

Public Advisory Workgroup Meeting

November 14, 2017



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Overview

- District preparing attainment strategy to address multiple PM2.5 standards under the federal Clean Air Act
 - 1997 PM2.5 Standard (24-hour 65 $\mu\text{g}/\text{m}^3$ and annual 15 $\mu\text{g}/\text{m}^3$)
 - 2006 PM2.5 Standard (24-hour 35 $\mu\text{g}/\text{m}^3$)
 - 2012 PM2.5 Standard (annual 12 $\mu\text{g}/\text{m}^3$)
- 2006 PM2.5 Standard – Attainment Deadline 2024
- 2012 PM2.5 Standard – Attainment Deadline 2025
- District and ARB agree that integrated ozone/PM2.5 strategy must be pursued to address latest federal standards
 - NOx emission reductions contribute to attainment of both PM2.5 and Ozone
 - Ensure that resources invested to attain PM2.5 standards also advance attainment of new 2015 Ozone Standard
 - Strategy should focus on NOx emission reductions while also leaving no stone unturned for direct PM2.5 emission reductions
- Federal Clean Air Act does not provide for a “black box” for PM2.5 like it does for ozone
- Attaining the standards requires significant increase in funding for incentive-based measures

Attainment Strategy Objectives

- Submit single document addressing all pending federal requirements for PM_{2.5}
- 5% reduction in NO_x annually until Valley attains 1997 annual PM_{2.5} standard of 15 µg/m³
- Attain 2006 24-hour PM_{2.5} standard of 35 µg/m³ by December 31, 2024
 - To get 5-year extension to 2024, must demonstrate Most Stringent Measure and expeditious attainment in proposed attainment strategy
- Attain 2012 annual PM_{2.5} standard of 12 µg/m³ by December 31, 2025
 - Must submit plan requesting reclassification to Serious non-attainment
 - Serious plan to be submitted years ahead of required deadline

Public Engagement Process

- Public process provides multiple opportunities to provide comments, ask questions, and request information
- Monthly public meetings of the District Governing Board, Citizens Advisory Committee, and Environmental Justice Advisory Group
- Public Workshops
 - December 1, 2016 - ARB Workshop
 - December 7, 2016 - District Scoping Public Workshop
 - March 9, 2017 - District Public Workshop
 - September 26, 2017 - District Public Workshop
 - May 8, 2017 - District Public Workshop
 - May 18, 2017 - District Public Workshop
 - September 26, 2017 - District and ARB co-hosted Public Workshop
- Public Advisory Workgroup Meetings
 - January 11, 2017 - Air Quality Modeling
 - January 25, 2017 - ARB Mobile Source Measures
 - February 9, 2017 - District Measures
 - April 12, 2017 - Update on Air Quality Modeling and Measures
 - **November 14, 2017 - Update on PM2.5 Attainment Strategy**

District's Strategy has Significantly Improved Air Quality in the Valley

- District/ARB have adopted numerous attainment plans
 - Toughest stationary/mobile air regulations in the nation
 - Adopted over 600 stringent rules and regulations (over 80% reduction in stationary source emissions)
 - Groundbreaking rules serve as model for others
- \$40 billion spent by businesses on clean air
- Strong incentive programs (\$1.8 billion in public and private investment reducing 135,000 tons of emissions)
- Public education and participation
 - Build public support for tough measures adopted
 - Urge air friendly behavior by public
- Through these combined efforts, Valley's air quality better than any other time on record

Proposed Attainment Strategy

- Will contain new measures that apply valleywide
- Will contain new measures focused on reducing emissions in “hot-spot” regions with most difficult attainment challenge
 - Targeted use of incentive grants
 - Targeted regulations
 - Reduced future regulatory burden for specific regions
 - Reduced overall cost to all regions by achieving attainment of federal standards more expeditiously
 - For regions that may face more stringent future measures, added regulatory cost will be mitigated by added incentives
- Supplemented with proposed Community-Level Targeted Strategy that will focus on reducing public exposure to pollution sources of local concern

New Stationary Source Control Measures

- Building off existing stringent requirements, new potential stationary source measures
 - Lower NOx requirements for boilers, steam generators and process heaters
 - Lower NOx requirements for glass manufacturing facilities
 - Lower NOx requirements for non-agricultural engines
 - Electrify agricultural pump engines in areas impacting peak PM2.5 sites where access to electricity is available (incentive-based)
 - Require ultra low-NOx flares for flaring activities and enhance flare minimization practices
 - Additional reductions of fugitive dust (directly emitted PM) from cropland tilling and fallow lands through new enhanced conservation management practices
- Each measure will undergo technological and economic feasibility analysis

Burn Cleaner Program Offering Enhanced Incentives in Hot-Spot Areas and Current Levels of Incentives in Rest of Valley

