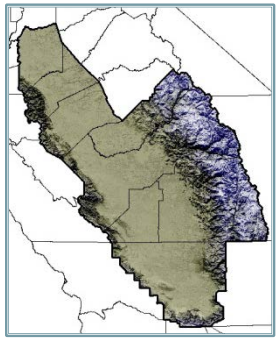
2016 OZONE SIP FOR THE SAN JOAQUIN VALLEY



July 21, 2016

California Environmental Protection Agency
Air Resources Board

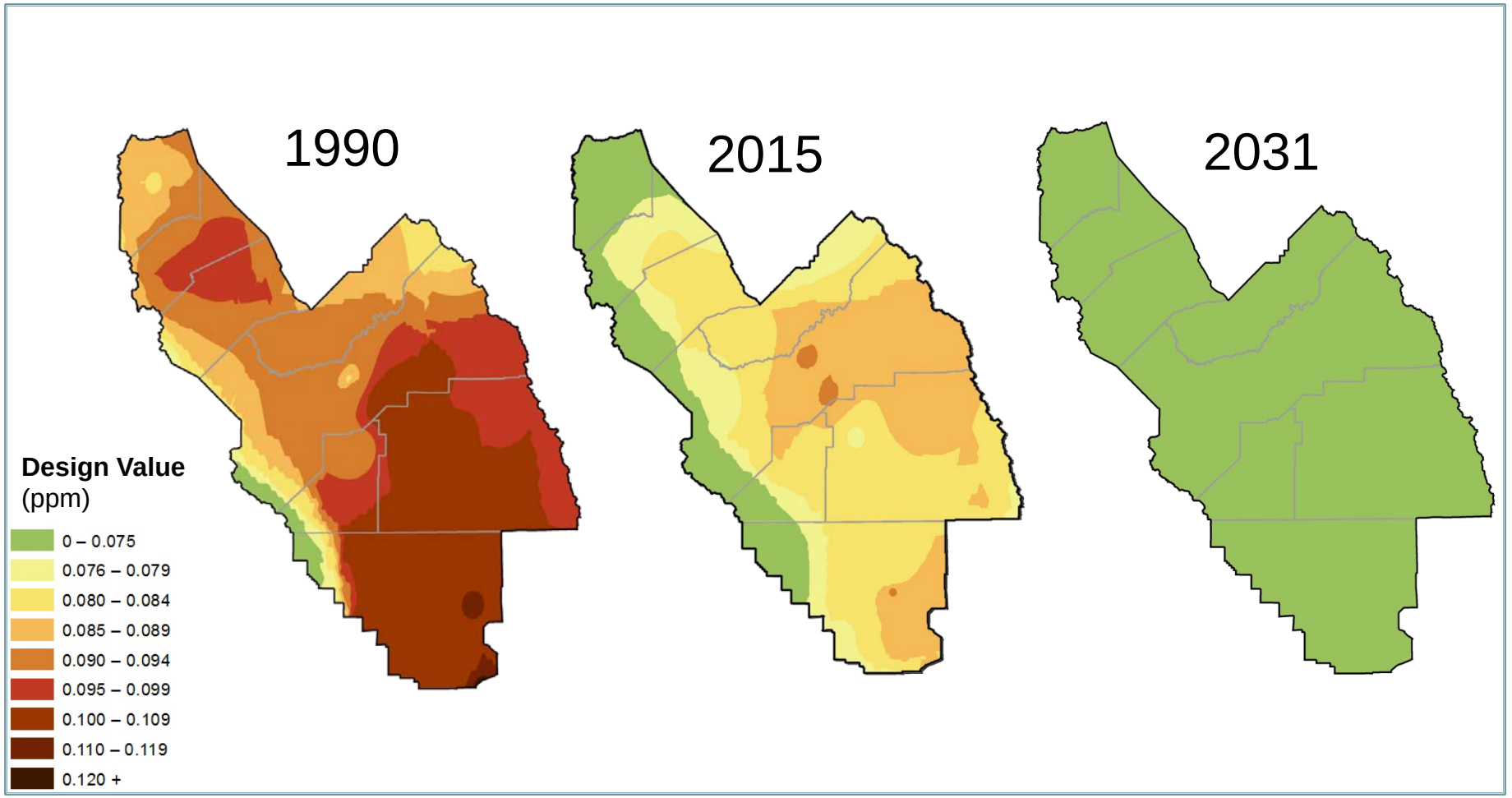
Overview

- Review of 2016 Ozone SIP for the 75 ppb 8-hour ozone standard
- Preview Valley's upcoming PM2.5 challenges and planning activities

SIP Process Works in the Valley

- EPA determined SJV met 1-hour ozone standard
- On track to meet 80 ppb standard in 2023
- Today's plan for 75 ppb standard provides for attainment by 2031 based on already adopted measures
- Proposed SIP Mobile Source Strategy provides additional air quality benefits and reductions to meet new 70 ppb standard by 2037
