

2018 WATER QUALITY REPORT

City of Foster City/Estero Municipal Improvement District



Dear EMID Customer,

The City of Foster City/Estero Municipal Improvement District (EMID) is pleased to provide you with the Annual Water Quality Report for 2018. On the following pages, you will find important information about the origin of your water, the quality of your water, and the steps taken to protect the water supply.

Of special note: *While Governor Brown has rescinded the Water Emergency Declaration, certain water use prohibitions have been made permanent. EMID is supporting Governor Brown's effort, reminding Californians to remain water-wise and make water conservation a way of life.*

As the purveyor of your drinking water, we are proud to be able to state that the water we provide is of the highest quality, meeting or exceeding all primary drinking water standards set by the United States Environmental Protection Agency (USEPA) and the California Department of Public Health (CDPH).

EMID purchases all of its water from the San Francisco Public Utilities Commission (SFPUC). The following pages contain the source water information prepared by the SFPUC Water Quality Bureau. In addition to the monitoring and testing performed by SFPUC, EMID does its own monitoring and testing to ensure that the water quality in the distribution system meets or exceeds all drinking water standards. If there are any questions about the water, please call the SFPUC Water Quality Bureau at (877) 737-8297 or visit the website at www.sfwater.org. Any other questions about the water system should be directed to EMID Public Works Manager, Laura Galli, at (650) 286-8140.

WATER QUALITY



O'Shaughnessy Dam

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 exceeds federal and state drinking water standards. In 2018, WQD staff conducted more than 57,690 drinking water tests in the source, transmission, and distribution system. 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 the 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.



Water Quality Sampling

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 at (800) 426-4791 or at www.epa.gov/safewater.

Water Line Repair



Taste and Odor Treatment at SWWTP

In response to an increase in the magnitude and frequency of algal blooms in Calaveras Reservoir and San Antonio Reservoir, the SFPUC initiated a taste and odor (T&O) control program for the SWWTP in 2018. The program will address seasonal taste and odor resulting from algal blooms in the reservoirs. The first component of this program is to a Powdered Activated Carbon facility to mitigate the occurrence of taste and odor compounds. A secondary benefit of using carbon for treatment will reduce the color of the water and formation of disinfection byproducts. The long-term component of the program is an ozonation treatment facility that is currently in design phase.

SFPUC DRINKING WATER SOURCES

CONSERVATION ALERT: EMID continues to encourage customers to conserve even with the recent wet spring. EMID supports the Governor's message that urges: "Make water conservation a California way of life."

OUR DRINKING WATER SOURCES AND TREATMENT

Supplied by the San Francisco Regional Water System (SFRWS), which is owned and operated by the San Francisco Public Utilities Commission (SFPUC), our major water source originates from spring Yosemite National Park 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). Water from Hetch Hetchy Reservoir received the following treatment to meet the appropriate drinking water standards for consumption: ultraviolet light and chlorine disinfection, pH adjustment for optimum corrosion control, fluoridation for dental health protection, and chloramination for maintaining disinfectant residual and minimizing the formation of regulated disinfection byproducts.

