

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 Nat | 1-Hr Cal | 8-Hr* Nat | 1-Hr Nat | 1-Hr Cal | 8-Hr Nat | 8-Hr Cal | 1-Hr Cal | 24-Hr Nat | 24-Hr Cal | 24-Hr Nat** | 24-Hr 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.