

# 2018 WATER QUALITY REPORT



## Introduction

This report is provided to help consumers make informed decisions about their drinking water. It is a key element of the public right-to-know provision of the Federal EPA Safe Drinking Water Act since 2011.

The results provided in the accompanying tables were from sampling conducted in 2018 by the San Francisco Public Utilities Commission, our wholesale water provider and Hillsborough staff within our water distribution system. It is available to all Hillsborough residents and published on-line at: <https://www.hillsborough.net/262/Water-Quality>

This report contains the following information:

- Our drinking water sources and treatment
- Water Quality Monitoring Programs
- Regulated contaminants detected
- Comparison of contaminant concentration to regulatory levels and Health Goals
- Health effects information
- Information for immunocompromised persons
- Fourth Unregulated Contaminant Monitoring
- Other information about accessing your water consumption to conserve water

For more information , please contact Cary Dahl at (650) 375-7444 or [cdahl@hillsborough.net](mailto:cdahl@hillsborough.net).

Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse [insert your agency's name and contact phone number] 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。

## 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 the State Water Resources Control Board's Division of Drinking Water (SWRCB-DDW). Water from Hetch Hetchy Reservoir receives 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.

The 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.

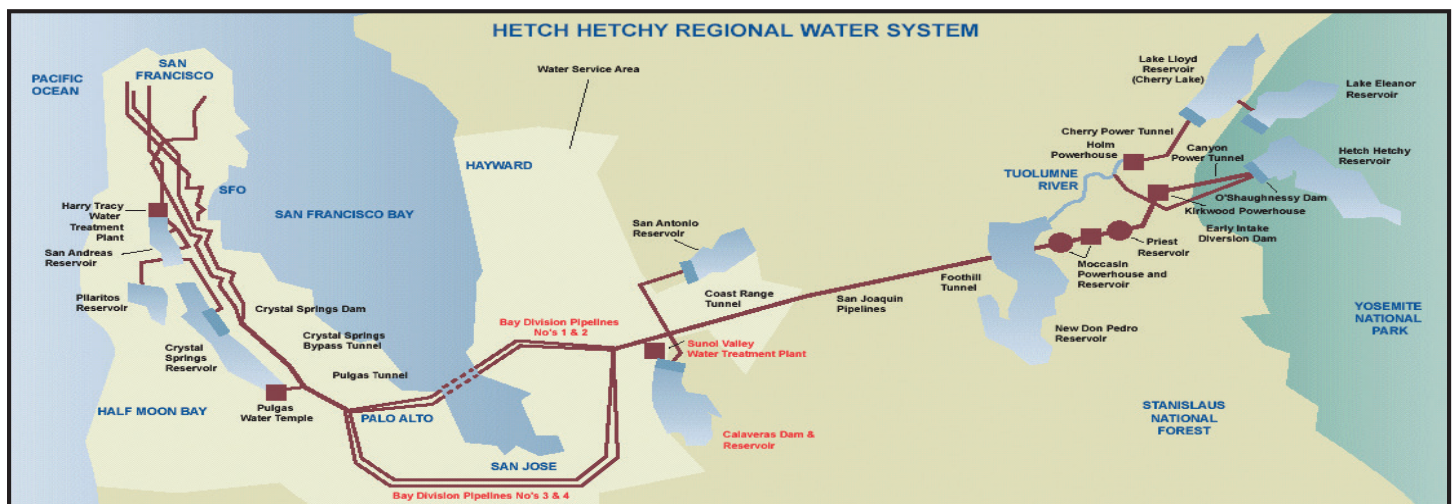
## Water Quality

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 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.

## 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. Our 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 of 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 healthcare provider or SWRCB-DDW if you have concerns about dental fluorosis. For additional information about fluoridation or oral health, visit the SWRCB-DDW website [www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/Fluoridation.shtml](http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml) or the CDC website [www.cdc.gov/fluoridation](http://www.cdc.gov/fluoridation).

## 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 healthcare 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](http://www.epa.gov/safewater).

## 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,

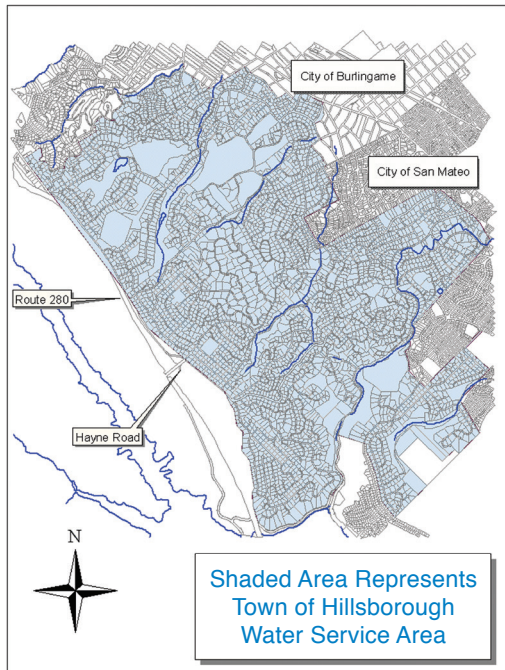
**Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

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](http://www.epa.gov/safewater).

