# BAY AREA AIR POLLUTION SUMMARY — 2000

—See notes of explanation on back of this page

| MONITORING<br>STATIONS  | OZONI                        |                       |                                    |                               | JE                            |                       |                                | CARBON<br>MONOXIDE        |                           | NITROGEN<br>DIOXIDE   |                        | SULFUR<br>DIOXIDE        |                  | PM <sub>10</sub>      |                    |                       |   |                              |                         |                       |                                   |
|---|------------------------------|-----------------------|------------------------------------|-------------------------------|-------------------------------|-----------------------|--------------------------------|---------------------------|---------------------------|-----------------------|------------------------|--------------------------|------------------|-----------------------|--------------------|-----------------------|---|------------------------------|-------------------------|-----------------------|-----------------------------------|
|   | Max<br>1-Hr                  | Nat<br>Days           | Cal<br>Days                        | 3-Yr<br>Avg*                  | Max<br>8-Hr                   | Nat<br>Days           | 3-Yr<br>Avg**                  | Max<br>1-Hr               | Max<br>8-Hr               | Nat/Cal<br>Days       | Max<br>1-Hr            | Ann<br>Avg               | Nat/Cal<br>Days  | Max<br>24-Hr          | Ann<br>Avg         | Nat/Cal<br>Days       | Ann<br>Geo<br>Mean                              | Ann<br>Avg                   | Max<br>24-Hr            | Nat<br>Days***        | Cal<br>Days***                    |
| North Counties  | (pphr                        | m)                    |                                    |                               | (pph                          | nm)                   |                                | (ppm)                     |                           |                       | (pph                   | m)                       |                  | (ppb)                 | )                  |                       | ( <i>µ</i> g/m <sup>3</sup>                     | 3)                           |                         |                       |                                   |
| Napa<br>San Rafael<br>Santa Rosa<br>Vallejo   | 8<br>7<br>8<br>8             | 0<br>0<br>0<br>0      | 0<br>0<br>0                        | 0.3<br>0.0<br>0.0<br>0.0      | 6<br>6<br>6<br>6              | 0<br>0<br>0<br>0      | 6.9<br>5.0<br>5.5<br>6.1       | 4.7<br>4.2<br>4.5<br>6.5  | 2.8<br>2.3<br>3.1<br>5.1  | 0<br>0<br>0<br>0      | 5<br>6<br>5<br>6       | 1.2<br>1.6<br>1.3<br>1.3 | 0<br>0<br>0<br>0 | -<br>-<br>-<br>5      | -<br>-<br>-<br>1.5 | -<br>-<br>0           | 14.7<br>18.2<br>15.9<br>13.0                    | 16.2<br>19.5<br>17.5<br>15.0 | 45<br>40<br>46<br>53    | 0<br>0<br>0<br>0      | 0<br>0<br>0<br>1                  |
| Coast & Central Bay   |                              |                       |                                    |                               |                               |                       |                                |                           |                           |                       |                        |                          |                  |                       |                    |                       |   |                              |                         |                       |                                   |
| Oakland<br>San Francisco<br>San Pablo   | 7<br>6<br>8                  | 0<br>0<br>0           | 0<br>0<br>0                        | 0.0<br>0.0<br>0.0             | 5<br>4<br>7                   | 0<br>0<br>0           | 4.1<br>4.4<br>4.7              | 5.4<br>5.5<br>2.8         | 3.4<br>3.2<br>1.9         | 0<br>0<br>0           | -<br>7<br>7            | -<br>2.0<br>1.4          | -<br>0<br>0      | -<br>8<br>7           | -<br>2.4<br>2.0    | -<br>0<br>0           | -<br>21.7<br>-                                  | 24.0<br>-                    | 63                      | 0                     | -<br>2<br>-                       |
