

# 2009 WATER QUALITY REPORT



*Hillsborough Beautification Foundation dedicated Centennial Garden on May 5, 2010 to celebrate the 100th anniversary of the Town's incorporation.*

The Town of Hillsborough Department of Public Works (DPW) presents the following report to provide consumers with important water quality information. It describes where your water comes from, what is in it and how well it measures up to the water quality standards set by the California Department of Public Health (CDPH) and the US Environmental Protection Agency (EPA). This report is compiled from water quality data collected in the calendar year 2009 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. Many minerals in the water for instance have aesthetic value and have a beneficial nutritional effect in low concentrations.

The sources of drinking (both tap and bottled) water include rivers, lakes, 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.

## Where does our water come from?

All of Hillsborough's water is provided by the San Francisco Public Utilities Commission (SFPUC). The sources of drinking water (both tap water and bottled water) include rivers, lakes, oceans, streams, ponds, reservoirs, springs, and wells. For our 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 water source is located in the well-protected Sierra region and meets all federal and state criteria for watershed protection. Based on the SFPUC's disinfection treatment practice, extensive bacteriological-quality monitoring, and high operational standards, the State and USEPA have granted the Hetch Hetchy water source a filtration exemption. In other words, the source is so clean and protected that the SFPUC is not required to filter water from the Hetch Hetchy Reservoir.

The Hetch Hetchy water is supplemented with surface water collected from two local watersheds. Rainfall and runoff collected from the Alameda Watershed, which spans more than 35,000 acres in Alameda and Santa Clara Counties, are collected in Calaveras and San Antonio Reservoirs. Prior to distribution, the water from these two reservoirs is treated at the Sunol Valley Water Treatment Plant (SVWTP). Treatment processes include coagulation, flocculation, sedimentation, filtration, and disinfection. Fluoridation, chloramination and corrosion control treatment are provided for the combined Hetch Hetchy and SVWTP water at the Sunol Chloramination and Fluoridation Facilities.

Rainfall and runoff captured in the 23,000-acre Peninsula Watershed, located in San Mateo County, are stored in reservoirs: Crystal Springs (Lower and Upper), San Andreas, and Pilarcitos. The water from these reservoirs is treated at the Harry Tracy Water Treatment Plant (HTWTP). Treatment processes include ozonation, coagulation, flocculation, filtration, disinfection, fluoridation, chloramination, and corrosion control treatment.

In 2009, the Hetch Hetchy Watershed provided approximately 87% of our total water supply with the remainder contributed by the two local watersheds.

## Watershed Protection

The SFPUC actively and aggressively protects the natural water resources entrusted to its care. An annual report on watershed for the Hetch Hetchy is prepared to evaluate their sanitary conditions, water quality, and potential contamination sources. The report also presents performance results of watershed management activities implemented by the SFPUC and its partner agencies, such as the National Park Service, to reduce or eliminate the potential contamination sources. The 2009 sanitary survey concludes that only very low levels of contaminants associated with wildlife and human activities exist in the watersheds.

The SFPUC also conducts sanitary surveys of the Alameda and Peninsula watersheds every five years. The potential contamination sources identified in the 2005 survey are similar to the upcountry watersheds. These survey reports are available at the CDPH San Francisco District office (510-620-3474).

## Water Quality Data for Year 2009

The Town of Hillsborough — Water Quality Data table lists drinking water contaminants detected in 2009. Contaminants below detection limits are not shown. In addition to the contaminants' names, applicable drinking water standards or regulatory action levels, ideal goals for public health and levels detected in water, the table also includes the information about the typical contaminant sources and footnotes explaining the findings. The State allows the SFPUC to monitor for some contaminants less than once per year because their concentrations do not change frequently. The SFPUC received from the State a monitoring waiver for some contaminants that were absent in the water.





