

# UPDATE: WEST PINAL PM10 STATE IMPLEMENTATION PLAN (SIP)

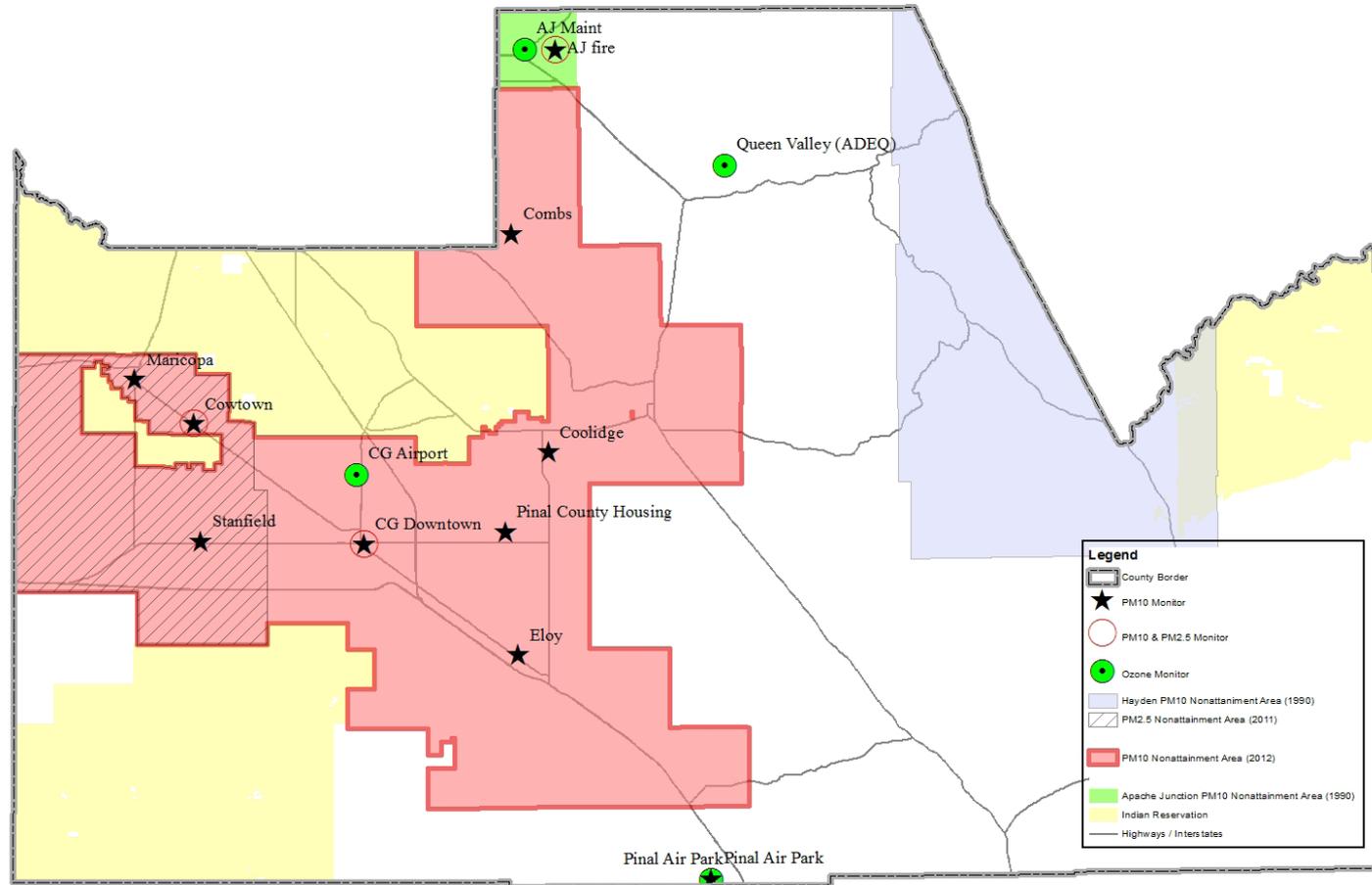
## PINAL COUNTY AIR QUALITY WORKSHOP

Mike Sundblom  
Director  
Pinal County Air Quality Control  
January 21, 2015

# Pinal Regulatory Issues

- ▣ PM-10 nonattainment
  - NAA Designation - July, 2012
  - SIP development ongoing
    - ▣ ADEQ is the lead agency in SIP development (statutory)
    - ▣ Components include:
      - Inventory(2008 &2018)
      - Modeling (Source Apportionment)
      - RACM Analysis
      - Control Evaluation (what is needed to show attainment)
      - Control measures (RACM)

