MONTHLY AIR QUALITY REPORT FOR JULY 2004

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 2004*

*Preliminary data

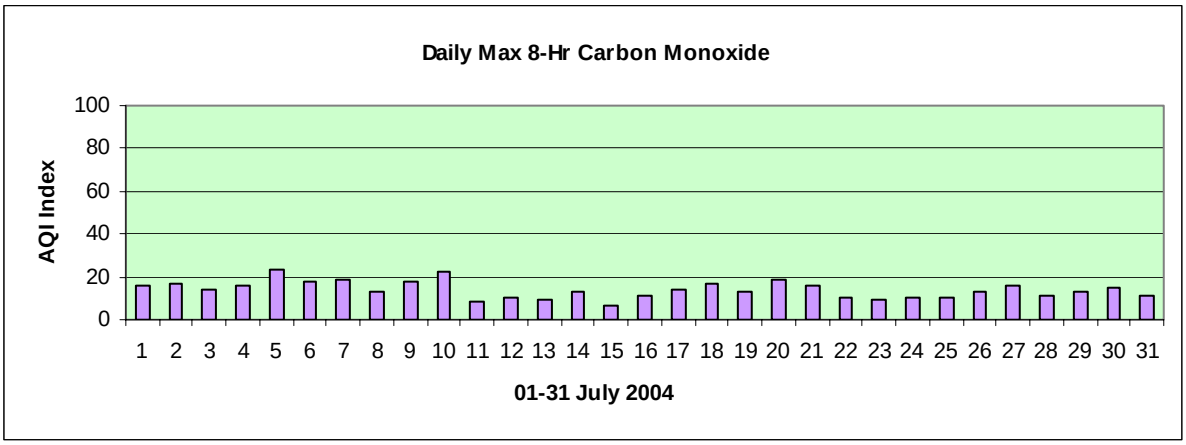
SAMPLE POLLUTANT REPORTING BOX

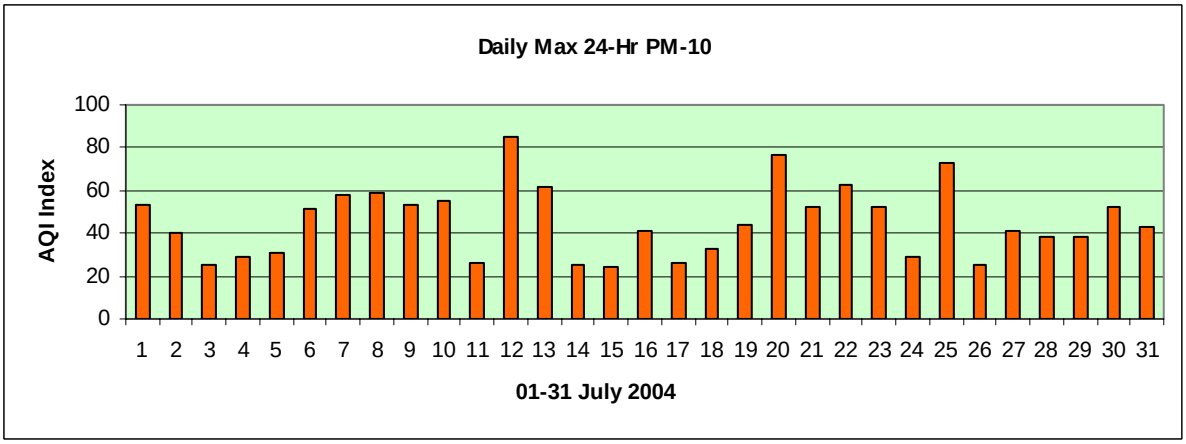
1 (day of month)	O3	CO
	PM10	PM2.5

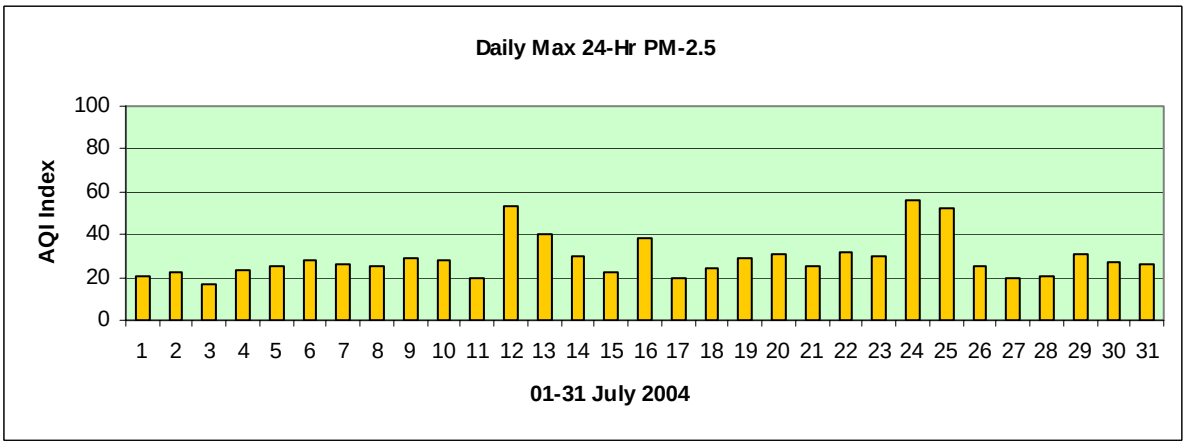
SUN			MON			TUES			WED			THU			FRI			SAT		
											1	45	16	2	44	17	3	41	14
												53	21		40	22		25	17
4	79	16	5	66	23	6	69	18	7	54	19	8	44	13	9	41	18	10	66	22
	29	23		31	25		51	28		58	26		59	25		53	29		55	28
11	61	08	12	69	10	13	77	09	14	82	13	15	74	07	16	48	11	17	59	14
	26	20		85	53		62	40		25	30		24	22		41	38		26	20
18	54	17	19	51	13	20	51	19	21	49	16	22	51	10	23	46	09	24	95	10
	33	24		44	29		77	31		52	25		63	32		52	30		29	56
25	90	10	26	100	13	27	106	16	28	64	11	29	77	13	30	69	15	31	74	11
	73	52		25	25		41	20		38	21		38	31		52	27		43	26

