AGENDA NO. 21

Background on State Implementation Plan Requirements

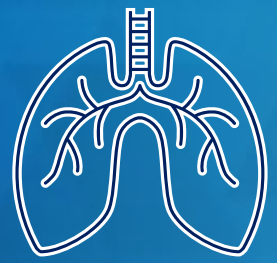
Governing Board

February 6, 2026

Air Quality Challenges in Our Region

- Our region has historically suffered from some of the worst air quality in the United States
- We have made significant progress, but still suffer from poor air quality
  - Worst ozone (smog) in the nation
  - Among the worst PM2.5
  - Substantial challenges to meet NAAQS

Federal Clean Air Act Requirements



Requires U.S. EPA to establish

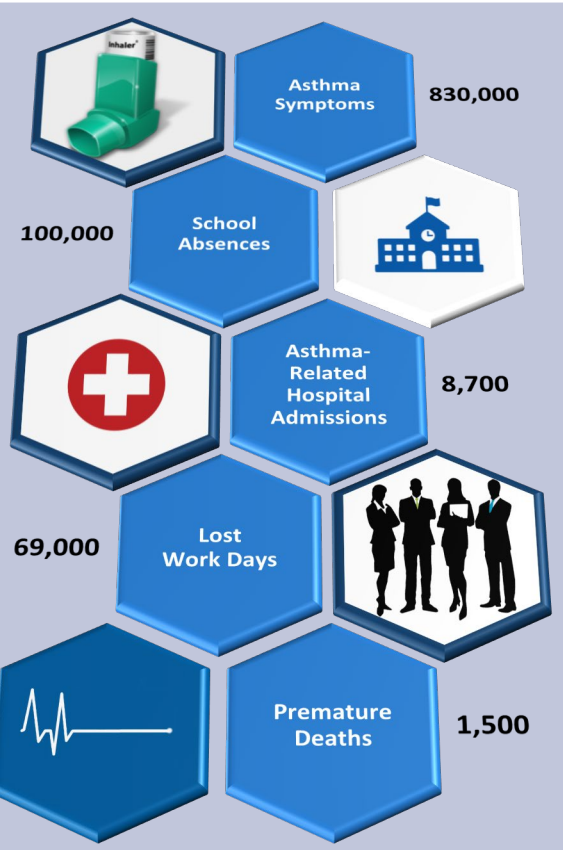
National Ambient Air Quality Standards

(NAAQS) for criteria pollutants

Health-based standards	U.S. EPA required to review every 5 years*	U.S. EPA must only consider health impacts, not costs	Key pollutants in our region are ozone and PM2.5

*CAA Section 109(d)

