

BOARD MEETING DATE: March 2, 2018

AGENDA NO. 32

PROPOSAL: Potential Strategies for Facility-Based Mobile Source Measures Adopted in 2016 AQMP

SYNOPSIS: Following the commitment made in the 2016 AQMP, staff has conducted significant public outreach over the past year to identify potential voluntary and, if needed, regulatory emission reduction strategies for sources covered by Facility-Based Mobile Source Measures. After reviewing the feedback received during this process, staff has developed a recommended approach tailored to each of the five facility sectors including airports, marine ports, new and redevelopment projects, rail yards, and warehouses. This recommendation includes a spectrum of potential voluntary and regulatory approaches that show the most promise for achieving emission reductions. Any potential rule or agreements included in this approach would be subject to a full public process, including further public outreach, environmental and economic analysis, and subsequent Board consideration. This action is to seek Board direction for next steps in the development of Facility-Based Mobile Source Measures.

COMMITTEE: Mobile Source, February 16, 2018, Reviewed

RECOMMENDED ACTIONS:

1. Direct staff to pursue the approach for developing Facility-Based emission reduction strategies for New Development and Redevelopment Projects described in the attached Staff Update and Recommendations, including any Board amendments,
2. Direct staff to pursue the approach for developing Facility-Based emission reduction strategies for Marine Ports described in the attached Staff Update and Recommendations, including any Board amendments,
3. Direct staff to pursue the approach for developing Facility-Based emission reduction strategies for Rail Yards described in the attached Staff Update and Recommendations, including any Board amendments,
4. Direct staff to pursue the approach for developing Facility-Based emission reduction strategies for Warehouses and Distribution Centers described in the attached Staff Update and Recommendations, including any Board amendments,

5. Direct staff to pursue the approach for developing Facility-Based emission reduction strategies for Commercial Airports described in the attached Staff Update and Recommendations, including any Board amendments

Wayne Natri
Executive Officer

PF:SR:IM:DG

Background

The 2016 AQMP adopted by the Board in March 2017 included a wide array of control measures to meet federal air quality standards. In particular, the 2023 and 2031 attainment dates for meeting the respective 80 ppb and 75 ppb 8-hour ozone standards require significant NO_x emission reductions in a short time. In order to meet these air quality standards, the total South Coast Air Basin (Basin) NO_x emissions must be reduced by approximately 45% beyond baseline 2023 levels, and 55% beyond baseline 2031 levels. The control strategies outlined in the 2016 AQMP and in CARB's Mobile Source Strategy focus on reducing emissions from mobile sources as they make up about 80% of the Basin's NO_x emissions and are the largest contributor to the region's ozone problem.

Most of the emission reduction measures in CARB's Mobile Source Strategy were categorized as Further Deployment Measures that seek to accelerate the introduction of cleaner vehicles, such as zero emission and near-zero emission technologies. These Further Deployment Measures have not yet been fully defined by CARB, but can include a combination of incentives, regulations, efficiency improvements, and local measures. With the adoption of the 2016 AQMP, SCAQMD committed to assisting CARB to develop and implement the Further Deployment Measures. One critical SCAQMD strategy included the development of Facility-Based Mobile Source Measures (FBMSMs) that would reduce emissions from indirect sources (i.e. the emissions from mobile sources generated by, or attracted to facilities). Five FBMSMs were included in the Final 2016 AQMP, including New Development and Redevelopment Projects, Marine Ports, Rail Yards, Warehouses and Distribution Centers, and Commercial Airports.

In addition to these measures, when the CARB Board approved the Mobile Source Strategy, CARB staff was directed to return in March of 2018 to report on concepts for an indirect source rule for large freight facilities, or other alternatives capable of achieving similar levels of emission reductions. SCAQMD and CARB staff have continued to coordinate with each other extensively over the past year. CARB staff have presented potential new freight-related strategies in a series of workshops and a draft report¹, and are expecting to report to their Board on March 22, 2018.

¹ <https://www.arb.ca.gov/gmp/sfti/FreightFacility.htm>

Finally, the 2016 AQMP estimated that in order to meet air quality standards, approximately \$1 billion per year would be needed to help offset the increased costs of lower emitting vehicles and equipment. This past year, the state legislature and CARB have provided hundreds of millions of dollars in new incentive funding for use throughout the state² from funding sources such as the state Greenhouse Gas Reduction Fund, the VW Settlement, and modifications to the smog check program. While this new funding is rapidly being put to use to reduce emissions, much work is still needed to increase and sustain the funding levels needed to achieve air quality standards.

Public Process

The 2016 AQMP described a year-long process for staff to evaluate potential emission reduction strategies for the FBMSMs and to report back to the Board on the most promising approaches. Following this process, staff has met many times with stakeholders, including 17 working group meetings and has presented updates to the Mobile Source Committee three times. For most of the past year the working groups have discussed potential voluntary strategies to reduce emissions, such as through Memoranda of Understanding (MOUs), and the potential methods for obtaining SIP credit for these measures. Preliminary discussions about potential regulatory strategies for each facility sector were also initiated. Any strategies that staff would be directed to pursue by the Board would include additional public outreach, including the public participation processes mandated for any SCAQMD rulemaking activity.

Proposal

Staff is recommending a comprehensive approach to implementing the FBMSMs that includes a combination of new voluntary programs supplemented with regulations where voluntary programs are not sufficient to meet the air quality goals of the 2016 AQMP. A summary of the recommended voluntary and regulatory emission reduction strategies for each facility sector is presented below, with additional details included in the attached Staff Update and Recommendations report, and a detailed summary included in the attached slides from staff's presentation to the Mobile Source Committee. Any rulemaking that staff would be directed to pursue would include socioeconomic and feasibility analyses, California Environmental Quality Act (CEQA) review and the Board would consider this information to determine the level of control in any proposed Indirect Source Rule (ISR). All regulatory proposals would also seek to allow vehicle owners the ability to use any incentive funds that may be available.

² <https://www.arb.ca.gov/msprog/aqip/fundplan/fundplan.htm>

New Development and Redevelopment Projects

Voluntary Emission Reduction Strategies

Staff proposes to further explore the following voluntary emission reduction strategies:

- Development of a new SCAQMD-administered CEQA air quality mitigation fund that projects could contribute to as a means of mitigating regional air quality impacts. Projects would pay a fee into the fund, and SCAQMD would use these funds for emission reduction projects.
- Development of new SCAQMD CEQA guidance that provides specific strategies projects could use to include lower emission technologies (e.g., vehicles, lawn and garden equipment, construction equipment, net-zero development, etc.). This guidance will be developed in cooperation with CARB's proposed efforts to develop a freight handbook that identifies best practices guidance for siting, design, construction, and operation of freight facilities.
- Continued collaboration with local utilities, local governments, and the state Energy and Public Utility Commissions to encourage more rapid growth of alternative fuel and/or electric vehicle charging infrastructure.

Regulatory Emission Reduction Strategies

Construction equipment is the most significant source of NO_x emissions that a measure on New Development and Redevelopment Projects could affect. Although voluntary emission reduction strategies for this facility sector outlined above could provide important air quality benefits, they are unlikely to substantially reduce NO_x emissions from construction equipment. As a result, voluntary emission reduction strategies alone are not sufficient to meet the needs of the 2016 AQMP. Therefore, in addition to pursuing voluntary emission reduction strategies staff is recommending the development of an ISR focused on reducing construction emissions. The ISR would be brought to the Board for its consideration by 2020 with a full phase-in of the ISR requirements by 2023 if adopted. The ISR would likely focus on projects with the largest NO_x emissions, would include several compliance options, and could include exemptions for certain types of projects (e.g., affordable housing). One option could include a voluntary fleet certification program for construction fleet owners to certify that their fleet is cleaner than required by CARB regulations – coupled with a requirement for new/redevelopment projects to use fleets that on average are cleaner than required by CARB regulations. The facility requirement for this and any other options would be set during rulemaking, and would be substantiated with evaluations of cost-effectiveness, the level of incentive funding, feasibility, air quality need, etc.

Marine Ports

Voluntary Emission Reduction Strategies for Commercial Marine Ports

SCAQMD staff is proposing to build off of the significant work that went into the development of the recent Clean Air Action Plan (CAAP) Update that was adopted in November 2017. Staff is recommending the development of MOUs on specific CAAP measures, such as the Clean Truck Program. These MOUs would be brought to the Board

and the Los Angeles and Long Beach Boards of Harbor Commissioners for consideration in the 2019 timeframe to coincide with significant milestones already established in the CAAP. In addition, staff is recommending to continue exploring new incentive strategies to address emissions from ocean-going vessels which make up about 64% of marine port-related NOx emissions.

Regulatory Emission Reduction Strategies for Commercial Marine Ports

Staff is not recommending a regulatory approach for marine ports at this time. If voluntary strategies for marine ports are not successful, staff is recommending to return to the Board in the 2019-2020 timeframe to seek direction regarding the pursuit of a regulatory approach that could potentially apply to port terminal operators.

Rail Yards

Voluntary Emission Reduction Strategies

No substantive voluntary emission reduction strategies have been identified for rail yards through the working group process, however previous voluntary agreements between the railroads and CARB have resulted in meaningful air quality benefits (e.g., the 1998 Tier 2 Agreement). Absent any additional voluntary approach, staff is recommending a regulatory approach to reduce emissions from this facility sector.

Regulatory Emission Reduction Strategies

Staff recommends initiating rulemaking for an ISR for rail yards that would include multiple compliance options to allow the most flexibility. An initial discussion on regulatory concepts with the working group explored a clean air action plan approach due to the limited number of facilities and railroads the rule would apply to. While locomotives are the most significant source of NOx emissions that could be affected by a facility-based rail yard measure, a plan-based approach would allow the railroads to craft the emission reduction strategies considering all emissions sources in a way that makes the most sense for each rail yard's unique operations. Any indirect source rule that the Board may approve in the future would also likely require harmonization at the federal level with the Interstate Commerce Commission Termination Act.

Warehouses and Distribution Centers

Voluntary Emission Reduction Strategies

Staff proposes to further explore the following voluntary emission reduction strategies:

- Similar to the potential voluntary measures described for the new development/redevelopment facility sector, new measures could include development of a SCAQMD-administered CEQA air quality mitigation fund for warehouse projects to opt into, development of updated guidance for warehouse siting and operations, and continued work with utilities and regulatory agencies on developing the necessary fueling/charging infrastructure
- Working with e-commerce providers to develop "Green Delivery Options". This proposal could involve a small, voluntary opt-in surcharge for consumers when

purchasing goods online and funds generated would be used towards reducing truck fleet emissions.

With the limited emission reductions that would be expected from the recommended voluntary measures, staff is recommending supplementing this voluntary approach with a regulatory approach.

Regulatory Emission Reduction Strategies

Similar to the approach described for new/redevelopment projects, the warehouse ISR would provide several compliance options that facilities could follow, except that the focus would be on reducing trucking emissions which make up a majority of emissions from this sector. One option could include a voluntary fleet certification program for truck fleet owners to certify that their fleet is cleaner than required by CARB regulations – coupled with a requirement for warehouses to ensure that fleets that serve their facility on average are cleaner than required by CARB regulations. The facility requirement for this and any other options would be set during rulemaking, and would be substantiated with evaluations of cost-effectiveness, the level of incentive funding, feasibility, air quality need, etc. As each of these factors change through time, the Board could modify the facility requirements. Examples of other options include a mitigation fee, crediting options for other activities like installation of charging/fueling infrastructure for cleaner trucks and transportation refrigeration units, conversion of cargo handling equipment to ZE technology, or other options developed during rulemaking.

Commercial Airports

Voluntary Emission Reduction Strategies

In an amendment to the 2016 AQMP adopted by the Board, staff was directed to return to the Board by February 2019 with an ISR covering non-aircraft emission sources at airports. During the Board discussion of this item, further direction was provided to ensure that the rulemaking process would not inhibit the ability of airports to develop their own airport-specific Clean Air Action Plans (AirCAAPs). Commercial airports are estimated to only emit about 8 tons per day of NO_x (absent aircraft emissions) that is primarily from trucks, a lower value in comparison to the other facility sectors. Airports have also generally expressed a willingness to voluntarily develop their own clean air action plans in lieu of a regulation. Taking all of this into consideration, staff is recommending a voluntary approach with airports, where the District would enter into separate MOUs with each airport after they develop their AirCAAPs. With the cooperation of the airports, this approach is expected to provide the quickest and most certain emission reductions.

Regulatory Emission Reduction Strategies

For the reasons stated above, SCAQMD staff is not recommending initially pursuing an ISR for airports at this time. Staff is recommending coming back to the Board no later than summer 2018 to report on the airports commitment to develop an AirCAAP. In the event that not all commercial airports agree to the AirCAAP and MOU approach,

SCAQMD staff could develop for the Board’s consideration an airport ISR by February 1, 2019. One potential ISR concept could include a requirement for airports to develop an AirCAAP.

Summary of Staff Recommendation

Proposed voluntary and regulatory emission reduction strategies for each FBMSM adopted in the 2016 AQMP, and discussed above and in the attachment, are summarized in the table below.

FBMSM Sector	Pursue <u>Voluntary</u> Measures Now?	Also Pursue <u>Regulatory</u> Measures Now?
Ports	Yes	No
Airports	Yes	No
Warehouses	Yes	Yes
New/Redevelopment	Yes	Yes
Rail Yards	Yes	Yes

The presentation to the February 16, 2018 Mobile Source Committee meeting provides a comprehensive summary about the FBMSM strategies discussed above and can be accessed at this link: <http://www.aqmd.gov/docs/default-source/Agendas/Mobile-Source/msc-agenda-feb2018.pdf?sfvrsn=12>.

