APPENDIX F. STATEWIDE STRATEGIES, TOOLS, AND RESOURCES

Please submit any written comments by July 23, 2018 to: https://www.arb.ca.gov/lispub/comm/bclist.php.

I. EMISSIONS REDUCTION STRATEGIES

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:
Begin Development: 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.

CARGO HANDLING EQUIPMENT AMENDMENT

Overview: This strategy will transition cargo handling equipment, which is located in ports, to zero emission technology.

Implementing Agency: CARB

Type of Action: Regulatory

Timing:
Begin Development: 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 emissions technology.

Implementing Agency: CARB

Type of Action: Regulatory

Timing:
Begin Development: 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 2023-2028. 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:
Begin Development: 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:
Begin Development: 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:
Begin Development: 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 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:
Begin Development: 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 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:
Begin Development: 2020
Implementation: 2020

Proposed Actions: This strategy will include a regulation and/or compliance assistance to reduce theft of 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 (PM10 and PM2.5) and volatile organic compound emissions that contribute to ozone formation.

Implementing Agency: CARB

Type of Action: Suggested Control Measure

Timing:
Begin Development: TBD
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 for initial implementation of the Program. The Legislature also recognized the importance to immediately reduce emissions in highly burdened communities and therefore 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 (Carl Moyer 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*.[85]

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*[86] 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 statute.[87] Air districts must also work with 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. 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.

Governor Brown's *Proposed Fiscal Year 2018-2019 Budget* includes an additional $250 million of Cap-and-Trade auction proceeds for continued support of early action incentive programs to reduce emissions within impacted communities.

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[85] 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.
[86] 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.
[87] 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.

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 other low-income equity funding, along with local 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.

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. By October 1, 2018, CARB will compile a list of existing documents, tools, and information in an effort to support effective implementation of the Community Air Protection Program and make 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 develop and 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.

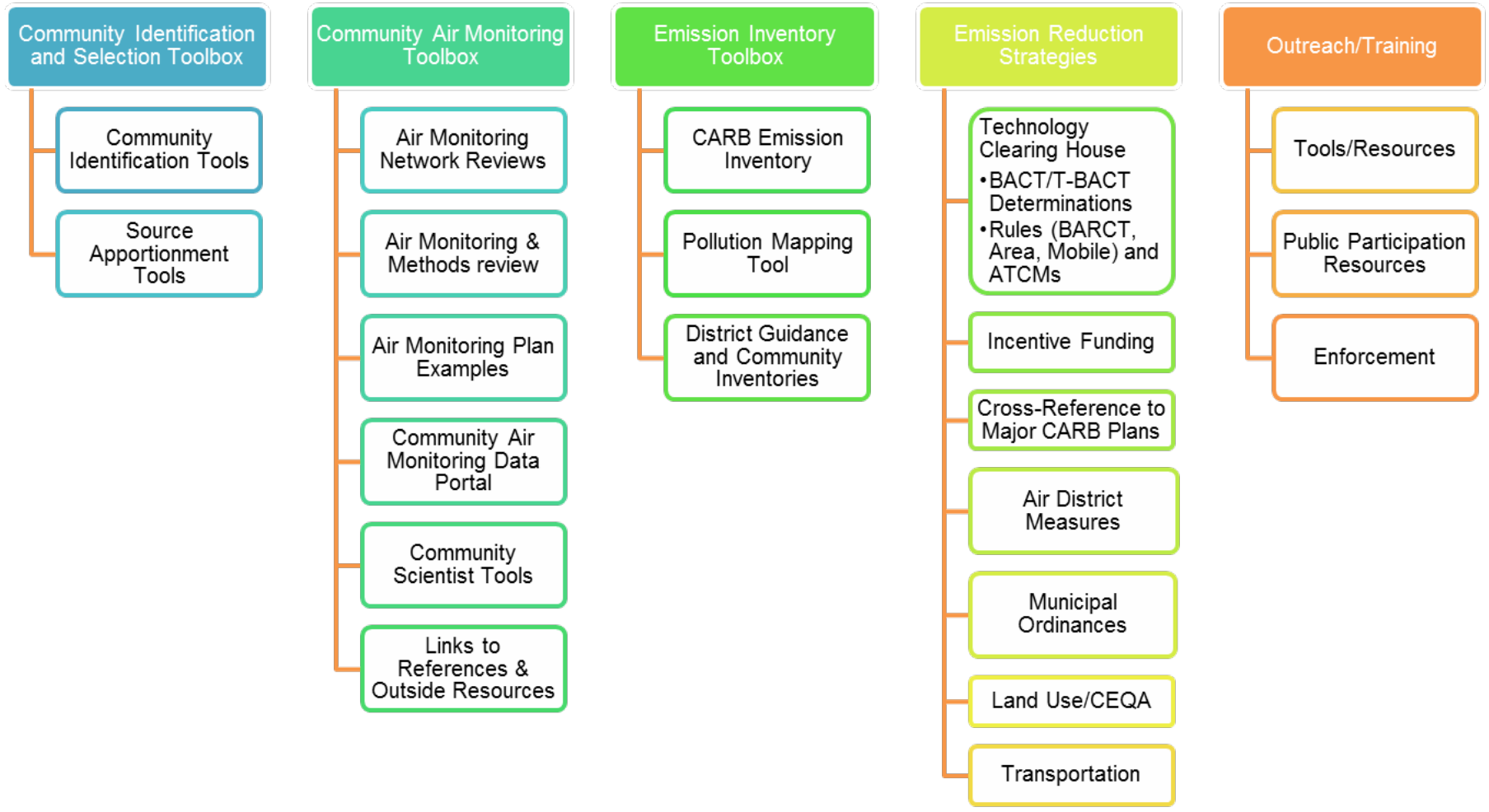
- *Community air monitoring toolbox* – The community air monitoring toolbox, found in the online Resource Center, will ensure that communities and air districts have easy access to: (1) air quality data and visualization tools; (2) air monitoring technology evaluations and best practices; (3) links to existing air monitoring projects; and (4) the community air monitoring data portal.

