MONTHLY AIR QUALITY REPORT FOR JULY 2007

AQI 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 July 2007*

*Preliminary data

SAMPLE POLLUTANT REPORTING BOX

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

SUN			MON			TUE			WED			THU			FRI			SAT	
1	69	08	2	69	06	3	82	06	4	97	06	5	87	07	6	82	06	7	74	06
	51	28		60	32		63	33		62	38		94	54		88	48		69	49
8	54	06	9	59	05	10	59	06	11	77	06	12	64	08	13	59	03	14	44	03
	70	55		52	55		53	57		73	38		65	54		59	35		40	27
15	59	08	16	69	10	17	77	08	18	69	06	19	61	10	20	69	05	21	56	05
	31	28		92	69		55	47		69	50		417	152		61	52		60	33
22	85	05	23	56	05	24	72	06	25	45	06	26	56	08	27	43	05	28	38	06
	31	22		76	26		48	38		49	39		44	45		38	29		42	31
29	66	05	30	61	06	31	69	07												
	28	23		54	30		56	38												

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

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

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 2007

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

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 JUL 2007-

Total= 1	Date	Max AQI	Pollutant	Site/s
	07/19	418	PM-10	Phoenix Supersite
		157	PM-10	Central Phoenix
		156	PM-10	Coyote Lakes
		123	PM-10	Higley
		121	PM-10	Buckeye
		112	PM-10	West Forty Third
		152	PM-2.5	Phoenix Supersite

