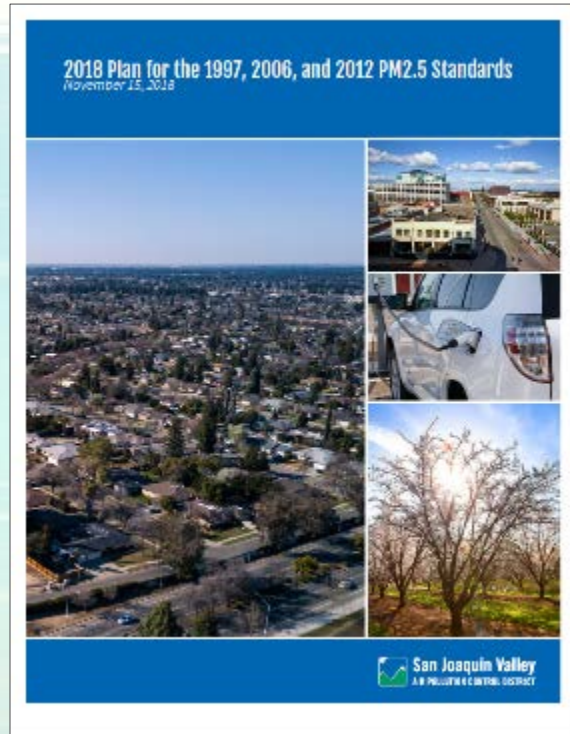




# Update on the 2018 PM<sub>2.5</sub> SIP for the San Joaquin Valley

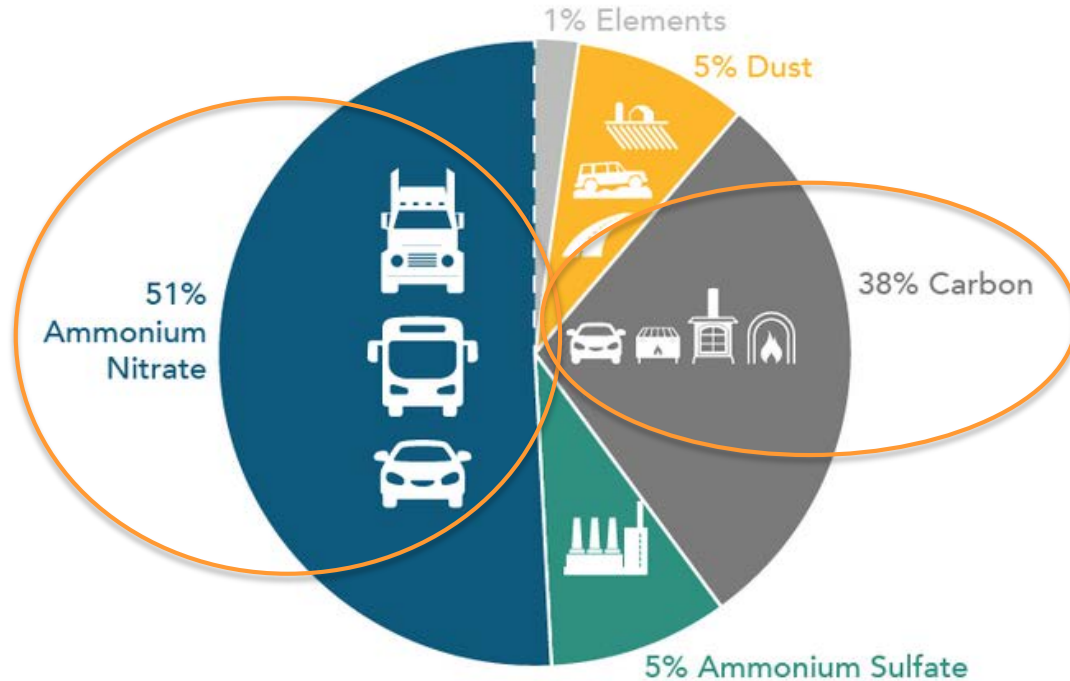
October 22, 2020

# San Joaquin Valley 2018 PM2.5 SIP



- First ever comprehensive strategy to address all four PM2.5 air quality standards in the Valley
- Joint CARB and District strategy
- Adopted January 2019

# Shared Responsibility



Valley PM2.5 Composition

# SIP Addresses Four PM2.5 Standards



# Adopted SIP Measures

Measure	Adopted
Heavy-Duty (HD) Low NOx Omnibus	Aug. 2020
Advanced Clean Trucks	June 2020
Accelerated Turnover of Agricultural Equipment Incentive Measure	Dec. 2019
Zero-Emission Airport Shuttle Buses	June 2019
District: Residential Wood Burning Strategy	June 2019
Innovative Clean Transit	Dec. 2018
Amended Warranty Requirements for HD Vehicles	June 2018
Lower Opacity Limits for HD Vehicles	May 2018

