

To: Stakeholders  
 From: Pinal County Air Quality  
 Date: 12/6/2021

**DRAFT** 2021 Pinal County PM<sub>10</sub> & PM<sub>2.5</sub> Exceedances **DRAFT**

**\*DRAFT\* Summary of 2021 24-hour Average PM<sub>10</sub> Exceedance Day(s) by Monitoring Site**

Monitoring Site - AQS # (POC))	# PM <sub>10</sub> 24-hr Average Exceedances				Total Exceedances
	Related to Wind	Related to Stagnation	Related to Combination of windy and stagnant conditions	Related to Transport	
Apache Junction – 04-021-3002	1				1
Casa Grande - 04-021-3001(3)	2				2
Combs - 04-021-3009 (3)	1				1
Eloy – 04-021-3014 (1) & (3)	3				3
Hidden Valley – 04-021-3015 (3)	3	20	1		24
Maricopa – 04-021-3016 (3)	2				2
Pinal Air Park – 04-021-3007 (3)	1				1
PCH – 04-021-3011 (3)	3				3
Stanfield – 04-021-3008 (3)	3	1			4

**\*DRAFT\* Summary of 2021 24-hour Average PM<sub>2.5</sub> Exceedance Day(s) by Monitoring Site**

Monitoring Site - AQS # (POC))	# PM <sub>2.5</sub> 24-hr Average Exceedances				Total Exceedances
	Related to Wind	Related to Stagnation	Related to Combination of windy and stagnant conditions	Related to Transport	
Casa Grande - 04-021-3001(3)					
Hidden Valley – 04-021-3015 (3)		8			8

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\*Data preliminary – subject to change \*

Date	Day of Week	Site	AQS #	PM <sub>10</sub> 24-hr Average Concentration (ug/m <sup>3</sup> )	PM <sub>2.5</sub> 24-hr Average Concentration (ug/m <sup>3</sup> )	Weather Type (Cold Front, Monsoon, etc.)	Exceedance(s) Related to Wind, Stagnation, Combo <sup>i</sup> , Transport	AQI Forecast <sup>ii</sup> / Dust Risk Forecast <sup>iii</sup>
3/3/21	Wed	Stanfield	04-021-3008	225	n/a	Upper Low (Max. wind 47 <sup>1</sup> mph)	Wind	USG/ Moderate
		Maricopa	04-021-3016	184	n/a			
		Casa Grande	04-021-3001	171	15.7			
		Eloy	04-021-3014	170	n/a			
		PCH	04-021-3011	169	n/a			
4/21/21	Wed	Eloy	04-021-3014	233	n/a	Upper Low/Cold Front (Max. wind 40 <sup>2</sup> mph)	Wind	Moderate/ Moderate
		PCH	04-021-3011	206	n/a			
		Stanfield	04-021-3008	202	n/a			
4/30/21	Fri	Hidden Valley	04-021-3015	166	20.5	High pressure (Max. wind 14 mph)	Stagnation	Moderate/ Moderate
5/25/21	Tue	Hidden Valley	04-021-3015	185	21.7	High pressure (Max. wind 14 mph)	Stagnation	Moderate/Low
5/27/21	Thu	Hidden Valley	04-021-3015	157	22.6	High pressure (Max. wind 14 mph)	Stagnation	Moderate/ Moderate
5/31/21	Mon	Hidden Valley	04-021-3015	143	41.3	High pressure (Max. wind 13 mph)	Stagnation	USG/High
6/9/21	Wed	Hidden Valley	04-021-3015	158	22.2	High pressure (Max. wind 14 mph)	Stagnation	Moderate/ Moderate
6/12/21	Sat	Hidden Valley	04-021-3015	181	33.8	High Pressure (Max. wind 10 mph)	Stagnation	Moderate/ Moderate
6/15/21	Tue	Hidden Valley	04-021-3015	165	29.7	High Pressure (Max. wind 16 mph)	Stagnation	Moderate/ Moderate

