

2022 DRAFT AIR QUALITY MANAGEMENT PLAN

Regional Workshop and CEQA Scoping Meeting

South Coast Air Quality Management District

May 25, 2022 South Coast AQMD Jurisdiction

Regional Workshop and CEQA Scoping Meetings

Meeting Information	Meeting 1: Entire South Coast AQMD Jurisdiction	Meeting 2: Entire South Coast AQMD Jurisdiction	Meeting 3: Coachella Valley Meeting*
Date	Wednesday, May 25, 2022	Wednesday, May 25, 2022	Thursday, May 26, 2022
Time	1:00 p.m.	6:00 p.m.	6:00 p.m.
Virtual	https://scaqmd.zoom.us/j/91200605609 Zoom Webinar ID: 912 0060 5609 Teleconference Dial In: +1 669 900 6833	https://scaqmd.zoom.us/j/91200605609 Zoom Webinar ID: 912 0060 5609 Teleconference Dial In: +1 669 900 6833	https://scaqmd.zoom.us/j/95634334998 Zoom Webinar ID: 956 3433 4998 Teleconference Dial In: +1 669 900 6833

^{*} Will cover entire South Coast AQMD jurisdiction and additionally highlight Coachella Valley

South Coast AQMD

Local air pollution control agency

- Largest of the 35 local air agencies in CA and in the U.S.
- 10,743 square miles
- 17 million residents
- Key Responsibilities
 - Regulate emissions from stationary sources
 - Develop and implement plans to meet air quality standards
 - Permit and inspect 28,400 affected businesses
 - Administer over \$200 million of incentive funding annually



World Health Organization

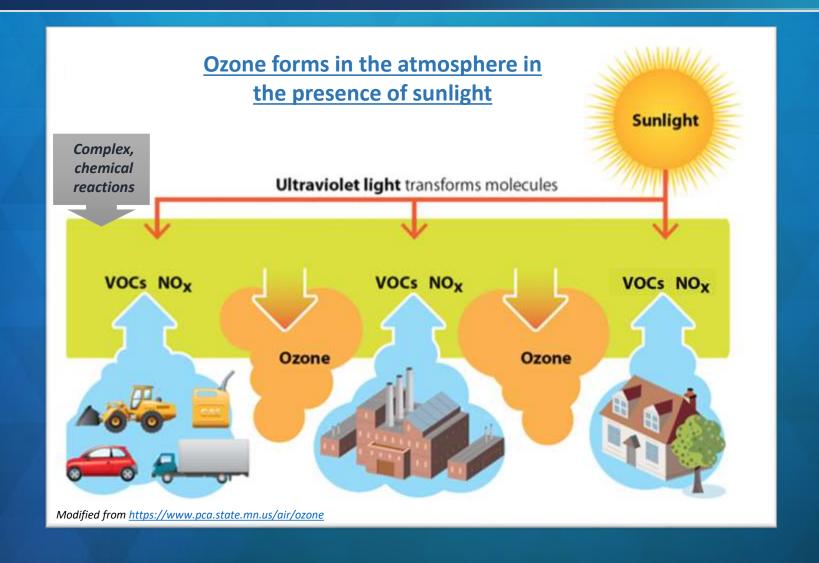
2020 Top 10 Causes of Death

Cause	World Deaths
Ischaemic Heart Disease	6,755,954
Stroke	5,463,915
Lower Respiratory Infections	3,050,943
Chronic Obstructive Pulmonary (Lung) Disease	2,986,236
Diarrhoeal Diseases	2,647,915
Tuberculosis	1,737,922
HIV/AIDS	1,378,852
Preterm Birth Complications	1,358,066
Trachea, Bronchus, Lung Cancers	1,205,688
Road Injury	1,167,008

Air pollution is the largest cause of unavoidable premature death

Air pollution affects the diseases causing death

What is Ozone



Health Impacts of Ozone

Health Impacts of Ozone Exposure



Coughing and Sore Throat



Airway Inflammation and Damage



Aggravation of Emphysema and Chronic Bronchitis



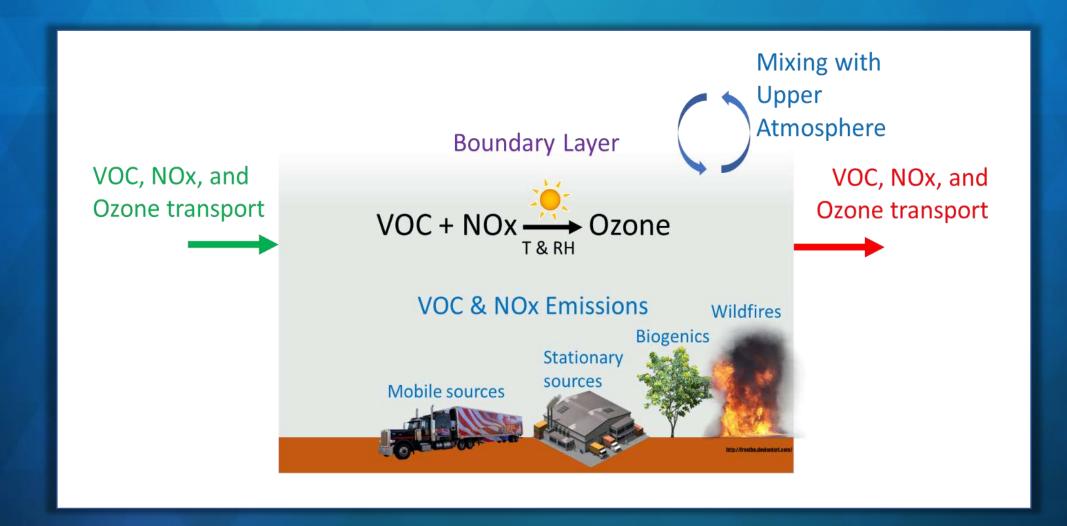
Increased Susceptibility to Infection



Asthma Attacks

- Ozone precursor pollutants also increase PM2.5 pollution
- PM2.5 can cause premature death in addition to other serious health effects

