BAY AREA AIR POLLUTION SUMMARY — 2009

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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 Days	3-Yr Avg	Max 1-Hr	Max 8-Hr	Nat/Cal Days	Max 1-Hr	Ann Avg	Nat/Cal Days	Max 24-Hr	Ann Avg	Nat/Cal Days	Ann Avg	Max 24-Hr	Nat Days	Cal Days	Max 24-Hr	Nat Days	3-Yr Avg	Ann Avg	3-Yr Avg
North Counties	(ppb)		(ppb)				(ppm)			(ppb)			(ppb)			(µg/m³)				(µg/m³)				
Napa	100	1	77	1	3	61	2.4	1.4	0	41	9.6	0	-	-	-	18.5	55	0	1	-	-	-	-	-
San Rafael*	75	0	59	0	0	52	2.2	1.2	0	52	12.2	0	-	-	-	16.2	38	0	0	-	-	*	*	*
Santa Rosa	86	0	65	0	0	52	3.5	1.3	0	45	9.3	0	-	-	-	-	-	-	-	29.0	0	28	8.4	8.2
Vallejo	104	2	73	0	1	61	2.8	2.2	0	49	9.7	0	3	1.2	0	-	-	-	-	38.9	5	36	9.7	9.8
Coast & Central Bay																								
Berkeley*	63	0	54	0	0	*	2.8	2.0	0	50	12.9	0	4	1.3	0	18.4	34	0	0	-	-	-	-	-
Oakland*	92	0	62	0	0	*	4.6	2.0	0	62	14.2	0	-	-	-	-	-	-	-	36.3	1	*	9.3	*
Oakland West*	-	-	-	-	-	-	2.8	2.0	0	57	15.7	0	5	1.6	0									
Richmond	-	-	-	-	-	-	-	-	-	-	-	-	6	1.4	0	-	-	-	-	-	-	-	-	-
San Francisco*	72	0	56	0	0	48	4.3	2.9	0	59	15.1	0	-	-	-	18.7	36	0	0	35.6	1	27	9.7	9.4
San Pablo*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	-	-	-	-	-
Eastern District																								
Bethel Island	109	2	94	3	6	74	1.3	0.9	0	33	6.3	0	3	1.3	0	17.3	39	0	0	-	-	-	-	-
Concord	106	2	88	2	5	74	1.8	1.1	0	40	9.3	0	2	1.1	0	14.7	33	0	0	39.0	1	33	8.4	8.7
Crockett	-	-	-	-	-	-	-	-	-	-	-	-	7	1.7	0	-	-	-	-	-	-	-	-	-
Fairfield	104	2	85	2	5	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Livermore*	113	8	86	6	8	78	*	*	0	52	11.9	0	-	-	-	-	-	-	-	45.7	4	34	9.2	9.4
Martinez	-	-	-	-	-		-	-	-	-	-	-	4	1.4	0	-	-	-	-	-	-	-	-	-
South Central Bay																								
Fremont	99	4	75	0	2	61	2.0	1.2	0	51	13.0	0	-	-	-	-	-	-	-	39.3	1	27	9.4	9.2
Hayward	107	4	80	3	4	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redwood City*	87	0	63	0	0	56	3.5	1.8	0	56	12.3	0	-	-	-	-	-	-	-	31.7	0	28	8.7	8.7
Santa Clara Valley																								
Gilroy*	98	1	78	2	4	70	-	-	-	-	-	-	-	-	-	-	-	-	-	36.6	1	*	8.9	*
Los Gatos	102	3	82	4	8	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
San Jose Central*	88	0	68	0	0	62	3.4	2.5	0	69	14.8	0	1	0.4*	0	20.4	43	0	0	35.0	0	34	10.1	10.8
San Martin	107	4	81	5	6	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Bay Area Days over Standard		11		8	13				0			0			0			0	1		11			

*See NOTES on second page

2009 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 began at Gilroy on March 1, 2007. Therefore, three-year average $PM_{2.5}$ statistics are not available.

The Berkeley site opened on December 13, 2007. Therefore, three-year average ozone statistics are not available.