# Town of Hillsborough — Water Quality Data for Year 2009<sup>(1)</sup>

Data based on Hetch Hetchy water and effluents from both SVWTP and HTWTP

DETECTED CONTAMINANTS	Unit	MCL	PHG or [MCLG]	Range or Level Found	Average or [Max]	Major Sources in Drinking Water
<b>TURBIDITY<sup>(2)</sup></b>						
For Unfiltered Hetch Hetchy Water	NTU	5	N/A	0.27 - 0.52 <sup>(3)</sup>	[3.87] <sup>(4)</sup>	Soil runoff
For Filtered Water from Sunol Valley Water Treatment Plant (SVWTP)	NTU	1 <sup>(5)</sup>	N/A	-	[0.26]	Soil runoff
	-	min 95% of samples < 0.3 NTU <sup>(5)</sup>	N/A	100%	-	Soil runoff
For Filtered Water from Harry Tracy Water Treatment Plant (HTWTP)	NTU	1 <sup>(5)</sup>	N/A	-	[0.18]	Soil runoff
	-	min 95% of samples < 0.3 NTU <sup>(5)</sup>	N/A	100%	-	Soil runoff
<b>DISINFECTION BYPRODUCTS AND PRECURSOR (SFPUC Regional System) - for information only</b>						
Total Trihalomethanes	ppb	80	N/A	9 - 54	[33] <sup>(6)</sup>	Byproduct of drinking water chlorination
Haloacetic Acids	ppb	60	N/A	5 - 27	[21] <sup>(6)</sup>	Byproduct of drinking water chlorination
Total Organic Carbon <sup>(7)</sup>	ppm	TT	N/A	2.2 - 3.2	2.7	Various natural and man-made sources
<b>DISINFECTION BYPRODUCTS AND PRECURSOR</b>						
Total Trihalomethanes	ppb	80	N/A	24.3 - 56.6	42.9 <sup>(6)</sup>	Byproduct of drinking water chlorination
Haloacetic Acids	ppb	60	N/A	15 - 34	26.8 <sup>(6)</sup>	Byproduct of drinking water chlorination
Total Organic Carbon <sup>(7)</sup>	ppm	N/A	N/A	N/A	N/A	Various natural and man-made sources
<b>MICROBIOLOGICAL</b>						
Total Coliform <sup>(8)</sup>	-	> 1 positive sample per month	[0]	0	0%	Naturally present in the environment
Giardia lamblia	cyst/L	TT	[0]	0.01 - 0.05	[0.05]	Naturally present in the environment
<b>INORGANIC CHEMICALS</b>						
Fluoride (source water) <sup>(9)</sup>	ppm	2.0	1	<0.1 - 0.8	0.3 <sup>(10)</sup>	Erosion of natural deposits
Chlorine (including free chlorine and chloramine)	ppm	MRDL = 4.0	MRDLG = 4	1.3 - 2.5	2.2 <sup>(6)</sup>	Drinking water disinfectant added for treatment

CONSTITUENTS WITH SECONDARY STANDARDS	Unit	SMCL	PHG	Range	Average	Typical Sources in Drinking Water
Aluminum	ppb	200	N/A	<50 - 51	<50	Erosion of natural deposits
Chloride	ppm	500	N/A	4 - 14.6	9.5	Runoff / leaching from natural deposits
Color	unit	15	N/A	<5 - 9	<5	Naturally-occurring organic materials
Specific Conductance	µS/cm	1600	N/A	30 - 309	170	Substances that form ions when in water
Sulfate	ppm	500	N/A	1.1 - 35.6	16.6	Runoff / leaching from natural deposits
Total Dissolved Solids	ppm	1000	N/A	22 - 168	92	Runoff / leaching from natural deposits
Turbidity	NTU	5	N/A	0.08 - 0.33	0.16	Soil runoff

LEAD AND COPPER	Unit	AL	PHG	Range	90th Percentile	Typical Sources in Drinking Water
Copper	ppb	1300	300	7 - 86 <sup>(11)</sup>	59	Corrosion of household plumbing systems
Lead	ppb	15	2	<1.0 - 9.5 <sup>(12)</sup>	4.6	Corrosion of household plumbing systems

