



MONTHLY AIR QUALITY REPORT FOR
SEPTEMBER 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 September 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 08 87 50
2	51 06 22 42	3	48 10 30 33	4	69 10 79 44	5	54 06 67 47	6	44 06 49 40	7	61 07 52 30	8	79 10 45 36
9	49 15 44 37	10	64 07 60 31	11	64 09 62 31	12	59 06 51 25	13	48 09 74 45	14	50 11 69 56	15	45 16 70 48
16	43 08 46 34	17	38 08 43 29	18	40 08 58 33	19	40 10 61 37	20	32 08 61 37	21	31 09 78 43	22	29 10 40 29
23	43 07 31 13	24	56 14 57 25	25	59 20 62 41	26	47 18 64 52	27	46 24 59 40	28	39 17 71 51	29	32 11 52 30
30	37 20 43 39												

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

SUN			MON			TUE			WED			THU			FRI			SAT		
																	1			
2		3			4			5			6	D		7			8			
9		10			11			12			13			14			15			
16		17			18			19			20			21	D		22			
23		24			25			26			27			28	D		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 September 2007

SUN			MON			TUE			WED			THU			FRI			SAT		
																	1	A	B	
2	E	3			4			5	D	E	6	A	B	7		E	8	D		
9		10			11	D		12			13		E	14			15	A	B	
16	A	B			17	B		18			19			20	A	B	21	A	B	
23	B	24			25			26			27			28			29	D		
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 SEP 2007-

Total= 0 Date Max AQI Pollutant Site/s

Health Watches issued during SEP 2007-

Total= 3 Date Max AQI Pollutant Site/s
9/06 49 PM-10 Durango
9/21 78 PM-10 West Forty Third
9/28 71 PM-10 West Forty Third

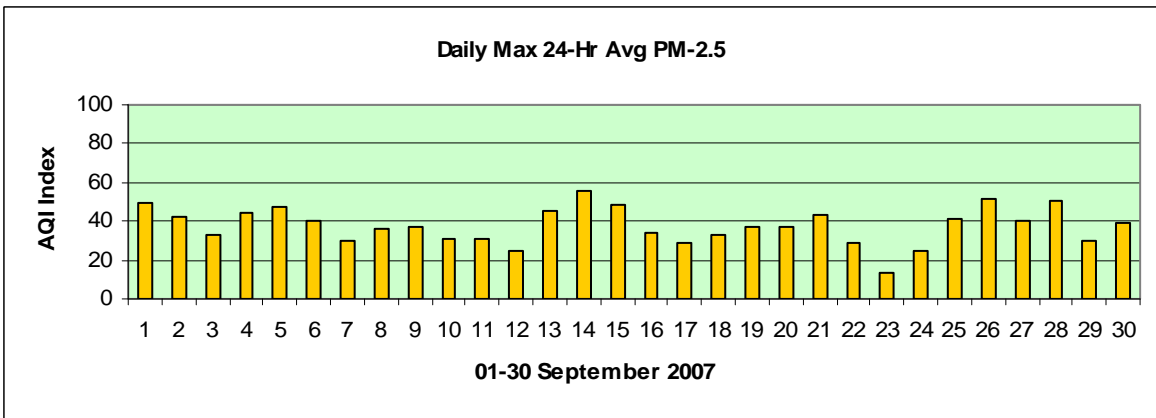
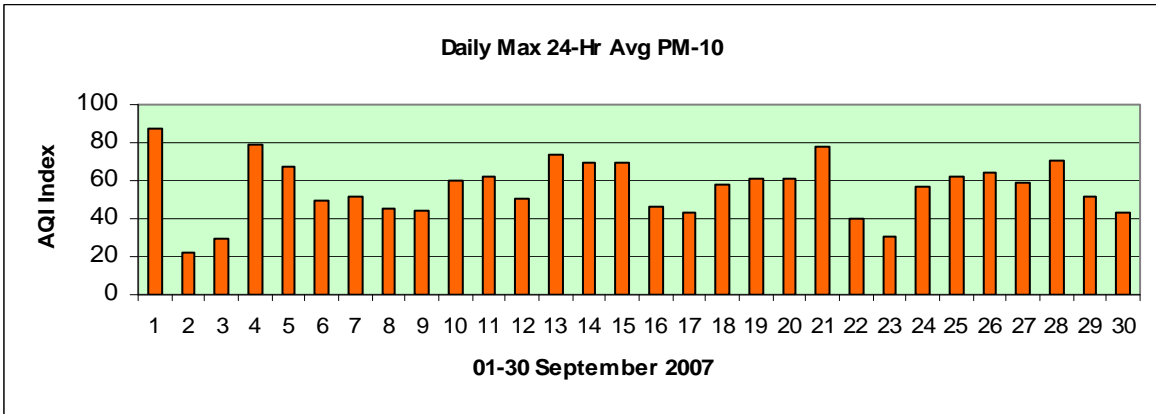
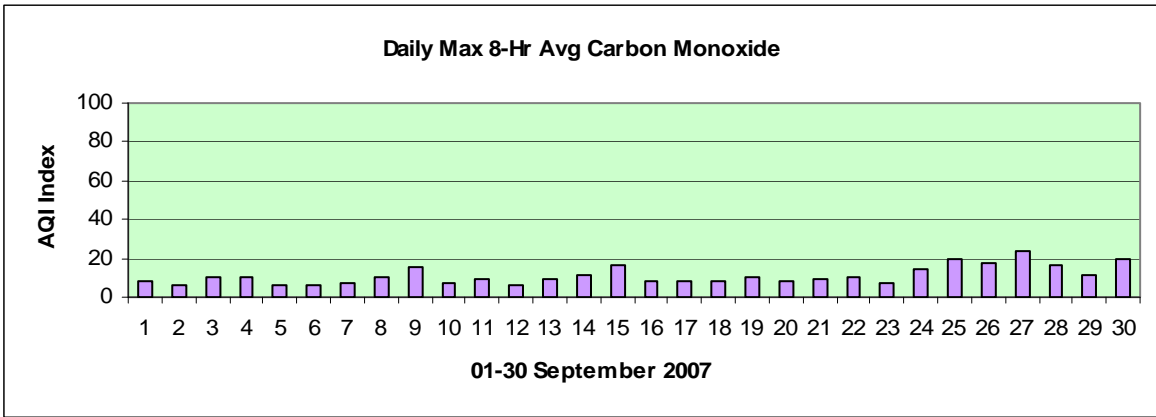
High Pollution Advisories issued during SEP 2007-

