

BAY AREA AIR POLLUTION SUMMARY – 2013

MONITORING STATIONS	OZONE						CARBON MONOXIDE			NITROGEN DIOXIDE				SULFUR DIOXIDE				PM ₁₀				PM _{2.5}				
	Max 1-Hr	Cal 1-Hr Days	Max 8-Hr	Nat 8-Hr Days	Cal 8-Hr Days	3-Yr Avg	Max 1-Hr	Max 8-Hr	Nat/Cal Days	Max 1-Hr	Ann Avg	Nat 1-Hr Days	Cal 1-Hr Days	Max 1-Hr	Max 24-Hr	Nat 1-Hr Days	Cal 24-Hr Days	Ann Avg	Max 24-Hr	Nat 24-Hr Days	Cal 24-Hr Days	Max 24-Hr	Nat 24-Hr Days	3-yr Avg	Ann Avg	3-yr Avg
North Counties	(ppb)		(ppb)				(ppm)			(ppb)				(ppb)				(µg/m ³)				(µg/m ³)				(µg/m ³)
Napa*	89	0	76	1	2	59	3.1	1.7	0	43	9	0	0	-	-	-	-	18.9	40	0	0	35.8	1	*	11.7	*
San Rafael	81	0	69	0	0	53	2.2	1.1	0	50	12	0	0	-	-	-	-	15.7	54	0	1	44.9	2	24	10.8	9.6
Santa Rosa	74	0	64	0	0	47	1.8	1.2	0	40	9	0	0	-	-	-	-	-	-	-	-	28.1	0	22	8.5	8.4
Vallejo	82	0	68	0	0	57	2.8	2.3	0	49	10	0	0	8.1	2.5	0	0	-	-	-	-	42.6	6	28	9.9	9.6
Coast & Central Bay																										
Oakland	76	0	54	0	0	44	3.6	2.0	0	60	14	0	0	-	-	-	-	-	-	-	-	37.9	2	26	10.3	10.0
Oakland-West*	71	0	59	0	0	45	3.8	3.2	0	64	17	0	0	49.8	7.1	0	0	-	-	-	-	42.7	2	*	12.8	*
Richmond	-	-	-	-	-	-	-	-	-	-	-	-	-	13.1	3.1	0	0	-	-	-	-	-	-	-	-	-
San Francisco	69	0	59	0	0	46	1.8	1.4	0	73	14	0	0	-	-	-	-	18.3	44	0	0	48.5	2	25	10.1	9.3
San Pablo*	74	0	65	0	0	51	2.2	1.0	0	47	10	0	0	11.0	1.9	0	0	18.4	48	0	0	41.2	2	*	12.0	*
Eastern District																										
Bethel Island*	82	0	75	0	1	68	1.0	0.8	0	33	*	0	0	4.0	1.5	0	0	*	51	0	1	-	-	-	-	-
Concord	74	0	62	0	0	67	1.2	1.0	0	44	9	0	0	11.1	2.8	0	0	16.0	51	0	1	36.2	1	24	7.6	7.3
Crockett	-	-	-	-	-	-	-	-	-	-	-	-	-	64.6	8.1	0	0	-	-	-	-	-	-	-	-	-
Fairfield	87	0	75	0	1	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Livermore	96	3	77	1	2	71	-	-	-	51	12	0	0	-	-	-	-	-	-	-	-	40.1	4	27	8.4	7.6
Martinez	-	-	-	-	-	-	-	-	-	-	-	-	-	16.3	4.6	0	0	-	-	-	-	-	-	-	-	-
Patterson Pass	-	-	-	-	-	-	-	-	-	25	4	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-
San Ramon*	84	0	67	0	0	*	-	-	-	42	8	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-
South Central Bay																										
Hayward	85	0	75	0	1	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redwood City	83	0	75	0	1	53	3.6	1.6	0	54	13	0	0	-	-	-	-	-	-	-	-	39.0	3	25	10.7	9.3
Santa Clara Valley																										
Cupertino	91	0	77	1	1	62	3.1	1.3	0	42	9	0	0	13.9	2.9	0	0	14.6	34	0	0	-	-	-	-	-
Gilroy	80	0	68	0	0	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27.5	0	19	8.6	8.0
Los Gatos	87	0	75	0	1	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
San Jose	93	0	79	1	1	58	3.1	2.5	0	59	15	0	0	2.5	1.4	0	0	22.3	58	0	5	57.7	6	32	12.4	10.5
San Martin	94	0	76	1	1	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Bay Area	3		3	3			0			0	0			0	0			0	6			13				
Days over Standard																										

*See NOTES on second page.

Dash (-) indicates pollutant is not monitored at the site.

2013 NOTES

The annual Bay Area Air Pollution Summary summarizes pollutant concentrations for comparison to the national and California air pollution standards.

***Station Information (see asterisks on front page)**

PM_{2.5} monitoring using the federally accepted method began at Napa, Oakland West, and San Pablo in December 2012. Therefore, 3-year average PM_{2.5} statistics are not available.

Air monitoring at Bethel Island was stopped during May-July, 2013 so that an upgrade of the instrument trailer could be completed. Therefore, annual statistics for Nitrogen Dioxide and PM₁₀ are not available.

Ozone monitoring at San Ramon began in January 2012 for an air monitoring study. Therefore, 3-year average ozone statistics are not available.

