Public Scoping Meeting for Potential Amendments to District Rule 4550 (Conservation Management Practices)

December 16, 2021

webcast@valleyair.org
Valley’s Air Quality Challenges

• Valley’s challenges in meeting federal air quality standards unmatched due to unique geography, meteorology, and topography
• Valley designated as “Extreme” non-attainment of the 8-hour Ozone NAAQS; “Serious” non-attainment of federal standards for fine particulate matter (PM2.5)
  – Substantial emission reductions needed to achieve federal standards – need to go beyond already strict control limits
• Combustion is a significant source of NOx emissions, primary precursor to ozone and PM2.5 formation
  – Comprehensive strategy in 2018 PM2.5 Plan includes commitment to reduce emissions from mobile sources and a number of stationary and area source categories, including agricultural operations
Commitments from 2018 PM2.5 Plan

- 2018 PM2.5 Plan contains commitment to further evaluate ways to promote conservation tillage practices and other potential enhancements to CMP program to reduce dust from ag operations
  - More widespread implementation of conservation tillage practices (cover cropping, no till, low till, strip till, and precision agriculture) through additional incentives may help to further limit PM2.5
  - District will work with AgTech to evaluate feasibility and effectiveness
- District will evaluate feasibility and effectiveness of CMPs on fallow lands that are tilled or otherwise worked with implements of husbandry to reduce windblown PM2.5 emissions
  - Evaluation will rely on additional research, in coordination with USDA-NRCS, ag sources, and researchers, which recognizes Valley’s unique soil characteristics and agricultural practices to ensure that Valley-specific solutions are considered
Rule 4550 Overview

• Rule 4550 first adopted August 19, 2004 as PM10 control measure
  – First rule of its kind in nation
• Environmental Protection Agency (EPA) finalized approval of Rule 4550 in Feb. 2006, and determined rule to meet Best Available Control Measure (BACM) requirements
• Rule established unique menu approach of control techniques to accommodate wide variability of agricultural industries found in Valley
  – Selected CMPs are listed on application forms that are submitted to District for approval as CMP Plan
  – Approved CMP plans enforced through onsite inspections
  – Operators required to submit applications to modify plans when changing CMPs
Rule 4550 Overview (cont’d)

- Rule 4550 is applicable to on-field farming and agricultural operation sites within San Joaquin Valley.
- CMP plans are required for the following operations:
  - Farms with 100 acres or more
  - Dairies with 500 or more mature cows
  - Cattle feedlots with 190 or more cows
  - Turkey ranches with 55,000 or more turkeys
  - Chicken ranches with 125,000 or more chickens
  - Chicken egg ranches with 82,000 or more laying hens
- Operations required to maintain records verifying use of approved CMPs
- Rule requirements have reduced PM10 emissions by 35.3 tons per day (tpd), representing a 24% reduction from source category to date.
CMP Categories

- Land Preparation/Cultivation
- Harvest
- Other
- Unpaved Roads
- Unpaved Vehicle/Equipment Areas
- Manure Handling and Storage
- Overall Management/Feeding
- Open Areas and Feeding
CMP Examples

- Practices that reduce or eliminate the need to disturb the soil or manure
- Practices that protect the soil from wind erosion
- Equipment modifications to physically produce less PM10
- Applying water or dust suppressants to reduce emissions entrained by moving vehicles and equipment
- Reducing speed or access on unpaved roads and equipment areas
- Alternative practices to open burning
District Success Implementing Strategy

• Upon adoption, District implemented strategy and worked extensively with stakeholders to ensure compliance and program success
• District created special CMP application form with simplified checklists to ensure streamlined application process for operators
• District has hosted number of workshops to assist sources to comply
• District has made notable achievements since adoption:
  – District has received over 8,500 CMP Plans since 2005, in addition to over 7,000 CMP Plan modification applications
  – Practices encompass 3.23 million acres of farmland
  – CMP program received EPA Region IX’s “2005 Environmental Award for Outstanding Achievement”
Conservation Tillage

• Conservation tillage practices include
  – No-till
  – Low/reduced-till
  – Mulching
  – Strip or zonal tillage
  – Cover cropping

• Benefits of conservation tillage measures:
  – Increase in soil water retention, and reduction of soil erosion
  – Improvement in plant growth and yields shown through research studies
  – Improved soil health
  – Reduction in emissions of criteria pollutants
  – Less passes needed to till acreage: fuel savings, reduced wear and tear on equipment, and labor savings

Source: USDA
Rule 4550 Evaluation Process

• District staff analyzing technological and economic feasibility of these practices, taking into account costs, cost-effectiveness, and considerations depending on specific conservation management practices
  – Costs and feasibility of most effective practices available
  – Review of requirements in other air districts

• Socioeconomic Impact Analysis will be conducted by third-party consultant to evaluate regional economic impacts of proposed amendments

• Ongoing opportunities for public input throughout rule development process:
  – Public workshops will be scheduled in 2022
  – Regular updates will be provided at Citizens Advisory Committee (CAC), Environmental Justice Advisory Group (EJAG), and District Governing Board meetings
Next Steps: Public Engagement Process for Rule 4550 Amendments

- Scoping Meeting
- Public Workshops
- Publication of Proposed Rule
- 2022 Governing Board Public Hearing

Public Participation and Comment Invited throughout Process
Contact

Contact: Emily Kneeland
Mail: San Joaquin Valley APCD
1990 E. Gettysburg Ave
Fresno, CA 93726
Phone: (559) 230-5800
Fax: (559) 230-6064
Email: emily.kneeland@valleyair.org
Listserv: http://lists.valleyair.org/mailman/listinfo/agricultural_sources
Comments/Questions

webcast@valleyair.org