



MONTHLY AIR QUALITY REPORT FOR
AUGUST 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 August 2007*

*Preliminary data

SAMPLE POLLUTANT REPORTING BOX

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

| | SUN | MON | TUE | WED | THU | FRI | SAT | | | | | | |
|----|----------------|-----|-----------------|-----|----------------|-----|-----------------|----|-----------------|----|----------------|----|----------------|
| | | | | 1 | 59 05 42 24 | 2 | 51 06 39 39 | 3 | 54 05 34 29 | 4 | 48 04 33 27 | | |
| 5 | 40 04 31 27 | 6 | 32 07 31 26 | 7 | 51 09 62 32 | 8 | 90 15 58 44 | 9 | 61 11 55 46 | 10 | 66 06 54 33 | 11 | 79 06 50 40 |
| 12 | 69 07 34 29 | 13 | 77 07 103 52 | 14 | 87 05 84 44 | 15 | 100 05 40 28 | 16 | 87 08 131 57 | 17 | 74 13 64 41 | 18 | 85 15 55 47 |
| 19 | 47 05 50 41 | 20 | 56 05 45 29 | 21 | 61 06 54 37 | 22 | 69 08 60 62 | 23 | 56 07 138 66 | 24 | 61 07 87 53 | 25 | 51 06 37 51 |
| 26 | 66 05 21 48 | 27 | 54 08 47 53 | 28 | 77 09 61 67 | 29 | 74 09 84 65 | 30 | 48 05 88 42 | 31 | 61 06 42 51 | | |

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

| SUN | | | MON | | | TUE | | | WED | | | THU | | | FRI | | | SAT | | |
|-----|--|----|-----|---|----|-----|---|----|-----|---|----|-----|---|----|-----|---|----|-----|--|--|
| | | | | | | | | | 1 | | | 2 | | | 3 | | | 4 | | |
| 5 | | 6 | | | 7 | | | 8 | | | 9 | | | 10 | | | 11 | | | |
| 12 | | 13 | | F | 14 | | F | 15 | | F | 16 | | C | 17 | | F | 18 | | | |
| 19 | | 20 | | | 21 | | | 22 | | | 23 | | | 24 | | | 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 August 2007

| SUN | | | MON | | | TUE | | | WED | | | THU | | | FRI | | | SAT | | |
|-----|--|---|-----|---|---|-----|---|---|-----|---|---|-----|---|---|-----|---|---|-----|---|---|
| | | | | | | | | | 1 | A | B | 2 | | | 3 | | B | 4 | | B |
| 5 | | B | | | B | | A | | 8 | | | 9 | | | 10 | | | 11 | | |
| 12 | | | | A | B | | A | B | 15 | A | B | 16 | | B | 17 | | | 18 | | |
| | | | | D | E | | D | | 15 | D | | 16 | D | E | 17 | | | 18 | | |
| 19 | | B | | | | | | | 22 | | E | 23 | | | 24 | | B | 25 | A | B |
| | | D | | | | | E | | 22 | | E | 23 | D | | 24 | D | E | 25 | | |
| 26 | | | | | | | | | 29 | A | B | 30 | | B | 31 | A | | | | |
| | | | | | | | | | 29 | D | | 30 | D | E | 31 | | | | | |

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 AUG 2007-

| Total= | Date | Max AQI | Pollutant | Site/s |
|--------|------|---------|-----------|------------------|
| 3 | 8/13 | 103 | PM-10 | South Phoenix |
| | 8/16 | 131 | PM-10 | West Forty Third |
| | | 121 | PM-10 | Higley |
| | 8/23 | 138 | PM-10 | Higley |

Health Watches issued during AUG 2007-

| Total= | Date | Max AQI | Pollutant | Site/s |
|--------|------|---------|-----------|--------|
| 0 | | | | |

High Pollution Advisories issued during AUG 2007-

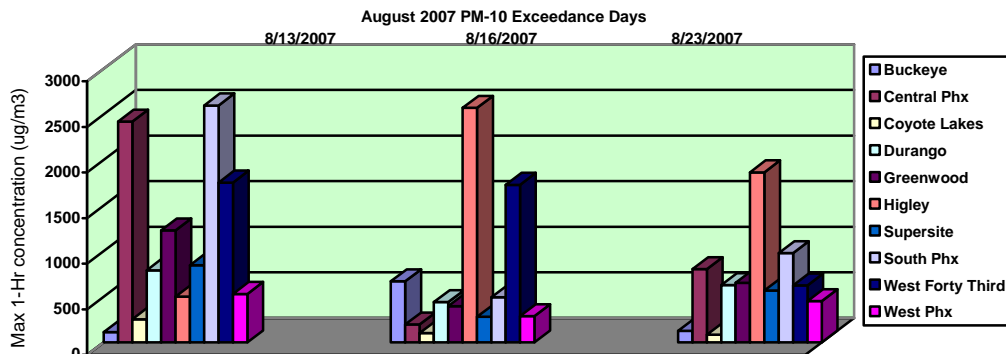
| Total= | Date | Max AQI | Pollutant | Site/s |
|--------|------|---------|-----------|--------|
| 0 | | | | |