Ozone Formation



Our Challenge

Our region has historically suffered from some of the worst air quality in the United States



Los Angeles 2017



Los Angeles c. 1950

We have made significant progress, but still suffer from poor air quality

- Worst ozone (smog) in the country
- Among the worst fine particulate matter (PM_{2.5})

National Ambient Air Quality Standards*

U.S. EPA sets air quality standards for pollutants considered harmful to public health and the environment



The standards are reviewed approximately every 5 years

The latest standard was for 8-hour ozone standard set in 2015

Areas do not meet the standard must develop a plan to meet the standard by specific timeline

If the standard is not met by the due date, federal sanctions and draconian federal regulations kick in

^{*} NAAQS cover ozone, particulate atter, lead, carbon monoxide, sulfur dioxide, and nitrogen dioxide

Air Quality Management Plans (AQMPs)

AQMP is a blueprint for how the region will meet national ambient air quality standards

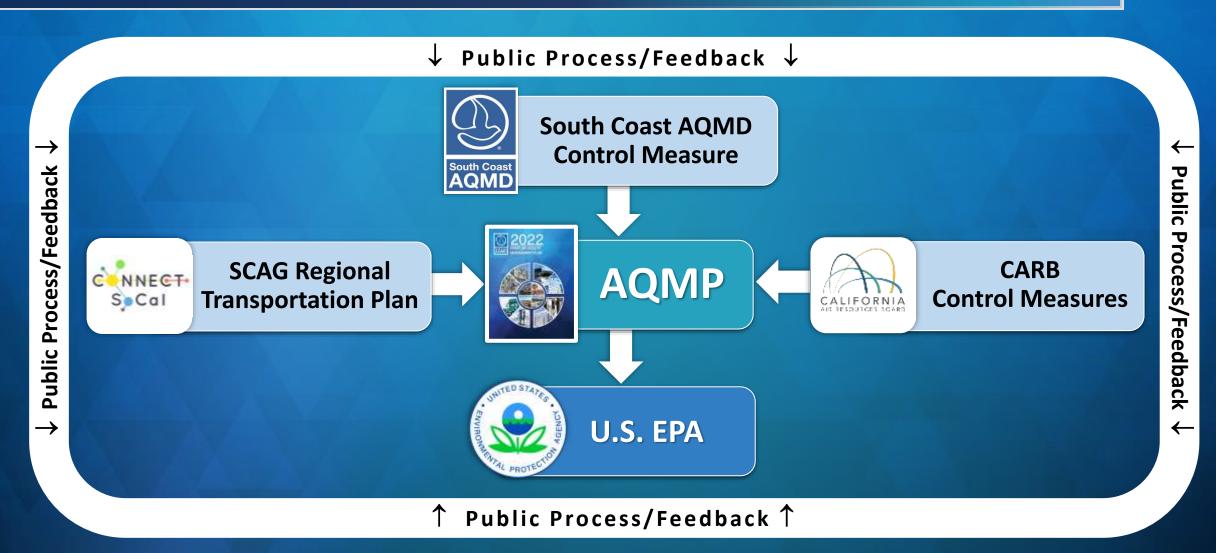
 AQMP is also required under California Health & Safety Code since 1979

- South Coast Air Basin is classified as "extreme" nonattainment area for the 2015 8-hour ozone standard
- 2022 AQMP addresses control strategy to meet the ozone standard by 2037*

