



Arizona Department of Environmental Quality

Janet Napolitano, Governor
Stephen A. Owens, ADEQ Director

MONTHLY AIR QUALITY REPORT FOR
DECEMBER 2005

AQI COLOR SCALE

GOOD 0-50	MODERATE 51-100	UNHEALTHY FOR SENSITIVE GROUPS 101-150	UNHEALTHY 151-200
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Calendar of maximum AQI values & their corresponding color for December 2005*

*Preliminary data

SAMPLE POLLUTANT REPORTING BOX

1 (day of month)	O3	CO
	PM10	PM2.5

SUN		MON		TUES		WED		THU		FRI		SAT								
								1	30	39	2	23	42	3	30	40				
									102	63		121	73		67	53				
4	34	16	5	32	28	6	26	39	7	27	42	8	31	47	9	30	43	10	28	52
	43	41		74	49		95	75		96	72		90	68		98	69		80	99
11	28	53	12	27	48	13	20	51	14	33	48	15	34	33	16	23	26	17	31	36
	83	108		140	114		107	109		114	102		101	60		87	62		73	76
18	33	43	19	29	34	20	29	39	21	32	47	22	30	47	23	28	50	24	31	50
	66	82		97	95		94	73		123	106		113	76		102	83		68	111
25	32	63	26	31	34	27	28	24	28	27	22	29	24	25	30	31	34	31	27	39
	59	120		57	59		82	48		85	57		93	64		81	74		67	84

Exceedance days during DEC 2005-

Total= 9	<u>Date</u>	<u>Max AQI</u>	<u>Pollutant</u>	<u>Site/s</u>
	12/01	102	PM-10	Durango
	12/02	121	PM-10	West Forty Third
		106	PM-10	Durango
	12/12	140	PM-10	West Forty Third
		126	PM-10	Durango
		122	PM-10	Bethune School
		109	PM-10	Greenwood
		101	PM-10	West Phoenix
	12/13	107	PM-10	West Forty Third
		106	PM-10	Durango
	12/14	114	PM-10	Durango
		110	PM-10	West Forty Third
	12/15	101	PM-10	Durango
	12/21	123	PM-10	West Forty Third
		123	PM-10	Durango
	12/22	113	PM-10	Durango
		106	PM-10	West Forty Third
	12/23	102	PM-10	Durango
		101	PM-10	West Forty Third

Health Watches issued during DEC 2005-

Total= 13	<u>Date</u>	<u>Max AQI</u>	<u>Pollutant</u>	<u>Site/s</u>
	12/02	121	PM-10	West Forty Third
	12/07	96	PM-10	West Forty Third
	12/12	140	PM-10	West Forty Third
	12/13	109	PM-2.5	Phoenix Supersite
	12/17	76	PM-2.5	Phoenix Supersite
	12/18	82	PM-2.5	West Phoenix
	12/19	97	PM-10	West Forty Third
	12/20	94	PM-10	Durango
	12/21	106	PM-2.5	West Phoenix
	12/23	83	PM-2.5	West Phoenix
	12/28	85	PM-10	Durango
	12/29	93	PM-10	Durango
	12/30	81	PM-10	West Forty Third

[High Pollution Advisories issued during DEC 2005-](#)

Total=	9	<u>Date</u>	<u>Max AQI</u>	<u>Pollutant</u>	<u>Site/s</u>
		12/01	102	PM-10	Durango
		12/08	90	PM-10	Durango
		12/09	98	PM-10	West Forty Third
		12/14	114	PM-10	Durango
		12/15	101	PM-10	Durango
		12/16	87	PM-10	Durango
		12/21	123	PM-10	West Forty Third
		12/22	113	PM-10	Durango
		12/23	102	PM-10	Durango

