



**MONTHLY AIR QUALITY REPORT FOR**  
**SEPTEMBER 2008**

AOI COLOR SCALE

<b>GOOD</b>	<b>MODERATE</b>	<b>UNHEALTHY FOR SENSITIVE GROUPS</b>	<b>UNHEALTHY</b>
<b>0-50</b>	<b>51-100</b>	<b>101-150</b>	<b>151-200</b>

Calendar of maximum AQI values & their corresponding color for September 2008\*

\*Preliminary data

SAMPLE POLLUTANT REPORTING BOX

<b>1</b> (day of month)	<b>O3</b>	<b>CO</b>
	<b>PM10</b>	<b>PM2.5</b>

	SUN	MON	TUE	WED	THU	FRI	SAT						
		1	44 09 16 18	2	77 10 32 31	3	74 10 52 26	4	77 10 51 36	5	84 11 50 39	6	84 17 44 42
7	71 15 40 40	8	50 06 51 31	9	51 08 43 32	10	42 07 45 24	11	51 08 83 28	12	51 09 65 31	13	77 05 41 19
14	64 13 32 32	15	46 11 44 22	16	42 05 64 25	17	50 10 62 33	18	74 11 55 39	19	67 13 46 36	20	48 13 33 28
21	38 07 67 21	22	37 09 47 18	23	47 10 46 28	24	45 11 59 43	25	46 08 63 30	26	47 08 54 35	27	61 08 45 29
28	47 09 35 31	29	47 08 60 43	30	50 09 62 63								

**Calendar of High Pollution Advisories and Health Watches issued during September 2008**

SUN	MON	TUE	WED	THU	FRI	SAT
	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				

**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 2008**

SUN	MON	TUE	WED	THU	FRI	SAT
	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				

**LEGEND**

**ELECTROMETEORS**

- A** = Thunderstorm

**HYDROMETEORS**

- B** = Rain/Drizzle/Hail/Snow
- C** = Fog

**LITHOMETEORS**

- D** = Blowing Dust
- E** = Haze (vsby <10SM)
- F** = Smoke

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**Non-Ozone Exceedance days during SEP 2008-**

Total= 0      Date      Max AQI      Pollutant      Site/s

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**Non-Ozone Health Watches issued during SEP 2008-**