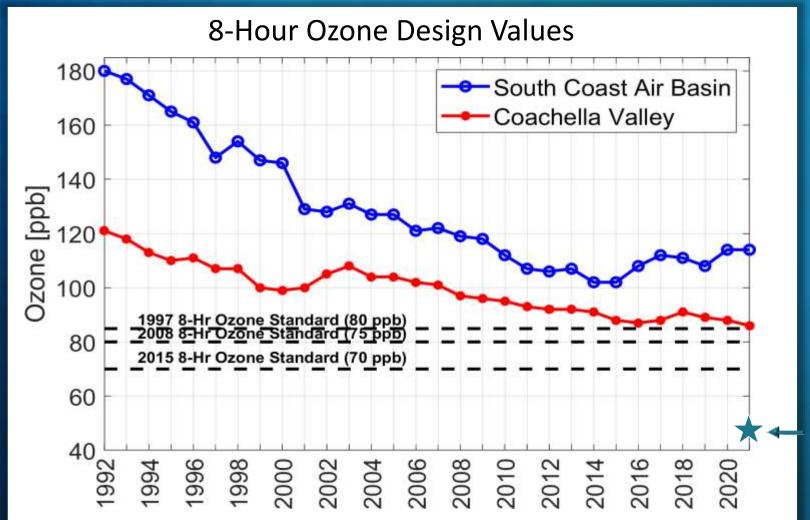
FINAL 2007 ADD OUALD AIR QUALITY MANAGEMENT PLAN

^{*} Other air quality standards are not part of this plan

2022 AQMP Process



Ozone Trends in the South Coast Air Basin



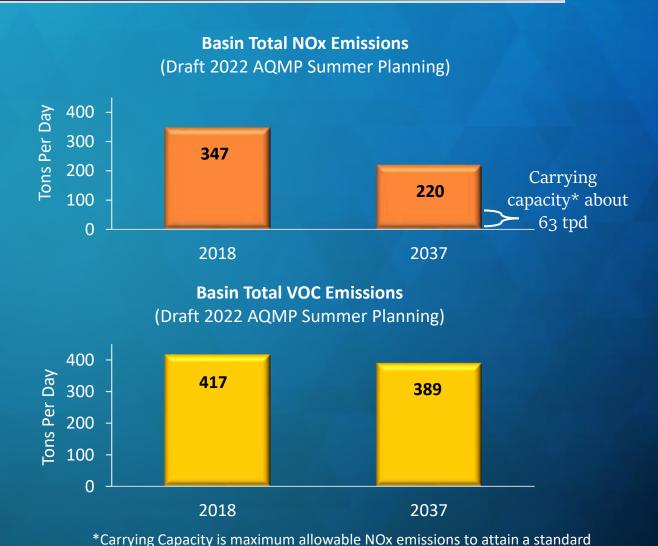
Overall air quality has dramatically improved

High ozone in recent years were due to adverse meteorology. Continued emission reductions will improve ozone

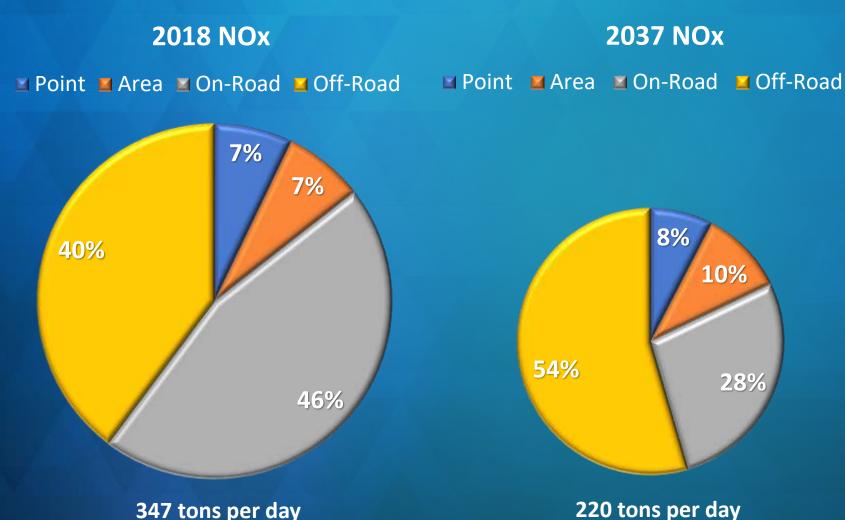
Approximate Ozone Background Level

Key Pollutants for Ozone Attainment

- NOx reduction is key to attain ozone standards
- No path to meet ozone standards through VOC reductions without substantial NOx reductions
- VOC reductions
 - Can reduce PM and can also reduce ozone at high NOx levels
 - Much less effective for reducing ozone at the low NOx levels needed



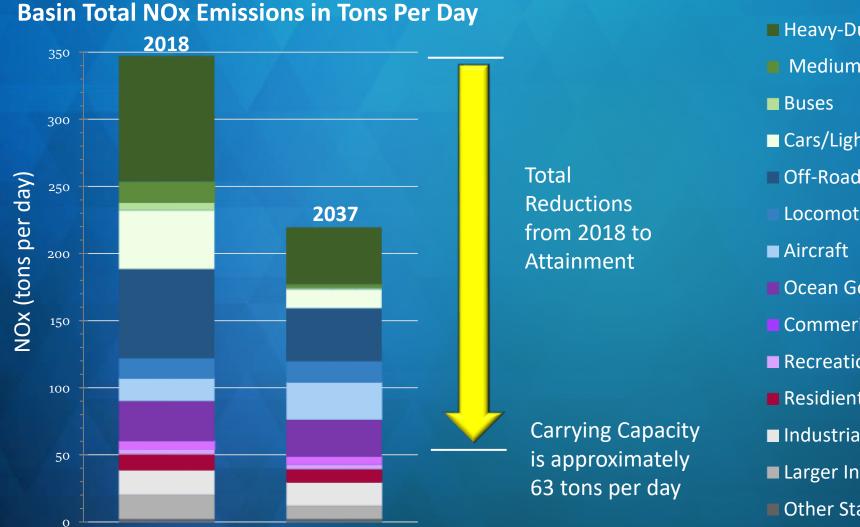
Sources of NOx Emissions in 2018 vs. 2037



These are Business-As-Usual (baseline) inventory, which reflects implementation of adopted regulations and programs

This ozone standard requires shifting focus beyond on-road and more to offroad sources

NOx Reductions Needed for Attainment



- Heavy-Duty Diesel Trucks
- Medium-Duty & Heavy-Duty Gas Trucks
- Cars/Light-Duty Trucks/SUVs/Motorcycles
- Off-Road Equipment and Vehicles
- Locomotives
- Ocean Going Vessels
- Commerical Harber Craft
- Recreational Boats
- Residiential Fuel Combustion
- Industrial/Commercial Fuel Combustion
- Larger Industrial Facilities
- Other Statioanry

NOx Emissions and Reduction Goals



Is Attaining the Ozone Standard in 15 Years Possible?