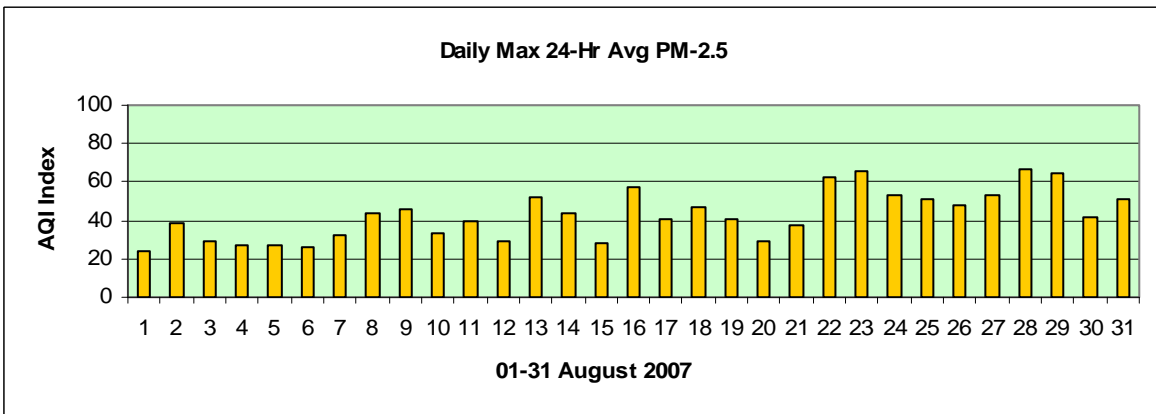
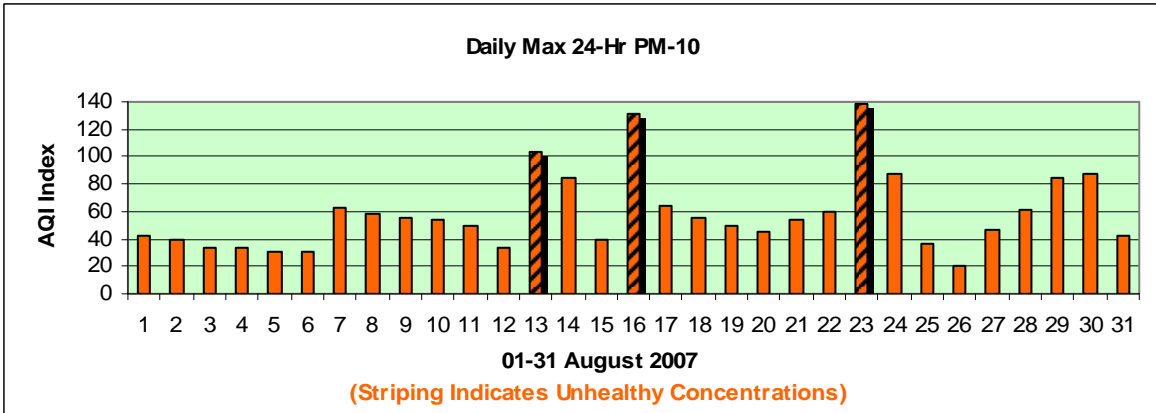
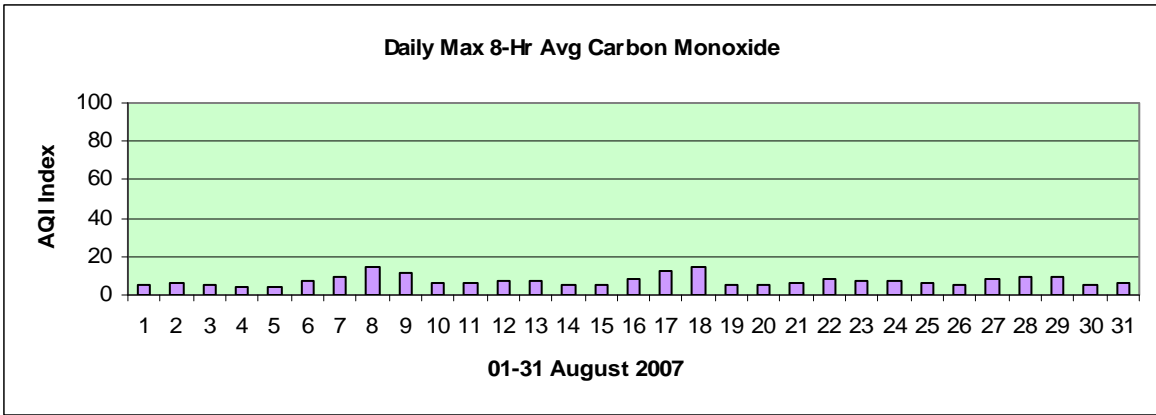
Concentration Recap:

| | |
|---|----|
| Days in the Good category: | 4 |
| Days in the Moderate category: | 24 |
| Days in the Unhealthy for Sensitive Groups category: | 3 |
| Days in the Unhealthy category: | 0 |
| Total Forecast Days: | 31 |

Narrative:

For the sixth straight month at least one 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. During August there were three such events and all were generated by strong outflow boundaries associated with monsoon thunderstorms. As can be seen from the chart below, extremely high hourly PM-10 levels occurred during each incident and the highest concentrations were spread over a wide geographical area of the Valley – from 2,599.2ug/m³ at the South Phoenix site and 2422.7ug/m³ at the Central Phoenix site on the 13th, to 2572.6ug/m³ at the Higley site (far southeast valley) and 1,728.6ug/m³ at the West Forty Third site (west valley) on the 16th. -Reith





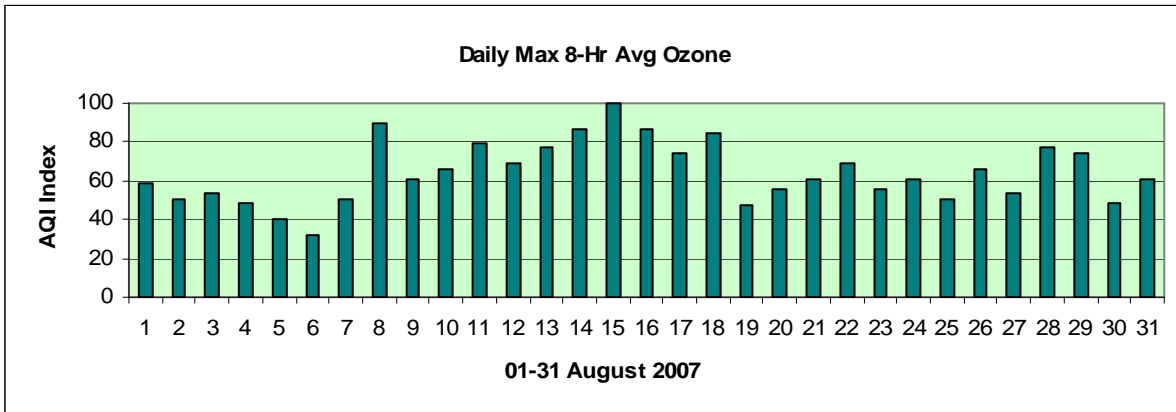
DETAILED OZONE SECTION

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

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

*Preliminary data

| SUN | | MON | | TUES | | WED | | THU | | FRI | | SAT | |
|-----|-----------|-----|-----------|------|-----------|-----|------------|-----|-----------|-----|-----------|-----|-----------|
| | | | | | | 1 | 59 | 2 | 51 | 3 | 54 | 4 | 48 |
| 5 | 40 | 6 | 32 | 7 | 51 | 8 | 90 | 9 | 61 | 10 | 66 | 11 | 79 |
| 12 | 69 | 13 | 77 | 14 | 87 | 15 | 100 | 16 | 87 | 17 | 74 | 18 | 85 |
| 19 | 47 | 20 | 56 | 21 | 61 | 22 | 69 | 23 | 56 | 24 | 61 | 25 | 51 |
| 26 | 66 | 27 | 54 | 28 | 77 | 29 | 74 | 30 | 48 | 31 | 61 | | |
| | | | | | | | | | | | | | |



8-hr Ozone exceedance days in AUG: 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 AUG: Total= 4 Date Max ppb/AQI Site/s
(Forecast max value 80-84 ppb)

| | | | |
|--|------|--------|-----------------|
| | 8/13 | 75/77 | Rio Verde |
| | 8/14 | 79/87 | Apache Junction |
| | 8/15 | 84/100 | Tempe |
| | 8/17 | 74/74 | North Phoenix |