Explanation of Terms	
1	1. The first term is defined as the product of the first and second terms of the sequence.
2	2. The second term is defined as the product of the second and third terms of the sequence.
3	3. The third term is defined as the product of the third and fourth terms of the sequence.
4	4. The fourth term is defined as the product of the fourth and fifth terms of the sequence.
5	5. The fifth term is defined as the product of the fifth and sixth terms of the sequence.
6	6. The sixth term is defined as the product of the sixth and seventh terms of the sequence.
7	7. The seventh term is defined as the product of the seventh and eighth terms of the sequence.
8	8. The eighth term is defined as the product of the eighth and ninth terms of the sequence.
9	9. The ninth term is defined as the product of the ninth and tenth terms of the sequence.
10	10. The tenth term is defined as the product of the tenth and eleventh terms of the sequence.
11	11. The eleventh term is defined as the product of the eleventh and twelfth terms of the sequence.
12	12. The twelfth term is defined as the product of the twelfth and thirteenth terms of the sequence.
13	13. The thirteenth term is defined as the product of the thirteenth and fourteenth terms of the sequence.
14	14. The fourteenth term is defined as the product of the fourteenth and fifteenth terms of the sequence.
15	15. The fifteenth term is defined as the product of the fifteenth and sixteenth terms of the sequence.
16	16. The sixteenth term is defined as the product of the sixteenth and seventeenth terms of the sequence.
17	17. The seventeenth term is defined as the product of the seventeenth and eighteenth terms of the sequence.
18	18. The eighteenth term is defined as the product of the eighteenth and nineteenth terms of the sequence.
19	19. The nineteenth term is defined as the product of the nineteenth and twentieth terms of the sequence.
20	20. The twentieth term is defined as the product of the twentieth and twenty-first terms of the sequence.
21	21. The twenty-first term is defined as the product of the twenty-first and twenty-second terms of the sequence.
22	22. The twenty-second term is defined as the product of the twenty-second and twenty-third terms of the sequence.
23	23. The twenty-third term is defined as the product of the twenty-third and twenty-fourth terms of the sequence.
24	24. The twenty-fourth term is defined as the product of the twenty-fourth and twenty-fifth terms of the sequence.
25	25. The twenty-fifth term is defined as the product of the twenty-fifth and twenty-sixth terms of the sequence.
26	26. The twenty-sixth term is defined as the product of the twenty-sixth and twenty-seventh terms of the sequence.
27	27. The twenty-seventh term is defined as the product of the twenty-seventh and twenty-eighth terms of the sequence.
28	28. The twenty-eighth term is defined as the product of the twenty-eighth and twenty-ninth terms of the sequence.
29	29. The twenty-ninth term is defined as the product of the twenty-ninth and thirtieth terms of the sequence.
30	30. The thirtieth term is defined as the product of the thirtieth and thirty-first terms of the sequence.
31	31. The thirty-first term is defined as the product of the thirty-first and thirty-second terms of the sequence.
32	32. The thirty-second term is defined as the product of the thirty-second and thirty-third terms of the sequence.
33	33. The thirty-third term is defined as the product of the thirty-third and thirty-fourth terms of the sequence.
34	34. The thirty-fourth term is defined as the product of the thirty-fourth and thirty-fifth terms of the sequence.
35	35. The thirty-fifth term is defined as the product of the thirty-fifth and thirty-sixth terms of the sequence.
36	36. The thirty-sixth term is defined as the product of the thirty-sixth and thirty-seventh terms of the sequence.
37	37. The thirty-seventh term is defined as the product of the thirty-seventh and thirty-eighth terms of the sequence.
38	38. The thirty-eighth term is defined as the product of the thirty-eighth and thirty-ninth terms of the sequence.
39	39. The thirty-ninth term is defined as the product of the thirty-ninth and fortieth terms of the sequence.
40	40. The fortieth term is defined as the product of the fortieth and forty-first terms of the sequence.
41	41. The forty-first term is defined as the product of the forty-first and forty-second terms of the sequence.
42	42. The forty-second term is defined as the product of the forty-second and forty-third terms of the sequence.
43	43. The forty-third term is defined as the product of the forty-third and forty-fourth terms of the sequence.
44	44. The forty-fourth term is defined as the product of the forty-fourth and forty-fifth terms of the sequence.
45	45. The forty-fifth term is defined as the product of the forty-fifth and forty-sixth terms of the sequence.
46	46. The forty-sixth term is defined as the product of the forty-sixth and forty-seventh terms of the sequence.
47	47. The forty-seventh term is defined as the product of the forty-seventh and forty-eighth terms of the sequence.
48	48. The forty-eighth term is defined as the product of the forty-eighth and forty-ninth terms of the sequence.
49	49. The forty-ninth term is defined as the product of the forty-ninth and fiftieth terms of the sequence.
50	50. The fiftieth term is defined as the product of the fiftieth and fifty-first terms of the sequence.
51	51. The fifty-first term is defined as the product of the fifty-first and fifty-second terms of the sequence.
52	52. The fifty-second term is defined as the product of the fifty-second and fifty-third terms of the sequence.
53	53. The fifty-third term is defined as the product of the fifty-third and fifty-fourth terms of the sequence.
54	54. The fifty-fourth term is defined as the product of the fifty-fourth and fifty-fifth terms of the sequence.
55	55. The fifty-fifth term is defined as the product of the fifty-fifth and fifty-sixth terms of the sequence.
56	56. The fifty-sixth term is defined as the product of the fifty-sixth and fifty-seventh terms of the sequence.
57	57. The fifty-seventh term is defined as the product of the fifty-seventh and fifty-eighth terms of the sequence.
58	58. The fifty-eighth term is defined as the product of the fifty-eighth and fifty-ninth terms of the sequence.
59	59. The fifty-ninth term is defined as the product of the fifty-ninth and sixtieth terms of the sequence.
60	60. The sixtieth term is defined as the product of the sixtieth and sixty-first terms of the sequence.
61	61. The sixty-first term is defined as the product of the sixty-first and sixty-second terms of the sequence.
62	62. The sixty-second term is defined as the product of the sixty-second and sixty-third terms of the sequence.
63	63. The sixty-third term is defined as the product of the sixty-third and sixty-fourth terms of the sequence.
64	64. The sixty-fourth term is defined as the product of the sixty-fourth and sixty-fifth terms of the sequence.
65	65. The sixty-fifth term is defined as the product of the sixty-fifth and sixty-sixth terms of the sequence.
66	66. The sixty-sixth term is defined as the product of the sixty-sixth and sixty-seventh terms of the sequence.
67	67. The sixty-seventh term is defined as the product of the sixty-seventh and sixty-eighth terms of the sequence.
68	68. The sixty-eighth term is defined as the product of the sixty-eighth and sixty-ninth terms of the sequence.
69	69. The sixty-ninth term is defined as the product of the sixty-ninth and seventieth terms of the sequence.
70	70. The seventieth term is defined as the product of the seventieth and seventy-first terms of the sequence.
71	71. The seventy-first term is defined as the product of the seventy-first and seventy-second terms of the sequence.
72	72. The seventy-second term is defined as the product of the seventy-second and seventy-third terms of the sequence.
73	73. The seventy-third term is defined as the product of the seventy-third and seventy-fourth terms of the sequence.
74	74. The seventy-fourth term is defined as the product of the seventy-fourth and seventy-fifth terms of the sequence.
75	75. The seventy-fifth term is defined as the product of the seventy-fifth and seventy-sixth terms of the sequence.
76	76. The seventy-sixth term is defined as the product of the seventy-sixth and seventy-seventh terms of the sequence.
77	77. The seventy-seventh term is defined as the product of the seventy-seventh and seventy-eighth terms of the sequence.
78	78. The seventy-eighth term is defined as the product of the seventy-eighth and seventy-ninth terms of the sequence.
79	79. The seventy-ninth term is defined as the product of the seventy-ninth and eightieth terms of the sequence.
80	80. The eightieth term is defined as the product of the eightieth and eighty-first terms of the sequence.
81	81. The eighty-first term is defined as the product of the eighty-first and eighty-second terms of the sequence.
82	82. The eighty-second term is defined as the product of the eighty-second and eighty-third terms of the sequence.
83	83. The eighty-third term is defined as the product of the eighty-third and eighty-fourth terms of the sequence.
84	84. The eighty-fourth term is defined as the product of the eighty-fourth and eighty-fifth terms of the sequence.
85	85. The eighty-fifth term is defined as the product of the eighty-fifth and eighty-sixth terms of the sequence.
86	86. The eighty-sixth term is defined as the product of the eighty-sixth and eighty-seventh terms of the sequence.
87	87. The eighty-seventh term is defined as the product of the eighty-seventh and eighty-eighth terms of the sequence.
88	88. The eighty-eighth term is defined as the product of the eighty-eighth and eighty-ninth terms of the sequence.
89	89. The eighty-ninth term is defined as the product of the eighty-ninth and ninetieth terms of the sequence.
90	90. The ninetieth term is defined as the product of the ninetieth and ninety-first terms of the sequence.