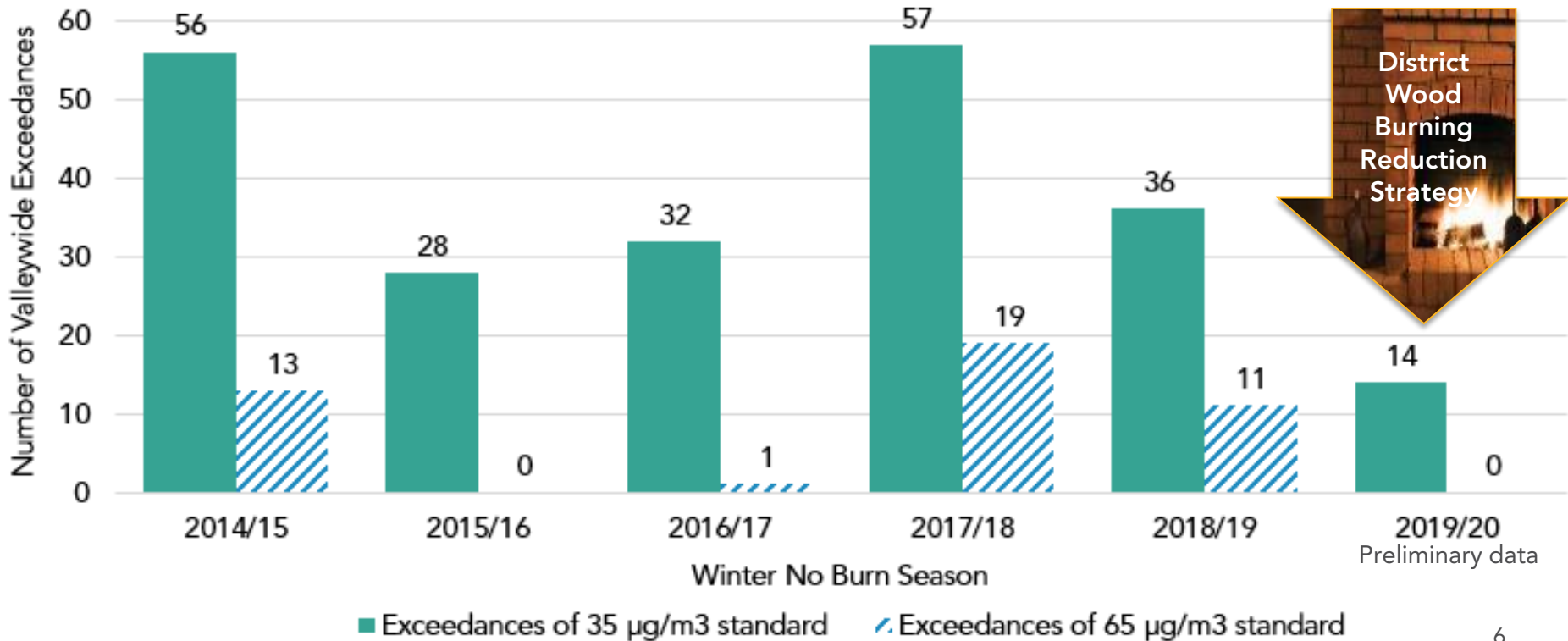
**2024 Reductions: 6.0 tons per day (tpd) NOx,  
0.7 tpd PM2.5 (0.3 CARB, 0.4 District)**

# Agricultural Equipment Turnover



- SIP credit for cost-effective agricultural equipment emissions reductions
  - 5.9 tpd NO<sub>x</sub>, 0.3 tpd PM<sub>2.5</sub> with existing funds
  - Over halfway to SIP target for agricultural equipment
- U.S. EPA proposed approval in March 2020
- District continues to distribute grants despite COVID-19; more projects in the pipeline

# District Residential Wood Burning



# Key Upcoming CARB SIP Measures

Measure	Planned Board Date
Heavy-Duty Vehicle Inspection & Maintenance Program	2021
Transport Refrigeration Unit Regulation	2021
Small Off-Road Engines	2021
Low-Emission Diesel Fuel Requirement	2021
Accelerated Turnover of Trucks and Buses Incentive Measure	2021
Accelerated Turnover of Agricultural Equipment, Second Incentive Measure	2024

