

California Bioresources Alliances 11th Annual Symposium

Interagency Waste Working Group for Landfill Diversion – San Joaquin Valley APCD's Perspective

November 1, 2016

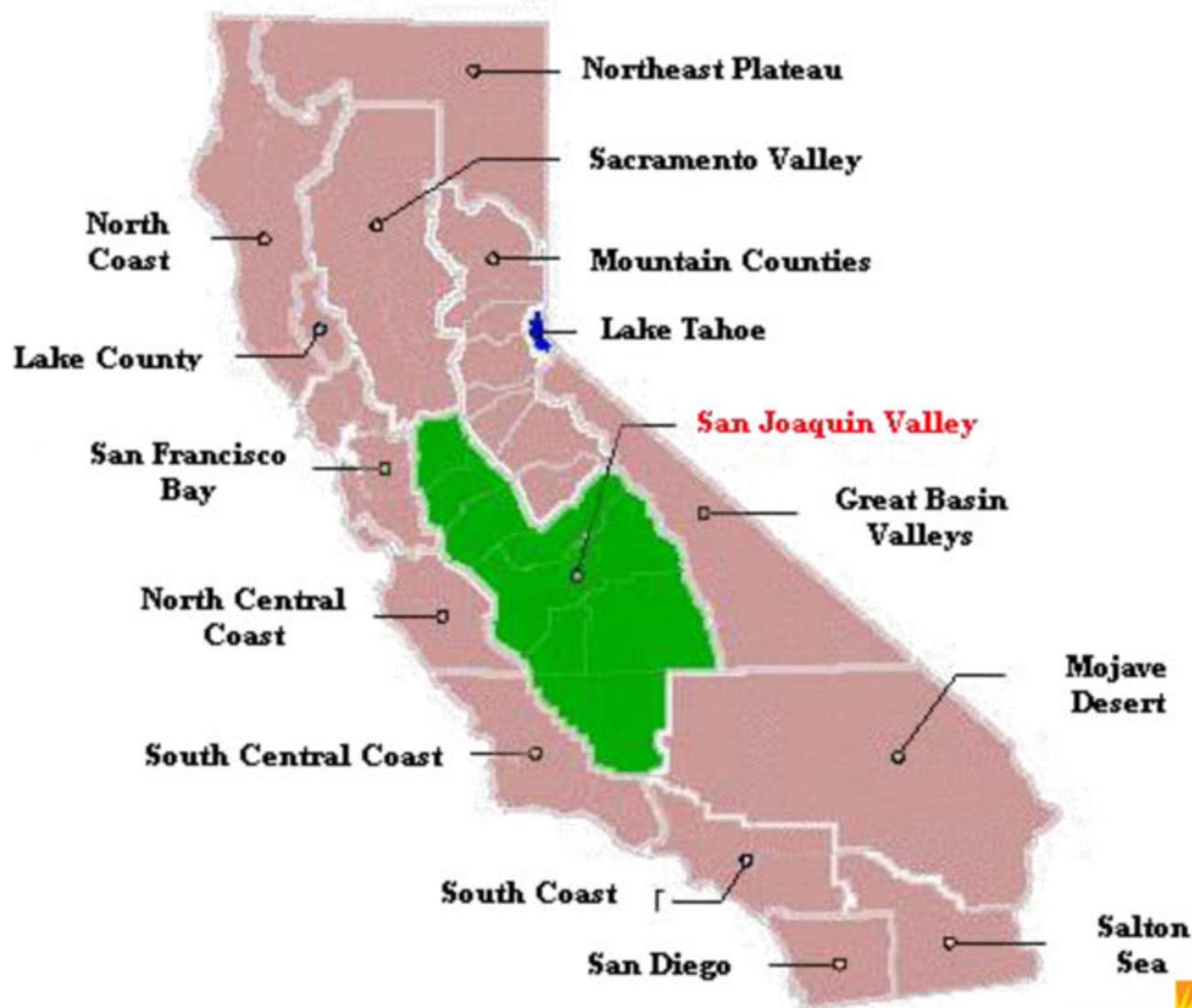
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San Joaquin Valley Air Basin