State and national excesses occur when pollutant concentrations surpass the indicated standards. For comparison, values in ppb must be converted to ppm and rounded to the same number of decimal places as the original standard.

MAX HR / MAX 8-HR / MAX 24-HR Particulate matter ten microns or smaller in size.

The highest average pollutant concentration over a one-hour period, an eight-hour period (on any given day), or a 24-hour period (from midnight to midnight).

PM₁₀ is sampled every third day at San Jose and every sixth day at all other sites.

PM_{2.5} Particulate matter 2.5 microns or smaller in size.

ANN AVG $\text{PM}_{2.5}$ is a sub-category of PM_{10} .

The yearly average (arithmetic mean) of the readings taken at a given monitoring station.

NAT DAYS

The number of days during the year for which the monitoring station recorded pollutant concentrations in excess of the national standard.

CAL DAYS which generally results in slightly lower readings.

The number of days during the year for which the station recorded pollutant concentrations in excess of the California standard.

TOTAL BAY AREA DAYS OVER STANDARD average greater than 35 $\mu\text{g}/\text{m}^3$ at any monitoring station

is not a sum of excesses at individual stations, but rather a sum of the number of days for which excesses occurred at any one or more stations. means that the region does not meet the standard and may be designated non-attainment by the EPA. The method for calculating the 98th percentile was changed

3-YR AVG (Nat. 8-hr ozone standard) by the EPA effective March 18, 2013.

