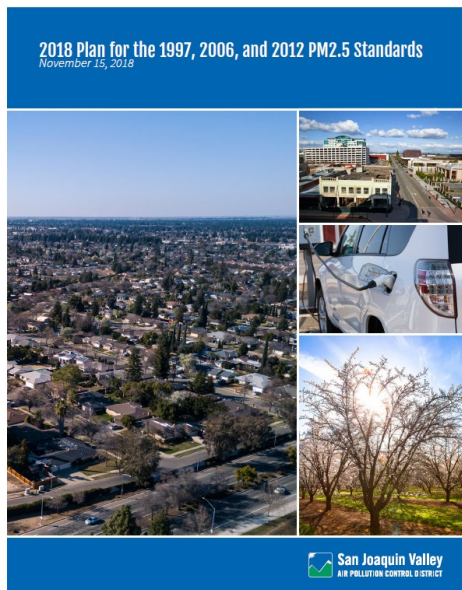




Update on the 2018 PM_{2.5} SIP for the San Joaquin Valley

September 19, 2019

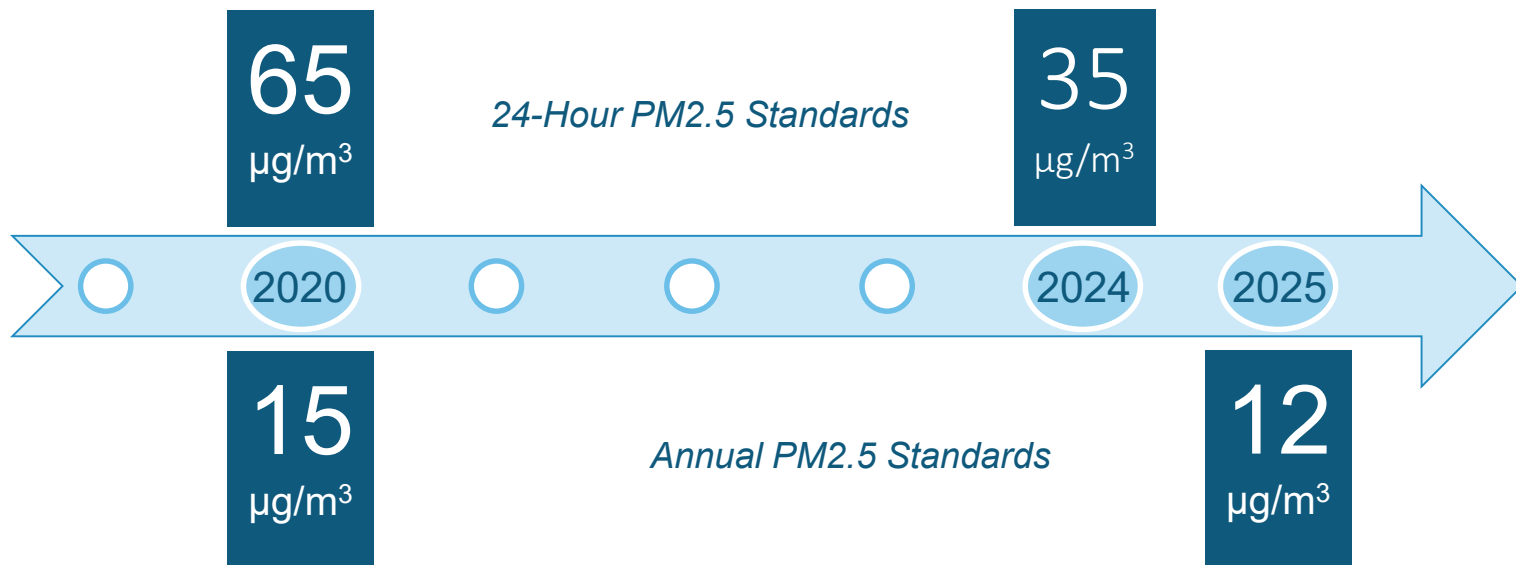
San Joaquin Valley 2018 PM2.5 SIP



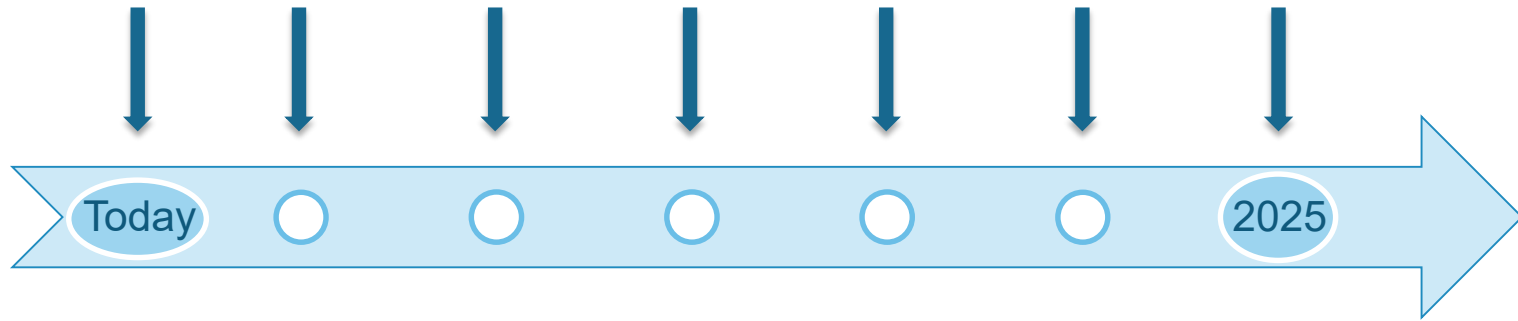
Comprehensive strategy to
address PM2.5 air quality
in the Valley

