



San Joaquin Valley 70 ppb Ozone SIP

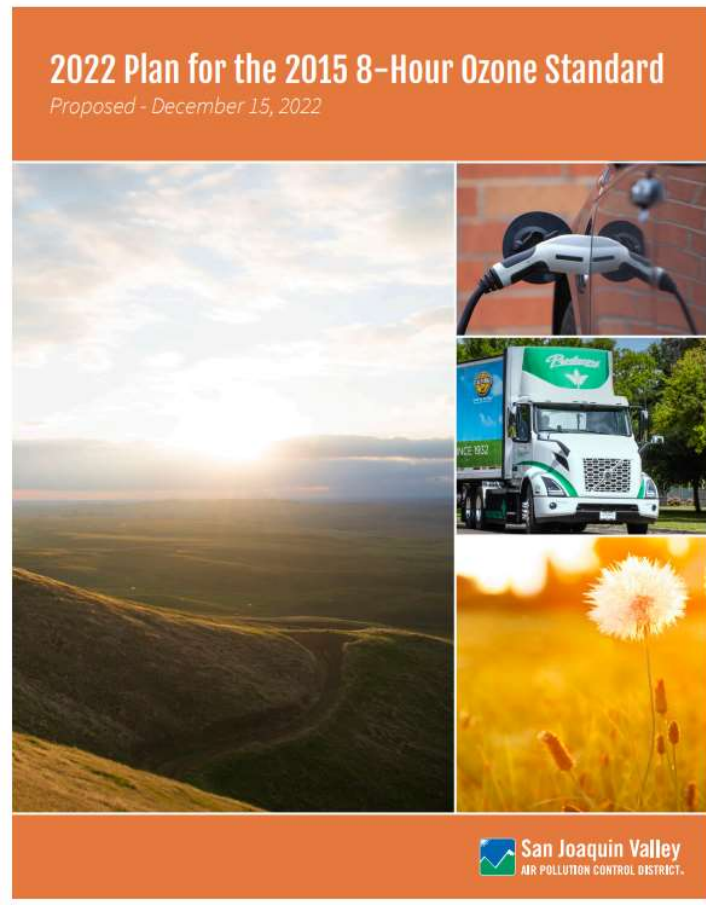
January 26, 2023

70 ppb Ozone Standard

- EPA strengthened 8-hour ozone standard to 70 ppb in 2015
- EPA designated San Joaquin Valley as Extreme nonattainment in 2018 requiring attainment within 20 years
- San Joaquin Valley one of three Extreme areas in the country