  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.
- *Emissions reduction strategies* – This resource will contain: (1) a Technology Clearinghouse outlining current emission reduction technologies and rules (BARCT, area-wide, mobile, ATCMs, and incentive programs); (2) incentive funding information; and (3) links to transportation, land use, and mitigation best practices.

  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.

Figure 22 depicts the basic structure and the types of documents, tools, and information that is available in the online Resource Center.

Figure 22 Basic Structure of the Online Resource Center



EXPAND AND MAINTAIN THE TECHNOLOGY CLEARINGHOUSE

Overview: Statute requires CARB to establish and maintain a statewide clearinghouse of criteria air pollutant and toxic air contaminant emissions performance levels for stationary sources,[88] 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+

Proposed Actions: In addition to housing these 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[89] as well as forward-looking information on the next generation of ultra-low or zero emissions technologies to support continued emissions control technology advancement. It will be a useful tool to identify the best control technologies, rules, and measures for use in controlling emissions and will foster continued technology advancement by highlighting next generation technologies. The Technology Clearinghouse will also 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 been delegated the authority to issue permits to stationary sources, allowing them to operate within emission limitations. 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,

[88] California Health and Safety Code § 40920.8(a).
[89] 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.

air districts confirm that the facility and all emitting equipment are in compliance with applicable rules and regulations. Permit limits are usually updated every time a facility installs new equipment or modifies their existing equipment. Permitting requirements vary by location based on the facility and equipment type, 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[90] designation status.

New facilities or facilities modifying equipment that emit air pollutants over specific air district emissions thresholds, are subject to stringent emissions control requirements. Air districts determine the best-achievable emissions limit for each class and category of source over these emissions thresholds based on the cleanest technology available at that time (this is BACT). Other BACT "determinations" for a specific equipment type must be considered by air district staff during the permitting of a new or modified facility. Statute requires air districts to use CARB's Technology Clearinghouse when updating their BACT determinations for stationary sources.[91]

Existing stationary sources in nonattainment areas are subject to BARCT requirements. BARCT determinations are adopted periodically by air districts to reduce emissions from existing sources of a particular source type. These requirements are set considering feasibility, cost-effectiveness,[92] and the nature and severity of the air quality challenge.

Statute requires air districts in nonattainment areas to adopt an expedited schedule and implement the most current BARCT limits on industrial sources[93] that are subject to the Assembly Bill 32[94] Cap-and-Trade program. Air district BARCT schedules must be adopted by January 1, 2019, and air districts must implement BARCT by December 31, 2023, and must give the highest priority to permitted units that have not modified emissions-related permit conditions for the greatest period of time. The expedited schedule does not apply to emission units that have implemented BARCT since 2007 due to a permit revision or new permit issuance.

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[90] 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.

[91] California Health and Safety Code § 40920.8(b).

[92] 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.

[93] California Health and Safety Code § 40920.6(c)(1).

[94] Assembly Bill 32, Nunez, Chapter 488, Statutes of 2006.

APPROACH AND SCHEDULE

CARB staff plan to develop the Technology Clearinghouse in two phases. In Phase Ia, CARB will develop an Interim Technology Clearinghouse to meet the bill requirement for a statewide clearinghouse that identifies BACT, BARCT, and T-BACT for stationary sources. This includes updating the existing BACT Clearinghouse to include BARCT and T-BACT, and populating the database.

