

Air Quality Standards Compliance Report (AQSCR)

Statistics for November/December 2009
and Summary Statistics for 2009

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2009 Air Quality

Air quality in the South Coast Air Basin (Basin) in 2009 was similar to the recent years' trend. Maximum ozone and PM_{2.5} concentrations in the Basin in 2009 continued to exceed the federal standards and the more stringent California state standards were exceeded for ozone, PM_{2.5} and PM₁₀. Recently established 1-hour federal standards for NO₂ was also exceeded in 2009. In Coachella Valley, the desert areas of Riverside County in Salton Sea Air Basin, the state and federal ozone standards and state 24-hour PM₁₀ standard were exceeded in 2009. Following is a brief analysis of the 2009 air quality in the region.

Annual air quality statistics for the year 2009 are summarized in the "2009 Air Quality" data card which can be accessed on the Internet at: <http://www.aqmd.gov/smog/historical/AQ09card.pdf>.

Maximum Pollutant Concentrations

In 2009, the maximum 8-hour and 1-hour average ozone concentrations in the Basin (0.128 ppm and 0.176 ppm) were 171% and 141% of the 8-hour and former 1-hour federal standards. Maximum 24-hour average and annual average PM_{2.5} concentrations (72.1 µg/m³ and 16.9 µg/m³) were 203% of the federal 24-hour standard and 113% of the annual PM_{2.5} standards. The maximum 24-hour average PM₁₀ concentration in the Basin (108 µg/m³) was 72% of the federal 24-hour standard. The maximum 24-hour average PM₁₀ concentration in Coachella Valley (140 µg/m³) was 93% of the standard. The maximum annual average PM₁₀ concentration (53.4 µg/m³) was 107% of the former federal annual PM₁₀ standard.

The maximum 1-hour average nitrogen dioxide concentration in the Basin (0.115 ppm) was 115% of the recently established federal standard. The maximum 24-hour average sulfate concentration (13.6 µg/m³) was 54% of the state standard. Sulfur dioxide concentrations were well below the standards in 2009 and the maximum 1-hour average concentration (0.022 ppm) was 29% of the recently established federal standard. Carbon monoxide concentrations have not exceeded the standards in the Basin since 2002. The highest 8-hour average carbon monoxide concentration in 2009 (4.6 ppm) was 49% of the federal standard.



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Comparison of Air Quality in Different Areas

Ozone (O₃)

Figure 1 shows the number of days on which the 8-hour federal ozone standard (0.075 ppm) was exceeded in different areas of the Basin in 2009. The 8-hour ozone standard was exceeded most frequently in the Basin's Central San Bernardino Mountains. The coastal areas of Los Angeles and Orange Counties recorded the lowest number of days exceeding with a few areas recording no exceedances of the 8-hour federal standard.

The former short-term 1-hour ozone standard (not shown) was also exceeded most frequently in the Central San Bernardino Mountains. Eight out of 29 sites monitored in 2009, exceeded the former 1-hour standard on more than one days, 10 sites exceeded the standard on one day only and 11 sites did not exceed.

Particulate Matter (PM_{2.5})

Figure 2 shows the distribution of annual average PM_{2.5} concentrations in different areas of the Basin in 2009. The federal annual standard (15 µg/m³) was exceeded at two of the 20 sites monitored with the highest concentrations recorded in the Metropolitan Riverside County area. The more stringent state PM_{2.5} standard (12 µg/m³) was exceeded in most areas in the Basin. PM_{2.5} concentrations (not shown) exceeded the 24-hour standard at all sites monitored in the Basin, with the highest concentration recorded in the San Gabriel Valley areas. Coachella Valley areas in the desert portion of the District did not exceed the PM_{2.5} standards.

Particulate Matter (PM₁₀)

PM₁₀ annual average concentrations in 2009, exceeded the former annual average PM₁₀ federal standard in the Metropolitan Riverside County area of the Basin (map not shown). The more stringent state standard was exceeded in most areas of the Basin. Coachella Valley area did not exceed the PM₁₀ standards in 2009.

For more detailed information on air pollutants, recent air quality and long-term trends (through the year 2005), please refer to the 2007 AQMP Appendix II "Current Air Quality."