Adopted January 2019

SIP Addresses Four PM2.5 Standards

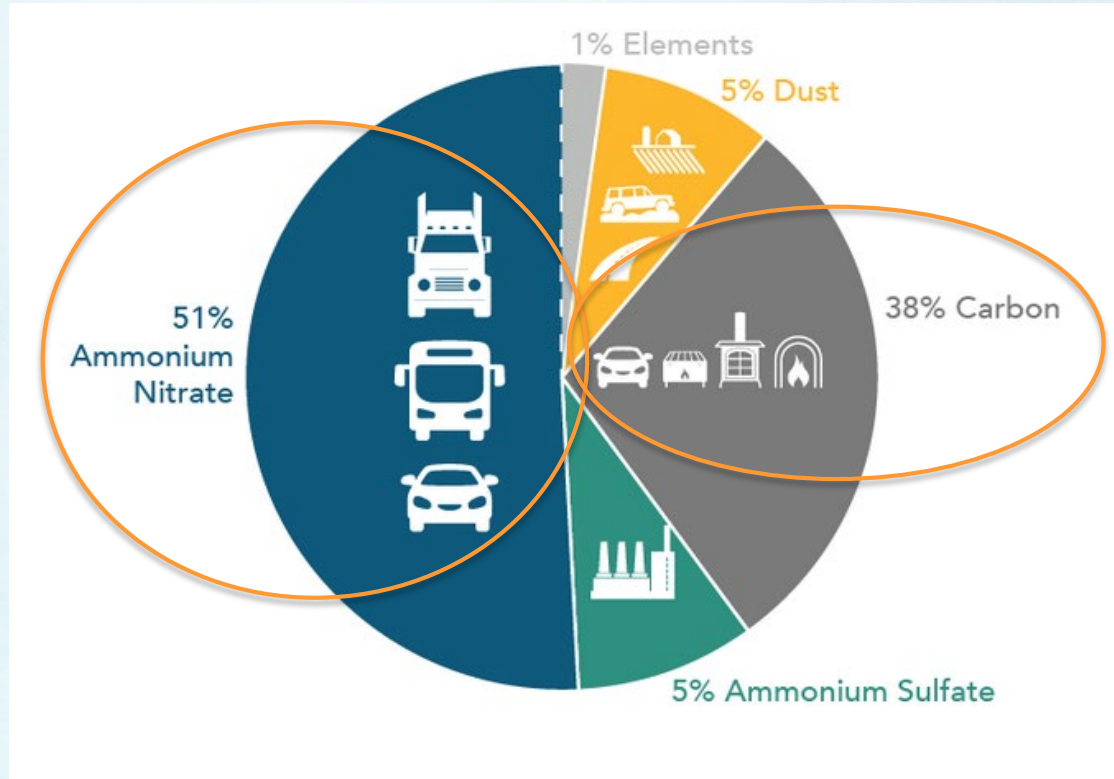


Regular Implementation Updates for Board



First checkpoint in a multi-year process

PM2.5 Composition in the Valley



Today's Update

**Regulatory
Actions**

*Implementation
Highlight:*
Agriculture

*Implementation
Highlight:*
**Trucks and
Buses**

*Implementation
Highlight:*
**Residential
Wood-Burning**

**Air Quality &
Emissions
Trends**

**Emission
Reduction
Credit Program
Review**

Next Steps

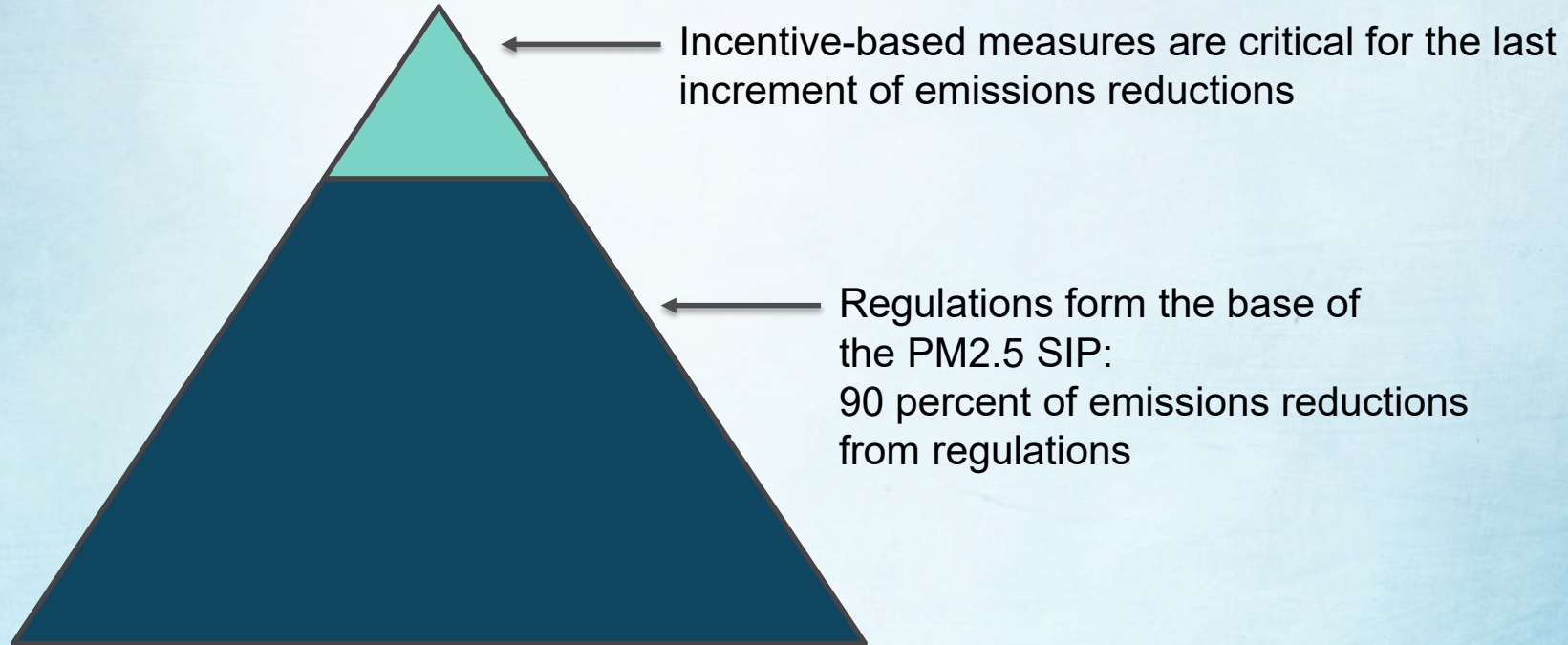
Regulatory Actions



Measures in the PM2.5 SIP

Agency	Adopted	Scheduled for Board Consideration
CARB	<ul style="list-style-type: none"> ✓ May 2018: Lower Opacity Limits for Heavy-Duty Vehicles ✓ June 2018: Amended Warranty Requirements for Heavy-Duty Vehicles ✓ December 2018: Innovative Clean Transit ✓ June 2019: Zero-Emission Airport Shuttle Buses 	<p>2020</p> <ul style="list-style-type: none"> • Low-NOx Engine Standard • Heavy-Duty Vehicle Inspection and Maintenance Program <p>2021</p> <ul style="list-style-type: none"> • Advanced Clean Cars 2 • Low-Emission Diesel Fuel Requirement
District	<ul style="list-style-type: none"> ✓ June 2019: Residential Wood-Burning Emission Reduction Strategy 	<p>2020</p> <ul style="list-style-type: none"> • Flares • Internal Combustion Engines • Boilers, Steam Generators, and Process Heaters • Commercial Underfired Charbroilers <p>2021</p> <ul style="list-style-type: none"> • Glass Melting Furnaces • Solid Fuel-Fired Boilers, Steam Generators, and Process Heaters

