

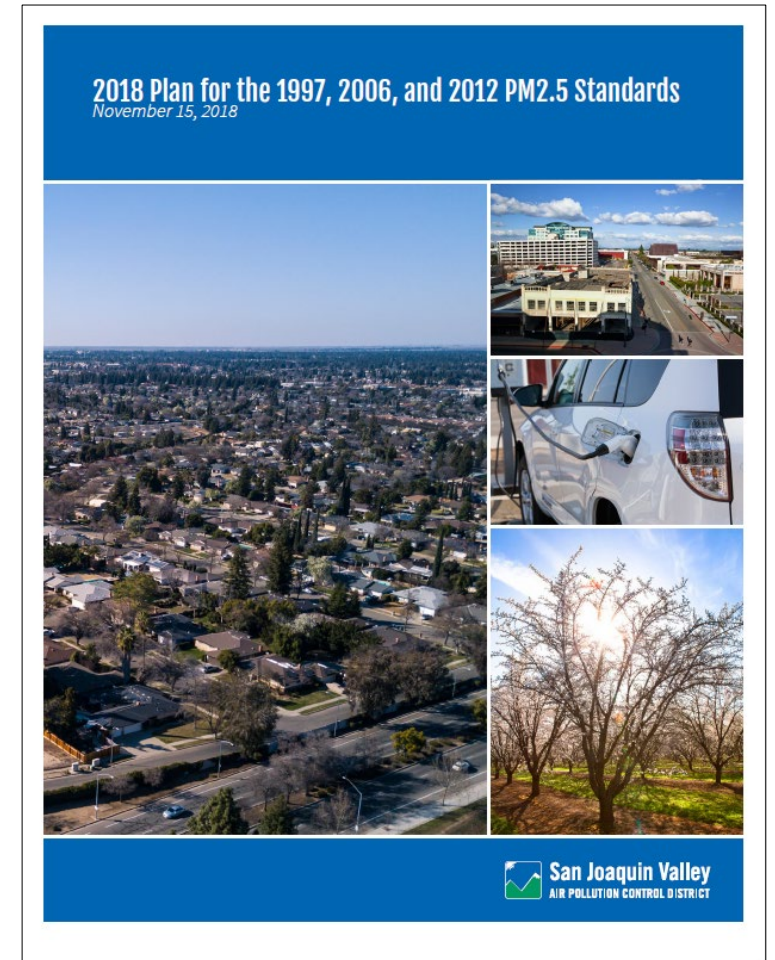
PM2.5 Plan for the San Joaquin Valley

January 24, 2019 – Fresno, California



Valley PM2.5 Plan: A significant step forward

- First time a plan addresses all four PM2.5 air quality standards
- Shaped by extensive public process
- Includes controls on important stationary sources
- Relies on significant mobile source reductions



