

2014 WATER QUALITY REPORT



The Town of Hillsborough Department of Public Works (DPW) presents this annual report to provide consumers with important water quality information. It identifies where Hillsborough's water comes from, and how well it measures up to the water quality standards set by the State Water Resources Control Board (SWRCB) and the US Environmental Protection Agency (EPA). This report is compiled from water quality data for Calendar Year 2014 jointly by DPW and our water supplier, the San Francisco Public Utilities Commission (SFPUC).

Este informe contiene información muy importante sobre su agua potable.

Tradúzcalo o hable con alguien que lo entienda bien.

這是一份有關您飲用水的品質報告，內含重要資訊。若您對報告內容有不甚瞭解之處，請務必找人為您翻譯及詳細解釋。

How Safe Is Our Water?

Hillsborough's water is very safe. Both the SFPUC and DPW have worked hard to assure that the water delivered to your home is of the highest quality possible. In practical terms, removal of all natural contaminants in drinking water is neither economically feasible nor desirable. For instance, many minerals in the water have aesthetic value and a beneficial nutritional effect in low concentrations.



SFPUC Drinking Water Sources

The sources of drinking water (both tap water and bottled water) include rivers, lakes, oceans, streams, ponds, reservoirs, springs and wells. For the San Francisco Regional Water System, the major water source originates from spring snowmelt flowing down the Tuolumne River to the Hetch Hetchy Reservoir where it is stored. This pristine Sierra water source meets all federal and state criteria for watershed protection. The SFPUC also maintains stringent disinfection treatment practices, extensive bacteriological-quality monitoring and high operational standards. As a result, the SWRCB and EPA have granted the Hetch Hetchy water source a filtration exemption.

The Hetch Hetchy water is supplemented with surface water from two local watersheds. Additionally, rainfall and runoff from the Alameda Watershed — within the greater 128,424-acre Southern Alameda Creek Watershed and spanning more than 35,000 acres in Alameda and Santa Clara Counties — are collected in the Calaveras Reservoir and San Antonio Reservoir for subsequent treatment at the Sunol Valley Water Treatment Plant where filtration and disinfection are provided.

Rainfall and runoff from the 23,000-acre Peninsula Watershed in San Mateo County are stored in the Crystal Springs Reservoir, San Andreas Reservoir and Pilarcitos Reservoir and are treated at the Harry Tracy Water Treatment Plant. Similar treatment processes occur at the Sunol Plant for treating water from the Alameda Watershed.

In 2014, the Hetch Hetchy Watershed provided the majority of the total SFPUC water supply with the remainder contributed by the two local watersheds.

Protecting Our Watersheds

The SFPUC actively protects the water resources entrusted to its care. Its annual update of the Hetch Hetchy Watershed Sanitary Survey evaluates the sanitary conditions, water quality, potential contamination sources, and the results of watershed management activities with

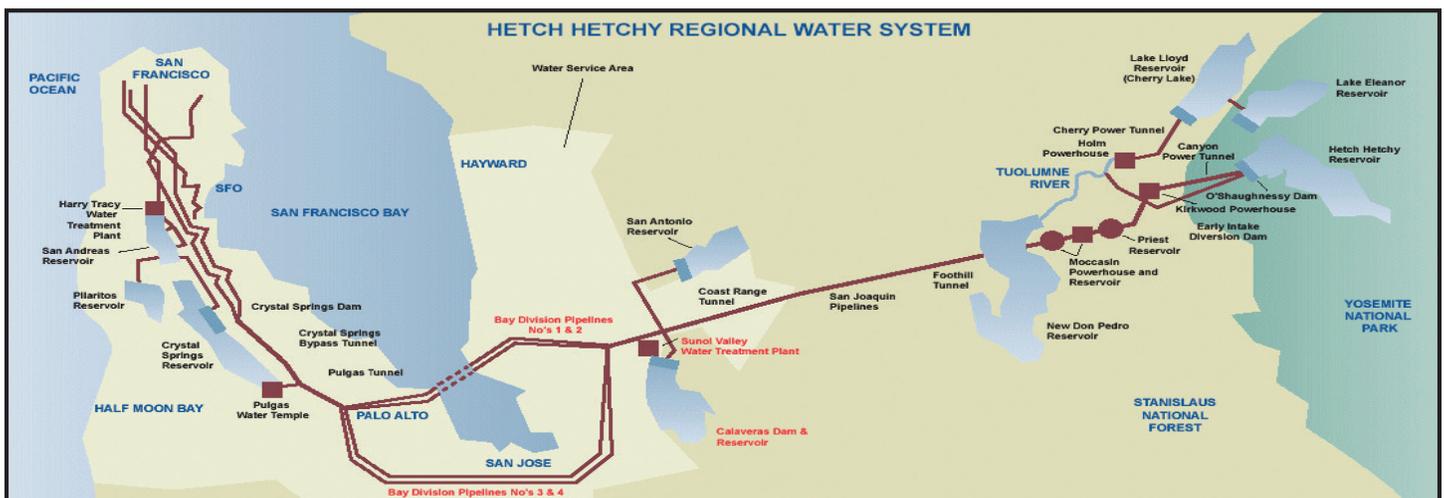
partner agencies (such as the National Park Service and US Forest Service). The SFPUC also conducts sanitary surveys every five years to detect and track sanitary concerns for the Bay Area watersheds and the approved standby water sources in the Early Intake Watershed, which includes Cherry Lake and Lake Eleanor. The latest 5-year surveys were completed in 2011 for the period of 2006-2010. These surveys identified wildlife, stock and human activities as potential contamination sources. The surveys are available for review at the SWRCB San Francisco District Office, (510) 620-3474.

