

- Air Quality Task Force Meeting, 2016

Carlos Suarez, California State Conservationist





A state of unparalleled beauty

Productivity



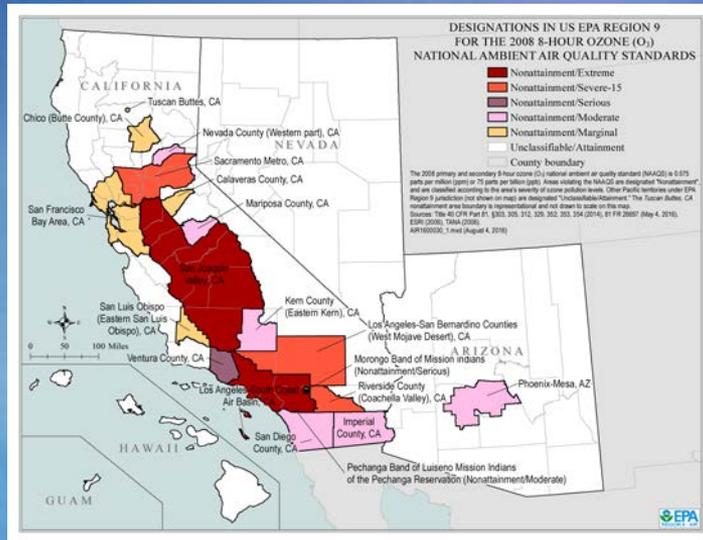
And Challenges...

NRCS Current Short List

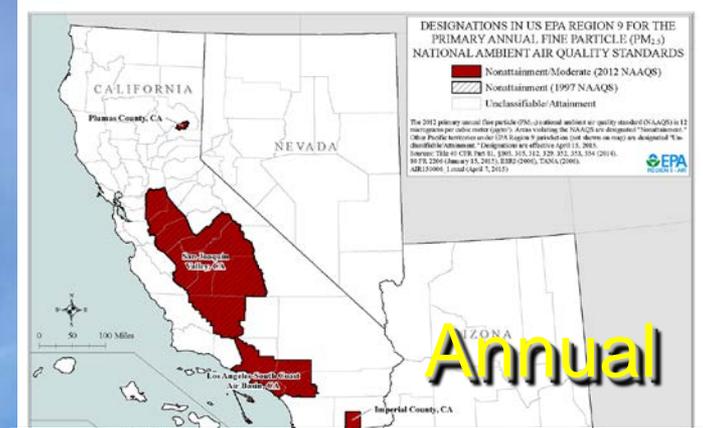
- **Soil Health**
 - **Water Quality**
 - **Water Conservation**
 - **Conservation Planning**
 - **Tree Mortality**
(60 million dead/dying trees)
 - **Wildfire Response**
 - **Climate Change**
 - **Pollinator Habitat**
- *And Air Quality*



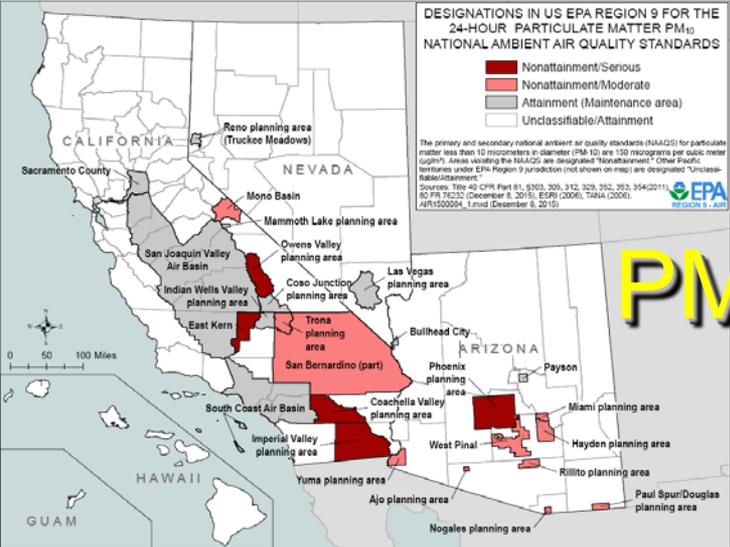
Ozone



PM_{2.5} Non attainment



Annual



PM₁₀



24 hour

Extreme non-attainment in dark red



Developing Partnerships

- California's most air quality challenged agricultural region is the San Joaquin Valley
- Partners identify the goals for improving the air quality resource concerns from agricultural operations.
- Implementing NRCS Air Quality Conservation Practices assists with achieving and maintaining the NAAQS.