Where we were two years ago

2016 Moderate Area Plan for the 2012 PM2.5 Standard

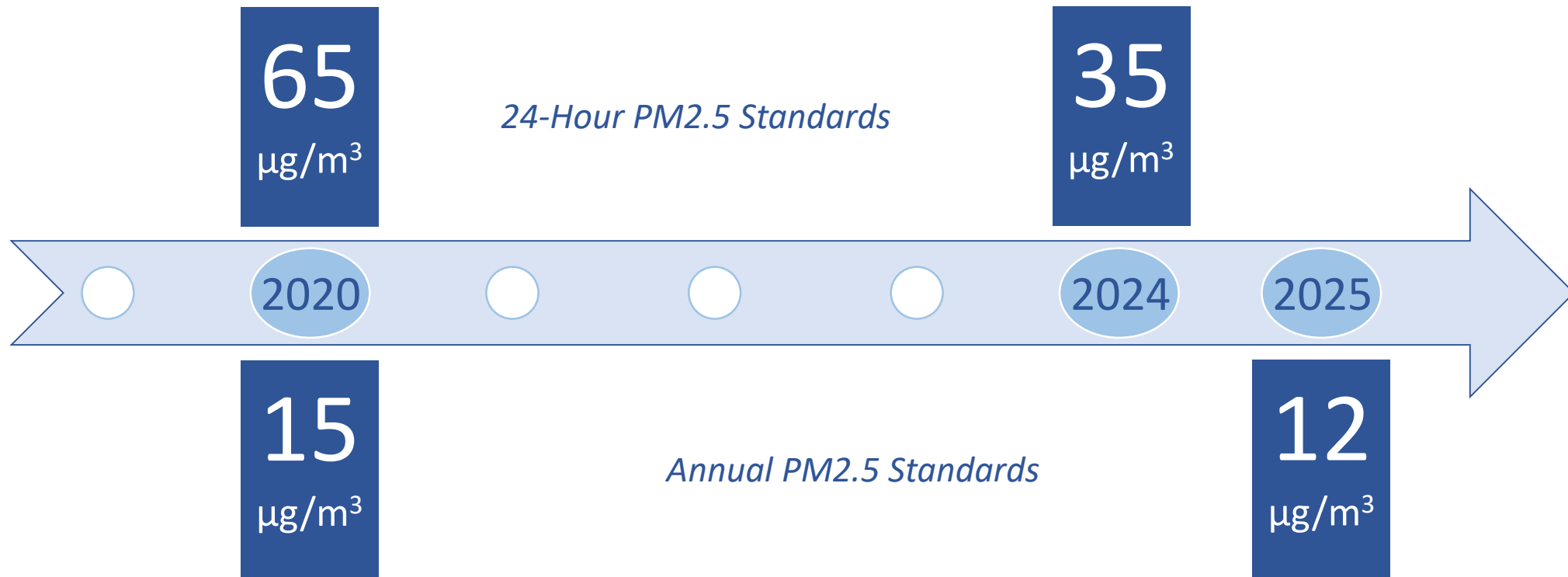
San Joaquin Valley Air Pollution Control District

- Demonstrated that attainment of $12 \mu\text{g}/\text{m}^3$ annual PM2.5 standard by 2021 was impracticable
- Adopted by District September 2016
- Lacked clear path to attainment for PM standards; Board directed staff to:



Conduct more thorough public process, find additional direct PM2.5 and NOx reductions from both mobile and stationary sources, return to the Board with a path for attaining all PM2.5 standards in the Valley

Where we are today



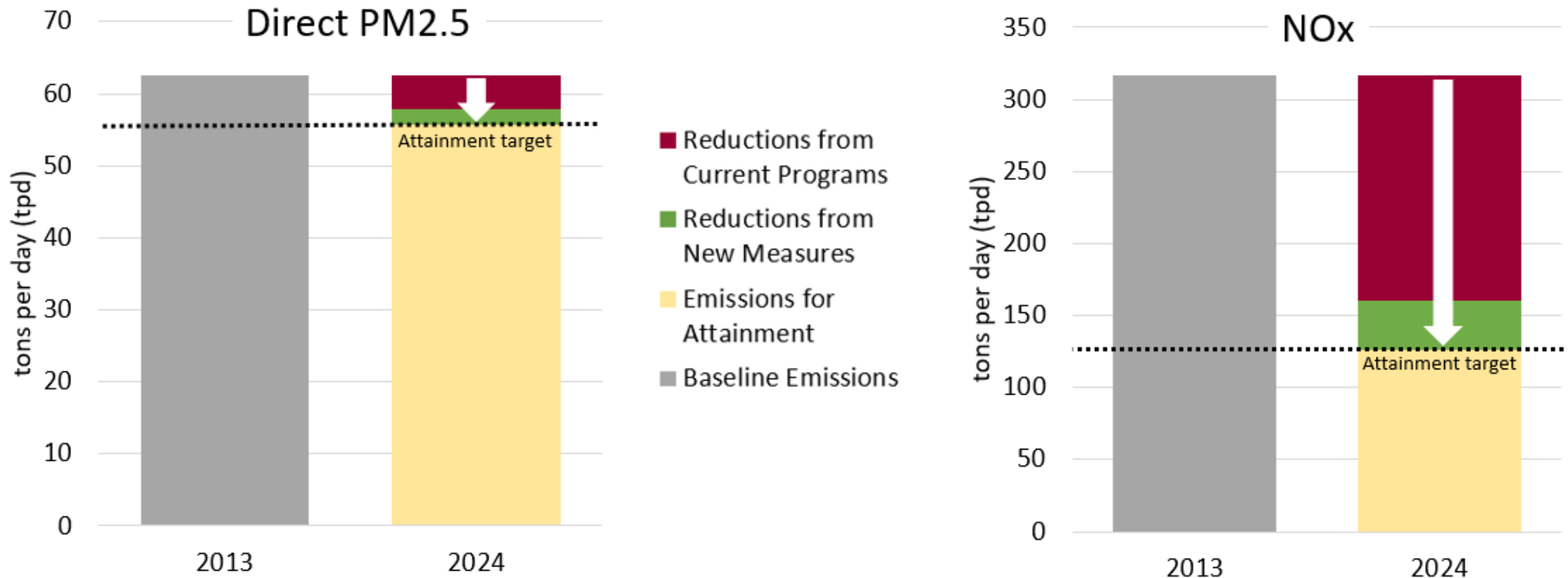
Valley PM2.5 Plan meets Act requirements for all four standards