Health Watches issued during JUL 2007-

Total= 0	Date	Max AQI	Pollutant	Site/s

High Pollution Advisories issued during JUL 2007-

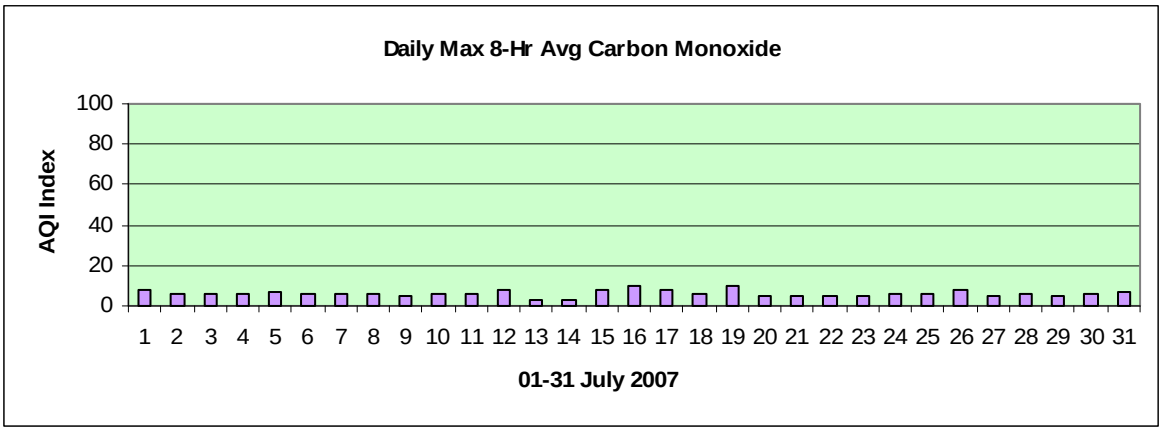
Total= 0	Date	Max AQI	Pollutant	Site/s

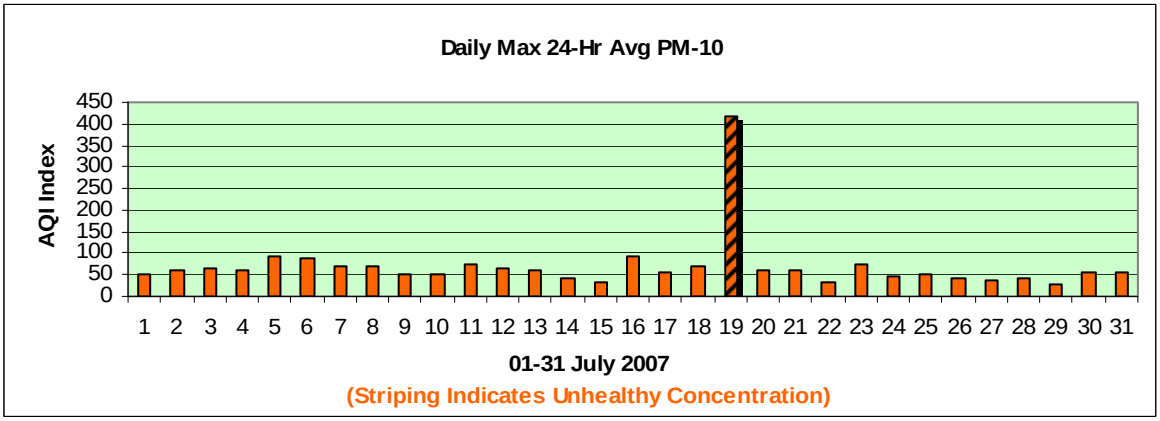
Concentration Recap:

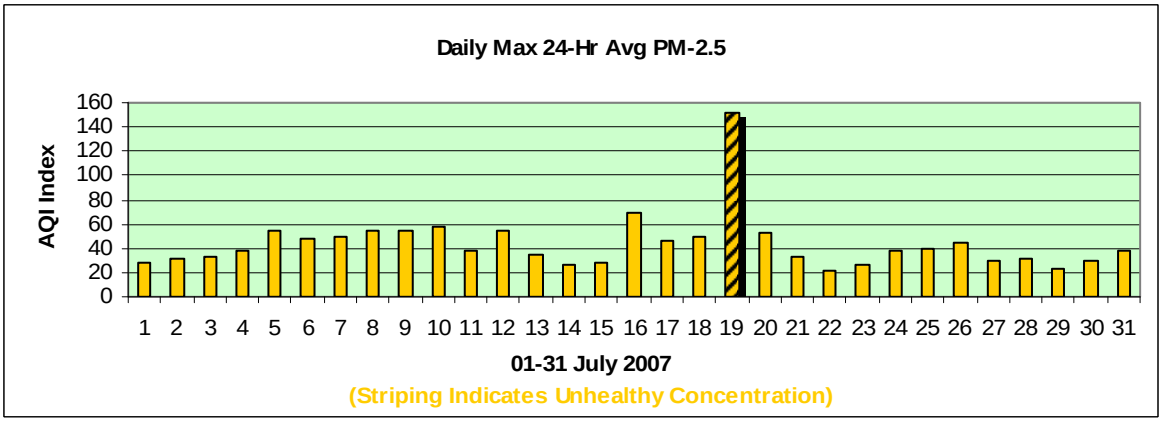
Days in the Good category:	4
Days in the Moderate category:	26
Days in the Unhealthy for Sensitive Groups category:	0
Days in the Unhealthy category:	0
Days in the Hazardous category:	1
Total Forecast Days:	31

Narrative:

For the fifth 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. The incident that began at 2200 hrs on July 19th produced zero visibility at one airport and wind gusts of 55 mph at another; however, it stood out from all other wind events on record for several other reasons. First, it also contributed to a PM-2.5 (fine particle) exceedance – a very rare event that in the past was associated with holiday wood burning – but apparently had never occurred during a high-wind event. Secondly, the peak hourly concentrations of both PM-10 and PM-2.5 were incredibly high at some sites: a concentration of 8,540ug/m3 for PM10 was recorded at Phoenix Supersite and 4,198.6ug/m3 at the Coyote Lakes site; for PM-2.5 a level of 976.3ug/m3 was attained at Phoenix Supersite. Thirdly, the moving clouds of dust particles evidently stayed intact for hours afterwards and impacted the visibilities in the communities of Prescott, Flagstaff, and the Grand Canyon – the latter being almost 150 miles north of Phoenix – during much of the following a.m. period. Prescott had visibilities of 2-8 miles between 0200 thru 0500 hrs; Flagstaff had 3-8 miles between 0500 thru 1000 hrs; and Grand Canyon had 4-7 miles between 0700 and 1100 hrs. It is thought that the severity of the dust concentrations was enhanced by decreased mixing depths due to the late hour and evaporation-cooled air, and sparse subsequent rainfall -Reith