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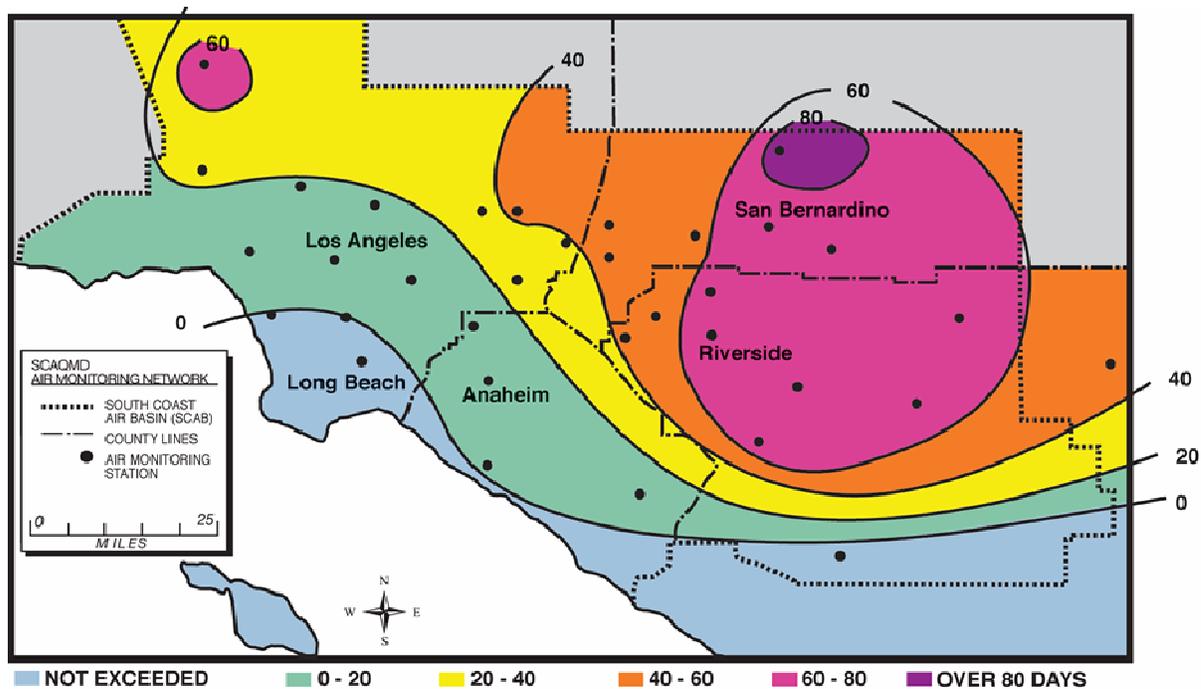