**Anticipated 2024 Reductions:  
13.2 tpd NO<sub>x</sub>, 0.6 tpd PM<sub>2.5</sub>**



# Key Upcoming District SIP Measures

Measure	Planned Board Date
Rule 4311: Flares	2020
Rules 4306/4320: Boilers, Steam Generators, and Process Heaters	2020
Rule 4702: Internal Combustion Engines (regulatory/incentive-based)	2020
Rule 4692: Commercial Underfired Charbroiling (Hot-Spot Strategy)	2020
Rule 4354: Glass Melting Furnaces	2021
Rule 4352: Solid Fuel-Fired Boilers, Steam Generators, and Process Heaters	2021
Rule 4550: Conservation Management Practices	2022

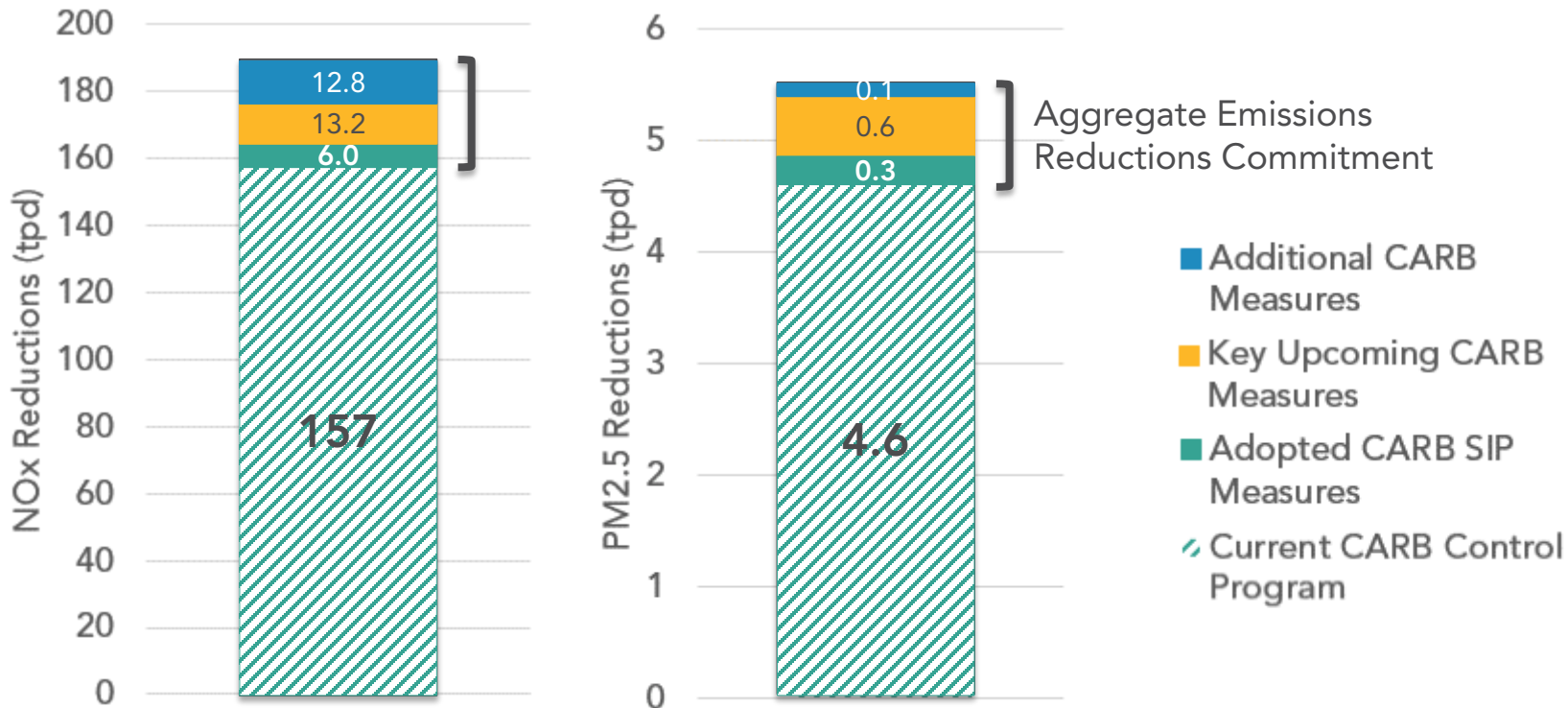


**Anticipated 2024 Reductions: 1.9 tpd NO<sub>x</sub>, 0.9 tpd PM<sub>2.5</sub>**  
Will fulfill District's PM<sub>2.5</sub> Plan aggregate commitment

# CARB's Two-Part SIP Commitment

1. Bring proposed SIP measures to the Board for consideration
2. Achieve aggregate emissions reductions in 2024 and 2025
  - 32 tpd NO<sub>x</sub>
  - 1 tpd PM<sub>2.5</sub>

