

June 2018

TO: Westborough Water District Customers
FROM: Westborough Water District Board of Directors
SUBJECT: 2017 Annual Water Quality Report



To comply with Section 64480, Public Information, of the California Domestic Water Quality and Monitoring Regulations, attached is a copy of the Drinking Water Standards and Typical Concentrations of Constituents found in your water. The information was largely compiled by the San Francisco Water Department.

As you are aware, the District purchases all of our water from the San Francisco Water Department.

If you have any questions about the report, please call Darryl Barrow, General Manager, at (650) 589-1435 or e-mail us at: wwd@westboroughwater.com

Please distribute this Water Quality Report and make available to everyone, including tenants, employees, homeowner association members, etc.

The District welcomes the opportunity for public participation in discussing the Water Quality Report. Board meetings are held at 7:30 p.m. at the District office every second Thursday of the month.



2017 Annual Water Quality Report and Consumer Confidence Report

Our Drinking Water Sources and Treatment

The Westborough Water District purchases 100% of its water from the San Francisco Public Utility Commission (SFPUC). Water is supplied by the San Francisco Regional Water System (SFRWS), which is owned and operated by the SFPUC, our major water source originates from spring snowmelt flowing down the Tuolumne River to storage in Hetch Hetchy Reservoir. The well protected Sierra water source is exempt from filtration requirements by the United States Environmental Protection Agency (USEPA) and State Water Resources Control Board's Division of Drinking Water (SWRCB-DDW). To meet the appropriate drinking water standards for consumption, water from Hetch Hetchy Reservoir is treated by the SFPUC using the following processes: ultraviolet light and chlorine disinfection, pH adjustment for optimal corrosion control, fluoridation for dental health protection, and chloramination for maintaining disinfectant residual and minimizing the formation of disinfection byproducts.

Hetch Hetchy water is supplemented with surface water from two local watersheds. Rainfall and runoff from the 35,000-acre Alameda Watershed in Alameda and Santa Clara counties are collected in the Calaveras and San Antonio reservoirs, and delivered to the Sunol Valley Water Treatment Plant (SVWTP). Rainfall and runoff from the 23,000-acre Peninsula Watershed in San Mateo County are stored in the Crystal Springs, San Andreas and Pilarcitos reservoirs, and are delivered to the Harry Tracy Water Treatment Plant. In addition to these local sources, the SWRCB-DDW approved the SFPUC to use the surface water in Lake Eleanor, Lake Cherry and the associated creeks all conveyed via the Lower Cherry Aqueduct, Early Intake Reservoir and Tuolumne River (collectively known as Upcountry Non-Hetch Hetchy Sources, or UNHHS) as additional drinking water sources to the SFRWS. The UNHHS water, if used, will be treated at the SVWTP prior to service to customers. In 2017, the SFRWS did not use UNHHS. Water at the two local treatment plants is subject to filtration, disinfection, fluoridation, and optimum corrosion control by pH adjustment. □

Water Quality

The SFPUC's Water Quality Division (WQD) regularly collects and tests water samples from reservoirs and designated sampling points throughout the system to ensure the water delivered to you meets or surpasses federal and state drinking water standards. In 2017, WQD staff conducted more than 55,273 drinking water tests in the transmission and distribution systems. This is in addition to the extensive treatment process control monitoring performed by the SFPUC's certified operators and online instruments.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. In order to ensure that tap water is safe to drink, the USEPA and SWRCB-DDW prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health. □



Watersheds Protection

The SFPUC conducts watershed sanitary surveys for the Hetch Hetchy source annually and local water sources every five years. The latest local sanitary survey was completed in 2016 for the period of 2011-2015. The SFPUC conducted a watershed sanitary survey for UNHHS in 2015 as part of its drought response plan efforts. These surveys evaluate the sanitary conditions, water quality, potential contamination sources and the results of watershed management activities, and were completed with support from partner agencies including National Park Service and US Forest Service.

These surveys identified wildlife, stock, and human activities as potential contamination sources. You may contact the San Francisco District office of SWRCB-DDW at 510-620-3474 for the review of these reports. □



Contaminants and Regulations

Generally, the sources of drinking water (both tap water and bottled water) include rivers, lakes, oceans, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Such substances are called contaminants, and may be present in source water as:

Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife,

Inorganic contaminants, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming,

Pesticides and herbicides that may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses,

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application and septic systems,

Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline 800-426-4791, or at www.epa.gov/safewater. □

Key Water Quality Terms

The following are definitions of key terms referring to standards and goals of water quality noted on the data table.

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the USEPA.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs or MCLGs as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Primary Drinking Water Standard (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Regulatory Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Turbidity: A water clarity indicator that measures cloudiness of the water, and is also used to indicate the effectiveness of the filtration system. High turbidity can hinder the effectiveness of disinfectants.