| Eastern District  |                              |                       |                                    |                               |                               |                       |                                |                           |                           |                       |                        |                          |                  |                       |                    |                       |   |                              |                         |                       |                                   |
| Bethel Island<br>Concord<br>Crockett  | 12<br>14<br>-                | 0<br>1<br>-           | 1<br>2<br>-                        | 0.3<br>1.7                    | 9<br>9<br>-                   | 1<br>1<br>-           | 8.4<br>8.4                     | 2.3<br>4.5<br>-           | 1.5<br>2.7<br>-           | 0<br>0<br>-           | 4<br>7<br>-            | 1.0<br>1.6<br>-          | 0<br>0<br>-      | 7<br>4<br>24          | 1.6<br>1.6<br>2.5  | 0<br>0<br>0           | 17.5<br>16.2<br>-                               | 20.0<br>17.8<br>-            | 62<br>54<br>-           | 0                     | 1<br>1<br>-                       |
| Fairfield<br>Livermore<br>Martinez  | 10<br>15<br>-                | 0 2 -                 | 1<br>7<br>-                        | 0.3<br>3.3<br>-               | 8<br>11<br>-                  | 0<br>2<br>-           | 8.0<br>8.7<br>-                | -<br>4.5<br>-             | -<br>2.7<br>-             | -<br>0<br>-           | -<br>7<br>-            | -<br>1.7<br>-            | 0                | -<br>-<br>5           | -<br>-<br>1.1      | -<br>-<br>0           | -<br>19.4<br>-                                  | -<br>21.8<br>-               | -<br>71<br>-            | -<br>0<br>-           | 2                                 |
| Pittsburg   | 11                           | 0                     | 1                                  | 0.0                           | 8                             | 0                     | 7.2                            | 4.9                       | 2.7                       | 0                     | 5                      | 1.3                      | 0                | 7                     | 1.7                | 0                     | 13.9  | 16.4                         | 56                      | 0                     | 2                                 |
| Fremont Hayward Mountain View <sup>1</sup> Redwood City San Leandro   | 10<br>11<br>-<br>8<br>10     | 0<br>0<br>-<br>0<br>0 | 2<br>1<br>-<br>0<br>1              | 0.3<br>0.0<br>-<br>0.0<br>0.0 | 8<br>8<br>-<br>6<br>6         | 0<br>0<br>-<br>0<br>0 | 6.3<br>6.9<br>-<br>4.7<br>5.9  | 4.6<br>-<br>-<br>9.8<br>- | 2.7<br>-<br>-<br>4.4<br>- | 0<br>-<br>-<br>0      | 8<br>-<br>-<br>7<br>-  | 2.0<br>-<br>-<br>1.8     | 0 0 -            | -<br>-<br>-<br>-      | -<br>-<br>-<br>-   | -<br>-<br>-<br>-      | 19.4<br>-<br>-<br>19.1                          | 21.5<br>-<br>-<br>21.2       | 58<br>-<br>-<br>53<br>- | 0<br>-<br>-<br>0<br>- | 1<br>-<br>-<br>1                  |
| Santa Clara Valley Gilroy <sup>1</sup> Los Gatos San Jose, 4th Street San Jose East San Jose, Tully Road San Martin | -<br>8<br>7<br>10<br>-<br>11 | 0 0 0                 | 0<br>0<br>1<br>-                   | 0.3<br>0.3<br>0.3<br>-<br>1.3 | -<br>7<br>6<br>7<br>-<br>10   | 0<br>0<br>0<br>0      | 7.0<br>6.2<br>6.1<br>-<br>8.2  | -<br>8.4<br>-<br>-        | 6.3                       | -<br>-<br>0<br>-<br>- | -<br>11<br>-<br>-<br>- | -<br>2.5<br>-<br>-       | -<br>0<br>-<br>- | -<br>-<br>-<br>-<br>- | -<br>-<br>-<br>-   | -<br>-<br>-<br>-<br>- | 23.8<br>-<br>18.4                               | -<br>26.7<br>-<br>21.5       | -<br>76<br>-<br>69      | -<br>0<br>-<br>0      | -<br>-<br>7<br>-<br>2             |
| Total Bay Area Days<br>over Standard<br><sup>1</sup> Out of service in 2000<br>(see Notes on back)                  | days (                       | of exce               | 12<br>mber of<br>edence<br>n back) |                               | **Avera<br>highest<br>(see No | concen                | ne fourth<br>stration<br>back) |                           |                           | 0                     |                        |                          | 0                |                       |                    | 0                     | ***PM <sub>10</sub> r<br>every six<br>of approx | days sar                     | npling sch              | nedule, fo            | 7<br>a one in<br>r a total<br>ar. |