<sup>1</sup> 47 mph @ Coolidge, 43 mph @ Stanfield, 40 mph @ Maricopa

<sup>2</sup> NWS Storm Report – 40 mph

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6/17/21	Thu	Hidden Valley	04-021-3015	168	40.9	High Pressure (Max. wind 17 mph)	Stagnation	USG/High
6/18/21	Fri	Hidden Valley	04-021-3015	155	28.4	High Pressure (Max. wind 16 mph)	Stagnation	USG/High
6/19/21	Sat	Hidden Valley	04-021-3015	174	37.7	High pressure (Max. wind 19 mph)	Stagnation	Moderate/Moderate
6/22/21	Tue	Hidden Valley	04-021-3015	163	22.0	High pressure, evening outflow winds (Max. wind 26 mph)	Combo	Moderate/Moderate
<b>6/28/21</b>	<b>Mon</b>	<b>Hidden Valley</b>	<b>04-021-3015</b>	<b>192</b>	<b>20.5</b>	<b>Pressure gradient, outflow winds (Max. wind 32 mph)</b>	<b>Wind</b>	<b>USG/High</b>
7/1/21	Thu	Hidden Valley	04-021-3015	113	40.8	High pressure (Max. wind 17 mph)	Stagnation	Moderate/Moderate
8/26/21	Thu	Hidden Valley	04-021-3015	186	36.7	High pressure (Max. wind 16 mph)	Stagnation	Moderate/Moderate
9/9/21	Thu	Hidden Valley	04-021-3015	198	26.0	High pressure (Max. wind 23 mph)	Stagnation	Moderate/Moderate
9/13/21	Mon	Hidden Valley	04-021-3015	207	32.2	High pressure (Max. wind 15 mph)	Stagnation	USG/High
9/16/21	Thu	Hidden Valley	04-021-3015	157	22.5	High pressure (Max. wind 17 mph)	Stagnation	USG/High
<b>10/11/21</b>	<b>Mon</b>	<b>Hidden Valley</b>	<b>04-021-3015</b>	<b>184</b>	<b>15.4</b>	<b>Cold Front (Max. wind 48<sup>3</sup> mph)</b>	<b>Wind</b>	<b>Moderate/Moderate</b>

<sup>3</sup> Wind gust @ Ak-Chin airport 11:15 p.m.

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10/12/21	Tue	Casa Grande	04-021-3001	264	30.7	Cold Front (Max. wind 45 <sup>4</sup> mph)	Wind	USG/High <sup>5</sup>
		PCH	04-021-3011	263				
		Combs	04-021-3009	242				
		Stanfield	04-021-3008	235				
		Hidden Valley	04-021-3015	222	26.6			
		Eloy	04-021-3014	219				
		Maricopa	04-021-3016	217				
		Pinal Air Park	04-021-3007	180				
		Apache Junction	04-021-3002	179				
10/21/21	Thu	Hidden Valley	04-021-3015	170	21.7	High pressure (Max. wind 11 mph)	Stagnation	Moderate/Moderate
10/22/21	Fri	Hidden Valley	04-021-3015	192	33.0	High pressure (Max. wind 12 mph)	Stagnation	USG/High
10/28/21	Thu	Hidden Valley	04-021-3015	170	23.2	High pressure (Max. wind 13 mph)	Stagnation	Moderate/Low
11/2/21	Tue	Hidden Valley	04-021-3015	200	31.5	High pressure (Max. wind 10 mph)	Stagnation	Moderate/Moderate
11/3/21	Wed	Hidden Valley	04-021-3015	204	39.8	High pressure (Max. wind 9 mph)	Stagnation	Moderate/Moderate
11/5/21	Fri	Hidden Valley	04-021-3015	166	30.7	High pressure (Max. wind 9 mph)	Stagnation	USG/High

<sup>4</sup> Late on 10/11/21

<sup>5</sup> Same day PM10 HPA (USG and High Dust Risk)

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11/7/21	Sun	Hidden Valley	04-021-3015	130	39.4	High pressure (Max. wind 10 mph)	Stagnation	USG/High
11/8/21	Mon	Hidden Valley	04-021-3015	180	34	Trough (Max. wind 19 mph)	Stagnation	USG/High
11/9/21	Tue	Hidden Valley	04-021-3015	143	36.7	High pressure (Max. wind 11 mph)	Stagnation	Moderate/ Moderate
12/3/21	Fri	Stanfield	04-021-3008	178	N/A	High pressure (Max. wind 9 mph)	Stagnation	Moderate/ Moderate

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**Bold text means the PM<sub>10</sub> and/or PM<sub>2.5</sub> data is going to be flagged as exceptional/natural event in AQS**  
ADEQ flagged exceptional/natural event

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<sup>i</sup> Combination of stagnation and winds (i.e. light winds in the morning with elevated PM<sub>10</sub> levels and higher winds in afternoon/evening with elevated PM<sub>10</sub> levels attributed to windblown dust).

<sup>ii</sup> Air Quality Index (AQI) forecast issued by Pinal County Air Quality – AQI Categories (Good (G), Moderate (M), Unhealthy for Sensitive Groups (USG), Unhealthy (U), etc.). PM10 High Pollution Advisory (HPA) is for forecasted AQI levels of 101+.

<sup>iii</sup> 2014 Adopted legislation (HB2125) – A West Pinal County PM10 Nonattainment Area Dust Risk Forecast prepared and issued by ADEQ – Risk categories (Low (L), Moderate (M), High (H)).

<sup>iv</sup> Combination of stagnation and winds (i.e. light winds in the morning with elevated PM<sub>10</sub> levels and higher winds in afternoon/evening with elevated PM<sub>10</sub> levels attributed to windblown dust).

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<sup>viii</sup> Air Quality Index (AQI) forecast issued by Pinal County Air Quality – AQI Categories (Good (G), Moderate (M), Unhealthy for Sensitive Groups (USG), Unhealthy (U), etc.). PM10 High Pollution Advisory (HPA) is for forecasted AQI levels of 101+.

<sup>ix</sup> 2014 Adopted legislation (HB2125) – A West Pinal County PM10 Nonattainment Area Dust Risk Forecast prepared and issued by ADEQ – Risk categories (Low (L), Moderate (M), High (H)).

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