Ozone Health Watches since APR 01: Total= 13

High Pollution Advisories in AUG: Total= 1 8/16 79/87 Chandler
(Forecast max value 85+ppb)

High Pollution Advisories since APR 01: Total= 2

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

Maximum 8-Hr value: Date Hour Site ppb/AQI DOW
8/15 1100 Tempe 84/100 Wed

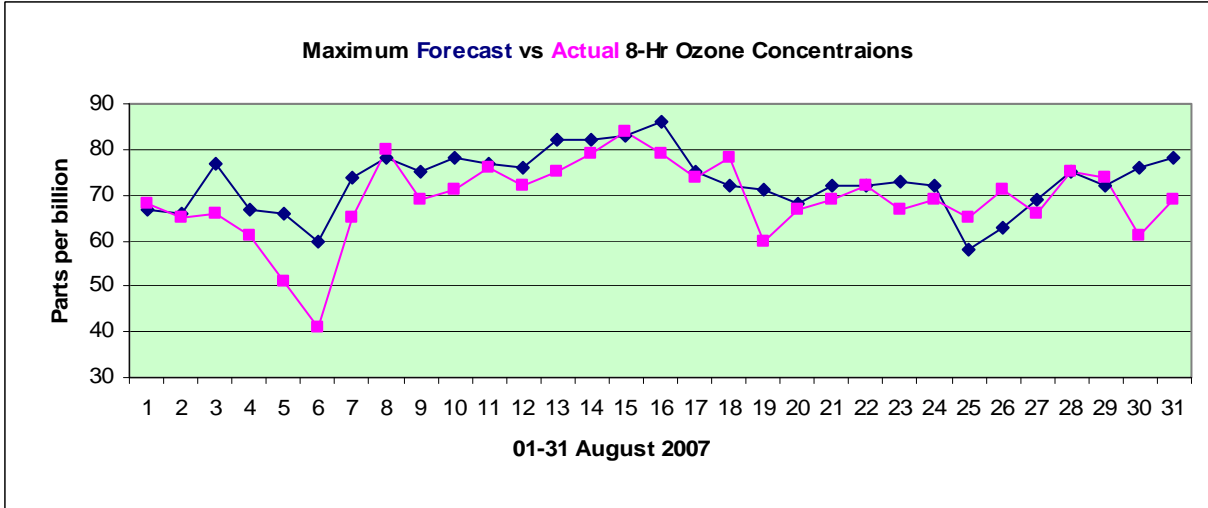
Maximum 1-Hr value: Date Hour Site ppb/AQI DOW
8/15 1600 Tempe 100/83 Wed

Average daily max 8-Hr concentration (ppb): 69.0
Deviation from the 1996-2006 average (ppb): -3.0

AUG Climatology: Average number of 8-Hr exceedance days: 3.8
(1996-2006) Maximum number of 8-Hr exceedance days: 10 in 1998, 2000
Minimum number of 8-Hr exceedance days: 0 in 1997, 2002, 2004
Average daily max 8-Hr concentration (ppb): 72.0
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:

| | |
|---|--------|
| # of days maximum concentrations were over-forecast: | 23 |
| # of days maximum concentrations were under-forecast: | 6 |
| # of days maximum concentrations were correctly forecast: | 2 |
| Aug average forecast accuracy (ppb): | +/-5.6 |
| Aug average forecast bias (ppb): | +4.4 |



Narrative: Despite ample opportunities, no exceedances of the 8-hour ozone standard occurred in the Phoenix metro area during August – for only the fourth time in the last 12 years. During the month record high daytime temperatures were recorded at Phoenix Sky Harbor Airport on the 12th, 18th, 21st, and 29th; there were 22 days with high temps of 105+deg F and nine days with 110+deg F. In addition, NWS Heat Advisories were issued for the 17th, 18th, 21st, 22nd, 28th, 30th, and 31st and Excessive Heat Warnings were issued for 12th, 13th, and 29th. August 2007 also had the distinction of having both the lowest 8-hour ozone concentration – 41 parts per billion on the 6th – and the highest concentration – 84 ppb on the 15th – of the local 2007 ozone season. In fact, the reading on the 6th was the lowest during the entire 1996-2007 statistical period. As can be seen in the graph below, highest ozone levels – in the 90-99ppb and 80-89ppb groupings – have been declining since 2000 while levels in the 60-69ppb and 70-79ppb ranges have been on the increase. This is a significant and positive trend. –Reith

August 8-Hr Ozone Concentration Groupings

