



**MONTHLY AIR QUALITY REPORT FOR
AUGUST 2004**

AQI 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 August 2004*

*Preliminary data

SAMPLE POLLUTANT REPORTING BOX

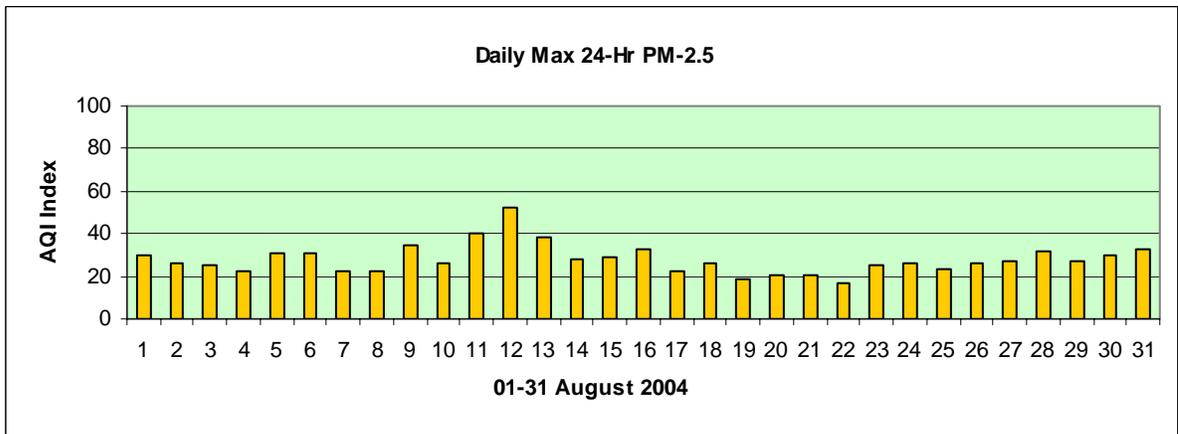
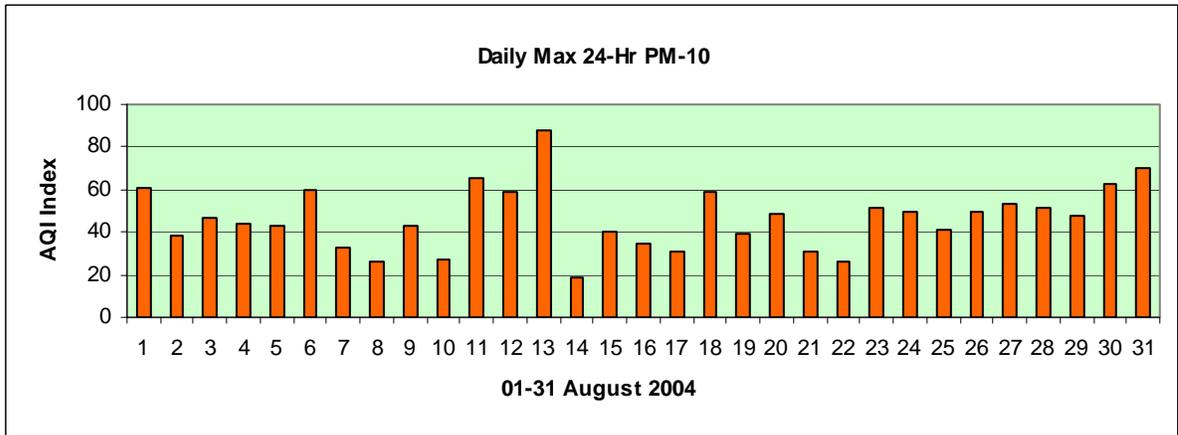
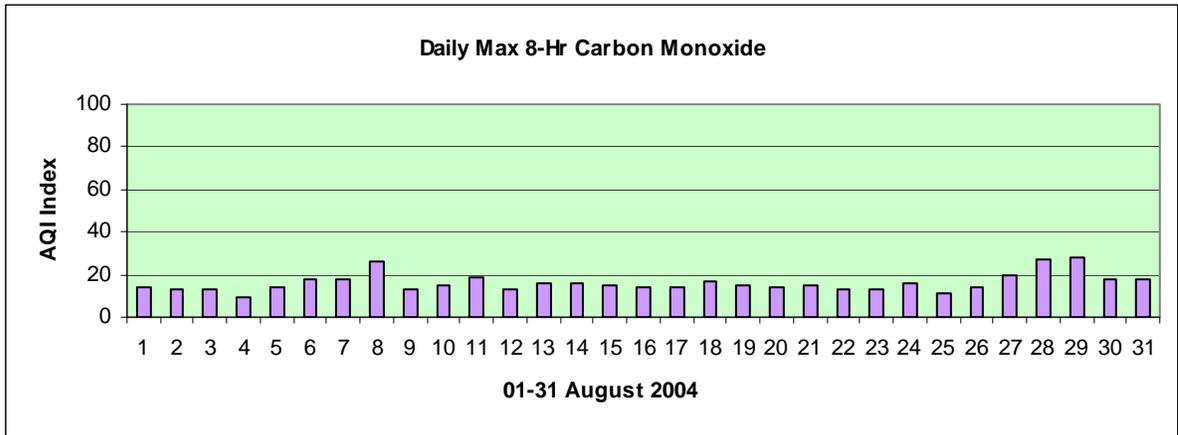
1 (day of month)	O3	CO
	PM10	PM2.5