Attachments

- A. Staff Update and Recommendations – Facility-Based Mobile Source Measures
- B. Board Meeting Presentation

ATTACHMENT A

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Staff Update and Recommendations Facility-Based Mobile Source Measures

March 2018

Deputy Executive Officer

Planning, Rule Development, and Area Sources
Philip M. Fine, Ph.D.

Assistant Deputy Executive Officer

Planning, Rule Development, and Area Sources
Sarah Rees, Ph.D.

Authors:

Dan Garcia – Program Supervisor
Maryam Hajbabaee, Ph.D. – AQ Specialist
Michael Laybourn – AQ Specialist

Contributors:

Zorik Pirveysian – Planning and Rules Manager

Reviewed by:

Ian MacMillan – Planning and Rules Manager
Megan Lorenz – Principal Deputy District Counsel
Veera Tyagi – Principal Deputy District Counsel
William Wong – Principal Deputy District Counsel
Barbara Baird – Chief Deputy Counsel

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
GOVERNING BOARD**

Chairman: DR. WILLIAM A. BURKE
Speaker of the Assembly Appointee

Vice Chairman: DR. CLARK E. PARKER, SR.
Senate Rules Committee Appointee

MEMBERS:

MARION ASHLEY
Supervisor, Fifth District
County of Riverside

BEN BENOIT
Mayor, Wildomar
Cities of Riverside County

JOE BUSCAINO
Councilmember, 15th District
City of Los Angeles Representative

MICHAEL A. CACCIOTTI
Councilmember, South Pasadena
Cities of Los Angeles County/Eastern Region

JOSEPH K. LYOU, Ph. D.
Governor's Appointee

LARRY McCALLON
Mayor, Highland
Cities of San Bernardino County

JUDITH MITCHELL
Mayor Pro Tem, Rolling Hills Estates
Cities of Los Angeles County/Western Region

SHAWN NELSON
Supervisor, Fourth District
County of Orange

DWIGHT ROBINSON
Councilmember, Lake Forest
Cities of Orange County

JANICE RUTHERFORD
Supervisor, Second District
County of San Bernardino

HILDA L. SOLIS
Supervisor, First District
County of Los Angeles

EXECUTIVE OFFICER:

WAYNE NASTRI

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION	
BACKGROUND	1-1
STAFF ACTIVITIES	1-3
LOCAL AND REGIONAL ACTIVITIES	1-3
CALIFORNIA AIR RESOURCES BOARD ACTIVITIES	1-5
CHAPTER 2: WORKING GROUP PROCESS	
FBMSM FRAMEWORK	2-1
CHAPTER 3: STAFF RECOMMEDATION	
OVERVIEW OF PROPOSED EMISSION REDUCTION STRATEGIES	3-1
NEW DEVELOPMENT AND REDEVELOPMENT	3-1
COMMERCIAL MARINE PORTS	3-3
RAILYARD AND INTERMODAL FACILITIES	3-5
WAREHOUSE DISTRIBUTION CENTERS	3-6
COMMERCIAL AIRPORTS	3-8
SUMMARY OF STAFF RECOMMENDATION	3-11
POTENTIAL SCHEDULE	3-11
REFERENCES	R-1

TABLES AND FIGURES

Table 1-1: CARB Mobile Source Emission Reduction Activities

Table 3-1: Summary of FBMSM Voluntary and Regulatory Emission Reduction Strategies

Figure 1-1: NO_x Emission Reductions Needed to Achieve Federal 8-Hour Ozone NAAQS

Figure 1-2: NO_x Control Strategy in 2016 AQMP

Figure 2-1: FBMSM Development Framework

Figure 2-2: 2023 NO_x Baseline Inventory Estimate by Facility Sector

Figure 2-3: U.S. EPA SIP Integrity Elements

Figure 2-4: Potential MOU Pathway

Figure 3-1: ISR Option Concept – Coupled Voluntary Fleet Certification

Figure 3-2: Port-Related Mobile Source NO_x Emissions (tons per day)

Figure 3-3: Landing Take-Off (LTO) Activity by Aircraft Type

Figure 3-4: Potential Schedule to Implement the Proposed FBMSM Strategies

CHAPTER 1: INTRODUCTION

BACKGROUND

RECENT STAFF ACTIVITIES

LOCAL AND REGIONAL ACTIVITIES

CALIFORNIA AIR RESOURCES BOARD ACTIVITIES

BACKGROUND

The Final 2016 Air Quality Management Plan (AQMP) was adopted by the South Coast Air Quality Management District (SCAQMD) Board on March 3, 2017. The 2016 AQMP is a regional blueprint for achieving federal and state air quality standards and healthful air in the South Coast Air Basin (Basin). The Basin still exceeds federal and state public health standards for both ozone and particulate matter (PM) and experiences some of the worst air pollution in the nation. In particular, the Basin is designated as an extreme non-attainment area for the 1-hour and 8-hour federal ozone National Ambient Air Quality Standards (NAAQS), serious non-attainment for the 24-hour PM_{2.5} NAAQS, and non-attainment for the state AAQS for ozone, PM₁₀, and PM_{2.5}.

The key strategy to meet this air quality challenge is to reduce nitrogen oxide (NO_x) emissions sufficiently to meet the 8-hour ozone NAAQS deadlines (80 ppb in 2023 and 75 ppb in 2031). If these standards are met then all other federal ozone and PM standards should be achieved. Based on analysis in the 2016 AQMP, in order to meet the ozone NAAQS deadline, the total Basin emissions of NO_x must be reduced to approximately 141 tons per day in 2023 and 96 tons per day in 2031 to attain the 8-hour ozone standards. This represents an additional 45% reduction in NO_x beyond baseline 2023 levels, and an additional 55% NO_x reduction beyond baseline 2031 levels. As seen in Figure 1-1, approximately 80% of NO_x emissions in 2023 and 2031 will be from mobile sources.

Figure 1-1: NO_x Emission Reductions Needed to Achieve Federal 8-Hour Ozone NAAQS

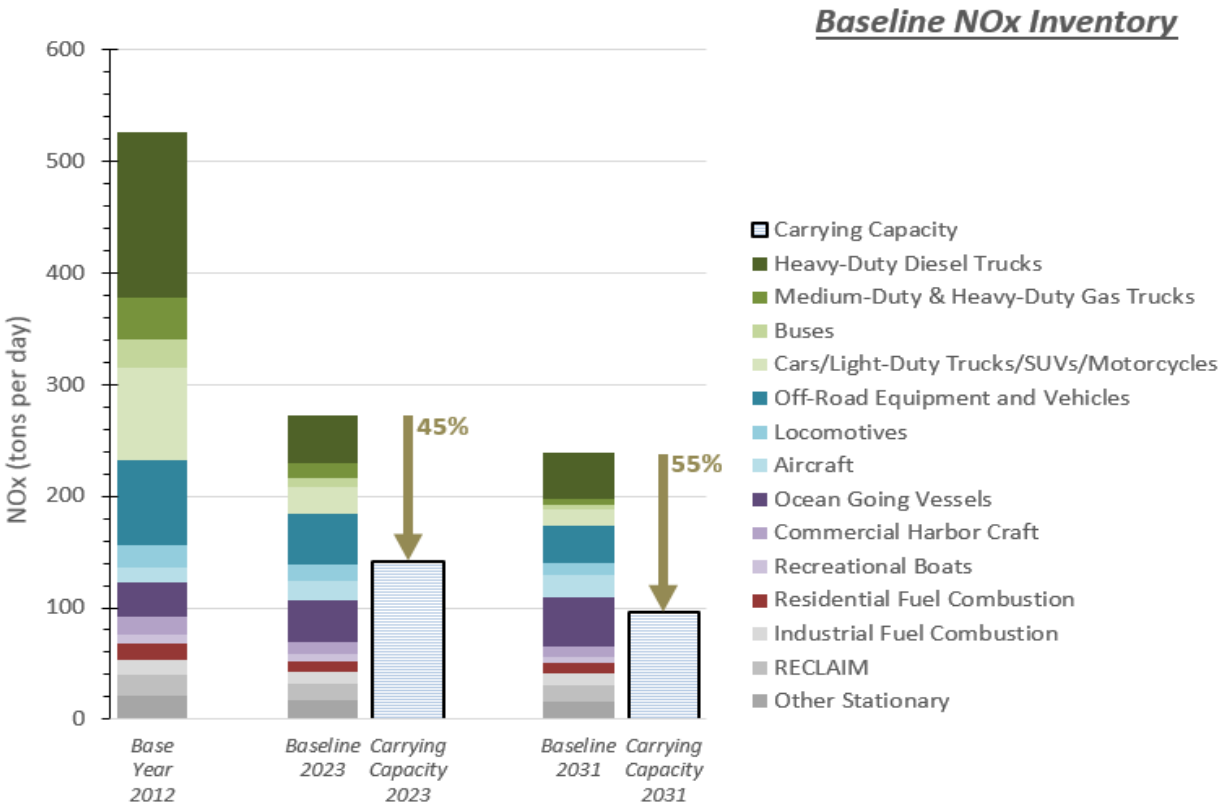
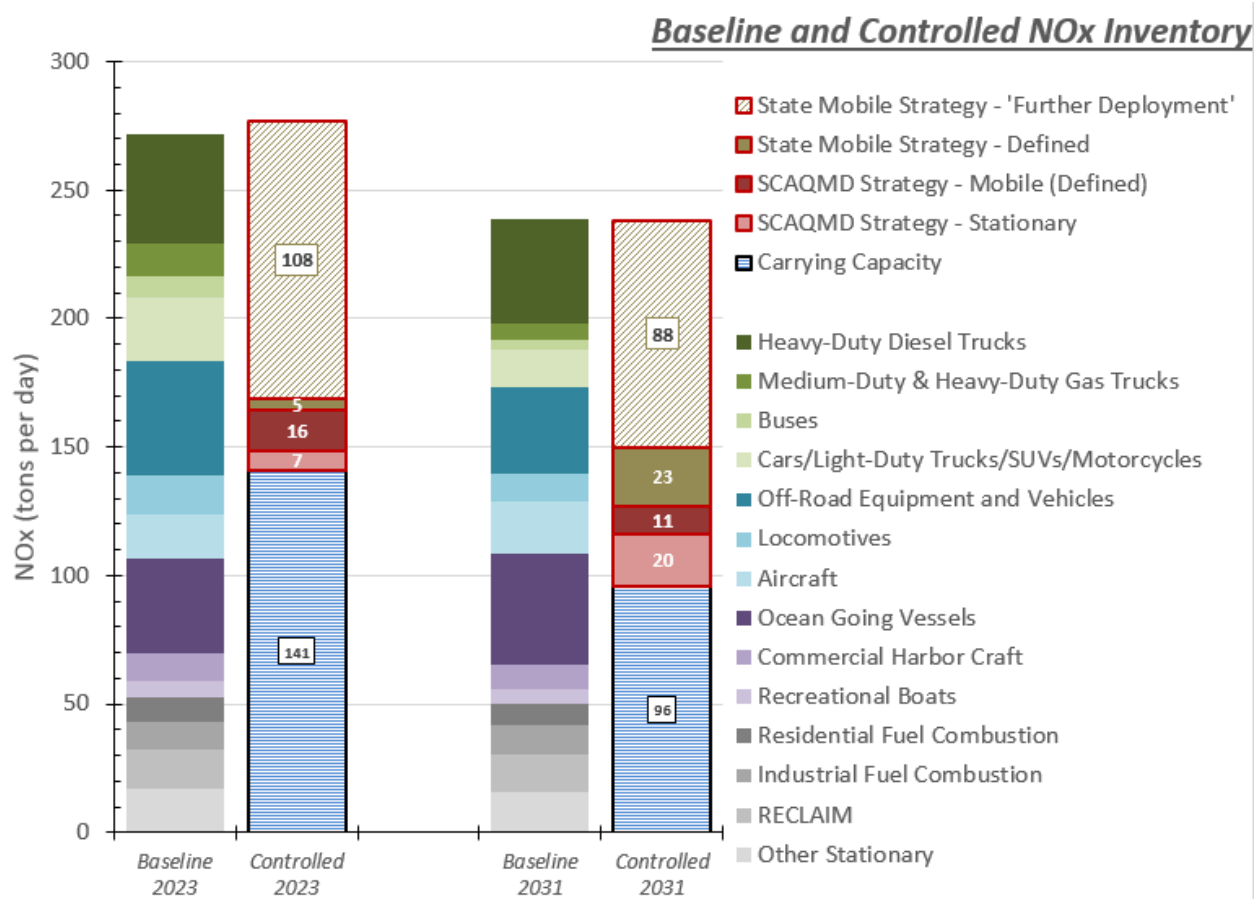


Figure 1-2: NOx Control Strategy in the 2016 AQMP



The control strategy in the 2016 AQMP includes many stationary and mobile source measures that will be carried out by the District and the California Air Resources Board (CARB) (Figure 1-2). In particular, CARB is committed to achieving emission reductions with its state Mobile Source Strategy in the State Implementation Plan (SIP). The majority of these emission reductions come from measures titled as “Further Deployment of Cleaner Technologies” (Further Deployment Measures). The Further Deployment Measures are expected to reduce 108 tons per day of NOx emissions beyond 2023 baseline by 2023 and 88 tons per day beyond 2031 baseline by 2031. Implementation of the Further Deployment Measures is based on a combination of incentive funding, development of regulations, and quantification of emission reduction benefits from increased operational efficiencies, such as deployment of autonomous and/or connected vehicles, operational improvements, etc. The 2016 AQMP may need to rely on flexibility provided in section 182(e)(5) of the federal Clean Air Act to demonstrate that the plan will attain air quality standards because these Further Deployment Measures are not yet defined or implemented. However, this same section requires the state to submit “enforceable commitments to develop and adopt contingency measures... no later than 3 years before proposed implementation of the plan provisions”. For instance in the case of the 2023 attainment date for the 8-hour ozone standard, any 182 (e)(5) flexibility relied on for Further Deployment Measures must be replaced with contingency measures in 2020.