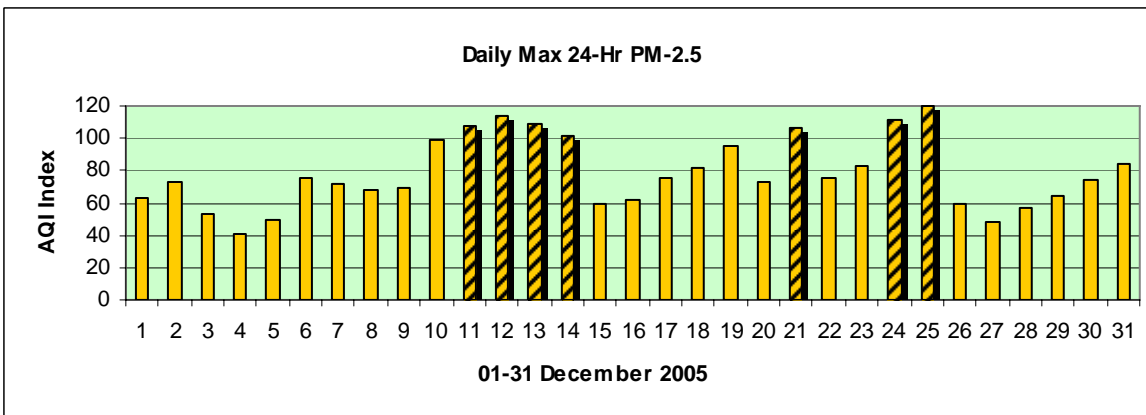
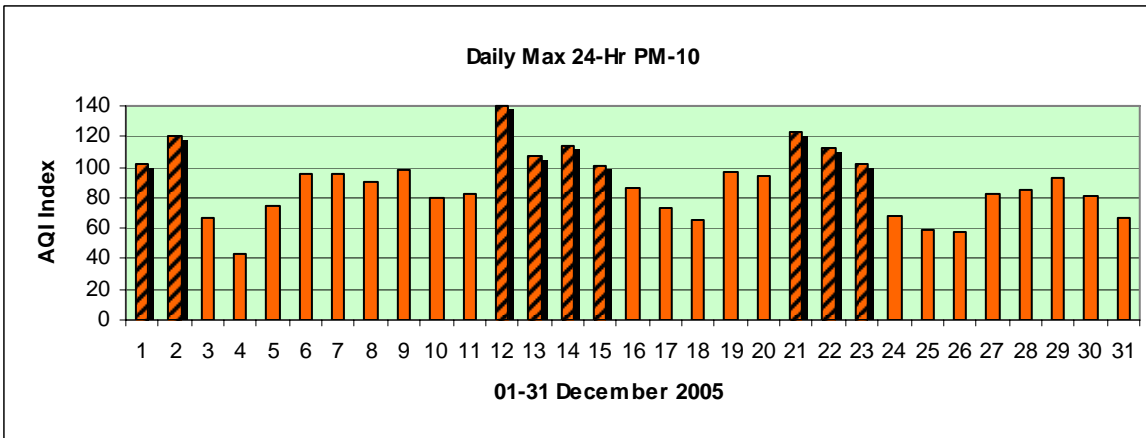
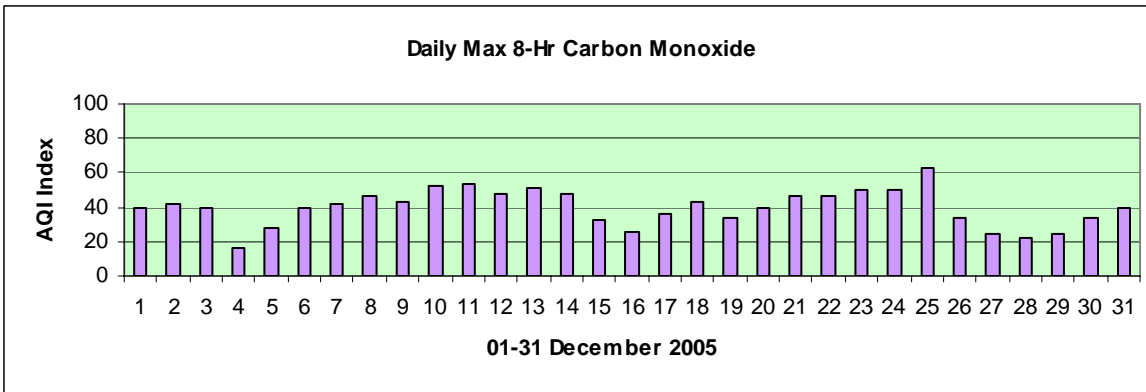
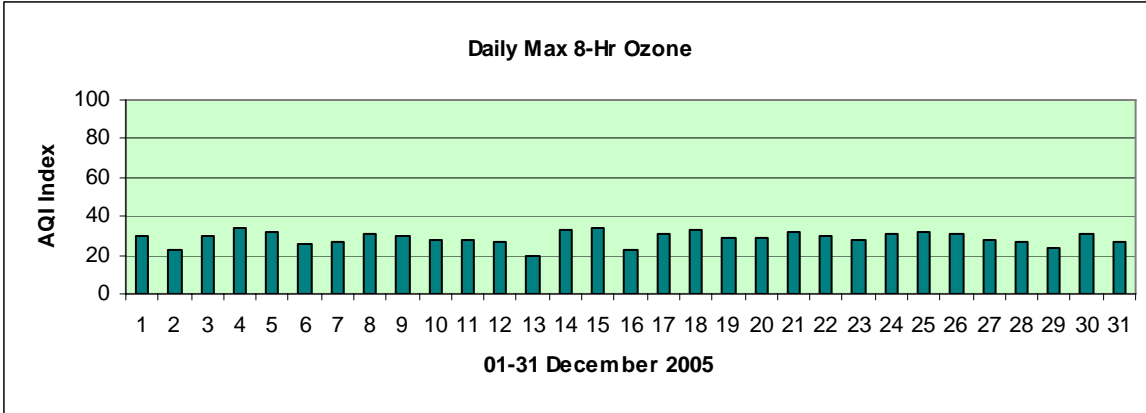
[Concentration Recap:](#)