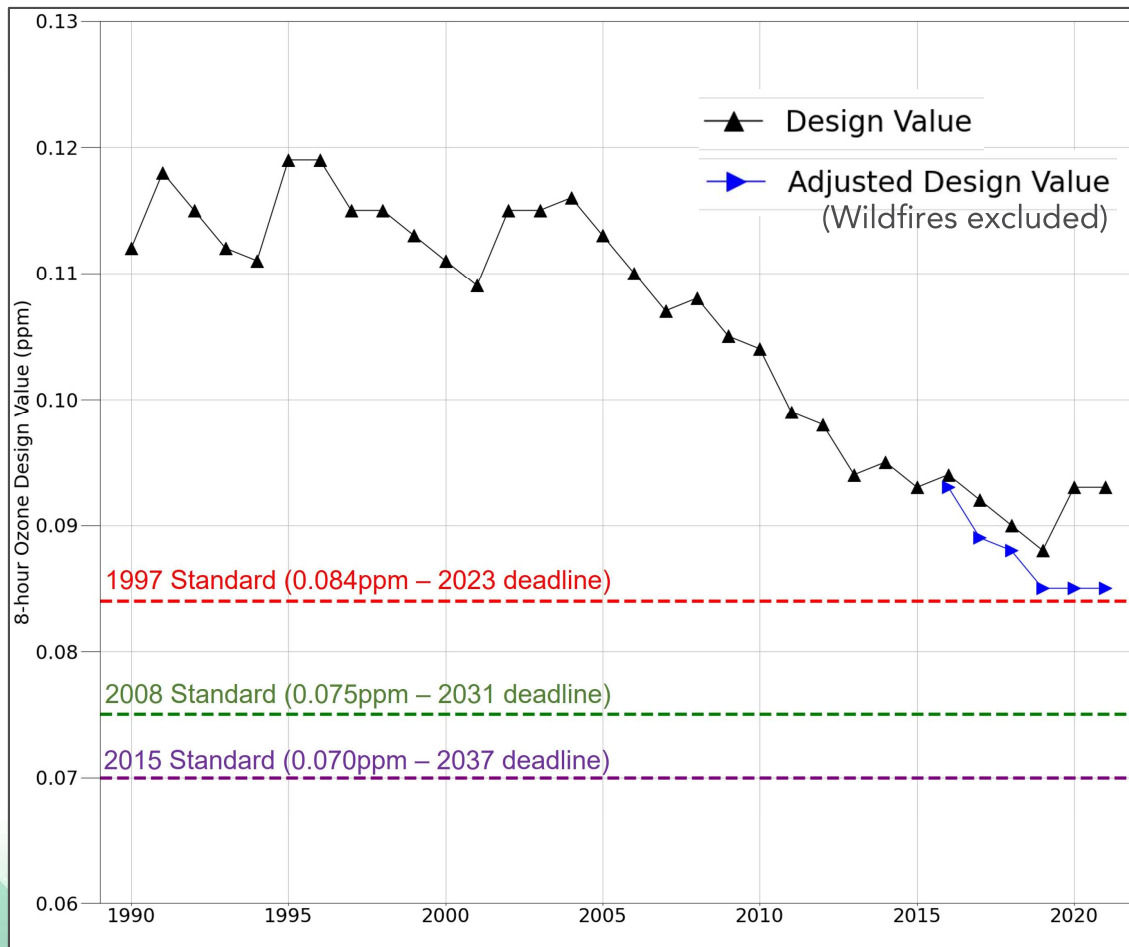


2022 Ozone Plan



- Developed jointly by the District and CARB
- Shows attainment of 70 ppb ozone standard in 2037
- Includes CARB emission reduction commitments
- Adopted by the District in December 2022

