

WATER QUALITY DATA

City of San Francisco Water Quality Data for Year 2004 ⁽¹⁾

DETECTED CONTAMINANTS	Unit	MCL	PHG (MCLG)	Range	Average (Maximum)	Typical Sources in Drinking Water
TURBIDITY ⁽²⁾						
Unfiltered Hetch Hetchy Water, max 5 NTU	-	TT	NS	0.28 - 0.46 ⁽³⁾	(5) ⁽⁴⁾	Soil run-off
Filtered Water - Harry Tracy WTP, max 1 NTU	-	TT	NS	-	(0.14)	Soil run-off
95 percentage of time < 0.3 NTU	-	TT	NS	100% ⁽¹³⁾	-	Soil run-off
Filtered Water - Sunol Valley WTP, max 1 NTU	-	TT	NS	-	(0.41)	Soil run-off
95 percentage of time < 0.3 NTU	-	TT	NS	100% ⁽¹³⁾	-	Soil run-off
ORGANIC CHEMICALS ⁽⁵⁾						
DISINFECTION BY-PRODUCTS						
Total Trihalomethanes (TTHMs)	ppb	80	NS	11 - 46	62 ⁽⁷⁾	By-product of drinking water chlorination
Total Haloacetic Acids (HAAs)	ppb	60	NS	5 - 33	23 ⁽⁷⁾	By-product of drinking water chlorination
Total Organic Carbon (TOC) ⁽⁶⁾	ppm	NS	NS	2.6 - 3.1	2.9	Various natural and man-made sources
MICROBIOLOGICAL						
Total Coliform, percentage of positive detected in any month	%	=< 5	(0)	-	(0.6)	Naturally present in the environment
INORGANIC CHEMICALS						
Aluminum	ppb	1000	600	3 - 43	26	Erosion of natural deposits
Barium	ppb	1000	2000	3 - 50	23	Erosion of natural deposits
Fluoride ^{(8) (9)}	ppm	2	1	<0.1 - 1	0.4	Erosion of natural deposits
Chlorine	ppm	MRDL=4	MRDLG=4	0.15 - 3.4	(1.97) ⁽⁷⁾	Drinking water disinfectant added for treatment

CONSTITUENTS WITH SECONDARY STANDARDS	Unit	SMCL	PHG	Range	Average	Typical Sources in Drinking Water
Chloride	ppm	500	NS	<3 - 44	10	Runoff / leaching from natural deposits
Color	unit	15	NS	<5 - 6	<5	Naturally-occurring organic materials
Iron	ppb	300	NS	<10 - 32	14	Leaching from natural deposits
Manganese	ppb	50	NS	<2 - 6	3	Leaching from natural deposits
Specific Conductance	µS/cm	1600	NS	24 - 440	183	Substances that form ions when in water
Sulfate	ppm	500	NS	<1 - 58	23	Runoff / leaching from natural deposits
Total Dissolved Solids	ppm	1000	NS	29 - 171	101	Runoff / leaching from natural deposits
Turbidity	NTU	5	NS	0.07 - 0.27	0.14	Soil runoff

LEAD AND COPPER RULE STUDY	Unit	AL	PHG	Range	90th Percentile ⁽¹⁰⁾	Typical Sources in Drinking Water
Copper	ppb	1300	170	7 - 186	86	Corrosion of household plumbing systems
Lead	ppb	15	2	<1 - 193 ⁽¹¹⁾	11.5	Corrosion of household plumbing systems

OTHER WATER QUALITY PARAMETERS	Unit	AL	Range	Average
Alkalinity (as CaCO ₃)	ppm	NS	10 - 138	59
Boron	ppb	1000	13 - 74	38
Calcium	ppm	NS	3 - 27	14
Hardness (as CaCO ₃)	ppm	NS	7 - 145	62
Fluoride	ppm	NS	0.1 - 1.2	1.0 ⁽¹²⁾
Magnesium	ppm	NS	<0.5 - 10	5.4
pH	unit	NS	7.5 - 10.5	8.8
Potassium	ppm	NS	0.3 - 2	1.0
Silica	ppm	NS	5 - 8	6.0
Sodium	ppm	NS	3 - 18	12

Key:
< = less than
TT = Treatment Technique
AL = Action Level
NS = No standard
NTU = Nephelometric Turbidity Unit
ppb = parts per billion
ppm = parts per million
µS/cm = microSiemens/centimeter

- (1) All results met State and Federal drinking water regulations.
- (2) Turbidity is the water clarity indicator; it also indicates the quality of the water and the treatment system efficiency.
- (3) Results are based on monthly average turbidities measured at Tesla Portal.
- (4) Turbidity is measured every four hours. This is a single measurement result. Higher turbidities occurred in the Hetch Hetchy system in January 2004 while returning the Hetch Hetchy water supply to service, but the water was not served to customers.
- (5) DHS has approved SFPUC's request for a waiver of 35 additional synthetic organic chemicals.
- (6) Total Organic Carbon is a precursor for disinfection by-product formation. Data are obtained from effluent monitoring at Sunol Valley Water Treatment Plant.
- (7) This is the highest quarterly running annual average value.
- (8) These data indicate the source water fluoride levels. Fluoride was added at Harry Tracy Water Treatment Plant and Polhemus Fluoride Station to prevent dental cavities in consumers.
- (9) Source water data were obtained from the following reservoirs: Hetch Hetchy, Calaveras, San Antonio, Lower Crystal Springs, San Andreas, Stone Dam, and Pilarcitos.
- (10) The 90th percentile levels of lead and copper must not be greater than the action levels. The lead and copper monitoring in 2004 included 54 tap water samples.
- (11) Three of these samples exceeded lead action level. The lead result at one location was 193 ppb which is unusually high. Therefore, two repeat samples were collected at that location, and the lead results were 6.3 ppb and 8.8 ppb. The cause of the initial high reading is unknown.
- (12) In January 2004, when Hetch Hetchy water supply was unavailable, eleven compliance samples showed fluoride below optimum level. This was caused by the planned shutdown of the Polhemus Fluoride Station to avoid over-fluoridation.
- (13) This is the minimum percentage of time that the filtered water turbidity is less than 0.3 NTU.

Note: The blend of different water sources has been variable and has resulted in varying water quality parameters due to system improvements and operational constraints. Additional water quality data may be obtained by calling the SFPUC Water Quality Bureau toll free number at (877) 737-8297.