# Pinal County Air Quality Control District Monitoring Network

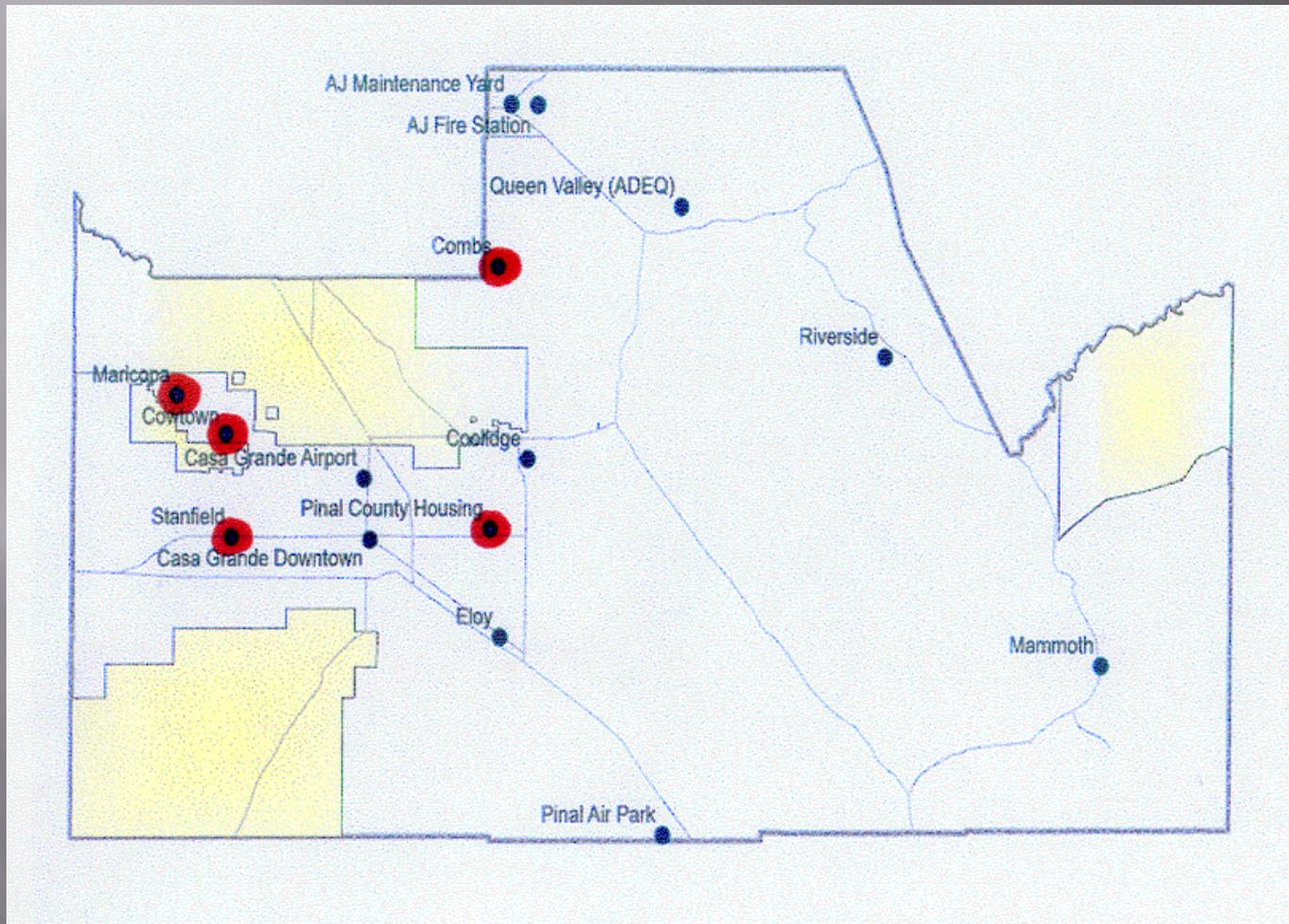


**Legend**

- County Border
- PM10 Monitor
- PM10 & PM2.5 Monitor
- Ozone Monitor
- Hayden PM10 Nonattainment Area (1990)
- PM2.5 Nonattainment Area (2011)
- PM10 Nonattainment Area (2012)
- Apache Junction PM10 Nonattainment Area (1990)
- Indian Reservation
- Highways / Interstates



# PM-10 Violating Monitors



# Emissions Inventory

- ▣ 2008 base year
- ▣ Stagnation / Low Wind – Activity driven emissions
  - October 29, 2008 was selected as a representative date
  - October 30, 2008 at Cowtown
- ▣ High Wind (over 12 mph) – Surface condition driven emissions
  - January 1, 2008 – Pinal County Housing
