MONTHLY AIR QUALITY REPORT FOR DECEMBER 2004

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 December 2004*

*Preliminary data

SAMPLE POLLUTANT REPORTING BOX

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

SUN		MON		TUES		WED			THU		FRI		SAT	
					1	27	36	2	32	36	3	31	49	4	30	47
						75	71		84	68		82	74		53	54
5	30	11	6	31	14	7	27	26	8	27	34	9	22	31	10	30	47	11	30	56
	09	19		15	11		39	34		55	n/a		60	n/a		79	n/a		68	n/a
12	29	58	13	29	48	14	31	41	15	30	32	16	29	32	17	29	25	18	26	30
	42	60		74	51		69	27		79	44		73	31		56	29		61	38
19	30	34	20	28	38	21	25	40	22	30	18	23	32	31	24	31	30	25	27	45
	54	42		79	42		78	58		60	42		63	48		38	38		46	63
26	28	41	27	29	36	28	29	27	29	25	11	30	28	25	31	28	30			
	62	59		89	62		57	45		08	06		19	24		38	36			

Exceedance days during DEC 2004-

Total=	0	Date	Max AQI	Pollutant	Site/s

Health Watches issued during DEC 2004-

Total=	0	Date	Max AQI	Pollutant	Site/s

High Pollution Advisories issued during DEC 2004-

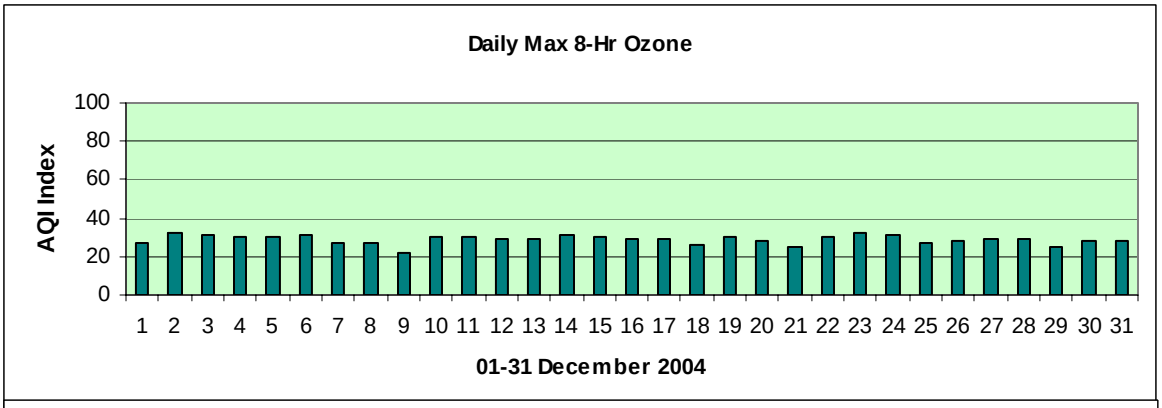
Total=	0	Date	Max AQI	Pollutant	Site/s

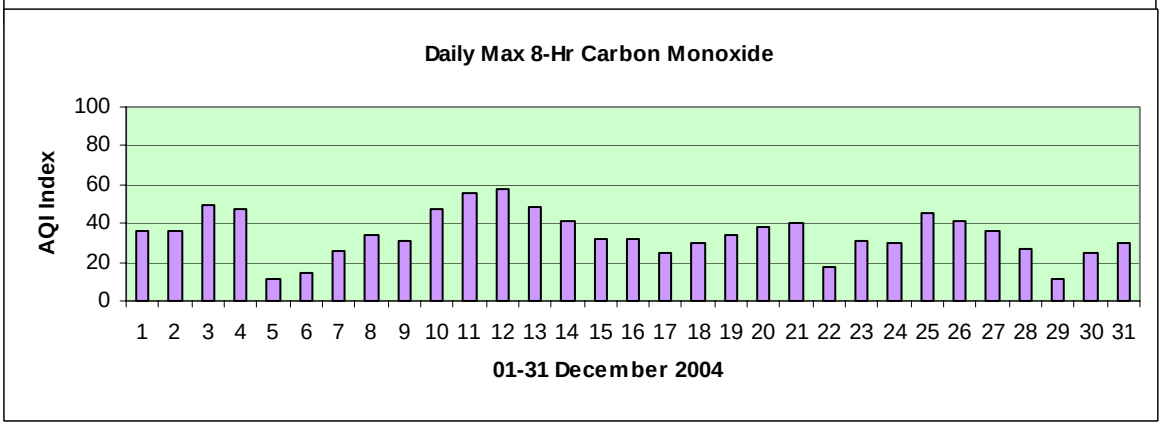
Concentration Recap:

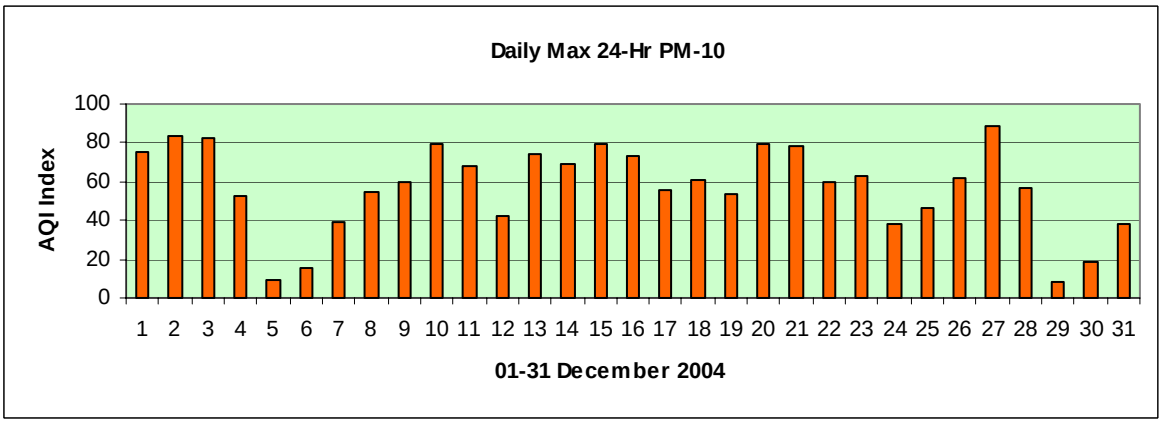
Days in the Good category:	7
Days in the Moderate category:	24
Days in the Unhealthy for Sensitive Groups category:	0
Days in the Unhealthy category:	0
Total Forecast Days:	31

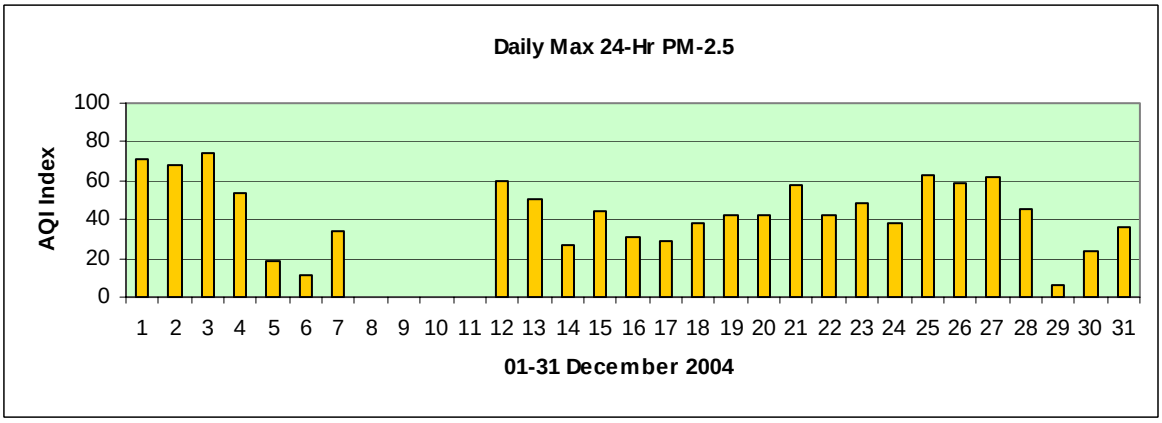
Narrative:

Although maximum concentrations of ozone were very low all month as is the norm during the cool season, the relative absence of mid-latitude storms during December 2004 played a large role in rather elevated levels of particulate matter and carbon monoxide over the forecast area. Only two episodes of precipitation occurred during the entire month – the 4th thru the 6th and the 28th thru the 30th. Although several other dry "back door" trough passages brought gusty winds that helped mixing and dispersion, much of the month was characterized by a dry and stable air mass – under high pressure aloft – that trapped pollutants near the ground. On nine days dispersion was calculated to be Poor to Marginal, and was Fair on nine others. The average mixing depth was around 4500', and was as low as 2000' on the 27th. These conditions led the National Weather Service to issue nine Air Stagnation Advisories that covered all or portions of the 1st thru the 4th, and the 10th thru the 14th. Maximum concentrations of PM-10 were in the Moderate range on 22 days, PM-2.5 on 10 days, and carbon monoxide on two days. The stagnant conditions also trapped residual low-level moisture from rains on the 4th thru the 6th. The result was that from the 7th thru the 13th prevailing visibility was reduced as particles and water vapor combined to produce efficient light scattering and absorption, also known locally as the *Valley Brown Cloud*. On four of those days the relative humidity was too high for nephelometer equipment to accurately determine a fine particle (PM-2.5) concentration. The two highest carbon monoxide concentrations occurred on the warmest days of the month – the 11th and the 12th – when maximum daytime temperatures reached 80 and 77 deg F, respectively. This is frequently the case, and appears to coincide with the peak strength of the subsidence inversion aloft. -Reith


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 31
01-31 December 2004


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 31
01-31 December 2004


Daily Max 24-Hr PM-10
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 31
01-31 December 2004


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 31
01-31 December 2004