Ozone Air Quality Improvement

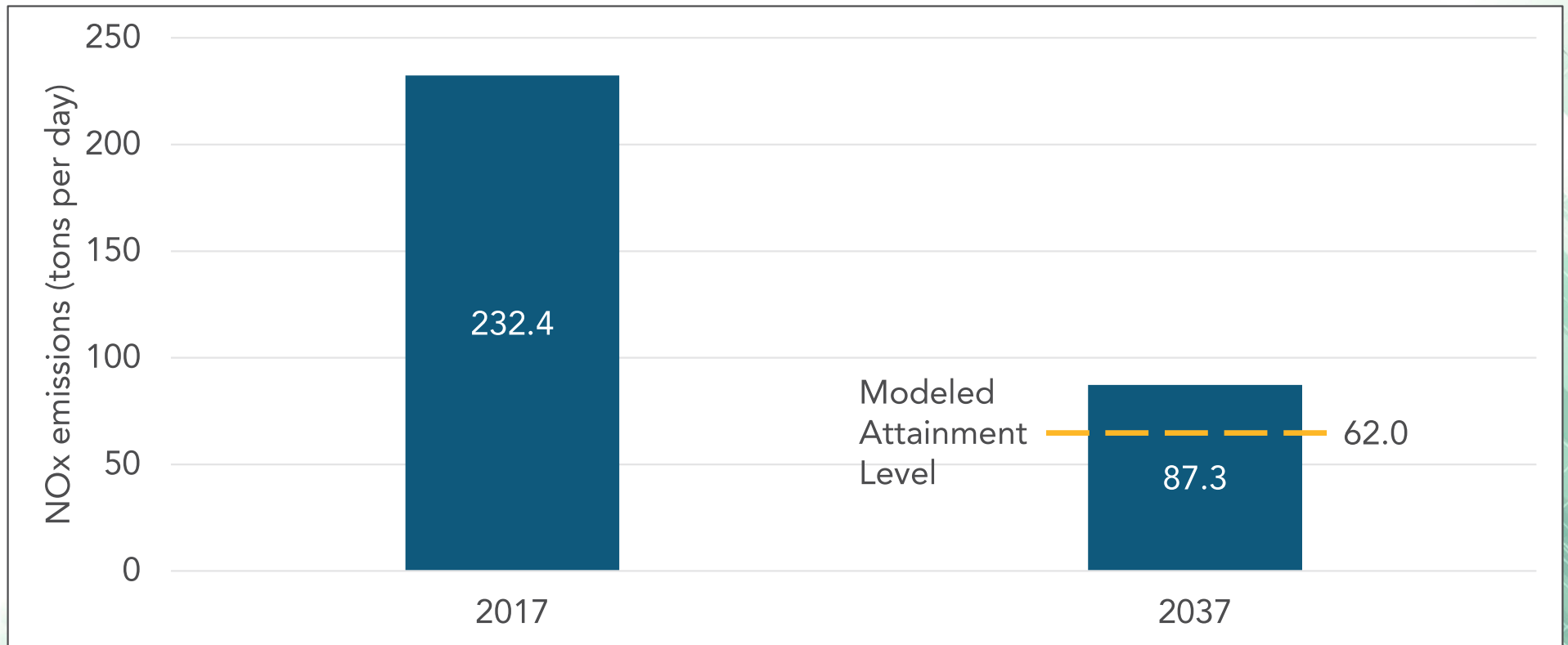


Attainment deadlines for ozone standards

- 84 ppb: 2023
- 75 ppb: 2031
- 70 ppb: 2037

2022 design value:
85 ppb

Baseline NOx Emissions



Ozone Control Strategy

CARB and District existing control strategy – Ongoing implementation

2016 State SIP Strategy – Remaining measures

2022 State SIP Strategy – New measures

District commitments – SIP-strengthening and further study measures

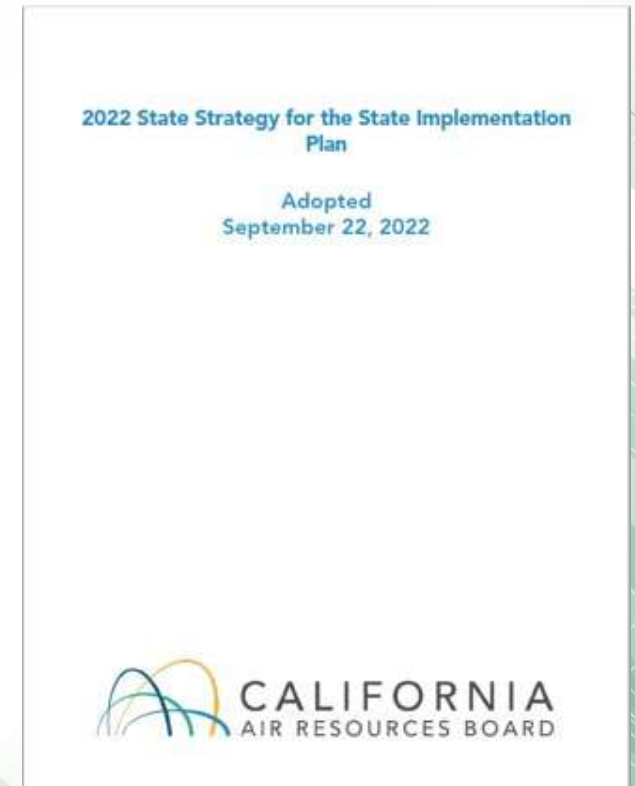
No Black Box Measures Needed

Emissions Reductions from Remaining 2016 State SIP Strategy Measures

Measure	Action	Implementation Begins	2037 NOx (tpd)	2037 ROG (tpd)
Advanced Clean Cars II	2022	2026	1.6	1.3
Transport Refrigeration Unit Part I	2022	2023-2024	0.3	0.3
Zero-Emission Forklift	2023	2026	<0.1	<0.1
Total			1.9	1.7

2022 State SIP Strategy

- Board adopted Measure Schedule September 22, 2022
- Unprecedented variety of new State measures to reduce emissions using all mechanisms available
- Drives pace and scale of CARB rulemakings
- Provides 23.4 tpd NO_x reductions needed for the Valley to attain



2022 State SIP Strategy Measures

On-Road

- Advanced Clean Fleets Regulation
- Zero-Emission Trucks
- On-Road Motorcycle New Emissions Standards
- Clean Miles Standard*
- Enhanced Regional Emission Analysis in State Implementation Plans

Off-Road

- Tier 5 Off-Road Engine Standard
- Amendments to In-Use Diesel-Fueled Fleets Regulation
- Zero-Emission TRU Part II
- Commercial Harbor Craft*
- Cargo Handling Equipment
- Off-Road Zero-Emission Targeted Manufacturer Rule
- Clean Off-Road Fleet Recognition Program
- Spark-Ignition Marine Engine Standards

Primarily Federally-Regulated

- In-Use Loco Regulation
- Future Measures for Aviation Emissions Reductions

Other

- Consumer Products Regulation Amendments
- Zero-Emission Standard for Space and Water Heaters
- Pesticides: 1,3-D

* Adopted



