIC: ENFORCEMENT PLAN REQUIREMENTS	
Document a three-year enforcement history that includes: • A summary of complaints received and their resolution. • A listing of all permitted facilities, including facility type. • Number of inspections conducted, including type, date, and location. • Notices of violation and notices to comply issued, including date, location, regulation cited, and description of issue. • An assessment of compliance with existing CARB and air district rules and regulations within and directly surrounding the community. • A discussion of opportunities for enhanced enforcement activities, including community outreach and communication, based on the historical data.	☐
Specify compliance mechanisms that will be implemented including: • Compliance goals to support achieving the emissions reduction targets. • Specific approaches to enhance complaint reporting, industry compliance, and enforcement-related community outreach. • Formation of a dedicated team to conduct community-level outreach. • A process to track CARB and air district enforcement activities and identify potential solutions based on enforcement results. • A discussion of potential enforcement mechanisms for each new regulatory strategy.	☐

COMMUNITY EMISSIONS REDUCTION PROGRAM ELEMENT: METRICS TO TRACK PROGRESS	
CRITERIA	✓
TOPIC: REQUIRED METRICS	
Specify required annual metrics to track progress on: • The emission reductions achieved and progress towards meeting the individual emissions reduction targets for each pollutant. • The compliance and deployment and implementation goals for sources of identified pollutants. • The proximity-based goals. • Status of rules and regulations adopted or other strategies implemented. • Dollar amount invested and number of projects implemented in and/or benefitting the community if incentive strategies are part of the emissions reduction program. • Additional enforcement activities.	☐
Specify approaches for evaluating air quality and exposure at the five-year milestone.	☐
TOPIC: RECOMMENDED ADDITIONAL METRICS	
Identify any additional metrics to track progress on: • Implementation. • Additional co-benefits.	☐

COMMUNITY EMISSIONS REDUCTION PROGRAM ELEMENT: CEQA ANALYSIS	
CRITERIA	✓
Include any applicable CEQA analysis.	☐

APPENDIX D.
STATEWIDE ACTIONS

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Please submit any written comments by September 24, 2018 to: https://www.arb.ca.gov/lispub/comm/bclist.php.

I. INTRODUCTION

Community-scale air pollution exposure is caused by many factors, including the cumulative impacts from multiple pollution sources and land use and transportation planning decisions that have placed communities and sources too close together. Identifying effective solutions will require multiple strategies at both the statewide and local level to deliver new emission reductions directly within these communities.

The Community Air Protection Program (Program) includes a multi-pronged set of actions that are underway to reduce the air pollution burden in heavily impacted communities throughout the State. These actions include:

- New regulations to set clean technology requirements for the types of sources that are impacting selected communities, coupled with enhanced enforcement tools.
- New incentives specifically targeted to help purchase cleaner vehicles and equipment in impacted communities.
- New exposure reduction resources and tools to reduce community residents' exposure to air pollution through coordination with land use and transportation planning agencies.

This appendix identifies the broad suite of actions the California Air Resources Board (CARB) and air districts are undertaking now to reduce criteria air pollutants and toxic air contaminants in disproportionately impacted communities throughout the State. This includes: new regulatory measures with a focus on zero emission technologies where feasible; community-focused enforcement; air district requirements to develop an expedited schedule for best available retrofit control technology (BARCT) implementation; CARB's Technology Clearinghouse; guidance documents; and incentive funding to support the deployment of cleaner technologies in communities included in the Program. CARB staff will also develop additional measures to improve energy efficiency, require cleaner fuels, and reduce climate super pollutants, which can also help reduce air pollution in impacted communities. Community emissions reduction programs will build from these actions, and identify additional strategies targeted to the individual pollution challenges within each community.

Addressing the cumulative exposure burden in communities requires both direct reductions in emissions and implementation of other strategies to further reduce exposure. In some cases, existing and future exposure issues are the result of land use and transportation planning decisions. Land use and transportation policies are primarily under the jurisdiction of local and regional government agencies, not air districts, which makes the solutions more challenging. However, this Blueprint supports

identification, design, and implementation of emissions and exposure reduction strategies related to these policies, including:

- Commitments to develop resources and tools on best practices for land use and transportation strategies, including use of the Land Use Handbook[1] and development of a Freight Handbook.[2]
- Commitments to continue to provide resources on health data in the online Resource Center to enhance the consideration of public health in the local decision-making process.
- Inclusion of local government agencies on community steering committees, identify land use and transportation strategies that could reduce exposure within the community, and include specific engagement mechanisms to advocate for these strategies.

As part of an ongoing process to address community-scale exposure challenges across the State, CARB will also:

- Work with other government agencies to identify future actions (e.g., community-scale data collection, analysis, and consideration for land use and transportation projects) that are outside of CARB's authority.[3] For example, joint meetings between CARB and the California Transportation Commission to coordinate programs and policies. This will help improve community-scale data collection and the ability to understand air quality/public health relationships at the community level and promote greater consideration of air quality for transportation projects.
- Consider how land use patterns and the proximity of sensitive receptors may influence State and air district regulatory strategies.
- Evaluate how geographic approaches could be incorporated into CARB's air toxics and mobile source regulations to reduce exposures for impacted communities.

[1] California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005, available at: https://www.arb.ca.gov/ch/landuse.htm.
[2] More information on the development of a Freight Handbook is available at: http://dot.ca.gov/hq/tpp/offices/ogm/cs_freight_action_plan/main.html.
[3] More information on joint meetings between CARB and the California Transportation Commission is available at: https://ww2.arb.ca.gov/ab-179-california-air-resources-board-and-california-transportation-commission-joint-meetings.

II. STATEWIDE EMISSION REDUCTION STRATEGIES

Identifying specific strategies for reducing criteria air pollutants and toxic air contaminants in communities with high cumulative exposure burdens is critical for implementing strong statewide actions to ensure new emissions reductions. The strategies outlined in this section reflect actions that CARB and air districts are already taking to deliver new reductions in communities. This includes new strategies from existing air quality and climate plans, early action incentive funding appropriated by the Legislature, and additional community-focused actions (e.g., new regulatory measures, targeted enforcement activities, other new tools and resources).

FOUNDATIONAL STRATEGIES IN CARB AIR QUALITY AND CLIMATE PLANS

CARB's Governing Board has adopted several comprehensive air quality and climate plans in recent years, including the *State Strategy for the State Implementation Plan*,[4] the *California Sustainable Freight Action Plan*,[5] *California's 2017 Climate Change Scoping Plan*,[6] and the *Short-Lived Climate Pollutants Reduction Strategy.*[7] Each of these plans includes a suite of emissions reduction strategies that will address many of the sources that are concentrated within heavily impacted communities like cars, trucks, freight sources, and other equipment. Together they provide a foundation for additional emissions reductions needed to deliver healthful air in communities with high cumulative exposure burdens.

Table D-1, Table D-2, and Table D-3 provide lists of new CARB strategies associated with these plans.[8] CARB staff have already begun developing regulations, policies, and incentive programs to implement these strategies. This is an ongoing process that will begin achieving emissions reductions in the near-term and providing benefits that support community-level actions, with a focus on zero emission technologies where the technologies are now feasible. New regulations cover the following range of sources:

[4] California Air Resources Board, *Proposed 2016 State Strategy for the State Implementation Plan*, May 17, 2016, available at: https://www.arb.ca.gov/planning/sip/2016sip/2016statesip.pdf.
[5] California Department of Transportation, *California Sustainable Freight Action Plan*, July 2016, available at: http://www.dot.ca.gov/hq/tpp/offices/ogm/cs_freight_action_plan/theplan.html.
[6] California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, November 2017, available at: www.arb.ca.gov/cc/scopingplan/scopingplan.htm.
[7] California Air Resources Board, *Short-Lived Climate Pollutant Reduction Strategy*, March 2017, available at: www.arb.ca.gov/cc/shortlived/shortlived.htm.
[8] The information provided in these tables reflects the published plans; some of the information may have been revised or updated since publication.

- *For communities heavily impacted by freight sources* –
  - Expanded standards for clean operation for ships while they are in port.
  - New stationary operating time limits and transition to zero emission operation for certain populations of transport refrigeration units at warehouses.
  - Zero emission requirements for forklifts.
  - Petitioning U.S. Environmental Protection Agency (U.S. EPA) for cleaner locomotive standards.
- *For communities heavily impacted by traffic* –
  - New clean car standards and sales requirements for zero emission cars.
  - New clean truck standards; new testing and warranty requirements to make sure trucks remain clean over their lifetime.
  - Zero emission requirements for delivery trucks, buses, and airport shuttles.
- *For communities heavily impacted by other equipment* –
  - Zero emission requirements for airport equipment.
  - Zero emission requirements for lawn and garden equipment.
  - Assessing opportunities for zero emission requirements for other off-road equipment.

Some of the strategies focused on reducing climate pollutants will also provide opportunities to reduce criteria air pollutants and toxic air contaminants. CARB will continue to develop coordinated strategies that leverage resources, accelerate action at the community level, and support healthier, more sustainable communities. CARB also anticipates emission reductions in communities as a result of the enhanced compliance provision in Senate Bill 1,[9] which prevents the California Department of Motor Vehicles from issuing registrations to heavy-duty trucks that do not comply with applicable CARB regulations. Several of the strategies listed in Table D-1, Table D-2, and Table D-3 have already been adopted by the CARB Governing Board and are being implemented, while development for many of the remaining strategies is underway.

[9] Senate Bill 1, Beall, Chapter 5, Statutes of 2017, California Vehicle Code § 4000.15(a).

Table D-1 State Strategy for the State Implementation Plan Measures and Schedule *(Approved 2017)*[10]

PROPOSED MEASURE	AGENCY	ACTION	IMPLEMENTATION BEGINS
ON-ROAD LIGHT-DUTY			
Advanced Clean Cars 2	CARB	2020-2021	2026
Lower In-Use Emission Performance Assessment	CARB / BAR	n/a	Ongoing
Further Deployment of Cleaner Technologies*	CARB / SCAQMD / U.S. EPA	ongoing	2016
ON-ROAD HEAVY-DUTY			
Lower In-Use Emission Performance Level	CARB	2017-2020	2018 +
Low-NOx Engine Standard – California Action	CARB	2019	2023
Low-NOx Engine Standard – Federal Action*	U.S. EPA	2019	2024
Medium and Heavy-Duty GHG Phase 2	CARB / U.S. EPA	2017-2019	2018 +
Innovative Clean Transit	CARB	2017	2018
Last Mile Delivery**	CARB	2018	2020
Innovative Technology Certification Flexibility	CARB	2016	2017
Zero-Emission Airport Shuttle Buses	CARB	2018	2023
Incentive Funding to Achieve Further Emission Reductions from On-Road Heavy-Duty Vehicles	CARB / SCAQMD	ongoing	2016
Further Deployment of Cleaner Technologies*	CARB / SCAQMD / U.S. EPA	ongoing	2016

(continued on next page)

[10] California Air Resources Board, *Revised Proposed 2016 State Strategy for the State Implementation Plan*, March 7, 2017, Table 2, available at: www.arb.ca.gov/planning/sip/sip.htm.

PROPOSED MEASURE	AGENCY	ACTION	IMPLEMENTATION BEGINS
OFF-ROAD FEDERAL AND INTERNATIONAL SOURCES			
More Stringent National Locomotive Emission Standards*	U.S. EPA	2017	2023
Tier 4 Vessel Standards*	CARB / IMO	2016 - 2018	2025
Incentivize Low Emission Efficient Ship Visits	CARB	2018 - 2020	2018 +
At-Berth Regulation Amendments	CARB	2017 - 2018	2023
Further Deployment of Cleaner Technologies*	CARB / SCAQMD U.S. EPA	ongoing	2016
OFF-ROAD EQUIPMENT			
Zero-Emission Off-Road Forklift Regulation Phase 1	CARB	2020	2023
Zero-Emission Off-Road Emission Reduction Assessment	CARB	2025 +	--
Zero-Emission Off-Road Worksite Emission Reduction Assessment	CARB	tbd	--
Zero-Emission Airport Ground Support Equipment	CARB	2018	2023
Small Off-Road Engines	CARB	2018 - 2020	2022
Transport Refrigeration Units Used for Cold Storage	CARB	2018 - 2019	2020 +
Low-Emission Diesel Requirement	CARB	by 2020	2023
Further Deployment of Cleaner Technologies*	CARB / SCAQMD / U.S. EPA	ongoing	2016
CONSUMER PRODUCTS			
Consumer Products Program	CARB	2019 - 2021	2020 +

* Request the U.S. EPA approval under the provisions of Section 182(e)(5) of the Clean Air Act allowing for reliance on anticipated development of new control techniques or improvement of existing control technologies. Also includes identification of needed funding, infrastructure development, and actions/resources required from other agencies.
** This measure is being developed as the *Advanced Clean Local Trucks Regulation*.

Table D-2 Summary of California's 2017 Climate Change Scoping Plan Update Measures *(Approved 2017)*[11]

POLICY	PRIMARY OBJECTIVE	HIGHLIGHTS	IMPLEMENTATION TIME FRAME
SB 350*[A]	Reduce GHG emissions in the electricity sector through the implementation of the 50 percent RPS, doubling of energy savings, and other actions as appropriate to achieve GHG emissions reductions planning targets in the Integrated Resource Plan (IRP) process.	• Load-serving entities file plans to achieve GHG emissions reductions planning targets while ensuring reliability and meeting the State's other policy goals cost-effectively. • 50 percent RPS. • Doubling of energy efficiency savings in natural gas and electricity end uses statewide.	2030
Low Carbon Fuel Standard (LCFS)*	Transition to cleaner/less- polluting fuels that have a lower carbon footprint.	• At least 18 percent reduction in carbon intensity, as included in the Mobile Source Strategy.	2030
Mobile Source Strategy (Cleaner Technology and Fuels [CTF] Scenario)*	Reduce GHGs and other pollutants from the transportation sector through transition to zero-emission and low-emission vehicles, cleaner transit systems and reduction of vehicle miles traveled.	• 1.5 million zero-emission vehicles (ZEV), including plug-in hybrid electric, battery-electric, and hydrogen fuel cell vehicles by 2025 and 4.2 million ZEVs by 2030. • Continue ramp up of GHG stringency for all light-duty vehicles beyond 2025. • Reductions in GHGs from medium-duty and heavy-duty vehicles via the Phase 2 Medium and Heavy-Duty GHG Standards. • Innovative Clean Transit: Transition to a suite of innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new bus sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NOx standard.	Various

(continued on next page)

[11] California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, November 2017, Table 1, available at: www.arb.ca.gov/cc/scopingplan/scopingplan.htm.

POLICY	PRIMARY OBJECTIVE	HIGHLIGHTS	IMPLEMENTATION TIME FRAME
Mobile Source Strategy (Cleaner Technology and Fuels [CTF] Scenario)* (continued)		• Last Mile Delivery: New regulation that would result in the use of low NOx or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 • Reduction in vehicle miles traveled (VMT), to be achieved in part by continued implementation of SB 375 and regional Sustainable Community Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy, but included in the document "Potential VMT Reduction Strategies for Discussion" in Appendix C of the Scoping Plan. B	Various
SB 1383*	Approve and Implement Short-Lived Climate Pollutant strategy to reduce highly potent GHGs	• 40 percent reduction in methane and hydrofluoro-carbon (HFC) emissions below 2013 levels by 2030. • 50 percent reduction in anthro-pogenic black carbon emissions below 2013 levels by 2030.	2030
California Sustainable Freight Action Plan*	Improve freight efficiency, transition to zero emission technologies, and increase competitiveness of California's freight system.	• Improve freight system efficiency by 25 percent by 2030. • Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	2030
Post-2020 Cap-and-Trade Program	Reduce GHGs across largest GHG emissions sources	• Continue the existing Cap-and-Trade Program with declining caps to ensure the State's 2030 target is achieved.	2030

* These measures and policies are referred to as "known commitments."
[A] SB 350 Clean Energy and Pollution Reduction Act of 2015 (De León, Chapter 547, Statutes of 2015). This policy also includes increased demand response and PV.
[B] Potential State-Level Strategies to Advance Sustainable, Equitable Communities and Reduce Vehicle Miles of Travel (VMT) - for Discussion. http://www.arb.ca.gov/cc/scopingplan/meetings/091316/Potential%20VMT%20Measures%20For%20Discussion_9.13.16.pdf.

Table D-3 Summary of Proposed New Short-Lived Climate Pollutant Measures and Estimated Emission Reductions[A] *(Approved 2017)*[12]

Measure Name	2030 Annual Emission Reductions	2030 Annual Emissions
Black Carbon		
2030 BAU[B]		26
Residential Fireplace and Woodstove Conversion	3	
Clean Energy Goals[C]	4	
2030 BAU with new measures		19
Methane		
2030 BAU[B]		117
Dairy and Other Livestock (Manure and Enteric Fermentation)	26	
Landfill	4	
Wastewater, Industrial and Other Miscellaneous Sources	7	
Oil and Gas Sector	8	
2030 BAU with new measures		71[D]
Hydrofluorocarbons		
2030 BAU[B]		65
Financial Incentive for Low-GWP Refrigeration Early Adoption	2	
HFC Supply Phasedown (to be achieved through global HFC phasedown)[E]	19	
Prohibition on sales of very-high GWP refrigerant	5	
Prohibition on new equipment with high-GWP Refrigerants	15	
2030 BAU with new measures		24

[A] Using 20-year GWPs from the 4th Assessment report of the IPCC for methane and HFCs, and 5th Assessment report for black carbon (the first report to define a GWP for black carbon).
[B] Business As Usual (BAU) forecasted inventory includes reductions from implementation of current regulations.
[C] Future emission reduction measures that will be developed to help the State meet its air quality and climate change goals are also expected to help the State meet the black carbon target by 2030.
[D] The specific annual reduction values shown above do not sum exactly to the total shown due to rounding.
[E] A global HFC production and consumption phasedown was agreed to on October 15, 2016, in Kigali, Rwanda. ARB is currently evaluating the impact upon HFC emission reductions in California and plans to utilize the results from the assessment to inform future updates to BAU projections for HFC emissions.

[12] California Air Resources Board, *Short-Lived Climate Pollutant Reduction Strategy*, March 2017, Table 2, available at: www.arb.ca.gov/cc/shortlived/shortlived.htm.

