



MONTHLY AIR QUALITY REPORT FOR
JUNE 2007

AOI COLOR SCALE

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

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

*Preliminary data

SAMPLE POLLUTANT REPORTING BOX

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

	SUN	MON	TUE	WED	THU	FRI	SAT						
						1	2						
						59 17	54 19						
						74 37	54 35						
3	47 20	4	64 08	5	47 07	6	59 02	7	85 08	8	85 15	9	64 08
	40 27		74 55		100 51		136 53		76 58		80 67		57 36
10	48 05	11	39 07	12	54 14	13	74 14	14	82 07	15	69 07	16	66 06
	41 28		77 34		47 31		80 45		67 47		62 46		54 30
17	47 10	18	46 11	19	50 08	20	50 13	21	61 10	22	74 16	23	82 06
	53 37		66 35		58 43		66 39		72 41		73 64		47 37
24	61 07	25	77 10	26	54 14	27	56 06	28	56 08	29	61 08	30	66 08
	33 31		72 53		77 62		63 42		66 33		86 37		53 40

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

SUN			MON			TUE			WED			THU			FRI			SAT					
															1						2		
3		4			5			D			A			7	8						9		
10		11			12						13			14	15					F	16		
17		18			19						20			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 June 2007

SUN			MON			TUE			WED			THU			FRI			SAT					
															1		E				2		
3		4			E			E			D			7	8						9		
10		11			D									14	15		E				16		E
17		18									E			21	22		E				23		
24		25						E			E			28	29		E				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 JUN 2007-

Total=	Date	Max AQI	Pollutant	Site/s
1	06/06	136	PM-10	West Forty Third
		114	PM-10	Higley

Health Watches issued during JUN 2007-

Total=	Date	Max AQI	Pollutant	Site/s
1	06/05	100	PM-10	West Forty Third

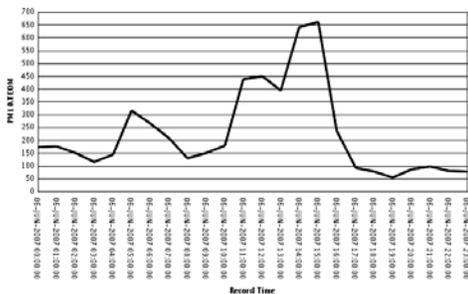
High Pollution Advisories issued during JUN 2007-

Total=	Date	Max AQI	Pollutant	Site/s
1	06/06	136	PM-10	West Forty Third

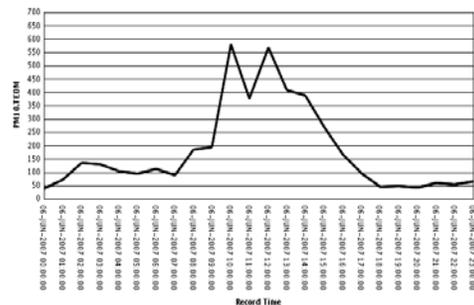
Concentration Recap:

Days in the Good category:	2
Days in the Moderate category:	27
Days in the Unhealthy for Sensitive Groups category:	1
Days in the Unhealthy category:	0
Total Forecast Days:	30