Cryptosporidium is a parasitic microbe found in most surface water. The SFPUC regularly tests for this waterborne pathogen, and found it at very low levels in source water and treated water in 2017. However, current test methods approved by the USEPA do not distinguish between dead organisms and those capable of causing disease. Ingestion of *Cryptosporidium* may produce symptoms of nausea, abdominal cramps, diarrhea, and associated headaches. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water. □

Fluoridation and Dental Fluorosis

Mandated by State law, water fluoridation is a widely accepted practice proven to be safe and effective for preventing and controlling tooth decay. The SFPUC's fluoride target level in the water is 0.7 milligram per liter (mg/L, or part per million, ppm), consistent with the May 2015 State regulatory guidance on optimal fluoride level. Infants fed formula mixed with water containing fluoride at this level may still have a chance of developing tiny white lines or streaks in their teeth. These marks are referred to as mild to very mild fluorosis, and are often only visible under a microscope. Even in cases where the marks are visible, they do not pose any health risk. The Centers for Disease Control (CDC) considers it safe to use optimally fluoridated water for preparing infant formula. To lessen the chance of dental fluorosis, you may choose to use low-fluoride bottled water to prepare infant formula. Nevertheless, children may still develop dental fluorosis due to fluoride intake from other sources such as food, toothpaste and dental products.

Contact your health provider or SWRCB-DDW if you have concerns about dental fluorosis. For additional information about fluoridation or oral health, visit the CDC website www.cdc.gov/fluoridation or SWRCB-DDW website www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml. □

Drinking Water and Lead

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. There are no known lead service lines in the SFRWS. We are responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. It is possible that lead levels at your home may be higher than at others in the community as a result of materials used in your home's plumbing.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Infants and young children are typically more vulnerable to lead in drinking water than the general population. You can minimize the potential for lead exposure, when your water has been sitting for several hours, by flushing your tap for 30 seconds to 2 minutes (or until the water temperature has changed) before using water for drinking or cooking. If you are concerned about lead levels in your water, you may wish to have your water tested. Additional information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the USEPA's Safe Drinking Water Hotline 800-426-4791, or at www.epa.gov/lead. □

Special Health Needs

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people and infants, can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline 800-426-4791 or at www.epa.gov/safewater. □

Boron Detection Above Notification Level in Source Water

In 2017, boron was detected in one of the SFPUC sources at a level of 1.74 ppm in the raw water stored in one of our approved sources, Pond F3 East, in Alameda Watershed. Although the detected value is above the California Notification Level of 1 ppm for source water, the corresponding treated water boron level from the SVWTP was only 0.2 ppm (which meets regulatory requirements). □

Wholesale Agency's Water Quality Data for Year 2017

The table below lists all 2017 detected drinking water contaminants and the information about their typical sources. Contaminants below detection limits for reporting are not shown, in accord with regulatory guidance. The SFPUC holds a SWRCB-DDW monitoring waiver for some contaminants and therefore their monitoring frequencies are less than annual. □

Westborough Water District - Water Quality Data for Year 2017

- SFPUC conducted annual monitoring of all volatile organic chemicals in Table 64444-A and inorganic contaminants (except asbestos and cyanide) in Table 64431-A. The latest monitoring of the radionuclides in Table 64442 was in 2014. All results less than the corresponding DLRs are not shown below.
- For the period of 2017-2019, SFPUC received from the State a monitoring waiver for all synthetic organic chemicals (SOCs) in Table 64444-A.
- The latest monitoring of all SOC (despite the waiver), cyanide, and asbestos by the SFPUC was in 2011.
- SFPUC sampled for 1,2,3-TCP and lead in 2017 Annual Monitoring, and the results were below the DLRs of 5 ppt for 1,2,3-TCP and 5 ppb for lead.

(Data based on Hetch Hetchy water and effluents from both SVWTP, HTWTP and samples within the Westborough Water District)

DETECTED CONTAMINANTS	Unit	MCL	PHG or (MCLG)	Range or Level Found	Average or [Max]	Major Sources in Drinking Water
TURBIDITY						
Unfiltered Hetch Hetchy Water	NTU	5	N/A	0.3- 1.1 ⁽²⁾	[2.7]	Soil runoff
Filtered Water from Sunol Valley Water Treatment Plant (SVWTP)	NTU	1 ⁽³⁾	N/A	-	[1]	Soil runoff
	-	Min 95% of samples ≤ 0.3 NTU ⁽³⁾	N/A	99% - 100%	-	Soil runoff
Filtered Water from Harry Tracy Water Treatment Plant (HTWTP)	NTU	1 ⁽³⁾	N/A	-	[0.1]	Soil runoff
	-	Min 95% of samples ≤ 0.3 NTU ⁽³⁾	N/A	100%	-	Soil runoff
DISINFECTION BYPRODUCTS AND PRECURSOR						
Total Trihalomethanes	ppb	80	N/A	16.7 -39.8	32.2 ⁽⁴⁾	Byproduct of drinking water disinfection (from samples collected from WWD)
Haloacetic Acids	ppb	60	N/A	5.0 - 24.3	16.6 ⁽⁴⁾	Byproduct of drinking water disinfection (from samples collected from WWD)
Total Organic Carbon ⁽⁵⁾	ppm	TT	N/A	1.0 - 3.7	2.4	Various natural and man-made sources
MICROBIOLOGICAL						
Total Coliform ⁽⁶⁾	-	NoP ≤ 5.0% of monthly samples	(0)	-	0 positive	Naturally present in the environment (from samples collected from WWD)
<i>Giardia lamblia</i>	cyst/L	TT	(0)	0 - 0.22	0.05	Naturally present in the environment
INORGANICS						
Fluoride (source water) ⁽⁷⁾	ppm	2.0	1	ND - 0.6	0.2 ⁽⁸⁾	Erosion of natural deposits; water additive to promote strong teeth
Chloramine (as chlorine)	ppm	MRDL = 4.0	MRDLG = 4	0.11 - 2.99	2.39 ⁽⁹⁾	Drinking water disinfectant added for treatment (from samples collected from WWD)

