



MONTHLY AIR QUALITY REPORT FOR
MARCH 2008

AOI 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 March 2008*

*Preliminary data

SAMPLE POLLUTANT REPORTING BOX

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

SUN			MON			TUES			WED			THU			FRI			SAT		
																		1	40	18
2	41	10	3	39	09	4	38	13	5	40	11	6	43	06	7	38	13	8	37	11
	103	29		55	20		59	37		60	43		34	17		71	31		43	40
9	41	10	10	40	14	11	42	19	12	42	16	13	47	09	14	45	11	15	42	05
	31	38		60	37		53	37		58	38		53	41		149	40		52	32
16	41	05	17	39	07	18	38	13	19	43	14	20	45	15	21	46	16	22	45	15
	30	22		39	25		51	43		65	43		58	40		61	64		41	44
23	41	18	24	49	19	25	54	17	26	45	13	27	45	17	28	44	19	29	38	11
	45	44		65	64		67	49		59	41		59	42		57	51		47	47
30	34	07	31	41	08															
	77	51		52	52															

Calendar of High Pollution Advisories and Health Watches issued during March 2008

SUN			MON			TUE			WED			THU			FRI			SAT		
																		1		
2		3			4			5			6			7				8		
9		10			11			12			13			14		D		15	D	
16	D	17			18			19			20			21				22		
23		24			25			26			27			28				29		
30		31																		

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

Calendar of Meteorological Conditions observed in Metro Phoenix during March 2008

SUN			MON			TUE			WED			THU			FRI			SAT		
																		1		E
2		3			4		E	5		E	6		E	7		E		8		
9		10		E	11		E	12		E	13			14		D	E	15		
16	B	17		B	18		E	19		E	20		E	21		E		22		F
23		F		E	24			25			26		E	27		E		28		
30		31		E																

LEGEND

ELECTROMETEORS

- A** = Thunderstorm

HYDROMETEORS

- B** = Rain/Drizzle/Hail/Snow
- C** = Fog

LITHOMETEORS

- D** = Blowing Dust
- E** = Haze (vsby <10SM)
- F** = Smoke

Exceedance days during MAR 2008-

<u>Total=</u>	<u>Date</u>	<u>Max AQI</u>	<u>Pollutant</u>	<u>Site/s</u>
2	03/02	103	PM-10	Buckeye
	03/14	149	PM-10	West Forty Third