In the 2016 AQMP, the SCAQMD committed to assist CARB and U.S. EPA in developing the Further Deployment Measures, including through development of local Facility-Based Mobile Source Measures (FBMSMs). Five FBMSMs were included in the Final 2016 AQMP as part of the mobile source strategy to help attain the 8-Hour Ozone NAAQS. The FBMSMs address indirect sources including new development and redevelopment projects (EGM-01), commercial marine ports (MOB-01), railyards and intermodal facilities (MOB-02), warehouse distribution centers (MOB-03) and commercial airports (MOB-04). Recognizing the importance of reducing emissions from facilities that attract mobile emissions sources, federal law allows states to adopt indirect source regulations. California law explicitly provides Indirect Source Rule (ISR) authority to local air districts [Health & Safety Code § 40716 (a)(1)]. An indirect source is defined under the federal Clean Air Act as any facility, building, structure, or installation, or combination thereof, which generates or attracts mobile source activity that results in emissions of any pollutant (or precursor) for which there is an air quality standard. See 42 U.S.C. § 7410(a)(5)(C).

STAFF ACTIVITIES

The 2016 AQMP described a year-long process for staff to evaluate potential emissions reduction strategies for the FBMSMs and report back to the Board on the most promising approaches. Following this process, SCAQMD staff convened five FBMSM Working Groups, each focused on one facility sector (e.g., warehouses, airports, etc.), that have primarily focused on potential voluntary approaches to achieve emission reductions to help implement the Further Deployment Measures. Over the past year, SCAQMD staff have conducted 17 Working Group Meetings, and many additional individual stakeholder meetings and site visits. Some of the key topics discussed during the Working Group meetings included: 1) a framework for developing FBMSMs, 2) potential methods for obtaining SIP credit for voluntary measures, and 3) potential voluntary and regulatory emission reduction strategies for each facility sector. To assist in identifying potential areas of opportunity for emission reductions, SCAQMD staff developed emission inventories for each facility sector that provided a rough estimate of the NO_x baseline emissions in 2023 that could be affected by FBMSMs.

Consistent with the 2016 AQMP, SCAQMD staff provided progress reports to the SCAQMD Mobile Source Committee in May and October of 2017, and is planning to return to the Governing Board in March 2018 to present recommendations on specific FBMSM approaches. This staff update provides a discussion by facility sector and the specific FBMSM approaches recommended by staff.

LOCAL AND REGIONAL ACTIVITIES

A number of local and regional jurisdictions have pursued policies that could benefit air quality. Two examples of these policies include the Ports Clean Air Action Plan Update and the LAX Alternative Fuel Policy Update discussed below.

Ports' Clean Air Action Plan Update

On November 2, 2017 the governing boards of the Port of Los Angeles and Port of Long Beach (Ports) approved the 2017 CAAP Update that provides high-level guidance for reducing emissions from the Port facilities. Key CAAP strategies include:

- An update to the Clean Truck Program that will include initiating a new differential rate structure to encourage the introduction of Near Zero Emissions (NZE) and Zero Emissions

(ZE) trucks into the drayage fleet. The rate structure would begin in 2020 and exempt NZE/ZE trucks. Starting in 2023, or whenever CARB implements its new NZE truck engine standard, new trucks entering the Ports' drayage registry must be NZE or ZE. Starting in 2035, only ZE trucks would be exempt from the rate structure.

- Developing a universal truck reservation system, staging yards, intelligent transportation systems and other efficiency programs to reduce emissions while improving the flow of cargo;
- Beginning in 2019, requiring terminal operators to develop Cargo Handling Equipment (CHE) procurement plans and to deploy zero-emission equipment, if feasible, or the cleanest available when procuring new CHE, with the goal of transitioning all terminal equipment to zero emissions by 2030;
- Providing new incentives to cleaner ships, such as by updating the existing Vessel Speed Reduction (VSR) Program to increase its effectiveness, and implementing a variable rate to promote cleaner ships by 2025;
- Developing infrastructure plans to support terminal equipment electrification, alternative fuels and other energy resource goals; and
- Expanding the use of on-dock rail, with the long-term goal of moving 50% of all cargo leaving the Ports by rail.

The 2017 CAAP Update established new emission reduction targets for reducing greenhouse gases (GHGs) from Port-related sources – 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050. The 2017 CAAP Update maintains the emission reduction goals of the 2010 CAAP. These goals include reducing diesel particulate matter (DPM) by 77%, sulfur oxides (SOx) by 93%, and NOx by 59% below 2005 levels by the year 2023.

SCAQMD staff has worked extensively with Port staff in the development and early implementation of the 2017 CAAP Update. The recommended strategy in Chapter Three of this staff update aims to build off of this collaborative work to implement, supplement, and accelerate the measures in the CAAP.

LAX Alternative Fuel Policy Update

In October 2017 LAX approved an update to its Alternative Fuel Policy that applies to vehicles greater than 8,500 pounds gross vehicle weight rating (e.g., buses, trucks, passenger vans, etc.) that are used in operations related to LAX. The previous policy from 2007 had been approved as part of a Community Benefits Agreement, however recent compliance with this policy was less than 50%. Throughout the year, SCAQMD staff worked collaboratively with LAX staff to modernize the policy to reflect current vehicle technologies, to bring the applicable vehicles covered by the policy into compliance as quickly as feasible, and to encourage the introduction of zero emission vehicles. The recommended strategy in Chapter Three of this staff update aims to build off of this collaborative work to incorporate this policy, and others, into a comprehensive plan for LAX.

CALIFORNIA AIR RESOURCES BOARD ACTIVITIES

Throughout the FBMSM Working Group Process, the SCAQMD staff has coordinated extensively with CARB staff as they develop their regulatory program to implement the SIP. The state strategy approved by CARB as part of the SIP approval includes several specific mobile source measures (Table 1-1) in addition to the previously described ‘Further Deployment Measures’. Over the past year and a half, CARB has continued to advance these measures, including adopting two measures, and initiating public workshops with proposed draft approaches for six other measures. While each of these measures will unquestionably have air quality benefits, including reducing emissions of pollutants other than NO_x, cumulatively these eight measures are projected to reduce less than 1 ton per day of NO_x by 2023. In total, about 96% of CARB’s strategy for reducing an additional 108 tons per day of NO_x by 2023 relies on ‘Further Deployment Measures’.

In addition to these specific strategies, as part of its approval of the SIP in March 2017, the CARB Board directed its staff to return in one year with an update on the implementation of the SIP, as well as *“concepts for an Indirect Source Rule to control pollution from large freight facilities including ports, railyards, warehouses and distribution centers, as well as any identified alternatives capable of achieving similar levels of emission reductions.”*

Subsequent to the approval of the 2016 AQMP and the SIP by CARB, the state legislature passed AB 617¹ which is designed to focus air quality regulatory efforts towards reducing exposure in communities most impacted by air pollution. Consistent with the intent of AB 617 and its Board direction on ISR, CARB staff held workshops throughout the state to discuss the air quality impacts on communities from large freight facilities and how to address them. Recently released materials for upcoming workshops² provide CARB staff’s proposed approach to address impacts from large freight facilities (see ‘Potential Additional Strategies’ in Table 1-1). The proposed approach includes focusing on measures that would reduce community impacts of large freight facilities, consistent with the requirements of AB 617. Each of these measures would also apply towards CARB’s ‘Further Deployment’ commitment; however the potential level of NO_x reductions has not yet been determined.

¹ Available here: http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB617

² Available here: <https://www.arb.ca.gov/gmp/sfti/FreightFacility.htm>

Table 1-1: CARB Mobile Source Emission Reduction Activities

	Measure	Proposed Action Date in CARB Mobile Strategy	Proposed Implementation Date	Proposed Approach	SIP Reductions NOx (tpd)	
					2023	2031
On-Road Light Duty	Advanced Clean Cars 2	2020 - 2021	2026		0	0.6
	Lower In-Use Emission Performance Assessment	Ongoing			NYQ	NYQ
	Further Deployment of Cleaner Technologies	Ongoing			7	5
On-Road Heavy Duty	Lower In-Use Emission Performance Level	2017 - 2020	2018+	-Longer warranty periods (<0.1 tpd 2023, <0.9 tpd 2031) -Revised periodic smoke inspections, On Board Diagnostics requirements, In-Use Compliance program, Durability/Useful Life requirements -New HD Inspection & Maintenance	NYQ	NYQ
	Low-NOx Engine Standard – California Action	2019	2023		0	5
	Low-NOx Engine Standard – Federal Action	2019	2024		0	7
	Medium and Heavy-Duty GHG Phase 2	2017 - 2019	2018+		0	0
	Innovative Clean Transit	2017	2018	2020 - 100% NZE (purchase - all fleets) 2020 - 2029 Phase in ZE purchases (25%-100%)	<0.1	0.1
	Last Mile Delivery/Advanced Clean Trucks	2018	2020	2023 - 2030 Phase in OEM Class 2B-7 ZE sales (2.5%-15%)	<0.1	0.4
	Innovative Technology Certification Flexibility	2016	2017	Provides certification flexibility to OEMs for cleaner engines	0	0
	ZE Airport Shuttle Buses	2018	2023	2023 - 2031 Phase in ZE shuttles (up to 100%)	NYQ	NYQ
	Incentive Funding	Ongoing			3	3
Further Deployment of Cleaner Technologies	Ongoing			34	11	
Ships, Locomotives, & Aircraft	More Stringent National Locomotive Emission Standards	2016	2023		<0.1	2
	Tier 4 Vessel Standards	2016 - 2018	2025		0	NYQ
	Incentivize Low Emission Efficient Ship Visits	2018 - 2020	2018+		NYQ	NYQ
	At-Berth Regulation Amendments	2018	2023	-Phase in controls starting 2022, with 100% by 2031	0.3	1
	Further Deployment of Cleaner Technologies	Ongoing			46	54
Off-Road	ZE Off-Road Forklift Regulation Phase 1	2020	2023		NYQ	NYQ
	ZE Off-Road Emission Reduction Assessment	2025+	--		NYQ	NYQ
	ZE Off-Road Worksite Emission Reduction Assessment	TBD	--		NYQ	NYQ
	ZE Airport Ground Support Equipment	2018	2023		<0.1	<0.1
	Small Off-Road Engines	2020	2022		0.7	2
	Transport Refrigeration Units	2018 - 2019	2020+	2023 - 2029 Phase in time limits for stationary operation 2025 - 2050 Phase in for ZE operation	NYQ	NYQ
	Low-Emission Diesel Requirement	2020	2023		0.3	1
	Further Deployment of Cleaner Technologies	Ongoing			21	18
Potential Additional Strategies	ZE Drayage Trucks	2022	2023 - 2028	Potential additional freight-related strategies	NYQ	NYQ
	Cargo Handling Equipment Amendments	2019	2022		NYQ	NYQ
	Harbor Craft Amendments	2021	2025		NYQ	NYQ
	Reduce stationary locomotive emissions (e.g., idling)	2020	2023		NYQ	NYQ
	Reduce emissions from non-pre-empted locomotives	2022	2025		NYQ	NYQ
	Freight Handbook	2019 - 2020	--		NYQ	NYQ
	Enhanced Freight Hub Enforcement	--	2018		NYQ	NYQ
	<i>Public workshops underway</i>			Percentage of committed NOx emission reductions from Further Deployment Measures	96%	79%
	<i>Measure adopted</i>					

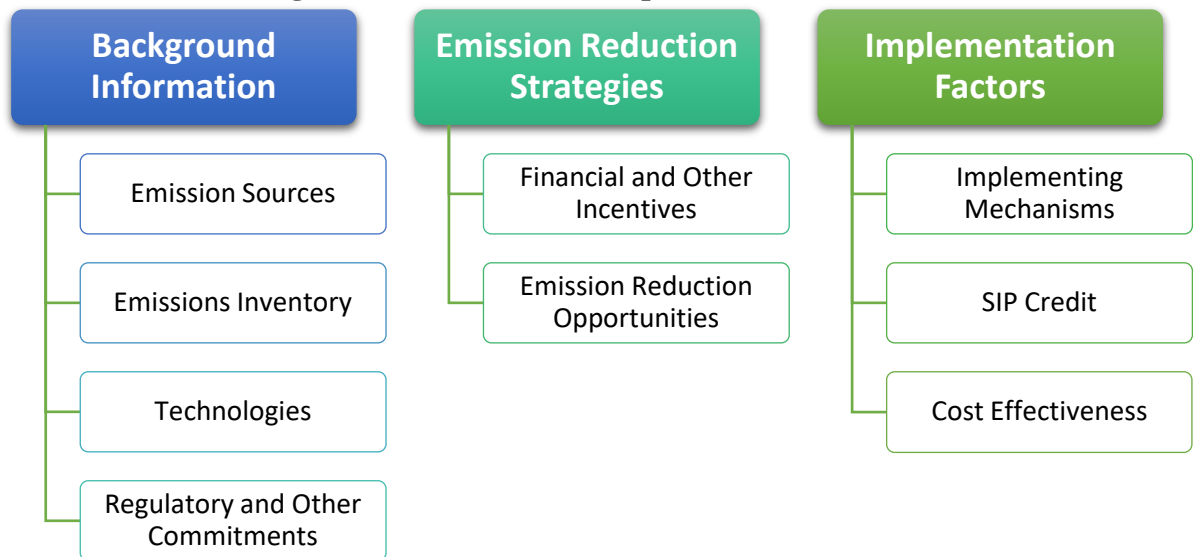
CHAPTER 2: WORKING GROUP PROCESS

FBMSM FRAMEWORK

FBMSM DEVELOPMENT FRAMEWORK

Through the FBMSM Working Group process SCAQMD staff collaborated with stakeholders to establish a development framework (Figure 2-1) intended to ultimately identify strategies that could reduce emissions from sources associated with FBMSMs. The development framework was comprised of three major categories including Background Information, Implementation Factors, and Emissions Reduction Strategies. The information gathered for each of these categories through the FBMSM Working Group process was used to inform SCAQMD staff’s proposed emission reduction strategies for the FBMSMs presented in Chapter Three of this staff update.

