



State Implementation Plan Development for the Pinal County PM₁₀ / PM_{2.5} Nonattainment Areas

**2013 Southern Arizona Dust Storm Workshop
Casa Grande, AZ
March 5, 2013**

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Background on Particulate Matter in Pinal County

- U.S. EPA designated a portion of Pinal County as nonattainment for the 24-hour $PM_{2.5}$ standard ($35 \mu\text{g}/\text{m}^3$) on February 3, 2011 based on ambient monitoring data between 2006 and 2008
- U.S. EPA designated a larger portion of Pinal County as nonattainment for the 24-hour PM_{10} standard ($150 \mu\text{g}/\text{m}^3$) on May 31, 2012 based on monitoring data between 2006 and 2008
- More recent data indicate attainment of the 24-hour $PM_{2.5}$ standard, though PM_{10} data still show nonattainment

Background on Particulate Matter in Pinal County

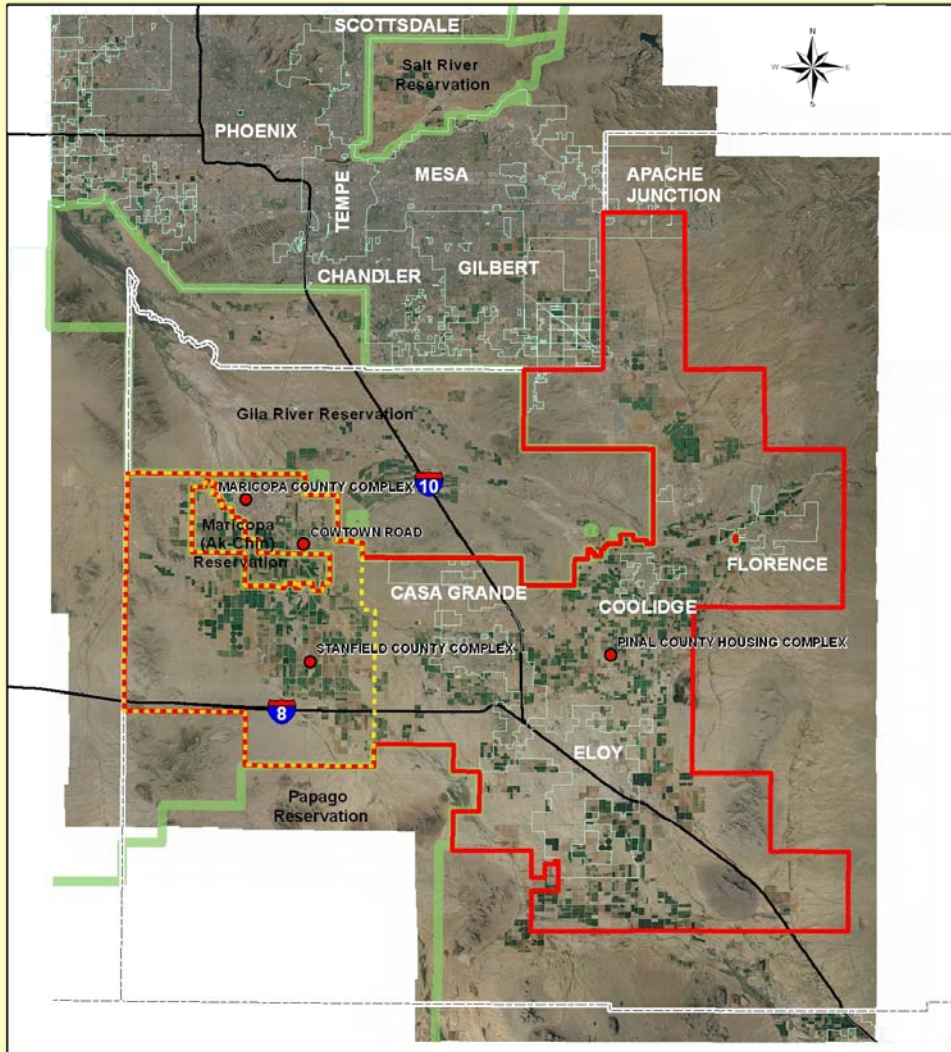
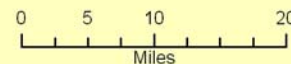