Figure 1
Ozone - 2009
Number of Days Exceeding 8-Hour Federal Standard

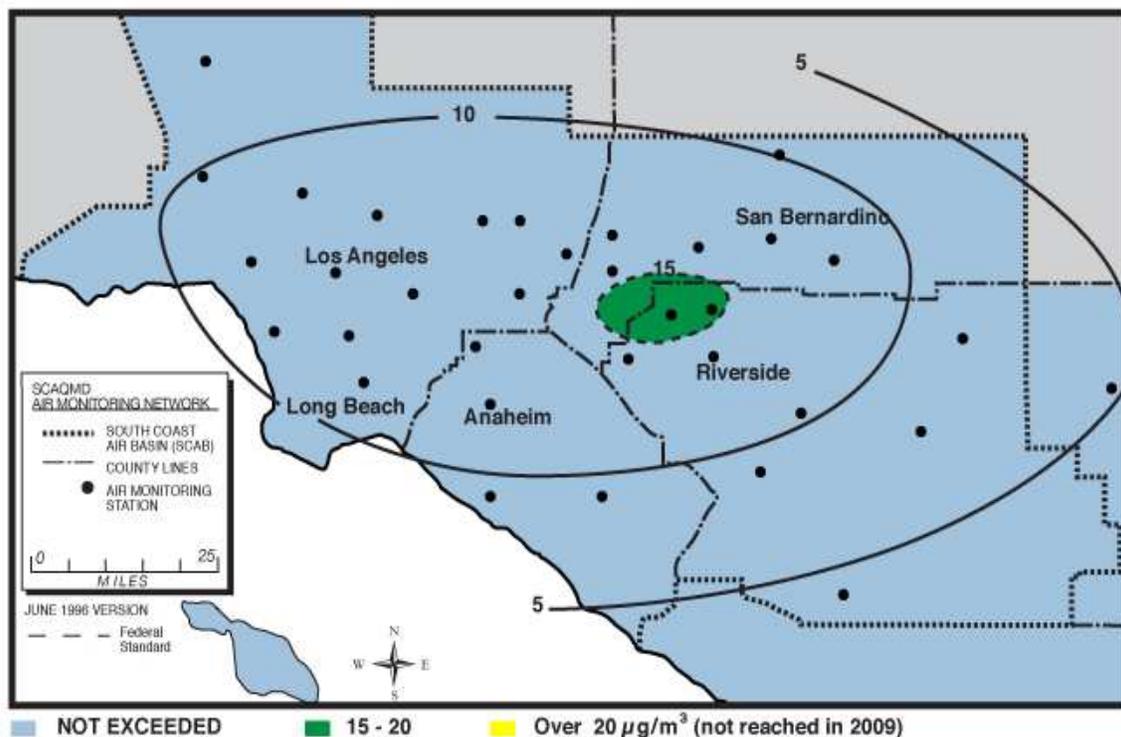


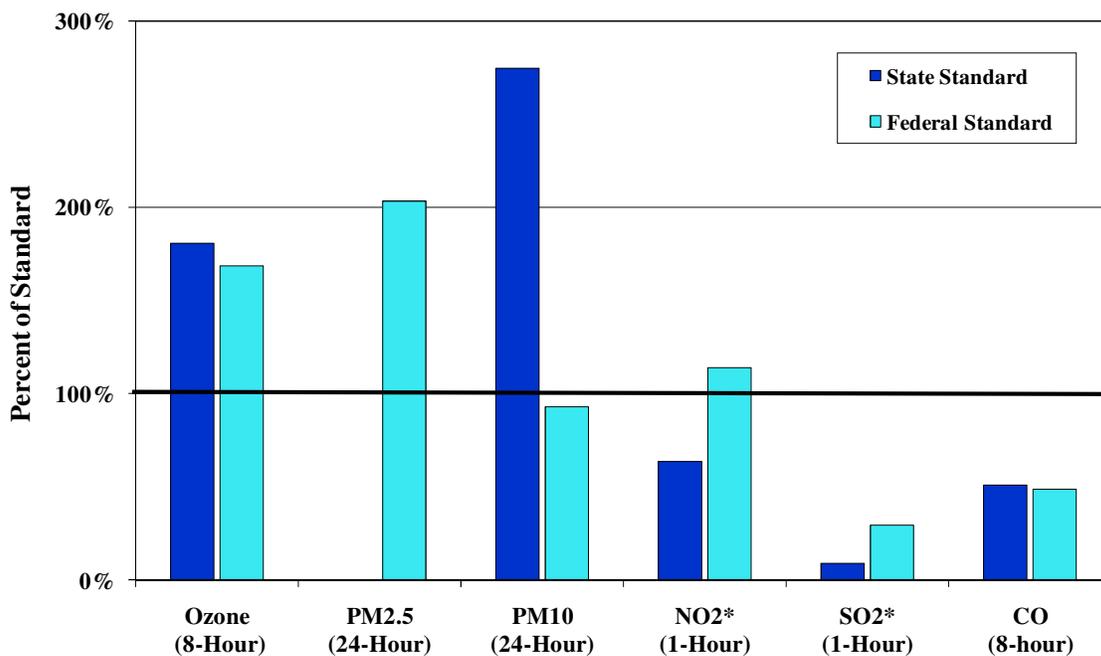
Figure 2
PM2.5 – 2009
Annual Arithmetic Mean, µg/m³

Air quality statistics for the South Coast Air Basin and the desert area of Coachella Valley in the Salton Sea Air Basin for the months of November and December are shown and summarized in the following tables.

Figure 3 shows the 2009 maximum pollutants concentrations in the District (Basin and Coachella Valley) as percent of the current state and federal standards. Tables 1 and 2 summarize monthly air quality statistics for the South Coast Air Basin and the desert area of Coachella Valley monitoring areas during the months of November and December 2009. The tables show maximum concentrations of the pollutants in each source/receptor area and number of days on which the locations monitored exceeded federal and/or state standards.

This bimonthly publication satisfies the requirements for reporting on air quality in the South Coast Air Basin set by California legislation (Chapter 1301, Statutes of 1987; Health and Safety Code Section 40451(d)), and supplies similar information for the areas of the Salton Sea Air Basin (Coachella Valley) served by the District.