  - April 27, 2008 – Cowtown
  - October 27, 2008 – Maricopa
  - November 21, 2008 – Stanfield
- ▣ Separate modeling domains were defined and emissions inventories were developed

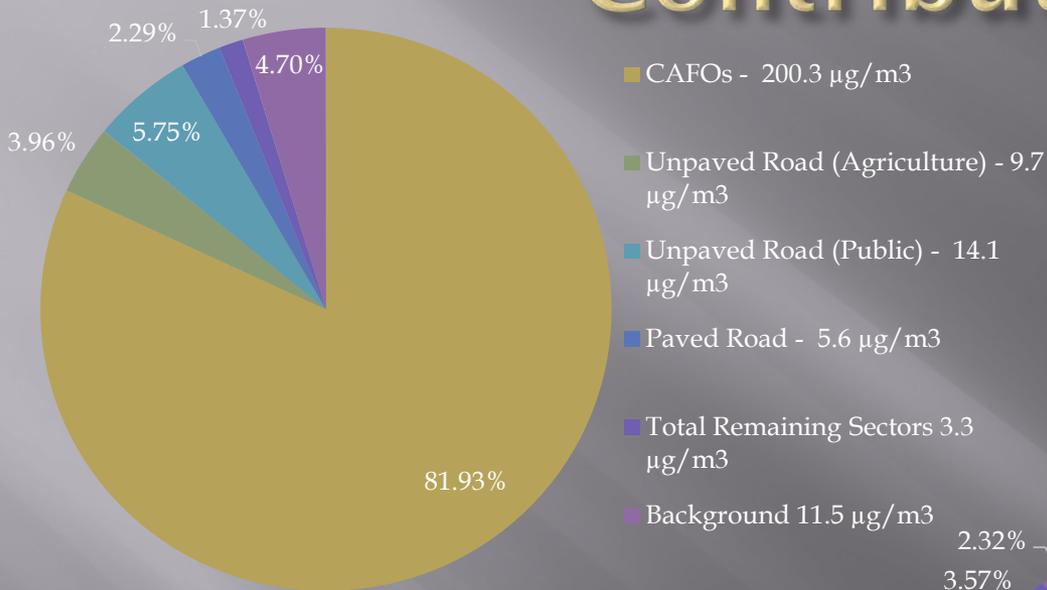
## Summary of Preliminary 2008 Annual High Wind Emissions in West Pinal Nonattainment Area

Land Use Category	Emissions (Tons/Year)	Percentage
Developed Urban Lands	201	0.27%
Developed Rural Lands (low density residential)	1,960	2.59%
Unpaved Roads	4,689	6.20%
Cleared Areas	399	0.53%
Residential Construction	1,335	1.76%
CAFOs and Dairies	723	0.96%
Desert Shrubland	38,277	50.58%
Agricultural Croplands	22,397	29.59%
Commercial Construction	624	0.82%
Other	4,244	5.61%
Site Development	835	1.10%
Total Emissions	75,682	100%