Image Date: April 1-4, 2008

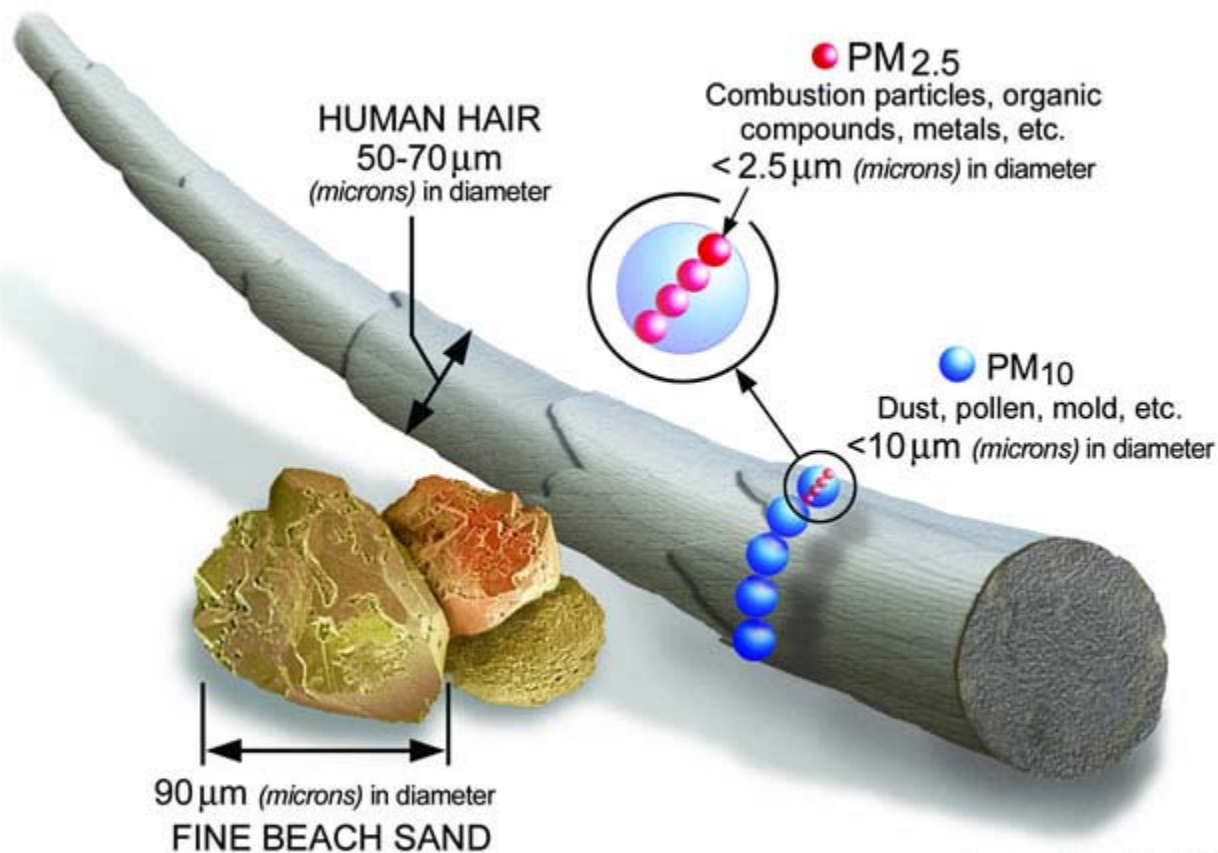
1 in = 10 miles



SEPTEMBER 27, 2012

Nonattainment Boundaries and some PCAQCD ambient monitoring locations in Western Pinal County