OTHER WATER QUALITY PARAMETERS	Unit	ORL	Range	Average	KEY
Alkalinity (as CaCO <sub>3</sub> )	ppm	N/A	8 - 102	50	< / ≤ = less than / less than or equal to
Boron	ppb	N/A	<100 - 102	<100	AL = Action Level
Bromide	ppb	N/A	<10 - 16	<10	Max = Maximum
Calcium	ppm	N/A	2 - 26	12	Min = Minimum
Chlorate <sup>(12)</sup>	ppb	(800) NL	56 - 511	258	N/A = Not Available
Hardness (as CaCO <sub>3</sub> )	ppm	N/A	12 - 108	55	ND = Non-detect
Magnesium	ppm	N/A	0.2 - 8.8	4.5	NL = Notification Level
pH	-	N/A	8.7 - 8.8	8.7	NTU = Nephelometric Turbidity Unit
Potassium	ppm	N/A	0.24 - 1.5	0.9	ORL = Other Regulatory Level
Silica	ppm	N/A	4.8 - 7.5	5.9	ppb = parts per billion
Sodium	ppm	N/A	3 - 23	14	ppm = parts per million
					µS/cm = microSiemens / centimeter

Note:

- All results met State and Federal drinking water health standards. (And confirmed by the Town of Hillsborough.)
- Turbidity is a water clarity indicator; it also indicates the effectiveness of the filtration plants.
- Turbidity is measured every four hours. These are monthly average turbidity values.
- This is the highest turbidity of the unfiltered water served to customers in 2009. The highest single turbidity measurement of the unfiltered water in 2009 was 10 NTU but the turbid water was pumped away to San Antonio Reservoir without serving customers. The startup of San Joaquin Pipelines caused elevated turbidities as a result of sediment resuspension in the pipelines.
- There is no MCL for turbidity. The limits are based on the TT requirements in the State drinking water regulations.
- This is the highest quarterly 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.
- The SFPUC adds fluoride to the naturally occurring level to help prevent dental caries in consumers. The CDPH requires our fluoride levels in the treated water to be maintained within a range of 0.8 ppm - 1.5 ppm. In 2009, the range and average of our fluoride levels were 0.7 ppm - 1.3 ppm and 1.0 ppm, respectively.
- The naturally occurring fluoride levels in the Hetch Hetchy and SVWTP raw water are ND and 0.2 ppm, respectively. The HTWTP raw water has elevated fluoride levels due to the continued supply of the fluoridated Hetch Hetchy & SVWTP treated water into Lower Crystal Springs Reservoir, which supplies water via San Andreas Reservoir to the HTWTP for treatment.
- The most recent Lead and Copper Rule monitoring was in 2007. 0 of 62 water samples collected at consumer taps had copper concentrations above the Action Level. Another round of monitoring will be conducted during the summer of 2010.
- The most recent Lead and Copper Rule monitoring was in 2007. 0 of 62 water samples collected at consumer taps had lead concentrations above the Action Level. Another round of monitoring will be conducted during the summer of 2010.
- There were 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.

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

# 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 U.S. Environmental Protection Agency.

**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.

**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 are set to protect the odor, taste, and appearance of drinking water.

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

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

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

## Fluoride

The SFPUC system treats your water by adding fluoride to the naturally occurring level in order to help prevent dental caries in consumers. The fluoride levels in the treated water are maintained within a range of <0.1–0.8 ppm, as required by CDPH regulations.

## Lead and Copper

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. SFPUC is responsible for providing high quality drinking water, but cannot control the variety of materials being used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for

lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>. The Town is currently looking for volunteers to participate in the summer 2010 Lead and Copper Sampling Program. (Please contact [pw@hillsborough.net](mailto:pw@hillsborough.net) if you would like to participate.)

## Reducing Lead from Plumbing Fixtures

Some homes in the community may have increased levels of lead in their tap water caused by the deterioration of household plumbing materials that contain lead. Infants and young children are typically at greatest health risk. Fixtures purchased in the U.S. after 1986 are likely to be lead free. Water pipes installed after 2010 must be lead free. If you are concerned about elevated lead levels in your water, have your water from your home tested.

## Chloramine

Chloramine is a disinfectant the SFPUC adds to water for public health protection. It is a combination of chlorine and ammonia that is currently considered best technology for controlling the formation of certain regulated organic disinfection byproducts.

Chloraminated water is safe for people and animals to drink, and for all other general uses. However, as with chlorine, chloramine will need to be removed for fish and amphibian use, and for people or businesses requiring highly treated water. Unlike chlorine, chloramine cannot be removed from water by boiling, or by letting an open container of water stand to dissipate chlorine. It can only be neutralized, or removed with specific treatment methods.