For subscription, please submit the subscription forms for the AQSCR which may be accessed at <http://www.aqmd.gov/hr/subsrv.html>. Additional subscription information and forms may be obtained by calling Subscription Services at (909) 396-3720. Electronic reports (PDF format) for this issue, as well as previous years' reports, may be accessed via internet at: <http://www.aqmd.gov/smog/AirQualitybyMonth.htm>.



*Based on the recently established federal standards effective in 2010.

Figure 3
January-December 2009 Air Quality
Maximum Concentrations as Percent of Standards

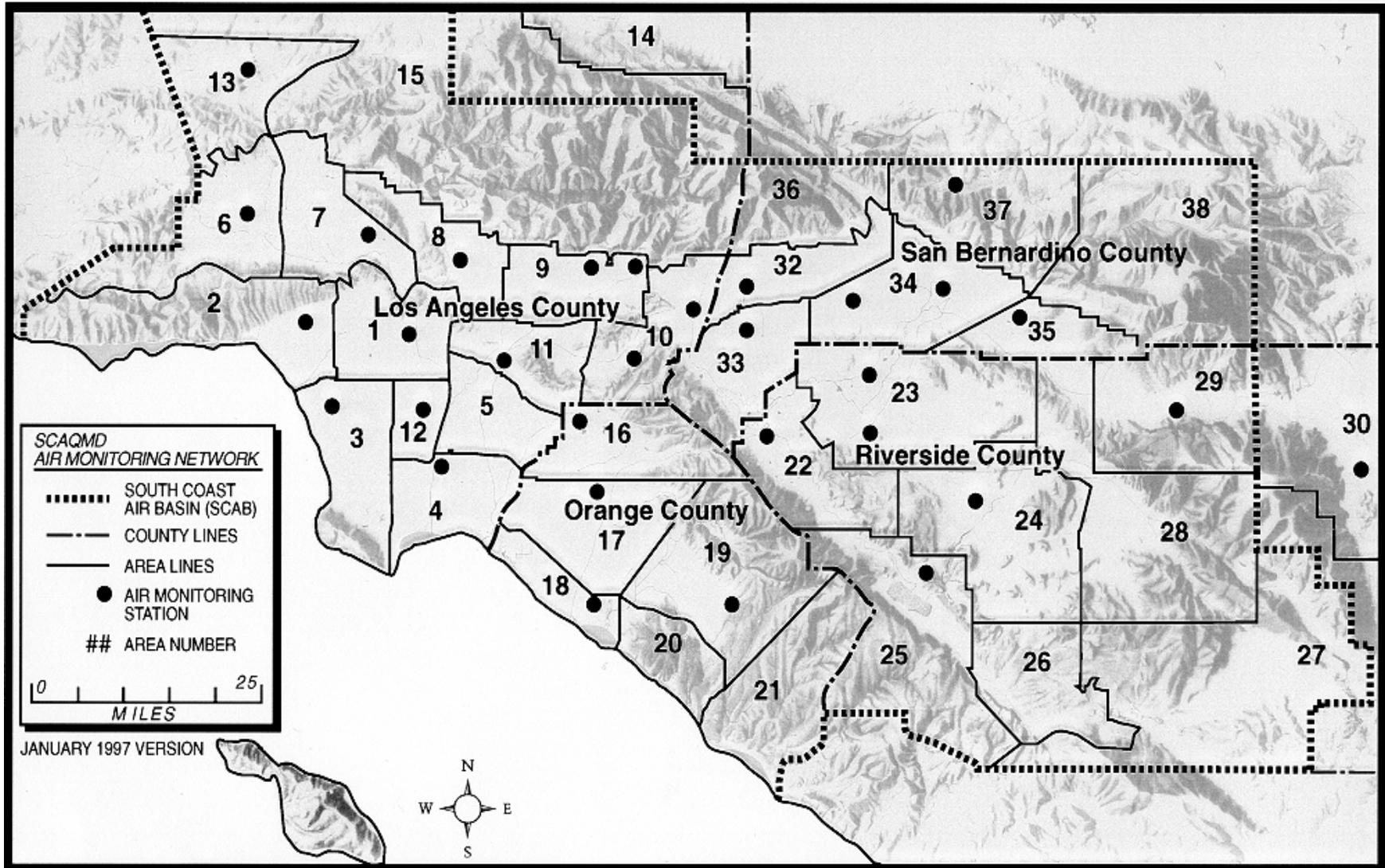


Figure 4
 South Coast Air Basin and Adjoining Areas of Salton Sea and Mojave Desert
 Air Basins and Monitoring Stations