Role of Regulations and Incentives



*Implementation
Highlight:*
Agriculture



Agricultural Equipment Replacement

- Over 4,000 pieces of agricultural equipment replaced since January 2015
- District has contracted all first-year FARMER funding
- More projects in the pipeline



Agricultural Equipment Incentive Measure

- SIP credit for agricultural equipment emissions reductions
- Board consideration: November 2019
- Halfway to SIP target for agricultural equipment

Over 5 tpd NOx

Reductions from
completed projects

About 5 tpd NOx

Need approximately
\$150 million/year from
2020 through 2023

Incentive Funds for Agricultural Equipment

Funding sources and programs specific to agriculture include:

NRCS (USDA):
\$37.5 million **nationwide**
annually for FYs 2019-2023

FARMER:
\$65 million **statewide**
for FY 2019-2020

U.S. EPA grants:
\$15 million **for the Valley**
for FY 2019-2020

Other Programs

Three other District ag programs successful and oversubscribed

- Funded 1,550 all-electric ag UTVs, demand for 500 more
- \$2 million for alternatives to open agricultural burning
- \$2 million for low-dust nut harvesting



*Implementation
Highlight:*
**Trucks and
Buses**



Truck and Bus Incentive Measure

- SIP credit for surplus emissions reductions from trucks and buses
- Board consideration in 2021
- Refining estimates of incentive funding needed through 2024



Incentive Funds for Trucks and Buses

Funding sources and programs available for trucks and buses include:

Low Carbon Transportation:
\$455 million **statewide**
for FY 2018-2019

Carl Moyer:
\$78 million **statewide**
for FY 2018-2019

AB 617:
\$245 million **statewide**
for FY 2018-2019

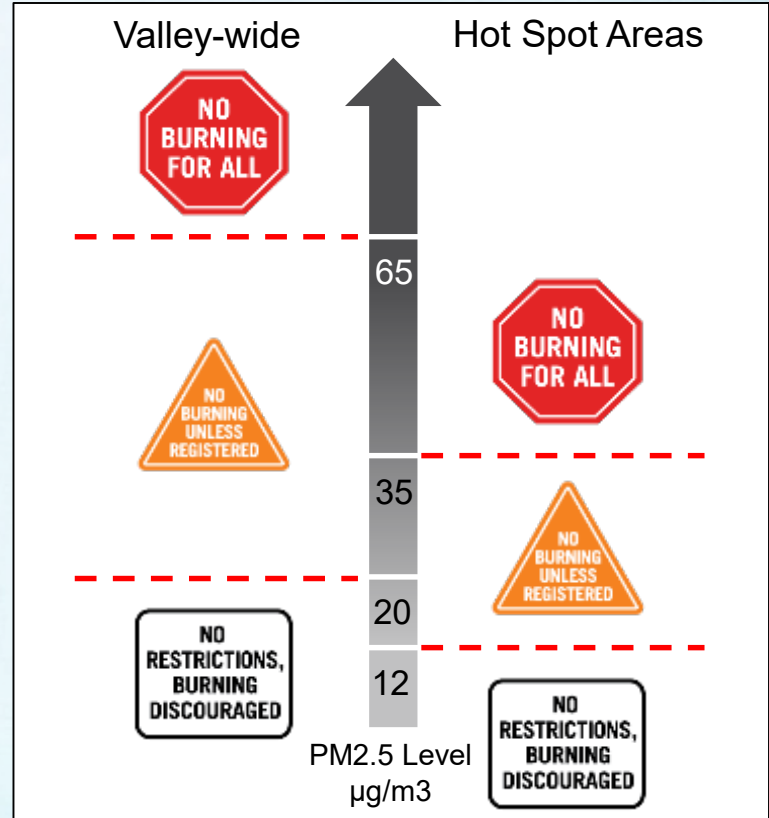
Prop 1B:
Already awarded

*Implementation
Highlight:*
**Residential
Wood-Burning**



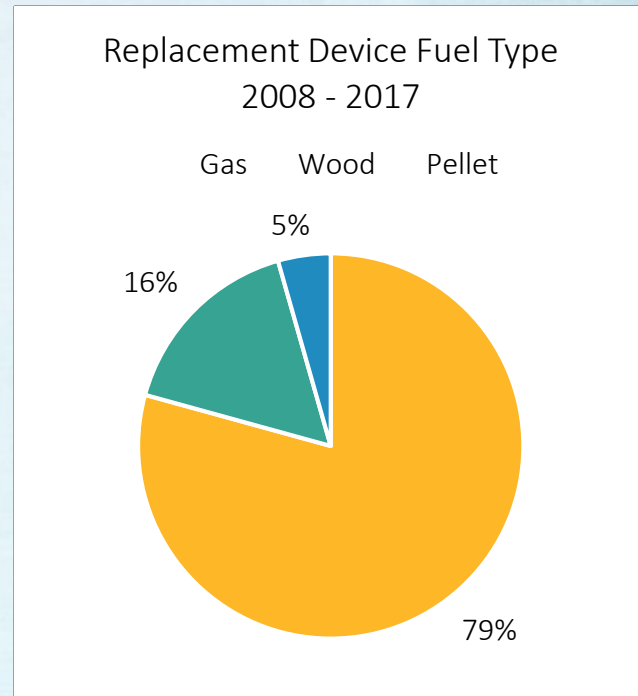
Curtailment Levels

- District strengthened residential burning rule
- Lower curtailment levels in “hot spot areas” of Kern, Fresno, and Madera Counties take effect this winter
- Includes contingency element



Wood Stove Replacement

- District replaced 1,300 wood-burning devices during winter 2018-2019 with \$2.2 million
- Over 16,000 total replacements in the Valley
- Almost 80 percent are wood-to-natural gas
- Reduces near source exposure