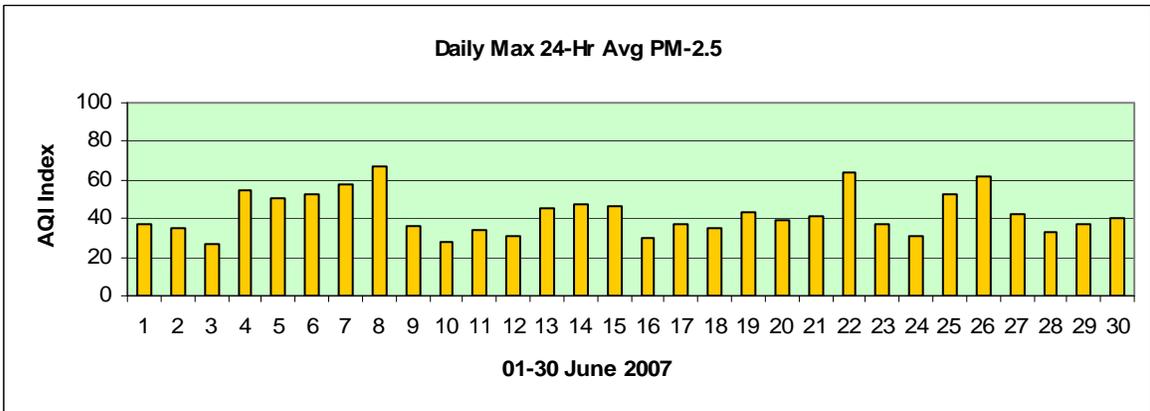
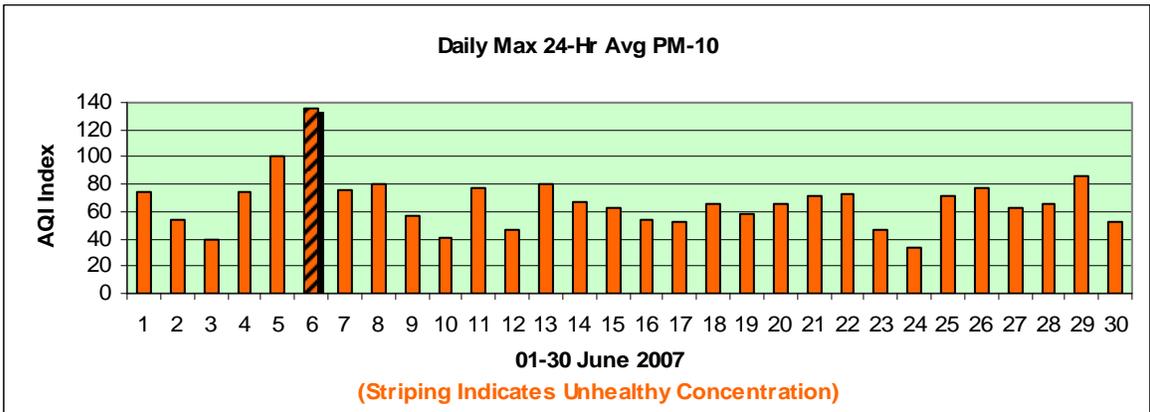
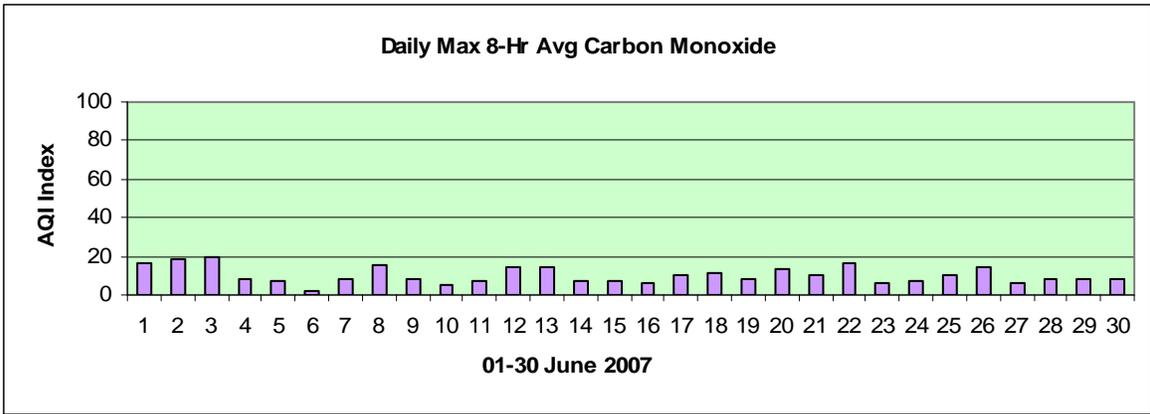
Narrative: For the fourth straight month a wind event contributed to a PM-10 (coarse particle) exceedance in the Phoenix metro area by generating and transporting thick dust from disturbed desert soils. This month's episode peaked the afternoon of the 6th but some suspended dust from upstream areas to the west was seen and monitored as early as the afternoon of the 5th. An unusually large (for the month of June) and negative-tilt trough in the mid-latitude storm track covered most of the western U.S. and was accompanied by strong cold air advection and tight gradients aloft and at the surface. This energy translated into 30-40 mph winds over the Phoenix area by 0800 hrs and areas of blowing dust were observed by 0900 hrs; ultimately, local prevailing visibilities were reduced to as low as eight miles during the afternoon hours. As a result, two monitoring sites – at West Forty Third and Higley – registered hourly PM-10 concentrations of 662.3ug/m3 at 1500 hrs and 580.2ug/m3 at 1000 hrs, respectively. Their graphs are reproduced below:



WFT



HIGLEY



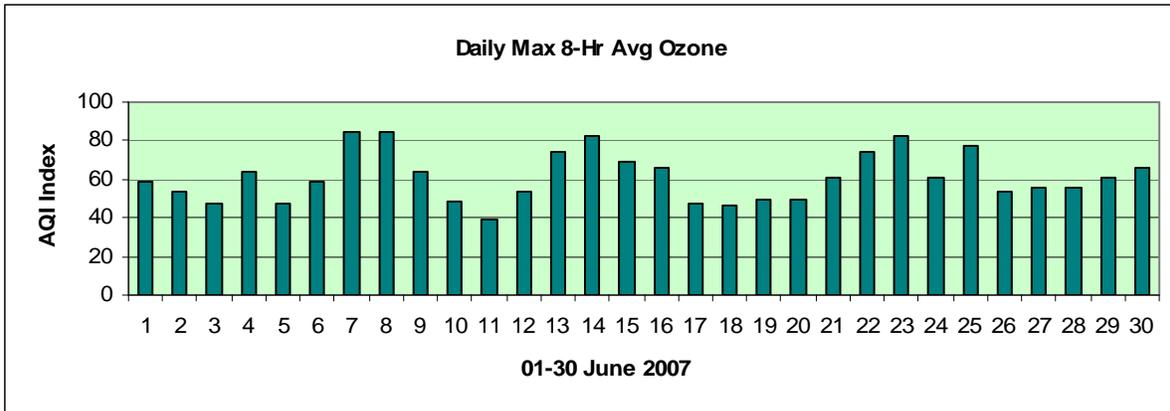
DETAILED OZONE SECTION

GOOD 0-50	MODERATE 51-100	UNHEALTHY FOR SENSITIVE GROUPS 101-150	UNHEALTHY 151-200
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SUMMARY OF MAXIMUM 8-HR OZONE AQI VALUES FOR JUNE 2007*

