

**PINAL COUNTY DEPARTMENT OF DEVELOPMENT SERVICES
AIR QUALITY CONTROL DISTRICT
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**Pinal County
2007 Fourth Quarter
PM₁₀ Exceptional 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 326,398¹ and has experienced significant growth since the last census in 2000 (179,727). Central and western portions of Pinal County include significant anthropogenic PM₁₀ sources such as construction and agriculture. Additionally, central Arizona experiences periods of significant winds associated with frontal passages and summer monsoon storms. 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 2007, there were twenty one days where Pinal County monitors exceeded the PM₁₀ 24-hr National Ambient Air Quality Standard (NAAQS). Of the twenty one exceedance days, nine days can be shown “but for” each particular “exceptional event” each monitor would NOT have exceeded the PM₁₀ 24-hr NAAQS. Additionally, three of the exceedance days were also flagged by the Arizona Department of Environmental Quality (ADEQ) as Exceptional/Natural Events.

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 PM₁₀ 24-hr concentrations as “exceptional events” and thus not be used for compliance determination with the PM₁₀ 24-hr NAAQS.

Table of Fourth Quarter 2007 Pinal County PM₁₀ 24-hr Exceedances Associated with Exceptional Events

Date	Site	24-hr Concentration (ug/m ³)	Max. Wind (mph)	Exceptional Event
10/5/07 [†]	Combs	296.9	28	Strong Pacific
10/5/07	Stanfield	177.4		Low Pressure
10/5/07	Maricopa	157.5		
10/16/07	Maricopa	213.0	25	Strengthening
10/16/07	Stanfield	186.6		Low Pressure
10/16/07	Combs	164.8		System
10/21/07 [†]	Stanfield(47 mm)	397.1	23	Frontal Passage
10/21/07	Stanfield(TEOM)	356.8		
10/21/07	Maricopa	328.9		
10/21/07	Combs	166.2		

¹ Central Arizona Association of Governments (CAAG) July 1, 2007 estimate.

[†] ADEQ Exceptional/Natural Event

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Table (Continued)

Date	Site	24-hr Concentration (ug/m ³)	Max. Wind (mph)	Exceptional Event
10/23/07	Stanfield	184	16	Strong Pressure Gradient
10/24/07 [†]	Combs	385.2	24	Strong Pressure Gradient
10/29/07	Maricopa	156.2	22	Pressure Gradient
11/15/07	Stanfield	246.6	39	Strong Pacific Low Pressure
11/15/07	PCH	217.2		
11/15/07	Combs	190.6		
11/15/07	Casa Grande	172		
11/15/07	Maricopa	162.6		
12/7/07	PCH	272.0	41	Frontal Passage
12/7/07	Stanfield	257.1		
12/7/07	Casa Grande	156.5		
12/25/07	Stanfield	298.2	26	Frontal Passage

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[†] ADEQ Exceptional/Natural Event