



**MONTHLY AIR QUALITY REPORT FOR
APRIL 2007**

AOI COLOR SCALE

GOOD 0-50	MODERATE 51-100	UNHEALTHY FOR SENSITIVE GROUPS 101-150	UNHEALTHY 151-200
-------------------------	-------------------------------	--	---------------------------------

Calendar of maximum AQI values & their corresponding color for April 2007*

*Preliminary data

SAMPLE POLLUTANT REPORTING BOX

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

	SUN	MON	TUES	WED	THU	FRI	SAT						
1	61 23	2	56 23	3	49 11	4	49 16	5	49 25	6	47 25	7	56 08
	40 40		62 40		61 46		71 38		84 48		65 49		49 25
8	44 06	9	48 07	10	49 05	11	50 08	12	69 03	13	54 06	14	54 10
	83 45		52 37		56 29		91 46		124 53		44 32		36 30
15	47 14	16	48 08	17	64 09	18	56 10	19	66 10	20	56 10	21	48 07
	59 31		56 34		47 28		96 54		56 30		74 50		29 25
22	50 14	23	45 06	24	46 07	25	59 14	26	69 17	27	74 17	28	59 11
	19 30		36 14		37 19		52 26		58 71		61 45		73 56
29	69 05	30	69 05										
	27 24		56 38										

Calendar of High Pollution Advisories and Health Watches issued during April 2007

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

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 April 2007

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

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 APR 2007-

Total=	Date	Max AQI	Pollutant	Site/s
1	04/12	124	PM-10	West Forty Third
		109	PM-10	South Phoenix

Health Watches issued during APR 2007-

Total=	Date	Max AQI	Pollutant	Site/s
2	04/11	91	PM-10	West Forty Third
	04/20	74	PM-10	West Forty Third

High Pollution Advisories issued during APR 2007-

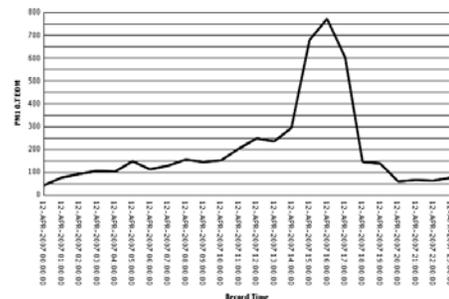
Total=	Date	Max AQI	Pollutant	Site/s
1	04/12	124	PM-10	West Forty Third

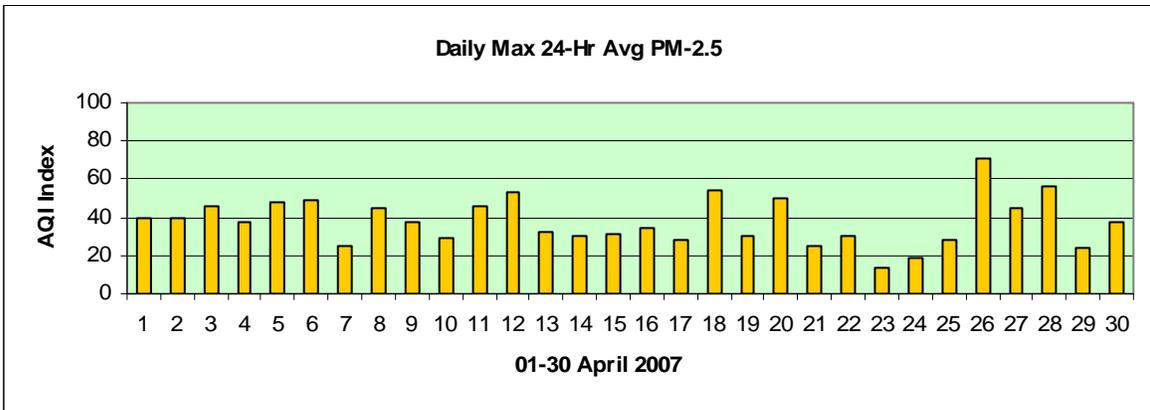
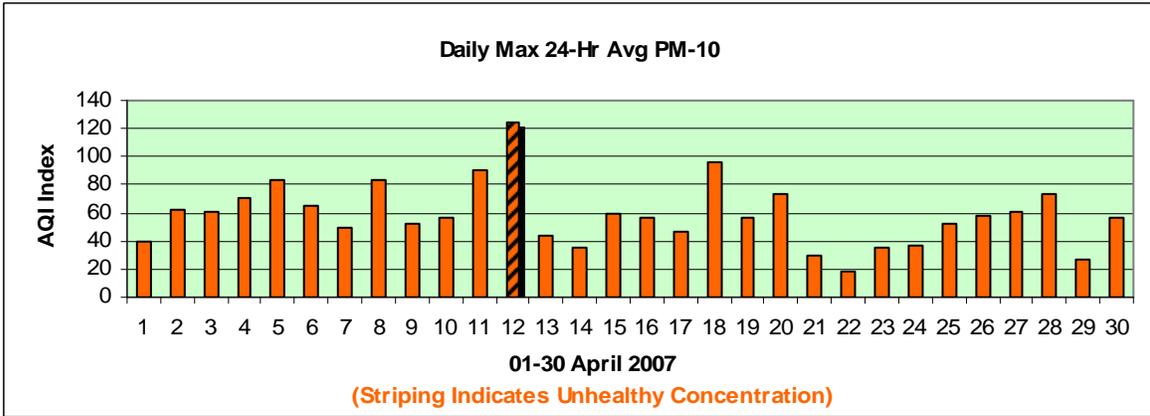
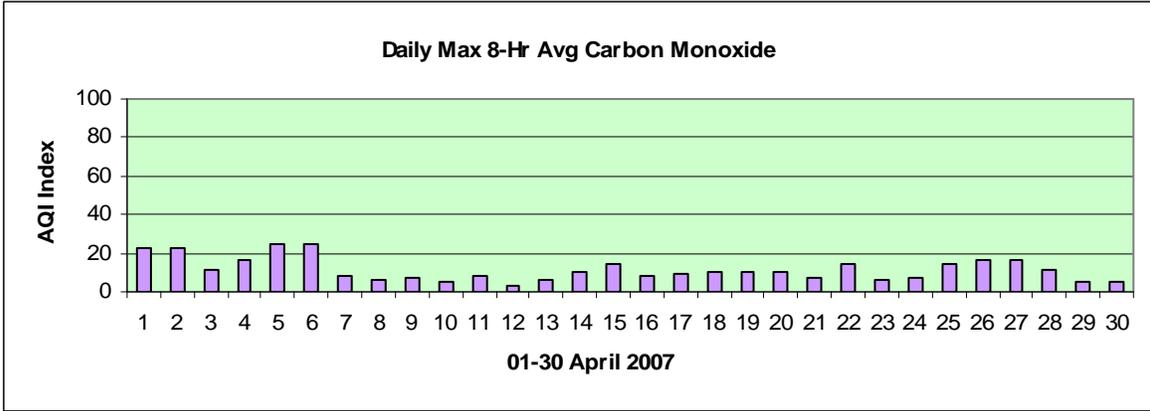
Concentration Recap:

Days in the Good category:	3
Days in the Moderate category:	26
Days in the Unhealthy for Sensitive Groups category:	1
Days in the Unhealthy category:	0
Total Forecast Days:	30

Narrative:

The mid-latitude storm track remained active at this latitude thru all of April and delivered trough and/or frontal passages to the local forecast area on the 8th, 12th, 15th, 16th, 18th, 21st, and 23rd. Blowing dust accompanied those on the 8th, 12th, and 18th; only the 12th could be classified as a regional wind and dust event. The National Weather Service Office in Phoenix issued a Wind Advisory that was valid from 1200-2000 hrs. Local wind gusts reached 35 mph by 1300 hrs and a squall arrived by 1600 hrs that increased local wind gusts to 50 mph. As a result, widespread blowing dust occurred with visibilities as low as one mile at times. High coarse particle (PM-10) levels were contributed to by these winds and preliminary data indicated exceedances of the NAAQS at the West Forty Third and South Phoenix sites with a near-miss at the Buckeye site. At 1600 hrs the hourly average at WFT reached 774.9ug/m3; its time series graph can be seen above. The trough passage also brought light rainfall that helped lower PM-10 levels into the good range of the AQI the following two days. The wind event on the 18th was the catalyst for more blowing dust with a near-exceedance at West Forty Third on that date. Also, in a rather rare circumstance for April, outflow from thunderstorms generated blowing dust on the 28th.