<p>The 3-year average of the fourth highest 8-hour average ozone concentration for each monitoring station. A 3-year average greater than 75 ppb at any monitoring station means that the region does not meet the standard and may be designated non-attainment by the EPA.</p>	<p>3-YR AVG (PM_{2.5} annual standard) The 3-year average of the quarterly averages of PM_{2.5}. A 3-year average greater than 12.0 µg/m³ at any monitoring station means that the region does not meet the standard and may be designated non-attainment by the EPA.</p>
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HEALTH-BASED AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Std	National Std
Ozone	1 Hour	0.09 ppm	–
	8 Hour	0.070 ppm	0.075 ppm
Carbon Monoxide	1 Hour	20 ppm	35 ppm
	8 Hour	9.0 ppm	9 ppm
Nitrogen Dioxide	1 Hour	0.18 ppm	0.100 ppm
	Annual	0.030 ppm	0.053 ppm
Sulfur Dioxide	1 Hour	–	0.075 ppm
	24 Hour	0.04 ppm	–
Particulates ≤ 10 microns	24 Hour	50 µg/m ³	150 µg/m ³
	Annual	20 µg/m ³	–
Particulates ≤ 2.5 microns	24 Hour	–	35 µg/m ³
	Annual	12 µg/m ³	12.0 µg/m ³

Concentrations

ppm	ppb	µg/m3
parts per million	parts per billion	micrograms per cubic meter

TEN-YEAR BAY AREA AIR QUALITY SUMMARY

DAYS OVER CURRENT STANDARDS					

[illegible]

[illegible]

2014 NOTES

***Station Information (see asterisks on front page)**

Air monitoring at Sebastopol began in January 2014. Therefore, 3-year average statistics for ozone and PM_{2.5} are not available. In addition, the Sebastopol site replaced the Santa Rosa site which closed on December 13, 2013. Therefore, statistics for Santa Rosa are not provided in the 2014 summary.

Near-road air monitoring at San Jose Freeway began in September 2014. Therefore, annual average NO₂ and 3-year average PM_{2.5} statistics are not available.

Explanation of Terms	
1	1
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82	82
83	83
84	84
85	85
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89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

MAX HR / MAX 8-HR / MAX 24-HR

ANN AVG

NAT DAYS

CAL DAYS

TOTAL BAY AREA DAYS OVER STANDARD

3-YR AVG (Nat. 8-hr ozone standard)

PM₁₀

PM_{2.5}

Particulate matter 2.5 microns or smaller in size.
PM_{2.5} is a sub-category of PM₁₀.

PM₁₀ ANN AVG and MAX 24-HR

This table shows PM₁₀ data reported at local temperature and pressure conditions, according to the California standards. National PM₁₀ data are converted to standard temperature and pressure conditions, which generally results in slightly lower readings.

3-YR AVG (PM_{2.5} 24-hour standard)

The 3-year average of the annual 98th percentiles of the individual 24-hour concentrations of PM_{2.5}. A 3-year average greater than 35 µg/m³ at any monitoring station means that the region does not meet the standard and may be designated non-attainment by the EPA.

3-YR AVG (PM_{2.5} annual standard)

Pollutant	Averaging Time	California Std	National Std
Ozone	1 Hour	0.09 ppm	–
	8 Hour	0.070 ppm	0.075 ppm
Carbon Monoxide	1 Hour	20 ppm	35 ppm
	8 Hour	9.0 ppm	9 ppm
Nitrogen Dioxide	1 Hour	0.18 ppm	0.100 ppm
	Annual	0.030 ppm	0.053 ppm
Sulfur Dioxide	1 Hour	–	0.075 ppm
	24 Hour	0.04 ppm	–
Particulates ≤ 10 microns	24 Hour	50 µg/m ³	150 µg/m ³
	Annual	20 µg/m ³	–
Particulates ≤ 2.5 microns	24 Hour	–	35 µg/m ³
	Annual	12 µg/m ³	12.0 µg/m ³

[illegible]