Figure 2-1: FBMSM Development Framework



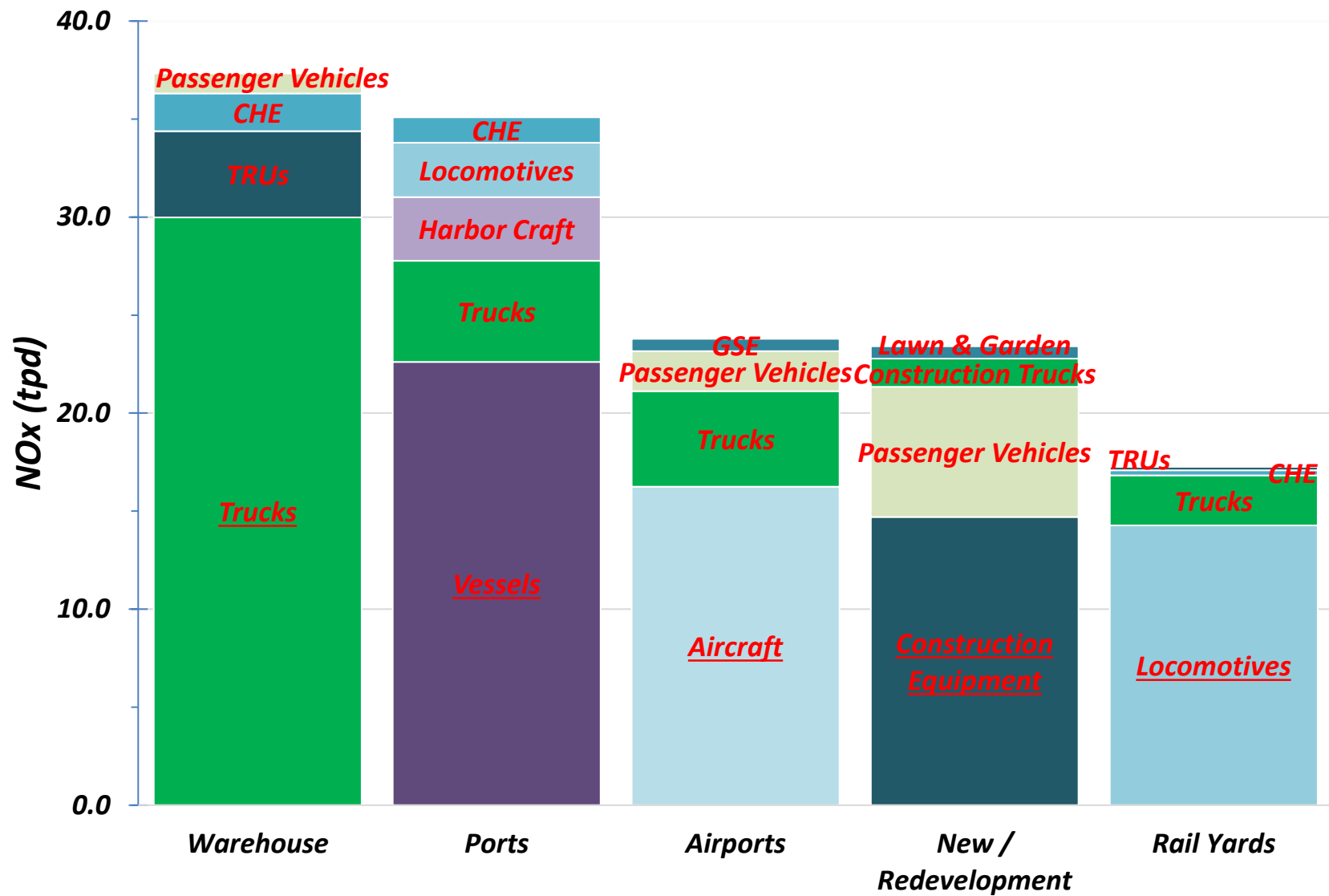
Background Information

Emission Sources and Emissions Inventory

SCAQMD staff provided an estimate of the baseline NOx emissions in 2023 that could be affected by each FBMSM (Figure 2-2). The estimated baseline NOx emissions are not intended to be final values used for the SIP or for regulatory purposes. Instead, they are intended as a point of reference to guide future strategies, policies and/or rules aimed at reducing emissions from sectors affected by FBMSM. More detailed emissions inventories will be developed in future public processes to address any specific measure that will be used to obtain SIP credit (such as a regulation, MOU, etc.) and for future AQMPs.

Three key relationships are found from these estimates. First, for each facility sector a single vehicle type dominates the emissions profile. Second, emissions can overlap between facility sectors. For example, the same trucks that visit the Ports can visit warehouses and rail yards, and the inventories are not designed to be mutually exclusive. Third, while these inventories are rough estimates, they reflect the reality that these facility sectors make up a substantial fraction of the Basin’s NOx emissions, and significant emission reductions must be found for each sector if our region is to meet air quality standards. Strategies developed in Chapter Three take into account these relationships.

2023 NOx Baseline Inventory



Technologies

New technologies were regularly discussed at FBMSM Working Group Meetings convened over the last year. For example, an 11.9 liter natural gas engine was recently certified to meet or exceed CARB's lowest optional low NOx standard, which is at least 90% cleaner than trucks meeting EPA's 2010 standard. Further, with the rapid decline in Li-ion battery prices, several new initiatives have been announced by commercial truck manufacturers in the past year for commercialization of zero emission trucks (battery, plug-in hybrid, hydrogen) of a variety of sizes. The business case for fleet owners to introduce zero-emission trucks into their operations has become more favorable than in previous years because of the rapid decrease in costs for some of these technologies. However cost remains an important factor, and widespread adoption is not expected by 2023 without additional developments (e.g., incentives, market development of advanced cleaner technologies, regulations). Similar scenarios can be described for commercially available technologies for other vehicle types, such as tier 3 vessels, tier 4 final off-road equipment, cleaner harbor craft, etc.

While many commercially available technologies exist that provide substantial NOx reductions, some vehicle types would benefit from additional technology demonstrations, including ZE cargo handling equipment, retrofitted vessels that would be cleaner than tier 2, further development of ZE trucks, etc. Strategies outlined in Chapter Three take into account the incentives needed to bring existing technologies into market, as well as the areas where new technology development is needed.

Regulatory and Other Commitments

In order to provide a single reference for the many regulations that currently exist to reduce emissions from mobile sources, staff compiled a website¹ of all of the key federal and state regulations that target mobile source criteria pollutant emissions. Additional discussion of upcoming CARB regulations is included in Chapter One of this staff update.

While the focus of FBMSMs is local and state actions, many mobile sources are regulated at the federal level. To this end, staff submitted a petition to US EPA to update its truck engine regulations to include a new lower NOx standard, and CARB petitioned US EPA to update its locomotive engine standard to include a new Tier 5 standard, and new repowering requirements. US EPA has committed to revisiting the truck standards, but has not yet taken action on either petition. US EPA also recently proposed an action allowing truck glider kits to use older engines that do not meet current standards. Such an action, if finalized, could increase NOx in the Basin. In the past year, SCAQMD and CARB staff have written comment letters opposing this rollback in regulation.

¹<http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/facility-based-mobile-source-measures/regs-commitments>

Implementation

SIP Credit

One of the primary objectives of the FBMSM Working Group meetings was to develop a list of potential emissions reduction strategies for each facility sector in addition to the strategies that CARB is currently pursuing under ‘Further Deployment Measures’ of the state mobile source strategy. To achieve this goal, staff worked closely with stakeholders through the FBMSM Working Group process to establish collaborative, voluntarily approaches. One consideration for evaluating proposed voluntary measures is whether subsequent emission reductions could be used towards obtaining prospective (i.e. future) SIP credit against control measure commitments. Any emission reductions resulting from voluntary measures used to demonstrate attainment must be submitted to US EPA for approval before SIP credit is given. Similarly, emission reductions can be demonstrated through Rate-of-Progress evaluations, and ultimately could count for SIP creditable reductions. US EPA evaluates the following criteria when considering whether to approve voluntary measures for potential prospective SIP credit (see the References at the end for a list of relevant guidance documents):

1. Demonstration that US EPA “integrity elements” have been satisfied (Figure 2-3).
2. SCAQMD commitment to monitor, assess, and regularly report to US EPA on emission reductions achieved.
3. Development of provisions to ensure US EPA and the public have access to emissions data and for evaluating procedures to determine the overall effectiveness of the program.
4. Demonstration that adequate funding, personnel, and implementation authority are available for the proposed measure.
5. SCAQMD commitment to remedy any emission reduction shortfall.

Figure 2-3 US EPA SIP Integrity Elements

Permanent: Emissions reductions must continue through the term that the credit is granted (e.g., the attainment date).

Enforceable: Several criteria must be met to demonstrate enforceability:

- Emissions reductions occurring under the program must be independently verifiable for each source.
- The program should define compliance options and violations.
- The public must have access to emissions-related information and the ability to file a lawsuit against responsible entities if violations occur.
- EPA should have the ability to apply penalties and secure corrective actions.

Quantifiable: The emissions reductions should be calculated by a reliable and replicable methodology and all analyses must be substantiated and documented.

Surplus: Emissions reductions are surplus if they are not required or assumed in another SIP program or any other adopted state air quality program or federal rule.

Implementing Mechanisms

The potential mechanisms that are available to reduce future emissions can be grouped into five broad categories, including incentives, facilitating measures, inventory adjustments, Memoranda of Understanding (MOUs) or other agreements, and regulations.

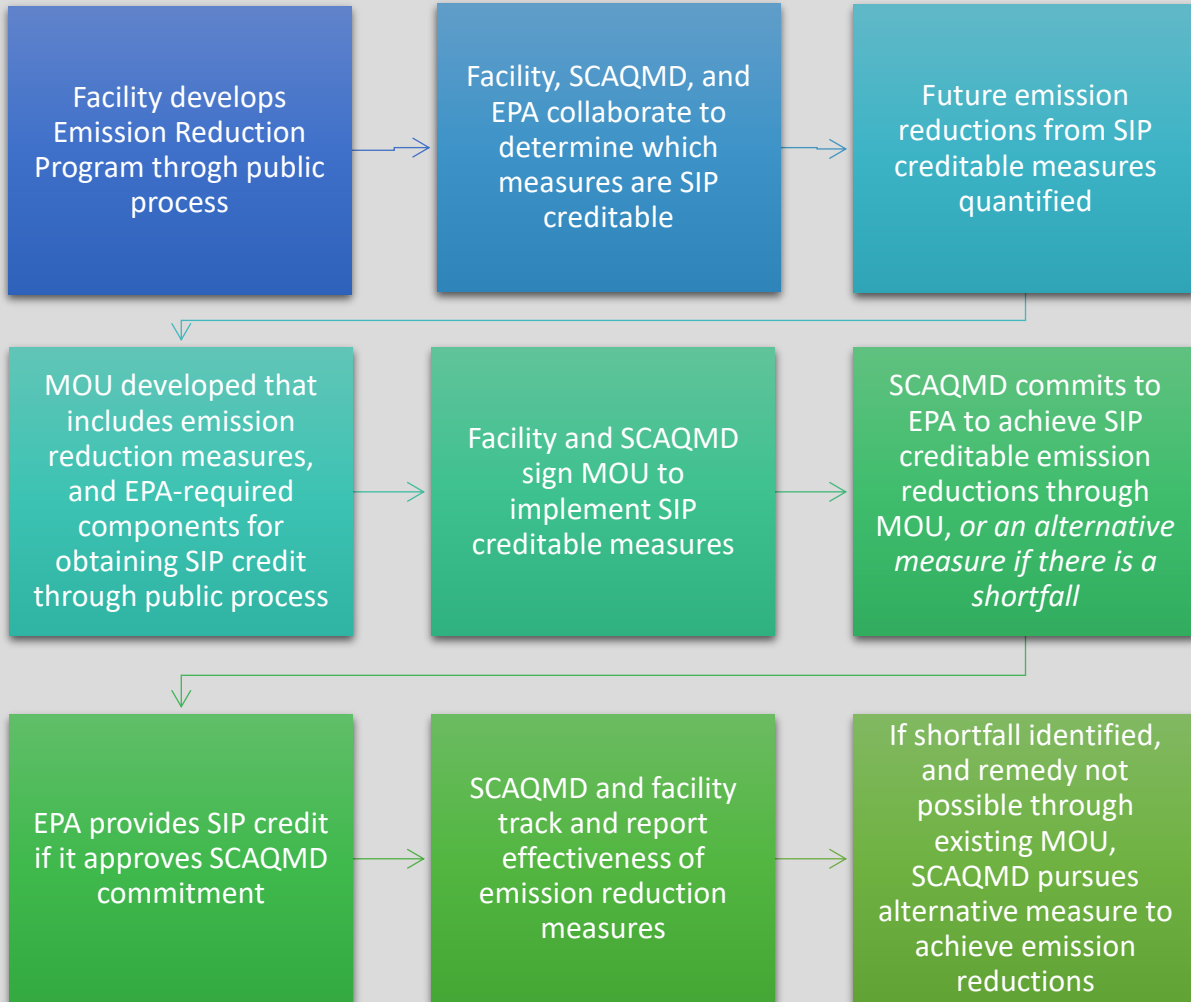
- *Incentives:* Incentive programs promote projects that implement cleaner/advanced technologies. Familiar programs include the Carl Moyer or Prop 1B funding programs to offset the increased cost of purchasing cleaner technology. Additional non-monetary incentives are also potentially available, such as preferential access to a facility for cleaner vehicles (e.g., HOV stickers for ZE cars). Incentive programs are potentially SIP creditable if they meet the criteria outlined above, including US EPA’s “integrity elements”.
- *Facilitating Measures:* Deployment of newer vehicle technologies typically require the installation of fueling/charging transportation infrastructure. These infrastructure projects are critical to ensuring the viability and penetration of cleaner technologies, however they are typically not SIP creditable on their own.
- *Inventory adjustments:* As a normal part of air quality management planning, emission inventories are regularly reviewed and updated to incorporate new information as it becomes available. For example, if a demonstrated history of activity is shown, adjustments to future emission inventories can be made. An example is the Ports’ Vessel Speed Reduction (VSR) Program, where records show that the program achieves 80-90% compliance, resulting in significant emission reductions. The demonstrated history of activity, and the continuation of the program, future emission inventories reflect the lower emissions expected from vessels. Additional adjustments for other activities could also potentially be made as part of Reasonable Further Progress demonstrations.
- *Agreements or MOUs:* Formal agreements or MOUs can be established between CARB or SCAQMD and a facility (e.g., Port, airport, terminal operator, etc.) or business(es) (e.g., railroads) to partner in implementing emissions reduction measures (Figure 2-4). An example includes the 1998 railroad agreement between CARB and UP and BNSF that requires the railroads to operate a locomotive fleet in the South Coast Air Basin that meets the Tier 2 locomotive standard on average¹. An MOU is a mutually binding agreement and requires both parties to agree on terms and conditions, and individually crafted actions that achieve emissions reductions by certain dates. An MOU would be structured to meet SIP integrity elements. The commitments made in an MOU would be enforceable by US EPA against the District. Just as the District would have to make up any shortfall from a traditional regulatory measure, so too the District would have to make up any shortfall from an MOU. The enforceability described in Figure 2-3 against the District would be much the same as existing enforceability for other control measures or rules adopted by the District.
- *Regulations:* SIP creditable emission reductions have most commonly been achieved through the application of traditional regulations from US EPA, CARB, or SCAQMD. Key feedback from stakeholders during the past year have pointed to the need to ensure that any regulations do not preclude the application of incentive funding. Typical incentive funding

