MONTHLY AIR QUALITY REPORT FOR NOVEMBER 2005

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 November 2005*

*Preliminary data

SAMPLE POLLUTANT REPORTING BOX

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

SUN	MON	TUES	WED	THU	FRI	SAT
		1 O3 38 PM10 106 CO 32 PM2.5 48	2 O3 34 PM10 104 CO 35 PM2.5 51	3 O3 26 PM10 105 CO 34 PM2.5 60	4 O3 30 PM10 93 CO 38 PM2.5 58	5 O3 38 PM10 73 CO 41 PM2.5 55
6 O3 38 PM10 63 CO 35 PM2.5 53	7 O3 32 PM10 88 CO 34 PM2.5 52	8 O3 34 PM10 86 CO 39 PM2.5 52	9 O3 34 PM10 85 CO 41 PM2.5 54	10 O3 27 PM10 106 CO 39 PM2.5 64	11 O3 30 PM10 56 CO 36 PM2.5 44	12 O3 33 PM10 52 CO 27 PM2.5 55
13 O3 34 PM10 53 CO 28 PM2.5 56	14 O3 30 PM10 86 CO 28 PM2.5 53	15 O3 36 PM10 65 CO 22 PM2.5 31	16 O3 36 PM10 90 CO 30 PM2.5 38	17 O3 33 PM10 101 CO 31 PM2.5 65	18 O3 34 PM10 108 CO 31 PM2.5 33	19 O3 34 PM10 77 CO 27 PM2.5 55
20 O3 38 PM10 71 CO 28 PM2.5 30	21 O3 34 PM10 97 CO 35 PM2.5 56	22 O3 34 PM10 118 CO 44 PM2.5 77	23 O3 32 PM10 111 CO 44 PM2.5 69	24 O3 30 PM10 61 CO 25 PM2.5 61	25 O3 32 PM10 65 CO 25 PM2.5 58	26 O3 38 PM10 73 CO 27 PM2.5 37
27 O3 33 PM10 44 CO 06 PM2.5 20	28 O3 28 PM10 74 CO 20 PM2.5 40	29 O3 27 PM10 93 CO 31 PM2.5 60	30 O3 25 PM10 98 CO 38 PM2.5 75			

Exceedance days during NOV 2005-

Total= 8

Date	Max AQI	Pollutant	Site/s
11/01	106	PM-10	West Forty Third
11/02	104	PM-10	West Forty Third
11/03	105	PM-10	Durango
11/10	106	PM-10	West Forty Third
11/17	101	PM-10	Durango
11/18	108	PM-10	Buckeye
11/22	118	PM-10	Durango
	110	PM-10	West Forty Third
11/23	111	PM-10	West Forty Third
	106	PM-10	Durango

Health Watches issued during NOV 2005-

Total= 11

Date	Max AQI	Pollutant	Site/s
11/05	73	PM-10	Durango
11/06	63	PM-10	West Forty Third
11/08	86	PM-10	West Forty Third
11/09	85	PM-10	Durango
11/10	106	PM-10	West Forty Third
11/17	101	PM-10	Durango
11/21	97	PM-10	Durango
11/24	61	PM-10	West Forty Third
11/25	65	PM-10	West Forty Third
11/26	73	PM-10	West Forty Third
11/29	93	PM-10	West Forty Third

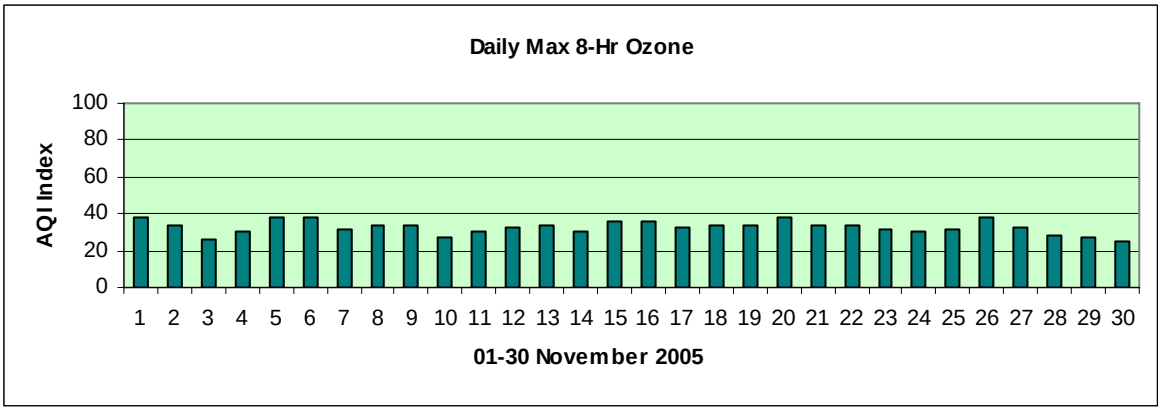
High Pollution Advisories issued during NOV 2005-