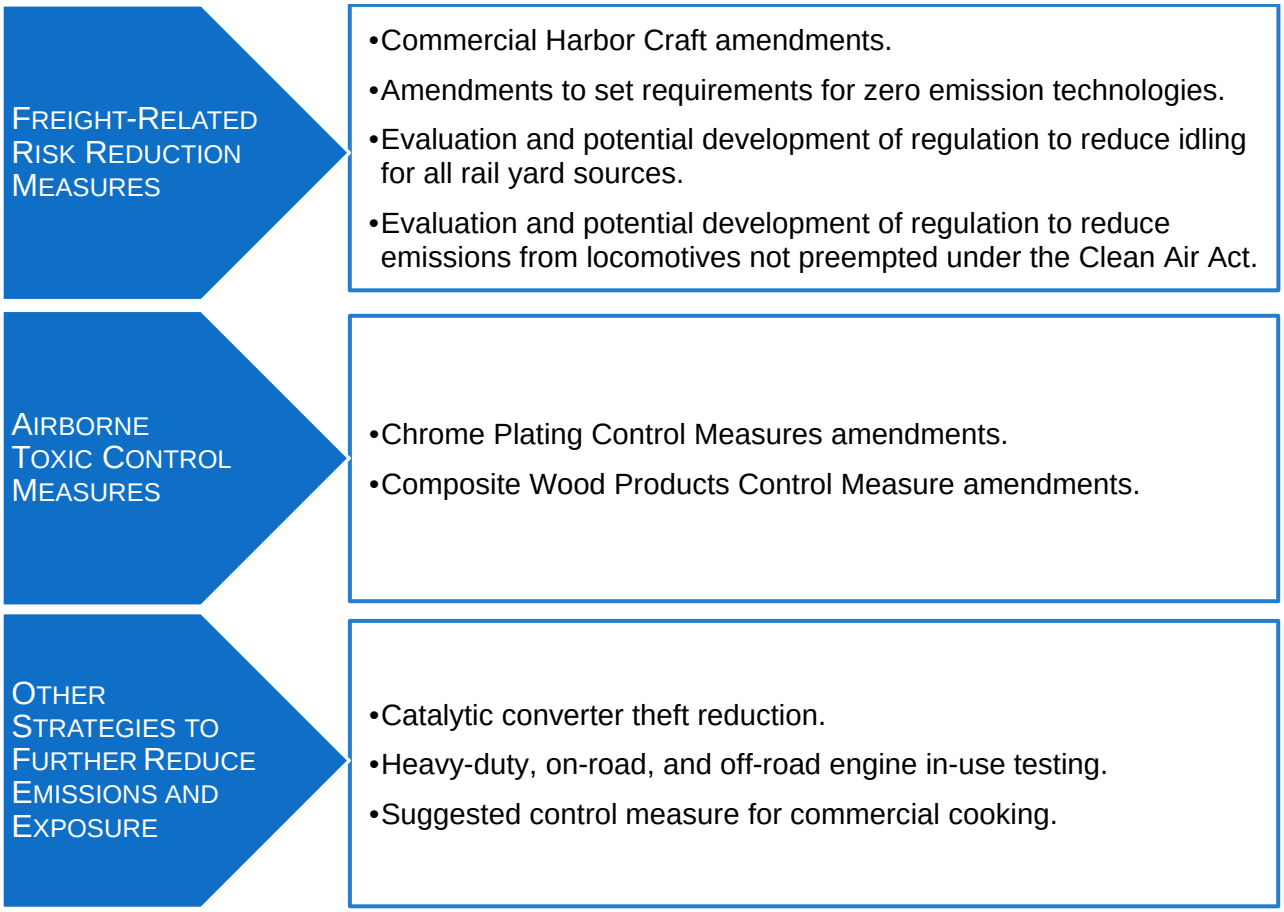
NEW CARB STRATEGIES TO REDUCE EMISSIONS IN IMPACTED COMMUNITIES

Figure D-1 lists additional new strategies to reduce emissions from a number of sources that are significant contributors to cumulative exposure burdens (details are provided in Appendix F). CARB has identified new mobile source measures in both the light- and heavy-duty sectors. Five of the new regulatory measures are specifically focused on reducing near-source risk from freight-related sources. The new measures also include strengthening control requirements for stationary sources of toxic air contaminants, such as chrome plating.

CARB staff and air districts will continue developing current regulatory and incentive actions through separate public processes. Subsequent implementation will be conditional on the successful completion of applicable public processes, necessary financing approvals, technical feasibility analyses, economic competitiveness, safety, and environmental reviews.

CARB staff will also continue to work with communities and air districts to identify additional sources that may require further statewide action and will update the CARB Governing Board on an annual basis on ongoing community-focused efforts and the need for additional regulatory and other actions.

Figure D-1 New Strategies for Emissions Reduction in Communities



Incentives

In addition to the strategies identified above, and to further support the implementation of Assembly Bill (AB) 617,[13] the fiscal year 2017-2018 State budget appropriated $250 million of Cap-and-Trade auction proceeds for incentive projects to achieve accelerated reductions through the deployment of cleaner mobile sources in impacted communities. As directed by the Legislature, these funds are being administered through the Carl Moyer Memorial Air Quality Standards Attainment Program,[14] except that at its discretion, an air district may allocate up to 40 percent of the funds it receives to incentivize clean trucks. These incentives are to be distributed in accordance with the funding amounts and truck evaluation requirements in the *Proposition 1B Goods Movement Emission Reduction Program Guidelines for Implementation*.[15]

The funding allocated to specific air districts included:

- 43 percent to South Coast Air Quality Management District.
- 32 percent to San Joaquin Valley Air Pollution District.
- 20 percent to Bay Area Air Quality Management District.
- 5 percent to CARB for distribution to other air districts.

The CARB Governing Board also approved a *Community Air Protection Program Funds Supplement to the Carl Moyer Memorial Air Quality Standards Attainment Program 2017 Guidelines*[16] in April 2018 to facilitate funding the types of projects that are most beneficial to communities. This includes: increased grant amounts for replacing older vehicles and equipment; broader project eligibility; and an added focus on projects that address community-level air pollution (e.g., school buses, delivery trucks, improved infrastructure for electric vehicles).

CARB staff is also working with air districts to ensure funds target the types of projects that will reduce emissions and exposure in communities with high cumulative exposure burdens, per the requirements of AB 617.[17] Air districts must also work directly with communities in identifying the types of investments that best support community needs, with at least 70 percent of the funds invested in projects to benefit disadvantaged communities.[18] Air districts are conducting public outreach to local residents and community groups to inform investment decisions, and select projects in communities with high cumulative exposure burdens. The funds also focus on vehicles and/or equipment that spend a substantial amount of time in those communities, with a priority on zero emission technologies. Air districts are posting information on their webpages regarding their proposed approaches and public engagement process for funding projects.

---

[13] Assembly Bill 617, Garcia, C., Chapter 136, Statutes of 2017, modified the California Health and Safety Code, amending § 40920.6, § 42400, and § 42402, and adding § 39607.1, § 40920.8, § 42411, § 42705.5, and § 44391.2. See Appendix H for complete bill language.

[14] Additional information for the California Air Resources Board, *Community Air Protection Program Funds Supplement to the Carl Moyer Memorial Air Quality Standards Attainment Program* is available at: www.arb.ca.gov/msprog/moyer/moyer.htm.

[15] California Air Resources Board, *Proposition 1B Goods Movement Emission Reduction Program Guidelines for Implementation*, June 2015, available at: www.arb.ca.gov/bonds/gmbond/gmbond.htm.

[16] California Air Resources Board, *Community Air Protection Program Funds Supplement to the Carl Moyer Memorial Air Quality Standards Attainment Program 2017 Guidelines*, April 27, 2018, available at: www.arb.ca.gov/msprog/moyer/moyer.htm.

[17] Requirements for the Greenhouse Gas Reduction Fund, the source of the appropriations, also apply. More information is available at: www.arb.ca.gov/cc/capandtrade/auctionproceeds/auctionproceeds.htm.

[18] Additional information on investment requirements are provided in the California Air Resources Board, *Board Resolution 18-15*, April 27, 2018, available at: https://ww2.arb.ca.gov/board-resolutions.

The fiscal year 2018-2019 budget includes an additional $245 million of Cap-and-Trade auction proceeds for continued support of early action incentive programs to reduce emissions within impacted communities. These funds are to be allocated to projects consistent with priorities identified by the affected community in a transparent, meaningful, public process.[19] Similar to the fiscal year 2017-2018 funding, this funding focuses on purchasing cleaner vehicles and equipment, prioritizing zero emission equipment, and the ability to purchase infrastructure to support zero emission vehicles, with a priority for medium-duty and heavy-duty vehicles. This funding can also be used to reduce emissions from stationary sources, including zero emission technologies, along with programs that are consistent with actions identified in a community emissions reduction program. Distribution of this funding will include a separate public process.[20]

In addition to this new incentive funding, CARB will work with the air districts to leverage other incentive programs such as the Low Carbon Transportation Investments, Volkswagen Environmental Mitigation Trust, and air district funding programs as community emissions reductions programs are developed and implemented. This will also include increasing outreach activities to community members and small business owners in the community to help deliver funding to those who need it the most.

AIR DISTRICT STRATEGIES

Air districts are also engaged in regional planning efforts to meet national and State ambient air quality standards and in implementing local risk reduction programs. This includes: new regulatory measures; incentive funding to achieve early reductions in diesel particulate emissions from mobile sources; programs to identify, solicit, and support opportunities to accelerate the deployment of innovative clean air technologies; and "new and modified stationary source review" programs that ensure that new or modified sources of air pollution are controlled with the best available air pollution control equipment.

AB 617 also requires that any air district in nonattainment for at least one criteria air pollutant adopt an expedited schedule for implementation of BARCT[21] by January 1, 2019.[22] These requirements apply to each industrial sources that was subject to the State's Cap-and-Trade program (e.g., oil refineries, cement plants) as of January 1, 2017. The expedited schedule is designed to ensure a full review of existing applicable measures and, as appropriate, accelerated implementation of cleaner control technologies across the State where BARCT standards require an update. The

[19] Senate Bill 856, Budget Act of 2018, Chapter 30. Statutes of 2018.
[20] Additional information on this public process is available at: https://www.arb.ca.gov/msprog/cap/capfunds.htm.
[21] California Supreme Court, *American Coatings Ass'n v. South Coast Air Quality District*, 54 Cal. 4th 446, 465 (2012).
[22] California Health and Safety Code § 44391.2(c)(1).

schedule must give the highest priority to those permitted units that have not modified their emissions-related permit conditions for the greatest period of time. The schedule must address each nonattainment pollutant emitted by a unit at a covered industrial source, but will not apply to a permitted unit that has implemented BARCT due to a permit revision or a new permit issuance since 2007. Prior to adopting the schedule, the air district must hold a public meeting and take into account: (1) the local public health and clean air benefits to the surrounding community; (2) the cost-effectiveness of each control option; and (3) the air quality and attainment benefits of each control option. CARB staff will be posting these schedules in the online Resource Center[23] and will incorporate the updated BARCT prohibitory rules into the Technology Clearinghouse as they are adopted.

This Blueprint also provides specific guidance on the process for identifying and evaluating further pollution reduction strategies that are to be included as part of all community emissions reduction programs. While the individual strategies will vary by community, the criteria establish a minimum baseline for the types of strategies that will be considered, including adopting more stringent emissions limits and improved control techniques for new and existing sources, permitting requirements for new sources, enhanced enforcement to deal with local compliance issues, and commitments for coordination with local land use and transportation agencies.

III. NEW TOOLS AND RESOURCES

Emissions reduction strategies are key to reducing exposures in communities with high cumulative exposure burdens. To support these strategies, CARB staff have identified and are developing new tools and resources to help communities, air districts, affected industry, and other stakeholders achieve exposure reductions at the community level. These tools and resources are designed to: promote broad community participation; provide data and guidance on emissions sources and emissions reduction strategies; and facilitate the adoption of land use and transportation strategies that can deliver additional exposure reductions.

Several of these tools and resources are directly responsive to statutory requirements, such as:

- The Technology Clearinghouse,[24] which includes data necessary to support new air district best available control technologies (BACT), best available retrofit control technologies (BARCT), and best available control technologies for toxic air contaminants (T-BACT) determinations and other air district rules.

[23] Appendix F provides more detail on CARB's online Resource Center.
[24] California Health and Safety Code § 40920.8(a).

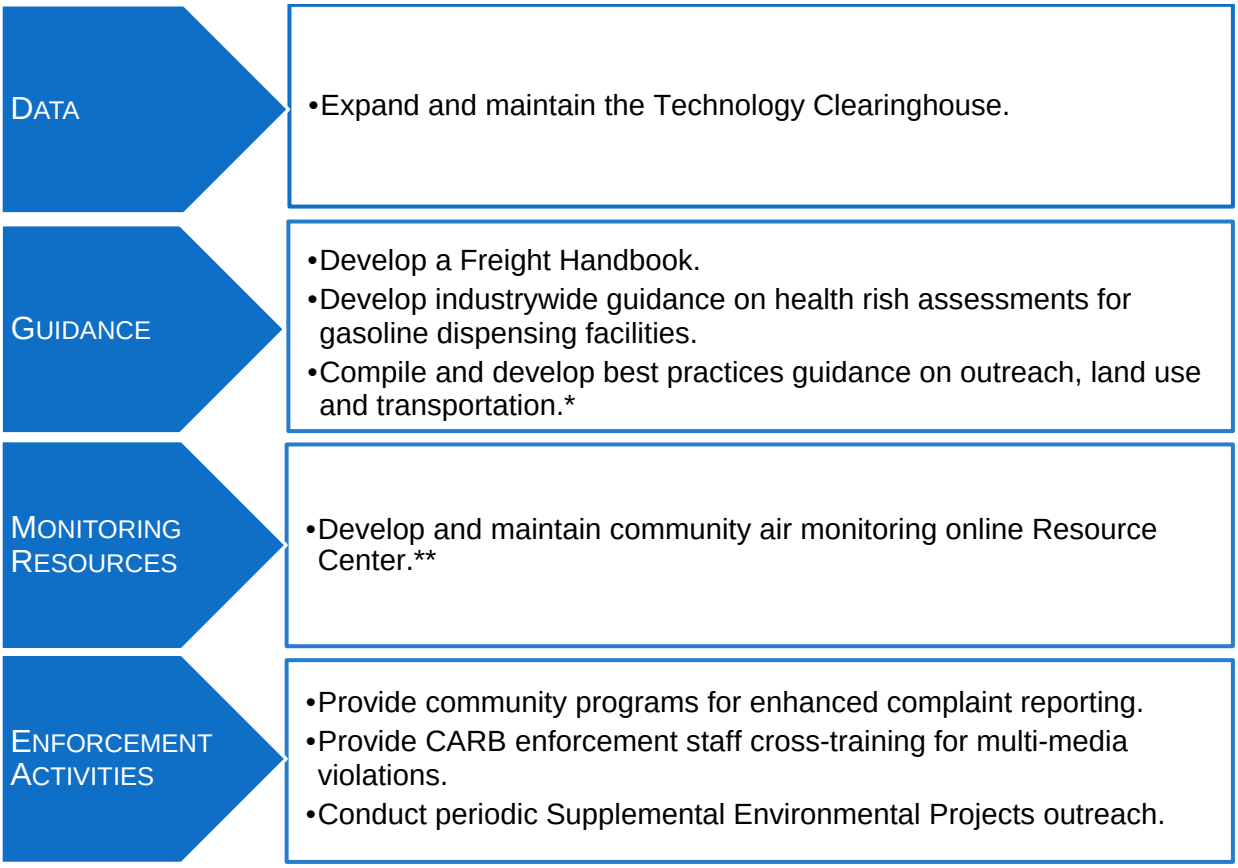
- The annual emissions reporting system,[25] which will collect and display integrated criteria, toxics, and climate data for facilities across the State on an annual basis.
- The community air monitoring toolbox including reviews of advanced sensing monitoring technologies and reviews of existing community air monitoring systems.
- Source attribution methodologies for assessing and identifying sources contributing to high cumulative exposure burdens in a community.[26]

Other tools and resources have been identified in response to public input on the resources needed to support effective community engagement and emissions reductions. This includes a variety of guidance resources like CARB's Land Use Handbook, Freight Handbook, best practices on outreach, land use, and transportation, and new enforcement activities including community programs and outreach.

Figure D-2 includes the full list of tools and resources under development, with additional detail provided in Appendix F.

[25] California Health and Safety Code § 39607.1(b)(1).
[26] California Health and Safety Code § 44391.2(b)(2).

Figure D-2 New Tools and Resources to Support Community Engagement and Emissions Reductions



* The online Resource Center contains comment letters that CARB has written on CEQA documents for some proposed projects.
** Including an assessment of current air monitoring technologies and air monitoring systems.

[This page is intentionally left blank.]

Please submit any written comments by September 24, 2018 to: https://www.arb.ca.gov/lispub/comm/bclist.php.

APPENDIX E.
STATEWIDE AIR MONITORING PLAN

TABLE OF CONTENTS

Please submit any written comments by September 24, 2018 to: https://www.arb.ca.gov/lispub/comm/bclist.php.

LIST OF FIGURES

LIST OF TABLES

I. INTRODUCTION

Community air monitoring plays an important role in supporting effective action to reduce emissions and exposure within impacted communities. Assembly Bill (AB) 617[1] requires the California Air Resources Board (CARB) to prepare a statewide monitoring plan by October 1, 2018 that must evaluate the availability and effectiveness of air monitoring technologies and existing community air monitoring systems.[2] As air monitoring technologies and systems will continue to evolve and advance, this evaluation will be housed in the community air monitoring toolbox within the online Resource Center.[3]

The CARB Governing Board must also annually consider the selection of communities for the deployment of community air monitoring, as deemed appropriate. Once CARB has selected communities, air districts, working with the community, must deploy community air monitoring within 12 months following selection. However, for the first set of communities selected for community air monitoring under the Community Air Protect Program (Program), monitoring must begin by July 1, 2019. This new community air monitoring will augment other community-led and government-led air monitoring programs and enhance community-level coverage throughout the State.

With the advent of low-cost air quality sensors, community members are themselves taking more and more responsibility for measuring the air quality where they live, including community groups operating sophisticated air quality systems. Many of the initial community assistance grants[4] CARB awarded in the first year were for projects that include robust community-operated air quality sensor systems. CARB will work with community groups and air districts to incorporate the elements and guidance in this appendix into the design and operation of the community-operated systems so that the data from those systems can effectively support community needs.

The goal of air monitoring is to enhance our understanding of pollution impacts within communities, and support effective implementation of emissions reduction programs. A variety of air monitoring approaches may be utilized for community air monitoring, and the objectives, tools, and stakeholders involved may differ from community to community.