# Summary of Preliminary 2008 Annual PM<sub>10</sub> Emissions in the West Pinal County Nonattainment Area

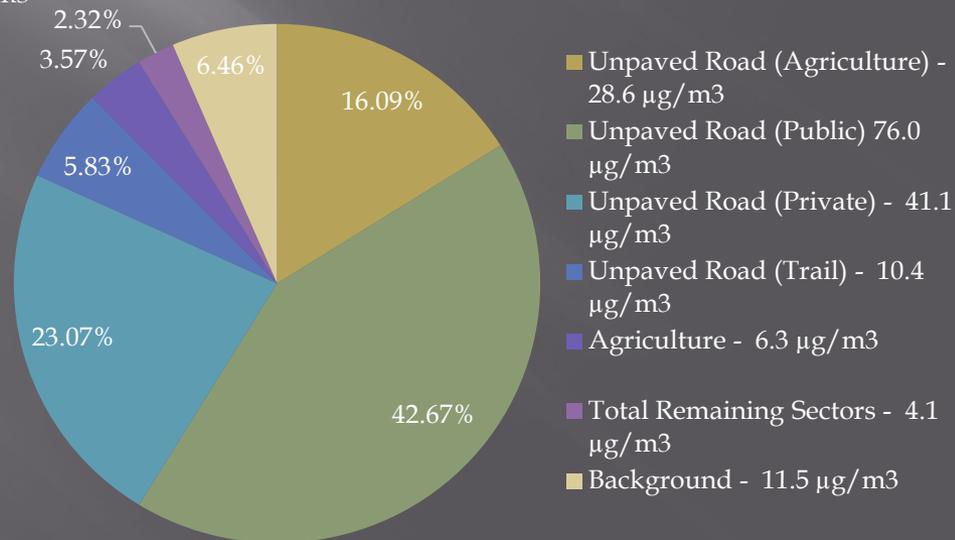
Source Category		PM <sub>10</sub> Emissions	
		(Tons/Year)	% of Total
Agriculture	Harvesting	313	0.23%
	Tilling	2,540	1.88%
CAFOs		2,614	1.94%
Paved Road		905	0.67%
Unpaved Road		46,297	34.33%
Fuel Combustion		28	0.02%
Fires		20	0.01%
Open Burning		14	0.01%
Nonroad		121	0.09%
Railroad		86	0.06%
Construction		5,553	4.12%
Dairy		184	0.14%
Permitted Sources		516	0.38%
Sub-Total: Low Wind Emissions		59,192	43.89%
Windblown Emissions		75,682	56.11%
Total Emissions		134,873	100%

