



**MONTHLY AIR QUALITY REPORT FOR
JULY 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 July 2008*

*Preliminary data

SAMPLE POLLUTANT REPORTING BOX

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

SUN			MON			TUES			WED			THU			FRI			SAT		
						1	77	09	2	116	06	3	119	05	4	114	04	5	93	05
							109	49		53	49		67	62		140	46		28	43
6	61	04	7	114	04	8	114	04	9	77	04	10	48	04	11	51	06	12	49	06
	42	37		52	35		78	39		44	29		32	30		39	30		24	25
13	43	06	14	67	06	15	77	06	16	71	08	17	84	07	18	77	08	19	51	05
	47	40		25	39		33	35		37	37		38	34		46	43		62	46
20	54	06	21	77	06	22	87	06	23	71	07	24	111	06	25	101	06	26	71	07
	17	26		23	30		36	35		37	31		40	27		64	27		26	26
27	45	07	28	67	06	29	58	07	30	64	08	31	74	07						
	32	34		42	33		54	21		44	25		53	45						

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

SUN			MON			TUE			WED			THU			FRI			SAT					
					1			F	2			3			4			F	5				F
6		F	7		F	8			9		C	10			F	11					12		
13			14			15			16			F	17		F	18				F	19		
20			21			22			23				24		F	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 July 2008

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

LEGEND

ELECTROMETEORS
A = Thunderstorm

HYDROMETEORS
B = Rain/Drizzle/Hail/Snow
C = Fog

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

Non-Ozone Exceedance days during JUL 2008-

Total=	<u>Date</u>	<u>Max AQI</u>	<u>Pollutant</u>	<u>Site/s</u>
2	07/01	109	PM-10	Buckeye
	07/04	140	PM-10	Buckeye

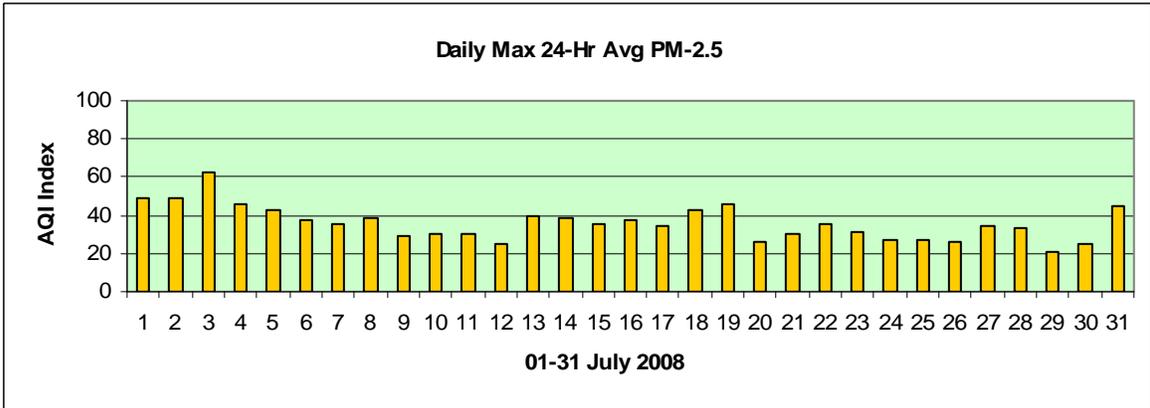
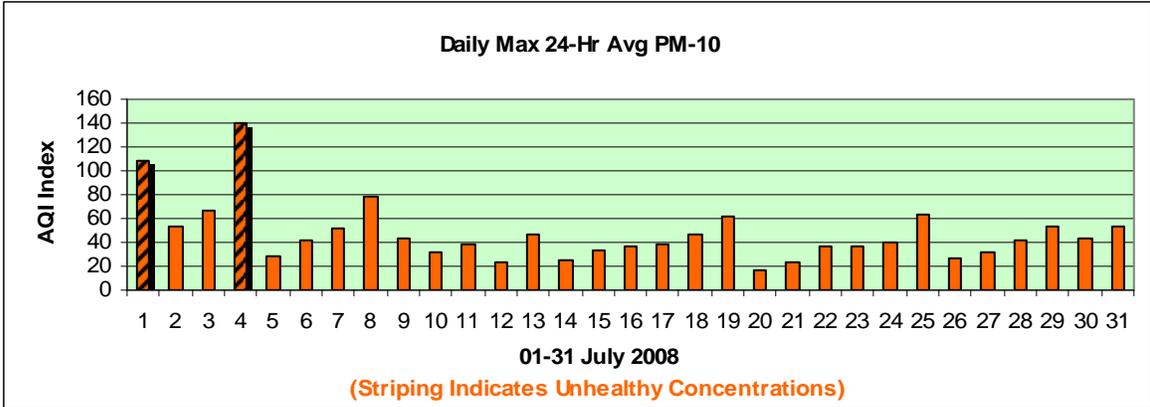
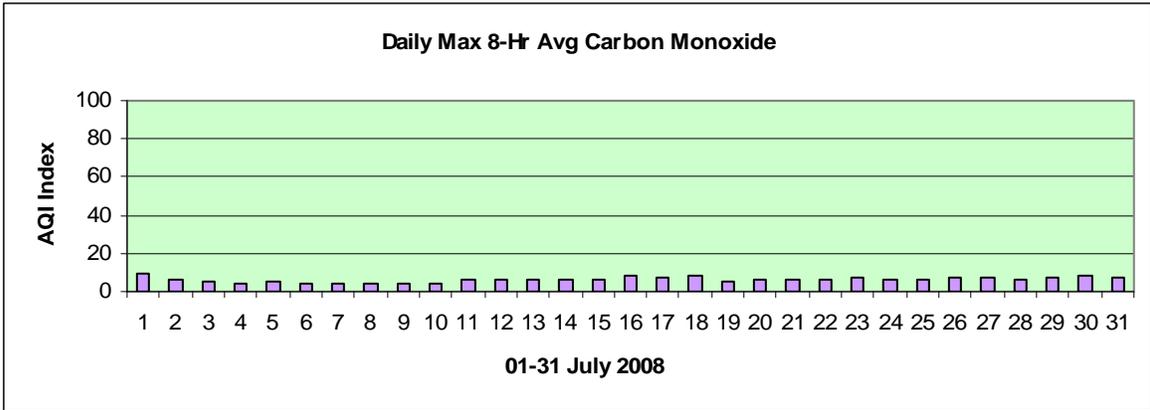
Non-Ozone Health Watches issued during JUL 2008-