Attaining the standard is possible

- We have already made incredible progress
- Will be difficult
- Cannot be achieved alone
- Will be expensive with existing technologies
- Will require reliance on emerging advanced technologies

Innovative Approaches Needed

Traditional approach relies on additional tailpipe/exhaust stack controls, new engines technology, or fuel improvements tailored to individual use cases

These traditional approaches on already highly controlled sources cannot achieve additional ≈71% reduction and must be bypassed wherever possible



Key Considerations on a Zero Emissions Approach

What does the pathway look like through time?



O Which fuels for which applications?



- O How can this be made most affordable?
 - Ensures adoption at scale, and available equitably



Overview of Draft South Coast AQMD Stationary and Area Source Control Strategy

NOx Control Measures

Co-Benefits from Greenhouse Gas Reductions

Limited Strategic VOC Measures

Other Measures

Draft Stationary and Area Sources NOx Control Measures

Residential Combustion

- R-CMB-01: Residential Water Heating
- R-CMB-02: Residential Space Heating
- R-CMB-03: Residential Cooking
- R-CMB-04: Residential Other Combustion Sources

Commercial Combustion

- C-CMB-01: Commercial Water Heating
- C-CMB-02: Commercial Space Heating
- C-CMB-03: Commercial Cooking
- C-CMB-04: Small Internal Combustion Engines (Non-permitted)
- C-CMB-05: Small Commercial Miscellaneous Combustion Equipment (Non-permitted)

Large Combustion (e.g., Industrial)

- L-CMB-01: NOx RECLAIM (formerly CMB-05)
- L-CMB-02: Large Boilers and Process Heaters
- L-CMB-03: Large Internal Combustion Engines (Prime Engines)
- L-CMB-04: Large Internal Combustion Engines (Emergency Standby Engines)
- L-CMB-05: Large Turbines
- L-CMB-06: Electric Generating Facilities
- L-CMB-07: Petroleum Refineries
- L-CMB-08: Landfills and POTWs
- L-CMB-09: Incinerators
- L-CMB-10: Miscellaneous Combustion

Residential and Commercial Building Measures

State and Local Policies for Residential and Commercial Buildings



California Energy Commission (CEC) Title 24 (2022 Code)

 Electric ready measures from 2023 onward for single family, multi-family, and commercial new buildings



California Air Resource Board (CARB) Draft 2022 SIP Strategy

 Proposed Zero-Emission Standard for Space and Water Heaters at the point of sale in 2030



Bay Area AQMD

 Rulemaking for zero NOx emissions standard for space and water heating units with a proposed compliance date of 2027 to 2031



City of Berkeley

- All electric new buildings of all types, effective January 1, 2020
- A plan adopted to electrify existing buildings with a phased approach in 2021 -2045



Over 50 cities/counties in California

Adopted building codes supporting all-electric new constructions (mostly Northern CA)

South Coast AQMD Approach for Residential and Commercial Building Measures

1

Coordinating with local and state agencies to build upon existing programs

2

Phasing in requirements for zero emission water/space heating and cooking through a regulatory approach 3

Allowing near-zero and other lower NOx technologies as a transitional alternative if installing a zero emission unit is determined to be infeasible

4

Utilizing incentives to accelerate the adoption of zero emission units and address inequities

Proposed Method of Control and Implementation

Regulatory Approach

- Require zero NOx emissions; allow lower NOx technology when not be feasible
- Amend or develop rules reflecting updated Best Available Retrofit Control Technology

Incentive Approach

- Focus on disadvantaged communities
- Encourage early deployment of zero emission requirement

Strategic VOC Control

- While NOx is primary pollutant of concern for attainment, some VOC reductions can still improve air quality
 - Early reductions in VOCs can reduce ozone
 - VOC reductions contribute to reduction in fine PM
 - Many VOCs are also toxics

Overview of Draft South Coast AQMD Mobile Source Control Strategy



Key Considerations for a Zero Emissions Approach

Indirect Source Rules

- Ports New ISR in development
- Railyards New ISR in development for new railyards, followed immediately by existing railyards
- Warehouses Enforcement and quantification of existing rule, and periodic re-evaluation to determine if amendments are necessary
- Voluntary Agreements (MOUs)
 - Airports Extension/expansion of existing MOUs with major airports
- Unique consideration for facility-based measures
 - Quantified SIP credit likely not possible at time of AQMP and rule adoption. Credit obtainable as measure is implemented.
 - Potential scope of measures are limited as many sources that visit these facilities are primarily regulated federally or internationally



Emissions Growth Management

New and re-development projects

Potential for regulatory (e.g., ISR) or non-regulatory approach

General Conformity (federal projects)

- Proposing to move away from current 'set-aside' / first come-first served approach through future rulemaking
- Example approach: High Speed Rail (Burbank-LA)
 - Project mitigates own emissions first, then contributes to mitigation fund to address remaining emissions in community

Clean Construction Policy

- Develop uniform model program that local agencies can use to require cleanest construction equipment available
- Could include uniform air quality mitigation fund for CEQA projects if all feasible mitigation already implemented