---

[1] Assembly Bill 617, Garcia, C., Chapter 136, Statutes of 2017, modified the California Health and Safety Code, amending § 40920.6, § 42400, and § 42402, and adding § 39607.1, § 40920.8, § 42411, § 42705.5, and § 44391.2. See Appendix H for complete bill language.

[2] California Health and Safety Code § 42705.5(b).

[3] Appendix F provides more detail on CARB's online Resource Center, which includes monitoring information, along with CARB points of contact and links to air district webpages and other resources to improve Program implementation.

[4] California Air Resources Board, *2017-2018 Grant Guidelines, California Assembly Bill 617: Community Air Grants Program*, February 26, 2018, available at: https://ww2.arb.ca.gov/our-work/programs/Community-Air-Protection-Program-AB617.

For example, air districts may require fence-line monitoring[5] (i.e., air monitoring at or adjacent to a known stationary source) to determine where and when emissions are occurring, at what rate emissions are leaving the source, and what chemicals are released when fugitive emissions are present. Other air monitoring objectives include using more granular, local-scale monitoring methods to communicate air quality conditions within a community, identify contributing sources, and support the development of mitigation strategies. Air monitoring can also be utilized as a method to track progress on the community emissions reduction programs. Community air monitoring may not necessarily require U.S. Environmental Protection Agency (U.S. EPA)-designated methods and equipment, which provides the opportunity to utilize advanced air monitoring methods and big data solutions capable of providing greater spatial coverage and faster access to the resulting air quality data as they become available.

This appendix identifies and describes criteria for air districts and communities that are planning to conduct community air monitoring under the Program. Community organizations, air districts, and CARB have conducted successful community air monitoring programs that provide valuable best practices and learnings to jumpstart implementation of the Program. CARB staff have defined 14 elements to include in community-specific air monitoring plans that build from these existing programs. The 14 elements are flexible enough to apply to a variety of monitoring needs, yet rigorous enough to ensure that the data collected will support actions to reduce emissions and exposure within communities with high cumulative exposure burdens.

Planning elements fall into three key areas: (1) determine the reason for conducting community air monitoring; (2) describe how the community air monitoring will be conducted; and (3) identify how the data will support action to reduce air pollution within the community. These elements include specific criteria and best practices for: conducting community air monitoring; supporting collaborative partnerships between communities, air districts, and CARB in conducting air monitoring; and making the data accurate, accessible, transparent, and understandable. CARB has also created checklists to clarify the criteria required for community air monitoring plans (see the "Checklist for Community Air Monitoring Evaluation" section and Table E-2 in this appendix).

A number of activities are essential to support the successful implementation of community air monitoring. In addition to the criteria and evaluation checklists, community groups and air districts can access air monitoring guidance in CARB's community air monitoring toolbox housed within the online Resource Center. The goal of the community air monitoring toolbox is to:

[5] California Health and Safety Code § 42705.5(c).

- Support the process of fostering collaborative relationships for community air monitoring.
- Streamline data collection, display, and interpretation.
- Support the advancement and utility of air monitoring methods.

CARB's community air monitoring toolbox serves as a repository of community air monitoring information and guidance to be used by community members, air districts, health scientists, land use and transportation planners, and the public. This includes:

- Reviews of advanced sensing monitoring technologies.[6]
- Reviews of existing community air monitoring systems.[7]
- Supporting material for the development of community air monitoring plans.
- Resources for community scientists.

The air monitoring technology review will cover techniques ranging from deploying dense systems of small air sensors, to using approved criteria air pollutant or air toxics methods, to utilizing advanced remote sensing systems with a focus on characterizing performance and identifying appropriate applications for each method. CARB staff will conduct laboratory and field-based air sensor evaluations alongside partner programs at the South Coast Air Quality Management District (which operates the Air Quality Sensor Performance Evaluation Center program[8]), the U.S. EPA, and others who have experience conducting sensor evaluations. Information from these evaluations will be provided to assist communities and others in selecting methods they can trust to produce the type and quality of data required to meet their needs. Best practices gleaned from existing air monitoring systems will be compiled and documented to inform future air monitoring activities.

The community air monitoring toolbox will be periodically updated and expanded as new air monitoring information becomes available. Additional details on what information is provided in the community air monitoring toolbox and the online Resource Center can be found in Appendix F.

[6] California Health and Safety Code § 42705.5(a)(1).
[7] California Health and Safety Code § 42705.5(b).
[8] More information on the South Coast Air Quality Management District, Air Quality Sensor Performance Evaluation Center (AQ-SPEC) program is available at: http://www.aqmd.gov/aq-spec.

II. COMMUNITY AIR MONITORING PLAN ELEMENTS AND REQUIRED CRITERIA

CARB staff have defined criteria that air districts, communities, and others need to include in community-specific air monitoring plans developed under the Program. The elements are based on sound scientific principles and successful practices that build from knowledge gained through existing community air monitoring programs and accommodate the diversity of air monitoring objectives from community to community.

Community air monitoring may be employed to meet a number of objectives, from communicating current air quality conditions, to identifying the contribution of emission sources to community exposure, to evaluating air quality concerns within a community, to supporting public health research, or tracking progress for a community emissions reduction program. Air districts will report community air monitoring data to CARB and CARB will publish these data online.[9] Following the 14 elements helps CARB and the public understand the nature of the data generated and how it can be used. This will ensure that monitoring has been designed at a level of scientific rigor and the necessary duration of the monitoring has been defined to meet air quality goals and support actions for each community. CARB will review air district community air monitoring plans using the evaluation checklists to verify that criteria for each of the 14 elements are met prior to making the data available on the statewide data portal.

Although the 14 community air monitoring elements are presented sequentially (Figure E-1), air monitoring planning is often an iterative process that can occur in phases. An example of this is air monitoring that begins with an initial screening of the community to identify the most appropriate placement of more robust instrumentation. Establishing community partnerships at the onset of plan development is the first step to foster strong community participation throughout plan development and lay the groundwork for ongoing involvement during implementation. Working with community members is essential to develop an action-focused air monitoring objective specific to the community. Other elements may be addressed outside of the suggested sequence presented in this appendix, depending on the information and resources available and the specific concerns within a community. Broadly speaking, the 14 elements are used to define the scope of work and understand:

- What is the reason for conducting community air monitoring? (Elements 1-5)
- How will monitoring be conducted? (Elements 6-11)
- How will data be used to take action? (Elements 12-14)

[9] California Health and Safety Code § 42705.5(e).

Figure E-1 Community Air Monitoring Plan Elements

WHAT IS THE REASON FOR CONDUCTING COMMUNITY AIR MONITORING?

1. Form community partnerships.
2. State the community-specific purpose for air monitoring.
3. Identify scope of actions.
4. Define air monitoring objectives.
5. Establish roles and responsibilities.

HOW WILL MONITORING BE CONDUCTED?

6. Define data quality objectives.
7. Select monitoring methods and equipment.
8. Determine monitoring areas.
9. Develop quality control procedures.
10. Describe data management.
11. Provide work plan for conducting field measurements.

HOW WILL DATA BE USED TO TAKE ACTION?

12. Specify process for evaluating effectiveness.
13. Analyze and interpret data.
14. Communicate results to support action.

There may be instances where specific criteria are not applicable to an air monitoring plan, and the level of detail contained in each element may differ from community to community.[10] If criteria are not applicable, plans should indicate why the criteria are not relevant to the specific community air monitoring.

Air monitoring plans may undergo revisions and be resubmitted for review if air monitoring will occur in phases (e.g., screening for problems and then focusing in on problem areas or sources) or if new information becomes available as long as the community air monitoring planning process is followed. This allows air monitoring plans to accommodate changes and adapt as new information becomes available.

[10] CARB acknowledges that there may be cases where a community air monitoring plan fails to meet all procedural requirements but is still being developed in the spirit of these requirements. CARB will evaluate the extent to which deviations from these requirements are acceptable on a case-by-case basis and will communicate findings in writing.

Each element is discussed in more detail below. For the full list of criteria to be met within each element, refer to the "Checklist for Community Air Monitoring Evaluation" section and Table E-2 of this appendix.

WHAT IS THE REASON FOR CONDUCTING COMMUNITY AIR MONITORING?

Following community selection, the first step to developing an air monitoring plan is to form community partnerships through a community steering committee. Community members have detailed knowledge and awareness of community issues based on their experience of living and working in the community. Leveraging this knowledge and that of the air district to define community-specific air monitoring needs will form the foundation of the entire air monitoring process. Example needs could include: providing real-time air quality data to support notification systems and school flag programs; quantifying pollutants that are burdening the community; identifying sources of air pollution impacting the community; and evaluating pollution trends in the community prior to and after implementation of community emissions reduction programs. The air monitoring needs should be described in enough depth so the community steering committee can develop air monitoring objectives that yield data that can be used to establish air pollution levels within the community and support actions that reduce emissions or exposure. This should also include defining the appropriate duration for the air monitoring. Defining roles and responsibilities as part of the community partnership process will ensure expectations are understood and clarified as needed prior to beginning air monitoring. For example, in some communities residents may take an active role in leading or conducting air monitoring while in other communities residents may be involved in selecting monitoring locations with air monitoring conducted by air district staff. In total, working through these first five elements will help the air district, with input from the community steering committee, determine which air monitoring approaches are most appropriate.

FORM COMMUNITY PARTNERSHIPS

Community members have first-hand knowledge that is vital in understanding and addressing local air quality challenges in their community. A collaborative partnership with the community throughout the air monitoring planning, development, and implementation process is essential to support effective community-focused monitoring. To facilitate this community-driven process, air districts must work with selected communities to convene a community steering committee, comprised primarily of community members, which includes participants who live, work, or own businesses within the community (e.g., community residents, small businesses, facility managers/workers, school personnel). Examples of community-focused organizational

structures (i.e., Transformative Climate Community Program;[11] Comité Civico del Valle[12]) are available in the online Resource Center. Additional members should include participants from local community-based environmental justice organizations, schools, land use planning agencies, transportation agencies, local health departments (e.g., hospitals, clinics, physical rehabilitation centers, public health counseling services), academic researchers, and labor organizations, as appropriate. CARB staff will participate as observers to support discussion and will provide technical support and other input, along with staff from the Office of Environmental Health Hazard Assessment, as appropriate. The community steering committee will have a fundamental role in designing and carrying out air monitoring goals and objectives, disseminating results to the community, and supporting effective local actions.

Air districts must document relevant information on the community steering committee in the air monitoring plan. This includes:

- Proposed workshops.
- Community outreach frequency and materials.
- Contact information for a dedicated air monitoring contact person.
- A link to a webpage developed to inform the public on the community air monitoring initiative.

Development of community air monitoring plans will be a collaborative process with the community steering committee. The purpose of preparing an air monitoring plan with the community steering committee is to bring all parties to a common understanding of what air monitoring will achieve, potential limitations, what tools will be utilized to collect, review, and interpret data, and how data will be used. Some communities may participate only in the planning process, whereas some may play a leading role throughout implementation, for example, by securing sites for air monitoring, conducting measurements, or analyzing data. Community participation is important throughout the planning process to increase participants' technical capacity. The approach for community involvement should be documented to verify that the community has and will continue to contribute to decision-making processes. Community engagement will also be a crucial component during the development of CARB's community air monitoring data portal. Community steering committees will provide essential recommendations to help determine data display and interpretation needs for each unique community.

[11] More information on the Strategic Growth Council's Transformative Climate Community Program is available at: http://www.sgc.ca.gov/programs/tcc/.
[12] More information on the Alliance Healthcare Foundation, Comité Civico del Valle is available at: https://alliancehealthcarefoundation.org/comite-civico-del-valle/.

STATE THE COMMUNITY-SPECIFIC PURPOSE FOR AIR MONITORING

The plan must clearly define the purpose for air monitoring. This may include background information on the community, pollutants of concern, known or expected locations of pollution, and potential sources.

If relevant air monitoring is currently being conducted, the planning team should also identify how the proposed community air monitoring will build from current air monitoring. Alternative approaches to investigating and addressing the air monitoring need(s) should be evaluated. Results from ancillary studies that may not directly include air monitoring (e.g., truck counts) should be discussed in the plan if they have informed the identification of the concern that will be addressed by air monitoring.

The systematic development of the community-specific air monitoring plan should not delay action that can quickly deliver emissions and exposure reductions. CARB encourages immediate implementation of any feasible activities identified in parallel with development of the plan.

IDENTIFY SCOPE OF ACTIONS

The plan must identify the desired scope of actions that may potentially be supported by air monitoring data, such as whether data will be collected to support real-time air quality notification systems; to identify areas that may be more heavily burdened by air pollution; or tracking the progress of community emissions reduction programs, including the potential need for additional emissions mitigation strategies. Identifying the desired action(s) that air monitoring data are intended to support will guide the process of defining the level of data quality needed and further set the context and focus for planning activities that follow.

DEFINE AIR MONITORING OBJECTIVES

The plan must describe the community's air monitoring objectives, discuss how meeting these objectives will address the monitoring need(s), and establish benchmarks for determining when air monitoring objectives have been met. These benchmarks will inform resource allocation in the "Specify Process for Evaluating Effectiveness" element. Per the requirements of AB 617, community air monitoring objectives should be designed to support action(s) that reduce emissions or exposure within a community.[13] While it is possible that air monitoring data may be used to address more than one objective, prioritizing objectives will help to ensure that air monitoring can be directed to address the most important objective.

[13] California Health and Safety Code § 42705(c).

Objectives that community air monitoring might be designed to address include:

- Identifying and characterizing areas experiencing disproportionate air pollution impacts.
- Identifying emissions sources and assessing their impact on air quality, including fence-line monitoring.
- Determining effectiveness of emission controls in reducing air pollution and assessing progress in improving community air quality.
- Providing real-time air quality information to inform community members of current conditions within the community.

Along with the air monitoring objective(s), the plan should include other relevant information such as background concentrations of the pollutant of interest, specific time periods of interest, threshold levels of concern, and known sources. Supporting measurements needed to address the objective, which may include meteorological data or measurements of pollutants other than criteria air pollutants or toxic air contaminants, should be defined in this step. The plan should include or reference existing information and materials such as maps, diagrams, tables, and previous studies that can augment community air monitoring. If existing community air monitoring data are available, the plan should document the scope of the monitoring and explain how additional monitoring will expand or complement these existing programs. Example objectives and associated information inputs necessary to inform objectives can be found in the community air monitoring toolbox in the online Resource Center.

ESTABLISH ROLES AND RESPONSIBILITIES

All parties responsible for major aspects of community air monitoring need to be identified in the plan and their roles and responsibilities be described. Air monitoring teams are typically composed of a project manager, technical staff, and stakeholders that are directly affected by air monitoring. Community members may also lead some community air monitoring or be direct participants and partners in air monitoring. An organizational chart can be provided to clarify group roles and interactions, and specific tasks, duties, and training that each party involved with air monitoring are expected to complete as a function of their role should be documented. Contact information for key members should be made available on the air district's designated community air monitoring webpage.

How will Monitoring be Conducted?

Documenting how air monitoring will be conducted is the next step in the planning process. Defining the quality of data that is needed for the proposed actions supports the selection of methods and equipment that are capable of producing data of appropriate quality. For example, more rigorous methods are required to support a regulatory action compared to an air quality awareness program. Identifying areas where monitoring is needed may also be important to selecting appropriate methods and equipment. For example, mobile monitoring may be effective at covering a broad area and determining where fixed sites should be established to observe trends. Once the methods and equipment are selected, defining quality control procedures and data management steps help ensure the resulting data is useful to inform the stated community-specific purpose for air monitoring and all parties can understand how the data was generated. After making these decisions, documenting the work plan provides clarity on how the field measurements will be made.

Define Data Quality Objectives

Plans must describe the level of data quality that will be required to support community air monitoring objectives, and list the data quality indicators that will be used to assure data quality objectives are met. Identifying data quality objectives early in the planning process will inform subsequent choices of methods and equipment capable of collecting data that meets community needs. Table E-1 lists the recommended data quality indicators that should be defined in community air monitoring plans, where appropriate. Examples of air monitoring measurement methods and equipment and how each may meet specific data quality objectives are available in the community air monitoring toolbox in the online Resource Center.

Table E-1 Data Quality Indicators for Air Monitoring

Data Quality Indicators	Definition
Precision	The measure of agreement among repeated measurements of the same property under identical or similar conditions.
Bias	The systematic or persistent distortion of a measurement process which causes error in one direction.
Accuracy	A measure of the overall agreement of a measurement to a known value.
Sensitivity	The smallest absolute amount of change that can be detected by an instrument or method.
Completeness	A measure of the amount of valid data needed from a measurement system.
Representativeness	A qualitative term that expresses the degree to which data accurately and precisely represent the condition that is being measured in order to meet a specific monitoring objective.

Select Monitoring Methods and Equipment

Selecting appropriate methods and equipment is crucial to the success of community air monitoring because the resulting data needs to support effective action. Air monitoring methods include not only the air monitoring equipment used but also how it is operated and applied, whereas equipment solely describes the specific technology used for air monitoring. Methods and equipment must be capable of meeting the data quality objectives defined in the "Define Data Quality Objectives" section of this appendix.

There are a wide variety of methods and equipment. The plan must identify the selected method(s) and include a full description of the equipment that will be used (e.g., make, model, characteristics) and how it will be applied. The plan should justify the suitability of the method and equipment to meet the level of action required and include a description of how the selected method will achieve the data quality objectives. Limitations of selected air monitoring methods and equipment should be made clear to stakeholders and documented in the plan. Other method requirements or needs considered in the selection process should also be documented (e.g., maintenance requirements, operating costs, specific features). The plan should also identify and describe any additional equipment needed to meet air monitoring objectives, such as meteorological monitoring equipment.

Information regarding applicability, performance, and example uses of air monitoring methods and equipment will be available in the community air monitoring toolbox section of the online Resource Center.

Determine Monitoring Areas

The plan should indicate where monitoring will be conducted within the community, describe the rationale for selecting specific locations, and document each site's purpose and characteristics. The process for identifying specific monitoring areas that will achieve the monitoring objective should be based on factors such as: public input from community members, review of existing air monitoring data, locations of source emissions, locations of sensitive populations, and results from air quality modeling. Selecting carefully designed locations with known characteristics will assist analysts in understanding what the data represents and how it can be used to support actions to reduce emissions and exposure in communities with high cumulative exposure burdens. The exact monitoring location will be a balance of a number of factors, often depending on the logistics of the specific area chosen for monitoring, such as site access, communications systems, security, and power availability.