  - Board consideration in September

Current Programs Provide for Attainment



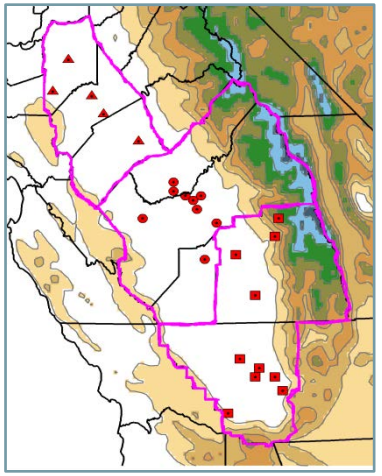
Clean Air Act: Basis for Success

- Provides science-based framework for comprehensive air quality planning
- Enables effective control strategy development based on clear deadlines and technical/cost feasibility
- Requires minimum control levels and rate of progress
- Allows for adjustments to control strategy and timing

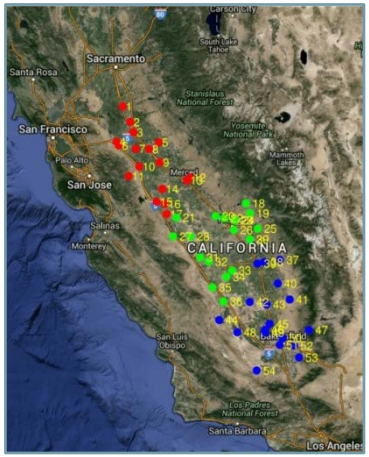
Scientific Foundation for SIP

- Comprehensive field studies
  - Central California Ozone Study (2000)
  - CalNex 2010
- Most ozone formed from emissions within the Valley
- NOx reductions most effective for reducing ozone