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

Non-Ozone High Pollution Advisories issued during JUL 2008-

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

<u>Concentration Recap:</u>	Days in the Good category:	4
(All pollutants)	Days in the Moderate category:	19
	Days in the Unhealthy for Sensitive Groups category:	8
	Days in the Unhealthy category:	<u>0</u>
	Total Forecast Days:	31



Narrative: With virtually no rainfall during the month of June – and thru nearly the first 10 days of July – local blowing dust events were practically assured with any strong wind. The first event came on the 1st when an outflow boundary from summer monsoon thunderstorms to the north thru east of the Valley arrived. Wind gusts up to 49 mph were registered at local airports between 1615 and 2030 hrs and visibilities as low as two miles were reported in dense blowing dust. As a result, the Buckeye PM-10 monitoring site recorded an hourly concentration of 2,327ug/m³ at 1800 hrs and an exceedance for the day. A mere three days later, another thunderstorm outflow boundary generated wind gusts up to 53 mph between 1900 and 2400 hrs, visibilities as low as 11/4 miles, and an hourly PM-10 concentration at Buckeye of 2,820.2ug/m³ – and another exceedance. Outflow boundaries and areas of blowing dust were nearly a daily occurrence thru July 10. However, the storms on the 10th also produced heavy rainfall – many sites had 1+” totals – that went a long way toward temporarily stabilizing loose soils and curtailing widespread fugitive dust emissions. In fact, on all but four days following that rain event, PM-10 levels were in the good range of the Air Quality Index. Other rain events also occurred during the month, but the precipitation on the 10th set the stage. Sky Harbor Airport received record daily rainfall totals on the 10th and 13th. -Reith

DETAILED OZONE SECTION

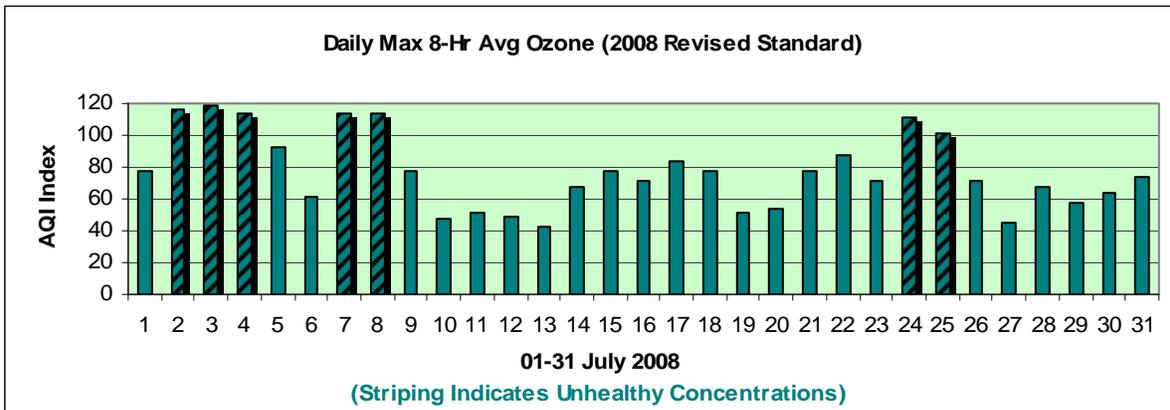
(Based on the 2008 EPA Revised 8-Hour Ozone Standard)