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Pesticide Measure for 1,3-Dichloropropene

- EJ groups advocated for a pesticide measure
- Statewide DPR pesticide measure included in 2022 State SIP Strategy
- DPR measure currently under development
- Per Board request, the CARB Staff Report:
 - Quantifies emission reductions from DPR measure in the San Joaquin Valley
 - Describes and clarifies CARB's authority



2022 State SIP Strategy Supporting San Joaquin Valley Attainment

2037 reductions:
23.4 tpd NO_x
2.9 tpd ROG



Proposed Measure	2037 NO _x (tpd)	2037 ROG (tpd)
On-Road Heavy-Duty		
Advanced Clean Fleets Regulation	5.9	0.4
Zero-Emissions Trucks Measure	NYQ	NYQ
Total On-Road Heavy-Duty Reductions	5.9	0.4
On-Road Light-Duty		
On-Road Motorcycle New Emissions Standards	0.3	0.6
Clean Miles Standard	<0.1	<0.1
Total On-Road Light-Duty Reductions	0.3	0.6
Off-Road Equipment		
Tier 5 Off-Road Vehicles and Equipment	1.4	NYQ
Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation	0.6	<0.1
Transport Refrigeration Unit Regulation Part 2	3.8	0.5
Commercial Harbor Craft Amendments	<0.1	<0.1
Cargo Handling Equipment Amendments	<0.1	<0.1
Off-Road Zero-Emission Targeted Manufacturer Rule	NYQ	NYQ
Clean Off-Road Fleet Recognition Program	NYQ	NYQ
Spark-Ignition Marine Engine Standards	0.3	0.6
Total Off-Road Equipment Reductions	6.1	1.2
Other		
Consumer Products Standards	-	NYQ
Zero-Emission Standard for Space and Water Heaters	NYQ	NYQ
Enhanced Regional Emission Analysis in State Implementation Plans	NYQ	NYQ
Pesticides: 1,3-Dichloropropene Health Risk Mitigation	--	0.4
Total Other	NYQ	NYQ
Primarily-Federally and Internationally Regulated Sources – CARB Measures		
In-Use Locomotive Regulation	11.2	0.4
Future Measures for Aviation Emission Reductions	NYQ	NYQ
Total Primarily-Federally and Internationally Regulated Sources – CARB Measures Reductions	11.2	0.4
Aggregate Emissions Reductions	23.4	2.9

Numbers may not add up due to rounding.