It may be necessary to select alternative locations when determining specific monitoring areas due to factors such as site availability, site safety, source activity, etc. The reasons for selecting alternative locations should be documented in this element of the plan. Air districts should identify all areas where community air monitoring is taking place in support of the Program on their designated community air monitoring webpage.

Develop Quality Control Procedures

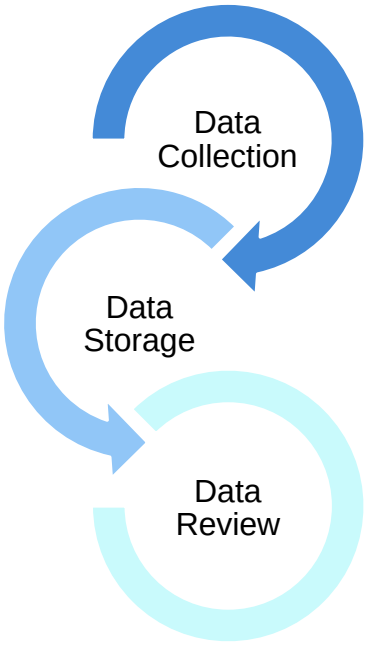
Quality control is a set of routine procedures implemented during air monitoring to ensure that data quality objectives are being met and the resulting data will be scientifically defensible. These technical activities should be routinely performed to measure or estimate the effect of any errors and determine when corrective action should be taken.

The community air monitoring plan must specify the quality control procedures and the frequency at which they will be performed for each monitoring method. Examples of quality control procedures include describing field and laboratory calibration practices, periodic precision and accuracy checks, and routine audit functions. Specific quality control procedures will depend upon the method used for air monitoring. Examples of quality control procedures for different air monitoring methods are available in the community air monitoring toolbox in the online Resource Center.

DESCRIBE DATA MANAGEMENT

The plan must describe how data will be collected, managed, and stored. This is often done by providing data descriptors, data storage attributes, and data review and flagging procedures. The first phase of data management (Figure E-2) begins with the collection of analytical results. Besides capturing the value of interest, it is essential to capture additional descriptors, including instrument identifiers, date stamps, measured units, and other parameters that identify important attributes of the data.

Figure E-2 Data Management Phases



Data storage is the second phase of data management. Generally, this takes place in some form of database. In addition to the data descriptors established in the first phase, the stored data must also maintain data storage attributes, which are specific to how the data is stored and processed. These additional attributes include data quality indicators, data qualifiers, ingest dates, and chain of custody.

The attributes and values collected in the data acquisition and data storage phases must provide ample tools for an operator or system to conduct detailed and thorough reviews of the data in the data review phase. Data review and flagging procedures that will be utilized should be documented in this element of the plan. Examples include confirming that calibrations are excluded from data aggregation, confirming that incompletely sampled time periods are not included, and confirming that temperature controls required for proper instrument functioning were maintained.

PROVIDE WORK PLAN FOR CONDUCTING FIELD MEASUREMENTS

The plan must describe field procedures that will be followed by those conducting measurements and provide the timeline for community air monitoring. Field procedures spell out individual tasks with enough detail so that air district staff or community members with the necessary training can complete the tasks. Examples of specific field procedures include documenting actions in logbooks, completing chain of custody forms, and conducting specific quality control procedures. The timeline needs to

establish the duration of field measurements and denote milestones for completing key tasks. The plan will also describe communication and coordination steps to ensure field personnel know whom to contact for questions and how work products are delivered. Relevant safety considerations should also be documented.

How will Data be Used to Take Action?

Defining how the data will be evaluated and applied to the stated community-specific purpose and objectives is the final step towards ensuring that the results will meet the needs of the community and support actions to improve air quality. Plans need to include a process for evaluating effectiveness, for example monthly or quarterly meetings to review results and determine if adjustments are needed. Determining in advance how data will be analyzed and interpreted, for example trends analysis or identification of source impacts, or providing real-time information for health alerts, provides another opportunity to confirm that air monitoring methods and equipment will achieve the desired objectives. Finally, planning in advance how and when the air monitoring results will be communicated, for example in real-time on a webpage or in written reports on a periodic basis, helps communities and stakeholders understand where and when they will be able to access the information.

Specify Process for Evaluating Effectiveness

The purpose of this element is to designate a procedure that will serve as a check to ensure that the air monitoring objectives are being met in a timely fashion. The process to revise the monitoring plan or make corrections if it is not meeting the air monitoring objectives or timeline must be described in this element of the air monitoring plan. If issues arise during air monitoring and data quality objectives should be adjusted, describe the process that will be utilized to make alterations and how they will be documented.

The plan should address the planned duration of the monitoring, whether it is intended to be a long-term sustainable program or a shorter-term investigation, and the timeframe for demobilization of air monitoring when objectives are met. This should also include recommendations for any necessary ongoing actions to track progress and ensure air quality improvements continue.

ANALYZE AND INTERPRET DATA

There are many approaches to data analysis and interpretation that vary in scope and complexity. Approaches such as conducting fence-line monitoring may require both real-time analysis and interpretation to screen for fugitive emissions and subsequent analysis of long-term data to track emissions reductions over time. This element of the plan must describe how data analysis will be conducted, including data preparation procedures utilized throughout the process, and how air monitoring results may be translated into actions.

The significance of results depends on the quality of the data, so data preparation is a critical component in data analysis. Data preparation procedures that will be utilized (e.g., formatting and quality assurance of data) must be documented. The protocol for providing data handling algorithms for the raw data should be documented to ensure transparency. Procedures used must document how data are handled and processed so that all changes to data are annotated and provide a clear, transparent data path that can be followed from initial data production to a final, quality-checked end point.

Ultimately, results from data analysis should be responsive to the established community air monitoring objectives. The types of analyses will depend on the specific community's goals, and each community is likely to require a unique analysis. Some analysis examples include, but are not limited to:

- Comparing trends in community air monitoring data to trends in data from nearby regulatory air monitors.
- Performing analysis to determine which source(s) may be primarily responsible for elevated concentrations in order to develop appropriate control strategies.
- Tracking progress over time to determine if strategies put in place by community emissions reduction programs yield ambient air quality improvements.

The plan should describe the anticipated data analyses along with a process for interpreting results based on the community-specific monitoring objective(s). This includes reviewing the scope of actions that the specific type of data analysis will support, since results produced through this element will be the direct link to action in a community. Thoroughly documenting data preparation procedures and types of analyses that will be conducted with the data is pivotal to ensuring that conclusions drawn from data analyses are defensible.

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.[14] 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.

[14] California Health and Safety Code § 42705.5(e).

III. CHECKLIST FOR COMMUNITY AIR MONITORING EVALUATION

Table E-2 Checklist for Community Air Monitoring Evaluation

MONITORING PLAN ELEMENT 1: FORM COMMUNITY PARTNERSHIPS	
CRITERIA	✓
Identifies community steering committee members and their affiliation.	☐
Documents community steering committee meeting information: • Date of first meeting. • Date, time, number of attendees for all meetings that have been held. • Frequency of future meetings and expected attendees.	☐
Details level of community involvement in planning and resources made available to accommodate community's desired level of involvement throughout implementation.	☐
Provides link to air district webpage dedicated to community air monitoring and documents what will be posted on this webpage.	☐
Identifies dedicated contact person to address questions on the community-specific air monitoring plan.	☐

MONITORING PLAN ELEMENT 2: STATE THE COMMUNITY-SPECIFIC PURPOSE FOR AIR MONITORING	
CRITERIA	✓
Identifies the community-specific air monitoring need(s).	☐
Provides background information on how the need was discovered.	☐
Documents relevant information from previous, ongoing, and proposed air monitoring and identifies gaps that this community air monitoring will address.	☐
Explores alternative approaches to investigating and addressing the air quality monitoring need(s).	☐

MONITORING PLAN ELEMENT 3: IDENTIFY SCOPE OF ACTIONS	
CRITERIA	✓
Defines action(s) that air monitoring aims to support.	☐

Please submit any written comments by September 24, 2018 to: https://www.arb.ca.gov/lispub/comm/bclist.php.

MONITORING PLAN ELEMENT 4: DEFINE AIR MONITORING OBJECTIVES	
CRITERIA	✓
States the air monitoring objective(s) that will address the stated community-specific purpose for air monitoring.	☐
Specifies the community air monitoring design: • Type(s) of data needed. • Measurements to be made. • Duration of monitoring.	☐
Defines other information necessary to address objective(s), such as: • Supporting measurements (e.g., meteorology). • Action limits, threshold levels, regulatory information. • Data sources to be accessed and used.	☐
Includes reference information and materials (e.g., maps, diagrams, previous studies).	☐

MONITORING PLAN ELEMENT 5: ESTABLISH ROLES AND RESPONSIBILITIES	
CRITERIA	✓
Identifies all parties responsible for major aspects or phases of air monitoring (includes contractors).	☐
Clarifies group roles and interactions; specifies training requirements for individuals conducting air monitoring.	☐

MONITORING PLAN ELEMENT 6: DEFINE DATA QUALITY OBJECTIVES	
CRITERIA	✓
Sets performance and acceptance criteria for all data to be collected.	☐
Identifies precision, bias, accuracy, sensitivity, and data completeness needs.	☐
Defines temporal and spatial representativeness.	☐

MONITORING PLAN ELEMENT 7: SELECT MONITORING METHODS AND EQUIPMENT	
CRITERIA	✓
Identifies and describes method(s) and equipment selected (e.g., make, model, characteristics).	☐
Justifies suitability of the method to meet the level of action required by monitoring objective.	☐
Provides field and lab Standard Operating Procedures that will be followed.	☐

MONITORING PLAN ELEMENT 8: DETERMINE MONITORING AREAS	
CRITERIA	✓
Indicates where monitoring will be conducted within the community.	☐
Describes rationale and considerations for each monitoring area.	☐
Details location characteristics (e.g., meteorology, sources, land use) and important logistical details (e.g., site access, security, power availability).	☐

MONITORING PLAN ELEMENT 9: DEVELOP QUALITY CONTROL PROCEDURES	
CRITERIA	✓
Specifies quality control activities for each type of measurement and the frequency at which they should be conducted – this includes, if applicable: • Reference materials. • Calibration. • Ongoing quality control measures (e.g., zero point, span point, one point). • Blanks. • Spikes. • Duplicates/collocation. • Audits.	☐
Details process to follow when control limits are exceeded.	☐

MONITORING PLAN ELEMENT 10: DESCRIBE DATA MANAGEMENT	
CRITERIA	✓
Describes the data management system by identifying all of the following: • Data descriptors. • Data storage attributes. • Data review and flagging procedures.	☐
Identifies measures that will be taken to account for errors.	☐

MONITORING PLAN ELEMENT 11: PROVIDE WORK PLAN FOR CONDUCTING FIELD MEASUREMENTS	
CRITERIA	✓
Identifies field procedures and materials to be utilized for conducting community air monitoring.	☐
Defines field communication and coordination steps.	☐
Provides timeline that denotes air monitoring duration, frequency, and milestones.	☐

MONITORING PLAN ELEMENT 12: SPECIFY PROCESS FOR EVALUATING EFFECTIVENESS	
CRITERIA	✓
Identifies evaluation process that will be utilized to ensure air monitoring objectives are being met, including number, frequency, and types of evaluations that will be conducted.	☐
Describes how issues will be documented and addressed.	☐
Defines an end point for air monitoring.	☐

MONITORING PLAN ELEMENT 13: ANALYZE AND INTERPRET DATA	
CRITERIA	✓
Documents data preparation procedures that will be utilized.	☐
Describes how data will be analyzed to address the stated community-specific purpose for air monitoring.	☐

MONITORING PLAN ELEMENT 14: COMMUNICATE RESULTS TO SUPPORT ACTION	
CRITERIA	✓
Establishes process for information sharing and communication with community throughout air monitoring.	☐
Indicates how results will be delivered to affected community, stakeholders, CARB, and other decision-makers (e.g., content, frequency).	☐
Details what information will be provided on district webpage (e.g., factsheets, notices, timeline, meeting agendas) and the frequency at which material and progress updates will be provided.	☐
Defines the format and schedule of reports.	☐

IV. COMMUNITY AIR MONITORING DATA PORTAL

While displaying data and communicating results is an essential element of each community air monitoring plan, the State also has a role in improving communication and information sharing with communities. This is further prescribed by AB 617, which requires that air districts report data from community air monitoring to CARB, and that CARB publish these data online.[15] To address this requirement, CARB is developing a data portal, which will allow reporting of both real-time preliminary data and validated

[15] California Health and Safety Code § 42705.5(e).

final data. This data portal will be available on CARB's webpage to ensure that community air monitoring data are publicly stored and accessible, and not housed solely in proprietary systems. Within and outside of CARB, a number of monitoring efforts and data portals, ranging from the regional to community level, have already been developed. Staff intend to use these projects and portals as models, and build on those past experiences and learnings. Staff also anticipate that many community groups and air districts will develop and maintain their own data display systems. Staff will collaborate with these entities to ensure that data display systems for community monitoring efforts are complementary. By partnering with communities, air districts, and other stakeholders, CARB will leverage existing and future resources to ensure that Program goals are met. CARB staff expect the data portal to be available by summer 2019. Additional information on the data portal can be found in Appendix F.

V. RESOURCES FOR COMMUNITY AIR MONITORING

CARB's community air monitoring toolbox, housed within the online Resource Center, will serve as a repository of community air monitoring information and guidance to be used by community members, air districts, and the public alike. This will include reviews of advanced sensing monitoring technologies,[16] reviews of existing community air monitoring systems,[17] supporting material for the development of community air monitoring plans, and resources for community scientists. CARB staff will partner with air sensor testing programs conducted by the South Coast Air Quality Management District's Air Quality Sensor Performance Evaluation Center, U.S. EPA, and others to evaluate air sensor performance and will house this information in the community air monitoring toolbox. Further, the community air monitoring toolbox will provide educational or informational materials on monitoring equipment, data collection methods, limitations of data, and so on. This toolbox will build on and complement learnings from community-led air monitoring activities, the California Environmental Health Tracking Program, the U.S. EPA Air Sensor Toolbox, and air monitoring resources developed under South Coast Air Quality Management District's U.S. EPA "Science To Achieve Results" grant. These informational resources will provide insight on how to appropriately interpret and use the data residing in the data portal. Therefore, the data portal will have direct materials and links to the community air monitoring toolbox, and vice versa. CARB staff will continue to work with air districts, community members, industry, and others to update and expand the air monitoring toolbox as new air monitoring materials and data become available.

[16] California Health and Safety Code § 42705.5(b).
[17] California Health and Safety Code § 42705.5(b).

[This page is intentionally left blank.]

Please submit any written comments by September 24, 2018 to: https://www.arb.ca.gov/lispub/comm/bclist.php.

APPENDIX F.
STATEWIDE STRATEGIES, TOOLS, AND RESOURCES

TABLE OF CONTENTS

Please submit any written comments by September 24, 2018 to: https://www.arb.ca.gov/lispub/comm/bclist.php.

I. EMISSIONS REDUCTION STRATEGIES

Assembly Bill 617[1] requires new, community-focused actions that go beyond existing State and regional programs to reduce exposure to air pollution in communities affected by a high cumulative exposure. The actions identified in this appendix will reduce the air pollution burden in heavily impacted communities throughout the State, as well as provide emissions reductions to support communities selected for preparation of community emissions reduction programs. California Air Resources Board (CARB) staff and air districts will continue developing regulatory and incentive actions through separate public processes. Subsequent implementation will be conditional on the successful completion of applicable public processes, necessary financing approvals, technical feasibility analyses, economic competitiveness, safety, and environmental reviews.

COMMERCIAL HARBOR CRAFT AMENDMENTS

Overview: This strategy will create more stringent engine requirements for freight and passenger vessels. The strategy will also consider prioritizing implementation in or near communities with high cumulative exposure burdens.

Implementing Agency: CARB

Type of Action: Regulatory

Timing:
Expected CARB Governing Board Meeting: 2020
Implementation: 2023+

Proposed Actions: This strategy will amend the existing Commercial Harbor Craft regulation to include more stringent in-use and new vessel requirements for both freight-related and passenger vessels. The amendments will take into consideration the feasibility of Tier 4 engine technology in Commercial Harbor Craft applications, the performance of advanced retrofit emission control devices, and the availability of zero and near-zero emission technologies for the sector.

[1] Assembly Bill 617, Garcia, C., Chapter 136, Statutes of 2017, modified the California Health and Safety Code, amending § 40920.6, § 42400, and § 42402, and adding § 39607.1, § 40920.8, § 42411, § 42705.5, and § 44391.2. See Appendix H for complete bill language.

CARGO HANDLING EQUIPMENT AMENDMENT

Overview: This strategy will transition cargo handling equipment, often used at ports and intermodal rail yards to zero emission technology standards.

Implementing Agency: CARB

Type of Action: Regulatory

Timing:
Expected CARB Governing Board Meeting: 2022
Implementation: 2026

Proposed Actions: This strategy will amend the existing Cargo Handling Equipment regulation. This regulation applies to mobile equipment such as yard trucks, rubber-tired gantry cranes, container handlers, and forklifts that operate at ports or intermodal rail yards. The strategy will propose an implementation schedule for new equipment and infrastructure requirements, with a focus on the transition to zero emission operation, and may include provisions for efficiency improvements.

DRAYAGE TRUCKS AT SEAPORTS AND RAIL YARDS AMENDMENT

Overview: This strategy will serve to lower emissions at ports by transitioning drayage trucks to zero emission technology.

Implementing Agency: CARB

Type of Action: Regulatory

Timing:
Expected CARB Governing Board Meeting: 2022
Implementation: 2026-2028+

Proposed Actions: This strategy will amend the existing Drayage Truck Regulation, or adopt a new regulation, to direct a transition to zero emission operations, beginning 2026-2028. The new regulation will establish a schedule for phasing in the use of zero emission technology. Options to be considered include, but are not limited to, requirements for full zero emission technology (e.g., a battery or fuel-cell electric short haul truck) and zero emission mile capability (e.g., a natural gas-electric hybrid that could drive interstate but switch to zero emission electric mode while operating near impacted communities). CARB staff will also consider the opportunities to prioritize the earliest implementation in the communities with high cumulative exposure burdens.