Alert- Severe Drought

California is experiencing a severe drought. As a result, all water agencies, including Hillsborough, are required by the State Water Resources Control Board to reduce water use to meet a statewide water use reduction goal of 25% (as compared to 2013). Due to high seasonal summer use, Hillsborough is required to reduce its water use by 36% as compared to 2013 water use. This reduction in summer water use may have water quality impacts due to lower than normal turnover of water in water storage tanks and reservoirs. The Town will closely monitor water quality at its storage facilities, and will be taking a number of steps to ensure the good maintenance of water quality, including testing dead end lines, tanks and weekly testing at designated areas of the system. The Town will also use its mobile water filtration and treatment system (NO-DES) to flush water in areas of the Town with low water use or dead end lines.

Water Quality Data for Year 2014

The attached table lists all 2014 detected drinking water contaminants and the information about their typical sources. Contaminants below detection limits are not shown, in accord with the State Water Resources Control Board (SWRCB) regulatory guidance. The SWRCB allows the SFPUC to monitor some contaminants less than once per year because their concentrations do not change frequently.



Water Quality: Contaminants and Regulations

The SFPUC's Water Quality Division (WQD) regularly collects and tests water samples from reservoirs and designated sampling points throughout the system to ensure that the water delivered to you meets or exceeds federal and state drinking water standards. In 2014, WQD staff conducted more than 60,640 drinking water tests in the transmission and distribution systems. This monitoring effort is in addition to the extensive treatment process control monitoring performed by our certified and knowledgeable treatment plant staff and online instruments.

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. 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 EPA and SWRCB prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. SWRCB regulations also establish limits for contaminants in bottled water that provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline 800-426-4791.

Possible Contaminants In Source Water:

- 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, that 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 that can be naturally occurring or be the result of oil and gas production and mining activities.

Key Water Quality Terms

Following are definitions of key terms noted on the adjacent water quality data table. These terms refer to the standards and goals for water quality described below.

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 EPA.

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.

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 is also used to indicate the effectiveness of the filtration system. High turbidity can hinder the effectiveness of disinfectants.

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

Cryptosporidium: 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 2012. However, current test methods approved by the EPA 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.

- SFPUC conducted annual monitoring of all volatile organic chemicals (VOCs) in Table 64444-A and inorganic contaminants (except asbestos and cyanide) in Table 64431-A. All results not shown in the table below are less than the corresponding DLRs.
- SFPUC received a monitoring waiver for the period of 2011-2013 from SWRCB for all non-volatile synthetic organic chemicals (SOCs) in Table 64444-A.
- Since 2011 is the first year of the 9-year Compliance Cycle, SFPUC monitored all SOC (despite the waiver), radionuclides (in Table 64442), cyanide and asbestos, in addition to the annual VOCs and inorganics monitoring in June 2011.
(Data based on Hetch Hetchy water and effluents from both SVWTP and HTWTP)