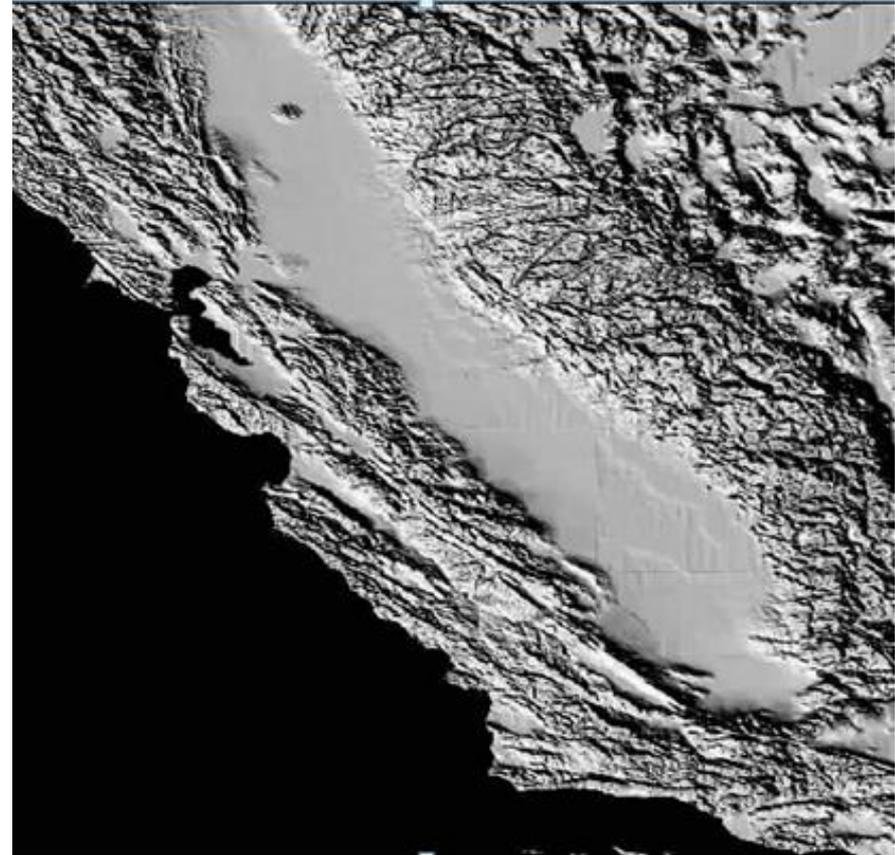


SJV Air Quality Status

- Attainment with federal PM10 standard
- Recently attained federal one-hour ozone standard
- So significant progress, but still have incredible challenges:
 - Serious Non-attainment with federal PM2.5 std.
 - “Extreme” non-attainment with federal 8-hr Ozone standard
 - Non-attainment with state standards

San Joaquin Valley's Geography and Climate Create a Low Tolerance for Pollutant Emissions

- Surrounding mountains and meteorology create ideal conditions for trapping air pollution
- Economic challenges and high unemployment rates
- High rate of population growth
- I-5 and HWY 99 (Major transportation highways)