- Enhanced levels of incentives provided in hot-spot areas
 - Kern County, Fresno County, City of Visalia, City of Madera, and City of Corcoran
- Program would replace wood burning devices with only natural gas or propane units in hot-spot areas
- Program would continue to offer current level of incentives Valleywide
- \$80 million estimated total cost, with \$60 million dedicated to hot-spot areas
- Exact funding levels and incentive program details to be finalized pending results of residential wood burning survey currently under way

More Stringent Residential Wood Burning Curtailments (12 $\mu\text{g}/\text{m}^3$ and 35 $\mu\text{g}/\text{m}^3$) in Hot-Spot Areas

- In order to encourage participation in enhanced Burn Cleaner program, could implement more stringent wood burning curtailment program in hot-spot areas
 - Burn prohibitions for non-registered units at 12 $\mu\text{g}/\text{m}^3$
 - Burn prohibitions for all devices at 35 $\mu\text{g}/\text{m}^3$
- Measure suggested for Valley floor locations
 - Kern County, Fresno County, City of Visalia, City of Madera, and City of Corcoran

Underfired Charbroiler Hot-Spot Strategy

- Provide incentives for installation of controls and related modifications for existing underfired charbroilers within urban boundaries of hot-spots
 - Kern County, Fresno County, cities of Visalia, Madera, and Corcoran
 - Provide funding to deploy controls at 40% of underfired charbroilers
 - Average cost estimated at \$150,000 (capital plus 1st yr maintenance)
 - Incentive cost estimated at \$30 million (covering 100% of costs)
 - To ensure early and robust use of incentives, measure may need to be supplemented with regulatory backstop to encourage participation
- Adopt rule requiring installation of PM controls on large new charbroilers within urban boundaries of hot-spots
 - Require installation of control technologies at new larger restaurants
 - May only be feasible with incentives to help restaurants offset cost
 - Incentive cost estimated at \$5 million (50% of costs)
- Facilitate efficient and cost-effective expenditure of resources
 - To achieve same design value benefits possible through \$35 million investment in charbroiler PM reductions, businesses would have to incur \$14 billion in cost for NOx reductions



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Community-Level Targeted Strategy

- Modeling demonstrates reductions from some measures do not measurably reduce PM2.5 concentrations at Valley's design value sites
 - Anecdotal evidence demonstrates that emissions from some sources cause periodic short-term localized nuisance
- Strategy will identify communities and sources of pollution through air monitoring data, public complaints regarding localized sources of air pollution, and health risk assessments
- Strategy will give Valley head start in addressing mandates under recently enacted Assembly Bill 617 which requires community monitoring and BARCT for facilities subject to Cap and Trade program
- Once targeted communities and sources are identified, District will develop technologically and economically feasible measures to control emissions
- Pending availability of funding, incentive-based strategies partnering with affected sources will be preferred strategy



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CARB Mobile Source Actions

- Current Program reduces over 150 tpd of NOx
- Reductions from new CARB measures
 - More stringent engine standards
 - Requirements for zero emission technologies
 - Low emission diesel fuel standard
 - Heavy-Duty I&M
 - Ag equipment rule
- Incentivize turnover to cleanest technologies
 - Heavy duty trucks and buses
 - Ag tractors
 - Off-road equipment

Air Quality Modeling

- District and CARB are working together to continue enhancing and refining attainment strategy
 - Working to incorporate District's hot-spots strategy
 - Additional emission reduction scenarios
- Precursor Sensitivity modeling runs
 - Need to be done for 15 ug/m³, 35 ug/m³ and 12 ug/m³ PM_{2.5} standards
 - Evaluate NO_x, SO_x, ROG, & Ammonia

Attainment May Require Additional Reductions by 2025

- Proposed strategy demonstrates attainment of 24-hr standard and close to attainment for annual standard
- Gap in any remaining emissions reductions required for attainment of annual standard may be filled with:
 - Use of existing local funds, including DMV funds, for incentive programs aimed at reducing emissions with a focus on remaining hot-spot areas
 - New funding from EPA, NRCS, and other federal agencies aimed at reducing emissions with focus on hot-spot areas
 - New funding from recent state Cap and Trade expenditure plan, Moyer, AB 118, and other state funds
 - Commitments by state and federal government for additional mobile source reductions if necessary

Next Steps in Plan Development Process

- Review and evaluate results of wood burning survey
- Complete underfired charbroiling technology assessment
- Work with ARB to complete air quality modeling
- Refine boundaries of hot-spot regions for each of the targeted strategies
- Conduct additional public workshops on proposed strategy with input from Valley businesses and other stakeholders
- Assess technological and economical feasibility of proposed measures
- Attainment plan to District Governing Board now anticipated by February 2018
- ARB consideration of SIP in March 2018

Additional Information

- Up-to-date information available at www.valleyair.org/2017-pm25-plan
- Receive email updates on the development of this plan and future air quality attainment plans – email sign up available at <http://www.valleyair.org/lists/list.htm>
- Email comments to airqualityplans@valleyair.org