Table 1
November 2009
Exceedances of Standards and Maximum Concentrations

Source/ Receptor No.	Location	Station No.	Ozone						Carbon Monoxide		Nitrogen Dioxide		Sulfur Dioxide			
			No. Days Exceeding						Days Exceeding State/ Federal Standard	Max 8-hour ppm	Days Exceeding State/ Federal Standard ^{a)}	Max 1-hour ppb	Days Exceeding State/ Federal Standard ^{b)}	Max 1-hour ppb	Max 24-hour ppm	
			State Standard		Health Advisory		Federal Standard									
1-hour > 0.09 ppm	8-hour > 0.070 ppm	1-hour ≥ 0.15 ppm	1-hour > 0.124 ppm	8-hour > 0.075 ppm	Max 1-hour ppm	Max 8-hour ppm										
LOS ANGELES COUNTY																
1	Central LA	87	0	0	0	0	0	0.06	0.043	0/0	1.88	0/0	115	0/0	5	0.001
2	Northwest Coastal LA County	91	0	0	0	0	0	0.07	0.052	0/0	1.29	0/0	58			
3	Southwest Coastal LA County	820	0	0	0	0	0	0.07	0.057	0/0	2.14	0/0	76	0/0	6	0.001
4	South Coastal LA County 1	72	0	0	0	0	0	0.06	0.042	0/0	1.86	0/0	111	0/0	10	0.003
4	South Coastal LA County 2	77														
6	West San Fernando Valley	74	0	0	0	0	0	0.06	0.048	0/0	2.00	0/0	56			
7	East San Fernando Valley	69	0	0	0	0	0	0.06	0.050	0/0	2.63	0/0	83			
8	West San Gabriel Valley	88	0	0	0	0	0	0.06	0.048	0/0	1.75	0/0	80			
9	East San Gabriel Valley 1	60	0	0	0	0	0	0.06	0.050	0/0	1.50	0/0	90			
9	East San Gabriel Valley 2	591	0	0	0	0	0	0.07	0.056	0/0	1.00	0/0	86			
10	Pomona/Walnut Valley	75	0	0	0	0	0	0.06	0.052	0/0	1.29	0/0	102			
11	South San Gabriel Valley	85	0	0	0	0	0	0.07	0.050	0/0	1.63	0/0	80			
12	South Central LA County	112	0	0	0	0	0	0.06	0.051	0/0	4.25	0/0	92			
13	Santa Clarita Valley	90	0	0	0	0	0	0.06	0.048	0/0	1.00	0/0	56			
ORANGE COUNTY																
16	North Orange County	3177	0	0	0	0	0	0.06	0.045	0/0	1.86	0/0	80			
17	Central Orange County	3176	0	0	0	0	0	0.06	0.048	0/0	1.57	0/0	64			
18	North Coastal Orange County	3195	0	0	0	0	0	0.06	0.052	0/0	1.86	0/0	61	0/0	6	0.002
19	Saddleback Valley	3812	0	0	0	0	0	0.08	0.060	0/0	1.00					
RIVERSIDE COUNTY																
22	Norco/Corona	4155														
23	Metropolitan Riverside County 1	4144	0	0	0	0	0	0.06	0.050	0/0	1.29	0/0	78	0/0	5	0.002
23	Metropolitan Riverside County 2	4146								0/0	1.29	0/0	80			
23	Mira Loma	4165	0	0	0	0	0	0.06	0.046	0/0	1.43	0/0	76			
24	Perris Valley	4149	0	0	0	0	0	0.06	0.056							
25	Lake Elsinore	4158	0	0	0	0	0	0.06	0.052	0/0	1.00	0/0	53			
29	Banning Airport	4164	0	0	0	0	0	0.07	0.061			0/0	52			
30	Coachella Valley 1**	4137	0	0	0	0	0	0.06	0.058	0/0	0.38	0/0	39			
30	Coachella Valley 2**	4157	0	0	0	0	0	0.06	0.052							
SANBERNARDINO COUNTY																
32	Northwest San Bernardino Valley	5175	0	0	0	0	0	0.07	0.057	0/0	1.00	0/0	96			
33	Southwest San Bernardino Valley	5817														
34	Central San Bernardino Valley 1	5197	0	0	0	0	0	0.07	0.055	0/0	1.13	0/0	106	0/0	3	0.001
34	Central San Bernardino Valley 2	5203	0	0	0	0	0	0.06	0.051	0/0	1.29	0/0	84			
35	East San Bernardino Valley	5204	0	0	0	0	0	0.06	0.055							
37	Central San Bernardino Mountains	5181	0	0	0	0	0	0.07	0.061							
38	East San Bernardino Mountains	5818														
District Maximum			0	0	0	0	0	0.08	0.061	0/0	4.25	0/0	115	0/0	10	0.003