Positive process creates a path forward



District and CARB Board members and executives, U.S. EPA, industry, health advocates, and public members discuss the draft Plan in Fresno, August 2018

Reductions needed for Valley PM2.5 attainment



Overview of District strategy

- Achieves 1.3 tpd direct PM2.5 reduction and 1.9 tpd NOx reduction in 2024
- Strengthens residential wood-burning rule
- Incentives for charbroiling controls
- Incentives for low-dust nut harvesting equipment and alternatives to open agricultural burning pilot projects
- Tightens controls on suite of stationary sources

District strategy in detail

Emission Reductions from Measures	Direct PM2.5 (tpd) 2024	NOx (tpd) 2024
Flares	N/A	0.05
Boilers, Steam Generators, and Process Heaters – Phase 3 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr Internal Combustion Engines used at Agricultural Operations Glass Plants Solid Fuel-Fired Boilers, Steam Generators, and Process Heaters	0.03	1.83
Conservation Management Practices	0.32	N/A
Commercial Charbroiling	0.53	N/A
Wood Burning Fireplaces and Wood Burning Heaters	0.42	N/A

CARB Valley PM strategy

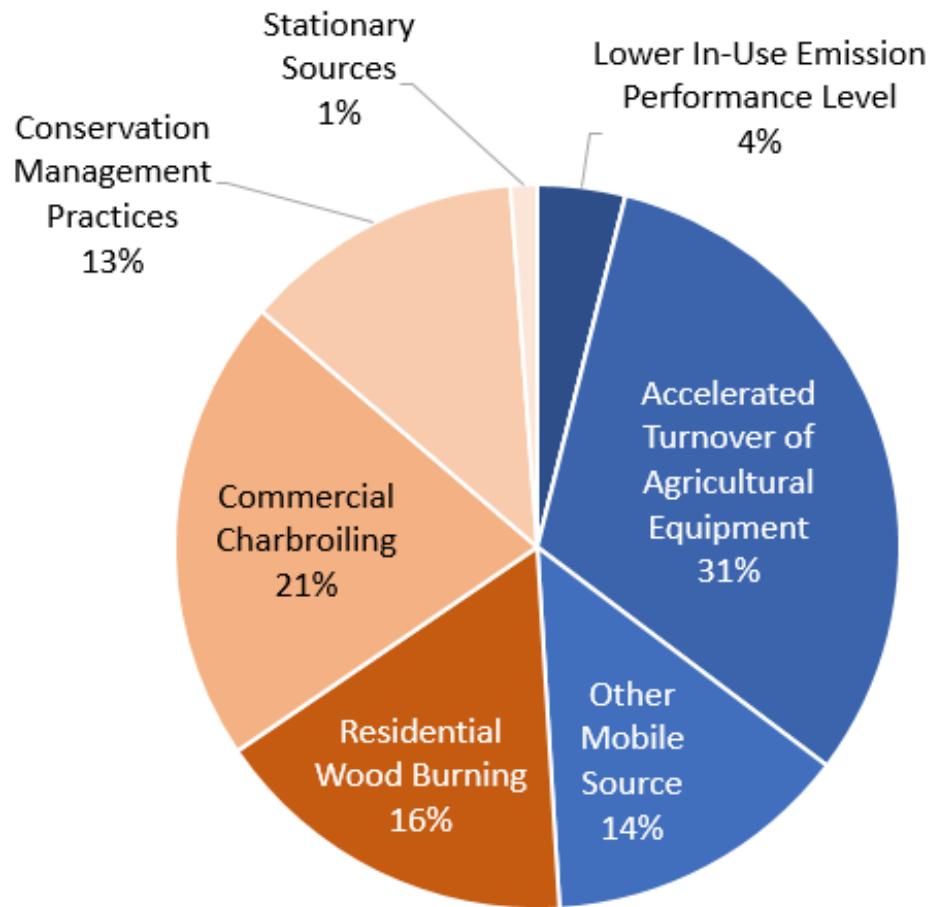
- Current mobile source control program achieves most of needed reductions
- New mobile source reductions come from 2016 State SIP Strategy and **SJV Supplement to the 2016 State SIP Strategy**
 - Board adopted October 2018
- New measures achieve 1 tpd direct PM2.5 reduction and 32 tpd NOx reduction in 2024
- Aggressive action and implementation timeline
- Low-NOx engine standard and agricultural equipment measures this year