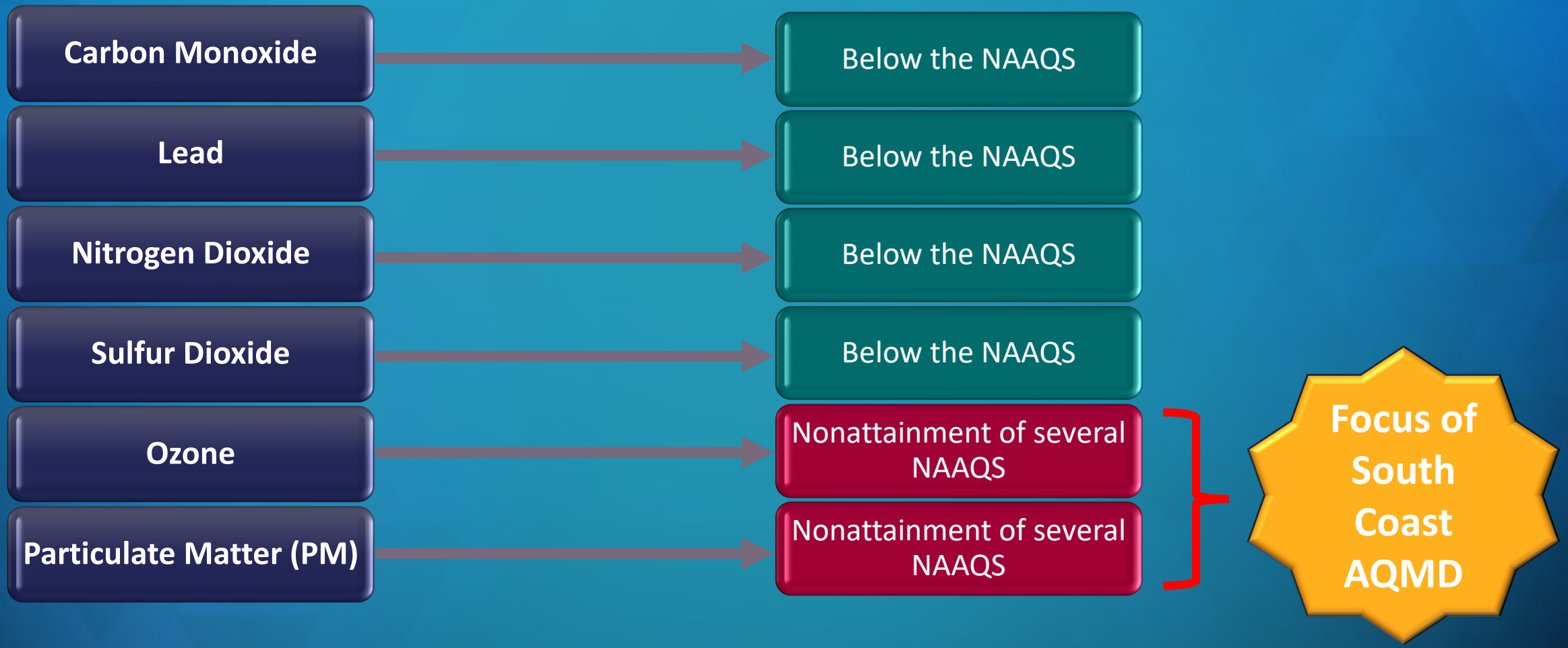
Public Health Benefits from Attaining Standards

Annual Public Health Benefits (examples of avoided outcomes)	Annual Monetized Public Health Benefit (2025-2037)
	**$19.4 Billion**