Incentive Programs



Replace Your Ride



Small Off-Road Equipment Exchange



Truck Trade Up



Passenger Locomotives



Existing Incentive Programs



Pacific Rim Initiative for Maritime Emission Reductions

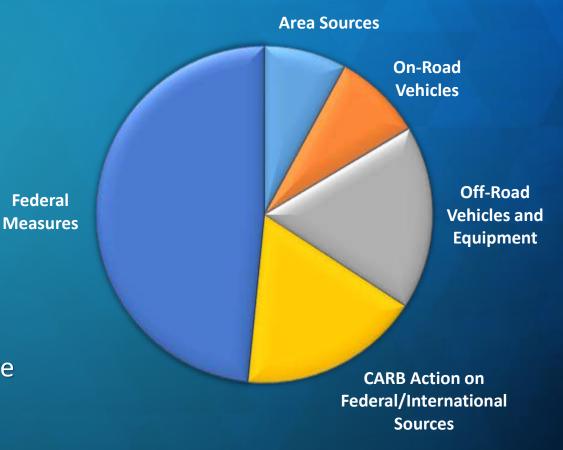
Reg. XVI

Mobile Source Emission Reduction Credits Focus:
Take credit for,
and seek to
expand, existing
successful
programs

CARB Measures – Draft 2022 State SIP Strategy

- Draft 2022 AQMP will include CARB measures* for the following categories
 - Area sources (2 Measures)
 - On-Road Vehicles (3 Measures)
 - Off-Road Vehicles and Equipment (7 Measures)
 - CARB's measures for federally and internationally regulated sources (1 Measure)
 - Federally and internationally regulated sources that required federal action (5 Measures)
- Limited reductions from the 2016 SIP Strategy are included in the attainment demonstration

NOX Reduction (73 Tons Per Day)

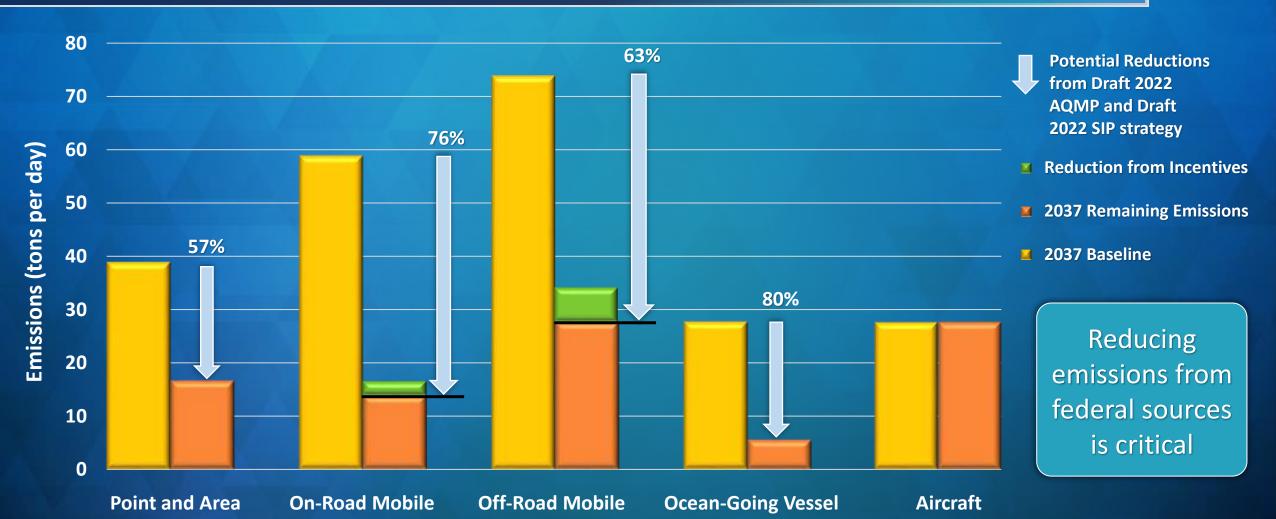


^{*} Reductions from mobile sources include CARB 2016 and 2022 State Strategy

2022 State SIP Strategy Measures – South Coast Reductions



Summary of Potential Approach to Reducing NOx by Major Source Category

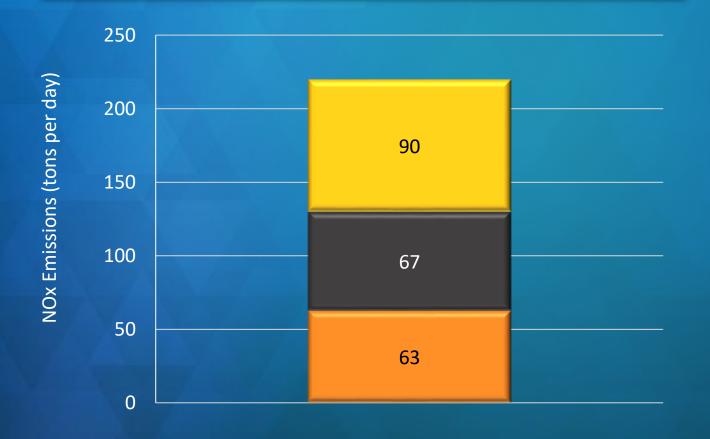


Federal and International Sources

- Approximately 1/3 of the 2037 baseline emissions inventory is regulated primarily under federal and international jurisdiction, with limited authority for CARB/South Coast AQMD
 - Ships, aircraft, locomotives, preempted off-road equipment, selected heavy duty trucks
- Cannot require federal government to reduce emissions, even from federal sources
- Cannot meet the standard without significant reductions from these sources