Total= 0 Date Max AQI Pollutant Site/s

Concentration Recap: Days in the **Good** category: 8
Days in the **Moderate** category: 22
Days in the **Unhealthy for Sensitive Groups** category: 0
Days in the **Unhealthy** category: 0
Total Forecast Days: 30

Narrative:

For Arizona in general – and Phoenix in particular – the month of September is usually the transition month between the summer thunderstorm season (North American Monsoon) and the return of periodic trough and frontal passages embedded in the mid-latitude storm track (Westerlies); this month was no different. The first ten days or so of the month were characterized by afternoon and evening thunderstorms both near and far and periodic outflow boundaries that generated areas of dense blowing dust. An episode on the 1st brought winds gusts up to 46 mph at Williams Gateway Airport that contributed to visibilities there as low as 1/2 mile. As a consequence the highest PM-10 (coarse particle) AQI level of the month – 87 – occurred on that date at the Higley site which is located in relative close proximity to the airport. (It was the first month since February 2007 with no exceedance of the 24-hour PM-10 standard). Although the monsoon was officially declared over on the 11th of the month by the N.W.S, another outflow event on the 15th produced a wind gust of 39 mph at Luke AFB; the visibility there also dropped to 1/2 mile. During the remainder of the month the mid-latitude storm track exerted its influence with trough and/or frontal passages occurring on the 16th, 17th, 22nd, and 29th. By the 23rd average dew points had dropped into the 30's and 40's. From the 20th thru the 22nd instability associated with a slow-moving Pacific upper low and trough contributed to nearby thunderstorm formation, whose outflow winds managed to produce local areas of blowing dust each evening. Valley rainfall for the month was mostly light, but coverage was sufficient to temporarily drop highest PM-10 levels into the good range of the AQI. In fact, air quality was relatively good the entire month; the highest AQI for any pollutant only exceeded the 75-AQI level on three days. -Reith



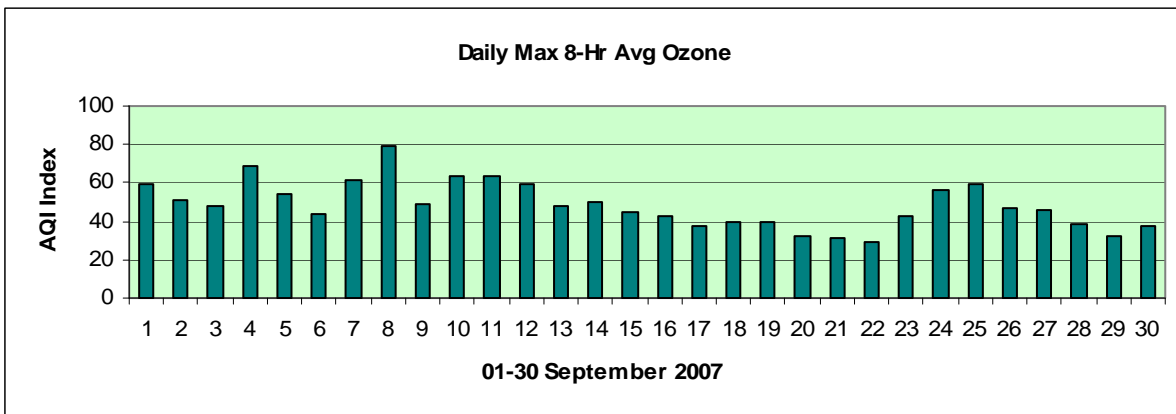
DETAILED OZONE SECTION

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

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

*Preliminary data

SUN		MON		TUES		WED		THU		FRI		SAT	
												1	59
2	51	3	48	4	69	5	54	6	44	7	61	8	79
9	49	10	64	11	64	12	59	13	48	14	50	15	45
16	43	17	38	18	40	19	40	20	32	21	31	22	29
23	43	24	56	25	59	26	47	27	46	28	39	29	32
30	37												