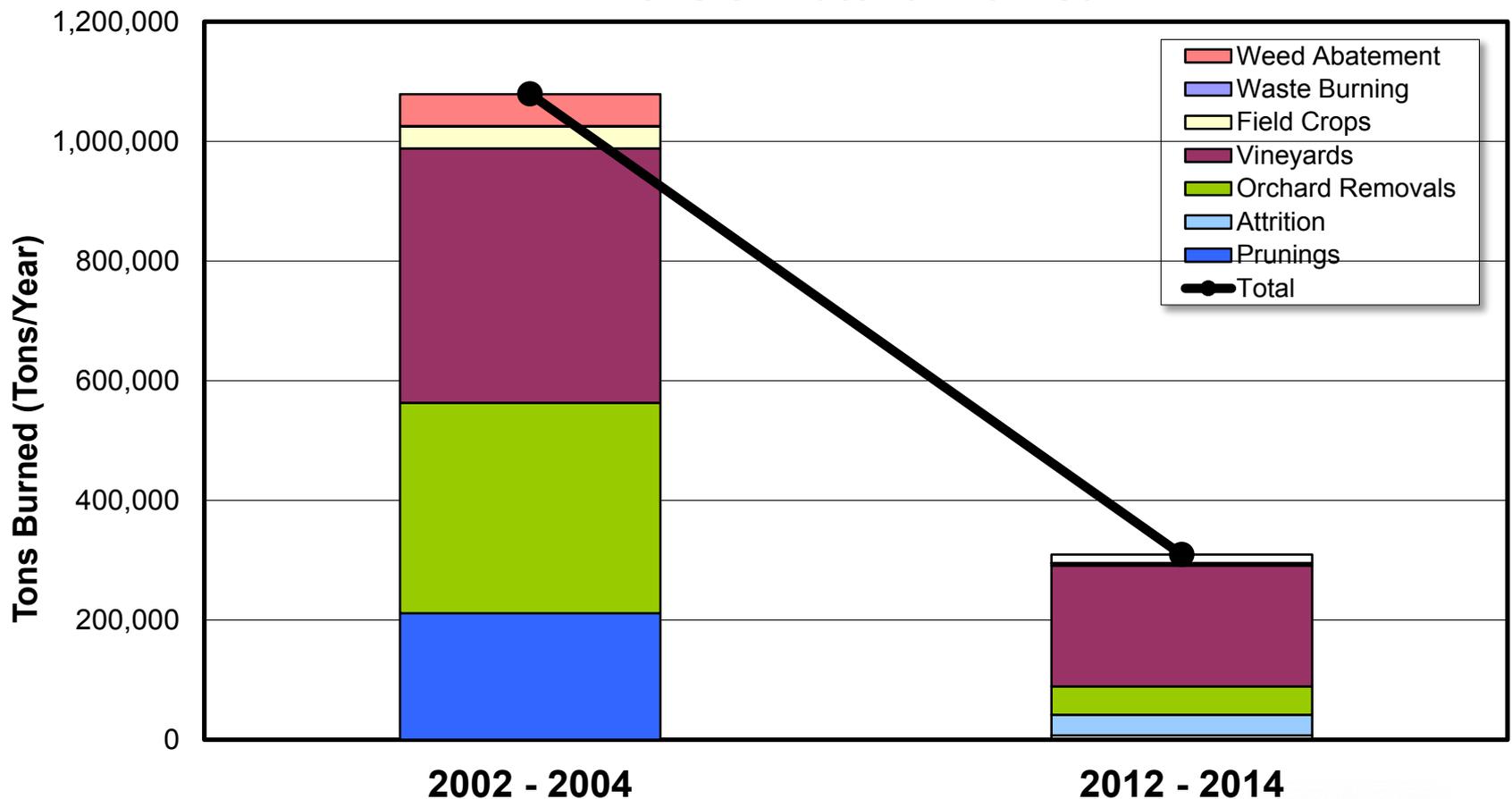


Multi-Faceted Emission Reduction Strategy

- District has adopted numerous attainment plans:
 - Toughest air regulations in the nation
 - Adopted over 600 stringent rules and regulations
 - Groundbreaking rules serve as model for others
 - Over 80% reduction in stationary source emissions
- Strong incentive programs (\$1 billion in public and private investment reducing 100,000+ tons of emissions)
- Public education and participation:
 - Build public support for tough measures adopted
 - Urge air friendly behavior by the public

Phase-Out of Ag. Open Burning

Annual Average Agricultural Open Burning Emissions
Tons of Material Burned



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Dramatic Increase in Agricultural Waste

- Extreme drought and the enormous increase in fallowed land has resulted in an increased need to dispose of agricultural waste
 - 2014 data reflected an increase in the amount of agricultural waste
- Hundreds of thousands of acres of orchards and vineyards have been or will be removed due to drought and crop economics

Biomass Power in Jeopardy

- Only five active biomass plants left in the Valley
- Six biomass plants have shut down
 - Madera Power (Feb. 2012)
 - Sierra Power (Jan. 2014)
 - Tracy Biomass, Greenleaf Power (Oct. 2014)
 - Mendota Biomass, Covanta (Dec. 2014)
 - Cres Inc, Dinuba Energy (Sep. 2015)
 - Delano Biomass, (Dec. 2015)
- Over 50% reduction of the Valley's biomass plant capacity since 2012

Emissions Impacts Associated with Diversion Goals

- Composting (including Anaerobic Digestion) seen as a solution for state waste diversion goals
- Diversion plans call for major increase in these operations (50 to 100 new facilities throughout California? Most located within SJV?)
 - Air quality impacts must be considered
 - Air quality regulations seek to mitigate the potential impact from existing, new, and expanding sources

Air Quality Permitting

- Permits required for all organic waste facilities, including composting
 - New/modifying facilities require “Authority to Construct” permit before construction
- Subject to Rule 2201 (New Source Review)
 - Must have BACT (Best Available Control Technology)
 - Involves extensive site-specific and project-specific analysis
 - Mitigation of emissions increases (offsets)
 - Ambient air quality impact analysis
 - California Environmental Quality Act



Other Regulations

- Rule 4565 (Biosolids, Animal Manure, and Poultry Litter Operations)
 - Applies to facilities who landfills, land applies, composts, or co-composts these materials
 - Limit VOC emissions from facilities
- Rule 4566 (Organic Material Composting Operations)
 - Limit VOC emissions from facilities that compost organic material
- Other rules (Rule 4702 – IC engines, Rule 4570 – Confined Animal Facilities, etc.)

SJVAPCD Efforts

- Currently evaluating all opportunities (Permitting actions, experimental research exemptions, Technology Advancement efforts)
 - Anaerobic Digester projects
 - Composting Operations (new/expanding)
 - Pyrolysis Operations
 - Air Curtain Burners
 - Biomass Facilities

SJVAPCD Perspective

- Must understand that each agency has individual goals to accomplish
 - Interagency collaboration very important to the success of this effort
- Need to identify multiple options to meet these goals
 - New/innovative technologies need to be proven in actual installations
 - Lowest emissions must be achieved