- **74% of benefit from avoided premature death due to reduced PM2.5**

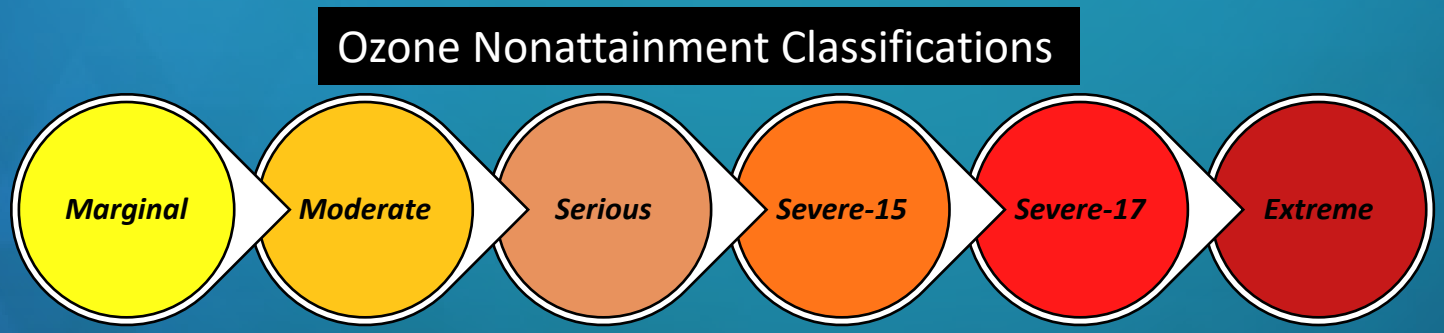
SIPs Focuses on Criteria Pollutants

Criteria Pollutants



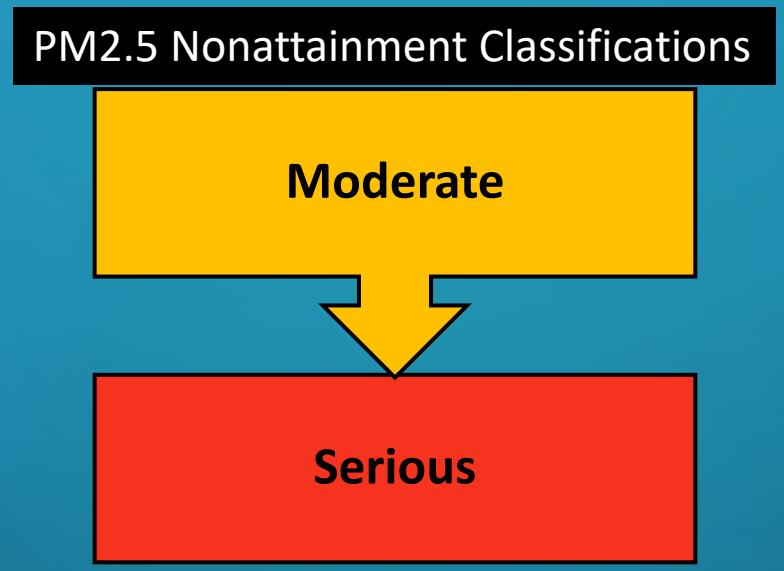
South Coast AQMD Ozone Attainment Status

Ozone Standard	Level	South Coast Attained?	South Coast Classification	Coachella Valley Attained?	Coachella Valley Classification	Attainment Year
1979 1-hour Ozone (revoked)	120 ppb	No	Extreme	Yes	N/A	2022
1997 8-hour Ozone (revoked)	80 ppb	No	Extreme	Yes	N/A	2023
2008 8-hour Ozone	75 ppb	No	Extreme	No	Extreme	2031
2015 8-hour Ozone	70 ppb	No	Extreme	No	Extreme	2037



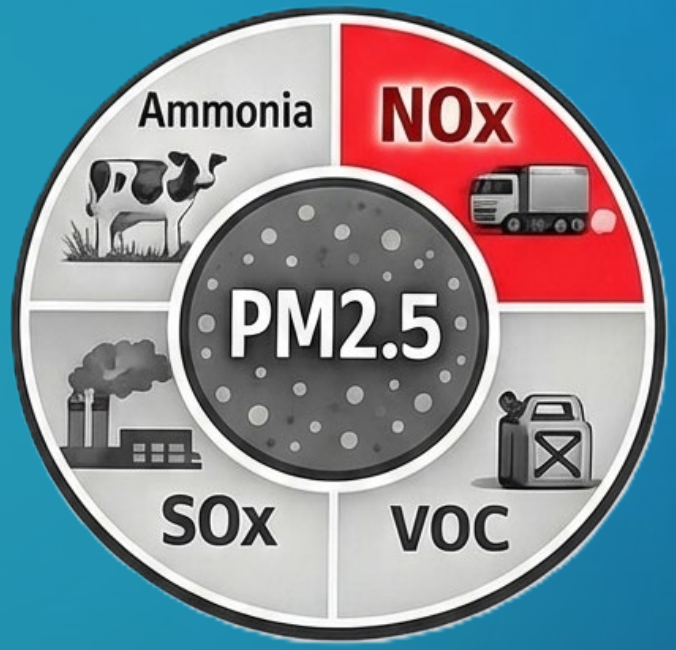
South Coast AQMD PM2.5 Attainment Status*

PM2.5 Standard	Level	South Coast Attained?	South Coast Classification	Coachella Valley Attained?	Coachella Valley Classification	Attainment Year
2012 Annual PM2.5	12 µg/m^3	No	Serious	Yes	N/A	2025/2030
2024 Annual PM2.5	9 µg/m^3	No	Nonattainment	Yes	N/A	-



*Several past standards that South Coast AQMD has currently attained are not shown

Importance of NOx



NOx is the key precursor to reduce ozone and PM2.5 in our region

**Relative contribution of each pollutant is only shown schematically*

What is a State Implementation Plan?