Daily Max 8-Hr Avg Carbon Monoxide
AQI Index
100
80
60
40
20
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
01-31 July 2007


Daily Max 24-Hr Avg PM-10
AQI Index
450
400
350
300
250
200
150
100
50
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
01-31 July 2007
(Striping Indicates Unhealthy Concentration)


Daily Max 24-Hr Avg PM-2.5
AQI Index
160
140
120
100
80
60
40
20
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
01-31 July 2007
(Striping Indicates Unhealthy Concentration)

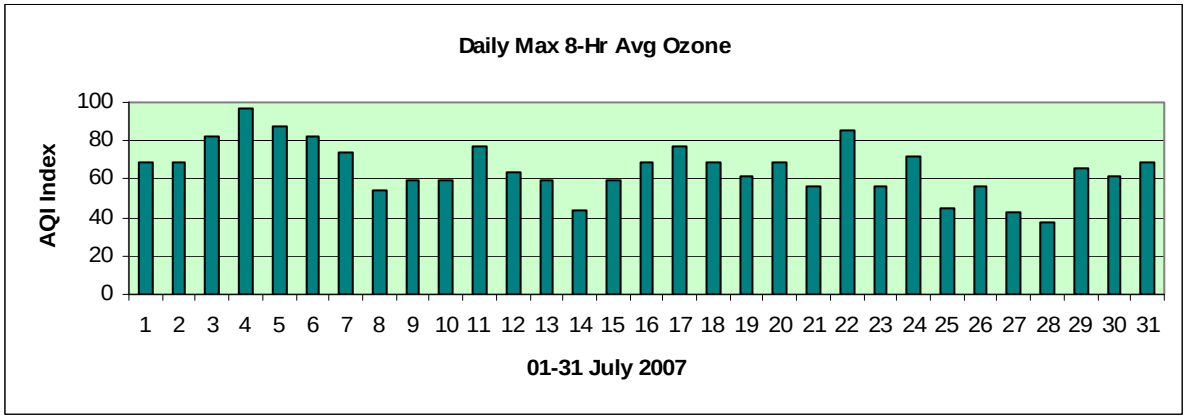
DETAILED OZONE SECTION

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

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

*Preliminary data

SUN		MON		TUES		WED		THU		FRI		SAT	
1	69	2	69	3	82	4	97	5	87	6	82	7	74
8	54	9	59	10	59	11	77	12	64	13	59	14	44
15	59	16	69	17	77	18	69	19	61	20	69	21	56
22	85	23	56	24	72	25	45	26	56	27	43	28	38
29	66	30	61	31	69								



8-hr Ozone exceedance days in JUL:	Total=	0	Date	Max ppb/AQI	Site/s

Total number of exceedance days since APR 01: 0
Total number of exceedance sites since APR 01: 0

Ozone Health Watches in JUL:	Total=	5	Date	Max ppb/AQI	Site/s
(Forecast max value 80-84 ppb)			7/06	77/82	Scottsdale
			7/12	70/64	Rio Verde
			7/17	75/77	North Phoenix
					Rio Verde
			7/23	67/56	Glendale
					Phx Supersite
					North Phoenix
			7/30	69/61	Tempe
Ozone Health Watches since APR 01:	Total=	9			
High Pollution Advisories in JUL:	Total=	1	7/05	79/87	Cave Creek
(Forecast max value 85+ppb)					
High Pollution Advisories since APR 01:	Total=	1			

Concentration Recap:

Days in the Good category:	4
Days in the Moderate category:	27
Days in the Unhealthy for Sensitive Groups category:	0
Days in the Unhealthy category:	0
Total Forecast Days:	31