BAY AREA AIR POLLUTION SUMMARY – 2015

MONITORING STATIONS	OZONE						CARBON MONOXIDE			NITROGEN DIOXIDE				SULFUR DIOXIDE				PM ₁₀				PM _{2.5}						
	Max 1-Hr	Cal 1-Hr Days	Max 8-Hr	Nat 8-Hr	Cal 8-Hr	3-Yr Avg	Max 1-Hr	Max 8-Hr	Nat/Cal Days	Max 1-Hr	Ann 8-Avg	Nat 1-Hr	Cal 1-Hr Days	Max 1-Hr	Max 24-Hr	Nat 1-Hr	Cal 24-Hr Days	Ann Avg	Max 24-Hr	Nat 24-Hr	Cal 24-Hr Days	Max 24-Hr	Nat 24-Hr	3-yr Avg	Ann Avg	3-yr Avg		
North Counties	(ppb)		(ppb)				(ppm)			(ppb)				(ppb)				(µg/m ³)				(µg/m ³)			(µg/m ³)			
Napa	79	0	69	0	0	61	3.3	1.6	0	43	8	0	0	-	-	-	-	18.6	50	0	0	38.2	1	27	10.6	11.4		
San Rafael	81	0	70	0	0	61	1.4	0.9	0	44	11	0	0	-	-	-	-	16.1	42	0	0	36.3	2	26	8.6	10.0		
Sebastopol*	68	0	62	0	0	*	1.3	0.9	0	37	5	0	0	-	-	-	-	-	-	-	-	29.9	0	*	6.8	*		
Vallejo	85	0	70	0	1	61	2.4	1.9	0	44	8	0	0	5.0	1.7	0	0	-	-	-	-	41.4	3	29	9.6	9.8		
Coast & Central Bay																												
Laney College Freeway*	-	-	-	-	-	-	2.7	1.6	0	106	18	1	0	-	-	-	-	-	-	-	-	37.2	1	*	10.0	*		
Oakland	94	0	74	2	2	52	2.4	1.4	0	48	11	0	0	-	-	-	-	-	-	-	-	44.7	1	25	8.3	9.1		
Oakland-West	91	0	64	0	0	49	4.7	2.6	0	57	14	0	0	21.6	3.9	0	0	-	-	-	-	38.7	3	29	10.2	10.8		
Richmond	-	-	-	-	-	-	-	-	-	-	-	-	-	12.0	2.8	0	0	-	-	-	-	-	-	-	-	-		
San Francisco	85	0	67	0	0	48	1.8	1.3	0	71	12	0	0	-	-	-	-	19.2	47	0	0	35.4	0	25	7.6	8.4		
San Pablo	84	0	62	0	0	55	2.0	1.1	0	46	9	0	0	10.7	2.4	0	0	18.6	43	0	0	33.2	0	27	8.9	10.5		
Eastern District																												
Bethel Island	80	0	72	1	2	66	1.1	0.9	0	29	5	0	0	8.8	1.9	0	0	13.6	33	0	0	-	-	-	-	-		
Concord	88	0	73	2	4	64	1.4	1.3	0	33	7	0	0	6.7	2.0	0	0	13.1	24	0	0	31.0	0	23	8.8	7.7		
Crockett	-	-	-	-	-	-	-	-	-	-	-	-	-	20.5	3.7	0	0	-	-	-	-	-	-	-	-	-		
Fairfield	84	0	72	1	1	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Livermore	105	1	81	7	7	73	-	-	-	50	10	0	0	-	-	-	-	-	-	-	-	31.1	0	28	8.8	8.2		
Martinez	-	-	-	-	-	-	-	-	-	-	-	-	-	14.7	4.8	0	0	-	-	-	-	-	-	-	-	-		
Patterson Pass*	99	4	82	5	6	*	-	-	-	19	3	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-		
San Ramon	106	1	84	6	6	70	-	-	-	37	6	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-		
South Central Bay																												
Hayward	103	2	84	2	2	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Redwood City	86	0	71	1	1	59	3.4	1.6	0	48	11	0	0	-	-	-	-	-	-	-	-	34.6	0	24	5.7	7.8		
Santa Clara Valley																												
Gilroy	95	1	78	3	3	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42.2	2	18	7.2	7.5		
Los Gatos	100	1	84	4	5	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
San Jose	94	0	81	2	2	63	2.4	1.8	0	49	13	0	0	3.1	1.1	0	0	22.0	58	0	1	49.4	2	30	10.0	10.2		
San Jose Freeway*	-	-	-	-	-	-	2.7	2.0	0	61	18	0	0	-	-	-	-	-	-	-	-	46.9	1	*	8.4	*		
San Martin	98	1	83	4	4	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Total Bay Area	7		12	12					0		1	0			0	0			0	1		9						
Days over Standard	*See NOTES on second page. Dash (-) indicates pollutant is not monitored at the site.																											

*See NOTES on second page.

Dash (-) indicates pollutant is not monitored at the site.

2015 NOTES

The annual Bay Area Air Pollution Summary summarizes pollutant concentrations for comparison to the national and California air pollution standards.

***Station Information (see asterisks on front page)**

Air monitoring at Sebastopol began in January 2014. Therefore, 3-year average statistics for ozone and PM_{2.5} are not available. The Sebastopol site replaced the Santa Rosa site which closed on December 13, 2013.

Ozone monitoring using the federally accepted method began at Patterson Pass on April 1, 2015. Therefore, 3-year average ozone statistics are not available.

Near-road air monitoring at Laney College Freeway began in February 2014. Therefore, 3-year average PM_{2.5} statistics are not available.

Near-road air monitoring at San Jose Freeway began in September 2014. Therefore, 3-year average PM_{2.5} statistics are not available.

Explanation of Terms

State and national exceedances occur when pollutant concentrations exceed the indicated standards. For comparison, values in ppb must be converted to ppm and rounded to the same number of decimal places as the original standard.

MAX HR / MAX 8-HR / MAX 24-HR

The highest average pollutant concentration over a one-hour period, an eight-hour period (on any given day), or a 24-hour period (from midnight to midnight).

ANN AVG

The yearly average (arithmetic mean) of the readings taken at a given monitoring station.

NAT DAYS

The number of days during the year for which the monitoring station recorded pollutant concentrations exceeding the national standard.

CAL DAYS

The number of days during the year for which the station recorded pollutant concentrations exceeding the California standard.

TOTAL BAY AREA DAYS OVER STANDARD

is not a sum of exceedances at individual stations, but rather the number of days where at least one site recorded an exceedance.

3-YR AVG (Nat. 8-hr ozone standard)

The 3-year average of the fourth highest 8-hour average ozone concentrations for each monitoring station. A 3-year average greater than 70 ppb at any monitoring station means that the region does not meet the standard and may be designated non-attainment by the EPA.

PM₁₀

Particulate matter ten microns or smaller in size. PM₁₀ is sampled every third day at San Jose and every sixth or twelfth day at all other sites.

PM_{2.5}

Particulate matter 2.5 microns or smaller in size. PM_{2.5} is a sub-category of PM₁₀.

PM₁₀ ANN AVG and MAX 24-HR

This table shows PM₁₀ data reported at local temperature and pressure conditions, according to the California standards. National PM₁₀ data are converted to standard temperature and pressure conditions, which generally results in slightly lower readings.

3-YR AVG (PM_{2.5} 24-hour standard)

The 3-year average of the annual 98th percentiles of the individual 24-hour concentrations of PM_{2.5}. A 3-year average greater than 35 µg/m³ at any monitoring station means that the region does not meet the standard and may be designated non-attainment by the EPA.

3-YR AVG (PM_{2.5} annual standard)

The 3-year average of the quarterly averages of PM_{2.5}. A 3-year average greater than 12.0 µg/m³ at any monitoring station means that the region does not meet the standard and may be designated non-attainment by the EPA.