Comprehensive planning document

Blueprint for meeting air quality standards

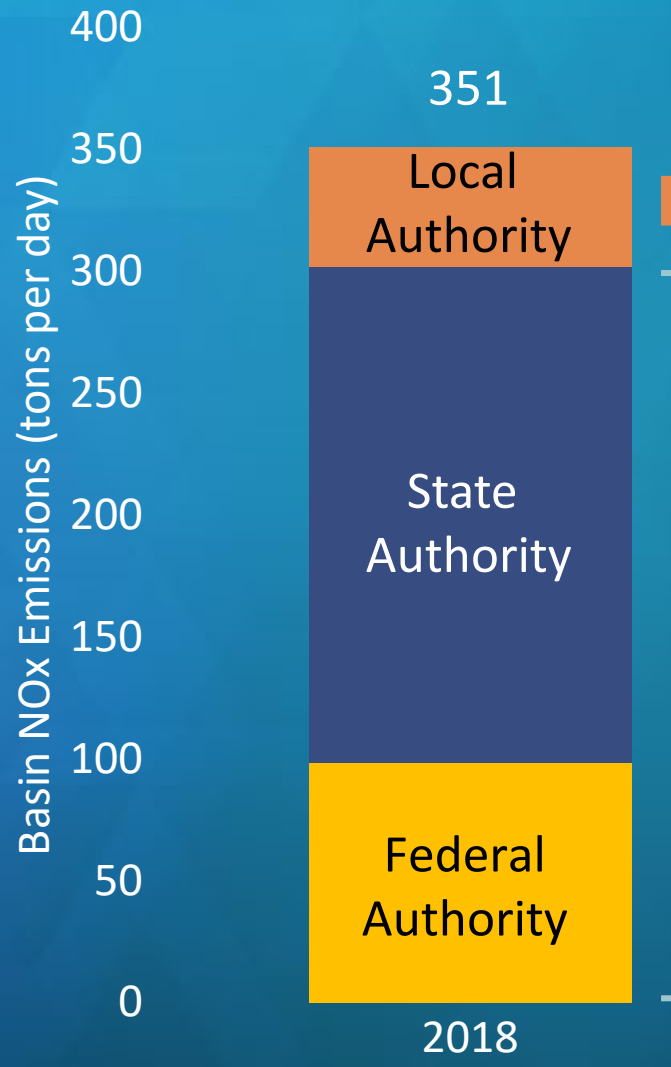
Mandated under state and federal law

There are significant economic consequences if SIP obligations are not met

Emissions and Agencies with Primary Regulatory Authority

SIPs must address emissions from all source categories

- Stationary
- Area
- Mobile



- South Coast AQMD's primary regulatory authority is for stationary point and area sources

- Mobile sources emit over 80% of the NOx emissions in the Basin
- South Coast AQMD works collaboratively with CARB to address mobile sources

Federal Role

Approval of SIPs

- U.S. EPA has sole authority to approve or disapprove SIPs
- South Coast AQMD and CARB cannot assign emission reductions or control measures to the federal government

Federally Regulated Sources

- Several large NOx emission sources are primarily regulated at federal and international level (e.g., aircraft, ships, locomotives)

Federal Waivers

- CARB can request a waiver/authorization to enforce on-road/off-road regulations
  - U.S. EPA has sole authority to grant or deny request

SIP Development Process

SIP development is an extensive process over multiple years involving numerous public meetings

Emissions Forecasts are Integral Part of SIPs

Future Emissions = Base Year Emissions X Control X Growth

Base Year Emissions

- Reported emissions for stationary point sources
- Calculated emissions for mobile sources and stationary area sources

Growth

- Vehicle Miles Traveled
- Population
- Economic Factors

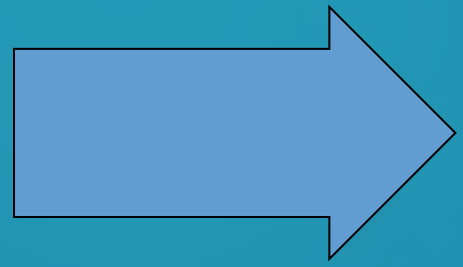
} Provided by SCAG and other stakeholders (e.g., utilities, airports, etc.)