## 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](http://www.epa.gov/lead).

In 2016, the Town of Hillsborough conducted an inventory of water service line material. The Town does not have any known lead service lines or goosenecks. The Town conducts lead and copper testing every 3 years, the last round of sampling was conducted in 2016 and the Town was below the action level for each both lead and copper. The next round of sampling will occur in August of 2019.

### **Unregulated Contaminant Monitoring**

Every 5 years, the Federal EPA compiles a list of potential contaminants and asks public water systems to test their water to see if they are present and in what concentrations they were detected. The contaminants were Cyanotoxins (a byproduct of certain species of algae), metals (germanium and manganese), 7 pesticides, brominated haloacetic acids (disinfection byproducts), 3 alcohols, 3 semi volatile chemicals and 2 indicators. See new table on page 7

As our water sources are located within protected watersheds, the bulk of these contaminants were neither expected nor detected in our monitoring. We attached a table of the monitoring results for Hillsborough during 2018 for your information.

## 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. We regularly test 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.

# Wholesale Agency's Water Quality Data for Year 2018

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.

## Town of Hillsborough — Water Quality Data for Year 2018<sup>(1)</sup>

DETECTED CONTAMINANTS	Unit	MCL	PHG or [MCLG]	Range or Level Found	Average or [Max]	Major Sources in Drinking Water
<b>TURBIDITY</b>						
Unfiltered Hetch Hetchy Water	NTU	5	N/A	0.3 - 0.8 <sup>(2)</sup>	[1.8]	Soil runoff
Filtered Water from Sunol Valley Water Treatment Plant (SVWTP)	NTU	1 <sup>(3)</sup>	N/A	-	[1]	Soil runoff
	-	min 95% of samples	N/A	99.96%-100%	-	Soil runoff
Filtered Water from Harry Tracy Water Treatment Plant (HTWTP)	NTU	1 <sup>(3)</sup>	N/A	-	[0.07]	Soil runoff
	-	min 95% of samples	N/A	100%	-	Soil runoff
<b>DISINFECTION BYPRODUCTS AND PRECURSORS</b>						
Total Trihalomethanes	ppb	80	N/A	37 - 67.7	50.6 <sup>(4)</sup>	Byproduct of drinking water disinfection
Haloacetic Acids	ppb	60	N/A	23 - 42	33.5	Byproduct of drinking water disinfection
Total Organic Carbon <sup>(6)</sup>	ppm	TT	N/A	1.2 - 2.9	2.2	Various natural and man-made sources
<b>MICROBIOLOGICAL</b>						
Total Coliform <sup>(6)</sup>	-	NoP ≤ 5.0% of monthly samples	[0]	0 - 0	[1]	Naturally present in the environment
Giardia lamblia	cyst/L		[0]	0 - 0.24	0.03	Naturally present in the environment
<b>INORGANICS</b>						
Fluoride (source water) <sup>(7)</sup>	ppm	2.0	1	ND - 0.7	0.3 <sup>(8)</sup>	Erosion of natural deposits, water additive to promote strong teeth
Chloramine (as chlorine)	ppm	MRDL = 4.0	MRDLG = 4	.93 - 3.00	2.39 <sup>(9)</sup>	Drinking water disinfectant added for treatment

CONSTITUENTS WITH SECONDARY STANDARDS	Unit	SMCL	PHG	Range	Average	Typical Sources in Drinking Water
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	Typical Sources in Drinking Water
Copper - Town of Hillsborough	ppb	1300	300	17.6 - 149	84.2	Internal corrosion of household plumbing systems
Lead - Town of Hillsborough	ppb	15	0.2	<1 - 18.4	5.8	Internal corrosion of household plumbing systems