EVALUATION AND POTENTIAL DEVELOPMENT OF REGULATION TO REDUCE IDLING FOR ALL RAIL YARD SOURCES

Overview: The goal of this strategy is to reduce emissions from idling freight and passenger locomotives. Implementation of this strategy will target communities with high cumulative exposure burdens.

Implementing Agency: CARB

Type of Action: Regulatory

Timing:
Expected CARB Governing Board Meeting: 2020
Implementation: 2023+

Proposed Actions: This strategy will require operators to limit idling of all combustion-powered vehicles and mobile equipment operating at rail yards and other locations, as well as reducing emissions from stationary locomotive operations (e.g., maintenance, testing). The scope will include both freight and passenger rail activities, in and around intermodal, classification, and maintenance rail yards, at seaports, at warehouses, on sidings, at passenger rail stations, and at maintenance and service locations. Locomotives with zero emission capability could be exempt, if operators show that zero emission operation is maximized.

EVALUATION AND POTENTIAL DEVELOPMENT OF REGULATION TO REDUCE EMISSIONS FROM LOCOMOTIVES NOT PREEMPTED UNDER THE CLEAN AIR ACT

Overview: The goal of this strategy is to reduce emission from the older, dirtier locomotives currently operating in California. CARB staff estimates there are 200-300 of these units in the State.

Implementing Agency: CARB

Type of Action: Regulatory

Timing:
Expected CARB Governing Board Meeting: 2022
Implementation: 2025+

Proposed Actions: This strategy will require the retrofit, repower, remanufacture, or replacement of freight and passenger locomotives not preempted under the Clean Air Act, beginning in 2025. Locomotives in operation beyond their useful life are typically operated by Class 3 freight railroads, industrial facilities, and passenger railroads, as well as a smaller number run by Class I railroads that can readily transfer those units to other states. Although the activity levels on these locomotives are lower than interstate line-haul and passenger locomotives, locomotives past their useful lives are the oldest and highest emitting (per unit of work performed) in the State. Prioritizing the earliest implementation in communities with high cumulative exposure burdens will be considered as part of this strategy.

As an alternative, CARB could also consider a voluntary agreement with the major railroads to secure greater community health benefits by reducing emissions from interstate locomotives (the dominant source of emissions and community health risk at rail yards), if that agreement was developed in a transparent public process and included clear enforcement provisions.

CHROME PLATING CONTROL MEASURE AMENDMENTS

Overview: This strategy will amend the current regulation on chrome plating to further reduce toxic air contaminants at chrome plating facilities. In December 2006, CARB approved the proposed amendments to the Hexavalent Chromium Airborne Toxic Control Measure for Chrome Plating and Chromic Acid Anodizing Operations (Chrome Plating ATCM). The Chrome Plating ATCM requires the use of control technologies and operational practices that reduce hexavalent chromium emissions to their lowest levels. Facilities are subject to hexavalent chromium emission limits based on throughput and distance to sensitive receptors. Certain facilities are required to install add-on air pollution control devices and other facilities can meet the emissions limit through the use of chemical fume suppressants

Implementing Agency: CARB

Type of Action: Regulatory

Timing:
Expected CARB Governing Board Meeting: TBD
Implementation: TBD

Proposed Actions: CARB staff will amend the existing chrome plating regulation to incorporate provisions to align with the federal chrome plating regulation and consider additional measures to further reduce emissions from chrome plating operations. The amendments will include the prohibition of perfluorooctane sulfonate containing fume

suppressants (as required by federal regulation), changes to the surface tension requirements, and other actions to reduce uncontrolled emissions. CARB staff will also evaluate less toxic alternatives to hexavalent chromium and options to phase out perfluorinated chemicals used in fume suppressants.

COMPOSITE WOOD PRODUCTS CONTROL MEASURE AMENDMENTS

Overview: This strategy will amend the CARB Composite Wood Products Airborne Toxic Control Measure (ATCM), approved in 2007. The Composite Wood Products ATCM established formaldehyde emission standards for three types of composite wood products (hardwood plywood, particleboard, and medium density fiberboard) and requires that all consumer goods that contain such materials (e.g., flooring, cabinets, furniture) destined for sale in California must comply with the Composite Wood Products ATCM.

Implementing Agency: CARB

Type of Action: Regulatory

Timing:
Expected CARB Governing Board Meeting: TBD
Implementation: TBD

Proposed Actions: CARB staff will amend the existing Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products, to obtain additional formaldehyde emission reductions, clarify requirements and applicability, improve enforceability, and align with the U.S. Environmental Protection Agency formaldehyde regulation, where appropriate. (Note: CARB cannot enforce the U.S. Environmental Protection Agency formaldehyde in composite wood regulation, because it was adopted under the Toxic Substances Control Act).

CATALYTIC CONVERTER THEFT REDUCTION

Overview: This strategy consists of a regulation and/or compliance assistance to deter thefts of vehicle catalytic convertors in communities selected for the Community Air Protection Program. This strategy will make it easier for the recycler to identify stolen catalytic converters.

Implementing Agency: CARB

Type of Action: Regulatory and/or Compliance Assistance

Timing:
Expected CARB Governing Board Meeting: TBD
Implementation: 2020

Proposed Actions: This strategy will include a regulation and/or compliance assistance to reduce theft of vehicle catalytic converters in communities selected through the community identification and selection process. A regulation will require manufacturers to stamp catalytic converters with a vehicle identification number. Compliance assistance would offer free vehicle identification number stamping on converters in communities selected through the community assessment process. This strategy will make it easier for the recycler to identify stolen catalytic converters.

HEAVY-DUTY ON-ROAD AND OFF-ROAD ENGINE IN-USE TESTING

Overview: This strategy will involve real world screening of heavy-duty trucks and off-road engines operating in selected communities to target heavy-duty in-use compliance testing.

Implementing Agency: CARB

Type of Action: Enforcement and In-Use Testing

Timing:
Begin Development: 2019
Implementation: 2019+

Proposed Actions: This strategy will involve real world screening of heavy-duty trucks and off-road engines operating in selected communities to target heavy-duty in-use compliance testing. Engines that are found to be emitting above expected levels will be brought into CARB's in-use compliance program. Engines found to be in noncompliance will be recalled and emission mitigation projects could include, deployment of zero emission technology in selected environmental justice communities.

COMMERCIAL COOKING SUGGESTED CONTROL MEASURE

Overview: This strategy consists of a two-phase process to evaluate California's current emission reduction requirements for commercial cooking operations that prepare food for human consumption, and if necessary, make improvements to achieve additional reductions in particulate matter 10 microns or less in diameter (PM10), particulate matter 2.5 microns or less in diameter (PM2.5) and volatile organic compound emissions that contribute to ozone formation.

Implementing Agency: CARB

Type of Action: Suggested Control Measure

Timing:
Begin Development: 2020
Implementation: TBD

Proposed Actions: In the first phase, CARB will conduct a technical assessment to evaluate the stringency of existing air district commercial cooking rules and assess the commercial availability, effectiveness, and cost of more advanced emission control devices or methods, to determine the potential for additional particulate matter (PM10 and PM2.5) and volatile organic compound emission reductions. In the second phase, CARB will use the results of the technical assessment to develop a path forward for additional emission reductions from commercial cooking operations that could include adoption of a Suggested Control Measure, or a combination of up-front incentives to install advanced emission controls with a recommended regulatory backstop. A Suggested Control Measure is a model rule that can be adopted by the air districts that need to reduce particulate matter (PM10 and PM2.5) or volatile organic compound emissions to improve air quality. Co-pollutant reductions in black carbon, a short-lived climate pollutant, could also occur as a co-benefit.

INCENTIVE FUNDING TO SUPPORT IMMEDIATE EMISSIONS REDUCTIONS

Overview: Acknowledging the need for funding to support successful implementation of the Community Air Protection Program, the Legislature appropriated funding in the fiscal year 2017-2018 State budget for both CARB and the air districts, to support the initial implementation of the Program. The Legislature also recognized the importance of immediately reducing emissions in highly burdened communities, and appropriated a total of $250 million of Cap-and-Trade auction proceeds in the fiscal year 2017-2018 State budget, to fund emissions reduction projects that provide benefits to communities with high cumulative exposure burdens. Beyond this initial appropriation, ongoing resources will be critical for the success of the Program.

Implementing Agency: CARB

Type of Action: Incentive Funding

Timing: 2018

Proposed Actions: To deliver on the goals of the Program, $250 million in the fiscal year 2017-2018 State budget has been designated for incentive projects to support

early action to reduce emissions through the deployment of cleaner mobile source technologies in impacted communities. As directed by the Legislature, these funds are being administered through the Carl Moyer Memorial Air Quality Standards Attainment Program, except that at its discretion, an air district may allocate up to 40 percent of the funds it receives to incentivize clean trucks. These incentives are to be distributed in accordance with the funding amounts and truck evaluation requirements in the *Proposition 1B Goods Movement Emission Reduction Program Guidelines for Implementation*.[2]

The funding allocated to specific air districts include:

- 43 percent to South Coast Air Quality Management District.
- 32 percent to San Joaquin Valley Air Pollution District.
- 20 percent to Bay Area Air Quality Management District.
- 5 percent to CARB for distribution to other air districts.

The CARB Governing Board also approved a *Community Air Protection Program Funds Supplement to the Carl Moyer Memorial Air Quality Standards Attainment Program 2017 Guidelines*[3] in April 2018 to facilitate funding the types of projects that are most beneficial to communities. This includes: increased grant amounts for replacing older vehicles and equipment; broader project eligibility; and an added focus on projects that address community-level air pollution (e.g., school buses, delivery trucks, improved infrastructure for electric vehicles).

CARB staff is also working with air districts to ensure funds target the types of projects that will reduce emissions and exposure in communities with high cumulative exposure burdens, per the requirements of Assembly Bill (AB) 617.[4] Air districts must also work directly with communities in identifying the types of investments that best support community needs, with at least 70 percent of the funds invested in projects to benefit disadvantaged communities.[5] Air districts are conducting public outreach to local

[2] California Air Resources Board, *Proposition 1B Goods Movement Emission Reduction Program Guidelines for Implementation*, June 2015, available at: www.arb.ca.gov/bonds/gmbond/gmbond.htm.
[3] California Air Resources Board, *Community Air Protection Program Funds Supplement to the Carl Moyer Memorial Air Quality Standards Attainment Program 2017 Guidelines*, April 27, 2018, available at: www.arb.ca.gov/msprog/moyer/moyer.htm.
[4] Assembly Bill 617, Garcia, C., Chapter 136, Statutes of 2017, modified the California Health and Safety Code, amending § 40920.6, § 42400, and § 42402, and adding § 39607.1, § 40920.8, § 42411, § 42705.5, and § 44391.2. See Appendix H for complete bill language. Requirements for the Greenhouse Gas Reduction Fund, the source of the appropriations, also apply. More information is available at: www.arb.ca.gov/cc/capandtrade/auctionproceeds/auctionproceeds.htm.
[5] Additional information on investment requirements are provided in the California Air Resources Board, *Board Resolution 18-15*, April 27, 2018, available at: https://ww2.arb.ca.gov/board-resolutions.

residents and community groups to inform investment decisions, and select projects in communities with high cumulative exposure burdens. The funds also focus on vehicles and/or equipment that spend a substantial amount of time in those communities, with a priority on zero emission technologies. Air districts are posting information on their webpages regarding their proposed approaches and public engagement process for funding projects.

The fiscal year 2018-2019 State budget includes an additional $245 million of Cap-and-Trade auction proceeds for continued support of incentive programs to reduce emissions within impacted communities. These funds are to be allocated to projects consistent with priorities identified by the affected community in a transparent, meaningful, public process.[6] Similar to the fiscal year 2017-2018 funding, this funding focuses on purchasing cleaner vehicles and equipment, prioritizing zero emission equipment, and the ability to purchase infrastructure to support zero emission vehicles, with a priority for medium-duty and heavy-duty vehicles. This funding can also be used to reduce emissions from stationary sources, including zero emission technologies, along with programs that are consistent with actions identified in a community emissions reduction program. Distribution of this funding will include a separate public process.[7]

In addition to this new incentive funding, CARB will work with the air districts to leverage other incentive programs such as the Low Carbon Transportation Investments, Volkswagen Environmental Mitigation Trust, and air district funding programs as community emissions reductions programs are developed and implemented. This will also include increasing outreach activities to community members and small business owners in the community to help deliver funding to those who need it the most.

[6] Senate Bill 856, Budget Act of 2018, Chapter 30. Statutes of 2018.
[7] Additional information on this public process is available at: https://www.arb.ca.gov/msprog/cap/capfunds.htm.

II. SUPPORTING TOOLS AND RESOURCES

DEVELOP AND MAINTAIN THE ONLINE RESOURCE CENTER

Overview: The online Resource Center is designed to complement requirements for community air monitoring and community emissions reduction programs.[8] CARB consulted with air districts and the Office of Environmental Health Hazard Assessment, and compiled a list of existing documents, tools, and information in an effort to support effective implementation of the Community Air Protection Program and made them readily available in an online Resource Center. Establishing this online Resource Center allows the Community Air Protection Program to evolve by adding new features and materials as they become available over time, outside of the statutorily required CARB Governing Board-approved Program revisions.

Implementing Agency: CARB

Type of Action: Informational

Timing:
Begin Development: 2018
Implementation: 2018+

Proposed Actions: CARB will consult with air districts and the Office of Environmental Health Hazard Assessment to maintain an online Resource Center, serving as a centralized repository of strategies for use by community members, air districts, and the public. CARB will compile a list of existing documents, tools, and information to support effective implementation of the Community Air Protection Program. The online Resource Center will continuously be updated as new documents, materials and data become available. Below you will find a summary of what will be included:

- *Community identification and selection toolbox* – This toolbox will contain access to: (1) datasets to support community identification and (2) source attribution tools for air district and stakeholder use.
- *Community air monitoring toolbox* – The community air monitoring toolbox, found in the online Resource Center, will ensure that communities and air districts have easy access to: (1) air quality data and visualization tools; (2) air monitoring technology evaluations and best practices; (3) links to existing air monitoring projects; and (4) the community air monitoring data portal.

[8] More information on the basic structure and the types of documents, tools, and information that is available in the online Resource Center is available at: https://ww2.arb.ca.gov/our-work/programs/Community-Air-Protection-Program-AB617.

Evaluation protocols and field and laboratory test reports regarding the performance of air sensors for accuracy, precision, and durability will be available. In addition, CARB will post technical resources such as best management practices, guidance, and sensor evaluation reports. The community air monitoring data portal will link to CARB's Emission Inventory, the Pollution Mapping Tool, and CARB guidance for air districts on community inventories.

- *Emissions inventory toolbox* – This resource will contain: (1) CARB's Emission Inventory; (2) the Pollution Mapping Tool; and (3) CARB guidance for air districts on community inventories.[9]
- *Emissions reduction strategies* – This resource will contain: (1) a Technology Clearinghouse outlining current rules, regulations, and associated emissions control technologies;[10] (2) incentive funding information; (3) links to transportation, land use, and mitigation best practices; and (4) a compilation of existing strategies to reduce exposure impacts from pesticides and fertilizers.

  Cross-references to established major CARB programs will be accessed from here as well. This section will also provide a preliminary menu of options that community members and air districts can use while developing community emissions reduction programs.
- *Outreach and training* – This section of the online Resource Center will house best practices information and tools for effective community engagement, public participation, and enforcement.

EXPAND AND MAINTAIN THE TECHNOLOGY CLEARINGHOUSE

Overview: AB 617 requires CARB to establish and maintain a statewide clearinghouse of criteria air pollutant and toxic air contaminant emissions performance levels for stationary sources,[11] such as refineries and power plants. This information is currently available at the air district level, and the statewide clearinghouse will consolidate and expand this information.

Implementing Agency: CARB

Type of Action: Informational

Timing:
Begin Development: 2018
Implementation: 2018+

[9] More information on the development of community inventories is available in Appendix C of this document.
[10] More information on the Technical Clearinghouse is available in the "Expand and Maintain the Technology Clearinghouse" section of this appendix.
[11] California Health and Safety Code § 40920.8(a).

Proposed Actions: In addition to housing emission control requirements for stationary sources, the new Technology Clearinghouse will include information on the best rules and measures governing emission limits for mobile and area-wide sources.[12] The Technology Clearinghouse will also contain forward-looking information on next generation technologies to support continued advancements, and to highlight opportunities to retrofit or replace emissions units with ultra-low or zero emissions technologies. The Technology Clearinghouse will provide increased transparency and access to community-level information by linking to CARB's emissions inventory and Pollution Mapping Tool. Once completed, the Technology Clearinghouse will be a consistent resource for use in selecting the best approaches for controlling emissions within community emissions reduction programs.

BACKGROUND

Under State law, regional air districts have the authority to issue permits that limit emissions from stationary sources. Permit programs limit emissions from facilities by setting a threshold of allowable emissions that a facility must not exceed in order to continue to operate. Prior to issuing a permit, air districts confirm that the facility and all emitting equipment are in compliance with applicable rules and regulations. Permitting requirements vary by location based on the facility and equipment type, federal, State, and local rules that apply to the specific equipment being permitted, the allowable amount of emissions, consideration of State and local air toxics programs, and each air district's national and State ambient air quality standards attainment[13] designation status.

Local rules that limit emissions from stationary and area-wide sources are often referred to as prohibitory rules. In nonattainment areas, these prohibitory rules require more stringent control of stationary sources, or best available retrofit control technology (BARCT). BARCT determinations are adopted periodically by air districts to reduce emissions from all stationary sources of a particular source type as identified in the district's attainment plan. These requirements are set considering feasibility, cost-effectiveness,[14] and the nature and severity of the air quality challenge.

[12] Area-wide sources are sources that the inventory bases the emission on aggregated sources like gas stations or fireplaces, as well as sources that emit emissions over a large area like wind-blown dust, consumer products, or tractor tilling emissions.
[13] An air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without any harmful effects on people or the environment. Attainment of an air quality standard means the air quality of a region is as clean as or cleaner than the national and State ambient air quality standards.
[14] Feasibility and cost-effectiveness describe the ability to apply an emissions control and an associated emissions limit based on technical feasibility while considering the overall cost to achieve the emissions limit. Cost-effectiveness thresholds are establish by each air district on a pollutant-by-pollutant basis, on a dollars-per-ton of emissions reduced.

