

BAY AREA AIR POLLUTION SUMMARY — 1999

—See notes of explanation
on back of this sheet

MONITORING STATIONS	OZONE						CARBON MONOXIDE			NITROGEN DIOXIDE			SULFUR DIOXIDE			PM ₁₀					
	Max 1-Hr	Nat Days	Cal Days	3-Yr Avg	Max 8-Hr	Nat Days	3-Yr Avg	Max 1-Hr	Max 8-Hr	Nat Days	Max 1-Hr	Ann Avg	Cal Days	Max 24-Hr	Ann Avg	Cal Days	Ann Geo Mean	Ann Avg	Max 24-Hr	Nat Days*	Cal Days*
North Counties	(pphm)			(pphm)			(ppm)			(pphm)			(ppb)			(µg/m ³)					
Napa	12	0	4	0.3	9	1	6.6	5.5	4.2	0	9	1.4	0	-	-	-	16.3	18.6	66	0	2
San Rafael	10	0	2	0.0	8	0	5.1	5.6	2.9	0	9	1.8	0	-	-	-	19.5	22.0	76	0	2
Santa Rosa	10	0	1	0.0	8	0	5.4	5.7	3.5	0	7	1.4	0	-	-	-	19.6	21.4	54	0	1
Vallejo	11	0	4	0.0	9	1	6.2	6.6	5.5	0	8	1.4	0	7	1.4	0	16.4	19.5	84	0	3
Coast & Central Bay																					
Oakland	8	0	0	0.0	6	0	4.0	6.4	5.2	0	-	-	-	-	-	-	-	-	-	-	-
San Francisco	8	0	0	0.0	6	0	4.5	5.4	3.7	0	10	2.1	0	7	2.0	0	22.7	26.4	78	0	6
San Pablo	10	0	1	0.0	7	0	5.0	3.9	2.4	0	7	1.4	0	8	2.2	0	-	-	-	-	-
Eastern District																					
Bethel Island	13	1	5	0.3	10	5	8.0	1.8	1.4	0	5	1.1	0	8	1.4	0	21.2	25.4	101	0	6
Concord	16	2	8	1.4	12	6	8.4	4.9	3.1	0	8	1.8	0	12	1.7	0	18.2	20.9	64	0	3
Crockett	-	-	-	-	-	-	-	-	-	-	-	-	-	34	3.0	0	-	-	-	-	-
Fairfield	13	1	9	0.3	10	4	8.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Livermore	15	2	14	2.7	12	5	8.6	5.2	2.9	0	9	2.0	0	-	-	-	22.7	25.7	87	0	3
Martinez	-	-	-	-	-	-	-	-	-	-	-	-	-	8	1.7	0	-	-	-	-	-
Pittsburg	10	0	2	0.0	9	1	6.8	7.8	3.3	0	9	1.5	0	9	1.8	0	-	-	-	-	-
South Central Bay																					
Fremont	13	1	3	0.3	9	1	6.5	5.6	3.1	0	11	2.2	0	-	-	-	21.9	24.3	88	0	2
Hayward	12	0	4	0.0	9	1	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mountain View	11	0	7	0.0	9	1	6.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redwood City	8	0	0	0.0	6	0	4.9	8.0	3.8	0	10	1.9	0	-	-	-	22.4	25.1	85	0	3
San Leandro	11	0	3	0.0	8	0	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Santa Clara Valley																					
Gilroy	11	0	3	0.7	8	0	7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Los Gatos	12	0	4	0.3	10	1	7.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
San Jose, 4th Street	11	0	3	0.3	8	0	6.5	8.8	5.9	0	13	2.6	0	-	-	-	25.3	28.7	114	0	5
San Jose East	12	0	2	0.3	8	0	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
San Jose, Tully Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21.7	25.4	97	0	4
San Martin	13	1	7	1.7	10	3	8.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Bay Area Days over Standard	3		20		9		0			0			0			*Since PM ₁₀ is only sampled every sixth day, actual days over standard can be estimated to be six times the numbers shown. 0 12					

NOTES

This year we have expanded the Bay Area Air Pollution Summary to include measurements for a more complete set of federal and California time-averaged pollutant standards.

Most significantly, we've added columns for the new EPA eight-hour average ozone standard, proposed in 1997. This standard currently awaits a Supreme Court hearing to determine its final legal status.

Explanation of Terms

State and federal excesses occur when pollutant concentrations surpass the indicated standards, with values in most cases rounded to the same number of decimal places.

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

The highest average contaminant concentration over a one-hour period, an eight-hour period, or a 24-hour period.

NAT DAYS

The number of days during the year for which the monitoring station recorded contaminant concentration levels in excess of the national standard.

CAL DAYS

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

3-YR AVG (1-hr ozone standard)

The average number of days per year in excess of the national ozone standard, based on the most recent three-year period. *An average higher than 1.0 means the region will be considered out of attainment by the EPA.*

3-YR AVG (8-hr ozone standard)

The average of the fourth highest 8-hour average ozone concentration for each monitoring station, based on the most recent three-year period. *A concentration greater than 8.5 means that the region will be considered out of attainment by the EPA.*

ANN AVG

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

ANN GEO MEAN

The annual geometric mean concentration level (used for PM₁₀). The geometric mean of *n* positive numbers is the *n*th root of their product.

PM₁₀

Particulate matter under ten microns in size. (PM₁₀ is only sampled every sixth day. *Actual* days over standard can be estimated to be six times the number shown.)

TOTAL BAY AREA DAYS OVER STANDARD is not a sum of excesses at individual stations, but rather of the number of days for which excesses occurred at anyone or more stations.

HEALTH-BASED AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Std	National Std
Ozone	1 Hour	9 pphm	12 pphm
	8 Hour	—	8 pphm
Carbon Monoxide	1 Hour	20 ppm	35 ppm
	8 Hour	9.0 ppm	9 ppm
Nitrogen Dioxide	1 Hour	25 pphm	—
	Annual	—	5.3 pphm
Sulfur Dioxide	24 Hour	40 ppb	140 ppb
	Annual	—	30 ppb
Particulates < 10 microns	24 Hour	50 µg/m ³	150 µg/m ³
	Annual	—	50 µg/m ³
	Annual Geometric Mean	30 µg/m ³	—

Concentrations ppm parts per million | pphm parts per hundred million | ppb parts per billion | µg/m³ micrograms per cubic meter

TEN-YEAR BAY AREA AIR QUALITY SUMMARY

YEAR	OZONE			CARBON MONOXIDE				Nitrogen Dioxide	Sulfur Dioxide		PM ₁₀	
	1-Hr		8-Hr*	1-Hr		8-Hr		1-Hr	24-Hr		24-Hr	
	Nat	Cal	Nat	Nat	Cal	Nat	Cal	Cal	Nat	Cal	Nat**	Cal**
1990	2	14	-	0	0	2	4	0	0	0	1	15
1991	2	23	-	0	0	4	5	0	0	0	2	18
1992	2	23	-	0	0	0	0	0	0	0	0	18
1993	3	19	-	0	0	0	0	0	0	0	0	10
1994	2	13	-	0	0	0	0	0	0	0	0	9
1995	11	28	-	0	0	0	0	0	0	0	0	7
1996	8	34	-	0	0	0	0	0	0	0	0	3
1997	0	8	-	0	0	0	0	0	0	0	0	4
1998	8	29	16	0	0	0	0	0	0	0	0	5
1999	3	20	9	0	0	0	0	0	0	0	0	12

*EPA promulgated the 8-Hr standard in mid-1997

**PM₁₀ is sampled every sixth day—*actual* days over standard can be estimated to be six times the numbers listed.