## NOTES

The annual Bay Area Air Pollution Summary summarizes measurements for the national and California time-averaged pollutant standards.

The national eight-hour average ozone standard, proposed in 1997, was remanded by the US Supreme Court to EPA in April 2001 pending the development of a new ozone implementation policy.

The Mountain View station was closed on November 30, 1999. It was replaced by a new monitoring station in Sunnyvale in 2001. The Gilroy station was closed for the year 2000 due to construction activity, but was reactivated in 2001.

### **Explanation of Terms**

State and national 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  $PM_{10}$ ). The geometric mean of n positive numbers is the nth root of their product.

#### PM<sub>10</sub>

Particulate matter ten microns or smaller in size.  $PM_{10}$  measurements are based on a one in every six days sampling schedule, for a total of approximately 60 samples per year.

**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 any one or more stations.

### HEALTH-BASED AMBIENT AIR QUALITY STANDARDS

| Pollutant Ave               | eraging Time                        | California Std                                    | National Std                                       |
|-----------------------------|-------------------------------------|---|--|
|                             |                                     |   |  |
| Ozone 1 H<br>8 H            | lour<br>our                         | 9 pphm<br>—                                       | 12 pphm<br>8 pphm                                  |
| Carbon Monoxide 1 H<br>8 H  | our<br>our                          | 20 ppm<br>9.0 ppm                                 | 35 ppm<br>9 ppm                                    |
| Nitrogen Dioxide 1 H<br>Ann |                                     | 25 pphm<br>—                                      |  |
|                             | Hour<br>nual                        | 40 ppb  | 140 ppb<br>30 ppb                                  |
| Anr                         | Hour<br>nual<br>nual Geometric Mean | 50 μg/m <sup>3</sup><br>—<br>30 μg/m <sup>3</sup> | 150 μg/m <sup>3</sup><br>50 μg/m <sup>3</sup><br>— |

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

| TEN-YEAR BAY AREA AIR QUALITY SUMMARY |   |       |              |                 |        |                 |    |                     |   |   |                      |    |
|---------------------------------------|---|-------|--------------|-----------------|--------|-----------------|----|---------------------|---|---|----------------------|----|
|                                       |   | OZONE |              | CA              | RBON N | MONOXI          | DE | Nitrogen<br>Dioxide | Sulfur<br>Dioxide   |   | PM <sub>10</sub>     |    |
| YEAR                                  | 1-Hr<br>Nat Cal   |       | 8-Hr*<br>Nat | 1-Hr<br>Nat Cal |        | 8-Hr<br>Nat Cal |    | 1-Hr<br>Cal         | 24-Hr<br>Nat Cal  |   | 24-Hr<br>Nat** Cal** |    |
| 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 |
| 2000                                  | 3   | 12    | 4            | 0               | 0      | 0               | 0  | 0                   | 0   | 0 | 0                    | 7  |
|                                       | *EPA proposed the 8-Hr standard<br>in mid-1997 and it was remanded<br>by the Supreme Court in 2001. |       |              |                 |        |                 |    |                     | **PM <sub>10</sub> measurements are based on a or<br>in every six days sampling schedule, for<br>total of approximately 60 samples per year |   |                      |    |