Total= 0      Date      Max AQI      Pollutant      Site/s

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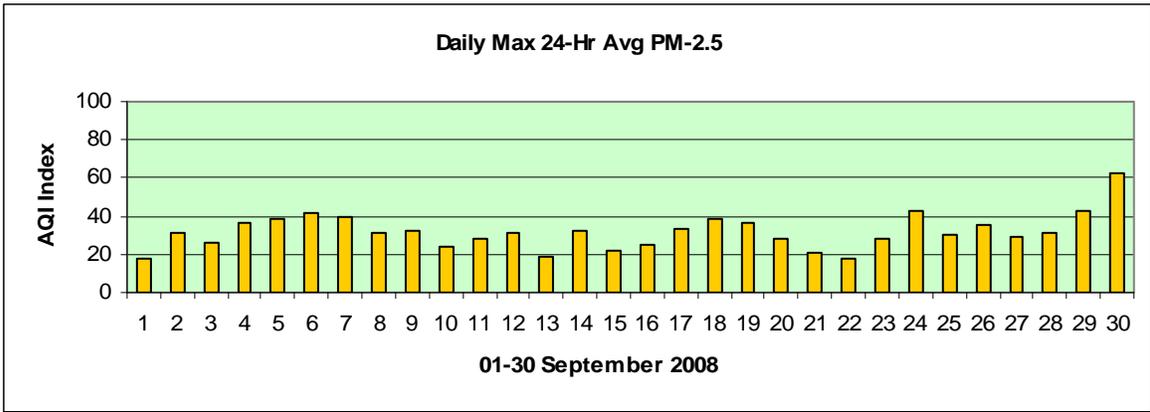
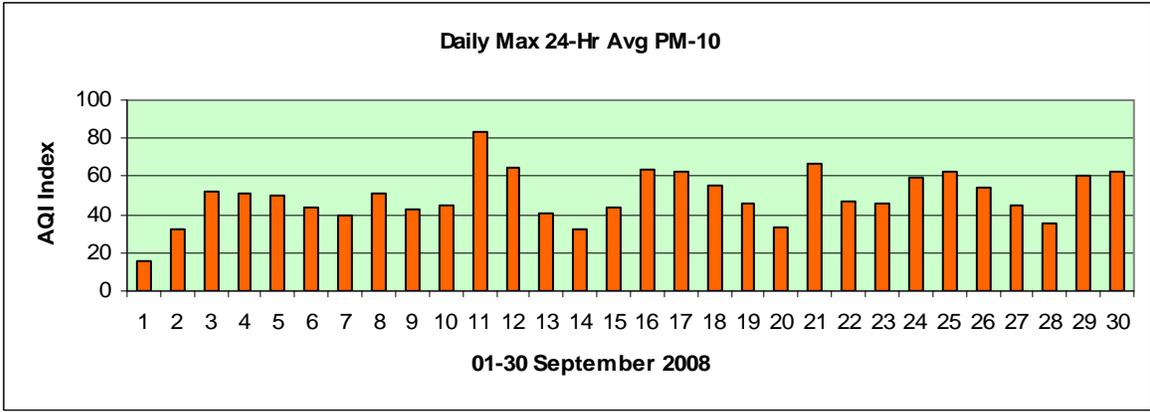
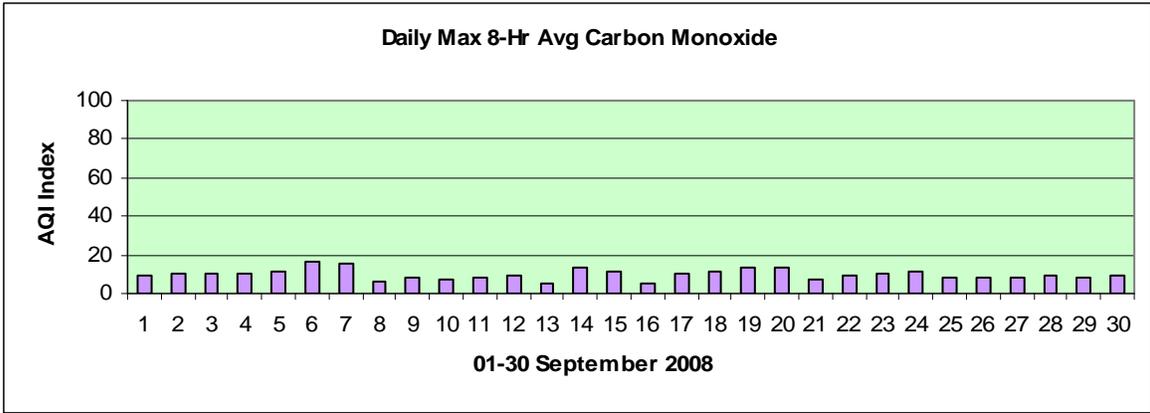
**Non-Ozone High Pollution Advisories issued during SEP 2008-**

Total= 0      Date      Max AQI      Pollutant      Site/s

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**Concentration Recap:**      Days in the **Good** category:      7  
(All pollutants)      Days in the **Moderate** category:      23  
Days in the **Unhealthy for Sensitive Groups** category:      0  
Days in the **Unhealthy** category:      0  
Total Forecast Days:      30

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**Narrative:** Air quality over the Phoenix metro area during the month of September was relatively good, and this was greatly appreciated by local area residents. Coarse particle pollutant (PM-10) levels were unusually low for this time of year due the early demise of summer monsoon thunderstorm outbreaks and their dust-generating outflow boundaries. The strongest such boundary of the month occurred on the 11th. Wind gusts up to 50 mph were recorded at local airfields between 1730 and 2000 hrs and the visibility dropped to zero at some locations. Even though no rainfall followed the dust event, highest PM-10 levels remained in the upper-moderate range of the Air Quality Index (AQI). This was pretty much the summer monsoon’s last gasp for the metro area; dew points were in the 40’s and lower 50’s the remainder of the month, and an increasingly active mid-latitude storm track delivered a pair of trough passages to the state – one on the 12th and the other on the 22nd. The only other noteworthy weather-related event occurred on the 28th-30th when a prolonged period of gusty easterly gradient winds over areas east and southeast of Arizona managed to pick up and transport a large volume of fine dust particles that hung over the region thru the 30th. In addition, local northeast to southeasterly winds gusting up to 40 mph on the 29th produced additional airborne dust. -Reith