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

SUMMARY OF MAXIMUM 8-HR OZONE AQI VALUES FOR JULY 2008*

*Preliminary data

SUN		MON		TUES		WED		THU		FRI		SAT	
				1	77	2	116	3	119	4	114	5	93
6	61	7	114	8	114	09	77	10	48	11	51	12	49
13	43	14	67	15	77	16	71	17	84	18	77	19	51
20	54	21	77	22	87	23	71	24	111	25	101	26	71
27	45	28	67	29	58	30	64	31	74				



<u>8-hr Ozone exceedance days in JUL:</u>	Total= 7	<u>Date</u>	<u>Max ppb/AQI</u>	<u>Site/s</u>
		7/02	82/116	Queen Valley
			81/114	Apache Junction
			79/109	Rio Verde
			78/106	Fountain Hills
			77/104	Tonto Nat'l Mon
		7/03	83/119	Apache Junction
		7/04	81/114	Apache Junction
		7/07	81/114	West Phoenix
			79/109	Phx Supersite
			78/106	Central Phoenix
			77/104	Glendale
			77/104	North Phoenix
			77/104	South Phoenix
			76/101	Tempe
		7/08	81/114	West Phoenix
			80/111	North Phoenix
			79/109	Glendale
			78/106	Phx Supersite
			77/104	Cave Creek
		7/24	80/111	North Phoenix
			79/109	Phx Supersite
			77/104	South Scottsdale
		7/25	76/101	Apache Junction

Total number of exceedance days since APR 01: 23
Total number of exceedance sites since APR 01: 97

<u>Ozone Health Watches in JUL:</u> (Forecast max value 72-75 ppb)	Total= 10	<u>Date</u>	<u>Max ppb/AQI</u>	<u>Site/s</u>
		7/01	68/77	Cave Creek
		7/04	81/114	Apache Junction
		7/05	73/93	Queen Valley
		7/06	63/61	Apache Junction
		7/08	81/114	West Phoenix
		7/10	57/48	Cave Creek
		7/16	66/71	Apache Junction
		7/17	70/84	Apache Junction
		7/18	68/77	West Chandler
		7/24	80/111	North Phoenix

Ozone Health Watches since APR 01: Total= 35

High Pollution Advisories in JUL:
(Forecast max value 76+ppb)

Total= 1 7/09 68/77 West Phoenix

High Pollution Advisories since APR 01: Total= 11

Concentration Recap:
(Ozone)

Days in the **Good** category: 4
 Days in the **Moderate** category: 20
 Days in the **Unhealthy for Sensitive Groups** category: 7
 Days in the **Unhealthy** category: 0
 Total Forecast Days: 31

Maximum 8-Hr value: Date Hour Site ppb/AQI DOW
 7/03 1300 Apache Junction 83/119 Thu

Maximum 1-Hr value: Date Hour Site ppb/AQI DOW
 7/02 1500 Rio Verde 104/87 Wed

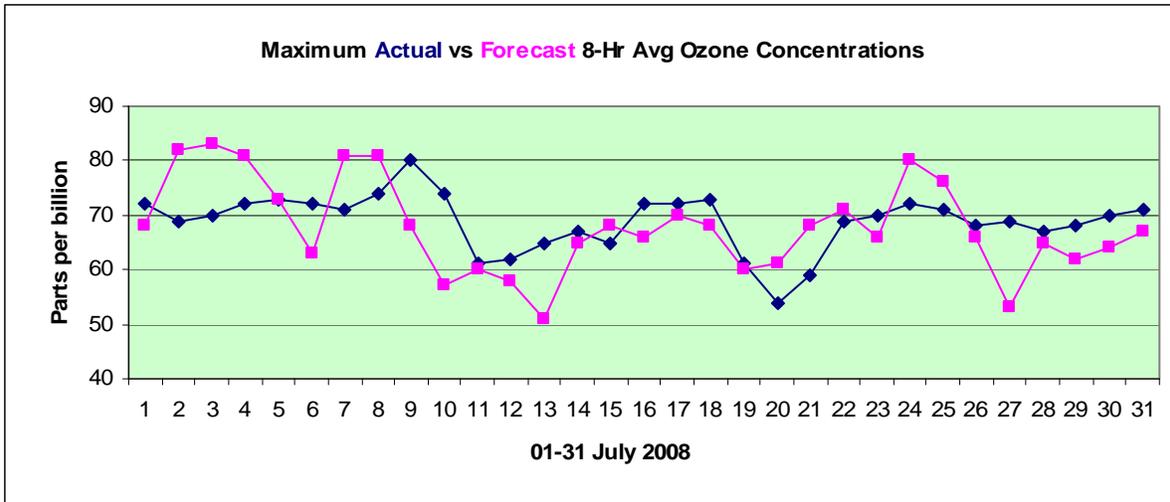
Average daily max 8-Hr concentration (ppb): 67.8
 Deviation from the 1996-2007 average (ppb): -3.8

