



**Pinal County  
2008 Fourth Quarter  
PM<sub>10</sub> Exceptional/Natural Events  
Executive summary**

Pinal County is located between Maricopa County (Phoenix) and Pima County (Tucson) in south central Arizona. Pinal county has an estimated population of 324,962<sup>1</sup> and has experienced significant growth since the last census in 2000 (179,727). Central and western portions of Pinal County include significant PM<sub>10</sub> sources such as dirt roads, feedlots, agriculture and construction. Additionally, central Arizona experiences periods of significant winds associated with frontal passages, summer monsoon storms and seasonal pressure gradients. Pinal County Air Quality Control District (PCAQCD) currently runs several continuous Tapered Element Oscillating Microbalance (TEOM) and filter based (47 mm & Hi-Vol) monitors in central and western Pinal County.

In the fourth quarter of 2008, there were 9 days where Pinal County monitors exceeded the PM<sub>10</sub> 24-hr National Ambient Air Quality Standard (NAAQS). Of the 9 exceedance days 6 days can be shown “but for” the particular “exceptional/Natural event” each monitor would NOT have exceeded the PM<sub>10</sub> 24-hr NAAQS.

The table below briefly outlines the exceedance, wind speed and exceptional/natural event data. More details of the events can be found in the Technical Support Documentation (TSD) which is in Microsoft PowerPoint (PPT). The TSDs should be viewed in their entirety in order to get a complete picture of the events which justify flagging each exceedance day as an “exceptional event”. This executive summary combined with the TSDs will be sent to the Environmental Protection Agency (EPA) requesting that EPA concur with PCAQCD’s flagging of these PM<sub>10</sub> 24-hr concentrations as “exceptional events” and thus not be used for compliance determination with the PM<sub>10</sub> 24-hr NAAQS.

Table of Fourth Quarter 2008 Pinal County PM<sub>10</sub> 24-hr Exceedances Associated with Exceptional Events

Date	Site	AQS Site Number (POC)	24-hr Concentration (ug/m <sup>3</sup> )	Max. Wind (mph)	Event
10/11/08	Maricopa	04-021-3010 (3 <sup>A</sup> )	157.0	23 mph	Strong cold front
10/27/08	Stanfield	04-021-3008 (3)	212.6	28 mph	Pressure gradient winds
10/27/08	Stanfield	04-021-3008 (1 <sup>B</sup> )	201.0		
10/27/08	Maricopa	04-021-3010 (3)	159.4		
11/9/08	Maricopa	04-021-3010 (3)	520.3	38 mph	Strong cold front
	Stanfield	04-021-3008 (3)	375.1		
	PCH	04-021-3011(3)	285.2		
	Combs	04-021-3009 (3)	270.0		
	Casa Grande	04-021-0001 (3)	182.9		
11/15/08	Stanfield	04-021-3008 (3)	240.7	30 mph	Pressure gradient winds

<sup>1</sup> Central Arizona Association of Governments (CAAG) July 1, 2007 estimate.

<sup>A</sup> POC 3 is a Tapered Element Oscillating Microbalance (TEOM)

<sup>B</sup> POC 1 is a high volume filter

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Table of Fourth Quarter 2008 Pinal County PM<sub>10</sub> 24-hr Exceedances Associated with Exceptional Events (Continued)

<u>Date</u>	<u>Site</u>	<u>AQS Site Number (POC)</u>	<u>24-hr Concentration (ug/m<sup>3</sup>)</u>	<u>Max. Wind (mph)</u>	<u>Event</u>
11/21/08	Stanfield	04-021-3008 (3)	178.6	29 mph	Pressure gradient winds
12/13/08	Stanfield	04-021-3008 (3)	178.2	26 mph	Pressure gradient winds

**Air Quality Control District**