HEALTH-BASED AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Std	National Std
Ozone*	1 Hour	0.09 ppm	–
	8 Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	1 Hour	20 ppm	35 ppm
	8 Hour	9.0 ppm	9 ppm
Nitrogen Dioxide	1 Hour	0.18 ppm	0.100 ppm
	Annual	0.030 ppm	0.053 ppm
Sulfur Dioxide	1 Hour	–	0.075 ppm
	24 Hour	0.04 ppm	–
Particulates ≤ 10 microns	24 Hour	50 µg/m ³	150 µg/m ³
	Annual	20 µg/m ³	–
Particulates ≤ 2.5 microns	24 Hour	–	35 µg/m ³
	Annual	12 µg/m ³	12.0 µg/m ³

* In October 2015, the U.S. EPA implemented a new 8-hour ozone standard of 70 ppb. Exceedances are based on this standard (note that national and state numbers can differ due to data-handling conventions).

Concentrations	ppm parts per million	ppb parts per billion	µg/m ³ micrograms per cubic meter
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TEN-YEAR BAY AREA AIR QUALITY SUMMARY

DAYS OVER CURRENT STANDARDS

YEAR	OZONE			CARBON MONOXIDE		NITROGEN DIOXIDE		SULFUR DIOXIDE		PM ₁₀		PM _{2.5}
	8-Hr Nat	1-Hr Cal	8-Hr Cal	1-Hr Nat	8-Hr Cal	1-Hr Nat	8-Hr Cal	1-Hr Nat	24-Hr Cal	24-Hr Nat	24-Hr Cal	Nat
2006	20	18	22	0	0	0	0	1	0	0	15	10
2007	8	4	9	0	0	0	0	0	0	0	4	14
2008	19	9	20	0	0	0	0	2	0	0	5	12
2009	11	11	13	0	0	0	0	0	0	0	1	11
2010	11	8	11	0	0	0	0	0	0	0	2	6
2011	9	5	10	0	0	0	0	0	0	0	3	8
2012	8	3	8	0	0	0	0	1	0	0	2	3
2013	3	3	3	0	0	0	0	0	0	0	6	13
2014	9	3	10	0	0	0	0	0	0	0	2	3
2015	12	7	12	0	0	0	0	1	0	0	1	9

BAY AREA AIR POLLUTION SUMMARY – 2016

MONITORING STATIONS	OZONE						CARBON MONOXIDE			NITROGEN DIOXIDE				SULFUR DIOXIDE				PM ₁₀				PM _{2.5}				
	Max 1-Hr	Cal 1-Hr Days	Max 8-Hr	Nat 8-Hr Days	Cal 8-Hr Days	3-Yr Avg	Max 1-Hr	Max 8-Hr	Nat/Cal Days	Max 1-Hr	Ann Avg	Nat 1-Hr Days	Cal 1-Hr Days	Max 1-Hr	Max 24-Hr	Nat 1-Hr Days	Cal 24-Hr Days	Ann Avg	Max 24-Hr	Nat 24-Hr Days	Cal 24-Hr Days	Max 24-Hr	Nat 24-Hr Days	3-yr Avg	Ann Avg	3-yr Avg
North Counties	(ppb)		(ppb)				(ppm)			(ppb)				(ppb)				(µg/m ³)				(µg/m ³)				
Napa	80	0	67	0	0	62	2.2	1.5	0	39	7	0	0	-	-	-	-	16.6	33	0	0	24.3	0	25	8.5	10.4
San Rafael	88	0	67	0	0	61	1.4	1.0	0	46	9	0	0	-	-	-	-	13.8	27	0	0	15.6	0	22	6.4	8.6
Sebastopol	73	0	64	0	0	52	1.6	1.0	0	32	4	0	0	-	-	-	-	-	-	-	-	18.7	0	18	4.6	6.4
Vallejo	97	1	72	1	1	63	2.1	1.8	0	43	7	0	0	10.1	1.9	0	0	-	-	-	-	23.0	0	25	7.4	9.0
Coast & Central Bay																										
Berkeley Aquatic Park*	52	0	41	0	0	*	1.6	1.4	0	50	*	0	0	-	-	-	-	-	-	-	-	17.3	0	*	*	*
Laney College Freeway	-	-	-	-	-	-	1.6	1.1	0	54	17	0	0	-	-	-	-	-	-	-	-	20.2	0	22	8.7	9.1
Oakland	82	0	57	0	0	55	2.6	1.0	0	59	10	0	0	-	-	-	-	-	-	-	-	15.5	0	21	6.1	7.6
Oakland-West	65	0	52	0	0	49	2.5	2.2	0	49	12	0	0	26.4	3.1	0	0	-	-	-	-	23.9	0	25	8.7	9.5
Richmond	-	-	-	-	-	-	-	-	-	-	-	-	-	29.9	4.4	0	0	-	-	-	-	-	-	-	-	-
San Francisco	70	0	57	0	0	49	1.7	1.1	0	58	11	0	0	-	-	-	-	17.0	29	0	0	19.6	0	22	7.5	7.6
San Pablo	94	0	61	0	0	54	1.7	1.0	0	39	8	0	0	12.2	2.9	0	0	15.2	34	0	0	19.5	0	23	8.1	9.2
Eastern District																										
Bethel Island	89	0	80	2	2	68	2.0	1.0	0	32	5	0	0	4.7	3.0	0	0	14.4	26	0	0	-	-	-	-	-
Concord	95	1	74	2	2	67	1.2	1.0	0	34	6	0	0	11.1	2.4	0	0	11.5	19	0	0	20.7	0	22	5.9	7.1
Crockett	-	-	-	-	-	-	-	-	-	-	-	-	-	14.1	4.8	0	0	-	-	-	-	-	-	-	-	-
Fairfield	81	0	67	0	0	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Livermore	102	2	85	4	6	74	-	-	-	41	9	0	0	-	-	-	-	-	-	-	-	22.3	0	23	7.5	7.9
Martinez	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	4.7	0	0	-	-	-	-	-	-	-	-	-
Patterson Pass*	109	5	87	15	15	*	-	-	-	24	3	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-
San Ramon	101	1	83	1	2	69	-	-	-	27	5	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-
South Central Bay																										
Hayward	83	0	64	0	0	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redwood City	75	0	60	0	0	59	2.2	1.1	0	46	9	0	0	-	-	-	-	-	-	-	-	19.5	0	20	8.3	7.0
Santa Clara Valley																										
Gilroy	79	0	70	0	0	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	0	16	5.6	6.5
Los Gatos	91	0	65	0	0	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
San Jose	87	0	66	0	0	63	2.0	1.4	0	51	11	0	0	1.8	0.8	0	0	18.5	41	0	0	22.6	0	24	8.4	8.9
San Jose Freeway*	-	-	-	-	-	-	2.5	1.6	0	52	16	0	0	-	-	-	-	-	-	-	-	26.5	0	*	9.1	*
San Martin	96	1	71	1	1	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Bay Area	6		15	15					0		0	0				0	0			0	0					
Days over Standard																										