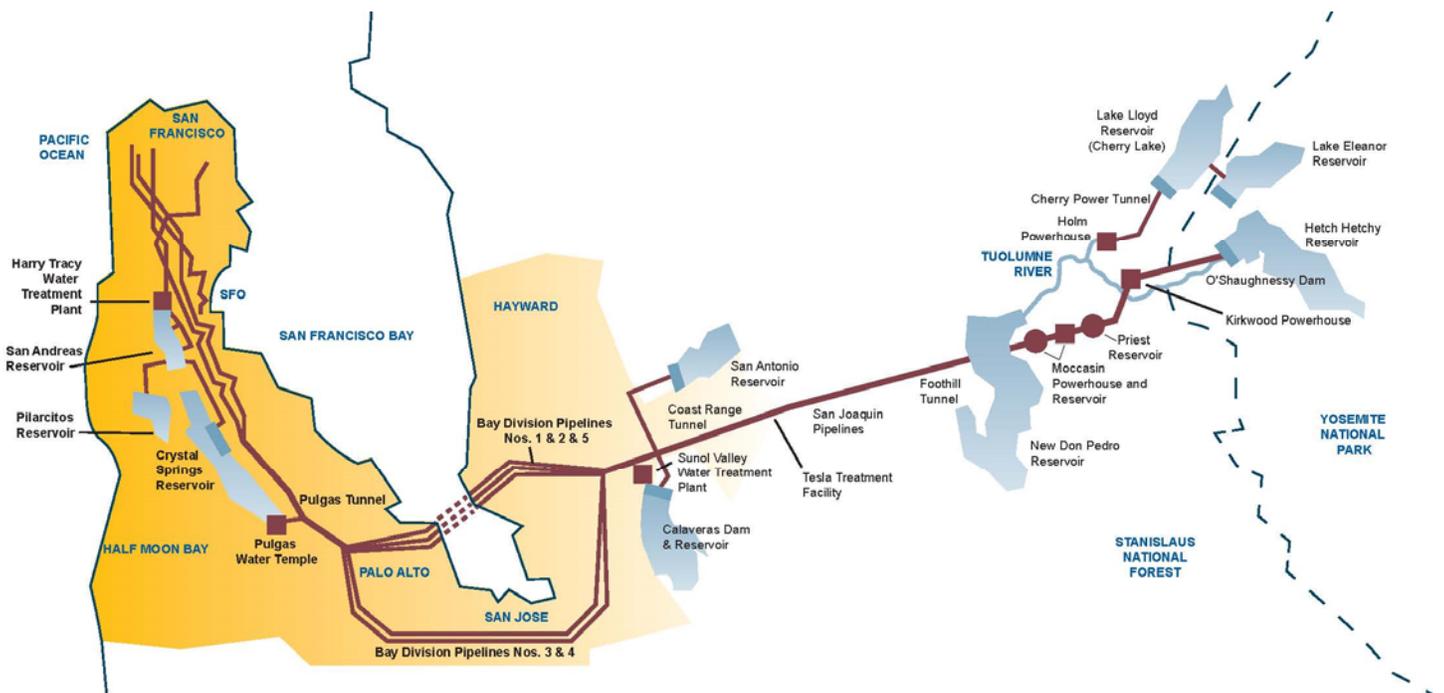
Hetch Hetchy water is supplemented with surface water from local watersheds and upcountry non-Hetch Hetchy sources (UNHHS). Rainfall

and runoff from the 35,000-acre Alameda Watershed in Alameda and Santa Clara counties are collected in Calaveras Reservoir and San Antonio Reservoir before delivery 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 Crystal Springs Reservoir, San Andreas Reservoir and Pilarcitos Reservoir, and are delivered to the Harry Tracy Water Treatment Plant. In 2018, the UNHHS was not used. Water at the two treatment plants is subject to filtration, disinfection, fluoridation, optimum corrosion control, and taste and odor removal.

WATERSHEDS PROTECTION

The SFPUC conducts watershed sanitary surveys for the Hetch Hetchy source annually and the local water sources as well as UNHHS every five years. The latest local sanitary survey was completed in 2016 for the period of 2011-2015. The last watershed sanitary survey for UNHHS was conducted in 2015 as part of the SFPUC's drought response plan efforts. These surveys evaluate the sanitary conditions, water quality, potential contamination sources and the results of watershed management activities. 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 review of these reports.

SFPUC WATER SYSTEM



KEY WATER QUALITY TERMS



Water Storage Reservoirs

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 milligrams 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 this 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 at www.cdc.gov/fluoridation or the SWRCB-DDW website: www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml

2018 WATER QUALITY DATA

The table on the following page lists all 2018 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, therefore, their monitoring frequencies are less than annual.

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, reporting, 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 2018. 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.

2018 WATER QUALITY DATA

The table below lists all 2018 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.