Days in the Good category:	1
Days in the Moderate category:	18
Days in the Unhealthy for Sensitive Groups category:	12
Days in the Unhealthy category:	<u>0</u>
Total Forecast Days:	31

[PM-10 Exceedances by date*:](#)

*Preliminary data = 24-hr average 154.5 ug/m3 or greater

<u>Date</u>	<u>Site(s)</u>	<u>UG/m3/AQI</u>	<u>Equipment</u>	<u>Weather Type</u>
Dec 01	Durango	158.9/102	Continuous	Stagnation
Dec 02	Durango	165.1/106	Continuous	Stagnation
	West Forty Third	195.2/121	Continuous	Stagnation
Dec 12	Bethune School	198.1/122	Filter-based	Stagnation
	Durango	206.9/126	Continuous	Stagnation
	Greenwood	172.7/109	Filter-based	Stagnation
	West Forty Third	233.1/140	Continuous	Stagnation
	West Phoenix	155.0/101	Filter-based	Stagnation
Dec 13	Durango	166.1/106	Continuous	Stagnation
	West Forty Third	167.7/107	Continuous	Stagnation
Dec 14	Durango	181.3/114	Continuous	Stagnation
	West Forty Third	174.7/110	Continuous	Stagnation
Dec 15	Durango	156.9/101	Continuous	Stagnation
Dec 21	Durango	200.4/123	Continuous	Stagnation
	West Forty Third	200.6/123	Continuous	Stagnation
Dec 22	Durango	179.1/113	Continuous	Stagnation
	West Forty Third	168.4/107	Continuous	Stagnation
Dec 23	Durango	157.6/102	Continuous	Stagnation
	West Forty Third	156.7/101	Continuous	Stagnation



Narrative:

For the second consecutive month the Phoenix metro area was plagued by high particle pollution levels. Despite numerous health watches, high pollution advisories, and no-burn day statements, local PM emissions remained high and concentrations were exacerbated by the continued lack of rainfall and an unrelenting stable and stagnant air mass that produced low mixing depths, unfavorable dispersion, strong inversions, and light winds (see graphs below). Unlike November, PM-2.5 levels also managed to reach unhealthy levels at times; these episodes mostly occurred during long periods of light or calm winds and peaked on Christmas Day (when carbon monoxide levels were also at their highest). The no-burn ban was lifted on that day and high fireplace use evidently occurred despite daytime temperatures in the middle 70's. The highest hourly PM-10 concentration during the month was 534.7ug/m3 that occurred at 7:00 a.m. on the 12th at the West Forty Third site. That site and four others exceeded the 24-hr health standard on that day with concentrations that ranged from 155.0 to 233.1ug/m3. Based on preliminary data, November and December 2005 had a total of 17 days with 24-hr exceedances, the same as that occurred during the entire period of 2000-2004. -Reith