Recent District Rules Reducing NOx

Measure	Amended
Rule 4306 Boilers, Steam Generators, and Process Heaters – Phase 3	December 17, 2020
Rule 4311 Flares	December 17, 2020
Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBTU/hr	December 17, 2020
Rule 4352 Solid Fuel Fired Boilers, Steam Generators, and Process Heaters	December 16, 2021
Rule 4354 Glass Melting Furnaces	December 16, 2021
Rule 4702 Internal Combustion Engines	August 19, 2021
Rule 4905 Natural Gas-Fired, Fan-Type Central Furnaces	December 16, 2021
Rule 4103 Open Burning	November 18, 2021

District SIP Commitments

Regulatory Control Measures	Action Date
Rule 4401 Steam-Enhanced Crude Oil Production Well Vents	2023/2024
Rule 4409 Components at Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities	2023/2024
Rule 4455 Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants	2023/2024
Rule 4623 Storage of Organic Liquids	2023/2024
Rule 4624 Transfer of Organic Liquid	2023/2024
Rule 4402 Crude Oil Production Sumps	2023/2024

Stationary and Area Source Sectors for Further Study

- Residential and Commercial Heating Measures
- Stationary Combustion NOx Measures
- Stationary Source VOC Measures
- Energy and Climate Change Programs
- Clean Landscaping Equipment and Practices
- Other Innovative Measures

CARB's Two-Part SIP Commitment

① Bring an item to the Board for defined new measures or take other specified actions within CARB's authority

Board adopted commitment to pursue measures in September 2022



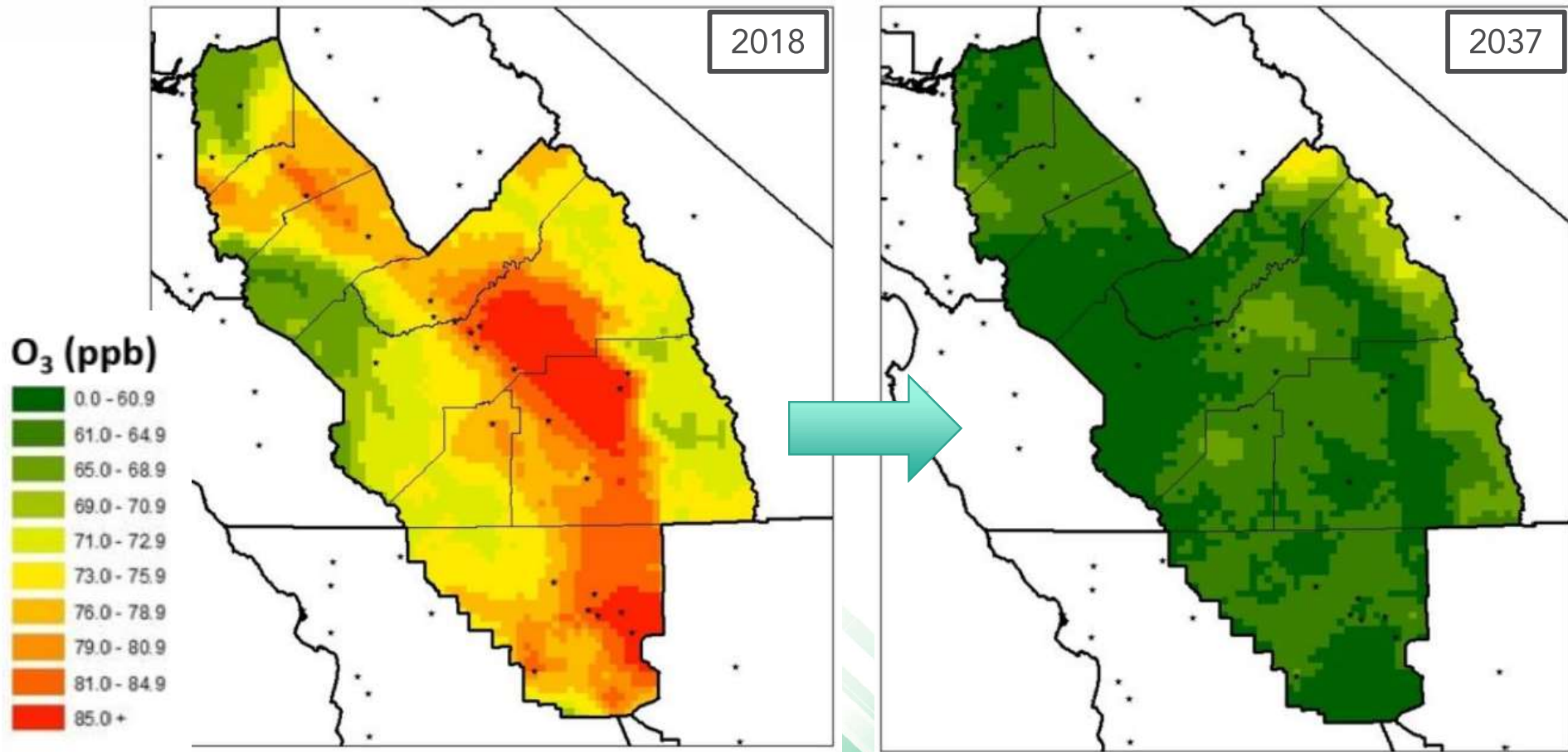
② Achieve aggregate emissions reductions by specific dates