CARB Valley strategy in detail

Emission Reductions from Selected Measures	Direct PM2.5 (tpd) 2024	NOx (tpd) 2024
Lower Opacity Limits for Heavy-Duty Vehicles – ADOPTED	<0.1	6.8
Amended Warranty Requirements for Heavy-Duty Vehicles – ADOPTED		
Heavy-Duty Vehicle Inspection and Maintenance Program		
Low-NOx Engine Standard – California Action	N/A	0.7
Low-NOx Engine Standard – Federal Action	N/A	0.7
Low-Emission Diesel Fuel Requirement	0.1	0.8
Accelerated Turnover of Trucks and Buses	NYQ	10
Accelerated Turnover of Agricultural Equipment	0.8	11
Accelerated Turnover of Off-Road Equipment	NYQ	2

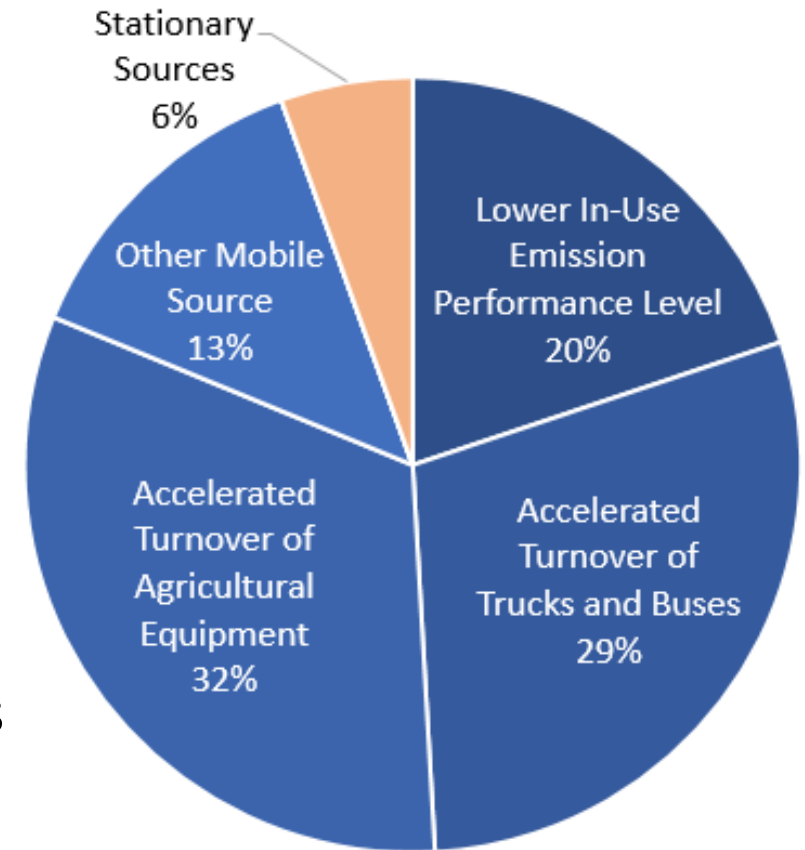
Direct PM2.5 and NOx reductions from State and District control measures