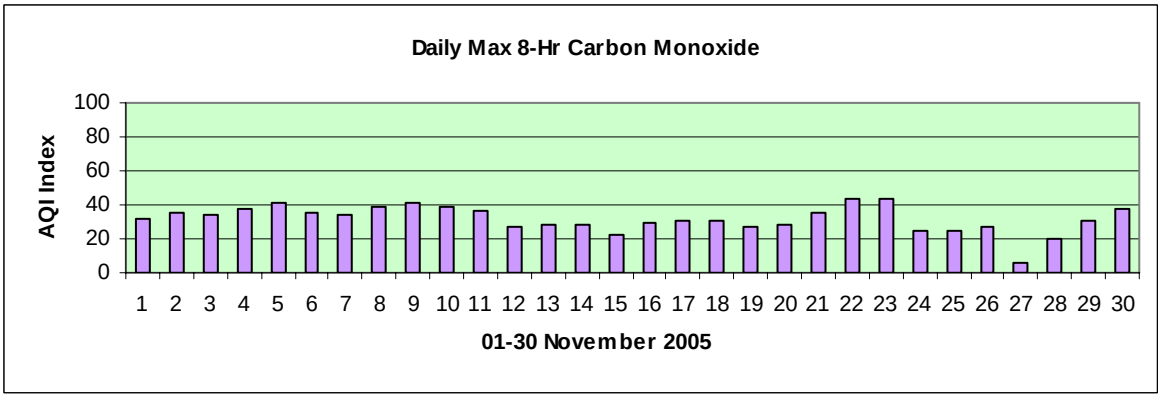
Total= 4

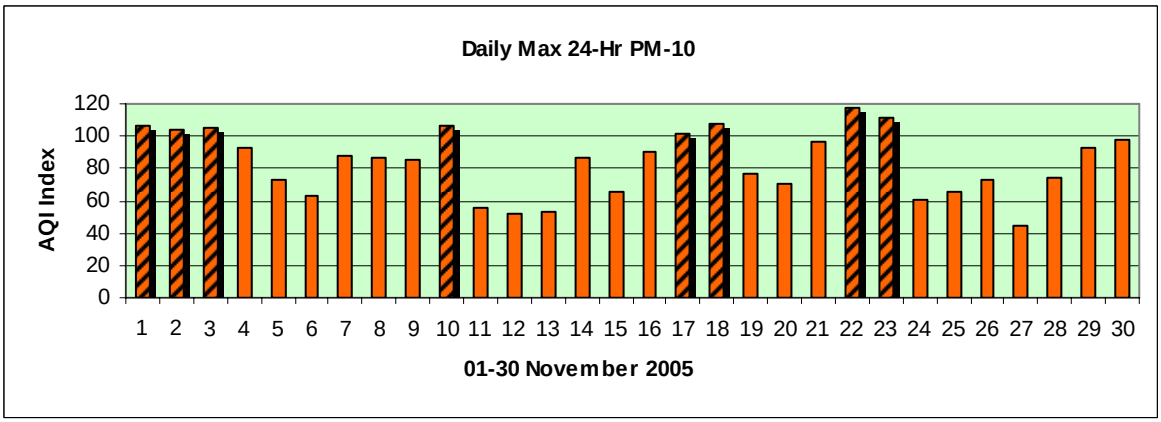
Date	Max AQI	Pollutant	Site/s
11/04	93	PM-10	West Forty Third
11/22	118	PM-10	Durango
11/23	111	PM-10	West Forty Third
11/30	98	PM-10	West Forty Third

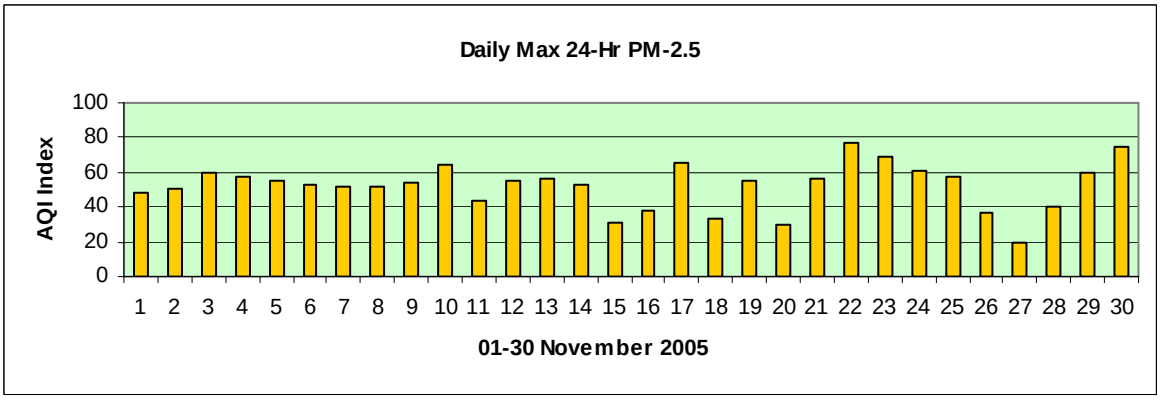
Concentration Recap:

Days in the Good category:	1
Days in the Moderate category:	21
Days in the Unhealthy for Sensitive Groups category:	8
Days in the Unhealthy category:	0
Total Forecast Days:	30

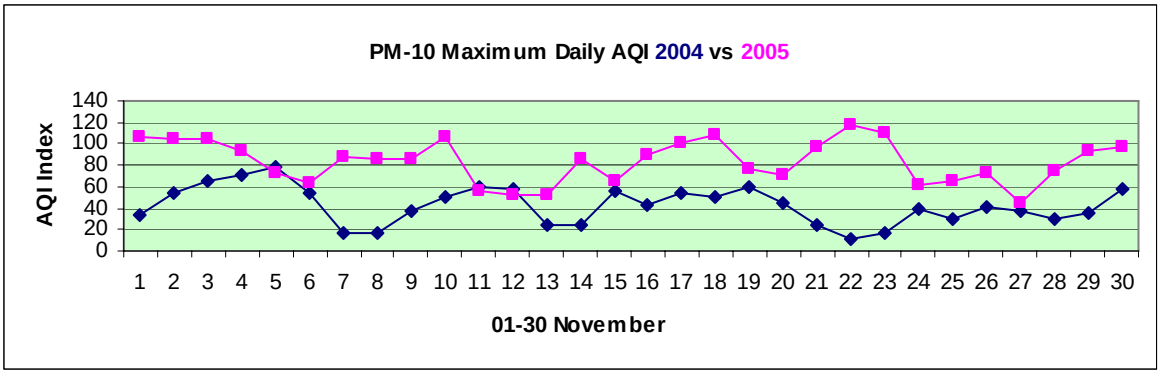

Daily Max 8-Hr Ozone
AQI Index
100
80
60
40
20
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
01-30 November 2005


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
01-30 November 2005


Daily Max 24-Hr PM-10
AQI Index
120
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
01-30 November 2005

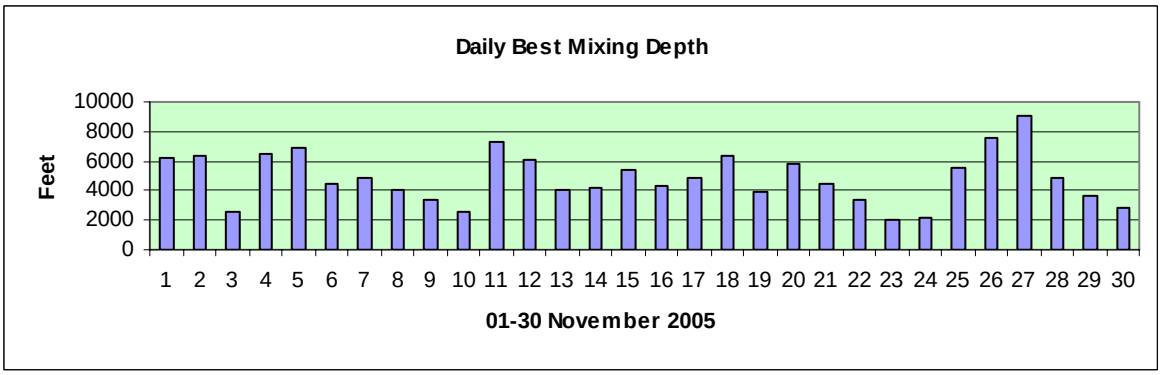

Daily Max 24-Hr PM-2.5
AQI Index
100
80
60
40
20
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
01-30 November 2005

Narrative: Ozone, carbon monoxide, and to a large extent PM-2.5 (fine particle) concentrations, were what one would expect during the month of November. However, there was an unprecedented and sustained increase in PM-10 (coarse particle) levels that resulted in more exceedances of the 24-hr standard than had occurred in the Phoenix metro during at least the previous five year period. Numerous high pollution advisories and health watches had to be issued and forecasters had to recalibrate their criteria for PM-10 forecasting since practically every day carried the risk of elevated particle pollution levels – the average PM-10 AQI was 83! This was in stark contrast to November 2004 when PM-10 levels were closer to "normal". See the graph below:



It appears that a confluence of weather-related events contributed to the high PM-10 levels:

- The long-wave ridge position in the mid-latitude storm track was overhead or nearby almost the entire period and any troughs that managed to pass by produced winds and clouds but no rain.
- No local precipitation since October 18 meant that large-scale soil and desert surface stabilization did not occur and that construction sites had to be manually watered during the entire month.
- Because the ridge was in such close proximity most of the month, associated subsidence aloft, light winds, and very stable conditions produced long periods of air mass stagnation with low mixing heights and less than favorable dispersion (see graph below). The air mass was also quite dry and cloud cover was either sparse or of the high variety. This led to frequent moderate to strong morning surface-based radiation inversions that on some days were never broken. Local visibilities were also impacted with the *Valley Brown Cloud* of trapped particles lowering them to below 10 miles on several days.



Of course, particle emissions from mobile and stationary sources continue to be the principal cause of the valley's high pollution levels; it should be pointed out that despite the weather no exceedances of the federal health standard occurred during the weekends when PM emissions are typically at their lowest. -Reith