*See NOTES on second page.

Dash (-) indicates pollutant is not monitored at the site.

BAY AREA AIR POLLUTION SUMMARY – 2017

MONITORING STATIONS	OZONE						CARBON MONOXIDE			NITROGEN DIOXIDE				SULFUR DIOXIDE				PM ₁₀				PM _{2.5}				
	Max 1-Hr	Cal 1-Hr Days	Max 8-Hr	Nat 8-Hr Days	Cal 8-Hr Days	3-Yr Avg	Max 1-Hr	Max 8-Hr	Nat/Cal Days	Max 1-Hr	Ann Avg	Nat 1-Hr Days	Cal 1-Hr Days	Max 1-Hr	Max 24-Hr	Nat 1-Hr Days	Cal 24-Hr Days	Ann Avg	Max 24-Hr	Nat 24-Hr Days	Cal 24-Hr Days	Max 24-Hr	Nat 24-Hr Days	3-yr Avg	Ann Avg	3-yr Avg
North Counties	(ppb)		(ppb)				(ppm)			(ppb)				(ppb)				(µg/m ³)				(µg/m ³)				(µg/m ³)
Napa	98	1	84	2	2	63	5.6	4.7	0	53	7	0	0	-	-	-	-	-	-	-	-	199.1	13	35	13.7	10.9
San Rafael	88	0	63	0	0	58	2.6	1.6	0	53	10	0	0	-	-	-	-	17.7	94	0	2	74.7	8	27	9.7	8.2
Sebastopol	87	0	71	1	1	53	2.1	1.6	0	35	5	0	0	-	-	-	-	-	-	-	-	81.8	4	21	8.1	6.5
Vallejo	105	1	88	2	2	61	3.1	2.1	0	49	8	0	0	5.9	2.1	0	0	-	-	-	-	101.9	9	30	11.6	9.5
Coast & Central Bay																										
Berkeley Aquatic Park*	58	0	49	0	0	*	2.2	1.7	0	123	16	1	0	-	-	-	-	-	-	-	-	52.0	7	*	9.1	*
Laney College Freeway	-	-	-	-	-	-	1.9	1.3	0	68	17	0	0	-	-	-	-	-	-	-	-	70.8	8	27	11.6	10.1
Oakland	136	2	100	2	2	54	3.2	2.2	0	65	10	0	0	-	-	-	-	-	-	-	-	70.2	7	24	9.4	7.9
Oakland-West	87	0	68	0	0	48	6.0	2.1	0	52	13	0	0	16.9	2.2	0	0	-	-	-	-	56.0	7	28	12.8	10.6
Richmond	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	2.9	0	0	-	-	-	-	-	-	-	-	-
San Francisco	87	0	54	0	0	47	2.5	1.4	0	73	11	0	0	-	-	-	-	22.0	77	0	2	49.9	7	27	9.7	8.3
San Pablo	104	3	80	2	2	52	2.5	1.9	0	48	8	0	0	8.3	2.7	0	0	20.3	95	0	4	71.2	9	30	10.8	9.3
Eastern District																										
Bethel Island	90	0	71	1	2	68	1.6	1.0	0	34	5	0	0	5.3	3.5	0	0	16.3	52	0	1	-	-	-	-	-
Concord	82	0	70	0	0	66	1.7	1.3	0	41	7	0	0	13.2	2.6	0	0	13.3	41	0	0	89.4	6	26	12.0	8.9
Crockett	-	-	-	-	-	-	-	-	-	-	-	-	-	23.5	5.6	0	0	-	-	-	-	-	-	-	-	-
Fairfield	80	0	62	0	0	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Livermore	109	5	86	6	6	75	-	-	-	45	9	0	0	-	-	-	-	-	-	-	-	41.5	2	25	8.5	8.2
Martinez	-	-	-	-	-	-	-	-	-	-	-	-	-	15.9	3.1	0	0	-	-	-	-	-	-	-	-	-
San Ramon	92	0	75	2	2	68	-	-	-	31	5	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-
South Central Bay																										
Hayward	139	2	110	3	4	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redwood City	115	2	86	2	2	56	2.8	1.4	0	67	11	0	0	-	-	-	-	-	-	-	-	60.8	6	23	9.1	7.7
Santa Clara Valley																										
Gilroy	96	1	84	1	1	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48.4	2	18	5.5	6.1
Los Gatos	93	0	75	3	3	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
San Jose	121	3	98	4	4	67	2.1	1.8	0	68	12	0	0	3.6	1.1	0	0	21.6	70	0	6	49.7	6	27	9.5	9.3
San Jose Freeway	-	-	-	-	-	-	2.6	1.8	0	77	17	0	0	-	-	-	-	-	-	-	-	48.4	8	28	10.8	9.4
San Martin	96	1	86	3	3	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Bay Area	6			6	6				0			1	0			0	0			0	6		18			
Days over Standard																										

*See NOTES on second page.