JUL Climatology:
(Period 1996-2007
using 1997 85ppb
standard)

Average number of 8-Hr exceedance days: 3.8
 Maximum number of 8-Hr exceedance days: 10 in 1996
 Minimum number of 8-Hr exceedance days: 0 in 1997, 1999, 2007
 Average daily max 8-Hr concentration (ppb): 71.6
 Record high max 8-Hr concentration (ppb): 109 on the 9th, 2002
 Record low max 8-Hr concentration (ppb): 40 on the 29th, 1997

Forecast Verification:

of days maximum concentrations were over-forecast: 19
 # of days maximum concentrations were under-forecast: 11
 # of days maximum concentrations were correctly forecast: 1
 July average forecast accuracy (ppb): +/-6.8
 July average forecast bias (ppb): +1.2



Narrative:

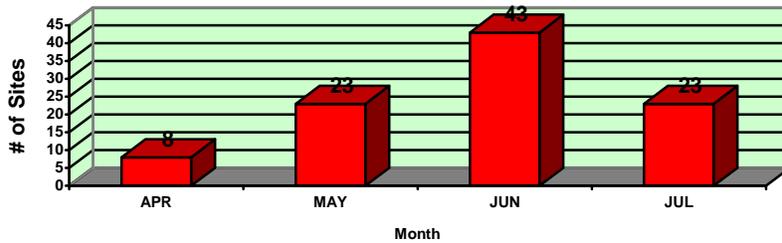
Hot daytime temperatures (20 days with highs of 105 deg F or higher), plentiful sunshine, high sun angles, long day lengths, and occasional shots of biogenic VOCs from thunderstorm outflow boundaries usually make July a ground-level ozone haven in Phoenix – and 2008 was no exception. On those days when winds were relatively light ozone exceedances were most prevalent over the city center (see the 7th, 8th, and 24th); otherwise, prevailing westerly winds were instrumental in transporting the locally produced ozone plume to downwind sites where exceedances were most numerous (see the 2nd, 3rd, 4th, and 25th). -Reith

PHOENIX & VICINITY 8-HR OZONE EXCEEDANCES APR-JUL 2008

(Totals = 24 Days/97 site exceedances)

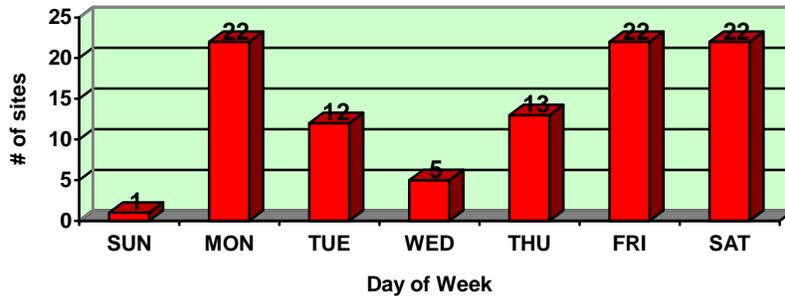
SITE EXCEEDANCES BY MONTH (TOTAL = 97)

Phoenix & Vicinity 8-Hour Ozone Site Exceedances



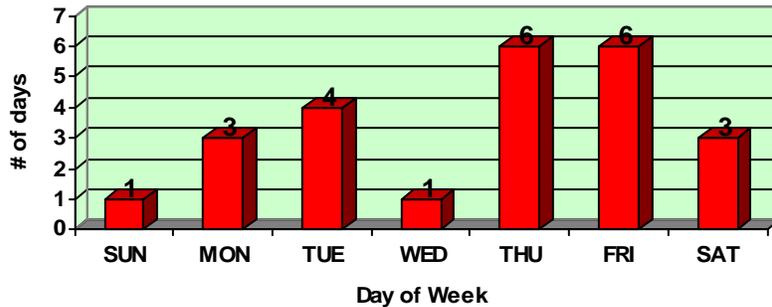
SITE EXCEEDANCES BY DAY OF WEEK (TOTAL = 97)

Phoenix & Vicinity 8-Hour Ozone Site Exceedances



EXCEEDANCE DAYS BY DAY OF WEEK (TOTAL = 24)

Phoenix & Vicinity 8-Hour Ozone Site Exceedance Days



SITE EXCEEDANCES BY SITE (TOTAL = 97)

Phoenix & Vicinity 8-Hour Ozone Site Exceedances

