Stanford University's Annual Water Quality Data for 2008 (1)

DETECTED CONTAMINANTS

CONSTITUENTS WITH PRIMARY STANDARDS	Unit	MCL	PHG or (MCLG)	Range or Result	Average or (Maximum)	Typical Sources in Drinking Water
TURBIDITY (2) (SFPUC samples)						
Unfiltered Hetch Hetchy Water, max 5 NTU	NTU	5	NS	0.24 - 0.46 (3)	(2.85) (4)	Soil run-off
Filtered Water - Sunol Valley WTP, max 1 NTU	NTU	1	NS	NA	(0.21)	Soil run-off
95 percent of time < 0.3 NTU	NTU	1	NS	100% (5)	NA	Soil run-off
DISINFECTION BY-PRODUCTS (SFPUC samples)						
Total Trihalomethanes (TTHMs)	ppb	80	NS	8 - 48	(31) (6)	By-product of drinking water chlorination
Total Haloacetic Acids (HAAs)	ppb	60	NS	4 - 26	(17) (6)	By-product of drinking water chlorination
Total Organic Carbon (TOC) (7)	ppm	TT	NS	2.2 - 2.8	2.5	Various natural and man-made sources
DISINFECTION BY-PRODUCTS (Stanford samples)						
Total Trihalomethanes (TTHMs)	ppb	80	NS	25 - 46	(39) (6)	By-product of drinking water chlorination
Total Haloacetic Acids (HAAs)	ppb	60	NS	15 - 40	(24) (6)	By-product of drinking water chlorination
MICROBIOLOGICAL						
Total Coliform (Stanford samples) percentage of positives detected in any month	%	≤5	(0)	0	(0)	Naturally present in the environment
Giardia Lamblia (SFPUC samples)	cyst/L	TT	(0)	ND - 0.03	(0.03)	Naturally present in the environment
INORGANIC CHEMICALS						
Fluoride (source water) (8) (SFPUC samples)	ppm	2.0	1.0	<0.1 - 0.8	0.2	Erosion of natural deposits
Total Chlorine (Stanford samples)	ppm	MRDL=4	MRDLG=4	1.4 - 2.5	(2.1) (6)	Water disinfectant added for treatment

CONSTITUENTS WITH SECONDARY STANDARDS (SFPUC samples except Color)	Unit	SMCL	PHG	Range	Average	Typical Sources in Drinking Water
Chloride	ppm	500	NS	4 - 15	10	Runoff / leaching from natural deposits
Color (Stanford samples)	unit	15	NS	<5 - 10	6	Naturally occurring organic materials
Specific Conductance	µS/cm	1600	NS	31 - 288	164	Substances that form ions when in water
Sulfate	ppm	500	NS	1.0 - 34.9	16.4	Runoff/leaching from natural deposits
Total Dissolved Solids	ppm	1000	NS	39 - 203	111	Runoff / leaching from natural deposits
Turbidity	NTU	5	NS	0.06 - 0.30	0.15	Soil runoff

LEAD AND COPPER RULE STUDY (Stanford samples, 54 samples collected)	Unit	AL	PHG	Range	90th Percentile (9)	Typical Sources in Drinking Water
Copper	ppb	1300	300	<10 - 100	60 (10)	Corrosion of household plumbing systems
Lead	ppb	15	2	<2.0 - 2.1	2.0 (11)	Corrosion of household plumbing systems

OTHER WATER QUALITY PARAMETERS	Unit	NL	Range	Average
Alkalinity (as $CaCO_3$)	ppm	NS	10 - 96	50
Calcium	ppm	NS	3 - 26	13
Chlorate (12)	ppb	(800)NL	49 - 224	155
Hardness (as $CaCO_3$)	ppm	NS	14 - 100	54
Magnesium	ppm	NS	0.2 - 9.0	4.9
pH	unit	NS	8.5 - 9.2	8.8
Potassium	ppm	NS	<0.2 - 1.2	0.6
Silica	ppm	NS	5.0 - 7.7	5.4
Sodium	ppm	NS	3 - 20	13

Key:		
</≤	=	less than / less than equal to
TT	=	Treatment Technique
AL	=	Action Level
NA	=	Not Applicable
NL	=	Notification 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 health standards.
2. Turbidity is a water clarity indicator; it also indicates the effectiveness of the filtration plants.
3. Turbidity is measured every four hours. These are monthly average turbidity values.
4. This is the highest single measurement in 2008. The startup of San Joaquin Pipeline No. 2 caused elevated turbidities on 3/13/08 as a result of sediment re-suspension in the pipeline.
5. There is no MCL for turbidity. The limits are based on the TT requirements in the State Drinking Water regulations.
6. This is the highest quarterly running annual average value.
7. TOC is a precursor for disinfection byproduct formation. The TT requirement applies to the filtered water from the SVWTP only.
8. The SFPUC adds fluoride to the naturally occurring level to help prevent dental caries in consumers. The fluoride levels in the treated water are maintained within a range of 0.8 - 1.5 ppm, as required by CDPH regulations.
9. The 90th percentile levels of lead and copper must not be greater than the action levels.
10. In 2006, no residences were over the copper Action Level at consumer taps. Customer tap sampling is required again in 2009.
11. In 2006, no residences were over the lead Action Level at consumer taps. Customer tap sampling is required again in 2009.
12. There was no chlorate detected in the raw water sources. The detected chlorate in treated water is a byproduct of the degradation of sodium hypochlorite, the primary disinfectant used by SFPUC for water disinfection.