** Salton Sea Air Basin.

a) U.S. EPA has established a new 1-hour NO₂ standard of 100 ppb, effective April 12, 2010.

b) U.S. EPA has established a new 1-hour SO₂ standard of 75 ppb, effective August 23, 2010.

Table 1 (continued)
November 2009
Exceedances of Standards and Maximum Concentrations

Source/ Receptor No.	Location	Station No.	PM10				PM2.5			Lead*		Sulfate	
			No. (%) Days Exceeding		Number Days Sampled	Max 24-hour Average µg/m3	Number Days Sampled	Number of Days Exceeding Federal Standard > 35 µg/m3	Max 24-hour Average µg/m3	Number Days Sampled	Monthly Average* µg/m3	Number Days Sampled	Max 24-hour Average µg/m3
			State Standard	Federal Standard									
LOS ANGELES COUNTY													
1	Central LA	87	0(0%)	0(0%)	5	44	30	1	44.2	5	0.02	5	3.1
2	Northwest Coastal LA County	91										5	3.2
3	Southwest Coastal LA County	820	0(0%)	0(0%)	4	29				5	0.01	5	4.3
4	South Coastal LA County 1	72	0(0%)	0(0%)	4	41	28	1	40.6	5	0.01	5	4.9
4	South Coastal LA County 2	77	0(0%)	0(0%)	4	49	30	1	36.5	4	0.01	4	5.2
6	West San Fernando Valley	74					10	0	19.1				
7	East San Fernando Valley	69	0(0%)	0(0%)	5	41	17	0	30.3				
8	West San Gabriel Valley	88					7	0	19.8			5	2.1
9	East San Gabriel Valley 1	60	1(25%)	0(0%)	4	65	10	0	22.5			5	2.9
9	East San Gabriel Valley 2	591											
10	Pomona/Walnut Valley	75											
11	South San Gabriel Valley	85					10	0	30.4	5	0.02	5	3.8
12	South Central LA County	112											
13	Santa Clarita Valley	90	0(0%)	0(0%)	5	22							
ORANGE COUNTY													
16	North Orange County	3177											
17	Central Orange County	3176	0(0%)	0(0%)	4	45	30	1	35.8				
18	North Coastal Orange County	3195											
19	Saddleback Valley	3812	0(0%)	0(0%)	5	32	10	0	19.7				
RIVERSIDE COUNTY													
22	Norco/Corona	4155	2(40%)	0(0%)	5	66							
23	Metropolitan Riverside County 1	4144	3(27%)	0(0%)	11	77	26	2	47.2	5	0.01	5	2.9
23	Metropolitan Riverside County 2	4146					10	0	33.7	5	0.01	5	2.5
23	Mira Loma	4165	5(100%)	0(0%)	5	108	29	5	49.2				
24	Perris Valley	4149	2(50%)	0(0%)	4	66							
25	Lake Elsinore	4158											
29	Banning Airport	4164	0(0%)	0(0%)	5	31							
30	Coachella Valley 1**	4137	0(0%)	0(0%)	4	19	10	0	7.3				
30	Coachella Valley 2**	4157	0(0%)	0(0%)	10	43	8	0	8.9				
SANBERNARDINO COUNTY													
32	Northwest San Bernardino Valley	5175								5	0.01	5	2.4
33	Southwest San Bernardino Valley	5817	2(33%)	0(0%)	6	54	9	0	32.7				
34	Central San Bernardino Valley 1	5197	1(20%)	0(0%)	5	59	9	1	39.9			4	1.9
34	Central San Bernardino Valley 2	5203	2(40%)	0(0%)	5	56	9	1	35.2	5	0.01	5	2.6
35	East San Bernardino Valley	5204	0(0%)	0(0%)	5	44							
37	Central San Bernardino Mountains	5181	0(0%)	0(0%)	5	24							
38	East San Bernardino Mountains	5818					5	0	21.5				
District Maximum			5	0		108		5	49.2		0.02		5.2

*Higher lead concentrations were recorded at special monitoring sites immediately adjacent to the lead sources.