¹ <https://www.arb.ca.gov/railyard/1998agree/1998agree.htm>

programs do not allow funds to be used to comply with an existing regulation, although there are exceptions.

Figure 2-4 Potential MOU Pathway

Over the past year, several stakeholders have expressed interest in a potential Memorandum of Understanding (MOU) approach instead of a regulation. One potential pathway for an MOU approach is outlined below, though other approaches are also possible.



Emission Reduction Strategies

Financial Incentives

During all working group meetings, members highlighted the importance of financial incentives to achieve emission reductions. Efforts outside of the FBMSM working group have been organized to discuss incentive funding¹. Recent increases in incentive funding have been identified and are being spent as rapidly as possible on cleaner vehicles. However, without significant new funding, additional measures must be pursued to meet the needs of the 2016 AQMP. Importantly, any measures that would be developed should not interfere with mobile fleet owners’ ability to receive and use incentive funds. The proposed FBMSMs in Chapter Three are designed to allow fleet owners to pursue incentive funding, while also exploring additional approaches to reduce emissions.

Emission Reduction Opportunities

SCAQMD staff solicited and incorporated emission reduction opportunity concepts from FBMSM working group stakeholders throughout the past year in both public and one-on-one stakeholder meetings. Voluntary measures were exclusively evaluated for most of the year, and initial discussions on potential regulatory strategies have been discussed only where voluntary measures were determined to not provide meaningful emission reductions on their own towards attainment needs.

Staff’s recommendation for FBMSM in Chapter Three is based on the following factors:

- All of the feedback received from FBMSM Working Group stakeholders,
- An evaluation of the potential NOx reductions by 2023 that could be achieved from currently proposed CARB and US EPA activities, and
- The level of currently identified incentive funding in comparison to the need.

Staff is recommending a mix of voluntary and regulatory strategies designed to accelerate the introduction of cleaner vehicles and equipment into the market based on the factors above and the significant air quality challenge the region faces.



The market pull from these voluntary and regulatory programs can provide a clear signal to ZE/NZE technology manufacturers that mass production is justified (thus lowering the costs to consumers). As these markets continue to develop over the next decade, the voluntary and regulatory programs would be designed to take advantage of these lower costs. The proposed system is also designed such that the voluntary and regulatory measures can complement each other and CARB’s strategies, while also still providing the opportunity for fleet owners to take advantage of the financial incentive programs that are underway and growing.

¹ <http://www.aqmd.gov/nav/about/groups-committees/aqmp-advisory-group/2016-aqmp-funding-wg>

CHAPTER 3: PROPOSED EMISSION REDUCTION STRATEGIES

OVERVIEW OF PROPOSED EMISSION REDUCTION STRATEGIES

NEW DEVELOPMENT AND REDEVELOPMENT (EGM-01)

COMMERCIAL MARINE PORTS (MOB-01)

RAILYARDS AND INTERMODAL FACILITIES (MOB-02)

WAREHOUSE DISTRIBUTION CENTERS (MOB-03)

COMMERCIAL AIRPORTS (MOB-04)

SUMMARY OF STAFF RECOMMENDATION

POTENTIAL SCHEDULE

OVERVIEW OF PROPOSED EMISSION REDUCTION STRATEGIES

Staff has developed a set of proposed voluntary and regulatory emission reduction strategies for each FBMSM adopted in the 2016 AQMP. Staff's proposed approach to implementing the FBMSMs prioritizes voluntary emission reduction strategies but incorporates the need for regulatory activity, where in staff's assessment, and through the FBMSM Working Group process that voluntary emission reduction strategies are not sufficient to meet the air quality goals of the 2016 AQMP. The proposed voluntary and regulatory emission reduction strategies for each FBMSM are presented below.

NEW DEVELOPMENT AND REDEVELOPMENT PROJECTS (EGM-01)

Background Discussion

The Basin population is projected to increase 12% by 2031, resulting in new residential, commercial, and industrial development activity, according to the Southern California Association of Governments (SCAG). A variety of existing and future programs, such as California's 2016 and 2019 Building Energy Efficiency Standards (i.e., Title 24) will contribute to emission reductions when compared to existing development activity. However, additional vehicle trips, and landscape maintenance equipment and construction emissions from new developments will contribute to regional air pollution. EGM-01 seeks to reduce emissions primarily from project construction by enabling greater deployment of zero and near-zero emission technologies. Total Basin-wide emissions from new development and redevelopment projects, including passenger vehicles and lawn and garden equipment, result in approximately 22 tons per day of NO_x (Figure 2-2).

In recent years project developers and local jurisdictions have actively explored and implemented innovative policies that reduce emissions. One recent example includes the Net Zero Newhall Ranch development project located in the Santa Clarita Valley of Los Angeles County. The project is committed to reducing or mitigating the project's greenhouse gas emissions to zero. While net-zero greenhouse gas emission projects do not necessarily target NO_x emission reductions they may provide quantifiable co-benefits of NO_x and other criteria pollutant emissions. Another example includes Clean Construction policies used by LA Metro, LAX, and the Ports. These policies generally provide a step-down approach, where project developers must use Tier 4 final equipment, but are allowed to use lower tiered equipment if certain criteria are met (such as an inability to identify any manufacturers of a particular type of Tier 4 final equipment). While these policies reduce emissions for these specific projects, it is unclear if these are SIP creditable due to the complexity of determining if they are surplus emission reductions. Finally, as part of the California Environmental Quality Act (CEQA) process, some projects have chosen to contribute money to an air quality mitigation fund that would be used to incentivize the purchase and use of cleaner equipment elsewhere.

Several air districts throughout the state have adopted ISRs to address emissions from new and redevelopment projects.¹ Common approaches in these rules include an emissions threshold test to determine the applicability of the rule, and mitigation fees and/or demonstrations that feasible mitigation measures have been implemented. Under state law, Districts must meet state air quality

¹ Air districts with ISR programs include: Colusa APCD, Great Basin Unified APCD, Imperial APCD, Mendocino APCD, and San Joaquin Valley APCD.

standards at the “earliest practicable date” using “every feasible measure” Health & Safety Code § 40913 and 40914]. SCAQMD is not required to adopt an ISR simply because another air district found it feasible. However, a demonstration of infeasibility may be required for this FBMSM in light of the actions taken by other air districts if SCAQMD does not pursue an ISR for this facility sector.

Voluntary Emission Reduction Strategies

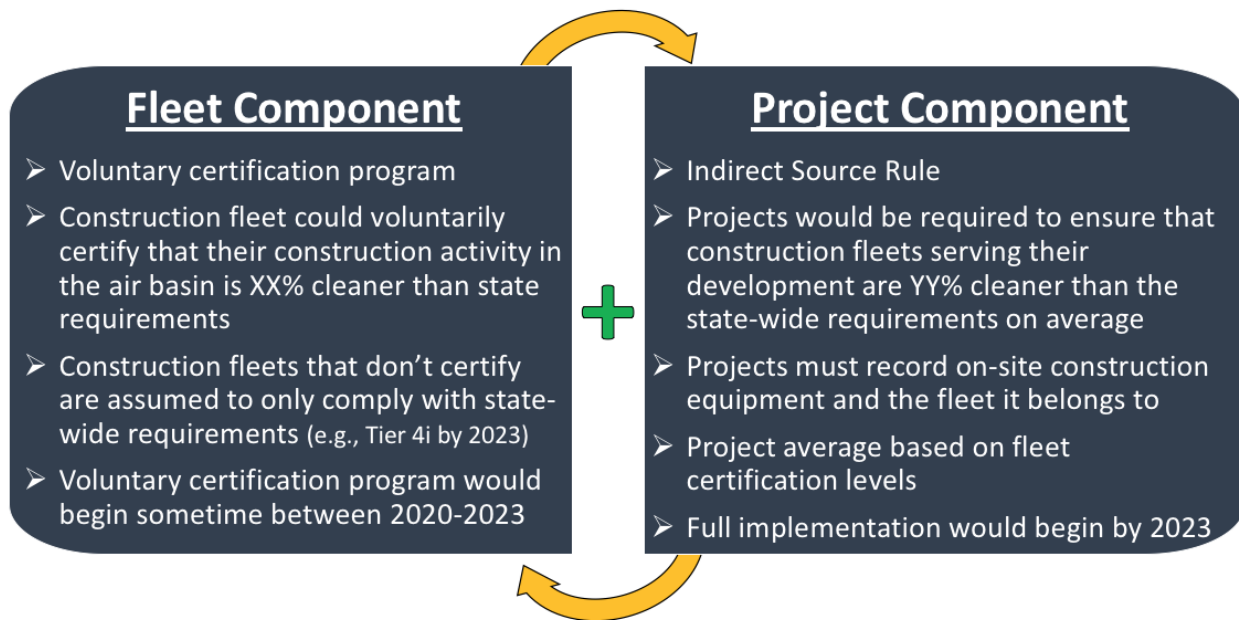
Based on the FBMSM Working Group process, SCAQMD staff proposes to further explore voluntary emission reduction strategies for new and redevelopment projects through a variety of new mechanisms, including a SCAQMD-administered CEQA air quality mitigation fund program and the development of new guidance that encourages the use zero-emission technologies in development projects. Under a CEQA air quality mitigation fund administered by SCAQMD, projects could voluntarily contribute funds that SCAQMD would use to fund emission reduction projects. The funds would be directed to cost-effective projects and could potentially be directed back to the community near the project or other priorities designated by the Board. Additionally, SCAQMD staff is proposing to continue collaborating with local utilities, local governments, and the state Energy and Public Utility Commissions to encourage more rapid growth of alternative fuel and/or electric vehicle charging infrastructure. This could also include policies that encourage zero-emission landscaping equipment. Finally, SCAQMD staff will update its CEQA handbook to encourage net-zero developments, installation of charging/fueling infrastructure, use of ZE lawn and garden equipment, and implementation of Clean Construction policies.

Regulatory Emission Reduction Strategies

The voluntary emission reduction strategies for EGM-01 outlined above could provide important air quality benefits, however they are unlikely to provide substantial NO_x emission reductions. Therefore, in addition to pursuing voluntary emission reduction strategies SCAQMD staff is proposing to develop an ISR focused on reducing construction emissions (i.e. the most significant source of emissions related to EGM-01). The ISR would be adopted by 2020 with a full phase-in of the ISR requirements by 2023. The ISR would likely focus on projects over a certain size or activity threshold, and would include several compliance options. Potential options could include a new voluntary fleet certification program coupled with a facility/project requirement to utilize at least some certified clean fleets (Figure 3-1), a mitigation fee option, crediting options for activities like installation of charging/fueling infrastructure, or other emission reduction measures.

The voluntary fleet certification program would be developed for construction equipment fleet operators, whereby fleet owners could voluntarily certify that their equipment has lower emissions than current regulatory requirements (e.g., more Tier 4 final equipment than required by CARB). Fleet operators electing not to participate would be classified as meeting existing CARB requirements. Based on feedback received from a construction industry representative, the voluntary fleet certification program could potentially include more flexibility by providing a ‘bubble’ over all of a fleet owner’s equipment such as trucks (subject to CARB’s Truck and Bus rule), construction equipment (subject to CARB’s In-Use Off-Road rule), and portable equipment (subject to CARB’s Portable Equipment Registration Program).