Partnerships

A.I.R. = Agriculture Improving Resources

“A partnership to aid agriculture in promoting the voluntary improvement of air quality through scientifically proven and cost effective measures.”



Air Quality Agencies:

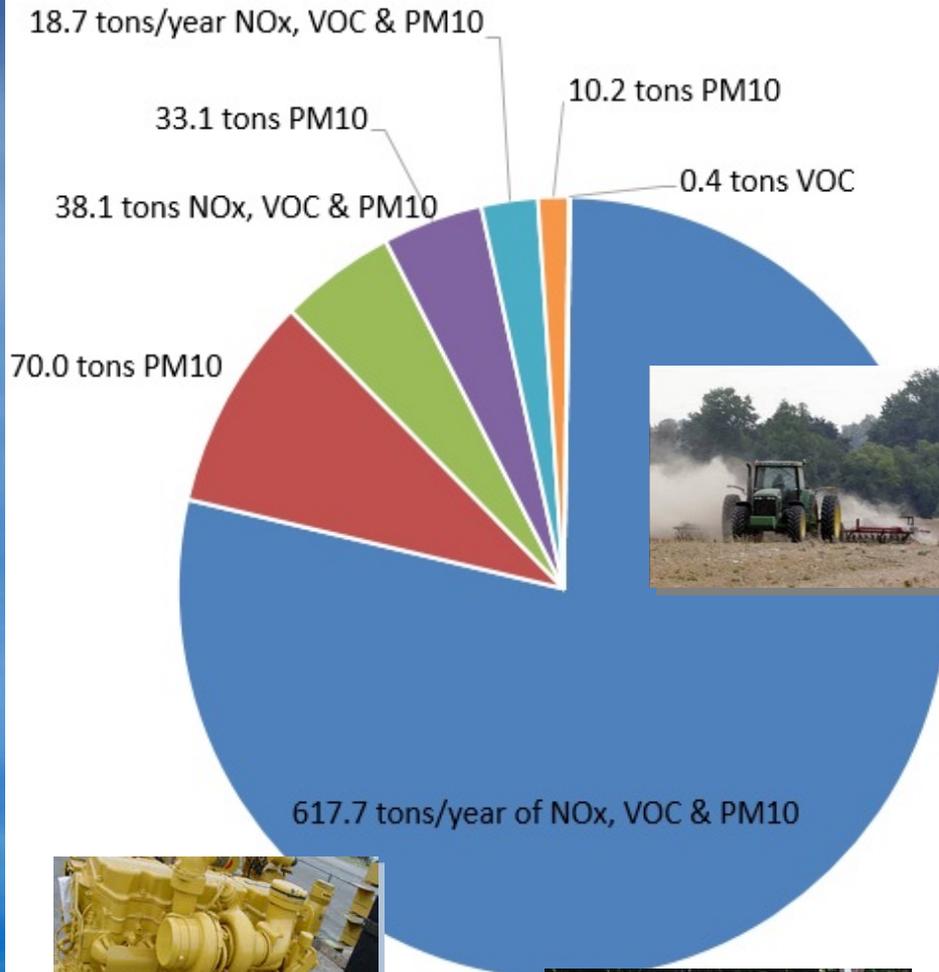
- US Environmental Protection Agency
- State of California Air Resources Board
- San Joaquin Valley Air Pollution Control District



USDA Agricultural Air Quality Task Force



Fiscal Year 2015 - California Air Quality Initiatives Estimated Emission Reductions