PM₁₀ and PM_{2.5} Particle Size





State Implementation Plan Development

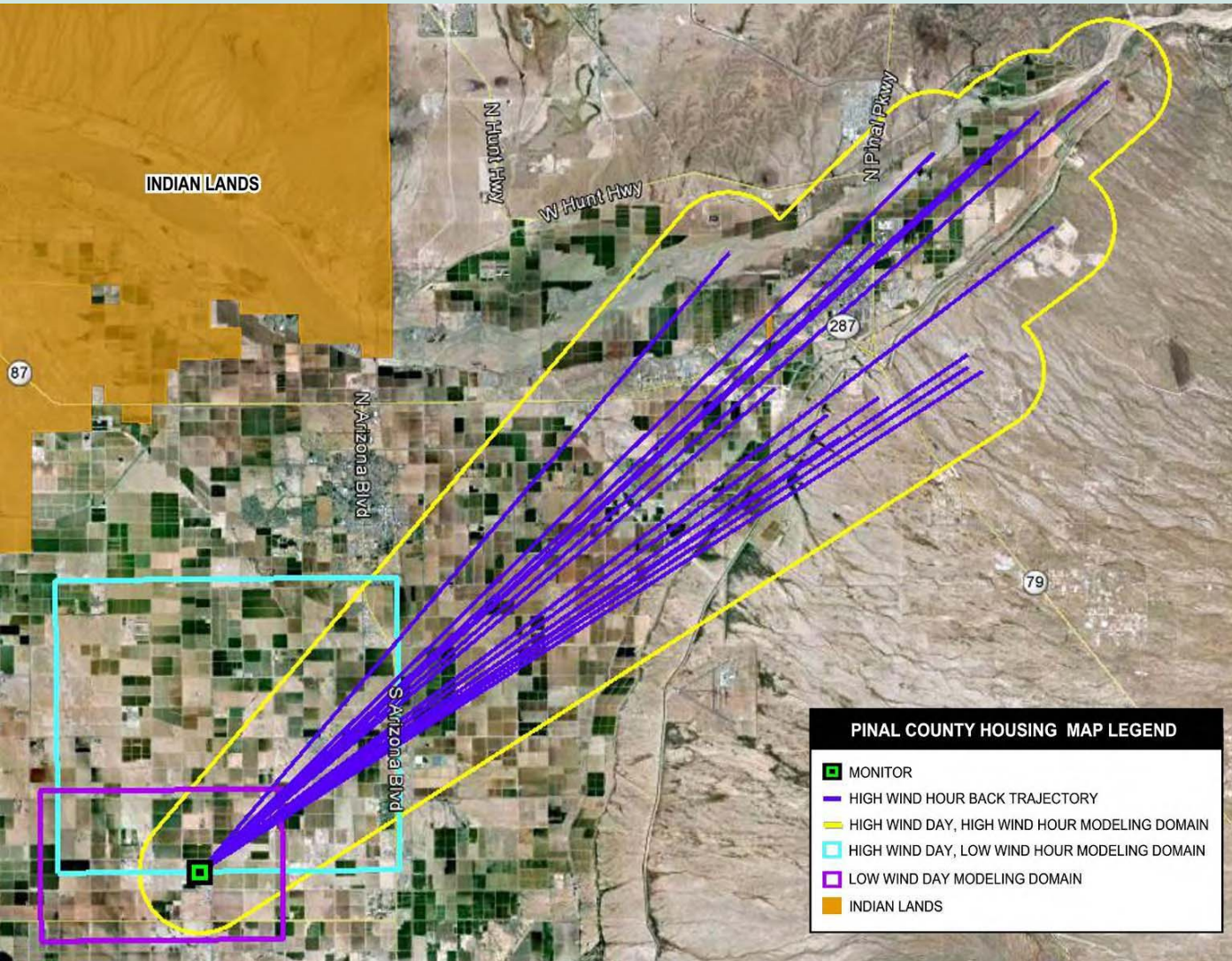
- Interagency effort by ADEQ, PCAQCD, EPA, ADOT, contractors, Tribes, and stakeholders
- Objective → Identify specific sources of particulate pollution and develop control strategies to mitigate ambient pollution levels
- Starts with extensive review of ambient air quality data (2006-2008)
- Identification of exceedance days for design day selection
 - Needed for modeling attainment in future years



State Implementation Plan Development

- Currently working on baseline emission inventory (EI) development to identify specific sources and estimate emissions
- Required to develop emission inventories for base year (2008) and specific design days
 - High wind emissions
 - Low wind (stagnation) emissions
- Basic Approach
 - Emissions = activity level x emission factor (e.g. traffic count [activity level] x unpaved roads [emission factor])
- Challenges
 - Collecting / estimating activity level data and calculating / estimating local emission factors
 - Allocating small datasets to entire nonattainment area
 - Identifying accurate assumptions

State Implementation Plan Development



Emission Inventory
 Development

Modeling Domain
 Inventories and
 nonattainment area
 inventory

Modeling Domain
 Inventory used to
 model attainment in
 future years based
 on control
 strategies

Next Steps

- Goal is to complete EI by March 31st
- Select primary contributors to elevated PM₁₀ concentrations and identify possible control measures (control strategy) by April 30th
- Hold stakeholder and public meetings – May, 2013
- Select Control Measures – June, 2013
- Prepare attainment demonstration – July, 2013
 - Utilizes control measures to model improvements
- Prepare SIP documentation – August, 2013
- Public Comment period – November, 2013
- Submit SIP to EPA for approval – December, 2013



Useful Web Links

- Ambient Air Quality Data → <http://www.epa.gov/airdata/>
- Pinal County Air Quality Control District → <http://pinalcountyz.gov/DEPARTMENTS/AIRQUALITY/Pages/Home.aspx>
- Arizona Department of Environmental Quality → www.azdeq.gov/environ/air/index.html
- ADEQ Exceptional Event Analyses → <http://www.azdeq.gov/environ/air/plan/nee.html>



Questions?

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Additional information available online at:
www.azdeq.gov/environ/air/index.html