City of Foster City/Estero Municipal Improvement District - Water Quality Data for Year 2018 ⁽¹⁾						
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 - 0.8 ⁽²⁾	[1.8]	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	99.96% - 100%	-	Soil runoff
Filtered Water from Harry Tracy Water Treatment Plant (HTWTP)	NTU	1 ⁽³⁾	N/A	-	[0.07]	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	37.9 - 77.0	57.7 ⁽⁴⁾	Byproduct of drinking water disinfection
Haloacetic Acids	ppb	60	N/A	28.5 - 39.8	34.4 ⁽⁴⁾	Byproduct of drinking water disinfection
Total Organic Carbon ⁽⁵⁾	ppm	TT	N/A	1.2 - 2.9	2.2	Various natural and man-made sources
MICROBIOLOGICAL						
Total Coliform	-	NoP ≤ 5.0% of monthly samples	(0)	-	0%	Naturally present in the environment
<i>Giardia lamblia</i>	cyst/L	TT	(0)	0 - 0.24	0.03	Naturally present in the environment
INORGANICS						
Fluoride (source water) ⁽⁶⁾	ppm	2.0	1	ND - 0.7	0.3 ⁽⁷⁾	Erosion of natural deposits; water additive to promote strong teeth
Chloramine (as chlorine)	ppm	MRDL = 4.0	MRDLG = 4	1.44 - 2.89	2.27 ⁽⁸⁾	Drinking water disinfectant added for treatment
CONSTITUENTS WITH SECONDARY STANDARDS						
Chloride	ppm	500	N/A	<3 - 17	8.9	Runoff / leaching from natural deposits
Color	unit	15	N/A	<5 - 7	<5	Naturally-occurring organic materials
Specific Conductance	µS/cm	1600	N/A	29 - 221	154	Substances that form ions when in water
Sulfate	ppm	500	N/A	0.9 - 29	16	Runoff / leaching from natural deposits
Total Dissolved Solids	ppm	1000	N/A	<20 - 144	82	Runoff / leaching from natural deposits
Turbidity	NTU	5	N/A	ND - 0.3	0.1	Soil runoff
LEAD AND COPPER						
	Unit	AL	PHG	Range	90th Percentile	Major Sources in Drinking Water
Copper	ppb	1300	300	0.011-0.064 ⁽⁹⁾	0.0576	Internal corrosion of household water plumbing systems
Lead	ppb	15	0.2	<0.001 - 0.01 ⁽¹⁰⁾	0.006	Internal corrosion of household water plumbing systems
OTHER WATER QUALITY PARAMETERS						
	Unit	ORL	Range	Average	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	
Alkalinity (as CaCO ₃)	ppm	N/A	<3 - 132	51		
Boron	ppb	1000 (NL)	ND - 104	ND		
Bromide	ppb	N/A	<5 - 27	7		
Calcium (as Ca)	ppm	N/A	2.9 - 18	11		
Chlorate ⁽¹¹⁾	ppb	800 (NL)	42 - 230	124		
Hardness (as CaCO ₃)	ppm	N/A	15 - 68	47		
Magnesium	ppm	N/A	<0.2 - 6.2	4.0		
pH	-	N/A	8.6 - 9.8	9.4		
Potassium	ppm	N/A	0.2 - 1.0	0.6		
Silica	ppm	N/A	2.8 - 7.1	5.0		
Sodium	ppm	N/A	2.3 - 20	14		
Strontium	ppb	N/A	12 - 199	99		

Footnotes:

- (1) All results met State and Federal drinking water health standards.
- (2) These are monthly average turbidity values measured every 4 hours daily.
- (3) There is no turbidity MCL for filtered water. The limits are based on the TT requirements for filtration systems.
- (4) This is the highest locational running annual average value.
- (5) Total organic carbon is a precursor for disinfection byproduct formation. The TT requirement applies to the filtered water from the SVWTP only.
- (6) In May 2015, the SWRCB recommended an optimal fluoride level of 0.7 ppm be maintained in the treated water. In 2018, the range and average of the fluoride levels were 0.6 ppm - 1.0 ppm and 0.7 ppm, respectively.
- (7) 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.
- (8) This is the highest running annual average value.
- (9) The most recent Lead and Copper Rule monitoring was in 2016. 0 of 31 site samples collected at consumer taps had copper concentrations above the AL.
- (10) The most recent Lead and Copper Rule monitoring was in 2016. 0 of 31 site samples collected at consumer taps had lead concentrations above the AL.
- (11) The detected chlorate in the treated water is a degradation product of sodium hypochlorite used by the SFPUC for water disinfection.

Note: Additional water quality data may be obtained by calling the City of Foster City phone number at 650-286-8140.

MORE WATER SYSTEM INFORMATION



Hetch Hetchy Reservoir

DRINKING WATER AND LEAD

The SFPUC's annual monitoring of the water sources in 2018 continues to demonstrate that there is no lead detected. There are no known lead service lines in our distribution system. If lead was detected in tap water, it is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high quality drinking water, but we cannot control the variety of materials used in plumbing components. It is possible that lead levels at your home in the community may be higher than at others because of plumbing materials used in your property.

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 at (800) 426-4791 or at www.epa.gov/safewater.

PUBLIC PARTICIPATION

The EMID President and Board of Directors are the governing authority of the EMID water system. They meet on the first and third Mondays of the month at 6:30 p.m. at the Foster City Council/Board Chambers located at 620 Foster City Blvd., Foster City, California. An agenda for each EMID meeting is posted on the City of Foster City website at <https://www.fostercity.org/agendasandminutes>.

The SFPUC meets on the second and fourth Tuesdays of the month at 1:30 p.m. at the San Francisco City Hall, Room 400. The public is invited to participate in these meetings.

This report contains important information about your drinking water. Please contact EMID at 650-286-8140 or publicworks@fostercity.org for assistance

Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse EMID a 650-286-8140 o publicworks@fostercity.org para asistirlo en español con alguien que lo entienda bien.

此份水質報告，內有重要資訊。請找他人為你翻譯和解說清楚。



City of Foster City/Estero Municipal Improvement District
100 Lincoln Centre Drive
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