Figure 3-1: ISR Option Concept – Coupled Voluntary Fleet Certification + Facility/Project Requirement



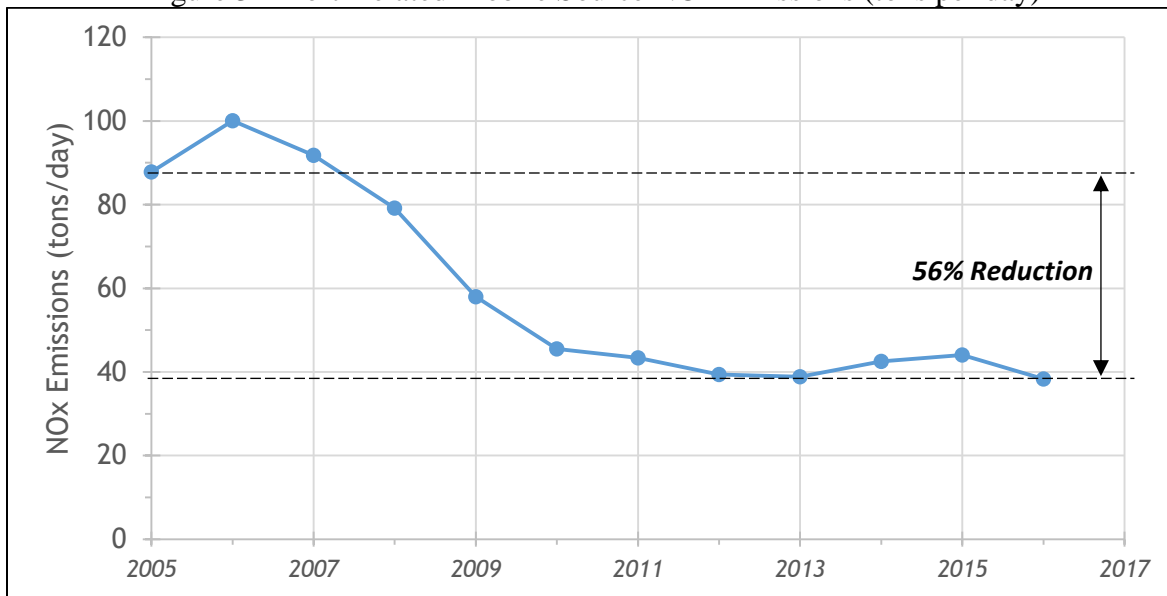
This concept would provide project proponents flexibility and avoid site specific requirements that could restrict a project's ability to use certain types of equipment that may not be readily available. Also, given that the certification program would be voluntary, construction fleets would remain eligible for incentive funding. Additionally, project proponents would not be required to track construction emission level compliance, instead they would be responsible for ensuring that a certified construction fleet(s) is used for the project that exceeds the statewide requirements by a specified level on average. For example, a construction fleet assigned to a project could vary in emission levels (i.e., any % above or below project ISR requirement) as long as the average of all fleets serving the project meet the ISR requirements. The ISR requirements could be supported by substantiating studies (e.g., cost-effectiveness, availability of incentives, feasibility, air quality needs, etc.), and could be modified as conditions change. The voluntary fleet certification program would also be available for other programs (e.g., CEQA mitigation, and other FBMSMs).

COMMERCIAL MARINE PORTS (MOB-01)

Background Discussion

The Ports are a significant source of emissions in the Basin and Port-related mobile sources are estimated to generate approximately 35 tpd of NO_x emissions in 2023 (Figure 2-2). Port-related mobile source emissions have been reduced substantially since 2005 (Figure 3-2), largely due to measures adopted in the 2006 and 2010 Port Clean Air Action Plans (CAAP). The 2010 CAAP Update included a target of a 59% reduction in NO_x between 2005 and 2023, a level that has nearly been reached today. In the most recent 2017 CAAP Update, the Ports kept this same target for NO_x, however new targets were included for GHG reductions, including a 40% reduction by 2030 and an 80% reduction by 2050. Measures designed to achieve these new GHG targets should have a co-benefit of reducing NO_x and other criteria pollutants.

Figure 3-2 Port-Related Mobile Source NOx Emissions (tons per day)



Through the FBMSM Working Group process SCAQMD staff worked closely with the Ports' staff to identify potential voluntary measures that could be pursued through SIP creditable mechanisms for existing Port commitments identified in the 2017 CAAP Update. In order to allow time for the 2017 CAAP Update to be implemented and because of the extensive work that has already gone into the development of the most recent 2017 CAAP Update the SCAQMD staff is proposing to, at this time, pursue the voluntary approach outlined below. If this voluntary approach is unsuccessful, a potential regulatory approach is described. Staff proposes to revisit the potential need for a regulatory approach in the 2019-2020 timeframe.

Voluntary Emission Reduction Strategies for Commercial Marine Ports

SCAQMD staff is proposing to continue to seek incentive-based emission reduction opportunities that could introduce cleaner ships at the Ports before 2023 and seek new technology development for ship engine retrofits. Additionally, staff recommends pursuing MOUs with the Ports for specific measures in the 2017 CAAP Update, including the updated Clean Truck Program and the CHE Procurement Planning. The purpose of these MOUs would be to ensure SIP creditable emission reductions. The MOUs could follow the pathway outlined in Figure 2-4, or another process that results in SIP creditable emission reductions.

Regulatory Emission Reduction Strategies for Commercial Marine Ports

Given the work that the Ports are conducting to implement the 2017 CAAP, the SCAQMD staff is not recommending developing an ISR to cover Port activities at this time. Instead staff is proposing to re-evaluate the proposed approach for Ports from 2019 to 2020 since the Clean Truck Program and CHE Procurement Planning measures in the CAAP have substantial implementation milestones during this timeframe.. Staff will continue to work with the Ports to successfully implement the elements of the 2017 CAAP.

In the event that the above recommended voluntary emission reduction strategies do not sufficiently advance the objectives of the 2016 AQMP commitments for control measure MOB-

01, SCAQMD staff would return to the Board to seek direction regarding the pursuit of a potential ISR for Ports. One potential concept that was explored with the Ports FBMSM Working Group included a rule that would apply to Port terminal operators. For this concept, terminal operators would be required to submit a detailed existing emissions inventory from all sources, submit a plan to reduce emissions from mobile sources associated with their facility and/or reduce emissions based on best management practices (e.g., either a measure-based or target-based approach). Also, facilities already achieving best-in-practice emission reduction strategies could have fewer or no new emission reduction requirements. If needed, the likely implementation milestones for a Port ISR would be in years 2023 and 2031 to coincide with key attainment dates. SCAQMD staff would explore the benefits/drawbacks of different regulatory approaches during future rulemaking if directed by the Board.

RAIL YARDS AND INTERMODAL FACILITIES (MOB-02)

Background Discussion

There are nine major freight rail yards and intermodal facilities located outside of the Ports and within the jurisdiction of the SCAQMD. In addition, the South California Regional Rail Authority (Metrolink) and Amtrak provide commuter rail transportation in the SCAQMD. Metrolink maintains their passenger locomotives at two locations in the Basin. A variety of emission sources are related to rail yard operations including locomotives, on-road heavy-duty trucks, cargo-handling equipment, transportation refrigeration units (TRUs), and maintenance shops, and each particular rail yard has a unique operational and emissions profile. While most of the emissions associated with rail yards in the inventory estimate shown in Figure 2-2 are from locomotives, the vast majority of these emissions do not occur in a rail yard itself, and are distributed throughout the rail network in the Basin as locomotives travel to their destinations.

The only significant requirements affecting freight locomotive emissions are US EPA requirements for locomotive engine manufacturers to produce Tier 4 engines starting in 2015, and for the two Class I railroad operators (UP and BNSF) to comply with the 1998 agreement with CARB to ensure that their average South Coast Air Basin locomotive fleet average emission rate is equivalent to or better than US EPA's Tier 2 standards. Without a regulatory requirement, significant turnover of the freight locomotive fleet to Tier 4 is not expected in the near future based on information from railroad representatives and recent media reports. Recent reporting from the railroads as part of the 1998 MOU shows that about 3% of locomotives are Tier 4 today. As a result, the assumption in CARB's locomotive inventory in the 2016 AQMP that ~40-50% of locomotives in the Basin will be Tier 4 by 2023 may need to be revisited, and emissions may be higher in the future than currently projected.

The District's regulatory authority pertaining to rail yards is different than for other facility types as it is subject to the Interstate Commerce Commission Termination Act (ICCTA)². If an apparent conflict arises between ICCTA and another federal law (such as a rule in an US EPA-approved SIP), then the two laws must first be harmonized before the air quality rule can be enforced. State laws that are not in the SIP are also subject to ICCTA unless they are of general applicability and they do not unreasonably burden railroad activity.

² *Association of American Railroads v. SCAQMD*, 622 F. 3d 1094 (9th Cir. 2010)

Voluntary Emission Reduction Strategies

Evaluating efficiency improvements such as facility reconfigurations or installation of emission control technologies like hood-type exhaust-capture devices at rail yards has been discussed in the FBMSM Rail Yards Working Group, however no specific commitment to pursuing these kinds of controls has been put forward by the railroad companies. Additionally, industry representatives noted possible fuel efficiency benefits from locomotive aerodynamic devices (yielding about a 1% reduction in fuel use during long haul operations). These voluntary strategies will continue to be pursued where feasible based on stakeholder input. SCAQMD staff is also open to exploring opportunities for a new agreement with rail companies to reduce emissions, such as accelerating the use of Tier 4 locomotives throughout the Basin, however the railroads have not expressed an interest in this approach thus far.

Regulatory Emission Reduction Strategies

Staff recommends initiating rulemaking for an ISR for rail yards due to a limited potential for significant emission reductions from the above proposed strategies, and due to the historically poor air quality in communities near rail yards. One possible ISR approach could be a two-phased SCAQMD regulation which would first require rail yard-specific emissions inventories that cover all emission sources at a rail yard. The second phase could then require a percentage reduction in rail yard NO_x emissions for future years, with key milestones likely in 2023 and 2031. As an alternative, the ISR could establish railroad-wide emission reduction targets provided measures were in place to reduce localized impacts. Many potential emission reduction alternatives are commercially available, and rail yards would develop programs tailored to their unique operating parameters. Based on working group discussions, compliance alternatives could include preferential routing of cleaner locomotives, use of cleaner switcher locomotives, installation of hood technologies to capture some locomotive exhaust emissions, ZE/NZE cargo handling equipment (CHE) and increased use of ZE transportation refrigeration units (TRU). Other compliance options could include establishment of a mitigation fees or use of truck fleet and construction equipment certification programs that are similar to those described under the warehouse distribution center and new development/redevelopment FBMSM categories. SCAQMD rail yard ISR efforts would also be coordinated with regulations proposed or developed by CARB. Depending on the rail yard ISR structure, any conflicts with other federal laws would require resolution before the rule could be enforced. Examples could include harmonization with the ICCTA, an EPA waiver (e.g., for an in-use engine standards), etc. Additionally, information gained through the ISR emissions reporting process would be used to refine the existing rail emissions inventory and may result in inventory adjustments if supporting information can be identified.

WAREHOUSE DISTRIBUTION CENTERS (MOB-03)

Background Discussion

Distribution centers and/or warehouses are facilities that serve as a distribution point for the transfer of goods. Depending on the size and type, a warehouse/distribution center may have hundreds of diesel trucks a day that deliver, load, and/or unload goods, often operating seven days a week. To the extent that these trucks are transporting perishable goods, they are commonly equipped with diesel-powered transport refrigeration units (TRUs). In addition, cargo handling equipment such as forklifts and yard tractors are used to move goods at warehouses. Warehouse employee commute trips also contribute to the overall emissions, however the estimate in Figure

2-2 shows that the majority of NO_x emissions originate from heavy-duty diesel trucks³. Over the past decade, warehouse and distribution centers have been increasing rapidly in size and number throughout the region, and that rate of growth is projected to continue in the future. The greatest growth in warehouses/distribution centers has been in the Inland Empire, with reports of about 15 million square feet per year being added to the regional building stock.

Voluntary Emission Reduction Strategies

Similar to the potential voluntary measures described for the new development/redevelopment FBMSM category, establishment of a SCAQMD-administered CEQA air quality mitigation fund would allow warehouse development projects to opt-in to paying into a mitigation fund to reduce construction or operational emissions. Under the program, collected mitigation fees would be used to reduce NO_x emissions, such as through financial incentives for fleet owners to purchase cleaner trucks. Another voluntary measure discussed involved working with the California Energy Commission (CEC), the Public Utilities Commission (PUC), and utilities to expand alternative fueling/electric vehicle charging infrastructure for heavy duty vehicles, especially targeting warehousing areas with high levels of truck activity. Establishment of a “Green Delivery Option” was also discussed as a potential voluntary measure to reduce warehouse distribution center NO_x emissions. This proposal would involve a small, voluntary opt-in surcharge for consumers when purchasing goods online and funds generated would be used to reduce truck fleet emissions. Efforts to reduce truck fleet emissions must include a continued focus on costs, and on ways to potentially reduce costs and ensure equitable access to cleaner technologies. Other potential strategies such as additional funding programs, alternative financing mechanisms, and truck exchange programs with areas outside the Basin will also continue to be explored by staff.

While the strategies described above may result in air quality benefits and should be pursued, they are unlikely to produce significant SIP creditable emission reductions. In addition, due to the large number of warehouses in the Basin, a voluntary plan-based approach (e.g., CAAPs) for warehouses is infeasible. For these reasons, and to ensure a level playing field for all warehouses, staff is recommending a regulatory approach for this sector in addition to the voluntary strategies above.