For customers with aquariums or koi ponds: Local Bay Area pet stores stock a number of products that effectively treat the water for both fresh and salt water fish. For more information, you can refer to the links posted on the SFPUC website at [www.sfwater.org](http://www.sfwater.org).

For homeowners with plumbing repairs or remodeling projects: Use chloramine-resistant plumbing materials that are widely available at local Bay Area home improvement and plumbing supply retail stores.

For customers who undergo dialysis treatment: The CDHS inspects all hemodialysis clinics, including those that use SFPUC water to make sure that their equipment and procedures meet all applicable health and safety standards.

## Why were any contaminants detected in our drinking water?

The SFPUC's Water Quality Division regularly collects and tests water samples from reservoirs and designated sampling point throughout the system to ensure that the SFPUC's water meets or exceeds federal and state drinking water standards. In 2009, Water Quality staff conducted 58,595 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. The SFPUC also has online instruments providing continuous water quality monitoring at numerous locations.

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 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 USEPA and California Department of Public Health (CDPH) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH 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 USEPA's Safe Drinking Water Hotline 800-426-4791

Contaminants that may be present in source water include:

- 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic Chemical Contaminants, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive Contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

## *Cryptosporidium*

*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 2009. 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.

## What setting should be used for the water softener in my new dishwasher or washing machine?

For most appliances, you will not need to add any salt. Hillsborough's water is soft. It ranges from 12 – 108 mg/L (parts per million) of hardness. That is the equivalent of <1 – 6.4 grains per gallon of hardness.

## Special Health Needs

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791) or at [www.epa.gov/safewater](http://www.epa.gov/safewater).

## SFPUC Water Quality Change

In January 2010, our water wholesaler, the San Francisco Public Utilities Commission shut down the pipelines from their reservoirs in the Sierra Nevada to install seismic upgrades and perform maintenance. Water is now coming from local sources in the Bay Area.

**Milky Water:** Tiny bubbles of air have saturated water. You will likely notice that the water clears up from the bottom of a glass container as the bubbles rise to the surface.

**Changes in Taste:** The SFPUC normally provides its customers with a blend of about 87% Hetch Hetchy water and 13% locally produced water. Since Hetch Hetchy is not in the mix, the taste is slightly different.

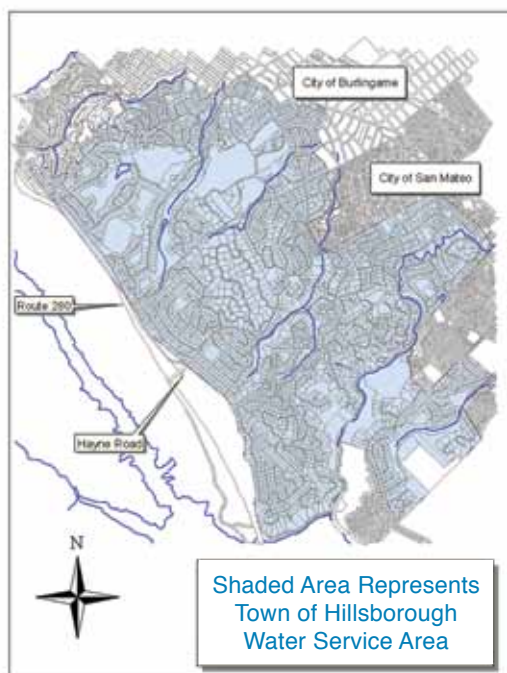
You can refer to the SFPUC Public Notice at their website:

[http://sfwater.org/detail.cfm/MC\\_ID/18/MSD\\_ID/114/C\\_ID/4840](http://sfwater.org/detail.cfm/MC_ID/18/MSD_ID/114/C_ID/4840)



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## 2009 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 in writing or in person. Information about public meetings, proposed and current regulations, water conservation and other consumer information can be found on the websites of all agencies.

For inquiries, contact Carlos Castro: (650) 375-7504

### **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 Director: Martha DeBry

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 and Regional Water System Financing Authority (CRFA)**

BAWSCA is comprised of 27 public agencies including Hillsborough, negotiates water supply issues with SFPUC. The RFA is overseeing 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, 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, Room 400

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)

### **California Department of Public Health**

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.