



Arizona Department of Environmental Quality

Janet Napolitano, Governor
Stephen A. Owens, ADEQ Director

MONTHLY AIR QUALITY REPORT FOR
FEBRUARY 2006

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 February 2006*

*Preliminary data

SAMPLE POLLUTANT REPORTING BOX

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

SUN			MON			TUE			WED			THU			FRI			SAT		
								1	30	23	2	32	25	3	30	33	4	38	34	
									86	73		92	59		90	78		81	69	
5	35	43	6	37	23	7	34	26	8	35	32	9	31	36	10	32	27	11	41	26
	71	81		93	36		84	44		115	53		125	61		82	54		85	64
12	38	20	13	38	32	14	32	31	15	36	23	16	37	37	17	34	23	18	38	33
	63	57		103	80		159	73		124	65		84	57		119	69		60	60
19	38	15	20	35	24	21	38	18	22	31	19	23	34	31	24	39	30	25	43	27
	33	44		63	51		67	53		71	53		91	61		89	66		70	60
26	43	41	27	41	22	28	34	25												
	64	65		93	56		85	44												

Calendar of High Pollution Advisories and Health Watches issued during February 2006

SUN			MON			TUE			WED			THU			FRI			SAT		
									1	A		2	A		3	A		4		
5			6	D		7	D		8			9			10	A		11		D
12			13			14	D		15	A		16	D		17	D		18		
19			20	D		21	D		22	D		23	A		24	A		25		
26			27			28	D													

LEGEND

HIGH POLLUTION ADVISORIES

- A** = PM-10 High Pollution Advisory
- B** = PM-2.5 High Pollution Advisory
- C** = Ozone High Pollution Advisory

HEALTH WATCHES

- D** = PM-10 Health Watch
- E** = PM-2.5 Health Watch
- F** = Ozone Health Watch

Exceedance days during FEB 2006-

Total= 6	<u>Date</u>	<u>Max AQI</u>	<u>Pollutant</u>	<u>Site/s</u>
	02/08	115	PM-10	West Forty Third
	02/09	125	PM-10	West Forty Third
		109	PM-10	Durango
	02/13	103	PM-10	Buckeye
	02/14	159	PM-10	Buckeye
	02/15	124	PM-10	West Forty Third
		102	PM-10	Durango
	02/17	119	PM-10	Buckeye

High Pollution Advisories issued during FEB 2006-

Total= 7	<u>Date</u>	<u>Max AQI</u>	<u>Pollutant</u>	<u>Site/s</u>
	02/01	86	PM-10	West Forty Third
	02/02	92	PM-10	West Forty Third
	02/03	90	PM-10	West Forty Third
	02/10	82	PM-10	West Forty Third
	02/15	124	PM-10	West Forty Third
	02/23	91	PM-10	West Forty Third
	02/24	89	PM-10	West Forty Third

Health Watches issued during FEB 2006-

Total= 11	<u>Date</u>	<u>Max AQI</u>	<u>Pollutant</u>	<u>Site/s</u>
	02/06	93	PM-10	Durango
	02/07	84	PM-10	West Forty Third
	02/09	125	PM-10	West Forty Third
	02/11	85	PM-10	Buckeye
	02/14	159	PM-10	Buckeye
	02/16	84	PM-10	Buckeye
	02/17	119	PM-10	Buckeye
	02/20	63	PM-10	West Forty Third
	02/21	67	PM-10	West Forty Third
	02/22	71	PM-10	West Forty Third
	02/28	85	PM-10	West Forty Third

Concentration Recap:

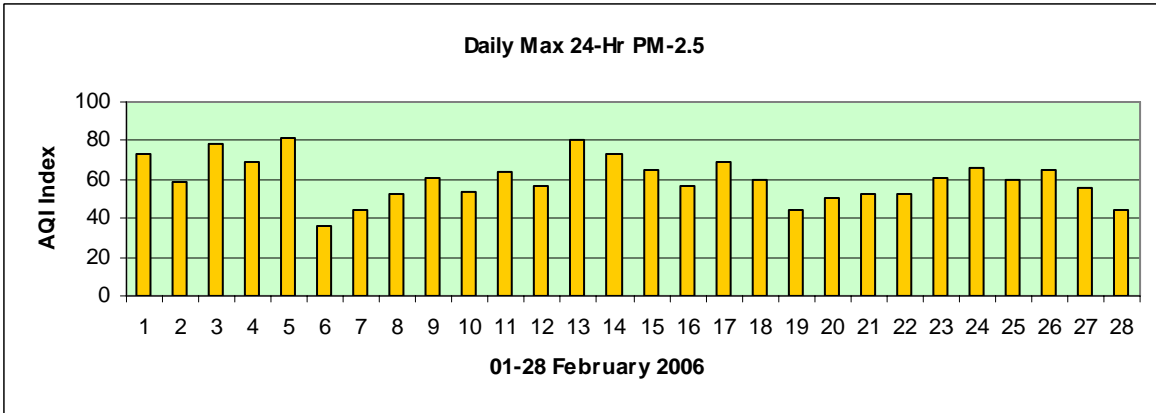
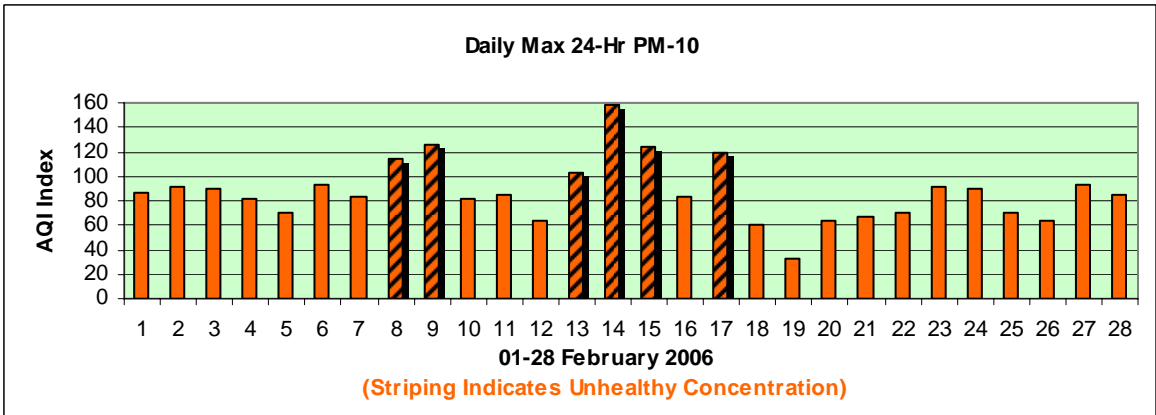
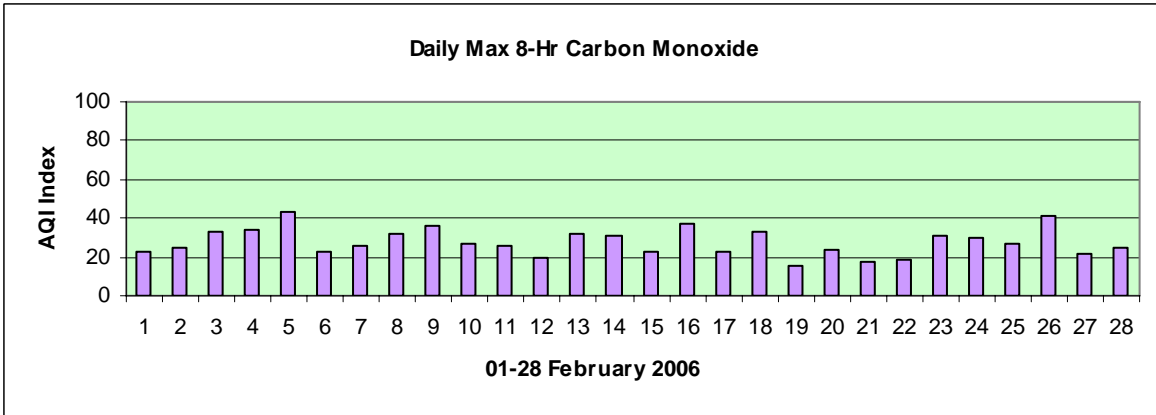
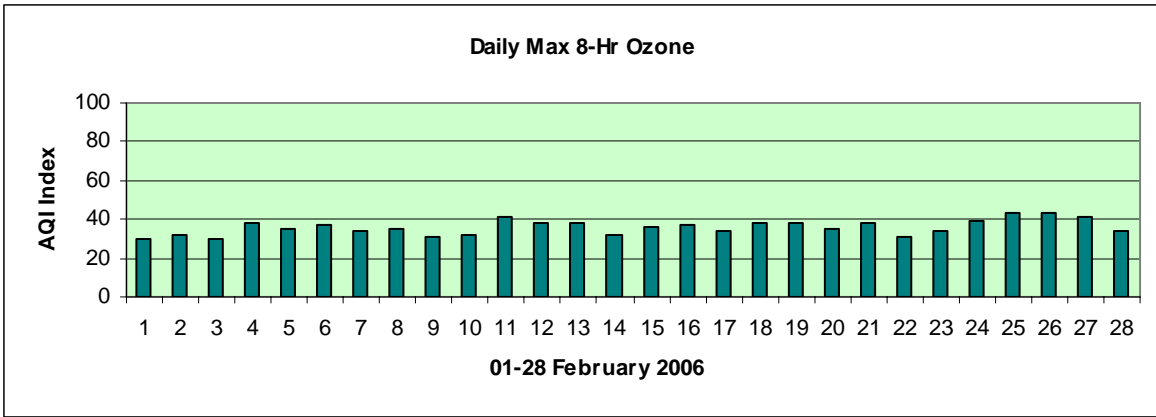
Days in the Good category:	1
Days in the Moderate category:	21
Days in the Unhealthy for Sensitive Groups category:	5
Days in the Unhealthy category:	<u>1</u>
Total Forecast Days:	28

PM-10 Exceedances by date*:

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

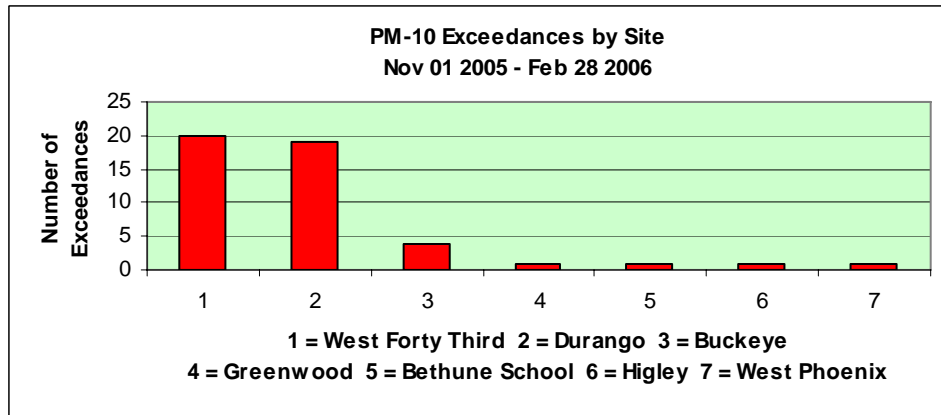
<u>Date</u>	<u>Site(s)</u>	<u>UG/m3/AQI</u>	<u>Equipment</u>	<u>Weather Type</u>
Feb 08	West Forty Third	184.0/115	Continuous	Stagnation
Feb 09	Durango	171.7/109	Continuous	Stagnation
	West Forty Third	204.6/125	Continuous	Stagnation
Feb 13	Buckeye	159.7/103	Continuous	Stagnation/Tilling
Feb 14	Buckeye	272.9/159	Continuous	Stagnation/Tilling
Feb 15	Durango	157.6/102	Continuous	Winds
	West Forty Third	202.2/124	Continuous	Winds
Feb 17	Buckeye	191.9/119	Continuous	Stagnation/Tilling

Total: 8

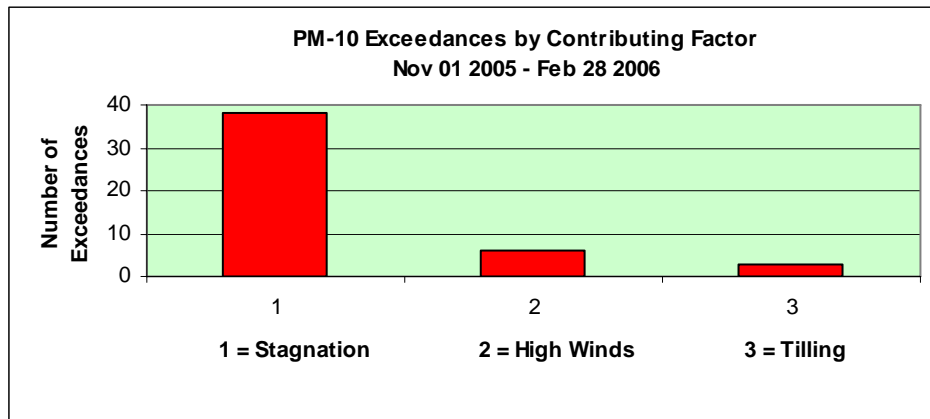


Narrative:

Maximum 8-hr ozone levels slowly crept upward during February as both day length and sun angle increased, while carbon monoxide levels dropped – aided by minimum temperatures in the 40’s and 50’s, weaker inversions, and better dispersion. Particle pollution continued to vex air quality officials and local residents as the string of months with multiple exceedances of the 24-hr PM-10 standard reached four. During that stretch there have been 29 days during which at least one site exceedance occurred and 15 days with multiple site exceedances; a total of 47 exceedances at seven different sites have been documented from November 01 2005 thru February 28 2006. See the graph below for a break out of occurrences by site:



During February 2006 a new contributing factor – farm field tilling – emerged during three PM-10 exceedances at the Buckeye site, which is located near homes as well as agricultural operations. These exceedances occurred on the 13th, 14th, and 17th and it was reported – and preliminary monitoring data appears to support – that some of the tilling coincided with times of peak stagnation. Maximum 1-hr PM-10 concentrations at Buckeye on those dates were 485.7ug/m³ at 2300 hrs, 672.3ug/m³ at 2100 hrs, and 589.2ug/m³ at 0100 hrs, respectively. The 24-hr average on the 14th was 272.9ug/m³ there, which placed it in the **UNHEALTHY** range of the Air Quality Index; it was the highest local daily average since September 18 2004. A breakdown of the contributing factors for PM-10 exceedances during the 2005-2006 season thus far follows:



Besides the above factors, the overarching theme continues to be the absence of precipitation; as of February 28 not even a trace of rain had fallen at Phoenix Sky Harbor Airport since October 18 2005 – a record 133 days. This means that a huge expanse of disturbed desert soil within the airshed remains poised for contribution to airborne dust due to winds or vehicular movement. -Reith.