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)				($\mu g/m^3$)				($\mu g/m^3$)			($\mu g/m^3$)	
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 Days over Standard		6		15	15				0			0	0			0	0			0	0		0			

*See NOTES on second page.

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

2016 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, annual averages for NO_2 and $PM_{2.5}$, and 3-year averages for ozone and $PM_{2.5}$ statistics are not available.

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 San Jose Freeway began in September 2014. Therefore, 3-year average $PM_{2.5}$ statistics are not available.

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

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.

PM_{10}
Particulate matter ten microns or smaller in size. PM_{10} 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 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/m^3 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/m^3 at any monitoring station means that the region does not meet the standard and may be designated non-attainment by the EPA.

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	1-Hr	8-Hr	1-Hr		8-Hr		1-Hr		1-Hr	24-Hr	24-Hr		24-Hr
	Nat	Cal		Nat	Cal	Nat	Cal	Nat	Cal	Nat	Cal	Nat	Cal	Nat
2007	8	4	9	0	0	0	0	0	0	0	0	0	4	14
2008	19	9	20	0	0	0	0	0	0	2	0	0	5	12
2009	11	11	13	0	0	0	0	0	0	0	0	0	1	11
2010	11	8	11	0	0	0	0	0	0	0	0	0	2	6
2011	9	5	10	0	0	0	0	0	0	0	0	0	3	8
2012	8	3	8	0	0	0	0	1	0	0	0	0	2	3
2013	3	3	3	0	0	0	0	0	0	0	0	0	6	13
2014	9	3	10	0	0	0	0	0	0	0	0	0	2	3
2015	12	7	12	0	0	0	0	1	0	0	0	0	1	9
2016	15	6	15	0	0	0	0	0	0	0	0	0	0	0