# Stagnation Day Modeled Contributions

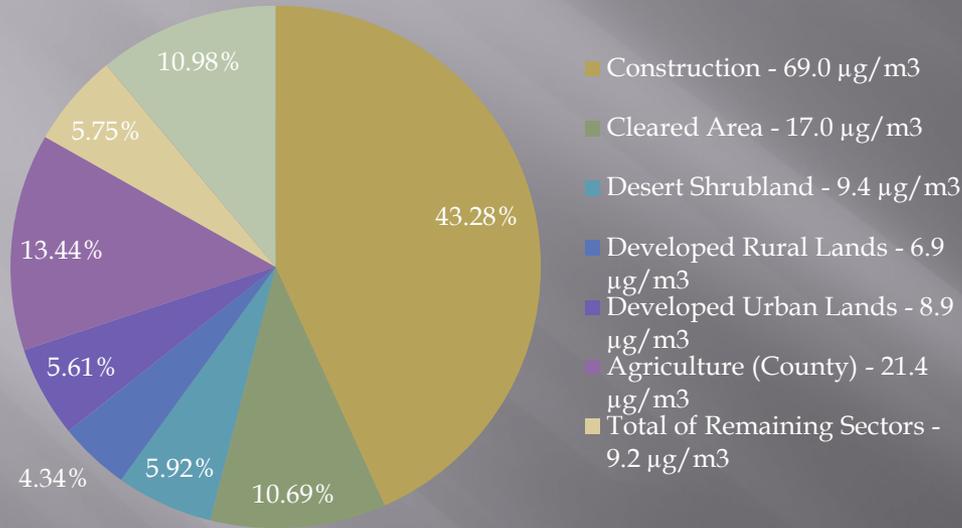


Cowtown 10/29/2008

## Pinal County Housing 10/29/2008

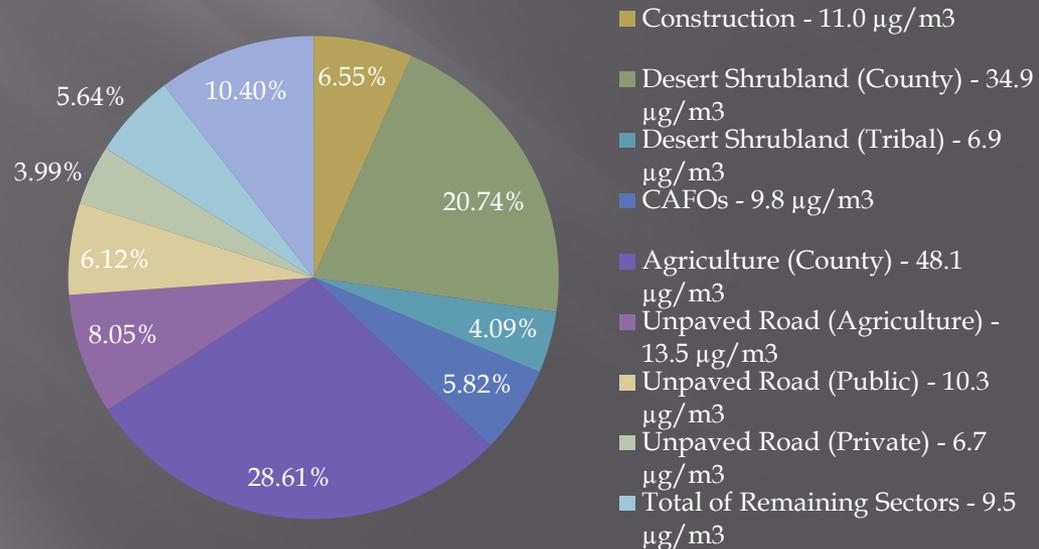


# High Wind Day Modeled Contributions



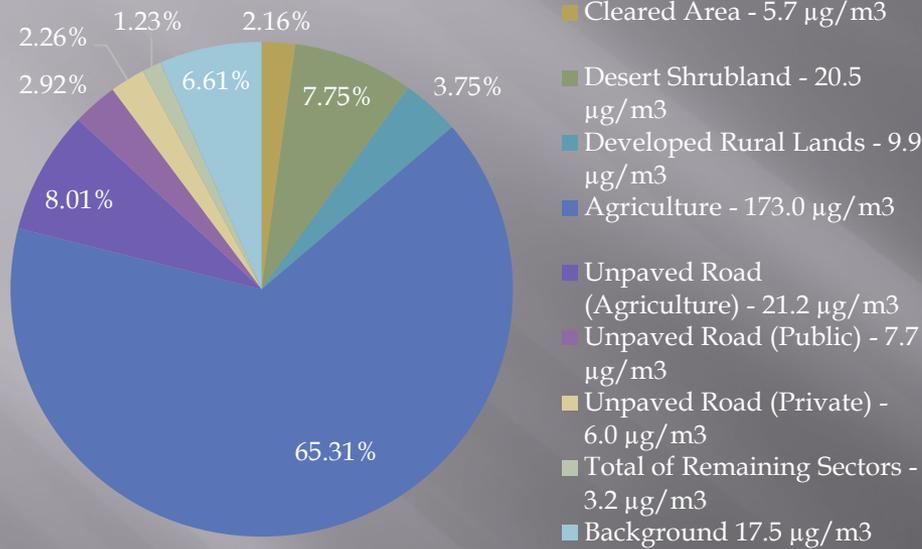
Maricopa 10/27/2008

Cowtown 4/27/2008



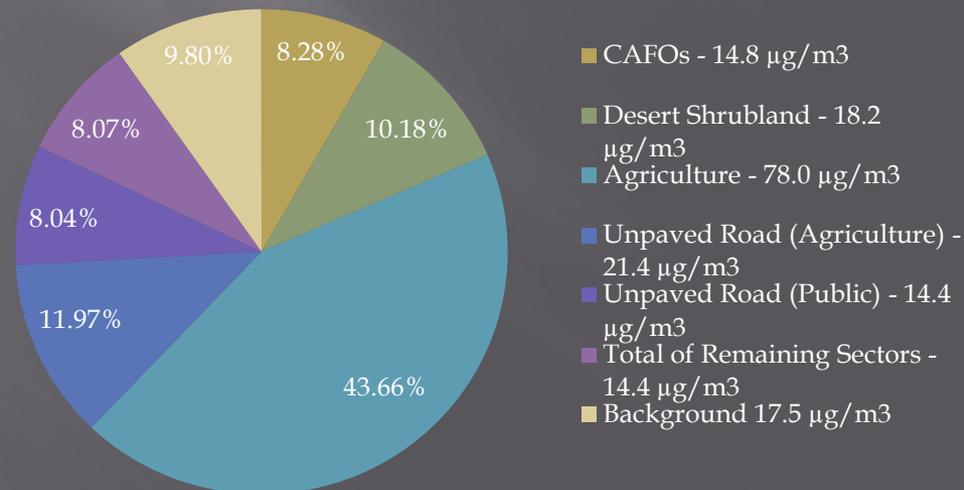
- Construction - 11.0 µg/m³
- Desert Shrubland (County) - 34.9 µg/m³
- Desert Shrubland (Tribal) - 6.9 µg/m³
- CAFOs - 9.8 µg/m³
- Agriculture (County) - 48.1 µg/m³
- Unpaved Road (Agriculture) - 13.5 µg/m³
- Unpaved Road (Public) - 10.3 µg/m³
- Unpaved Road (Private) - 6.7 µg/m³
- Total of Remaining Sectors - 9.5 µg/m³

# High Wind Day Modeled Contributions



Pinal County Housing 11/1/2008

Stanfield 11/1/2008



- CAFOs - 14.8  $\mu\text{g}/\text{m}^3$
- Desert Shrubland - 18.2  $\mu\text{g}/\text{m}^3$
- Agriculture - 78.0  $\mu\text{g}/\text{m}^3$
- Unpaved Road (Agriculture) - 21.4  $\mu\text{g}/\text{m}^3$
- Unpaved Road (Public) - 14.4  $\mu\text{g}/\text{m}^3$
- Total of Remaining Sectors - 14.4  $\mu\text{g}/\text{m}^3$
- Background 17.5  $\mu\text{g}/\text{m}^3$

# Control Evaluation

- ▣ Work is Pending