Town of Hillsborough — Water Quality Data for Year 2014⁽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	0.2 - 0.6 ⁽²⁾	[2.8] ⁽³⁾	Soil runoff
Filtered Water from Sunol Valley Water Treatment Plant (SVWTP)	NTU	1 ⁽³⁾	N/A	-	[0.98]	Soil runoff
	-	min 95% of samples ≤ 0.3 NTU ⁽³⁾	N/A	97%-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 PRECURSORS						
Total Trihalomethanes	ppb	80	N/A	39.5 - 50.8	50.8 ⁽⁴⁾	Byproduct of drinking water disinfection
Haloacetic Acids	ppb	60	N/A	26.3 - 30.6	30.6	Byproduct of drinking water disinfection
Total Organic Carbon ⁽⁶⁾	ppm	TT	N/A	1.3 - 2.8	1.9	Various natural and man-made sources
MICROBIOLOGICAL						
Total Coliform ⁽⁶⁾	-	NoP ≤ 2 monthly samples	[0]		[3]	Naturally present in the environment
Giardia lamblia	cyst/L	TT	[0]	<0.01 - 0.04	<0.01	Naturally present in the environment
INORGANICS						
Fluoride (source water) ⁽⁷⁾	ppm	2.0	1	ND - 0.8	0.4 ⁽⁸⁾	Erosion of natural deposits, water additive to promote strong teeth
Chloramine (as chlorine)	ppm	MRDL = 4.0	MRDLG = 4	0.07 - 2.98	2.40 ⁽⁹⁾	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 - 18	12.3	Runoff / leaching from natural deposits
Odor Threshold	TON	3	N/A	ND = 1	ND	Naturally occurring organic materials
Specific Conductance	µS/cm	1600	N/A	32 - 222	151	Substances that form ions when in water
Sulfate	ppm	500	N/A	0.9 - 32	17	Runoff / leaching from natural deposits
Total Dissolved Solids	ppm	1000	N/A	31 - 120	81	Runoff / leaching from natural deposits
Turbidity	NTU	5	N/A	0.1 - 0.2	0.1	Soil runoff

LEAD AND COPPER	Unit	AL	PHG	Range	90th Percentile	Typical Sources in Drinking Water
Copper	ppb	1300	300	5.1 - 86.5 ⁽¹⁰⁾	71	Internal corrosion of household plumbing systems
Lead	ppb	15	0.2	<1.0 - 296.6 ⁽¹¹⁾	10.4	Internal corrosion of household plumbing systems

OTHER WATER QUALITY PARAMETERS	Unit	ORL	Range	Average
Alkalinity (as CaCO ₃)	ppm	N/A	8 - 94	37
Bromide ⁽¹²⁾	ppb	N/A	ND - 27	5
Calcium (as Ca)	ppm	N/A	3 - 20	11
Chlorate ⁽¹³⁾	ppb	(800) NL	37 - 740	314
Hardness (as CaCO ₃)	ppm	N/A	7 - 77	46
Magnesium	ppm	N/A	<0.2 - 6.4	3.9
pH	-	N/A	6.9 - 10.2	9.3
Potassium	ppm	N/A	2 - 5	4
Silica	ppm	N/A	4.8 - 5.2	5
Sodium	ppm	N/A	2.4 - 16	12

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 = parts per billion
ppm = parts per million
µS/cm = microSiemens / centimeter

Footnotes:

- All results met State and Federal drinking water health standards and was confirmed by the Town of Hillsborough
- 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. (if your system has 4 quarters of locational DBP data obtained under Stage 2 DBPR monitoring)
- Total organic carbon is a precursor for disinfection byproduct formation. The TT requirement applies to the filtered water from the SVWTP only.
- The highest number of positive samples collected in any one month [3 positives in May]. The MCL is ≤ 2 positive samples in one month.
- The SWRCB specifies the fluoride level in the treated water be maintained within a range of 0.8 ppm - 1.5 ppm. In 2014, the range and average of the fluoride levels were 0.6 ppm - 1.2 ppm and 0.9 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 reservoirs.
- This is the highest running annual average value.
- The most recent Lead and Copper Rule monitoring was in 2013. 0 of 42 site samples collected at consumer taps had copper concentrations above the AL. (Use only if necessary)
- The most recent Lead and Copper Rule monitoring was in 2013. 2 of 42 site samples collected at consumer taps had lead concentrations above the AL. (Use only if necessary)
- Bromide was detected in HTWTP effluent only. If you do not receive HTWTP water in 2014, you may exclude this contaminant from this table.
- The most recent Lead and Copper Rule monitoring was in 2010. 2 of 68 site samples collected at consumer taps had lead concentrations 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.

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, the elderly and infants can be at risk from infections.

These people should seek advice from their healthcare providers about drinking water. EPA/Centers for Disease Control (CDC) provide guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants. The information is available from the Safe Drinking Water Hotline 800-426-4791 or at www.epa.gov/safewater.