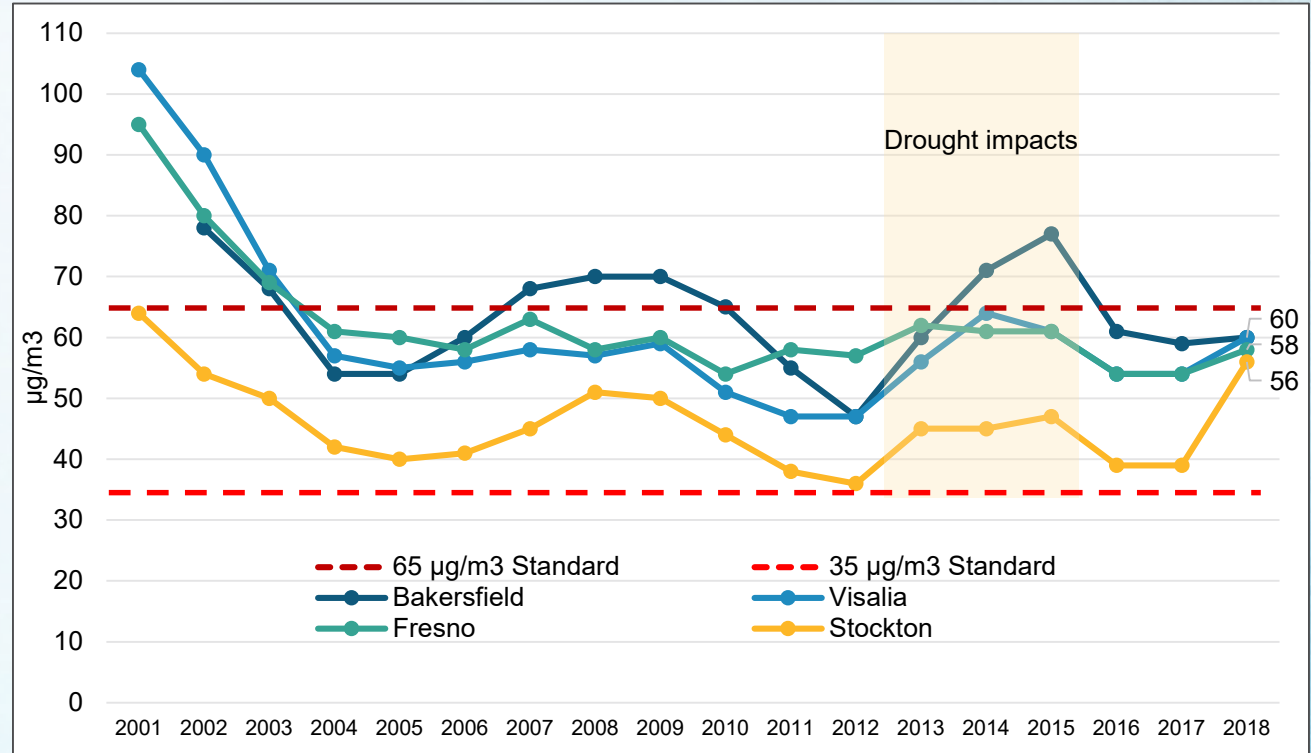
Air Quality & Emissions Trends



24-Hour Design Value Trends

All sites meet
 $65 \mu\text{g}/\text{m}^3$

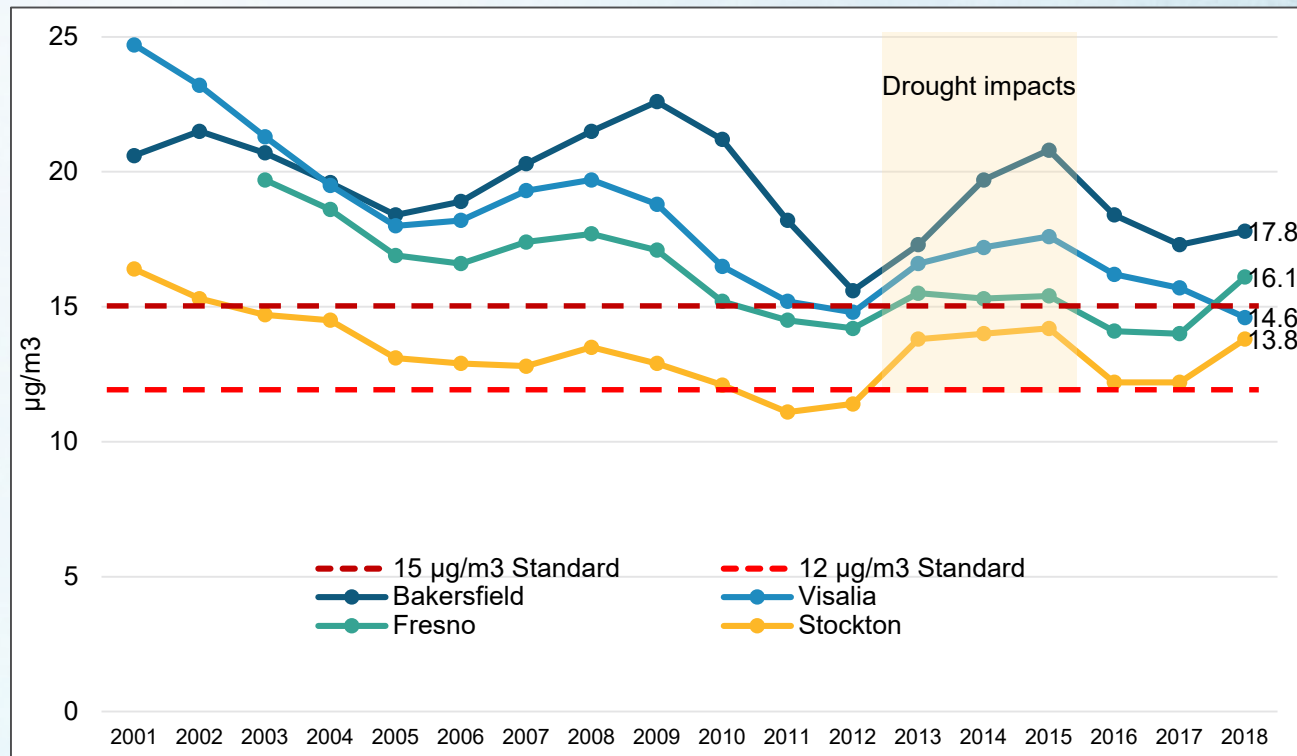
Reductions
needed to attain
 $35 \mu\text{g}/\text{m}^3$ by 2024