Air Quality Monitoring Sites

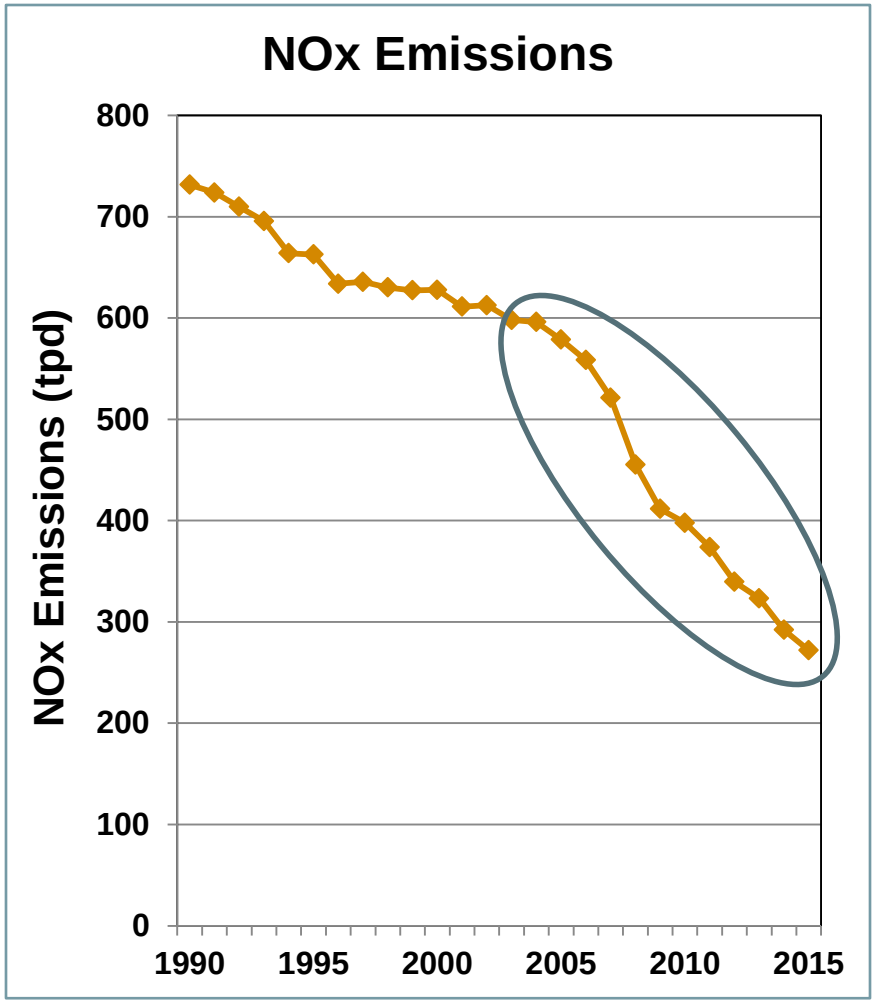


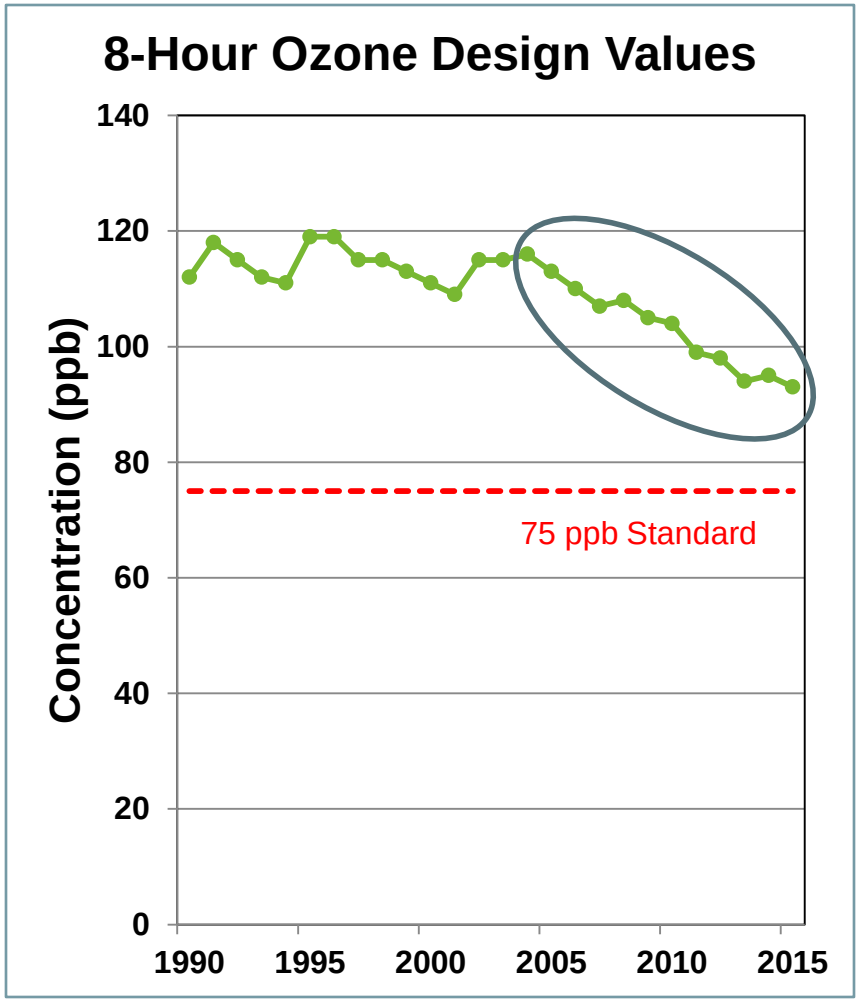
Meteorology Monitoring Sites



Source: http://www.esrl.noaa.gov/csd/groups/csd3/measurements/calnex

Ozone Responding to Accelerated NOx Reductions



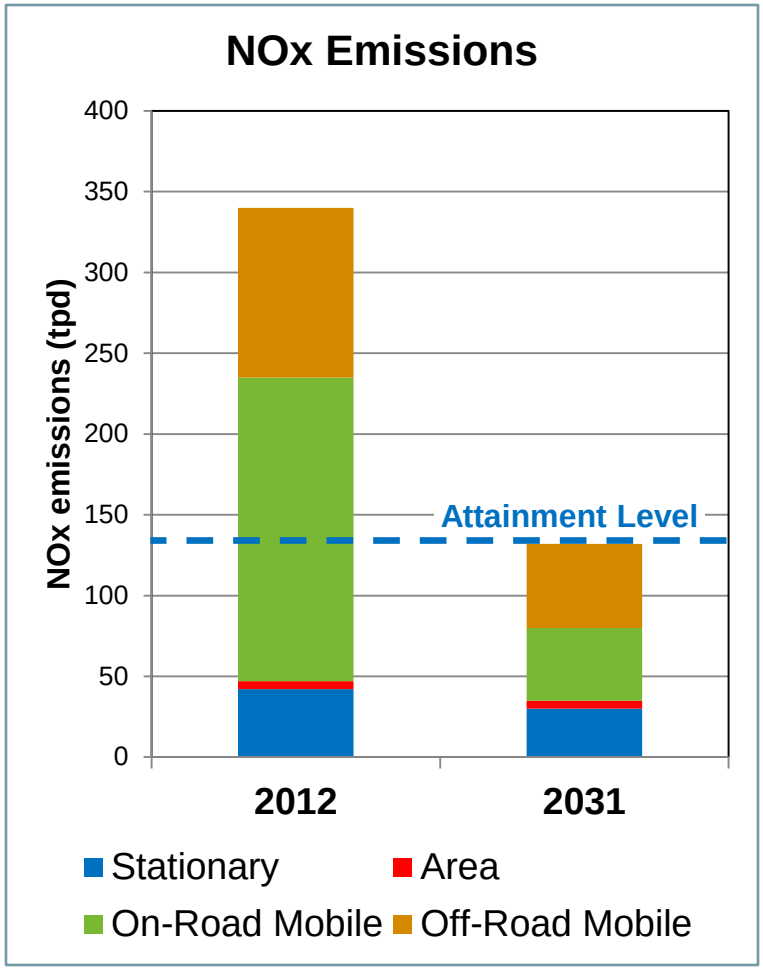


Major NOx Reduction Programs

- Truck and Bus regulation
- LEV and Advanced Clean Cars regulations
- Off-Road Equipment regulation
- Smog Check program
- Agriculture equipment replacement incentives

Current Programs Continue Pace of NOx Reductions

- ARB mobile source control program will reduce NOx emissions by 196 tpd
- District stationary source control program will reduce NOx emissions by 12 tpd



SIP Complies with Clean Air Act

- ✓Attainment demonstration
- ✓Emission inventory
- ✓Reasonably available control measures
- ✓Reasonable further progress
- ✓Contingency measures
- ✓Transportation conformity budgets
- ✓Vehicle miles travelled offset demonstration