## DETAILED OZONE SECTION

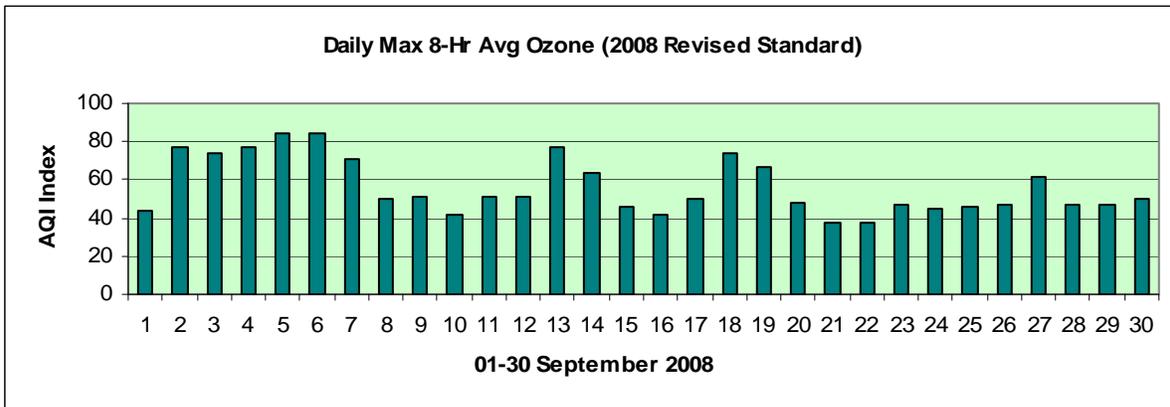
(Based on the 2008 EPA Revised 8-Hour Ozone Standard)

<b>GOOD</b>	<b>MODERATE</b>	<b>UNHEALTHY FOR SENSITIVE GROUPS</b>	<b>UNHEALTHY</b>
<b>0-50</b>	<b>51-100</b>	<b>101-150</b>	<b>151-200</b>

### SUMMARY OF MAXIMUM 8-HR OZONE AQI VALUES FOR SEPTEMBER 2008\*

\*Preliminary data

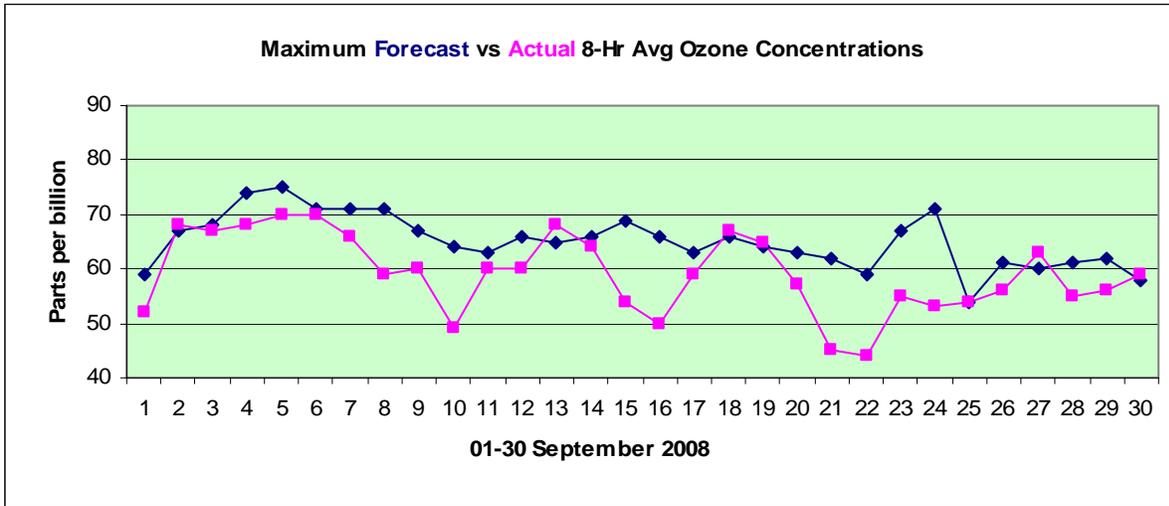
SUN		MON		TUES		WED		THU		FRI		SAT	
		1	<b>44</b>	2	<b>77</b>	3	<b>74</b>	4	<b>77</b>	5	<b>84</b>	6	<b>84</b>
7	<b>71</b>	8	<b>50</b>	9	<b>51</b>	10	<b>42</b>	11	<b>51</b>	12	<b>51</b>	13	<b>77</b>
14	<b>64</b>	15	<b>46</b>	16	<b>42</b>	17	<b>50</b>	18	<b>74</b>	18	<b>67</b>	20	<b>48</b>
21	<b>38</b>	22	<b>37</b>	23	<b>47</b>	24	<b>45</b>	25	<b>46</b>	26	<b>47</b>	27	<b>61</b>
28	<b>47</b>	29	<b>47</b>	30	<b>50</b>								