Proposed in CARB Staff Report being considered today

Aggregate Emissions Reductions Commitments

	2037 NO _x Emissions Reductions (tpd)	2037 ROG Emissions Reductions (tpd)
CARB Emissions Reductions Commitments	25.3	4.6
2016 State SIP Strategy measures (Not yet in baseline inventory)	1.9	1.7
2022 State SIP Strategy Measures	23.4	2.9
Current Mobile Source Control Program	134.5	32.9
Total Reductions	159.8	37.5
Aggregate Emissions Reductions Commitment: Percent of Total Reductions	15.8%	12.3%

Attainment in 2037



SIP Meets Clean Air Act Requirements

Included in the 2022 Ozone Plan	Previously Submitted	To Be Submitted
Modeling and Attainment Demonstration → Aggregate Emission Reduction Commitment in CARB Staff Report	Emissions Statement (Aug. 2020)	Vehicle Inspection and Maintenance Program (Scheduled early 2023)
Reasonable Further Progress	Nonattainment New Source Review (Nov. 2019)	Severe/Extreme Area Fee Program (Due Aug. 2028)
Reasonably Available Control Measure Demonstration	Reasonably Available Control Technology Demonstration (Aug. 2020)	
Transportation Conformity, Motor Vehicle Emissions Budgets	Clean Fuels for Fleets Program (Feb. 2022)	
Emissions Inventory	Vehicle Miles Traveled Offset Demonstration (Jul. 2020)	
Contingency Measure Discussion	Clean Fuels for Boilers Program (Aug. 2021)	



Federal Action Needed

- Key emissions sources not primarily under CARB or District authority
- Federal action needed to reduce emissions to improve air quality and accelerate attainment



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Staff Recommendations

1. Adopt commitment to achieve aggregate emission reductions in 2037
 - 25.3 tpd NO_x, 4.6 tpd ROG
2. Adopt 2022 Ozone Plan
3. Submit aggregate commitment and 2022 Ozone Plan into the California SIP