Health Watches issued during MAR 2008-

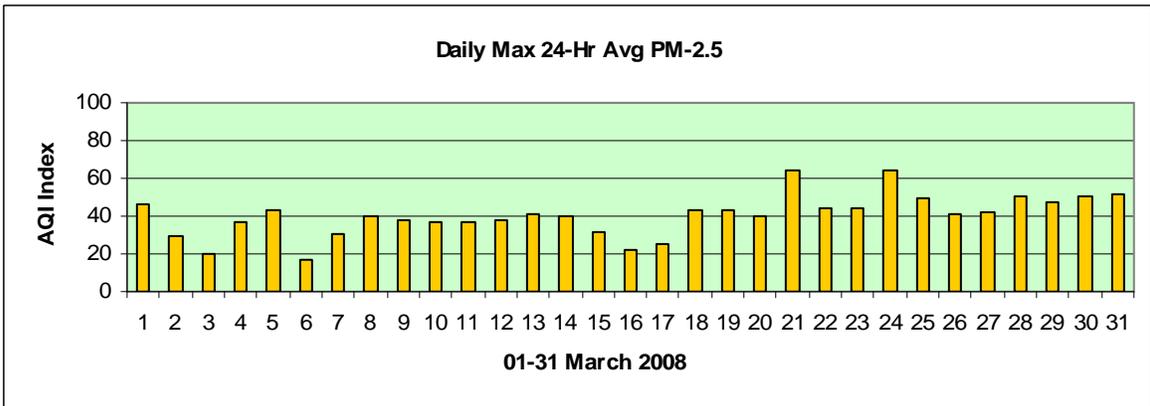
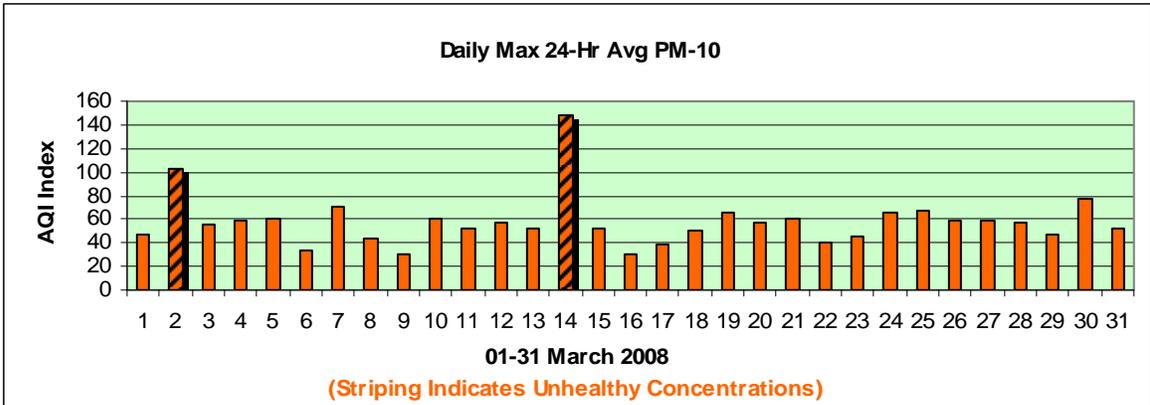
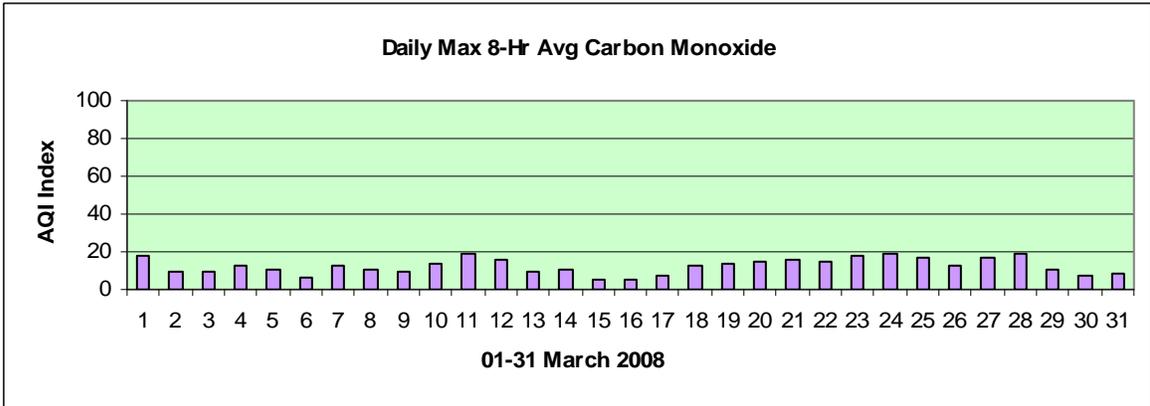
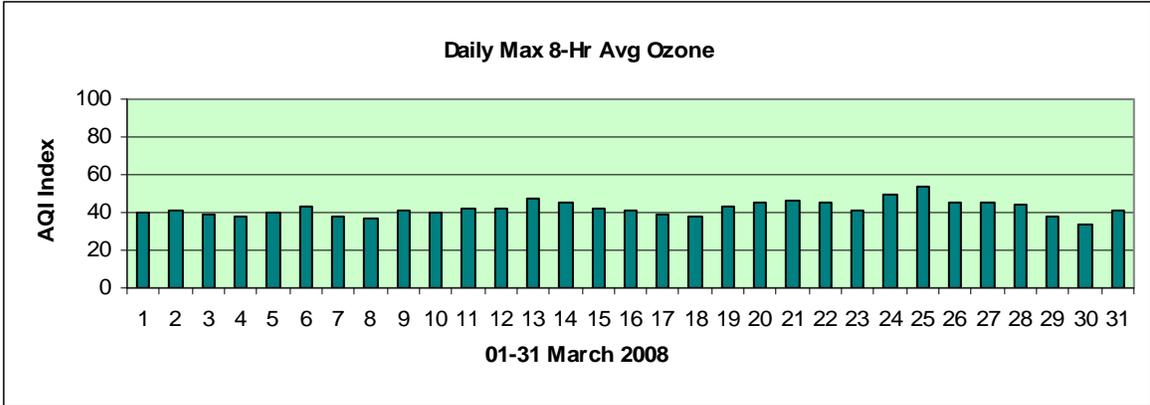
<u>Total=</u>	<u>Date</u>	<u>Max AQI</u>	<u>Pollutant</u>	<u>Site/s</u>
3	03/14	149	PM-10	West Forty Third
	03/15	52	PM-10	South Phoenix
	03/16	30	PM-10	South Phoenix