	SUN			MON			TUES			WED			THU			FRI			SAT	
1	90	14	2	82	13	3	92	13	4	48	09	5	47	14	6	48	18	7	64	18
	61	30		38	26		47	25		44	22		43	31		60	31		33	22
8	61	26	9	69	13	10	90	15	11	77	19	12	77	13	13	49	16	14	48	16
	26	22		43	35		27	26		65	40		59	52		88	38		19	28
15	82	15	16	61	14	17	48	14	18	45	17	19	45	15	20	59	14	21	61	15
	40	29		35	33		31	22		59	26		39	19		49	21		31	21
22	41	13	23	38	13	24	38	16	25	42	11	26	45	14	27	45	20	28	48	27
	26	17		51	25		50	26		41	23		50	26		53	27		51	32
28	49	28	30	50	18	31	50	18												
	48	27		63	30		70	33												

Narrative:

During August maximum carbon monoxide concentrations were well within the good range. Maximum PM-2.5 concentrations were all in the good range as well except on the 12th. This was largely due to lingering widespread suspended dust during the a.m. period from an outflow boundary-caused dust storm that moved over the metro area before midnight on the 11th. Outflow boundaries from summer monsoon thunderstorms were responsible for numerous local dust storms during the month and most of the higher PM-10 levels were coincident with them. Outflow boundaries and/or blowing dust were observed over the area on the 1st, 6th, 11th, 12th, 13th, 18th, 23rd, 27th, and 31st. The most extreme episode occurred on the 13th when storms to the west of the valley caused

blowing dust for several hours and was followed by a severe dust event from storms to the southeast that lowered visibility to as low as 1/4 mile at times. Hourly PM-10 readings as high as 495ug/m3 were recorded at the Durango monitor at 8:00 p.m.



DETAILED OZONE SECTION

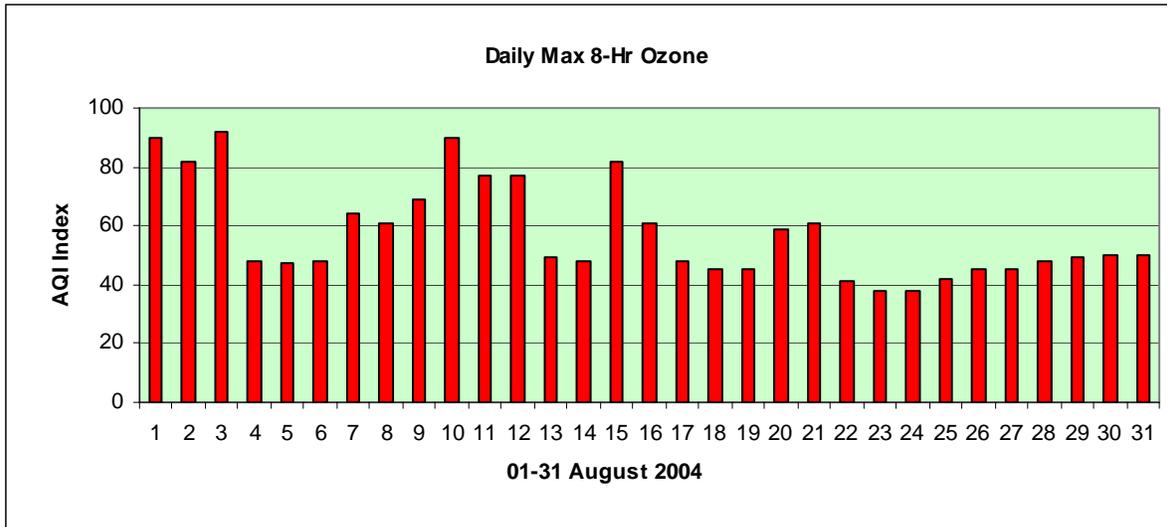
GOOD	MODERATE	UNHEALTHY FOR SENSITIVE GROUPS	UNHEALTHY
0-50	51-100	101-150	151-200

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

*Preliminary data

	SUN	MON	TUES	WED	THU	FRI	SAT
1	90	2	82	3	92*	4	48
5	47	6	48	7	64	8	61
9	69	10	90	11	77	12	77
13	49	14	48	15	82	16	61
17	48	18	45	19	45	20	59
21	61	22	41	23	38	24	38
25	42	26	45	27	45	28	48
29	49	30	50	31	50		