OTHER WATER QUALITY PARAMETERS	Unit	ORL	Range	Average	KEY
Alkalinity (as CaCO <sub>3</sub> )	ppm	N/A	<3 - 132	51	< / ≤ = less than / less than or equal to
Boron	ppb	1000 (NL)	ND - 104	ND	AL = Action Level
Bromide	ppb	N/A	<5 - 27	7	Max = Maximum
Calcium (as Ca)	ppm	N/A	2.9 - 18	11	Min = Minimum
Chlorate <sup>(12)</sup>	ppb	(800) NL	42 - 230	124	N/A = Not Available
Chromium (VI) <sup>(13)</sup>	ppb	N/A	0.031 - 0.1	0.068	ND = Non-Detect
Hardness (as CaCO <sub>3</sub> )	ppm	N/A	15 - 68	47	NL = Notification Level
Magnesium	ppm	N/A	<0.2 - 6.2	4.0	NoP = Number of Coliform-Positive Sample
pH	-	N/A	8.6 - 9.8	9.4	NTU = Nephelometric Turbidity Unit
Potassium	ppm	N/A	0.2 - 1.0	0.6	ORL = Other Regulatory Level
Silica	ppm	N/A	2.8 - 7.1	5.0	ppb = parts per billion
Sodium	ppm	N/A	2.3 - 20	14	ppm = parts per million
Strontium	ppb	N/A	12 - 199	99	µS/cm = microSiemens / centimeter

### Taste and Odor Treatment at SVWTP

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 SVWTP 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.

#### 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) No positive samples were collected in any one month
- (7) 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.
- (8) 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.
- (9) This is the highest running annual average value.
- (10) The most recent Lead and Copper Rule monitoring was in 2017. 0 of 31 site samples collected at consumer taps had copper concentrations above the AL. Next round of samples will be taken in summer of 2019
- (11) The most recent Lead and Copper Rule monitoring was in 2017. 1 of 31 site samples collected at consumer taps had lead concentrations above the AL. Next round of samples will be taken in summer of 2019
- (12) The detected chlorate in the treated water is a degradation product of sodium hypochlorite used by the SFPUC for water disinfection.
- (13) Chromium (VI) has a PHG of 0.02 ppb but no MCL. The previous MCL of 10 ppb was withdrawn by the SWRCB-DDW on September 11, 2017. Currently, the SWRCB-DDW regulates all chromium through a MCL of 50 ppb for Total Chromium, which was not detected in our water in 2018.

Note: Additional water quality data may be obtained by calling the Town of Hillsborough water system phone number: (650) 375-7444.

The Fourth Unregulated Contaminant Monitoring Rule (UCMR 4) was published in the Federal Register on December 20, 2016. UCMR 4 requires monitoring for 30 contaminants between 2018 and 2020 using analytical methods developed by the EPA and consensus organizations. This monitoring provides a basis for future regulatory actions to protect public health. The table below lists the monitoring results for 2018.

[illegible]





**Town of Hillsborough**  
1600 Floribunda Avenue  
Hillsborough, CA 94010

## 2018 WATER QUALITY REPORT

If you have questions or comments about water quality data, conservation, supply or regulations, please contact the Town of Hillsborough or any of the agencies below. Information about public meetings, proposed and current regulations, water conservation and other consumer information can be found on the websites of all the agencies mentioned here.

For inquiries, contact Hillsborough Public Works (650) 375-7444

### **Town of Hillsborough**

City Council Meetings: Second Monday of each month at Town Hall  
Written comments may be sent to the City Council in care of the City Clerk.

Town Hall: 1600 Floribunda Ave, Hillsborough, CA 94010

Public Works Main: (650) 375-7444

Water Billing or Service: (650) 375-7402

After Business Hours and Emergencies: (650) 375-7470

Email: [pw@hillsborough.net](mailto:pw@hillsborough.net)

Website: [www.hillsborough.net](http://www.hillsborough.net)

### **Bay Area Water Supply and Conservation Agency (BAWSCA) and Regional Water System Financing Authority (RFA)**

BAWSCA, comprised of 27 public agencies including Hillsborough negotiates water supply issues with SFPUC. The RFA oversees bonds issued to finance regional water improvements.

Office: (650) 349-3000

Website: [www.bawasca.org](http://www.bawasca.org)

### **SFPUC Commission**

Decisions about water sources and water quality including treatment processes are made by the SFPUC.

Public Meetings of Commission: Second and fourth Tuesday at 1:30 p.m. at San Francisco City Hall, 1 Carlton B. Goodlett Place Room 400, San Francisco, CA 94102.

Agendas and minutes for public meetings are maintained by the Commission Secretary.

Office of the Commission Secretary: (415) 554-3165

Water Quality Bureau: (650) 872-5950

Customer Service Bureau: (415) 551-3000

Website: [www.sfwater.org](http://www.sfwater.org)

### **State Water Resources Control Board**

Drinking Water Program, Santa Clara District:

(510) 620-3474

Drinking Water Treatment Device Certification Unit:

(916) 449-5600

Website: <http://www.cdph.ca.gov/programs/Pages/DWP.aspx>

### **Federal Environmental Protection Agency (EPA)**

Safe Drinking Water Hotline: (800) 426-4791

Website: [www.epa.gov/safewater](http://www.epa.gov/safewater)

### **Translation Languages**

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