- **Off-Road Mobile Engines:** Reduce diesel exhaust emissions by permanently removing in-use mobile ag equipment and replacing with new "like" equipment powered with the latest Tier-emissions certified diesel engines.
- **Treating Unpaved Roads:** Applying SC250 dust suppressants to unpaved roads and equipment areas for limiting fugitive dust and PM10 emissions generated from vehicle traffic.
- **Chipping Orchard Debris:** Avoid smoke from open burning by chipping the woody orchard removal debris and utilizing the chips to generate renewable electricity at a biomass-fueled power plant.
- **Tillage Pass Reductions:** Combine tillage operations by utilizing equipment that allows for multiple operations in a single pass, which reduces fugitive dust and PM emissions.
- **Irrigation Engine Improvements:** Reduce or eliminate diesel exhaust emissions by permanently removing in-use irrigation engines and replacing with new Tier-emissions certified diesel engines or new electric motors.
- **Residue & Tillage Management:** Reduce fugitive dust and PM emissions by limiting soil disturbances and leaving crop residue on the soil surface.
- **Precision Pesticide Application:** Adopt new pesticide spray technologies that provide at least 20% VOC reduction and addresses specific management of variable pest populations.

Farmer-matched EQIP Investments 2009-2016

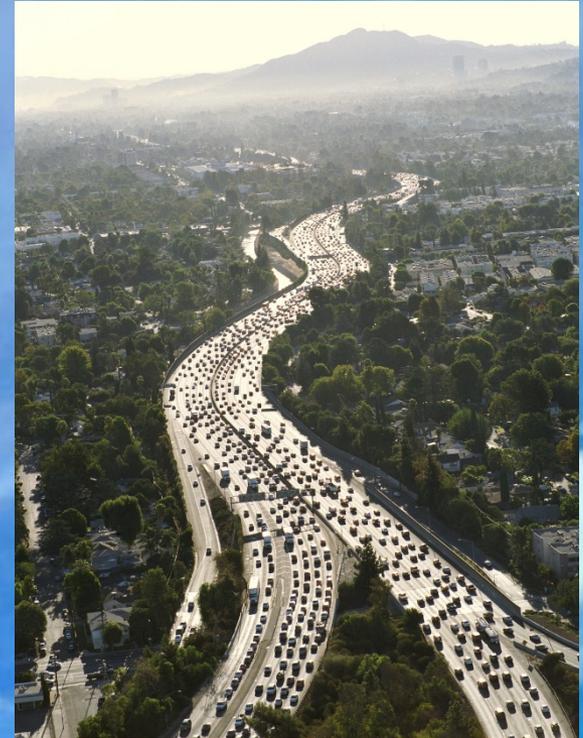
\$147,861,572.49

—or about \$3.89 per Californian to
breathe cleaner air



- **Using EQIP, California farmers overall have had the equivalent effect (in reduced NOx emissions)**

of removing 900,000 motor vehicles from California highways!



WOW!



2007 San Joaquin Valley State Implementation Plan (SIP)

- In 2008, partners expressed an interest to apply voluntary, incentive-based emission reductions to meet the San Joaquin Valley State Implementation Plan goals.
- Never been tried before. SIPs have always relied on compliance-based emission reductions.
- Supported by the USDA AAQTF



SIP Criteria for Voluntary Reductions to be Creditable

Ensure that emission reductions achieved are...

- Surplus
- Quantifiable
- Enforceable
- Permanent



Statement of Principles

- December 2010 – EPA, ARB, SJVAPCD, and NRCS sign a Statement of Principles
- Ensures that voluntary incentive-based emission reductions become SIP creditable
- Focus is on replacing diesel-powered off-road mobile agricultural equipment
- NRCS reports the emission reductions to the SJVAPCD and EPA annually



Results

- EPA approved SJVAPCD and NRCS voluntary incentive-based emission reduction programs on April 9, 2015.
- As of August 2016, SJVAPCD and NRCS programs for replacing diesel-powered off-road mobile agricultural equipment has reduced NOx emissions by 12.49 tons/day
- SIP goal of 5-10 tons/day was achieved prior to the 2017 deadline



SIP Goals from Our View

- Agriculture does its part to reduce emissions and achieve healthy air quality
- Through proactive, incentive-based engagement, we demonstrate that a voluntary approach
 - Can work
 - Can preempt the need for regulation.



Air Quality Goals and Progress in San Joaquin Valley

Achieve Air Quality Goals Outlined in SIP



Prevent the Need for Additional Regulation



Demonstrate that an Incentive-Based System can take the place of Regulatory Programs