Direct PM2.5 reductions

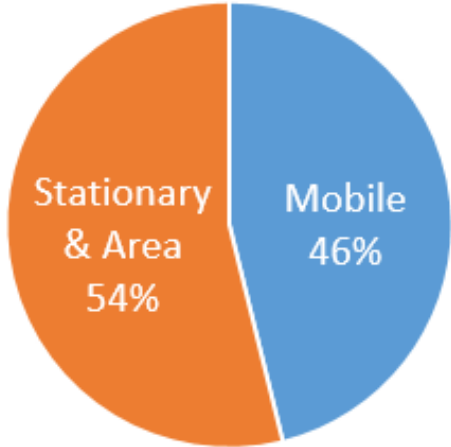
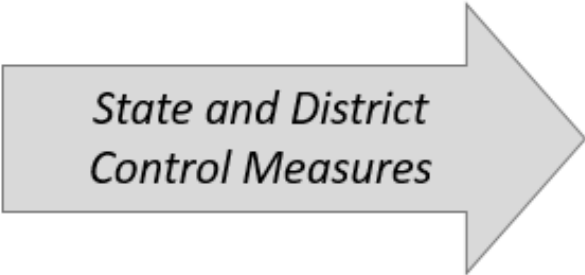
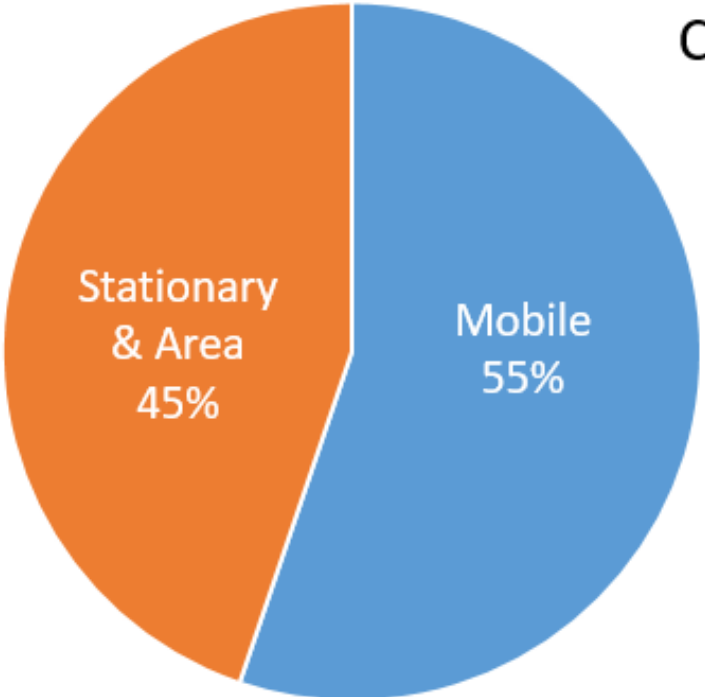


NOx reductions



Valley air now and in the future

Contribution of Mobile, Stationary, and Area Sources to the 24-Hour Design Value at Fresno



2013
60.0 $\mu\text{g}/\text{m}^3$

Plan delivers more than 40% improvement in air quality



2024
35.1 $\mu\text{g}/\text{m}^3$
Attainment

Incentive funds will continue to be critical element to success

- Approx. \$5 billion in incentives needed by 2024 to accelerate last increment of reductions
- Significant commitment by agricultural industry to replace approx. 12,000 tractors and equipment
- District/industry working now to distribute \$200+ million for FY17/18 and FY18/19 for agricultural equipment

Next steps focus on...

Securing
incentive funds

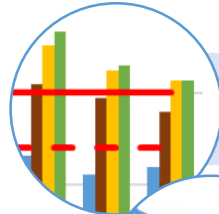
Implementation of
residential wood
burning rule

Finding alternatives to
open agricultural
burning

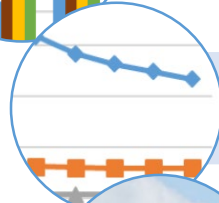
Research on
ammonia

Annual reporting on Plan implementation

Update the Board on...



Air quality trends



Emissions trends



Enforcement



Latest relevant research and science



Regulatory actions



Status of incentive money

Staff recommendation

- Adopt the **2016 Moderate Plan** as a revision to the California SIP – required for U.S. EPA’s stepwise process
- Adopt the **Valley PM2.5 Plan** as a revision to the California SIP