CONSTITUENTS WITH SECONDARY STANDARDS	Unit	SMCL	PHG	Range	Average	Major Sources of Contaminant
Aluminum ⁽¹⁰⁾	ppb	200	600	ND - 99	ND	Erosion of natural deposits; some surface water treatment residue
Chloride	ppm	500	N/A	<3 - 17	9.0	Runoff / leaching from natural deposits
Color	unit	15	N/A	<5 - 13	<5	Naturally-occurring organic materials
Specific Conductance	µS/cm	1600	N/A	29 - 256	168	Substances that form ions when in water
Sulfate	ppm	500	N/A	0.9 - 34	17	Runoff / leaching from natural deposits
Total Dissolved Solids	ppm	1000	N/A	<20 - 122	76	Runoff / leaching from natural deposits
Turbidity	NTU	5	N/A	0.1 - 1	0.4	Soil runoff

LEAD AND COPPER (samples collected from WWD)	Unit	AL	PHG	Range	90th Percentile	Major Sources in Drinking Water
Copper	ppb	1300	300	1.7 - 90.9 ⁽¹¹⁾	36.1	Internal corrosion of household water plumbing systems
Lead	ppb	15	0.2	1.0 - 6.7 ⁽¹²⁾	2.9	Internal corrosion of household water plumbing systems

OTHER WATER QUALITY PARAMETERS	Unit	ORL	Range	Average
Alkalinity (as CaCO ₃)	ppm	N/A	6 - 131	52
Boron	ppb	1000 (NL)	ND - 203	ND
Bromide	ppb	N/A	<5 - 30	13
Calcium (as Ca)	ppm	N/A	2 - 31	16
Chlorate ⁽¹³⁾	ppb	800 (NL)	51 - 180	86
Hardness (as CaCO ₃)	ppm	N/A	7 - 82	51
Magnesium	ppm	N/A	0.2 - 11	6.2
pH	-	N/A	7.4 - 9.8	9.2
Potassium	ppm	N/A	0.2 - 2	1.0
Silica	ppm	N/A	4.6 - 12	7.6
Sodium	ppm	N/A	2.3 - 31	18
Strontium	ppb	N/A	12 - 234	111

KEY:
< / ≤ = less than / less than or equal to
AL = Action Level
Max = Maximum
Min = Minimum
N/A = Not Available
ND = Non-detect
NL = Notification Level
NoP = Number of Coliform-Positive Sample
NTU = Nephelometric Turbidity Unit
ORL = Other Regulatory Level
ppb = part per billion
ppm = part per million
µS/cm = microSiemens/centimeter

Footnotes:

- All results met State and Federal drinking water health standards.
- These are monthly average turbidity values measured every 4 hours daily.
- There is no turbidity MCL for filtered water. The limits are based on the TT requirements for filtration systems.
- This is the highest locational running annual average value.
- Total organic carbon is a precursor for disinfection byproduct formation. The TT requirement applies to the filtered water from the SVWTP only.
- There were 0 positive samples collected in any one month.
- In May 2015, the SWRCB recommended an optimal fluoride level of 0.7 ppm be maintained in the treated water. In 2017, the range and average of the fluoride levels were 0.5 ppm - 0.9 ppm and 0.7 ppm, respectively.
- The natural fluoride level in the Hetch Hetchy supply was ND. Elevated fluoride levels in the SVWTP and HTWTP raw water are attributed to the transfer of fluoridated Hetch Hetchy water into the local reservoirs.
- This is the highest running annual average value.
- Aluminum also has a primary MCL of 1,000 ppb.
- The most recent Lead and Copper Rule monitoring was in 2016. None of 32 site samples collected at consumer taps for copper concentrations were above the action level.
- The most recent Lead and Copper Rule monitoring was in 2016. None of 32 site samples collected at consumer taps for lead concentrations were above the action level.
- The detected chlorate in the treated water is a degradation product of sodium hypochlorite used by the SFPUC for water disinfection.

2017 ANNUAL WATER QUALITY REPORT ENCLOSED



Translation Languages

This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

Spanish: Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Tagalog: Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

Chinese (Traditional):

此份有關你的食水報告,內有重要資料和訊息,請找他人為你翻譯及解釋清楚。

Chinese (Simplified):

此份有关你的食水报告,内有重要资料和讯息,请找他人为你翻译及解释清楚。