Dash (-) indicates pollutant is not monitored at the site.

2017 NOTES

The annual Bay Area Air Pollution Summary summarizes pollutant concentrations for comparison to the national and California air pollution standards.

***Station Information (see asterisks on front page)**

Near-road air monitoring at Berkeley Aquatic Park began on July 1, 2016. Therefore, 3-year averages for ozone and PM_{2.5} statistics are not available.

Explanation of Terms

State and national exceedances occur when pollutant concentrations exceed the indicated standards. For comparison, values in ppb must be converted to ppm and rounded to the same number of decimal places as the original standard.

MAX HR / MAX 8-HR / MAX 24-HR

The highest average pollutant concentration over a one-hour period, an eight-hour period (on any given day), or a 24-hour period (from midnight to midnight).

ANN AVG

The yearly average (arithmetic mean) of the readings taken at a given monitoring station.

NAT DAYS

The number of days during the year for which the monitoring station recorded pollutant concentrations exceeding the national standard.

CAL DAYS

The number of days during the year for which the station recorded pollutant concentrations exceeding the California standard.

TOTAL BAY AREA DAYS OVER STANDARD

is not a sum of exceedances at individual stations, but rather the number of days where at least one site recorded an exceedance.

3-YR AVG (Nat. 8-hr ozone standard)

The 3-year average of the fourth highest 8-hour average ozone concentrations for each monitoring station. A 3-year average greater than 70 ppb at any monitoring station means that the region does not meet the standard and may be designated non-attainment by the EPA.

PM₁₀

Particulate matter ten microns or smaller in size. PM₁₀ is sampled every third day at San Jose and every sixth or twelfth day at all other sites.

PM_{2.5}

Particulate matter 2.5 microns or smaller in size. PM_{2.5} is a sub-category of PM₁₀.

PM₁₀ ANN AVG and MAX 24-HR

This table shows PM₁₀ data reported at local temperature and pressure conditions, according to the California standards. National PM₁₀ data are converted to standard temperature and pressure conditions, which generally results in slightly lower readings.

3-YR AVG (PM_{2.5} 24-hour standard)

The 3-year average of the annual 98th percentiles of the individual 24-hour concentrations of PM_{2.5}. A 3-year average greater than 35 µg/m³ at any monitoring station means that the region does not meet the standard and may be designated non-attainment by the EPA.

3-YR AVG (PM_{2.5} annual standard)

The 3-year average of the quarterly averages of PM_{2.5}. A 3-year average greater than 12.0 µg/m³ at any monitoring station means that the region does not meet the standard and may be designated non-attainment by the EPA.

HEALTH-BASED AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Std	National Std
Ozone*	1 Hour	0.09 ppm	–
	8 Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	1 Hour	20 ppm	35 ppm
	8 Hour	9.0 ppm	9 ppm
Nitrogen Dioxide	1 Hour	0.18 ppm	0.100 ppm
	Annual	0.030 ppm	0.053 ppm
Sulfur Dioxide	1 Hour	–	0.075 ppm
	24 Hour	0.04 ppm	–
Particulates ≤ 10 microns	24 Hour	50 µg/m ³	150 µg/m ³
	Annual	20 µg/m ³	–
Particulates ≤ 2.5 microns	24 Hour	–	35 µg/m ³
	Annual	12 µg/m ³	12.0 µg/m ³

* In October 2015, the U.S. EPA implemented a new 8-hour ozone standard of 70 ppb. Exceedances are based on this standard (note that national and state numbers can differ due to data-handling conventions).

Concentrations

ppm

parts per million

ppb

parts per billion

µg/m³

micrograms per cubic meter

TEN-YEAR BAY AREA AIR QUALITY SUMMARY

DAYS OVER CURRENT STANDARDS

YEAR	OZONE			CARBON MONOXIDE		NITROGEN DIOXIDE		SULFUR DIOXIDE		PM ₁₀		PM _{2.5}
	8-Hr Nat	1-Hr Cal	8-Hr Cal	1-Hr Nat	8-Hr Cal	1-Hr Nat	1-Hr Cal	1-Hr Nat	24-Hr Cal	24-Hr Nat	24-Hr Cal	24-Hr Nat
2008	19	9	20	0	0	0	0	2	0	0	5	12
2009	11	11	13	0	0	0	0	0	0	0	1	11
2010	11	8	11	0	0	0	0	0	0	0	2	6
2011	9	5	10	0	0	0	0	0	0	0	3	8
2012	8	3	8	0	0	1	0	0	0	0	2	3
2013	3	3	3	0	0	0	0	0	0	0	6	13
2014	9	3	10	0	0	0	0	0	0	0	2	3
2015	12	7	12	0	0	0	0	0	0	0	1	9
2016	15	6	15	0	0	0	0	0	0	0	0	0
2017	6	6	6	0	0	1	0	0	0	0	6	18