The Oakland site opened on November 1, 2007. Therefore, three-year average statistics for ozone and $PM_{2.5}$ are not available.

The Oakland West site opened on February 26, 2009.

Sulfur dioxide monitoring began at San Jose in February 2009.

PM2.5 monitoring began at San Rafael in October 2009. Due to the brief period of monitoring, no statistics are available for PM2.5.

The San Pablo site was temporarily closed in March 2009 due to heavy damage from a building fire. No statistics are available for 2009. The site reopened in May 2010.

Carbon monoxide monitoring was discontinued at Livermore in May 2009.

Explanation of Terms

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
The highest average contaminant 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 contaminant concentrations in excess of the national standard.

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

TOTAL BAY AREA DAYS OVER STANDARD
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.

3-YR AVG (Nat. 8-hr ozone standard)
The 3-year average of the fourth highest 8-hour average ozone concentration for each monitoring station. A 3-year average greater than 84 ppb at any monitoring station means that the region does not meet the standard and may be designated non-attainment by the EPA.

PM_{10}
Particulate matter ten microns or smaller in size. PM_{10} is only sampled every sixth day. Actual days over standard can be estimated to be six times the number shown.

$PM_{2.5}$
Particulate matter 2.5 microns or smaller in size. $PM_{2.5}$ is a sub-category of PM_{10}.

PM_{10} ANN AVG and MAX 24-HR
This table shows PM_{10} data reported at local temperature and pressure conditions, according to the California standards. National PM_{10} 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 15.0 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	0.075 ppm
Carbon Monoxide	1 Hour	20 ppm	35 ppm
	8 Hour	9.0 ppm	9 ppm
Nitrogen Dioxide*	1 Hour	0.25 ppm	—
	Annual	0.030 ppm	0.053 ppm
Sulfur Dioxide*	24 Hour	0.04 ppm	0.14 ppm
	Annual	—	0.030 ppm
Particulates ≤ 10 microns	24 Hour	50 µg/m³	150 µg/m³
	Annual	20 µg/m³	—
Particulates ≤ 2.5 microns	24 Hour	—	35 µg/m³
	Annual	12 µg/m³	15.0 µg/m³

* This table shows standards in effect in 2009. In 2010 the U.S. EPA implemented a new 1-hour nitrogen dioxide standard of 100 ppb, and a new 1-hour sulfur dioxide standard of 75 ppb.

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

TEN-YEAR BAY AREA AIR QUALITY SUMMARY

DAYS OVER STANDARDS

YEAR	OZONE			CARBON MONOXIDE				Nitrogen Dioxide	Sulfur Dioxide		PM_{10}		$PM_{2.5}$
	8-Hr*	1-Hr	8-Hr	1-Hr		8-Hr		1-Hr	24-Hr		24-Hr		24-Hr**
	Nat	Cal		Nat	Cal	Nat	Cal	Cal	Nat	Cal	Nat	Cal	Nat
2000	4	12	-	0	0	0	0	0	0	0	0	7	1
2001	7	15	-	0	0	0	0	0	0	0	0	10	5
2002	7	16	-	0	0	0	0	0	0	0	0	6	7
2003	7	19	-	0	0	0	0	0	0	0	0	6	0
2004	0	7	-	0	0	0	0	0	0	0	0	7	1
2005	1	9	9	0	0	0	0	0	0	0	0	6	0
2006	12	18	22	0	0	0	0	0	0	0	0	15	10
2007	1	4	9	0	0	0	0	0	0	0	0	4	14
2008	12	9	20	0	0	0	0	0	0	0	0	5	12
2009	8	11	13	0	0	0	0	0	0	0	0	1	11

*On May. 17, 2008, the U.S. EPA implemented a more stringent national 8-hour ozone standard , revising it from 0.08 ppm to 0.075 ppm. Ozone exceedance days for 2008 reflect the new standard.

**On Dec. 17, 2006, the U.S. EPA implemented a more stringent national 24-hour $PM_{2.5}$ standard—revising it from 65 µg/m³ to 35 µg/m³. Starting in 2006, $PM_{2.5}$ exceedance days reflect the new standard.