After updating the existing system, staff will expand the Interim Technology Clearinghouse to include information on mobile and area-wide source rules and ATCMs (Phase Ib). 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. The steps required to complete the Interim Technology Clearinghouse will be prioritized based on statutory requirements and support needed for community emissions reduction programs. The following sub-set of Phase I tasks are expected to be completed by September 2018:

- Air district submission of BACT and T-BACT determinations not currently in the existing BACT Clearinghouse.
- Air district BARCT determinations are based on the facilities located in the district, as well as each air district's cost-effectiveness threshold.
- Modifications to CARB's current BACT Clearinghouse to enhance input and search function capabilities.
- Examples of the most stringent control technologies, measures, and rules for mobile, area-wide, and stationary sources.

Phase II of the Technology Clearinghouse will enhance functionality and allow users to compare the most stringent technologies achieved in practice for each equipment or vehicle type with technologically feasible or next generation technologies. Emissions controls are referred to as "technologically feasible" when they are placed on other similar sources, but have not yet been transferred or identified as cost-effective. Next generation technologies are alternatives to conventional equipment. Identifying zero and near-zero technologies such as fuel cells, solar, and battery backup systems in the Technology Clearinghouse, will allow users to identify prospective long-term technology solutions. 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. Beginning in June 2018, staff will begin working with a contractor to expand the Technology Clearinghouse functionality and

features. Part of this contract will be linking the Technology Clearinghouse data 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 in place. Ultimately, when Phase II is completed in 2020, users will be able to compare the level of controls deployed across similar facilities and specific equipment statewide.

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[95] will complement efforts already underway as part of Assembly Bill 197[96] 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+

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 community emissions reduction programs in the near-term, while the second phase will develop a comprehensive emissions reporting system 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

[95] California Health and Safety Code § 39607.1.
[96] 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.

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,[97] 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,[98] 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.[99] A facility that meets any of the three criteria would have to participate in the reporting program.

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 the quantification of emissions. The second phase will also include development and deployment of an improved database for reporting, storing, and retrieving emissions data. The system will allow integration of the criteria air pollutant and toxic air contaminant emissions data with the 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

[97] California Health and Safety Code § 39607.1.
[98] California Health and Safety Code § 38530.
[99] Pursuant to California Health and Safety Code § 44360.

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 planning four 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.[100]

INDUSTRY GUIDANCE TO 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[101] 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 uniform method for calculating gasoline station emissions inventories and risk assessments.

Implementing Agency: CARB

Type of Action: Guidance Document

Timing:
Begin Development: 2018
Implementation: 2018

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.

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

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.[102] 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 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.

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

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 networks, 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 AQ-SPEC program), 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. This strategy also commits CARB to supporting community science and providing air sensors to local air districts.

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 networks.

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 networks 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* – Through a well-designed community monitoring network, new monitoring data will be generated for more locations throughout the State. Staff will make the 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 an extremely 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, 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 retain and display many different types of data that cover a wide range of parameters, time resolutions, monitoring platforms, and metadata. More information about the parameters, time resolutions, platforms, and metadata can be found in the community air monitoring toolbox.
- *Data accessibility* – The data portal will make data easily accessible in varying formats (e.g., tables, graphs) online. The data portal will also provide a mechanism by which users can download the data for their own use. Accessible data will promote transparency, help support more research activities, and aid in further analysis of the community air monitoring data.
- *Data visualiz*ation – The data portal will include maps and other relevant plots that will provide the data with context so they can be quickly interpreted by all users. More information about the data visualization tools and techniques is available through the community air monitoring toolbox.
- *Data resources* – The data portal will also offer information and other materials that help provide additional context to the data. This may include links to original data sources, information on the 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 lessons learned, 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. 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.

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 networks for air monitoring and provide information on those networks 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 networks throughout the State to determine what elements can help serve as models for successful air monitoring networks. CARB staff will complete the initial review of existing networks 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.[103] 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 selected 28 projects totaling $10 million for funding. This amount reflects $5 million appropriated in the fiscal year 2017-2018 State budget and an additional $5 million which is contingent on the appropriation of those funds in the final fiscal year 2018-2019 State budget bill passed by the Legislature and signed by the Governor. The projects are located in disadvantaged or low-income communities, and demonstrate partnership building or other forms of collaborative efforts. The initial 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 pollution burdens faced by disadvantaged communities 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

[103] 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.

available CalEnviroScreen 3.0[104] and the California Healthy Places Index,[105] display asthma and heart attack-related emergency department visits at the census tract level. 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:
Begin Development: 2018
Implementation: 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.

[104] Office of Environmental Health Hazard Assessment, CalEnviroScreen, June 30, 2017, available at: https://oehha.ca.gov/calenviroscreen. [Accessed April 5. 2018].
[105] California Healthy Places Index, 2018, available at: http://healthyplacesindex.org/. [Accessed April 5, 2018].