Control

- Implementation of rules and regulations
- Deployment of new technologies

SIP Requirements

- *Emissions Inventory*
- *Control Strategy*
- *Attainment Demonstration*
- *Reasonable Further Progress*
- *Transportation Conformity*
- *Contingency Measures*
- *Progress Reports*
- *Reasonably Available Control Measures*



Several additional elements specific to ozone and PM2.5 NAAQS are required

Clean Air Act Consequences

Failure to Attain

- Implement contingency measure(s)
- Generally requires a SIP Revision

Can trigger:

- Nonattainment fees (e.g., Rule 317.1)
  - Emissions-based fee for major stationary sources ⟶ about $25 million per year
  - In the absence of Rule 317.1, U.S. EPA would collect the fee
- More stringent planning requirements (e.g., 5% annual emission reduction)

Clean Air Act Consequences (cont'd)

Planning Requirement Sanctions

Begin no later than 18-24 months from EPA's triggering action

- Increased offset ratios for permitting
- Loss of most federal highway funding
- Federal Implementation Plan

Status of Key SIP Requirements for Ozone NAAQS

1997 ozone NAAQS (80 ppb)

- Finding of failure to attain is pending
  - Once finalized, triggers Rule 317.1 nonattainment fees and Rule 445 (Check Before You Burn) contingency measure

2008 ozone NAAQS (75 ppb)

- 2016 AQMP demonstrated attainment by 2031 using CAA 182(e)(5) 'black box'
  - SIP revision to fulfill 'black box' commitments due Dec. 2027

2015 ozone NAAQS (70 ppb)

- 2022 AQMP demonstrated attainment by 2037
  - SIP revision necessary due to recent federal and state actions

SIP Status for PM NAAQS

1987 24-hour PM10 NAAQS (150 µg/m^3)

- South Coast Air Basin attained in 2013
- Coachella Valley – nonattainment

1997 24-hour (65 µg/m^3) and Annual (15 µg/m^3) PM2.5 NAAQS

- Attained in 2013

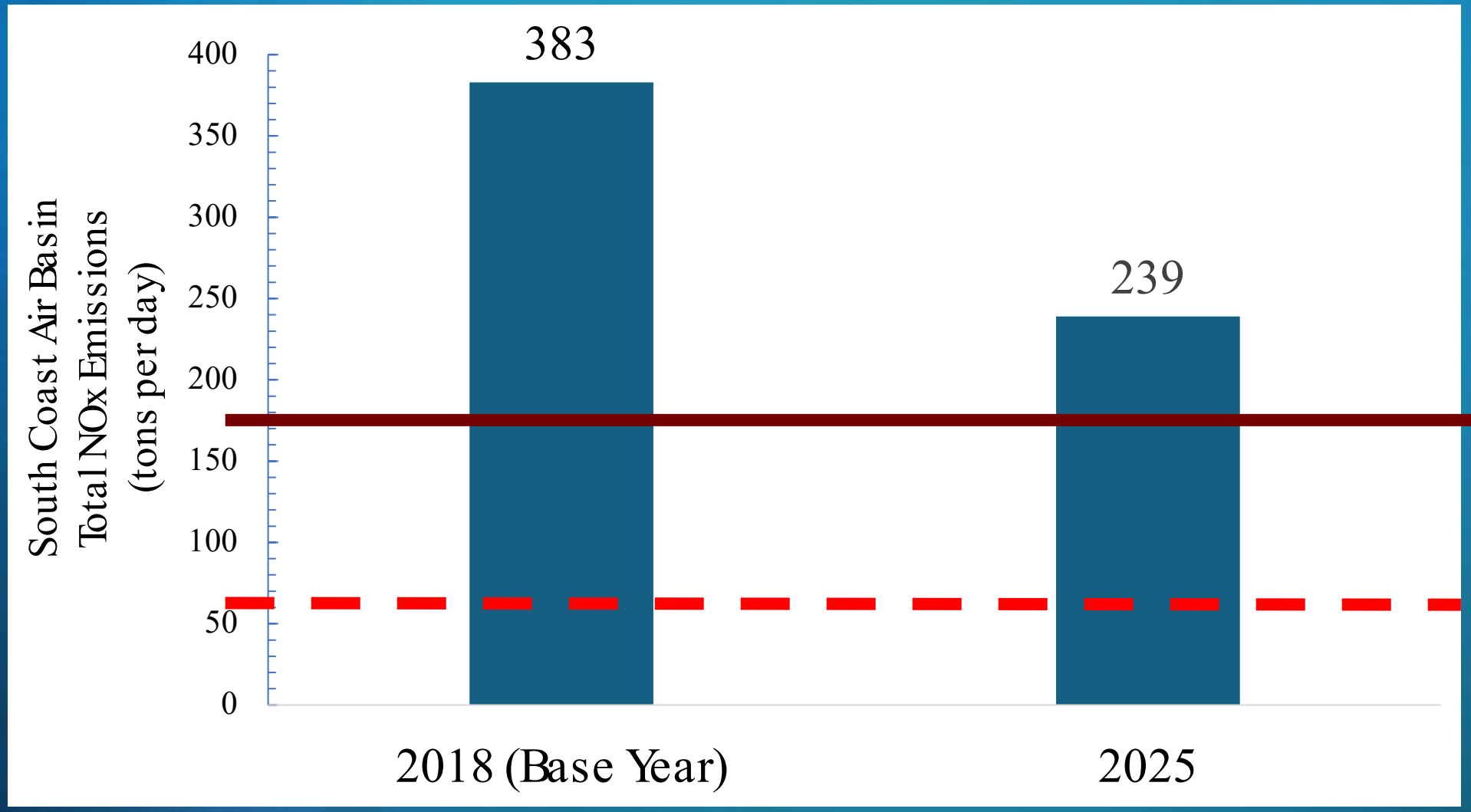
2006 24-hour PM2.5 NAAQS (35 µg/m^3)