**Salton Sea Air Basin.

Table 2
December 2009
Exceedances of Standards and Maximum Concentrations

Source/ Receptor No.	Location	Station No.	Ozone						Carbon Monoxide		Nitrogen Dioxide		Sulfur Dioxide			
			No. Days Exceeding						Days Exceeding State/ Federal Standard	Max 8-hour ppm	Days Exceeding State/ Federal Standard ^{a)}	Max 1-hour ppb	Days Exceeding State/ Federal Standard ^{b)}	Max 1-hour ppb	Max 24-hour ppm	
			State Standard		Health Advisory		Federal Standard									
1-hour > 0.09 ppm	8-hour > 0.070 ppm	1-hour ≥ 0.15 ppm	1-hour > 0.124 ppm	8-hour > 0.075 ppm	Max 1-hour ppm	Max 8-hour ppm										
LOS ANGELES COUNTY																
1	Central LA	87	0	0	0	0	0	0.04	0.040	0/0	1.75	0/0	58	0/0	4	0.001
2	Northwest Coastal LA County	91	0	0	0	0	0	0.05	0.041	0/0	1.00	0/0	70			
3	Southwest Coastal LA County	820	0	0	0	0	0	0.05	0.043	0/0	2.00	0/0	69	0/0	11	0.001
4	South Coastal LA County 1	72	0	0	0	0	0	0.04	0.037	0/0	2.00	0/0	58	0/0	7	0.002
4	South Coastal LA County 2	77														
6	West San Fernando Valley	74	0	0	0	0	0	0.04	0.036	0/0	2.57	0/0	50			
7	East San Fernando Valley	69	0	0	0	0	0	0.04	0.040	0/0	2.14	0/0	57			
8	West San Gabriel Valley	88	0	0	0	0	0	0.04	0.040	0/0	1.88	0/0	52			
9	East San Gabriel Valley 1	60	0	0	0	0	0	0.05	0.043	0/0	1.00	0/0	49			
9	East San Gabriel Valley 2	591	0	0	0	0	0	0.05	0.043	0/0	1.00	0/0	48			
10	Pomona/Walnut Valley	75	0	0	0	0	0	0.04	0.040	0/0	1.43	0/0	55			
11	South San Gabriel Valley	85	0	0	0	0	0	0.05	0.043	0/0	2.00	0/0	54			
12	South Central LA County	112	0	0	0	0	0	0.04	0.033	0/0	4.43	0/0	61			
13	Santa Clarita Valley	90	0	0	0	0	0	0.05	0.043	0/0	1.00	0/0	50			
ORANGE COUNTY																
16	North Orange County	3177	0	0	0	0	0	0.04	0.038	0/0	2.14	0/0	58			
17	Central Orange County	3176	0	0	0	0	0	0.04	0.038	0/0	2.71	0/0	68			
18	North Coastal Orange County	3195	0	0	0	0	0	0.05	0.040	0/0	2.14	0/0	65	0/0	4	0.002
19	Saddleback Valley	3812	0	0	0	0	0	0.05	0.043	0/0	0.88					
RIVERSIDE COUNTY																
22	Norco/Corona	4155														
23	Metropolitan Riverside County 1	4144	0	0	0	0	0	0.04	0.037	0/0	1.38	0/0	42	0/0	4	0.002
23	Metropolitan Riverside County 2	4146							0.000	0/0	1.29	0/0	52			
23	Mira Loma	4165	0	0	0	0	0	0.04	0.030	0/0	1.88	0/0	58			
24	Perris Valley	4149	0	0	0	0	0	0.05	0.040							
25	Lake Elsinore	4158	0	0	0	0	0	0.05	0.042	0/0	1.00	0/0	28			
29	Banning Airport	4164	0	0	0	0	0	0.05	0.048			0/0	43			
30	Coachella Valley 1**	4137	0	0	0	0	0	0.05	0.047	0/0	0.38	0/0	44			
30	Coachella Valley 2**	4157	0	0	0	0	0	0.05	0.046							
SAN BERNARDINO COUNTY																
32	Northwest San Bernardino Valley	5175	0	0	0	0	0	0.05	0.043	0/0	1.00	0/0	52			
33	Southwest San Bernardino Valley	5817														
34	Central San Bernardino Valley 1	5197	0	0	0	0	0	0.04	0.040	0/0	1.00	0/0	61	0/0	3	0.002
34	Central San Bernardino Valley 2	5203	0	0	0	0	0	0.05	0.042	0/0	1.50	0/0	48			
35	East San Bernardino Valley	5204	0	0	0	0	0	0.05	0.043							
37	Central San Bernardino Mountains	5181	0	0	0	0	0	0.05	0.048							
38	East San Bernardino Mountains	5818														
District Maximum			0	0	0	0	0	0.05	0.048	0/0	4.43	0/0	70	0/0	11	0.002