New facilities or facilities modifying equipment that emit air pollutants over specific air district emissions thresholds, are required to install best available control technology (BACT), that are often more stringent than emissions limits and technology requirements contained in district prohibitory rules. Air districts determine these BACT standards, for each class and category of source based on the cleanest technology available that does not substantially alter the purpose or basic design of the source (i.e., redefine the source). At the time a permit application is submitted, AB 617 requires air districts to use CARB's Technology Clearinghouse when updating their BACT determinations for stationary sources.[15]

New or modified sources that emit toxic air contaminants above specific thresholds must also install best available control technology for toxics (T-BACT) in addition to BACT requirements. At a minimum, T-BACT must include the most stringent emissions control for a source type or category, including limits established in Airborne Toxic Control Measures (ATCM) developed by CARB.

Approach and Schedule

CARB staff plan to develop the Technology Clearinghouse in two phases. In Phase Ia, CARB has developed an Interim Technology Clearinghouse to meet AB 617's requirement for a statewide clearinghouse that identifies existing BACT, BARCT, and T-BACT for stationary sources.

During Phase Ib, staff will expand the Interim Technology Clearinghouse to include information on mobile and area-wide source rules and ATCMs. The Interim Technology Clearinghouse will provide the public with a tool that can be used to identify, assess, or compare the best controls or measures for deployment in communities across the State.

Phase II of the Technology Clearinghouse will enhance functionality and allow users to get a sense of technologies that go beyond present-day BACT, BARCT, and T-BACT limits but may show promise in the future or due to high, present-day cost might be candidates for incentive programs. For example, identifying next generation technologies such as fuel cells, solar, and battery backup systems in the Technology Clearinghouse, will allow users to identify prospective long-term technology solutions. The market barriers[16] for each next generation technology will also be provided to help identify opportunities for incentive programs, and provide the public with increased transparency on technology gaps and barriers associated with deployment of advanced technologies. This information will be available in deliberately designed, clearly-labeled separate modules of the Technology Clearinghouse. Such forward-looking features will

[15] California Health and Safety Code § 40920.8(b).
[16] Market barriers include, but are not limited to, high present-day costs, technical uncertainty, or alterations that redefine the source.

allow users to compare the most stringent technologies achieved in practice for each equipment or vehicle type today, with "technologically feasible," or next generation technologies.[17] Once completed, Phase II will promote the identification of technology gaps and facilitate technological advancement.

Phase II will also expand on the transparency provided by the Interim Technology Clearinghouse developed under Phase I. In June 2018, staff began working with a contractor to expand the Technology Clearinghouse functionality and features to suit the needs of all user groups. One of the contract requirements is to link the Technology Clearinghouse to CARB's emissions inventory and Pollution Mapping Tool. This enhancement will allow community members to determine the emissions at facilities nearby and the associated controls installed. As this tool is developed, there will be stakeholder involvement opportunities to ensure the end product is user-friendly, clear, and useful.

DEVELOP AND MAINTAIN AN ANNUAL EMISSIONS REPORTING SYSTEM

Overview: Emissions inventory data are the foundation of multiple elements of the Community Air Protection Program. A robust system for the collection and retrieval of emissions inventory data provides a sound technical basis for understanding emissions source contributions, assessing the impacts of emissions control and process changes, improving transparency and accessibility of emissions data to communities, and tracking the implementation of community emissions reduction programs. New statutory requirements[18] will complement efforts already underway as part of Assembly Bill 197[19] and will include: annual reporting of criteria air pollutant and toxic air contaminant emissions for specified stationary sources, development of a statewide uniform emissions reporting system (e.g., methods, reporting), and the option to require that sources provide quality assurance for the accuracy of annual emissions reports.

Implementing Agency: CARB

Type of Action: Regulation

Timing:
Begin development: 2018
Implementation: 2018+

[17] Emissions controls are referred to as "technologically feasible" when they are believed to be capable of reducing emissions, but are not yet commercially available or proven to be cost effective for a certain class and category of emissions source.
[18] California Health and Safety Code § 39607.1.
[19] Assembly Bill 197, Garcia, E, Chapter 250, Statutes of 2016, amended California Health and Safety Code § 39510 and § 39607 and added § 38506, § 38531, § 38562.5, and § 38562.7.

Proposed Actions: CARB staff are proposing a phased approach for the implementation of the Program's emissions reporting requirements. The first phase will help inform the community identification process and the development of community emissions reduction programs in the near-term, while the second phase will develop a comprehensive emissions reporting system over the longer-term. Currently, the frequency with which air districts report criteria air pollutant and toxic air contaminant emissions data to CARB from facilities within their boundaries varies across the air districts. Many large air districts collect criteria air pollutant and toxic air contaminant emissions data annually, while smaller air districts may only report emissions once every three or four years, depending on the size of a facility. Additionally, air districts may apply different criteria for prioritizing and categorizing facilities based on emissions, and they may apply different methods for the selection and quantification of specific criteria air pollutants and toxic air contaminants. Implementing the program's reporting requirements will improve the consistency, accuracy, and transparency of the emissions data. CARB staff are collaborating with air district personnel to determine which facilities must report annual emissions data under the new statutory applicability criteria,[20] what specific substances must be reported, what methods will be used to quantify the emissions of the those substances, and a reporting structure to facilitate annual emissions reporting.

The first phase of implementation will include the development of a regulation establishing the criteria to determine which facilities would report emissions data under the Program. The regulation will also establish an annual reporting requirement for emissions of criteria air pollutants, criteria air pollutant precursors, and toxic air contaminants from those facilities.

To determine which facilities are subject to annual reporting requirements, CARB will work with air districts to apply the statutory applicability criteria. Sources subject to reporting include facilities required to report greenhouse gas emissions,[21] facilities authorized by a permit issued by an air district to emit 250 or more tons per year of any nonattainment pollutant or its precursors, and any facility that receives and elevated prioritization score.[22] A facility that meets any of the three criteria would have to participate in the reporting program. In addition, CARB staff are proposing that all permitted sources report annual emissions data if they are located within the boundary of a community selected by the CARB Governing Board for a community emissions reduction program or community air monitoring, or both.[23]

---

[20] California Health and Safety Code § 39607.1.
[21] California Health and Safety Code § 38530.
[22] Pursuant to California Health and Safety Code § 44360.
[23] The data received, among other things, from the new annual emissions reporting system will be used to inform: the statewide assessment completed by CARB staff during the annual community selection process, source attribution developed as part of a community emissions reduction program, and to help track progress of community emissions reduction programs.

For the longer-term, or second phase of the effort, CARB will continue to work with the air districts to collaboratively develop a more consistent and transparent approach for quantifying emissions. The second phase will include development and deployment of an improved database for reporting, storing, and retrieving emissions data, and will integrate criteria air pollutant and toxic air contaminant emissions data, with CARB's greenhouse gas inventory data and the CARB mapping tool.

CARB staff are already working with the air districts to develop the details of the statewide emissions reporting system that will increase accessibility, be user friendly, and support air district and community needs. The statewide database will provide more timely data and ensure consistency with the frequency of reporting of greenhouse gases. CARB staff are working with air districts to develop the process for completing these tasks and anticipate establishing additional workgroups with communities, air districts, affected industry, and other stakeholders to implement the emissions reporting requirements. The new integrated database system for criteria air pollutant, toxic air contaminant, and greenhouse gas emissions will support multi-pollutant planning efforts.

CARB staff are in the process of conducting public workshops across the State to discuss the proposed first phase of the emissions reporting regulation for criteria air pollutants and toxic air contaminants. It is anticipated that the CARB Governing Board will consider this new regulation in the late 2018/early 2019 timeframe.[24]

TOXIC HOT SPOTS: INDUSTRYWIDE GUIDANCE ON HEALTH RISK ASSESSMENTS FOR GASOLINE DISPENSING FACILITIES

Overview: In 1997, a joint working group of the California Air Pollution Control Officers Association (CAPCOA) and CARB developed the Gasoline Service Station Industrywide Risk Assessment Guidelines. These guidelines help air districts and industrywide sources implement the Assembly Bill 2588[25] Air Toxics "Hot Spots" program risk assessment requirements. Air districts may use this document for permitting new and existing gasoline service stations. Statewide, for thousands of gasoline stations, this document provided a cost-effective and consistent methodology for calculating gasoline station emissions inventories and risk assessments.

Implementing Agency: CARB

Type of Action: Guidance Document

[24] CARB will post more information on the proposed emissions reporting regulation for criteria air pollutants and toxic air contaminants as the regulation is developed.
[25] Assembly Bill 2588, Air Toxics "Hot Spots" Information and Assessment Act, Connelly, Statutes of 1987, California Health and Safety Code § 44300.

Timing:
Begin Development: 2018
Implementation: 2019

Proposed Actions: In 2015, the CARB/CAPCOA Risk Management Guidance Document identified these guidelines for update. CARB and CAPCOA are updating the original document to address changes since 1997. Changes include new risk assessment methodology from the Office of Environmental Health Hazard Assessment, dispersion models, speciation profiles for fuel, and emission factors addressing improved control technology. CARB staff anticipate completion of the updated Gasoline Service Station Industrywide Risk Assessment Guidelines in late 2018.

COMPILE AND DEVELOP BEST PRACTICES GUIDANCE ON OUTREACH, LAND USE, AND TRANSPORTATION

Overview: Proper outreach, land use and transportation planning can significantly affect community-level emissions and exposure, and underscores the need for approaches to better engage with and influence local land use planning efforts. Many governmental agencies, environmental justice organizations and advocacy groups have knowledge of local land use issues and experience of developing tool kits.[26] CARB staff will work closely with these groups and other agencies as new State tool kits are developed. These will support all communities and air districts as community emissions reduction programs are developed.

Implementing Agency: CARB

Type of Action: Informational

Timing:
Begin Development: 2018
Implementation: 2018+

Proposed Actions: By October 1, 2018, staff will compile a list of existing documents, tools, and information on legal authorities, for outreach, land use, and transportation best practices and strategies and make them readily available in an online resource center. This will provide a preliminary menu of options that air districts can use while developing community emissions reduction programs.

The development of these resources will evolve over time. After October 2018, CARB staff expect to expand the existing resources and preliminary list of best practices and

[26] For example: California Environmental Justice Alliance, *SB 1000 Toolkit: Planning for Healthy Communities*, available at: http://caleja.org/2017/09/sb-1000-toolkit-release/.

strategies to provide updated and more detailed materials, which will support implementation of the suggested strategies and practices. This can include updating existing handbooks and guidance, developing new best practices documents and model ordinances, creating the tools necessary to support implementation of best practices, and ultimately incorporating best practices and strategies into the Technology Clearinghouse.

DEVELOP AND MAINTAIN COMMUNITY AIR MONITORING ONLINE RESOURCES

Overview: This strategy consists of an online database with publicly available community air monitoring information.

Implementing Agency: CARB

Type of Action: Informational

Timing:
Begin Development: 2018
Implementation: 2018+

Proposed Actions: This strategy will consist of an online database that provides community air monitoring information such as current monitoring technologies, air monitoring systems, sensor evaluations, and information on advanced air monitoring technologies. Furthermore, this strategy commits CARB staff to performing air sensor evaluations, conducting joint large-scale air quality surveys and monitoring as resources allow, helping advance existing technologies, and bringing new technologies to the market. For example, CARB staff will conduct laboratory and field-based air sensor evaluations alongside partner programs at the South Coast Air Quality Management District (which operates the Air Quality Sensor Performance Evaluation Center program[27]), the U.S. Environmental Protection Agency, and others who have experience conducting sensor evaluations. Information from these evaluations will be provided to assist communities and others in selecting methods they can trust to produce the type and quality of data required to meet their needs. Best practices gleaned from existing air monitoring systems will be compiled and documented to inform future air monitoring activities. This strategy also commits CARB to supporting community science and providing air sensors to air districts.

[27] More information on the South Coast Air Quality Management District, Air Quality Sensor Performance Evaluation Center (AQ-SPEC) program is available at: http://www.aqmd.gov/aq-spec.

DEVELOP AND MAINTAIN COMMUNITY AIR MONITORING DATA PORTAL

Overview: This strategy consists of an online database with publicly available data generated from community air monitoring systems.

Implementing Agency: CARB

Type of Action: Informational

Timing:
Begin Development: 2018
Implementation: 2019+

Proposed Actions: This strategy will consist of an online database that lets the public access data from community air monitoring systems throughout California. Through previous engagement with communities, CARB has identified four key objectives for the data portal that staff are trying to address:

- *Data availability* – New and expanded efforts by air districts and communities to conduct community air monitoring will generate new air quality monitoring data for more locations throughout the State. CARB will make these data readily available to the public through an online data portal that is easily accessible to a multitude of users. To accomplish data availability goals, CARB will design a product that is compatible on both personal computers and mobile devices, and has multi-lingual capabilities.
- *Timeliness of data* – This can be achieved through the development of a real-time data portal. Staff intend to display data as soon as they are available so that they can be used to guide personal decisions about activities. Not all instruments have the ability to collect and disseminate data in real-time, like filters or canister-based measurements, for example. In the cases that data are not available in real-time, CARB will still post the data online as soon as they become available.
- *Flexibility* – This program requires a flexible data portal. While this program is just starting out, it will continue to expand and rapidly evolve over the next few years. Many communities will begin monitoring and displaying data, and each of these communities are unique – in size, shape, monitoring objective(s), emission sources, pollutants, and air quality in general. Furthermore, new sensor technologies will continue to emerge in the future. To accommodate the wide variety of needs from communities as well as changing technologies, the system CARB designs needs to be highly versatile.

- *Data transparency* – This can be obtained by sharing raw data that are identified as such, with the communities, as well as by fully disclosing any data processing procedures. Staff want to ensure that the data being displayed have value and context, so some data processing may occur. For example, to ensure appropriate usage and meaningful interpretation of data, CARB intends to perform quality assurance on the incoming data, as needed and these methods will be publicly accessible. Staff may aggregate data to a lower time resolution, such as hourly- or daily-averaged data to be able to compare to nearby regulatory monitors and/or air quality standards. In such cases, staff will make both raw and processed data available online, as well as any type of data processing procedures used.

The data portal will be a comprehensive data repository and web tool that allows for meaningful and easy interpretation of data, so that the user can determine what the data mean at a glance. This will include data in a variety of ways through features that are tailored to communities' unique needs. With the diverse nature of communities and their specific air quality issues, the portal needs to accommodate many different audiences and end users. At its core, the data portal has four key components:

- *Data storage* – Since every community is unique with its own air quality issues, the type of equipment used and the data collected will be particular to each individual community. The data portal will be able to import, retain, and display all applicable data that covers a wide range of parameters, time resolutions, monitoring platforms, and metadata.
    - *Parameters* – Parameters measured within each community will depend on the defined monitoring objective(s). CARB will design the database and web portal to accept and display discrete lab-analyzed data, like filter and canister samples, in addition to real-time data. This data may include criteria pollutants (e.g., PM2.5), toxic air contaminants (e.g., hexavalent chromium), black carbon, and other pollutants as well as meteorological data (e.g., temperature, wind speed, direction).
    - *Time resolutions* – Different instruments collect and transmit measurements at varying time resolutions, ranging from every minute to one measurement per day. For example, some low-cost PM2.5 sensors collect a measurement every minute, while other regulatory-grade equipment measures an hourly or even 24-hour average PM2.5 concentration. Consequently, the data portal will be designed to receive and show data in varying and meaningful time resolutions.
    - *Platforms* – Traditionally, air monitoring has been done with regulatory-grade monitors that are typically stationary; that is, in a fixed location. However, technological advancement has greatly expanded the methods and platforms by which we monitor air quality. The data portal will be designed to accept

data from a variety of platforms, including fence-line monitoring, remote sensing, or others, as applicable.

- *Metadata* – Due to the flexible and dynamic nature of the data portal, an essential element to the success of the portal will be the storage and sharing of metadata, or related information about the data. Metadata may include, but is not limited to, information about the instrument type, collection methods, location of monitors, sample duration, and firmware version. Additionally, for toxic air contaminants or other pollutants that require analysis in a lab, metadata might include sampling schedule, and monitoring issues if a sample was missed or invalid. Providing such information to the public will help inform about appropriate usage and interpretation of data, while also ensuring data transparency. For that reason, CARB plans to design the data portal so that this information is easy to access and understand.

- *Data accessibility* – The data portal will make data easily accessible in varying formats (e.g., tables, graphs, other plots) online. Additionally, to allow for easy data sharing, the data portal will have an online query tool or other interface with download capabilities. Accessible data will promote transparency, help support more research activities, and aid in further analysis of the community air monitoring data.
- *Data visualization* – CARB anticipates that the data portal will be highly visual in nature, so CARB plans to display air quality and related data (e.g., meteorological or metadata) on maps, time series, and other relevant plots that will provide the data with context so they can be quickly interpreted by all users. These dynamic plots can be used to help in identifying emissions sources, showing the frequency of violations, characterizing pollutant behaviors, and providing real-time air quality information (when available) to help guide personal decisions about activities on a daily basis. More information about the data visualization tools and techniques is available through the community air monitoring toolbox.
- *Data resources* – While CARB is responsible for publishing the data online, the data are ultimately a product of air monitoring by air districts and communities. Therefore, CARB intends to include links within the portal to original data sources (e.g., community and air district webpages or portals). CARB also plans to provide other resources that will help provide additional context to the data. This may include, but is not limited to, information on health effects of various pollutants, instrument evaluations and performance, current research and data quality and limitations.

Due to the varying scope and nature of air quality data, CARB will take a phased approach when it comes to the development and implementation of the data portal. Initially, features available through the data portal may be constrained by the types of instruments used and pollutants measured in the first year; however, it is anticipated

that the portal will continue to grow incrementally over time. As the program continues to develop and more communities begin air monitoring, staff will make adjustments to the data portal so that it continues to improve over time. As previously mentioned, CARB wants to leverage existing resources, so there will be more engagement with external organizations, including communities, air districts, and others, to determine essential user interface and visualization features, address challenges, utilize existing knowledge and learnings, and ensure that the data portal complements existing local efforts to display meaningful data.

PROVIDE COMMUNITY ENFORCEMENT PROGRAM

Overview: This strategy will develop a new community enforcement program that will be offered to communities across the State.

Implementing Agency: CARB

Type of Action: Training

Timing:
Begin Development: 2018
Implementation: 2018+

Proposed Actions: CARB will develop and implement a new program that will be offered to communities across the State. Information will cover topics like the fundamentals of enforcement, how the enforcement process works, instructions on filing a thorough complaint, and what to expect from the enforcement process after filing a complaint. Through this program, community members will be able to better support CARB or air district enforcement processes.

PROVIDE ENFORCEMENT STAFF CROSS-TRAINING FOR MULTI-MEDIA VIOLATIONS

Overview: This strategy will increase multi-media violation awareness.