	Date	Hour	Site	ppb/AQI	DOW
Maximum 8-Hr value:	7/04	1100	Apache Junction	83/97	Wed
Maximum 1-Hr value:	7/04	1500	Apache Junction	98/82	Wed

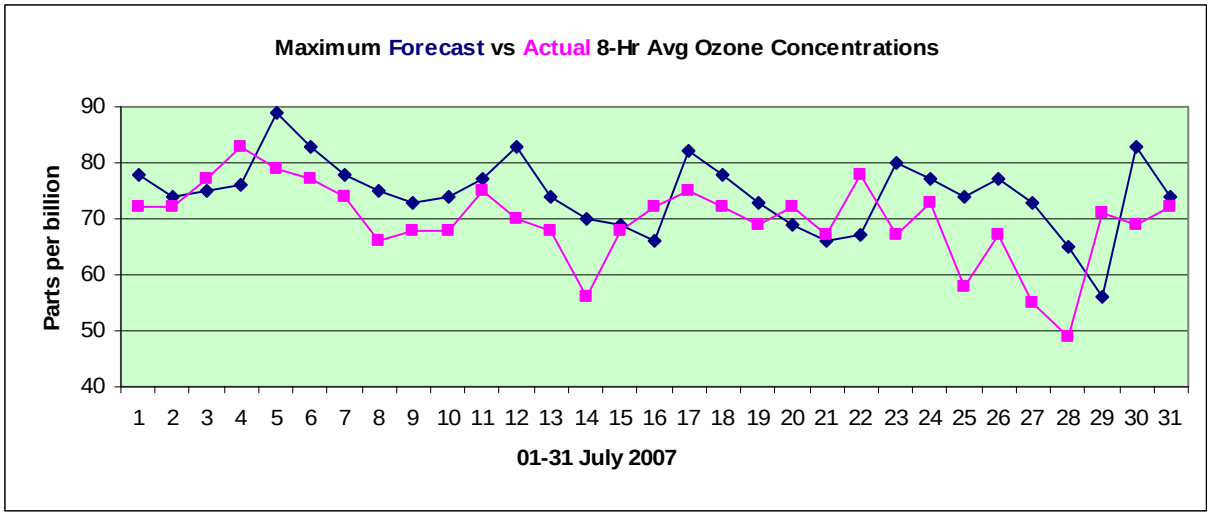
Average daily max 8-Hr concentration (ppb):	69.6
Deviation from the 1996-2006 average (ppb):	-2.2

JUL Climatology:
(1996-2006)

Average number of 8-Hr exceedance days:	4.2
Maximum number of 8-Hr exceedance days:	10 in 1996
Minimum number of 8-Hr exceedance days:	0 in 1997, 1999
Average daily max 8-Hr concentration (ppb):	71.8
Record high max 8-Hr concentration (ppb):	107 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:	24
# of days maximum concentrations were under-forecast:	7
# of days maximum concentrations were correctly forecast:	0
Jul average forecast accuracy (ppb):	+/-7.7
Jul average forecast bias (ppb):	+6.3



Narrative:

Local ozone production continued it's below normal trend during July – normally the month with the highest number of exceedance days – with a total of 46 between 1996 and 2006. Due to this known climatology and the expectation it creates, forecaster accuracy and bias statistics took a real hit for the month. This was in spite of the searing daytime heat that one would expect during July in Phoenix. The National Weather Service issued six Heat Advisories and two Excessive Heat Warnings during the month and there were 12 days with maximum temperatures of 110 deg F or higher. Other meteorological factors that tend to accompany locally high ozone levels are low-level easterly winds and elevated dew points associated with the summer monsoon. The monsoon did not meet the local criteria for its start date until rather late in the month – the 19th to be exact. Thus, the late arrival and subsequent capricious nature of the monsoon – and its lack of contributory characteristics during the month – was the forecasters' best explanation for the lower than normal ozone concentrations. –Reith