Narrative:

During July maximum carbon monoxide concentrations were again well within the good range, which is typically the case during the warm months of the year. In contrast, maximum coarse particle concentrations (PM-10) were in the moderate range on almost one day in two and approached unhealthy levels on several occasions. This was mainly due to frequent episodes of blowing dust due to outflow from monsoon thunderstorms. Dust storms moved into the Phoenix metropolitan area on the 12th, 20th, and 25th – days that had the highest levels of PM-10. Fine particle concentrations were in the good range except on the 12th, 24th, and 25th; in each case at least one period of blowing dust was observed that day.


Daily Max 8-Hr 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 2004


Daily Max 24-Hr PM-10
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 2004


Daily Max 24-Hr PM-2.5
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 2004

DETAILED OZONE SECTION

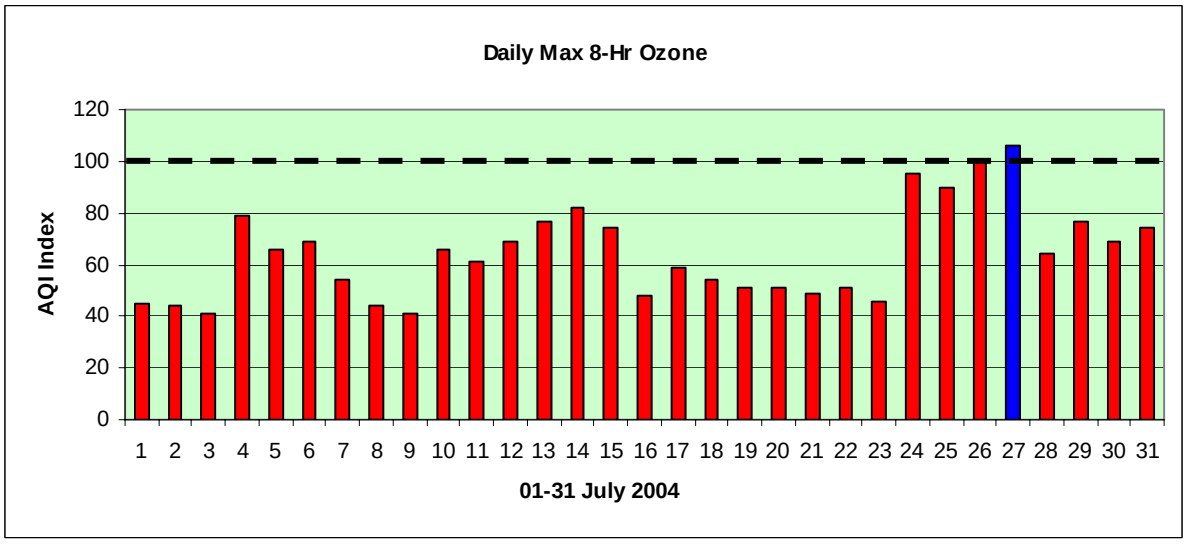
GOOD	MODERATE	UNHEALTHY FOR SENSITIVE GROUPS	UNHEALTHY
0-50	51-100	101-150	151-200

SUMMARY OF MAXIMUM 8-HR OZONE AQI VALUES FOR JUL 2004*

*Preliminary data

SUN		MON		TUES		WED		THU		FRI		SAT	
								1	45	2	44	3	41
4	79	5	66	6	69	7	54	8	44	9	41	10	66
11	61	12	69	13	77	14	82	15	74	16	48	17	59
18	54	19	51	20	51	21	49	22	51	23	46	24	95
25	90	26	100	27	106	28	64	29	77	30	69	31	74

*HIGHEST AQI OF MONTH



Exceedance days in JUL:	Total= 1	Date	Max ppb/AQI	Site/s
		7/27	87/106	North Phoenix

Total number of exceedance days since APR 01: 1
Total number of exceedance sites since APR 01: 1