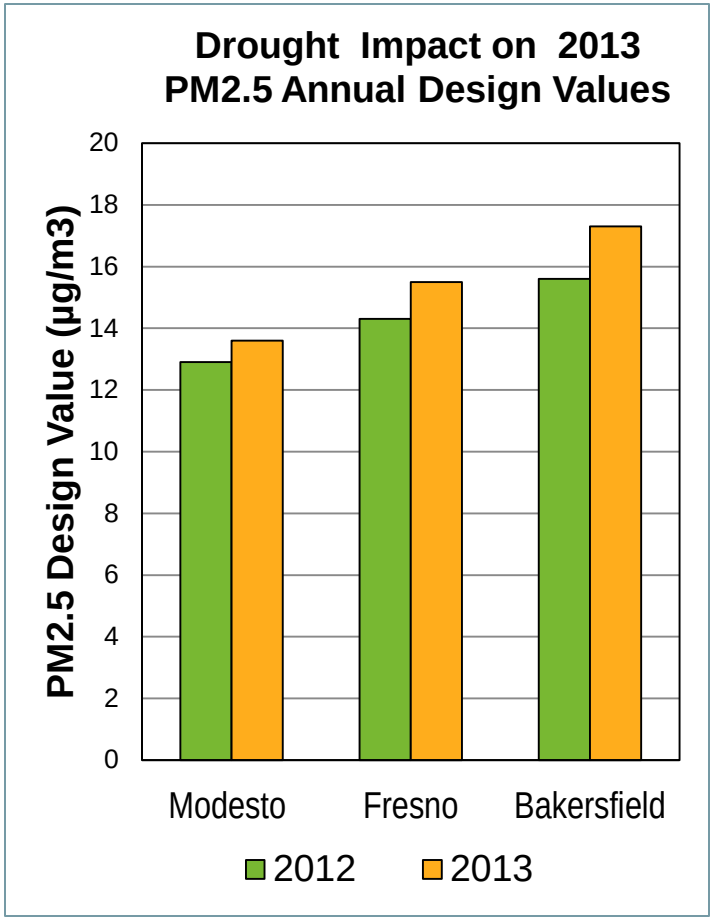
Other Considerations

- District included small “black box” commitment to address attainment contingency
  - Reductions from Mobile Source Strategy will make “black box” commitment unnecessary
- Bakersfield area monitor
  - EPA approved Arvin-Di Giorgio as replacement site for Arvin-Bear Mountain
  - Identify Arvin-Di Giorgio as maximum ozone monitor in Bakersfield area to resolve monitoring network disapproval

Upcoming PM2.5 Challenges and Planning Activities

SJV PM2.5 Air Quality Challenge

- More challenging to meet PM2.5 than ozone standards
- Multiple PM2.5 components must be controlled
- Valley topography and weather conducive to PM2.5 formation and accumulation
- Drought held up progress toward attainment



PM2.5 Planning Process

- Increasingly health protective PM2.5 standards
  - 15 µg/m^3 annual and 65 µg/m^3 24-hour
  - 12 µg/m^3 annual and 35 µg/m^3 24-hour
- Clean Air Act step-wise process for PM2.5 SIPs
  1. Initial “Moderate” SIP to assess feasibility of attainment within 6 years
  2. If infeasible, second “Serious” SIP for attainment within 10 years
  3. If attainment deadline missed, “5%” SIP requiring annual emission reductions

All 3 Steps Currently Apply

- Initial “Moderate” SIP assessment for 12 µg/m^3 annual standard this fall
- Combined “Serious” attainment SIP for 35 µg/m^3 standard with “5%” SIP for 15 µg/m^3/65 µg/m^3 standards
- Meeting 35 µg/m^3 standard driver for overall attainment strategy

Need Comprehensive Attainment Strategy

- Modeling shows need for both direct PM2.5 and NOx reductions
- District action on sources it regulates
- Strategic use of incentives to accelerate mobile source NOx reductions

Recommendations

- Approve the SJV 2016 Ozone SIP and direct staff to submit to EPA
- Approve Arvin-Di Giorgio as the maximum ozone concentration monitor for the Bakersfield area