Implementing Agency: CARB

Type of Action: Training

Timing:
Begin Development: 2018
Implementation: 2018+

Proposed Actions: The strategy will provide training to CARB enforcement staff, allowing CARB to multiply its clean-up efforts in selected communities, since enforcement staff will be able to identify violations of other environmental media and notify the appropriate regulatory agency of the potential violations.

CONDUCT PERIODIC SUPPLEMENTAL ENVIRONMENTAL PROJECTS OUTREACH

Overview: Supplemental Environmental Projects allows penalties collected from settlements to be used for projects that provide air quality benefits within communities throughout the State.

Implementing Agency: CARB

Type of Action: Outreach

Timing:
Begin Development: 2018
Implementation: 2018+

Proposed Actions: This strategy commits CARB to conducting outreach to impacted communities so CARB staff can identify where funds from Supplemental Environmental Projects can best be applied, and working to match Supplemental Environmental Projects with available settlements that have a common nexus. CARB staff will conduct periodic meetings throughout the State. CARB staff will utilize the ideas received from community members to determine what needs can be met through Supplemental Environmental Projects, and work to put those projects in place.

ASSESS CURRENT AIR MONITORING TECHNOLOGIES AND PROVIDE INFORMATION

Overview: This strategy will evaluate current technology for air monitoring and provide information on those technologies as well as an assessment of their feasibility for community air monitoring.

Implementing Agency: CARB

Type of Action: Assessment

Timing:
Begin Development: 2018
Implementation: 2018+

Proposed Actions: CARB staff will identify appropriate applications for each air monitoring technology with consideration of the types of air pollutants measured, data quality, data reporting timeframe, equipment and supporting resource cost, and other factors such as logistical and staffing needs. CARB staff will complete the initial review of existing monitoring technologies by October 1, 2018. This information will be made available in the online Resource Center.

Assess Current Air Monitoring Systems and Provide Information

Overview: This strategy will evaluate current systems for air monitoring and provide information on those systems as well as an assessment of their feasibility for community air monitoring.

Implementing Agency: CARB

Type of Action: Assessment

Timing:
Begin Development: 2018
Implementation: 2018+

Proposed Actions: CARB staff will review existing community air monitoring systems throughout the State to determine what elements can help serve as models for successful air monitoring systems. CARB staff will complete the initial review of existing systems by October 1, 2018. This information will be made available in the online Resource Center.

Funding for Community Assistance Grants

Overview: The Community Air Grants Program is designed to meet CARB's statutory obligations, and legislative intent, by providing support for community-based organizations to participate in the Community Air Protection Program. The Community Air Grants Program seeks to support communities and foster strong collaborative relationships between communities, air districts, CARB, and other stakeholders.

Implementing Agency: CARB

Type of Action: Incentive Funding

Timing:
Begin Development: 2018
Implementation: 2018+

Proposed Actions: As an initial commitment to support community organizations, the Legislature provided $5 million in the fiscal year 2017-2018 State budget for community assistance grants. In response, CARB created the Community Air Grants Program. The grants are designed to help local organizations engage closely in the AB 617 process and build capacity to become active partners in identifying, evaluating, and ultimately reducing exposure to harmful air emissions.[28] CARB received 65 applications, requesting $18.9 million in funding. Applications were received from communities around the State and included innovative proposals for engaging communities in AB 617's local air quality improvement process. To respond to this high demand, CARB is awarding 28 projects totaling $10 million in funding. This amount includes the $5 million appropriated in the fiscal year 2017-2018 State budget and an additional $5 million appropriated in fiscal year 2018-2019 State budget. The projects are located in disadvantaged or low-income communities, and demonstrate partnership building or other forms of collaborative efforts. The grants project-portfolio demonstrates geographic distribution from across the State, including rural and urban locations, and several tribes.

Projects, programs, and activities funded through the grant program reflect the unique needs of individual communities. These include projects that focus on community-driven air monitoring, dissemination of information on local emission sources, as well as the development of actions to reduce community exposure to pollution, and to track progress. However, the grant recipients also include a broader group of organizations that will enable multiple groups to build overall capacity and community leadership for future community emissions reduction programs in order to achieve the goal of AB 617, which is to broadly address the disproportionate air pollution burdens that persist across the State.

EXPLORE COMMUNITY HEALTH INDICATORS

Overview: Health data currently available can be used to describe the overall health of a community. Residents can use this information when working with various agencies to ensure that health-related issues inform policy decisions affecting their community. For example, asthma-related emergency department visits and hospitalizations are available at the ZIP code level. Cumulative health impact tools, like the publicly available CalEnviroScreen 3.0[29] and the California Healthy Places Index,[30] display asthma and heart attack-related emergency department visits at the census tract level.

---

[28] California Air Resources Board, *2017-2018 Grant Guidelines, California Assembly Bill 617: Community Air Grants Program*, February 26, 2018, available at: https://ww2.arb.ca.gov/our-work/programs/Community-Air-Protection-Program-AB617.

[29] Office of Environmental Health Hazard Assessment, CalEnviroScreen, June 30, 2017, available at: https://oehha.ca.gov/calenviroscreen. [Accessed April 5. 2018].

[30] California Healthy Places Index, 2018, available at: http://healthyplacesindex.org/. [Accessed April 5, 2018].

These types of data can help define the baseline cumulative health burden of California communities, which will aid in community identification and tracking health over time.

Implementing Agency: CARB

Type of Action: Informational

Timing: 2018+

Proposed Actions: Many of the California Health and Human Services Agency's departments, the Office of Environmental Health Hazard Assessment, and local health departments, collect and analyze health data. CARB will continue to work closely with these health agencies as they continue to lead efforts to collect and analyze statewide health data.

CARB staff will provide links to publicly available community health data, as well as links to past, current, and proposed community health projects. Staff will also provide information on local community health efforts. These resources will be centrally located in an easy to navigate, searchable section of the Community Air Protection Program's online Resource Center. These resources will help communities assess their current health burden. They will also provide examples and results of community-oriented research on the health impacts of air pollution that have been performed across the State, helping residents when advocating for their community.

APPENDIX G.
CALIFORNIA ENVIRONMENTAL QUALITY ACT – ENVIRONMENTAL ANALYSIS

A Draft Environmental Analysis was released as Appendix G in the *Draft Community Air Protection Blueprint for Selecting Communities, Preparing Community Emissions Reduction Programs, Identifying Statewide Strategies, and Conducting Community Air Monitoring* [1] on June 7, 2018 for a 45-day comment period, which ended on July 23, 2018. The Draft Environmental Analysis will not be recirculated for an additional comment period as the edits made to this Blueprint and Final Environmental Analysis do not include significant new information that would require recirculation of the Draft Environmental Analysis, pursuant to California Code of Regulations, title 14, Section 15088.5.

The Environmental Analysis for the Community Air Protection Program (Program) is intended to disclose potential environmental impacts and identify potential mitigation specific to the Program. In some cases, as described in Chapter 4 of the Draft Environmental Analysis, potentially significant environmental effects may occur as a result of compliance actions taken in response to the Program. Mitigation measures are described in the Final Environmental Analysis that could be expected to reduce potentially significant impacts to less-than-significant levels, for individual projects, if agencies with discretionary authority adopt the mitigation measures. The Final Environmental Analysis takes the conservative approach in its post-mitigation significance conclusions (i.e., tending to overstate the risk that feasible mitigation may not be sufficient or may not be implemented by other parties) and discloses, for purposes of compliance with the California Environmental Quality Act, that potentially significant environmental impacts may be unavoidable.

The Final Environmental Analysis is provided as a stand-alone document for the Program, and will be located on CARB's webpage at: https://ww2.arb.ca.gov/our-work/programs/Community-Air-Protection-Program-AB617.

[11] California Air Resources Board, *Draft Community Air Protection Blueprint for Selecting Communities, Preparing Community Emissions Reduction Programs, Identifying Statewide Strategies, and Conducting Community Air Monitoring*, June 7, 2018, available at: https://ww2.arb.ca.gov/our-work/programs/Community-Air-Protection-Program-AB617.

APPENDIX G – CALIFORNIA ENVIRONMENTAL QUALITY ACT – ENVIRONMENTAL ANALYSIS

[This page is intentionally left blank.]

APPENDIX H.
ASSEMBLY BILL 617

Assembly Bill No. 617

CHAPTER 136

An act to amend Sections 40920.6, 42400, and 42402 of, and to add Sections 39607.1, 40920.8, 42411, 42705.5, and 44391.2 to, the Health and Safety Code, relating to nonvehicular air pollution.

[Approved by Governor July 26, 2017. Filed with Secretary of State July 26, 2017.]

LEGISLATIVE COUNSEL'S DIGEST

AB 617, Cristina Garcia. Nonvehicular air pollution: criteria air pollutants and toxic air contaminants.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Section 39607.1 is added to the Health and Safety Code, to read:

39607.1. (a) For purposes of this section, the following definitions apply:

(1) "Nonattainment pollutant" means a criteria pollutant for which a district is classified as a nonattainment area pursuant to this division or the federal Clean Air Act (42 U.S.C. Sec. 7401 et seq.).

(2) "Stationary source" means any of the following:

(A) A facility that is required to report to the state board the facility's greenhouse gas emissions pursuant to Section 38530.

(B) A facility that is authorized by a permit issued by a district to emit 250 or more tons per year of any nonattainment pollutant or its precursors.

(C) A facility that receives an elevated prioritization score based on cancer or noncancer health impacts pursuant to Section 44360.

(b) (1) The state board, in consultation with districts, shall establish a uniform statewide system of annual reporting of emissions of criteria pollutants and toxic air contaminants for a stationary source.

(2) The state board shall require a stationary source to report to the state board its annual emissions of criteria pollutants and toxic air contaminants using the uniform statewide system of annual reporting developed pursuant to paragraph (1).

(c) With the report required pursuant to paragraph (2) of subdivision (b), the state board may require, as appropriate, a stationary source to provide relevant facility-level emissions data.

(d) The state board may require, as appropriate, a stationary source to verify or certify the accuracy of its annual emissions reports by a third-party verifier or certifier that is accredited by the state board.

SEC. 2. Section 40920.6 of the Health and Safety Code is amended to read:

40920.6. (a) Prior to adopting rules or regulations to meet the requirement for best available retrofit control technology pursuant to Sections 40918, 40919, 40920, and 40920.5, or for a feasible measure pursuant to Section 40914, districts shall, in addition to other requirements of this division, do all of the following:

(1) Identify one or more potential control options which achieves the emission reduction objectives for the regulation.

(2) Review the information developed to assess the cost-effectiveness of the potential control option. For purposes of this paragraph, “cost-effectiveness” means the cost, in dollars, of the potential control option divided by emission reduction potential, in tons, of the potential control option.

(3) Calculate the incremental cost-effectiveness for the potential control options identified in paragraph (1). To determine the incremental cost-effectiveness under this paragraph, the district shall calculate the difference in the dollar costs divided by the difference in the emission reduction potentials between each progressively more stringent potential control option as compared to the next less expensive control option.

(4) Consider, and review in a public meeting, all of the following:

(A) The effectiveness of the proposed control option in meeting the requirements of this chapter and the requirements adopted by the state board pursuant to subdivision (b) of Section 39610.

(B) The cost-effectiveness of each potential control option as assessed pursuant to paragraph (2).

(C) The incremental cost-effectiveness between the potential control options as calculated pursuant to paragraph (3).

(5) Make findings at the public hearing at which the regulation is adopted stating the reasons for the district’s adoption of the proposed control option or options.

(b) A district may establish its own best available retrofit control technology requirement based upon consideration of the factors specified in subdivision (a) and Section 40406 if the requirement complies with subdivision (d) of Section 40001 and is consistent with this chapter, other state law, and federal law, including, but not limited to, the applicable state implementation plan.

(c) (1) On or before January 1, 2019, each district that is a nonattainment area for one or more air pollutants shall adopt an expedited schedule for the implementation of best available retrofit control technology (BARCT), by the earliest feasible date, but in any event not later than December 31, 2023.

(2) The schedule shall apply to each industrial source that, as of January 1, 2017, was subject to a market-based compliance mechanism adopted by the state board pursuant to subdivision (c) of Section 38562.

(3) The schedule shall give highest priority to those permitted units that have not modified emissions-related permit conditions for the greatest period of time. The schedule shall not apply to an emissions unit that has implemented BARCT due to a permit revision or a new permit issuance since 2007.

(d) Prior to adopting the schedule pursuant to paragraph (1) of subdivision (c), a district shall hold a public meeting and take into account:

(1) The local public health and clean air benefits to the surrounding community.

(2) The cost-effectiveness of each control option.

(3) The air quality and attainment benefits of each control option.

(e) A district shall allow the retirement of marketable emission reduction credits under a program which complies with all of the requirements of Section 39616, or emission reduction credits which meet all of the requirements of state and federal law, including, but not limited to, the requirements that those emission reduction credits be permanent, enforceable, quantifiable, and surplus, in lieu of any requirement for best available retrofit control technology, if the credit also complies with all district rules and regulations affecting those credits.

(f) After a district has established the cost-effectiveness, in a dollar amount, for any rule or regulation adopted pursuant to this section or Section 40406, 40703, 40914, 40918, 40919, 40920, 40920.6, or 40922, the district, consistent with subdivision (d) of Section 40001, shall allow alternative means of producing equivalent emission reductions at an equal or lesser dollar amount per ton reduced, including the use of emission reduction credits, for any stationary source that has a demonstrated compliance cost exceeding that established dollar amount.

SEC. 3. Section 40920.8 is added to the Health and Safety Code, to read: 40920.8. (a) The state board shall establish and maintain a statewide clearinghouse that identifies the best available control technology and best available retrofit control technology for criteria air pollutants, and related technologies for the control of toxic air contaminants.

(b) When updating best available control technology determinations, a district shall use the information in the statewide clearinghouse established and maintained by the state board.

SEC. 4. Section 42400 of the Health and Safety Code is amended to read:

42400. (a) Except as otherwise provided in Section 42400.1, 42400.2, 42400.3, 42400.3.5, or 42400.4, any person who violates this part, or any rule, regulation, permit, or order of the state board or of a district, including a district hearing board, adopted pursuant to Part 1 (commencing with Section 39000) to Part 4 (commencing with Section 41500), inclusive, is guilty of a misdemeanor and is subject to a fine of not more than five thousand dollars ($5,000) or imprisonment in the county jail for not more than six months, or both.

(b) If a violation under subdivision (a) with regard to the failure to operate a vapor recovery system on a gasoline cargo tank is directly caused by the actions of an employee under the supervision of, or of any independent contractor working for, any person subject to this part, the employee or independent contractor, as the case may be, causing the violation is guilty of a misdemeanor and is punishable as provided in subdivision (a). That liability shall not extend to the person employing the employee or retaining the independent contractor, unless that person is separately guilty of an action that violates this part.

(c) Any person who owns or operates any source of air contaminants in violation of Section 41700 that causes actual injury, as defined in subdivision (d), to the health or safety of a considerable number of persons or the public is guilty of a misdemeanor and is subject to a fine of not more than fifteen thousand dollars ($15,000) or imprisonment in the county jail for not more than nine months, or both.

(d) As used in this section, “actual injury” means any physical injury that, in the opinion of a licensed physician and surgeon, requires medical treatment involving more than a physical examination.

(e) Each day during any portion of which a violation of subdivision (a) or (c) occurs is a separate offense.

SEC. 5. Section 42402 of the Health and Safety Code is amended to read:

42402. (a) Except as provided in Sections 42402.1, 42402.2, 42402.3, and 42402.4, any person who violates this part, any order issued pursuant to Section 42316, or any rule, regulation, permit, or order of a district, including a district hearing board, or of the state board issued pursuant to Part 1 (commencing with Section 39000) to Part 4

(commencing with Section 41500), inclusive, is strictly liable for a civil penalty of not more than five thousand dollars ($5,000).

(b) (1) Any person who violates any provision of this part, any order issued pursuant to Section 42316, or any rule, regulation, permit or order of a district, including a district hearing board, or of the state board issued pursuant to Part 1 (commencing with Section 39000) to Part 4 (commencing with Section 41500), inclusive, is strictly liable for a civil penalty of not more than ten thousand dollars ($10,000).

(2) (A) If a civil penalty in excess of five thousand dollars ($5,000) for each day in which a violation occurs is sought, there is no liability under this subdivision if the person accused of the violation alleges by affirmative defense and establishes that the violation was caused by an act that was not the result of intentional conduct or negligent conduct.

(B) Subparagraph (A) shall not apply to a violation of federally enforceable requirements that occur at a Title V source in a district in which a Title V permit program has been fully approved.

(C) Subparagraph (A) does not apply to a person who is determined to have violated an annual facility emissions cap established pursuant to a market based incentive program adopted by a district pursuant to subdivision

(b) of Section 39616.

(c) Any person who owns or operates any source of air contaminants in violation of Section 41700 that causes actual injury, as defined in subdivision

(d) of Section 42400, to the health and safety of a considerable number of persons or the public, is liable for a civil penalty of not more than fifteen thousand dollars ($15,000).

(d) Each day during any portion of which a violation occurs is a separate offense.

SEC. 6. Section 42411 is added to the Health and Safety Code, to read: 42411. Notwithstanding any other law, maximum penalties assessed by the state board or a district pursuant to this chapter as of January 1, 2018, shall be increased annually based on the California Consumer Price Index as compiled and reported by the Department of Industrial Relations.

SEC. 7. Section 42705.5 is added to the Health and Safety Code, to read: 42705.5. (a) For purposes of this section, the following definitions and related provisions shall apply:

(1) “Community air monitoring system” means advanced sensing monitoring equipment that measures and records air pollutant concentrations in the ambient air at or near sensitive receptor locations and in disadvantaged communities and that may be useful for estimating associated pollutant exposures and health risks, determining trends in air pollutant levels over time, and in supporting enforcement efforts.

(2) “Disadvantaged community” means a community identified as disadvantaged pursuant to Section 39711.

(3) “Fence-line monitoring system” means monitoring equipment that measures and records air pollutant concentrations at or adjacent to a stationary source that may be useful for detecting or estimating emissions of pollutants from the source, including the quantity of fugitive emissions, and in supporting enforcement efforts.

(4) “Nonattainment pollutant” has the same meaning as in Section 39607.1.

(5) “Sensitive receptors” includes hospitals, schools and day care centers, and such other locations as the district or state board may determine.

(6) “Stationary source” has the same meaning as in Section 39607.1.