Ozone Health Watches in JUL: (Forecast max value 80-84 ppb)	Total= 3	Date	Max ppb/AQI	Site/s
		7/13	75/77	Tonto Nat'l Mon
		7/27	87/106	North Phoenix
		7/28	70/64	Queen Valley

Ozone Health Watches since APR 01: Total= 13

High Pollution Advisories in JUL: Total= 0
(Forecast max value 85+ppb)

High Pollution Advisories since APR 01: Total= 1

Concentration Recap:

Jul days in the Good category:	8
Jul days in the Moderate category:	22
Jul days in the Unhealthy for Sensitive Groups category:	1
Jul days in the Unhealthy category:	0
Total Forecast Days:	31

Jul maximum 8-Hr value:	Date	Hour	Site	ppb/AQI	DOW
	7/27	0900	North Phoenix	87/106	Tue

Jul maximum 1-Hr value:	Date	Hour	Site	ppb/AQI	DOW
	7/26	1500	Glendale	100/83	Mon

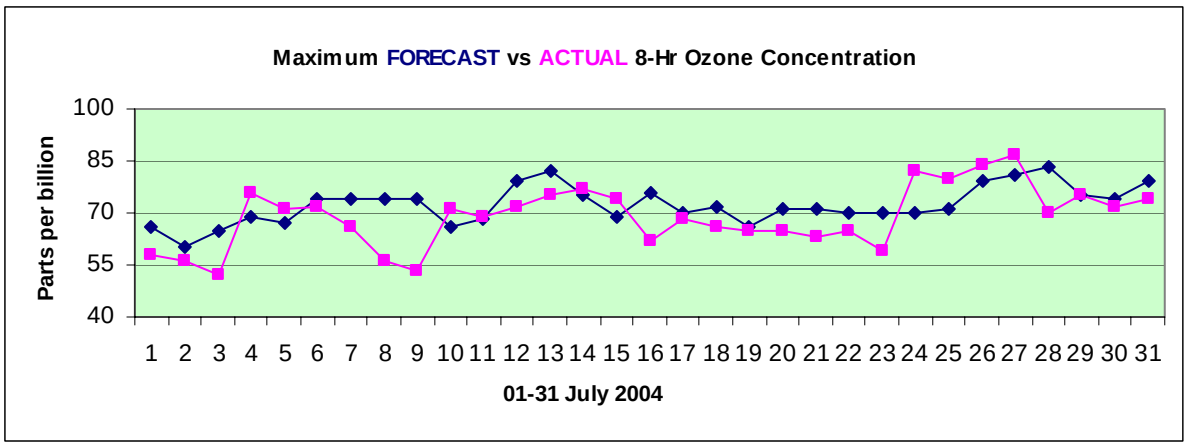
Jul average daily max 8-Hr concentration (ppb):	68.9
Jul deviation from1996-2003 average (ppb):	-3.1

JUL Climatology: (1996-2003)

Average number of 8-Hr exceedances:	4.3
Maximum number of 8-Hr exceedances:	10 in 1996
Minimum number of 8-Hr exceedances:	0 in 1997, 1999
Average daily max 8-Hr concentration (ppb):	72.0
Record high max 8-Hr concentration (ppb):	107 on the 9th, 2002
Record low max 8-Hr concentration (ppb):	40on the 29th, 1997

Forecast Verification:

Jul days that maximum concentration was over-forecast:	20
Jul days that maximum concentrations was under-forecast:	10
Jul days that maximum concentrations was correctly forecast:	1
Jul average forecast accuracy (ppb):	+/- 6.6
Jul average forecast bias (ppb):	+3.4



Narrative:

The unprecedented string of summer days in 2004 without an exceedance of the 8-hr ozone standard was broken on July 27th when the 8-hr average concentration at the North Phoenix site reached 87 parts per billion, 2 parts per billion (ppb) in excess of the National Ambient Air Quality Standard of 85 ppb. This was preceded by three days during which maximum concentrations were very close to the standard. Multi-day episodes such as this are the rule rather then the exception during the summer months in Phoenix, and typically occur with the onset of a deep easterly wind regime and higher dew points that accompany an active summer monsoon period. (There has been much speculation regarding why this is the case, but no firm conclusions have been reached). Based on the 55-degree dew point criteria, the 2004 monsoon did not officially begin until July 12 and did not produce much precipitation thru the end of the month. The lack of a deep fetch of easterly winds may be one possible explanation. April, May, June, and now July 2004 all had average daily ozone concentrations that were below the 1996-2003 climatology, and only July 1997 and July 1999 had fewer exceedances than July 2004. The rapid jump in ozone concentrations from the 23rd to the 24th was at least partly due to more cloud cover on the 23rd, but the rapid drop from the 27th to the 28th coincided with the demise of the easterly wind regime. Another episode of note occurred on the 4th when the maximum ozone level jumped 50% from that on the 3rd; this is likely attributable to the import of ozone and its precursors from California. This signature was seen in Yuma on the 3rd, when the 1-hr and 8-hr ozone concentrations were higher than any in the Phoenix forecast area. -Reith