Emerging Contaminant Monitoring

Unregulated microorganisms and synthetic or naturally-occurring chemicals that are not commonly monitored by the water utilities are termed Contaminants of Emerging Concern (CEC). More than 100,000 chemicals are registered in the US. New chemicals are registered and new microorganisms are identified everyday. Some of these contaminants can be detected at extremely low levels in the environment by ever-improving laboratory methods. The health significance of these trace contaminants is typically unknown. The SFPUC Water Quality Division (WQD) has been proactive in addressing CEC through participation in national research projects and conducting independent monitoring of our source waters. To help focus the resources, WQD developed its own approach to organize and prioritize work on the CECs in drinking water and enhance public engagement in CEC issues. Evaluation is conducted every three years and reviewed by the San Francisco Department of Public Health, SFPUC Citizens' Advisory Committee and the Commission. By virtue of its pristine drinking water sources, the SFPUC water has not been vulnerable to many CECs that may concern other water suppliers, e.g., pesticides and pharmaceutical products. Periodic review will allow WQD to adjust priorities based on new information and conditions, e.g., new information on the health significance, occurrence and treatment of CECs. See the link below for SFPUC's CEC approach <http://sfwater.org/modules/showdocument.aspx?documentid=1691>.

2014 Violation of Drinking Water Standard

In May of 2014 our water system violated a drinking water standard. This was not an emergency, and only a very small part of our water system was affected by this situation.

The Town Water Division routinely monitors for drinking water contaminants by collecting six total coliform test samples per week. In May 2014 the Town collected 33 samples to test for the presence of coliform bacteria. From these samples, three showed the presence of total coliform bacteria. The standard is that no more than one sample per month may do so.

WHAT HAPPENED AND CORRECTIVE MEASURES TAKEN

Detection of Positive Sample Results in Late May

During the last week in May 2014, routine samples taken from the Town's water mains showed an increased level of total coliform bacteria. These bacteria occur naturally and are not harmful themselves, but are often indications that other bacteria may be present. Dangerous bacteria, such as fecal coliforms or *E. coli*, were not detected. The Town's water is supplied by the San Francisco Regional Water System (SFRWS), which is operated by the San Francisco Public Utilities Commission (SFPUC). Subsequent investigation showed that the increased bacteria levels were likely caused by an operational change by the SFRWS in connection with the upgrading of the Hetch Hetchy water transmission lines.

Corrective Measures by Hillsborough

When the positive samples were confirmed on May 31, 2014, the Town's Water Department immediately flushed the water mains in the affected area and took new samples. These samples were negative. All subsequent samples have been within normal ranges.

Corrective Measures by SFPUC

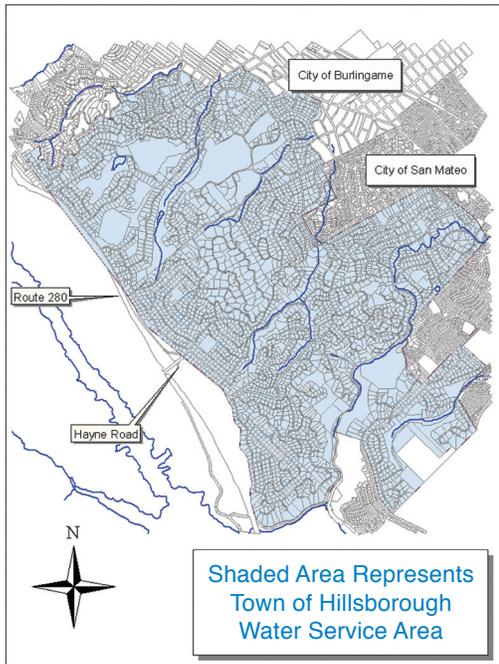
The increased total coliform positives in Hillsborough started about the same time that a nearby section of a San Francisco Regional Water System transmission main near Town was taken out of service. While this pipeline was out of service, the normal direction of water flow in another pipeline was reversed and pressure was increased. The SFPUC believes that the changes in flow rates and direction of flow in their transmission system during the shutdown may have dislodged some biological material and caused the elevated levels of total coliform positives in the affected area.

SFPUC disinfected the original transmission line and the pipeline connection to the Town. With these operational changes, the delivery system has returned to normal conditions. No new problems have been reported.



Town of Hillsborough
1600 Floribunda Avenue
Hillsborough, CA 94010

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2014 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

Website: 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

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

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

Translation Languages

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