Annual Design Value Trends

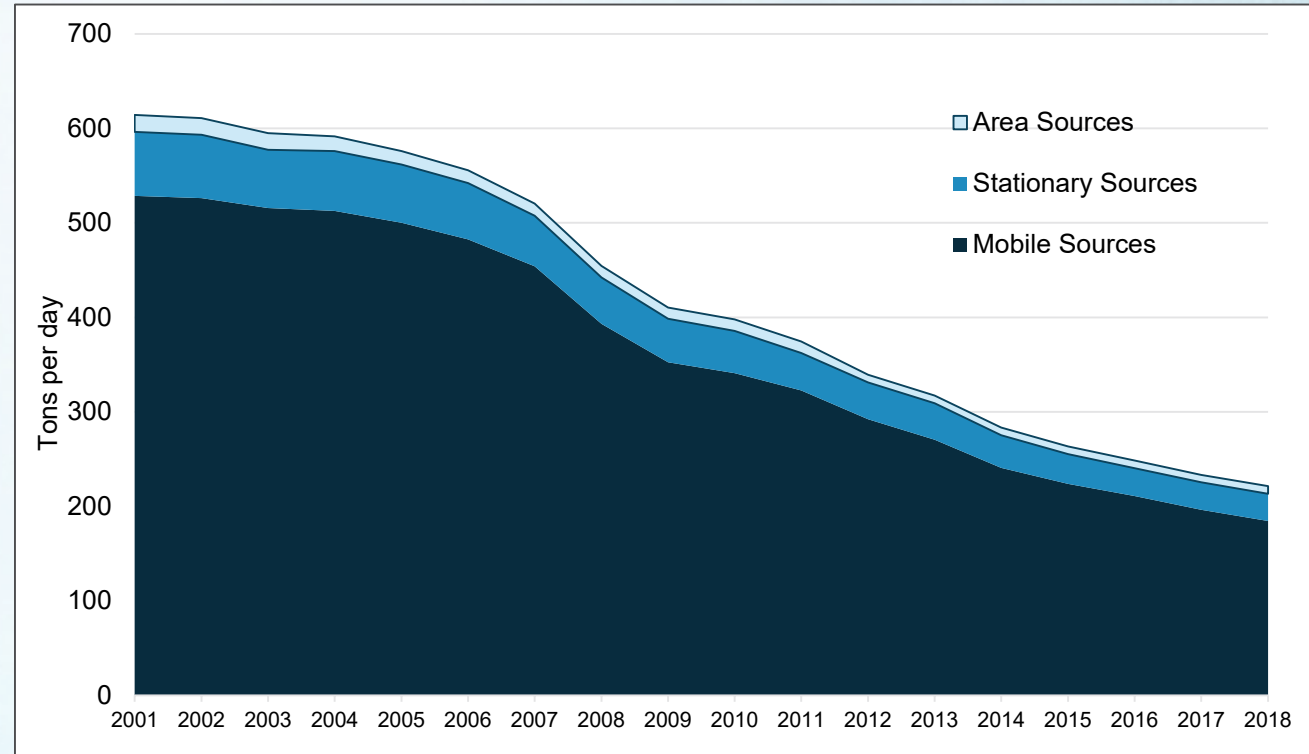
Six sites in south
Valley above
 $15 \mu\text{g}/\text{m}^3$ in 2018;
challenge to attain
by 2020