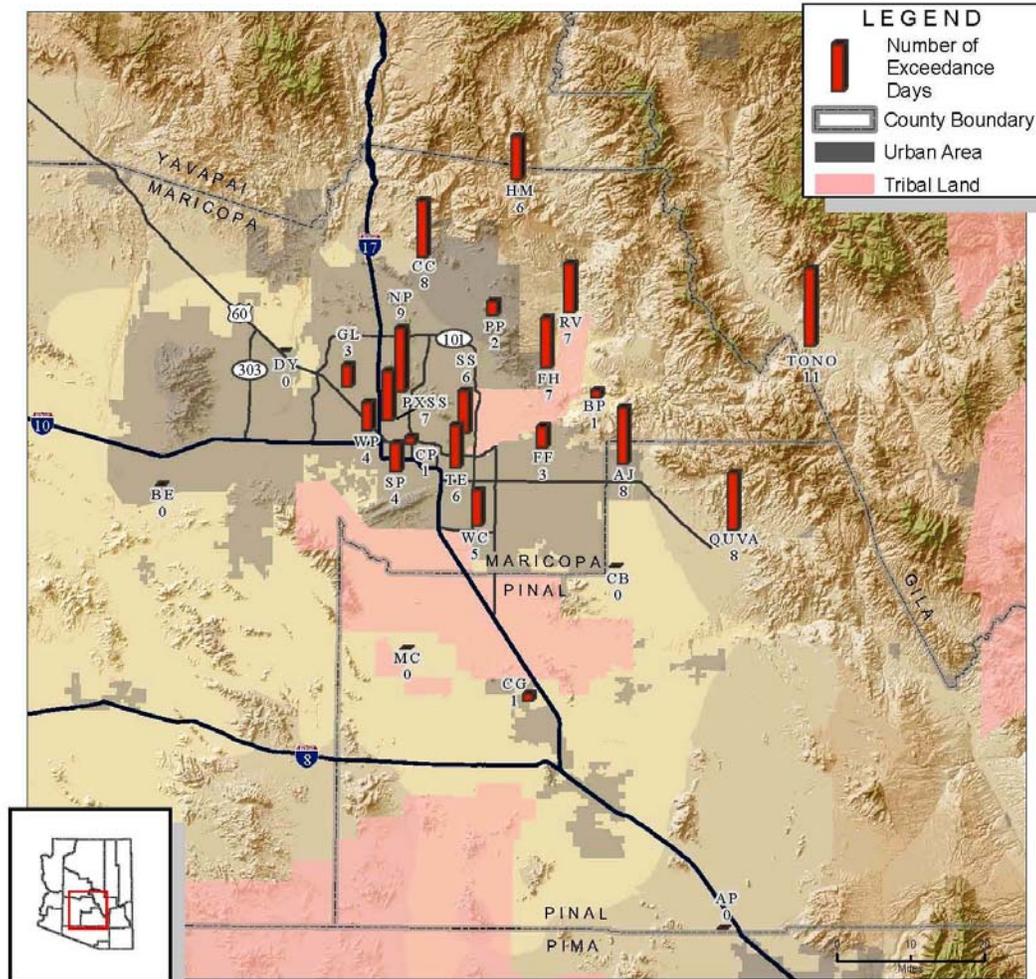
**Forecast Verification:**

# of days maximum concentrations were over-forecast:	23
# of days maximum concentrations were under-forecast:	6
# of days maximum concentrations were correctly forecast:	1
September average forecast accuracy (ppb):	+/-6.6
September average forecast bias (ppb):	+6.0



**Narrative:** The 2008 Phoenix metro ozone season went out like a lamb in September, but only after racking up 107 8-hour ozone site exceedances during 28 days for the season that began on April 01. The map below shows the geographical distribution of the local monitoring site network as well as the number of exceedances at each site. Given that southwest to westerly surface winds are predominant over the Valley, locations usually downwind of the city center generally had the highest number of exceedances. Sites located within the city center also had their fair share of exceedances, a situation that occurs when a deep easterly wind regime becomes established in concert with the summer monsoon circulation pattern. -Reith

## Number of 8-hr Ozone Exceedance Days April 01 - August 31, 2008



ID	SITE	# OF EXCEEDANCE DAYS	ID	SITE	# OF EXCEEDANCE DAYS
AJ	Apache Junction Maint Yard	8	MC	Maricopa	0
AP	Pinal Air Park	0	NP	North Phoenix	9
BE	Buckeye	0	PP	Pinnacle Peak	2
BP	Blue Point	1	PXSS	JLG Supersite	7
CB	Combs School	0	QUVA	Queen Valley	8
CC	Cave Creek	8	RV	Rio Verde	7
CG	Casa Grande Airport	1	SP	South Phoenix	4
CP	Central Phoenix	1	SS	South Scottsdale	6
DY	Dysart	0	TE	Tempe	6
FF	Falcon Field	3	TONTO	Tonto NM	11
FH	Fountain Hills	7	WC	West Chandler	5
GL	Glendale	3	WP	West Phoenix	4
HM	Humbolt Mt	6			

September 09, 2008  
 Author: N Caroli  
 Data Source: AAAD