Regulatory Emission Reduction Strategies

Similar to the approach described for new/redevelopment projects, the warehouse distribution center ISR would provide several compliance options that facilities could choose to follow. One approach could include a voluntary fleet certification option for truck fleet owners coupled with a requirement ensuring fleets that serve their facility on average are cleaner than required by CARB regulations. The facility level would be set during rulemaking, and would be substantiated with evaluations of cost-effectiveness, the level of incentive funding, feasibility, air quality need, etc. As each of these factors change through time, the facility requirement could also change. These requirements would not preclude individual trucks or truck fleets that do not participate in the proposed voluntary fleet certification program from serving warehouse distribution centers since the proposed concept is seeking emissions reductions based on overall indirect source emissions generated by the warehouse distribution center. Other options could include a mitigation fee, crediting options for other activities like installation of charging/fueling infrastructure for cleaner trucks and TRUs, conversion of CHE to ZE technology, or other options developed during

³ The estimate in Figure 2-2 for warehouses likely presents an upper end, conservative estimate of trucking emissions due to limited data availability and uncertainties for calculating a bottom-up inventory for this facility sector.

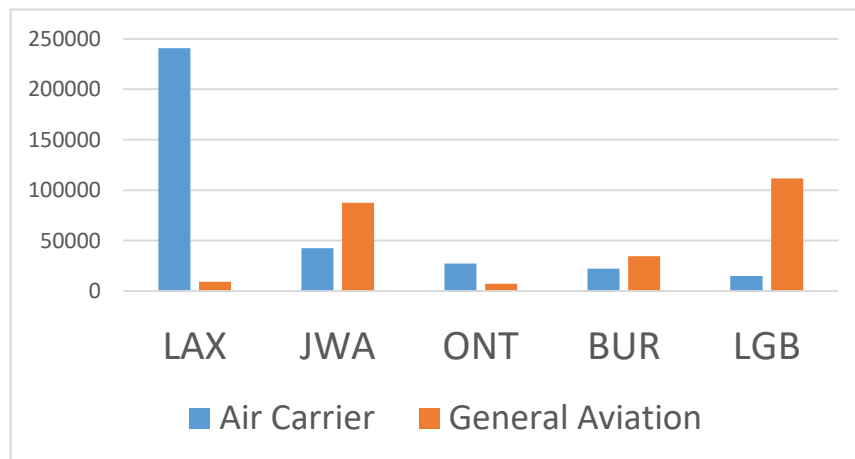
rulemaking. If an ISR is pursued, additional work would be needed to ensure that the options provided in the rule would be feasible with minimal if any modifications to the business practices used by warehouses (for example, many warehouses operators don't own their building or the truck fleets that serve them).

COMMERCIAL AIRPORTS (MOB-04)

Background Discussion

FBMSM MOB-04 focuses on the Basin's five commercial airports, including Los Angeles International Airport (LAX), John Wayne Airport (JWA), Ontario California International Airport (ONT), Hollywood Burbank Airport (BUR) and Long Beach Airport (LGB). While aircraft are not the only source of emissions at airports, however, landing/take-off (LTO) data provides a considerable level of information about airport facilities' emissions (Integra, 2016). For example, LTO data can be a surrogate for the number of visitors thereby vehicle traffic volumes associated with an airport or the GSE needs of an airport. Figure 3-3 below, shows 2012 LTO data by aircraft type (air carrier [airline] and general aviation [non-airline]). As shown in the Figure, LAX has by far the largest number of air carrier LTOs while JWA and LGB have the greatest number of general aviation flights. Basin-wide emissions from commercial airport facilities result in approximately 24 tons per day of NOx (Figure 2-2), with aircraft producing about two-thirds of the emissions.

Figure 3-3. Landing Take-Off (LTO) Activity by Aircraft Type



Many policies that reduce emissions have been pursued by commercial airports have been implemented in recent years. For example, LAX has implemented alternative fuel policy for vehicles >8,500 pounds GVWR, a ground support equipment emission standard, an electric vehicle purchasing policy, a clean construction policy, gate electrification projects, and a new Landside Access Modernization Program to reduce emissions from passenger vehicles. JWA and Burbank have adopted mitigation measures under the California Environmental Quality Act (CEQA) such as policies for GSE electrification, gate electrification, and installation of electric vehicle chargers and support for alternatively fueled taxis and shuttles. LGB has also pursued similar measures through its LGB Green Airport program, including consolidated parking (which reduced the need for shuttles), GSE electrification, and installation of solar panels.

While aircraft make up a substantial portion of airport-related emissions it has become evident through the working group process that this source of emissions presents a particularly unique challenge given the existing regulatory landscape for aircraft and the nature of aircraft activity (e.g., interstate and international origins and destinations). The remaining (i.e., minus aircrafts) emissions from this facility sector are about 8 tons per day, with about 5 of those tons coming from trucks serving the cargo operations at LAX and ONT.

When the 2016 AQMP was adopted, the Board approved a motion to amend MOB-04 and directed staff to “Undertake a stakeholder process and draft for our consideration an indirect source rule for commercial airports within the South Coast Basin by February 1, 2019 to control emissions of NO_x, PM_{2.5}, lead and diesel particulate matter from non-aircraft sources”. Some of the Board discussion accompanying this amendment provided further direction, including a desire to let the airports prepare their own airport-specific Clean Air Action Plans (AirCAAPs). During the Airport FBMSM Working Groups, many stakeholders also expressed a concern that if airports are required to implement a measure (e.g., through a rule), they would be prohibited from seeking incentive funding, such as Voluntary Emission Low Emission Program or VALE or ZEV grants available from the Federal Aviation Administration.

At the request of many stakeholders, staff facilitated a discussion of how a potential MOU process could work in the most recent Airport Working Group. Key topics included preliminary key principles of an MOU process, potential elements of an MOU, and how the MOU process could work (see Figure 2-4 for an example). Key feedback received from stakeholders included: a strong desire by airports to pursue a measure-based approach instead of an emissions target-based approach, ensuring that the District commits to the emission reduction to the US EPA (e.g., through the MOU, or an alternate process if the MOU does not achieve the desired outcome) instead of the airports, avoiding additional processes where a citizen suit could be brought against airports, leaving aircraft emissions out of any AirCAAP and MOU, and not restricting airports ability to carry out projects, particularly in relation to general conformity.

Voluntary Emission Reduction Strategies

Staff is recommending to pursue a voluntary MOU approach at this time because of the limited emissions reductions that may be available from the non-aircraft sources in this sector, the complications with regulating airports due to overlapping federal jurisdiction, the existence of many existing emission reduction programs, and the potential willingness of airports to enter into cooperative agreements.. SCAQMD staff is proposing that commercial airport operators in the Basin each develop their own AirCAAP. Given the unique challenges with reducing emissions from airports an AirCAAP would provide airport operators with a level of flexibility that is desirable to develop suitable emissions reduction strategies that avoid interference with the regulatory landscape of aircraft related activity and the day-to-day operations of commercial airports affected by national and global commerce. Key elements of the AirCAAP(s) would include a detailed emissions inventory of all sources both under direct and indirect airport control, emission reduction measures (e.g., incentives, fleet policies, etc.) and measurable goals. Airports would determine the appropriate public process and necessary approvals for their AirCAAPs.

As a potential component of each airports AirCAAP, or perhaps as a separate effort, the airports have expressed a desire to continue to pursue VALE/ZEV funding from FAA. This nationwide program provides competitive grants to airports in non-attainment areas for voluntary projects that

improve air quality. In the past ten years, total nationwide annual funding for this program has varied from about \$6 million to about \$37 million. In this time, only a single VALE grant has been provided to one of the five commercial airports in the Basin, a \$4 million grant to LAX to provide off-terminal gate electrification. Similar to the marine ports CAAP measure that requires terminal operators to submit a procurement plan for cargo handling equipment, one concept that has been explored is for all of the airports to put forward their proposed projects that may be eligible for VALE/ZEV funding. Collectively, the group of airports and the District could advocate to FAA to increase funding here, especially since this program is restricted to non-attainment areas, and our region faces unique air quality challenges compared to the rest of the nation.

In order to ensure that all five of the airports will agree to this approach, staff recommends reporting back to the Board no later than summer 2018. All five airports will be asked to provide written confirmation that they will pursue an AirCAAP, with a goal of approving the AirCAAP no later than January 2020. By mid-2020, the District and the airports would approve an MOU covering SIP creditable components of each airport's AirCAAP.

Regulatory Emission Reduction Strategies

For the reasons stated above, SCAQMD staff is not recommending pursuing development of an ISR for airports at this time. We believe that development of the AirCAAPs, combined with MOUs will provide a faster route to achieving emission reductions. However, in the event that the commercial airport CAAP and MOU approach does not appear workable, SCAQMD staff would recommend consideration of an airport ISR by February 1, 2019. One potential ISR concept could include a rule that mirrors the AirCAAP process outlined above. Commercial airports that would have previously identified emission reduction strategies through their own AirCAAP process and participated in an MOU would instead be required to prepare an airport-specific plan subject to a District rule to reduce emissions from all non-aircraft sources.

SUMMARY OF STAFF RECOMMENDATION

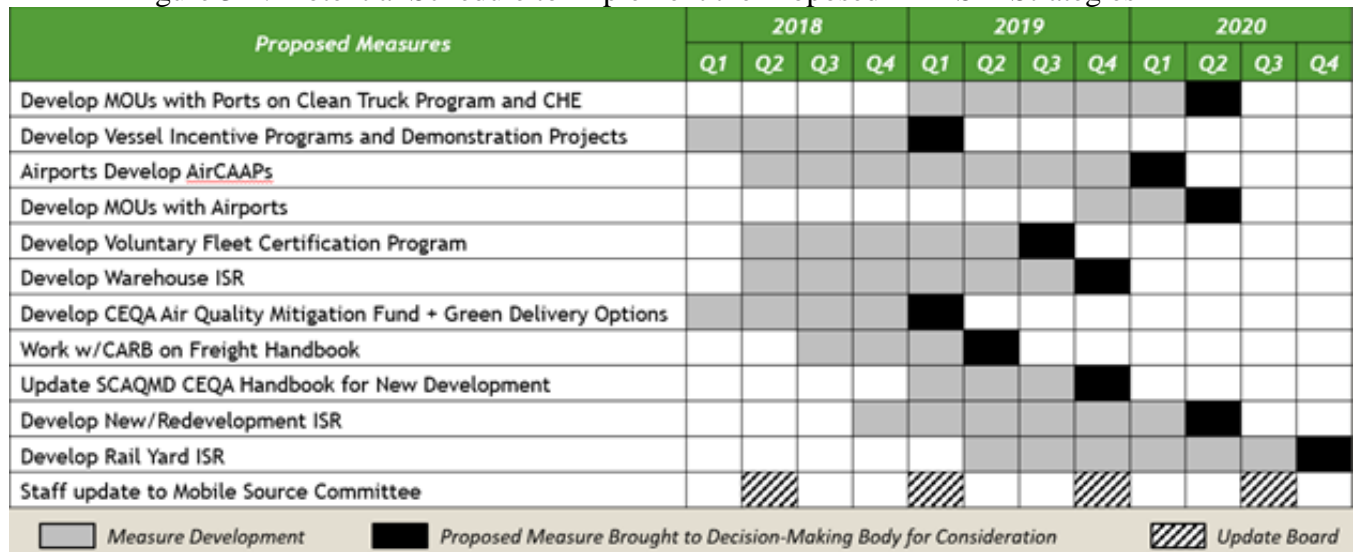
SCAQMD staff’s proposed voluntary and regulatory emissions reduction strategies for each FBMSM adopted in the 2016 AQMP and discussed above are summarized in Table 3-1: Summary of FBMSM Voluntary and Regulatory Emission Reduction Strategies, below.

Table 3-1: Summary of FBMSM Voluntary and Regulatory Emission Reduction Strategies

FBMSM Facility Sector	Pursue <u>Voluntary</u> Measures Now?	Also Pursue <u>Regulatory</u> Measures Now?
Ports	Yes	No
Airports	Yes	No
Warehouses	Yes	Yes
New / Redevelopment	Yes	Yes
Rail Yards	Yes	Yes

POTENTIAL SCHEDULE SCAQMD staff proposes the schedule presented in Figure 3-4: to implement the proposed voluntary and regulatory emission reduction strategies discussed above.