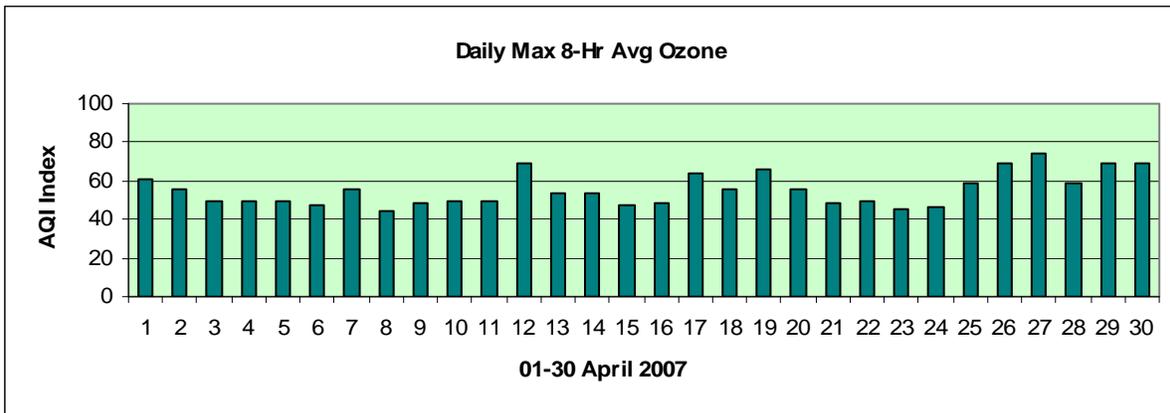
DETAILED OZONE SECTION

GOOD	MODERATE	UNHEALTHY FOR SENSITIVE GROUPS	UNHEALTHY
0-50	51-100	101-150	151-200

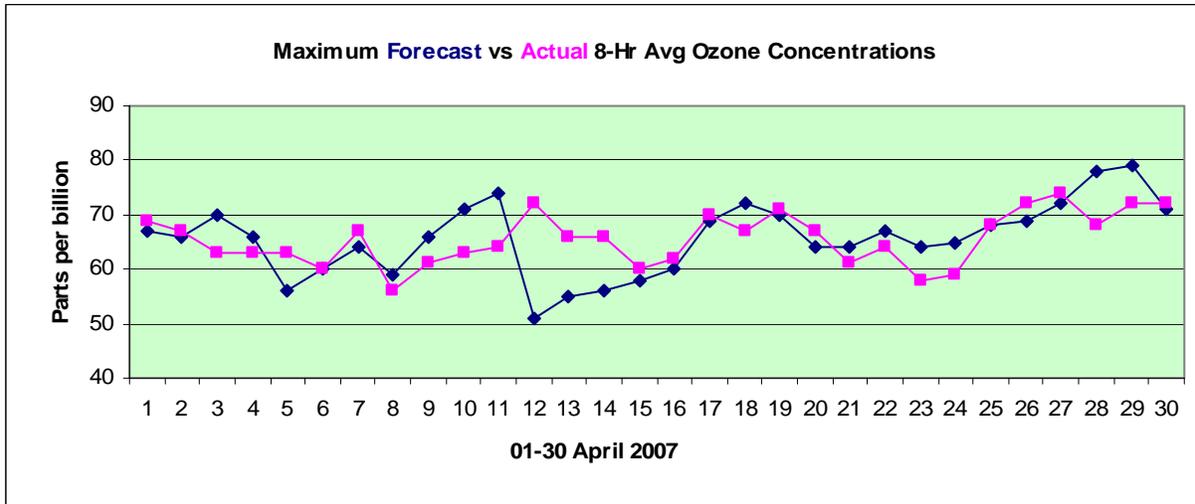
SUMMARY OF MAXIMUM 8-HR OZONE AQI VALUES FOR APRIL 2007*

*Preliminary data

	SUN	MON	TUES	WED	THU	FRI	SAT
1	61	2	56	3	49	4	49
5	49	6	47	7	56	8	44
9	56	10	48	11	49	12	69
13	54	14	54	15	47	16	48
17	64	18	56	19	66	20	56
21	48	22	50	23	45	24	46
25	59	26	69	27	74	28	59
29	69	30	69				



Forecast Verification:	# of days maximum concentrations were over-forecast:	13
	# of days maximum concentrations were under-forecast:	15
	# of days maximum concentrations were correctly forecast:	2
	Apr average forecast accuracy (ppb):	+/-4.9
	Apr average forecast bias (ppb):	+0.2



Narrative: Ozone “season” begins in April in the Phoenix metro area due to the potential for hot weather to contribute to unhealthy ozone levels. The last local April 8-hour ozone exceedance occurred on the 26th in 2000 and three other exceedances have occurred during the month of April since 1996; the highest April concentration of 99 ppb (137 AQI) was recorded on the 29th in 1996. No readings close to that took place in 2007, but the number of days with ozone levels in the moderate range of the AQI rose to 16 this month versus only three days in March. Daytime maximum temperatures at Sky Harbor Airport in Phoenix ranged from 71deg on the 16th to 101 deg on the 28th. As can be seen from the graph below, maximum temperature by itself is not a good predictor of ozone concentrations. Type and amount of cloud cover, afternoon wind speed and direction, and morning inversion strength also play a role as does the transport of ozone and its precursors from upstream sources – mainly in California; the Alamo Lake site located 100 miles northwest of Phoenix was established to track it. The best example of this import occurred between April 10th and 12th. In association with a trough passage, winds aloft shifted out of the west and northwest over Arizona late on the 10th. The 8-hour average ozone level at Alamo rose from 52 ppb on the 9th to 65 ppb on the 11th. In Phoenix, despite a daytime temperature drop of 8 deg F and strong winds that produced thick blowing dust, levels rose from 64 ppb on the 11th to 72 ppb on the 12th. –Reith