- Attained in 2023
- Measurements from 2025 are currently being analyzed to evaluate continued maintenance of the standard

2012 Annual PM2.5 NAAQS (12 µg/m^3)

- 2024 PM2.5 Plan demonstrated attainment by 2030
- SIP revision necessary due to recent federal and state actions

NOx Emission Reductions Needed for Attainment



175 tpd
2030 Attainment
(12 µg/m³ PM2.5)

60 tpd
2037 Attainment
(70 ppb ozone)

Recent Federal and State Actions Affecting Mobile Source Regulations

Withdrawal of Waiver Requests	Congressional Review Act	Recent SIP Decision
• Advanced Clean Fleets • In-Use Locomotive • Partial: Commercial Harbor Craft • Partial: Transport Refrigeration Unit	• Advanced Clean Cars II • Advanced Clean Trucks • Heavy-Duty Omnibus • Zero Emissions Airport Shuttle Bus • Zero Emission Powertrain Certification • Heavy-Duty Warranty	• Heavy-Duty Inspection and Maintenance (Clean Truck Check)

Pulling back on these regulations removes key actions and emission reductions we were counting on for multiple SIPs

Key Upcoming SIP Work

South Coast Air Basin

a) 

Addressing SIP Requirements for the 2012 Annual PM2.5 Standard

b) 

Contingency Measure Plan for the 2008 8-hour Ozone Standard

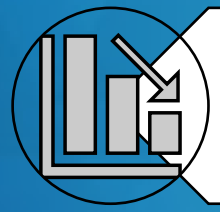
Coachella Valley

c) 

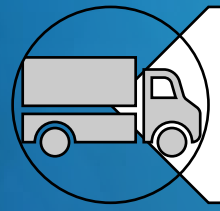
Addressing 1987 PM10 Standard

Summary

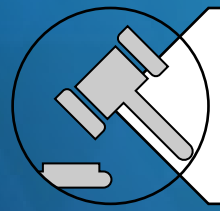
We have substantial SIP obligations under the Clean Air Act



Significant emission reductions are needed to meet the NAAQS in South Coast and Coachella Valley

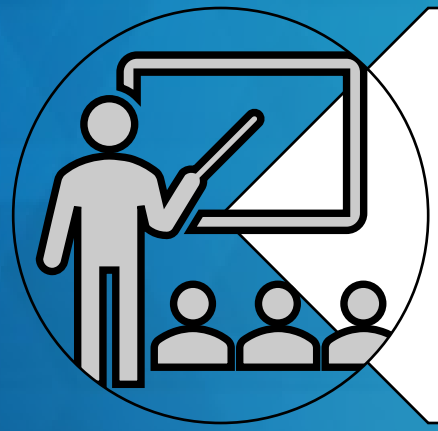


Recent actions affecting mobile source regulations are slowing progress toward attainment



Findings of failure to attain and potential SIP disapprovals can trigger nonattainment fees and sanctions

Next Steps



Multiple SIP documents are being worked on by staff and will come to Board

- Detailed SIP development update will be presented at March Mobile Source Committee meeting

Staff will continue to work closely with other air agencies on SIP actions