Reductions
needed to attain
 $12 \mu\text{g}/\text{m}^3$ by 2025



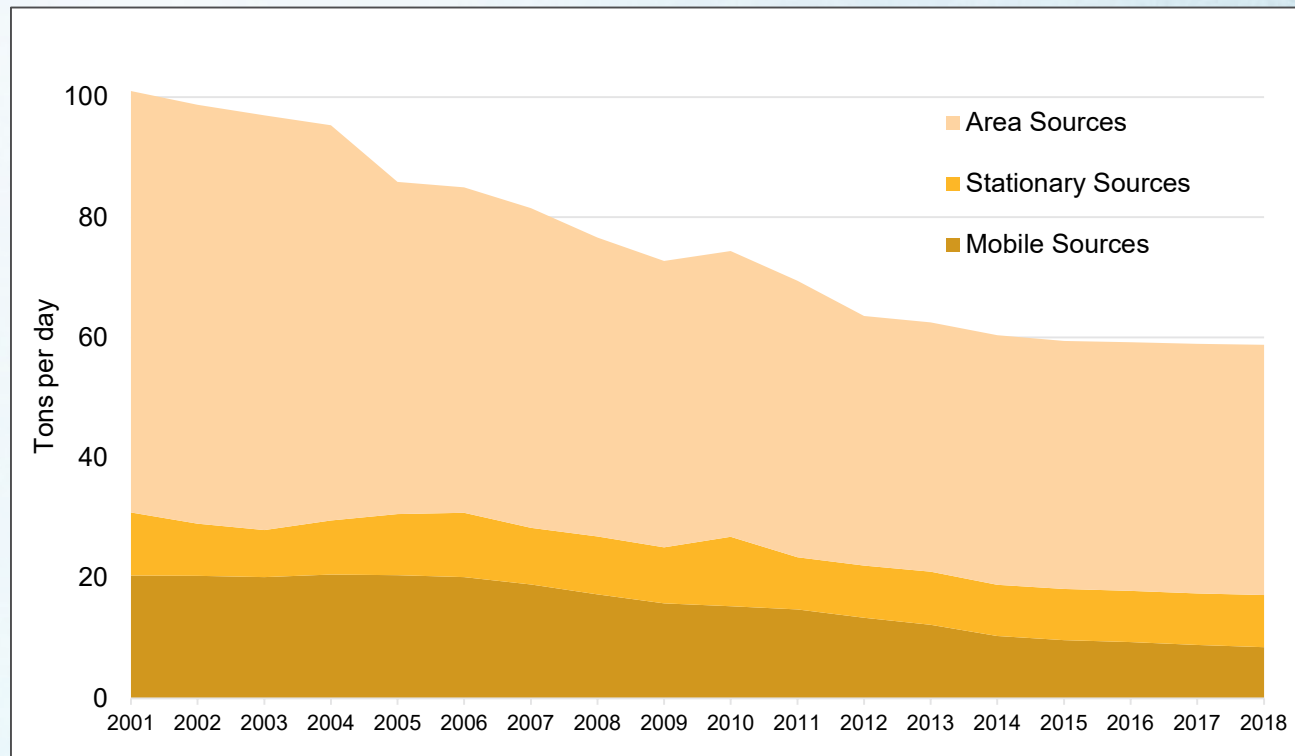
NOx Emissions Trends

Ongoing steep
mobile source
NOx reductions



PM2.5 Emissions Trends

Need to continue
direct PM2.5
reductions



Emission Reduction Credit Program Review



Goals

- Review the ERC system and evaluate whether the program is meeting legal requirements
- Determine if there are ways the system might be improved

Elements of Review

- Explanation of the ERC program
- Evaluation of ERC banking actions
- Evaluation of the Federal Offset Equivalency Demonstration
- Analysis of the use of offsets in permitting

Status and Next Steps

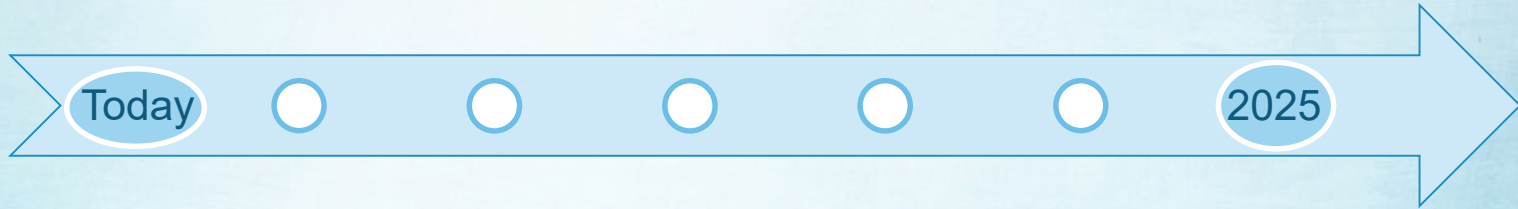
- Held two workshops
- Released progress report
- Requesting and analyzing information from the District
- Developing findings and recommendations
- Public workshop in early spring 2020
- Board meeting in spring 2020

Next Steps



Three-Part Strategy

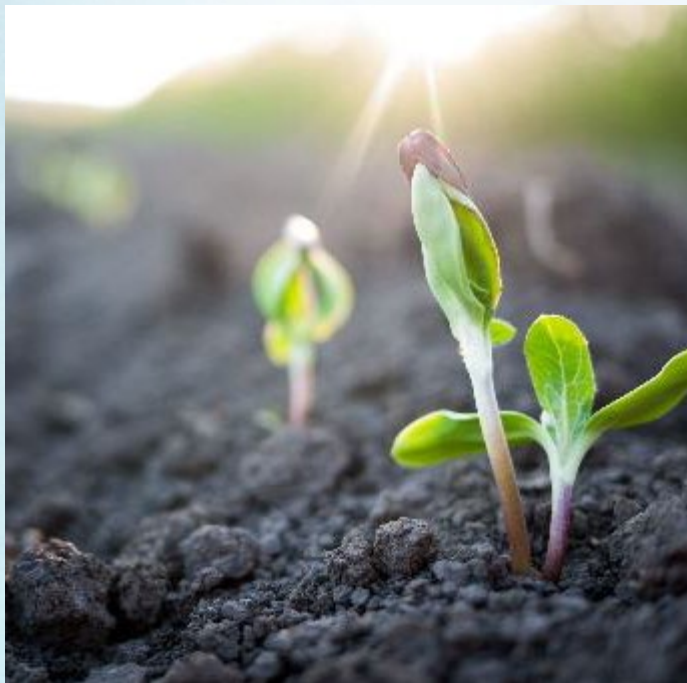
1. Keep on track with ambitious rulemaking calendar
2. Continue pushing for incentive dollars
3. Continue looking for additional opportunities for emissions reductions



Implementation Working Group

- Formed working group to provide venue for stakeholders to collaboratively facilitate SIP implementation
- CARB and District will discuss opportunities for additional measures
- Held first meeting August 2019

Next Update



- Regulatory actions
- Incentive funds
- Grant programs
- Research findings
- Additional emission reduction opportunities