Results of Draft Control Strategy

2037 South Coast NOx Emissions with CARB & South Coast AQMD Draft Measures and Federal Actions



Defined Measures are specific control measures with estimated reductions

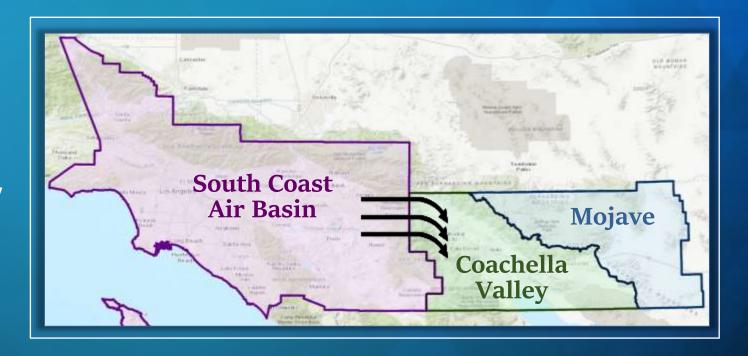
Black Box measures include varying levels of definition and certainty

Federal action cannot be assigned in AQMP, therefore Black Box remains same size

- Defined Measures
- Black Box Measures
- Remaining

Other Key Issues

- Coachella Valley
- Emission reductions in adjacent air basins can affect South Coast carrying capacity
- Cost-effectiveness and affordability



Public Input and Outreach



Supporting Documents

The Draft AQMP and all supporting documents are available on the 2022 AQMP website:

http://www.aqmd.gov/2022AQMP



Submission of Documents or Comments

Please address questions, comments, documents, or other relevant information to:



Internet Submission: https://forms.office.com/g/PV2q42uBjy



Email: AQMPteam@aqmd.gov



Sang-Mi Lee, Ph.D.
Planning & Rules Manager
South Coast AQMD

21865 Copley Drive

Diamond Bar, CA 91765



Telephone: (909) 396-3169

Responses to comments received by June 21, 2022

Next Steps



Submission to U.S. EPA

Late Fall (18 months after submission for EPA to act on the Plan)



CARB Public Hearing
Late Fall



South Coast AQMD Public Hearing October 7, 2022



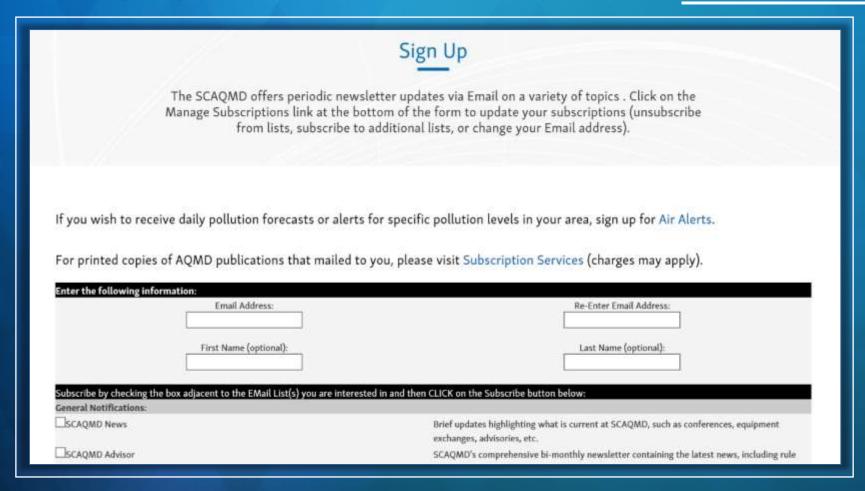
South Coast AQMD Regional Public Hearings
Summer



Release Revised Draft AQMP Summer

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https://www.aqmd.gov/nav/online-services/smartphone

South Coast AQMD Resources for Reporting Air Quality Concerns

South Coast AQMD Telephone Hotline

1-800-CUT-SMOG

(1-800-288-7664)

South Coast AQMD Website

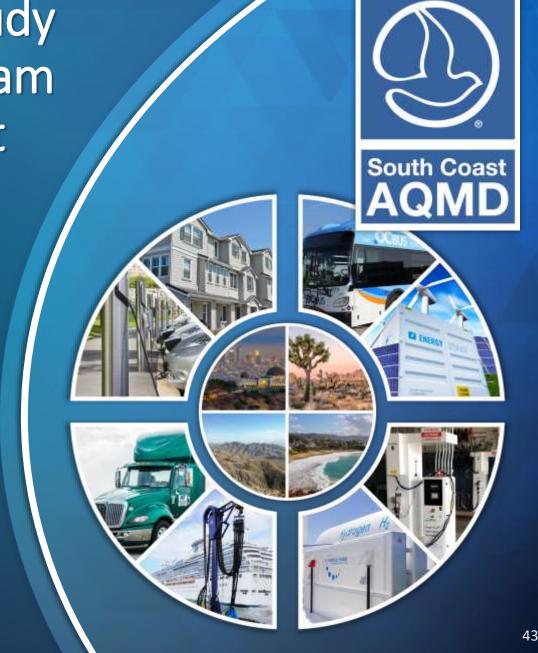
https://www.aqmd.gov/home/air-quality/complaints

South Coast AQMD Smartphone Application

Available on Apple and Android app stores

Notice of Preparation/Initial Study for the 2022 AQMP Draft Program Environmental Impact Report

Regional Workshop and CEQA Scoping Meeting



California Environmental Quality Act (CEQA)

- 2022 AQMP is a project subject to CEQA (State law)
 which requires evaluation of 18 environmental topic areas
- Decision to prepare a Program Environmental Impact Report (EIR) because 2022 AQMP contains a series of actions that can be characterized as one large project in connection with the issuance of rules, regulations, plans, or other general criteria required to govern the conduct of a continuing program