*HIGHEST AQI OF MONTH



Exceedance days in AUG: Total= 0 Date Max ppb/AQI Site/s

Total number of exceedance days since APR 01: 1

Total number of exceedance sites since APR 01: 1

Ozone Health Watches in AUG: Total= 2 Date Max ppb/AQI Site/s
(Forecast max value 80-84 ppb)
8/10 80/90 North Phoenix
8/12 75/77 Blue Point

Ozone Health Watches since APR 01: Total= 15

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

High Pollution Advisories since APR 01: Total= 1

Concentration Recap: Aug days in the **Good** category: 18
Aug days in the **Moderate** category: 13
Aug days in the **Unhealthy for Sensitive Groups** category: 0
Aug days in the **Unhealthy** category: 0
Total Forecast Days: 31

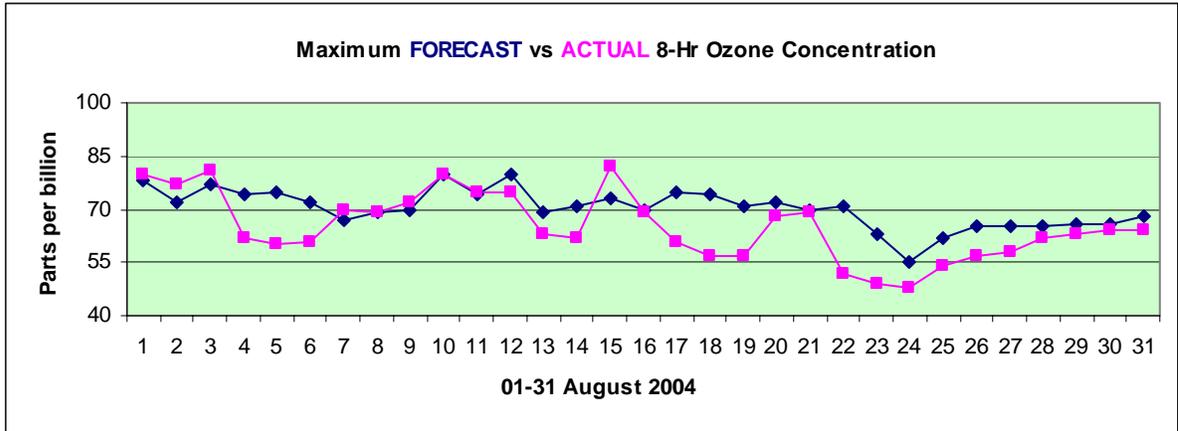
Aug max 8-Hr value: Date Hour Site ppb/AQI DOW
8/03 1300 Blue Point 81/92 Tue

Aug max 1-Hr value: Date Hour Site ppb/AQI DOW
8/09 1600 Blue Point 111/93 Mon

Aug average daily max 8-Hr concentration (ppb): 65.2
Aug deviation from 1996-2003 average (ppb): -8.9

AUG Climatology: Average number of 8-Hr exceedances: 5.0
(1996-2003) Maximum number of 8-Hr exceedances: 10 in 1998, 2000
Minimum number of 8-Hr exceedances: 0 in 1997, 2002
Average daily max 8-Hr concentration (ppb): 74.1
Record high max 8-Hr concentration (ppb): 100 on the 10th, 2001
Record low max 8-Hr concentration (ppb): 46 on the 12th, 1997

Forecast Verification:	Aug days that maximum concentration was over-forecast:	22
	Aug days that maximum concentration was under-forecast:	7
	Aug days that maximum concentration was correctly forecast:	2
	Aug average forecast accuracy (ppb):	+/- 6.8
	Aug average forecast bias (ppb):	+5.1



Narrative: During August the summer-long trend of below average ozone levels continued. On only three days did the maximum 8-hour concentration reach or exceed 80 parts per billion (ppb) and then only barely so. On several occasions significant day-to-day variations in the highest concentration of ozone occurred and this was due to either cloud cover or gusty winds from monsoon thunderstorm outflow boundaries. These two weather-related factors also contributed to the high positive average forecast bias by not being factored into the predicted maximum concentration. This was especially so during the periods of the 4th thru the 6th and the 17th thru the 19th. On the other hand, forecasters did a noteworthy job of anticipating the major jump in ozone that occurred from the 9th to the 10th using synoptic weather pattern recognition. The onset or return of low-level easterly winds has long been seen as a “meteorological precursor” of high ozone values in the Phoenix area; the mean transport wind was southwesterly at six knots on the 9th and abruptly shifted to easterly at five knots on the 10th. In most other ways the days were nearly identical, including per cent of possible sunshine, maximum daytime temperature, and average dew point temperature. An Ozone Health Watch was issued for the 10th with a predicted highest ozone concentration of 80ppb and that is precisely what was measured. (It will likely require a formal study to determine why easterly winds have this local effect on ozone production). Ozone levels dropped significantly after the middle of the month and were in the good range during the last ten days. This corresponded to a major change in the weather pattern that saw much drier air over the area due to westerly winds aloft. -Reith