** Salton Sea Air Basin.

a) U.S. EPA has established a new 1-hour NO₂ standard of 100 ppb, effective April 12, 2010.

b) U.S. EPA has established a new 1-hour SO₂ standard of 75 ppb, effective August 23, 2010.

Table 2 (continued)
December 2009
Exceedances of Standards and Maximum Concentrations

Source/ Receptor No.	Location	Station No.	PM10				PM2.5			Lead*		Sulfate	
			No. (%) Days Exceeding		Number Days Sampled	Max 24-hour Average µg/m3	Number Days Sampled	Number of Days Exceeding Federal Standard > 35 µg/m3	Max 24-hour Average µg/m3	Number Days Sampled	Monthly Average* µg/m3	Number Days Sampled	Max 24-hour Average µg/m3
			State Standard	Federal Standard									
LOS ANGELES COUNTY													
1	Central LA	87	0(0%)	0(0%)	5	45	31	0	28.4	5	0.01	5	3.2
2	Northwest Coastal LA County	91										5	2.9
3	Southwest Coastal LA County	820	0(0%)	0(0%)	5	40				5	0.00	5	3.4
4	South Coastal LA County 1	72	0(0%)	0(0%)	5	45	31	3	41.0	3	0.01	3	3.2
4	South Coastal LA County 2	77	1(25%)	0(0%)	4	51	27	2	46.2	5	0.01	5	3.6
6	West San Fernando Valley	74					8	0	32.2				
7	East San Fernando Valley	69	0(0%)	0(0%)	5	47	30	2	38.2				
8	West San Gabriel Valley	88					10	0	23.8			5	2.6
9	East San Gabriel Valley 1	60	0(0%)	0(0%)	5	40	10	0	22.5			5	2.9
9	East San Gabriel Valley 2	591											
10	Pomona/Walnut Valley	75											
11	South San Gabriel Valley	85					10	0	35.4	4	0.01	4	1.8
12	South Central LA County	112					10	2	39.5				
13	Santa Clarita Valley	90	0(0%)	0(0%)	5	16							
ORANGE COUNTY													
16	North Orange County	3177											
17	Central Orange County	3176	0(0%)	0(0%)	5	43	22	0	33.1				
18	North Coastal Orange County	3195											
19	Saddleback Valley	3812	0(0%)	0(0%)	5	34	10	0	25.3				
RIVERSIDE COUNTY													
22	Norco/Corona	4155	0(0%)	0(0%)	5	50							
23	Metropolitan Riverside County 1	4144	0(0%)	0(0%)	10	50	31	0	34.0	5	0.01	5	3.0
23	Metropolitan Riverside County 2	4146					9	0	32.1	5	0.01	5	2.8
23	Mira Loma	4165	1(20%)	0(0%)	5	60	28	1	44.3				
24	Perris Valley	4149	1(20%)	0(0%)	5	56							
25	Lake Elsinore	4158											
29	Banning Airport	4164	0(0%)	0(0%)	5	19							
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30	Coachella Valley 2**	4157	0(0%)	0(0%)	10	35	10	0	27.5				
SANBERNARDINO COUNTY													
32	Northwest San Bernardino Valley	5175								3	0.00	3	1.0
33	Southwest San Bernardino Valley	5817	1(20%)	0(0%)	5	52	9	0	33.4				
34	Central San Bernardino Valley 1	5197	0(0%)	0(0%)	5	45	9	0	23.7			5	2.5
34	Central San Bernardino Valley 2	5203	0(0%)	0(0%)	5	43	9	0	25.8	5	0.01	5	2.0
35	East San Bernardino Valley	5204	0(0%)	0(0%)	5	32							
37	Central San Bernardino Mountains	5181	0(0%)	0(0%)	5	33							
38	East San Bernardino Mountains	5818					4	1	40.8				
District Maximum			1	0		60		3	46.2		0.01		3.6

*Higher lead concentrations were recorded at special monitoring sites immediately adjacent to the lead sources.

**Salton Sea Air Basin.