High Pollution Advisories issued during MAR 2008-

<u>Total=</u>	<u>Date</u>	<u>Max AQI</u>	<u>Pollutant</u>	<u>Site/s</u>
0				

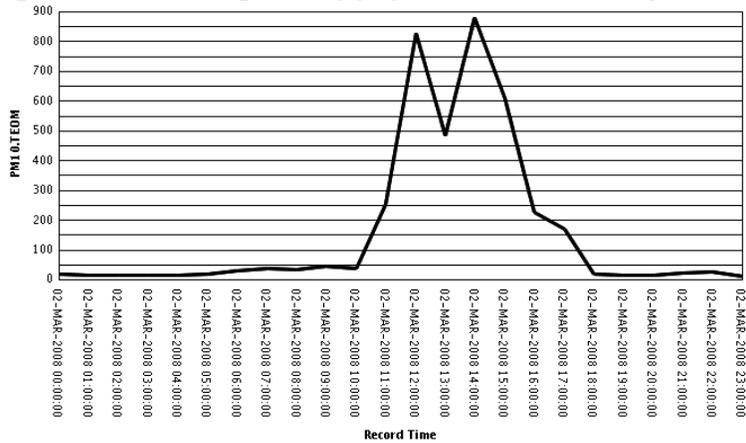
Concentration Recap:

Days in the Good category:	9
Days in the Moderate category:	20
Days in the Unhealthy for Sensitive Groups category:	2
Days in the Unhealthy category:	<u>0</u>
Total Forecast Days:	31

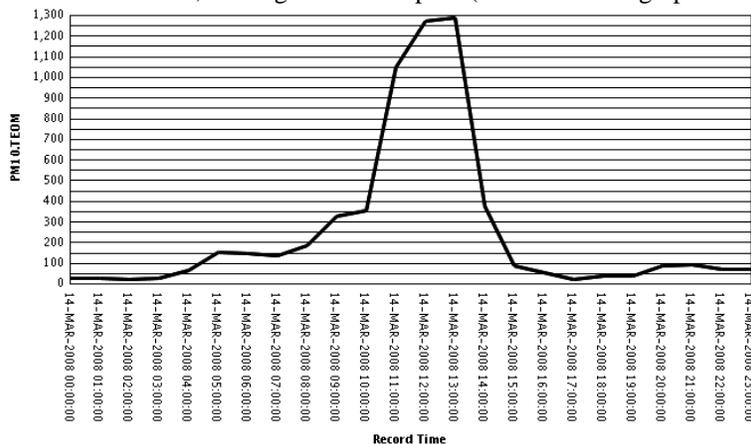


Narrative:

The mid-latitude storm track continued to be unusually active at low latitudes thru the end of March 2008 and contributed to a variety of weather and air quality situations in the Phoenix metropolitan area. Air pollution level trends were a mixed bag: ozone concentrations rose in response to higher sun angles, longer daytime periods, and warmer afternoon temperatures; carbon monoxide levels fell due to warmer overnight lows; and PM-2.5 (fine particle) readings decreased due to deeper mixing depths as well as stronger and more frequent winds. In contrast, PM-10 (coarse particle) concentrations ranged from four days with Air Quality Index levels in the 30's to an AQI of 149 on the 14th. With only trace rainfall amounts all month, and preceded by a relatively dry February, soil conditions in some areas were prone to wind-generated fugitive dust emissions. On the 2nd an upper level trough and surface frontal passage was accompanied by winds that gusted to between 20 and 40 mph from 11:00 a.m. to 10:00 p.m. Even though no blowing dust was reported anywhere in the Valley thru the episode, the monitoring site in Buckeye – in the far west Valley – registered an exceedance of the PM-10 standard that included an hourly reading of 879.5ug/m3 at 2:00 p.m. (see time series graph below). Agricultural field tilling and crop preparation in the area likely contributed to this event.



On the 14th strong but zonal flow aloft resulted in local surface winds that gusted to between 23 and 43 mph from 10:00 a.m. to 6:00 p.m. and produced sufficient dust to reduce the visibility at Luke AFB to 9SM at 2:00 p.m. A PM-10 exceedance was recorded at the West Forty Third monitor that included an extremely high hourly concentration of 1,286.4ug/m3 at 1:00 p.m. (see time series graph below).



The first sizeable brush fire of the season began in a dry river bed in the far southwest Valley on the 21st and smoke from it – both at the surface and aloft – impacted mainly the west Valley over the next three days with some obstruction to visibilities and modestly higher PM-2.5 concentrations. -Reith