# Reaching Attainment



CARB Reductions Needed for Attainment in 2024

# Incentives Status

- Incentive funding levels have been lower than expected since 2019 SIP adoption
- Available funds have been used cost-effectively and accelerated emissions reductions
- Continued incentive funding is critical
- CARB will consider regulatory and focused incentive measures to meet SIP commitment

# Additional CARB Measures

Measure	Action
Locomotive Measure	Early 2022
First Phase Heavy-Duty Vehicle Inspection & Maintenance: SJV	2023
Cargo Handling Equipment Regulation	2023/2024
Construction and Mining Equipment Measure	2024
Co-Benefits from Climate Program	2020-2024

# Locomotive Measure

- Replace old diesel locomotives with cleaner ones to reduce criteria, toxics, and GHG emissions
- In-use measure to limit idling



# First Phase Heavy-Duty Vehicle Inspection & Maintenance: SJV

- Use CARB's Portable Emissions Acquisition System (PEAQs) to find the dirtiest trucks
- Opacity enforcement: PM<sub>2.5</sub> reductions before 2023
- First Phase HD I/M: NO<sub>x</sub> reductions starting January 1, 2023
- Require vehicles identified as high emitters of PM or NO<sub>x</sub> to be repaired



# Five PEAQS on Major SJV Truck Corridors to Capture High-Emitters



San Joaquin Valley Interregional  
Goods Movement Plan



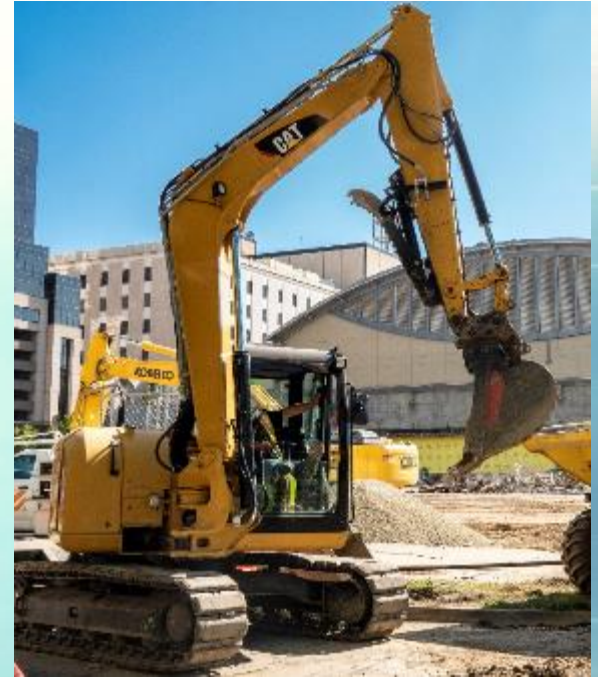
# Cargo Handling Equipment Regulation

- Applies to on-site seaport and intermodal railyard equipment
- Transition to zero-emission expected to begin in 2026
- Staff are evaluating role of hybrid equipment for near-term reductions
- Role of infrastructure critical



# Construction & Mining Equipment Measure

- Target high-emitting pieces of equipment and replace them with the cleanest available technology
- May include a combination of regulatory action, incentives, and green contracting



# Co-Benefits from Climate Program

Take credit for criteria pollutant benefits of adopted GHG programs

- Low-Carbon Transportation
- Community Air Protection Grants
- Climate Smart Agriculture



# Additional District Measures

Measure	Action
Low-Dust Nut Harvester Technology Deployment Program	2019
Alternatives to Open Agricultural Burning Incentive Pilot Program	2019
Clean Green Yard Machine Commercial Voucher Program	2019
Evaluation of agricultural open burning and alternatives	2020
Rule 4352: Solid Fuel-Fired Boilers, Steam Generators, and Process Heaters (evaluating additional opportunities)	2021
Rule 4354: Glass Melting Furnaces (evaluating additional opportunities)	2021

# Low-Dust Nut Harvester Technology Deployment Program



- Program supports deployment and evaluation of low-dust technology (\$2 million allocated to date)
- Equipment being deployed in all regions of San Joaquin Valley
- District recently awarded \$10 million federal Targeted Airshed Grant for broader deployment of technology



# Evaluation of Agricultural Open Burning and Alternatives



- Burning significantly reduced
- Since November 2018, \$10.5 million in District grants for nearly 20,000 acres of on-field alternatives
- Evaluation and report in progress; due to CARB end of 2020

# Mid-to-Longer-Term Planning with Near-Term Benefits



Executive Order  
N-79-20



Technology  
Clearinghouse

# Next Steps

- Throughout 2021: Multiple key SIP measures for Board consideration
  - Maximize near-term emissions reductions from CARB's current regulatory calendar
  - Accelerate zero-emission technology adoption
- February 2021: SJV's 2020 open agricultural burning report and any SIP implementation updates