8-hr Ozone exceedance days in SEP: 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 SEP: Total= 0 Date Max ppb/AQI Site/s
(Forecast max value 80-84 ppb)

Ozone Health Watches since APR 01: Total= 13

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

High Pollution Advisories since APR 01: Total= 2

Concentration Recap: Days in the **Good** category: 19
Days in the **Moderate** category: 11
Days in the **Unhealthy for Sensitive Groups** category: 0
Days in the **Unhealthy** category: 0
Total Forecast Days: 30

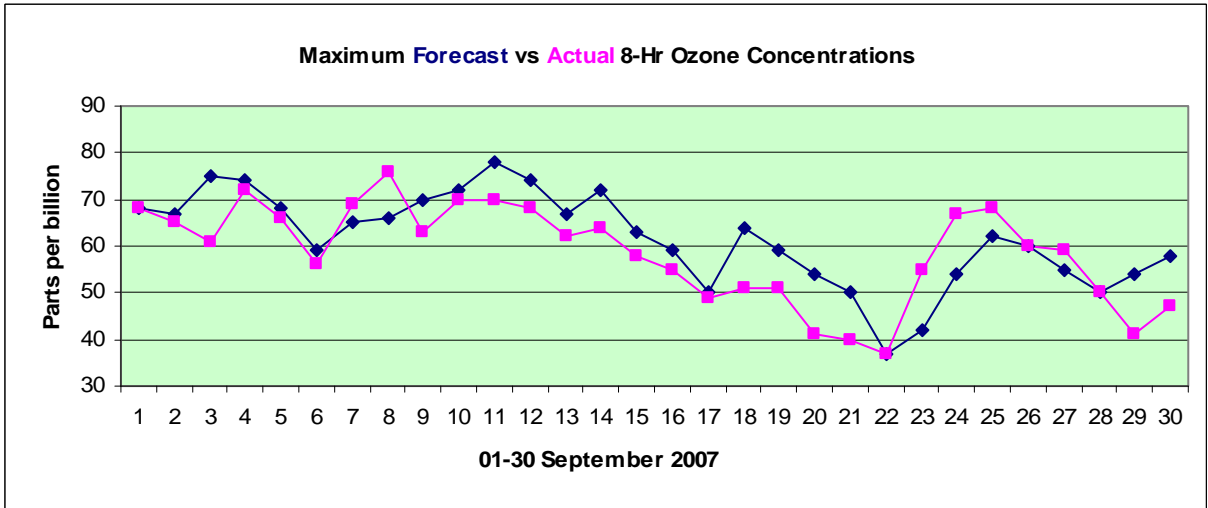
Maximum 8-Hr value: Date Hour Site ppb/AQI DOW
 9/08 1100 North Phoenix 76/79 Sat

Maximum 1-Hr value: Date Hour Site ppb/AQI DOW
 9/08 1500 North Phoenix 94/78 Sat

Average daily max 8-Hr concentration (ppb): 58.6
Deviation from the 1996-2006 average (ppb): -4.3

SEP Climatology: Average number of 8-Hr exceedance days: 0.4
(1996-2006) Maximum number of 8-Hr exceedance days: 2 in 1997, 1999
Minimum number of 8-Hr exceedance days: 0 in 1996, 1998, 2000-06
Average daily max 8-Hr concentration (ppb): 62.9
Record high max 8-Hr concentration (ppb): 91 on the 4th, 1997
Record low max 8-Hr concentration (ppb): 41 on the 24th, 2003

Forecast Verification: # of days maximum concentrations were over-forecast: 20
of days maximum concentrations were under-forecast: 6
of days maximum concentrations were correctly forecast: 4
Sep average forecast accuracy (ppb): +/-6.5
Sep average forecast bias (ppb): +4.8



Narrative: The 2007 Phoenix and vicinity 8-hour ozone “season” ended with a whimper, but not without setting an auspicious record: It was the first season without a single site exceedance of the current 8-hour average of 0.80 parts per million (ppm) during the reporting period that began in 1996 (see graph below). –Reith

PHOENIX & VICINITY 8-HR OZONE EXCEEDANCE DAYS 1996-2007
 (Total = 169 Days)