(b) On or before October 1, 2018, the state board shall prepare, in consultation with the Scientific Review Panel on Toxic Air Contaminants, the districts, the Office of Environmental Health Hazard Assessment, environmental justice organizations, affected industries, and other interested stakeholders, a monitoring plan regarding the availability and effectiveness of toxic air contaminant and criteria air pollutant advanced sensing monitoring technologies and existing community air monitoring systems, as well as the need for and benefits of establishing additional community air monitoring systems. In preparing the monitoring plan, the state board shall conduct at least one public workshop in each of the northern, central, and southern parts of the state.

(c) Based on findings and recommendations in the monitoring plan prepared pursuant to subdivision (b), the state board shall select, concurrent with the monitoring plan, in consultation with the districts and based on an assessment of the locations of sensitive receptors and disadvantaged communities, the highest priority locations around the state to deploy community air monitoring systems, which shall be communities with high exposure burdens for toxic air contaminants and criteria air pollutants. By July 1, 2019, any district containing a location selected pursuant to this subdivision shall deploy a community air monitoring system in the selected location or locations. In implementing this subdivision, the district may require any stationary source that emits pollutants in, or that materially affect, the highest priority locations identified pursuant to this subdivision to deploy a fence-line monitoring system or other appropriate real-time, on-site monitoring, taking into account technical capabilities, cost, and the degree to which additional data would materially contribute to an understanding of community risk.

(d) By January 1, 2020, and January 1 of every year thereafter, the state board shall select additional locations pursuant to subdivision (c), as the state board deems appropriate based on the monitoring plan described in subdivision (b). Any district containing a location selected pursuant to this subdivision shall deploy a community air monitoring system in the selected location within one year of the state board selecting the location. The state board shall hold an annual public hearing on the status of implementing the network of community air monitoring systems and make recommendations for improvements.

(e) The districts shall provide to the state board the air quality data produced by the community air monitoring systems deployed pursuant to this section. The state board shall publish the air quality data on its Internet Web site.

SEC. 8. Section 44391.2 is added to the Health and Safety Code, to read: 44391.2. (a) For purposes of this section, the following provisions shall apply:

(1) "Disadvantaged community" means a community identified as disadvantaged pursuant to Section 39711.

(2) "Sensitive receptors" includes the same locations as specified in subdivision (a) of Section 42705.5.

(b) On or before October 1, 2018, the state board shall prepare, in consultation with the Scientific Review Panel on Toxic Air Contaminants, the districts, the Office of Environmental Health Hazard Assessment, environmental justice organizations, affected industry, and other interested stakeholders, a statewide strategy to reduce emissions of toxic air contaminants and criteria air pollutants in communities affected by a high cumulative exposure burden. The state board shall update the strategy at least once every five years. In preparing the strategy, the state board shall conduct at least one public workshop in each of the northern, central, and southern parts of the state. The strategy shall include criteria for the development of community emission reduction programs. The criteria presented in the state strategy shall include, but are not limited to, all of the following:

(1) An assessment and identification of communities with high cumulative exposure burdens for toxic air contaminants and criteria air pollutants. The assessment shall prioritize disadvantaged communities and sensitive receptor locations based on one or more of the following: best available modeling information, existing air quality monitoring information, existing public health data based on consultation with the Office of Environmental Health Hazard Assessment, and the monitoring results obtained pursuant to Section 42705.5.

(2) A methodology for assessing and identifying the contributing sources or categories of sources, including, but not limited to, stationary and mobile sources, and an estimate of their relative contribution to elevated exposure to air pollution in impacted communities identified pursuant to paragraph (1).

(3) An assessment of whether a district should update and implement the risk reduction audit and emissions reduction plan developed pursuant to Section 44391 for any facility to achieve emission reductions commensurate with its relative contribution, if the facility's emissions either cause or significantly contribute to a material impact on a sensitive receptor location or disadvantaged community, based on any data available for assessment pursuant to paragraph (1) of subdivision (b) or other relevant data.

(4) An assessment of the existing and available measures for reducing emissions from the contributing sources or categories of sources identified pursuant to paragraph (2), including, but not limited to, best available control technology, as defined in Section 40405, best available retrofit control technology, as defined in Section 40406, and best available control technology for toxic air contaminants, as defined in Section 39666.

(c) (1) Based on the assessment and identification pursuant to paragraph

(1) of subdivision (b), the state board shall select, concurrent with the strategy, locations around the state for preparation of community emissions reduction programs. The state board shall select additional locations annually thereafter, as appropriate.

(2) Within one year of the state board's selection, the district encompassing any location selected pursuant to this subdivision shall adopt, in consultation with the state board, individuals, community-based organizations, affected sources, and local governmental bodies in the affected community, a community emissions reduction program to achieve emissions reductions for the location selected using cost-effective measures identified pursuant to paragraph (4) of subdivision (b).

(3) The community emissions reduction programs shall be consistent with the state strategy and include emissions reduction targets, specific reduction measures, a schedule for the implementation of measures, and an enforcement plan.

(4) The community emissions reduction programs shall be submitted to the state board for review and approval within 60 days of the receipt of the program. Programs that are rejected shall be resubmitted within 30 days. To the extent that a program, in whole or in part, is not approvable, the state board shall initiate a public process to discuss options for achievement of an approvable program. Concurrent with the public process to achieve an approvable program, the state board shall develop and implement the applicable mobile source elements in the draft program to commence achievement of emission reductions.

(5) The programs shall result in emissions reductions in the community, based on monitoring or other data.

(6) In implementing the program, the district and the state board shall be responsible for measures consistent with their respective authorities.

(7) A district encompassing a location selected pursuant to this subdivision shall prepare an annual report summarizing the results and actions taken to further reduce emissions pursuant to the community emissions reduction program.

(8) Compliance with the community emissions reduction program prepared pursuant to this section, including its implementation, shall be enforceable by the district and state board, as applicable.

(d) The state board shall provide grants to community-based organizations for technical assistance and to support community participation in the implementation of this section and Section 42705.5.

SEC. 9. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.

However, if the Commission on State Mandates determines that this act contains other costs mandated by the state, reimbursement to local agencies and school districts for those costs shall be made pursuant to Part 7 (commencing with Section 17500) of Division 4 of Title 2 of the Government Code.

[This page is intentionally left blank.]

APPENDIX I.
GLOSSARY

The glossary in Table I-1 is intended to clarify the terms used in this document; it does not contain official definitions to be used for other purposes. The California Air Resources Board's Glossary webpage[1] also provides commonly used terms throughout our webpages and documents and may be used for additional terms not included in the list below.

Table I-1 Glossary of Terms for the Community Air Protection Program

TERM (ACRONYM)	DESCRIPTION
Acute health effect	A health effect that occurs over a relatively short period of time (e.g., minutes, hours). The term is used to describe brief exposures and effects which appear promptly after exposure.
Air district	An air pollution control district, air quality management district, or air resources district, located in California.
Air quality standard	The prescribed level of a pollutant in the outside air that should not be exceeded during a specific time period to protect public health. Established by both federal and State governments.
Air sensor	Device that measures air pollutants on a real-time or near real-time basis that is generally portable, low in cost, and can require less power than other air monitoring methods. https://www.epa.gov/air-sensor-toolbox
Air toxics	A generic term referring to a harmful chemical or group of chemicals in the air. Substances that are especially harmful to health, such as those considered under U.S. Environmental Protection Agency's hazardous air pollutant program or California's Assembly Bill 1807 and/or Assembly Bill 2588 air toxics programs, are considered to be air toxics. Technically, any compound that is in the air and has the potential to produce adverse health effects is an air toxic.
Airborne Toxic Control Measure (ATCM)	A control measure adopted by the California Air Resources Board that reduces emissions of toxic air contaminants. California Health and Safety Code § 39666 et seq.

[1] California Air Resources Board's Glossary webpage: https://ww2.arb.ca.gov/about/glossary.

TERM (ACRONYM)	DESCRIPTION
Area-wide sources	Sources of pollution where the emissions are spread over a wide area, such as consumer products, fireplaces, road dust, and farming operations. Area-wide sources do not include mobile sources or stationary sources.
Assembly Bill 617	Assembly Bill 617 was enacted to reduce exposure in communities most impacted by air pollution. This first-of-its-kind statewide effort includes: community air monitoring; community emissions reduction programs; new requirements for accelerated retrofit of pollution controls on industrial sources; increased penalty fees; and greater transparency and availability of air quality and emissions data. Assembly Bill 617, Garcia, C., Chapter 136, Statutes of 2017, modified the California Health and Safety Code, amending § 40920.6, § 42400, and § 42402, and adding § 39607.1, § 40920.8, § 42411, § 42705.5, and § 44391.2
Attainment area	A geographical area identified to have air quality as good as, or better than, the national and/or California ambient air quality standards. An area may be an attainment area for one pollutant and a nonattainment area for others.
Best available control technology (BACT)	A control technology standard used in preconstruction permit programs. The term is used in the federal prevention of significant deterioration permitting program with a definition found in the federal Clean Air Act and the Code of Federal Regulations. In California, however, it is often used to describe control technology requirements in new source review rules. Usually, definitions used by California air pollution control districts are equivalent to or even more stringent than the federal new source review requirement for control technology and more akin to the lowest achievable emission rate definition used in the federal Clean Air Act.
Best available control technology for toxic air contaminants (T-BACT)	The most effective emissions limitation or control technique which has been achieved in practice or any other emissions limitation or control technique, including process and equipment changes, found by the California Air Resources Board Executive Officer or Air Pollution Control Officer of the air districts to be technologically feasible for a class or category of source.

TERM (ACRONYM)	DESCRIPTION
Best available retrofit control technology (BARCT)	An air emission limitation that applies to existing sources and is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source.
CalEnviroScreen	Developed by the California Environmental Protection Agency and the Office of Environmental Health Hazard Assessment, CalEnviroScreen is a screening tool that is used to help identify communities disproportionately burdened by multiple sources of pollution and with population characteristics that make them more sensitive to pollution. https://oehha.ca.gov/calenviroscreen
California Air Pollution Control Officers Association (CAPCOA)	CAPCOA is an association of Air Pollution Control Officers representing all 35 local air quality agencies throughout California.
California Air Resources Board Governing Board (CARB Governing Board)	The Governing Board for the California Air Resources Board consists of 16 members, of which 12 members are appointed by the Governor and confirmed by the State Senate. The 12 members include 5 who serve on air districts, 4 experts in fields that shape air quality rules, 2 public members, and the Chair, who serves as the only full-time member. The other 4 members include 2 who represent environmental justice communities (1 appointed by the Senate and the other by the Assembly) and 2 non-voting members appointed for Legislative oversight, 1 each from the Senate and Assembly.
California Environmental Quality Act (CEQA)	A California law that sets forth a process for public agencies to make informed decisions on discretionary project approvals. The process aids decision-makers to determine whether any environmental impacts are associated with a proposed project. It requires environmental impacts associated with a proposed project to be eliminated or reduced and that air quality mitigation measures are implemented.
Chronic health effect	A health effect that occurs over a relatively long period of time (e.g., months, years).
Community Air Protection Program (Program)	The program established by the California Air Resources Board to implement the requirements set forth in Assembly Bill 617.

TERM (ACRONYM)	DESCRIPTION
Community Air Protection Blueprint (Blueprint)	A set of elements designed to meet Assembly Bill 617's requirements to develop a statewide strategy and statewide air monitoring plan for the California Air Resources Board consideration. These elements include the process for identifying impacted communities, statewide strategies to reduce emissions of criteria air pollutants and toxic air contaminants, as well as proposed criteria for deployment of community air monitoring and development and implementation of community emissions reduction programs.
Criteria air pollutants	Air pollutants for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set. Examples include: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter 10 and particulate matter 2.5.
Cumulative impacts	The exposures, public health, or environmental effects from the combined emissions and discharges, in a geographic area, including environmental pollution from all sources, whether single or multi-media, routinely, accidentally, or otherwise released. Impacts will take into account sensitive populations and socio-economic factors, where applicable and to the extent data are available. The high cumulative impacts the Community Air Protection Program addresses are those related to emissions of criteria air pollutants and toxic air contaminants. https://oehha.ca.gov/calenviroscreen/report/cumulative-impacts-building-scientific-foundation-report
Data quality indicators	Data quality indicators include a variety of metrics used to ensure data will meet defined standards of quality at stated level of confidence appropriate to satisfy air monitoring objective(s). Examples are listed in Table E-1.
Data quality objectives	Performance and acceptance criteria of monitoring data needed to support specific actions or decisions.
Diesel particulate matter	The solid material in diesel exhaust. Diesel particulate matter is typically composed of carbon particles ("soot", also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. More than 90 percent of diesel particulate matter is less than 1 micron in diameter, and thus is a subset of particulate matter less than 2.5 microns in diameter. https://www.arb.ca.gov/research/diesel/diesel-health.htm

TERM (ACRONYM)	DESCRIPTION
Disadvantaged communities	These communities are identified based on geographic, socioeconomic, public health, and environmental hazard criteria, and may include, but are not limited to, either of the following: (1) areas disproportionately affected by environmental pollution and other hazards that can lead to negative public health effects, exposure, or environmental degradation or (2) areas with concentrations of people that are of low-income, high unemployment, low levels of homeownership, high rent burden, sensitive populations, or low levels of educational attainment. California Health and Safety Code § 39711(a)
Emissions inventory	An estimate of the amount of pollutants emitted into the atmosphere from categories of mobile, area-wide, and stationary sources caused by human activity as well as from natural sources. Natural source emissions include biogenic hydrocarbons, geogenic hydrocarbons, natural wind-blown dust, and wildfire emissions. Emissions from a particular source are estimated as mass of a pollutant emitted over a specific period of time, such as a tons per day or tons per year.
Environmental justice	The fair treatment of people of all races and incomes with respect to development, implementation and enforcement of environmental laws, regulations, and policies.
Fence-line monitoring system	Air monitoring equipment that measures and records air pollutant concentrations at or adjacent to a stationary source that may be useful for detecting or estimating emissions of pollutants from the source, including the quantity of fugitive emissions, and in supporting enforcement efforts. California Health and Safety Code § 42705.5(a)(3)
Fiscal Year (FY)	A 12-month period during which revenue is earned and received, obligations are incurred, encumbrances are made, appropriations are expended, and for which other fiscal transactions are recognized. In California State government, the fiscal year begins July 1 and ends the following June 30. For example, if reference is made to the State's Fiscal Year 2017-2018, this is the time period beginning July 1, 2017 and ending June 30, 2018. http://www.ebudget.ca.gov/reference/GlossaryOfTerms.pdf

TERM (ACRONYM)	DESCRIPTION
Greenhouse gases (GHG)	Atmospheric gases such as carbon dioxide, methane, chlorofluorocarbons, nitrous oxide, ozone, and water vapor that slow the passage of re-radiated heat through the Earth's atmosphere.
Mobile monitoring	A measurement platform equipped with instrumentation that can quickly measure air pollutant concentrations while in motion.
Mobile sources	Sources of air pollution such as automobiles, motorcycles, trucks, off-road vehicles, boats, and airplanes.
Nonattainment area	A geographic area identified by the U.S. Environmental Protection Agency and/or the California Air Resources Board as not meeting either the National Ambient Air Quality Standards or the California Ambient Air Quality Standards for a given pollutant.
Ozone	A product of the photochemical process involving the sun's energy and ozone precursors, such as hydrocarbons and oxides of nitrogen. Ozone exists in the upper atmosphere ozone layer (stratospheric ozone) as well as at the Earth's surface in the troposphere (ozone). Ozone in the troposphere causes numerous adverse health effects and is a criteria air pollutant. It is a major component of smog.
Particulate matter	Any material, except pure water, that exists in the solid or liquid state in the atmosphere. The size of particulate matter can vary from coarse, wind-blown dust particles to fine particle combustion products.
Particulate matter 10 (PM10)	Particulate matter 10 microns or less in aerodynamic diameter (about 1/7 the diameter of a single human hair). Their small size allows them to make their way to the air sacs deep within the lungs where they may be deposited and result in adverse health effects. PM10 also causes visibility reduction.
Particulate matter 2.5 (PM2.5)	Particulate matter 2.5 microns or less in aerodynamic diameter. This fraction of particulate matter penetrates most deeply into the lungs.
Proximity-based goal	Measurable goals included in community emissions reduction programs to reduce exposure at sensitive receptor locations that are exposed to elevated levels because of their proximity to emissions sources.

TERM (ACRONYM)	DESCRIPTION
Remote sensing	The use of instrumentation that may be deployed on ground-based, airborne, or spaceborne platforms that measures reflected or emitted radiation to collect information about air pollutant concentrations and meteorological conditions.
Resource Center	The California Air Resources Board's online repository that houses tools for community members, air districts, and other stakeholders to use when developing and implementing the Community Air Protection Program. https://ww2.arb.ca.gov/our-work/programs/Community-Air-Protection-Program-AB617
Sensitive receptors	Includes hospitals, schools, and day care centers, and such other locations as the air district board or California Air Resources Board may determine. California Health and Safety Code § 42705.5(a)(5)
Source attribution	An assessment identifying the contributing sources or categories of sources, including, but not limited to, stationary and mobile sources, and an estimate of their relative contribution to elevated exposure to air pollution in impacted communities.
Statewide assessment	A document developed by California Air Resources Board (CARB) staff to summarize community information as well as air district and/or CARB statewide assessment outcomes for each community that is recommended to the CARB Governing Board for consideration for deployment of community air monitoring and/or the development of community emissions reduction programs. The statewide assessment provides an overview of the information used to make the staff's recommendation to the CARB Governing Board.
Stationary sources	Non-mobile sources such as power plants, refineries, and manufacturing facilities which emit air pollutants.
Supplemental Environmental Projects	Community-based projects to improve public health, reduce pollution, increase environmental compliance, and bring public awareness to neighborhoods most burdened by environmental harm that are funded from a portion of the penalties received during settlement of enforcement actions. https://www.arb.ca.gov/enf/seppolicy.htm

TERM (ACRONYM)	DESCRIPTION
Toxic air contaminants	An air pollutant, identified in regulation by CARB, which may cause or contribute to an increase in deaths or in serious illness, or which may pose a present or potential hazard to human health. Health effects to toxic air contaminants may occur at extremely low levels and it is typically difficult to identify levels of exposure that do not produce adverse health effects.
Quality assurance	An integrated program used to document and provide confidence that data quality requirements will be fulfilled.
Quality control	Quality control is a set of routine procedures used to verify the quality of data and ensure that data quality objectives are being met while monitoring is underway.