Figure 3-4: Potential Schedule to Implement the Proposed FBMSM Strategies



REFERENCES

Integra Environmental Consulting, Inc., 2016. Technical Assistance Related to Emission Inventories, Goods Movement and Off-Road Sources, Updated Aircraft Emission Inventory; August 2016

SCAQMD Final 2016 Air Quality Management Plan, Approved March 3, 2017.
<http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>

SCAQMD Facility-Based Measures website:
<http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/facility-based-mobile-source-measures>

US EPA Guidance Documents Related to Obtaining SIP Credit from Voluntary Emission Reduction Programs:

-Diesel Retrofit SIP Programs (2014)

<http://nepis.epa.gov/Exe/ZyPDF.cgi/P100HP2S.PDF?Dockey=P100HP2S.PD>

-Energy Efficiency and Renewable Energy SIP Measures (2004)

www.epa.gov/sites/production/files/2016-05/documents/ereseerem_gd.pdf

-Improving Air Quality with Economic Incentive Programs (2001)

www.epa.gov/sites/production/files/2015-07/documents/eipfin.pdf

-Incorporating Bundled Measures in a SIP (2005)

www3.epa.gov/ttn/naqs/aqmguidance/collection/cp2/20050816_page_incorporating_bundled_measure_sip.pdf

-Incorporating Energy Efficiency/Renewable Energy Policies and Programs into SIPs (2012)

www.epa.gov/sites/production/files/2016-05/documents/eeremanual_0.pdf

-Voluntary Mobile Source SIP Programs (1997)

www.epa.gov/sites/production/files/2016-05/documents/vmep-gud.pdf

-Voluntary and Emerging SIP Measures (2004)

www.epa.gov/sites/production/files/2016-05/documents/voluntarycontrolmeasurespolicyepa.pdf

2016 AQMP Facility-Based Mobile Source Measures Draft Staff Recommendations

**Warehouse
Distribution
Centers**



**Commercial
Airports**



**New or
Redevelopment
Projects**



**Commercial
Marine Ports**



**Railyard &
Intermodal
Facilities**



Governing Board Meeting
March 2, 2018

Background



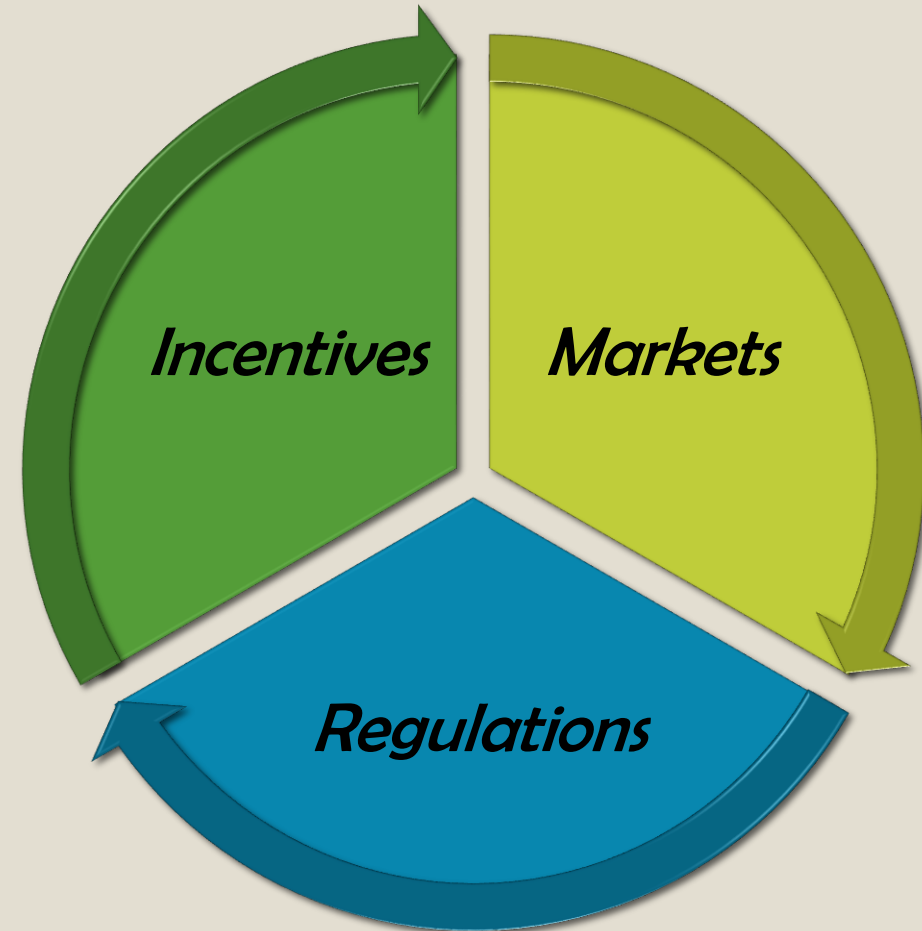
- 5 Facility-Based Mobile Source Measures (FBMSM) included in 2016 AQMP
 - Airports, New/Redevelopment, Ports, Railyards, Warehouses
- Primary goal of FBMSM is to reduce NOx emissions
 - Assists in implementing CARB's Mobile Source Strategy "Further Deployment" control measures
 - Measures need to be defined and in place, or contingency measures need to be in place 3 years before attainment deadline
 - Federal Clean Air Act requires the District to meet the NAAQS "as expeditiously as practicable"
 - State law requires meeting the CAAQS at the "earliest practicable date" using "every feasible measure"

CARB Mobile Source Activities

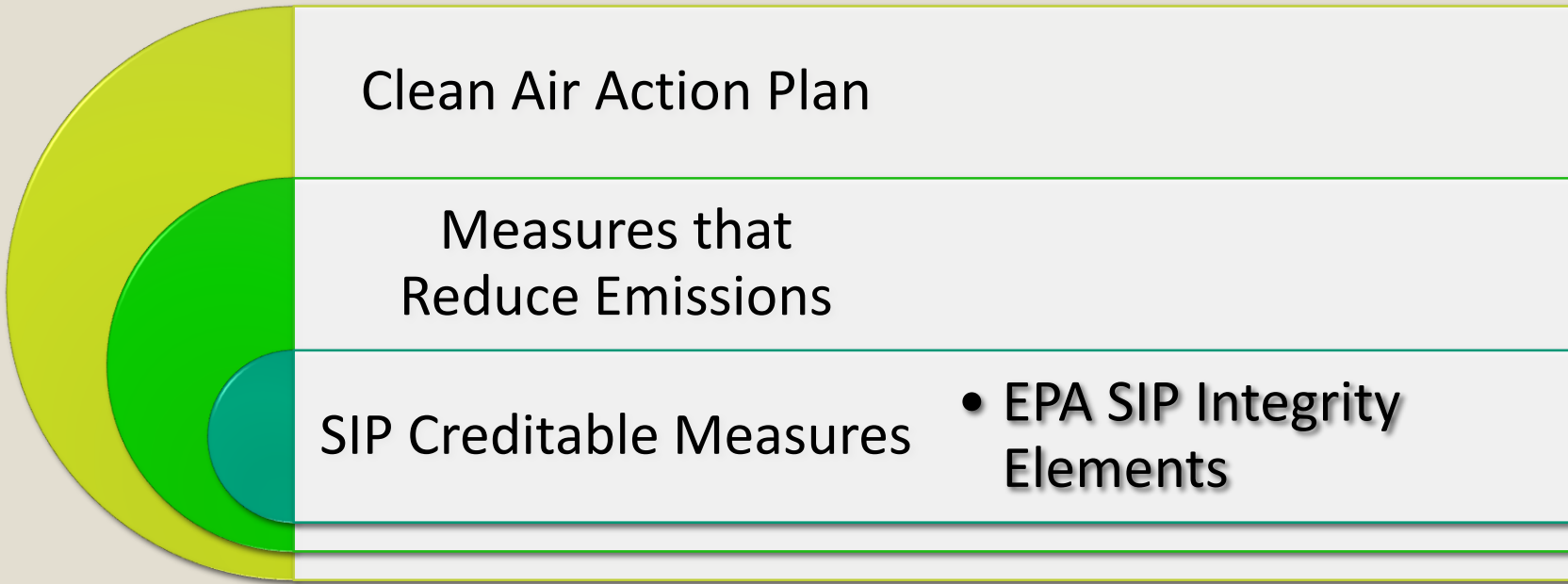
- Continued development of state mobile source strategy
- CARB staff will report to CARB Board on Indirect Source Rule concepts and alternatives on March 22
 - New measures proposed for large freight facilities
 - Regulatory approach focused on CARB's traditional mobile source and toxics ATCM authority
 - Measures will reduce NOx and other pollutants, but potential amount is not yet quantified
- CARB staff's proposed measures also take into account AB 617
 - Community focused approach

Significant Emission Reductions Require Comprehensive Approach

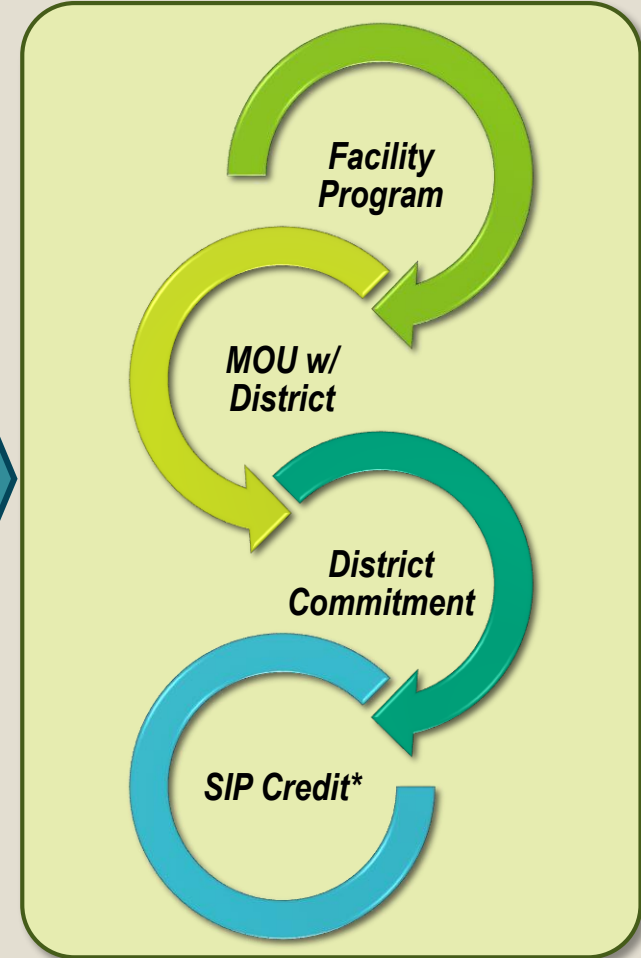
- Strategies explored since adoption of 2016 AQMP are not sufficient to meet air quality standards:
 - Proposed CARB & EPA measures
 - Currently identified incentive funding
 - Proposed voluntary facility-based measures
- All strategies need to be pursued, including new voluntary measures and available regulatory authority where needed



Potential MOU Approach for Clean Air Action Plans



- *MOU can include specific measures or emission targets*
- *With MOU, SCAQMD Board would commit to SIP-creditable emission reductions, or alternative measures if Facility Program/MOU unsuccessful*



**Subject to EPA Approval*

Potential Regulatory Approach

Multiple Compliance Options*

Fleet Certification + ISR

Facility-Specific Credits

Mitigation Fee

Others?

Voluntary Fleet Certification

Facility ISR Requirement

Examples:
-Infrastructure
-Demonstration of equivalent measures

Funds used to incentivize reductions elsewhere

Summary of Recommended Ports Approach

Potential Voluntary Measures

- Pursue individual MOUs on specific CAAP measures
- Pursue introduction of cleaner vessels
 - Demonstrations, incentives, etc.

Continue to Pursue

Key Factors in Evaluating Voluntary Approach

- Significant public process already conducted to develop CAAP Update
- CAAP Update needs opportunity to succeed

Potential Regulatory Measures

- Do not pursue ISR now
- In 2019-2020, evaluate potential need for ISR if MOUs unsuccessful

Re-evaluate in 2019-2020

Board Direction for Airports

- Board amendment to adoption of 2016 AQMP
 - *“Undertake a stakeholder process and draft for our consideration an indirect source rule for commercial airports within the South Coast Basin by February 1, 2019 to control emissions of NOx, PM2.5, lead and diesel particulate matter from non-aircraft sources”*
 - Board discussion on the amendment included allowing an opportunity for airports to develop their own Clean Air Action Plans

Summary of Recommended Airports Approach

Potential Voluntary Measures

- Pursue individual MOUs with each airport
 - Airport-specific Clean Air Action Plans (AirCAAP)
- Include explicit process for pursuing FAA VALE/ZEV funding

Continue to Pursue

Key Factors in Evaluating Voluntary Approach

- Many emission reduction programs already in place at airports
- Opportunity for large emission reductions beyond existing programs limited

Potential Regulatory Measures

- Do not pursue ISR now
- If not all airports agree to develop an AirCAAP and MOU, staff could develop ISR requiring AirCAAP
 - Report back to Board by summer 2018

Re-evaluate in 2018-2019

Summary of Recommended Warehouses Approach

Potential Voluntary Measures

- New CEQA Air Quality Mitigation Fund
- Warehouse Guidance Document
- Green Delivery options (e.g., opt-in fee to fund cleaner fleet)

Continue to Pursue

Key Factors in Evaluating Voluntary Approach

- Limited emission reductions from proposed measures
- Large number of warehouses in basin

Potential Regulatory Measures

- Indirect Source Rule with multiple compliance options
 - Level of control determined by Board based on:
 - Cost-effectiveness, air quality need, feasibility, etc.
- Focus on trucks & CHE

Continue to Pursue

Summary of Recommended New/Redevelopment Approach

Potential Voluntary Measures

- New CEQA Air Quality Mitigation Fund
- Update SCAQMD CEQA Handbook
- Continue to work with CEC, PUC, and utilities to expand charging/alt-fueling infrastructure

Continue to Pursue

Key Factors in Evaluating Voluntary Approach

- Proposed voluntary measures would not substantially reduce NOx emissions
- Large number of development projects in basin

Potential Regulatory Measures

- Indirect Source Rule with multiple compliance options
 - Level of control determined by Board based on:
 - Cost-effectiveness, air quality need, feasibility, etc.
- Focus on large construction projects

Continue to Pursue

Summary of Recommended Rail Yards Approach

Potential Voluntary Measures

- Staff open to new agreements/MOUs beyond existing 1998 & 2005 agreements

Continue to Pursue

Key Factors in Evaluating Voluntary Approach

- No new voluntary measures proposed by stakeholders that would substantially reduce NOx emissions

Potential Regulatory Measures

- Indirect Source Rule with multiple compliance options
 - Level of control determined by Board based on:
 - Cost-effectiveness, air quality need, feasibility, etc.
- Harmonization at federal level with ICCTA likely required

Continue to Pursue

Summary of Staff Recommendation for FBMSM

FBMSM Facility Sector	Pursue <u>Voluntary</u> Measures Now?	Also Pursue <u>Regulatory</u> Measures Now?
<i>Ports</i>	Yes	No
<i>Airports</i>	Yes	No
<i>Warehouses</i>	Yes	Yes
<i>New / Redevelopment</i>	Yes	Yes
<i>Rail Yards</i>	Yes	Yes