CEQA Scoping Meeting

- Public Workshops serve as CEQA Scoping Meetings
 - Held during Notice of Preparation/Initial Study (NOP/IS) comment period
- Required for projects with potentially significant environmental impacts
- Opportunity for the public, other agencies, and interested parties to find out more about proposed project and to provide suggestions on:
 - Scope of the CEQA analysis
 - Additional Topics to Evaluate in Draft Program EIR
 - Mitigation Ideas
 - Project Alternatives
- CEQA Scoping comments will be considered when preparing Draft Program EIR

Overview of CEQA Process

NOP/IS

Draft Program EIR

Final Program
EIR

Final Program EIR Certification

- Notifies the public that a
 Draft Program EIR is being
 prepared which evaluates
 18 environmental topic
 areas and identifies
 potentially significant
 environmental topics to be
 further evaluated
- Released for 32-day comment period from May 13, 2022 to June 14, 2022
- Provides 1st opportunity to submit comments

- Responds to comments on NOP/IS
- Analyzes potentially significant environmental topic areas
- Recaps conclusion of environmental topic areas with no impact or less than significant impacts
- Identifies mitigation measures for significant impacts
- Analyzes project alternatives
- To be released for 45-day comment period and provides 2nd Opportunity to submit comments

- Includes updates to proposed project, as applicable
- Includes all comments received on Draft Program EIR and provides responses to those comments
- Includes NOP/IS and comments/responses

- Governing Board considers the Final Program EIR for certification
- Adopt Mitigation Monitoring and Reporting Plan (if required)
- Adopt Findings and Statement of Overriding Considerations for significant impacts, if any

NOP/IS Analysis

- Evaluated all control measures and incentive programs identified in the 2022 AQMP for potential environmental impacts
- Chapter 1 provides background information and project description
- Chapter 2 identifies and analyzes environmental topics/impacts
- All 18 environmental topics were evaluated and potentially significant topics will be further analyzed in forthcoming Draft Program EIR:

Topic Areas with Potentially Significant Impacts	Topic Areas with No Impacts or Less than Significant Impacts
 Air Quality and Greenhouse Gases Energy Hazards and Hazardous Materials Hydrology and Water Quality Noise Solid and Hazardous Waste 	 Aesthetics Agriculture and Forestry Resources Biological Resources Cultural and Tribal Cultural Resources Geology and Soils Land Use and Planning Mineral Resources Population and Housing Public Services Recreation Transportation Wildfire

Availability of NOP/IS

- Notice of Preparation of a Draft Program EIR and the Initial Study (NOP/IS) was released for 32-day public review and comment period on May 13, 2022
- Comment period closes at 5:00 p.m. on June 14, 2022
- NOP/IS is available online at: https://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2022/2022-aqmp-nopis.pdf
- Hardcopies are available at the in-person meeting venue on the workshop date and at South Coast AQMD Headquarters, or by calling (909) 396-2039

Opportunity to Comment on NOP/IS

Please direct questions and comments on the CEQA analysis in the NOP/IS to:

Kevin Ni

Planning, Rule Development, and Implementation / CEQA Section



Email: kni@aqmd.gov



Fax: (909) 396-3982



South Coast AQMD 21865 Copley Drive Diamond Bar, CA 91765

Comments received relative to the CEQA analysis in the NOP/IS and their responses will be included in the Draft Program EIR, upon its release

Status of the Draft Program EIR

- Draft Program EIR anticipated release July 2022 and will include comments and responses received during CEQA Scoping Meetings and on the NOP/IS
- 45-day public review & comment period
- Upon release, it will be available at South Coast AQMD's Public Information Center & CEQA Webpage http://www.aqmd.gov/home/library/documents-supportmaterial/lead-agency-scaqmd-projects

CEQA Team Contact Information

Michael Krause Assistant Deputy Executive Officer



mkrause@aqmd.gov



(909) 396.2706

Barbara Radlein **Program Supervisor, CEQA**





bradlein@aqmd.gov (909) 396-2716





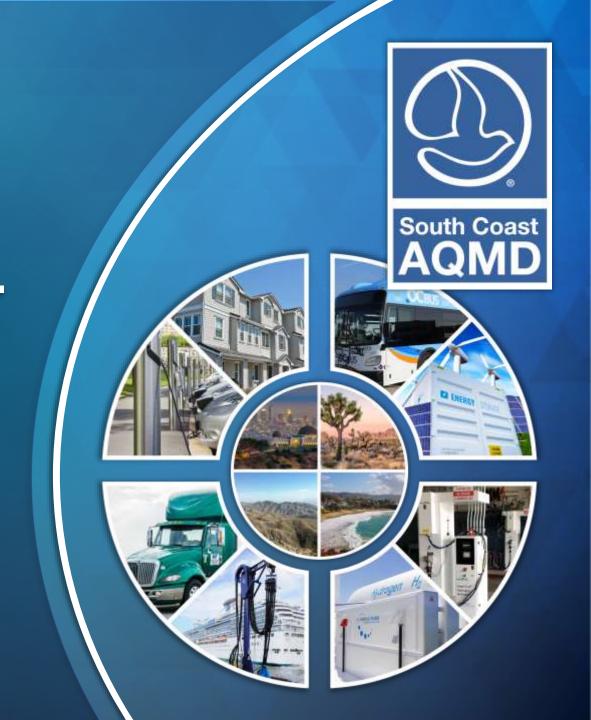


(909) 396-2462

Kevin Ni

Overview of Socioeconomic Impact Assessment

Regional Workshop and CEQA Scoping Meeting



Purpose of Socioeconomic Scoping

Transparency:

- Collect input on key socioeconomic issues and potential alternatives
- Discuss draft outline and each planned component of the 2022 AQMP Socioeconomic Report
- Continuous stakeholder involvement via public process:
 - Scientific, Technical & Modeling Peer Review (STMPR) Advisory Group
 - 2 meetings covered socioeconomic topics: November 2021 and March 2022
 - Upcoming: preliminary costs and health benefits to be discussed at May 31st meeting
 - 3 scoping sessions in regional public workshops
 - More to be announced/scheduled

Background and Commitments

AQMP Socioeconomic Report:

- Socioeconomic impact assessment for AQMP conducted since 1991
 - To better inform the public and policymakers
 - Not legally required (unlike for rules)
- 2016 Report incorporated more than a dozen key recommendations from the 2014 independent review by Abt Associates

Commitments for the 2022 Report:

- Continue to incorporate Abt recommendations
- Minimum 60-day review period for Draft Report (June release)
- Minimum 30-day review period for Draft Final Report (September release)

Draft Outline of AQMP Socioeconomic Report

- Non-technical executive summary
- o Report:
 - Introduction
 - Incremental costs and cost-effectiveness
 - Quantified public health benefits and other non-quantified benefits
 - Projected macroeconomic impacts
 - Sub-county distribution of costs, benefits, and job impacts
 - Environmental justice analysis
 - Conclusion and future enhancements
- Technical appendices
- Responses to comments

What Will be Quantified?

- Plan costs & public health benefits:
 - Measures with quantified emission reductions ready to be committed into State Implementation Plan (SIP)
 - Measures with TBD/NYQ emission reductions: preliminary costs may be discussed separately
 - Infrastructure costs resulting from transition to near-zero and zero-emission will be quantified to the extent possible
- Regional job and other macroeconomic impacts:
 - ✓ Impacts associated with quantified costs & public health benefits for measures directly affecting residents and economic sectors in the South Coast AQMD region
 - Any secondary regional impacts from measures anticipated to directly affect outof-region/state entities will be modeled to the extent possible

Incremental Costs of the Plan

- Costs by control measure
 - For measures with committed emission reductions
- Costs by affected industry
 - For small businesses, to the extent data is available
 - Identifying costs most likely incurred by out-of-region/state entities
- Costs incurred over time
 - Tied to anticipated implementation period of each measure
- Cost effectiveness by control measure
 - Discounted cash flow (DCF)
 - Levelized cash flow (LCF)

^{*} All costs will be converted and expressed in 2021 dollars.

Cost-Effectiveness Calculation Methods

• DCF: Upfront Costs + Present Value of Annual O&M Costs Incurred over Equipment Life

Annual Emission Reductions × Years of Equipment Life

• LCF: Amortized Upfront Costs + Annual O&M Costs

Annual Emission Reductions



What's in the numerator? A home-buying analogy:

DCF: Today's home price + money set aside today in a fixed interest rate account to pay for annual costs for utilities, maintenance, etc.

LCF: Annual fixed-rate mortgage payment with zero down payment + annual costs for utilities, maintenance, etc. at any given future year

Public Health and Other Benefits

- Modeled changes in PM2.5 and ozone concentrations
- Estimated changes in health incidence due to changes in health risk
 - Mortality risk: changes in number of premature deaths
 - Morbidity risk: changes in hospital admissions, ER visits, missing work/school days, etc.
- Monetized public health benefits
- Sensitivity tests of key inputs and assumptions
- Qualitative discussion of visibility, material, and agriculture benefits

^{*} Monetized benefits will be converted and expressed in 2021 dollars

Regional Jobs and Macroeconomic Impacts

- Job impacts due to incremental costs
- Job impacts due to quantified public health benefits
- Net job impacts and its distribution
 - By industry sector
 - By occupational earnings group
- Competitiveness impacts by industry sector
 - Value-added
 - Cost of production (for those who cannot pass through costs)
 - Delivered prices (for those who can pass through costs)
 - Imports and exports

Varied Policy Impacts within South Coast

- Variations by 21 sub-county regions
 - Sub-regional distribution of costs
 - Sub-regional distribution of public health benefits
 - Sub-regional distribution of projected net job impacts
- Environmental justice (EJ) analysis
 - EJ screening:
 - SB 535 definition
 - Sensitivity tests with alternative EJ definitions
 - EJ impacts of 2022 AQMP
 - Health benefits: EJ vs. non-EJ communities
 - Adapting income inequality indices to assess changes in health risk inequality

Staff Contacts

Ryan Finseth

Air Quality Specialist rfinseth@aqmd.gov (909) 396-3575

Brian Vlasich

Air Quality Specialist bylasich@aqmd.gov (909) 396-2167

Elaine Shen

Planning and Rules Manager eshen@aqmd.gov

(909) 396-2715

Open Discussion

- Although it is a different format, staff will take the time to listen to all stakeholder comments
 - Please use the "raise hand" feature to speak:
 - Click on the button
 - **b** Dial *9
- When it is your turn to speak, your name will be announced and, if participating virtually, the meeting host will unmute you
- Please state your name and who you are representing
- In addition to this workshop, staff is available for individual meetings

2022 DRAFT AIR QUALITY MANAGEMENT PLAN

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Thank You For Attending