  - Determines level of control required to demonstrate compliance with the PM10 NAAQS

# Potential Control Measures

- ▣ Fugitive Dust
  - Open areas, vacant lands, roads, etc. (Pinal County)
- ▣ Agricultural Operations
  - Open Field Ag, Feed operations, Dairy operations, Irrigation Districts (AgBMP's - ADEQ)
- ▣ Construction Activity
  - Enhanced Local Rule (Pinal County)
- ▣ Stationary Sources of PM10
  - RACT (Pinal County)

# Ozone NAAQS Revision

- ▣ In November 2014 EPA Proposed Revision to the 8-Hour Ozone Standard
  - Range 65-70ppb
  - Includes Both Primary and Secondary Standard
  - Taking comment on:
    - ▣ Primary level as low as 60ppb,
    - ▣ Leave it at 75ppb, and
    - ▣ Secondary or public welfare NAAQS "W126 Index" at 13-17ppm-hours averaged over 3 years (seasonal index to assess impacts on ecosystems and vegetation)

# Pinal County Ozone Statistics

Site	2012-2014 3 Year Avg. 4th high (ppb)*
Apache Junction	70
Casa Grande	66
Pinal Air Park	67
Queen Valley (ADEQ)	73

\* 2014 is preliminary data

# Contact Information

Mike Sundblom

[Michael.Sundblom@pinalcountyaz.gov](mailto:Michael.Sundblom@pinalcountyaz.gov)

(520)866-6915