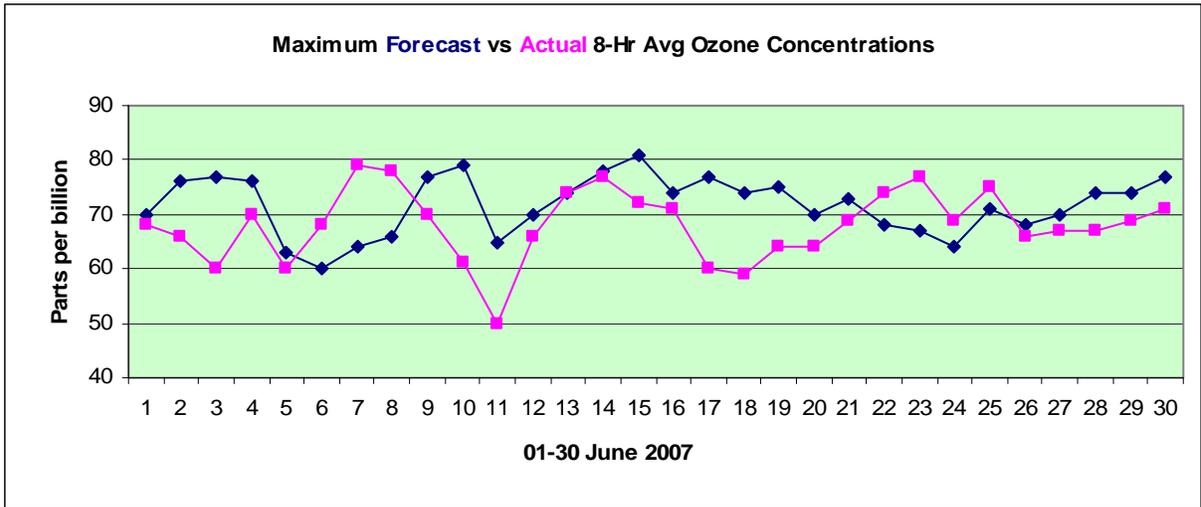
*Preliminary data

SUN		MON		TUES		WED		THU		FRI		SAT	
										1	59	2	54
3	47	4	64	5	47	6	59	7	87	8	85	9	64
10	48	11	39	12	54	13	74	14	82	15	69	16	66
17	47	18	46	19	50	20	50	21	61	22	74	23	82
24	61	25	77	26	54	27	56	28	56	29	61	30	66

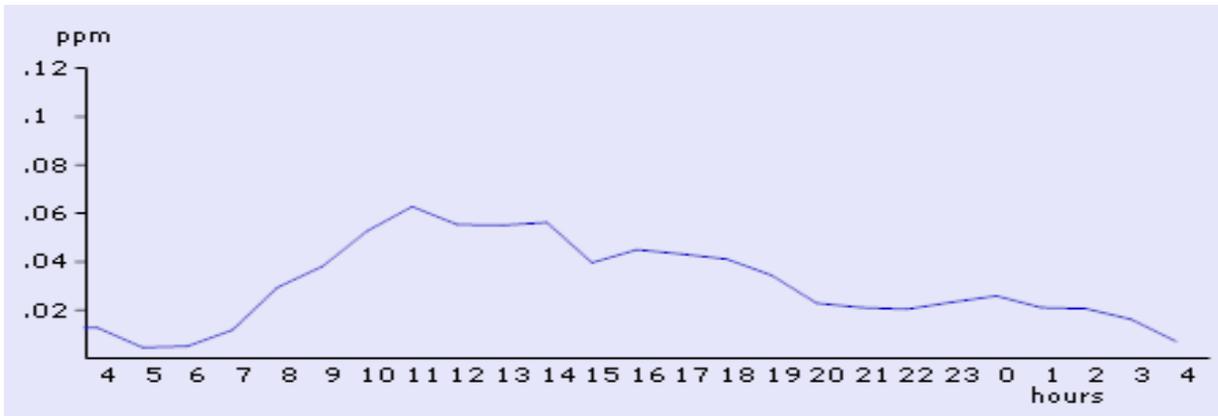


Forecast Verification:

# of days maximum concentrations were over-forecast:	22
# of days maximum concentrations were under-forecast:	7
# of days maximum concentrations were correctly forecast:	1
Jun average forecast accuracy (ppb):	+/-7.7
Jun average forecast bias (ppb):	+3.7



Narrative: Despite lots of afternoon sunshine most days and plenty of hot weather (100+ degree maximum temps on 25 days and 110+ temps on 10 days) local ozone production was below average during June – a trend that has persisted since April. The highest daily ozone concentration did not even reach the equivalent 90 AQI level, a point that was attained during each June between 1996 and 2006. Forecaster speculation is that ozone readings have been anomalously low due to an unidentified precursor imbalance – a theory that seems to have some merit based on the following graph:



It shows the June 18 time-series of hourly ozone concentrations from a Phoenix metro site that exhibits a downward trend during the afternoon hours – the period of day when ozone levels would normally be peaking. Similar ozone traces were seen on other days from other sites and has yet to be explained. –Reith