

2013 WATER QUALITY REPORT



The Town of Hillsborough Department of Public Works (DPW) presents the annual report to provide consumers with important water quality information. It identifies where your water comes from, 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 for Calendar Year 2013 jointly by PW 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 CDPH and EPA have granted the Hetch Hetchy water source a filtration exemption.

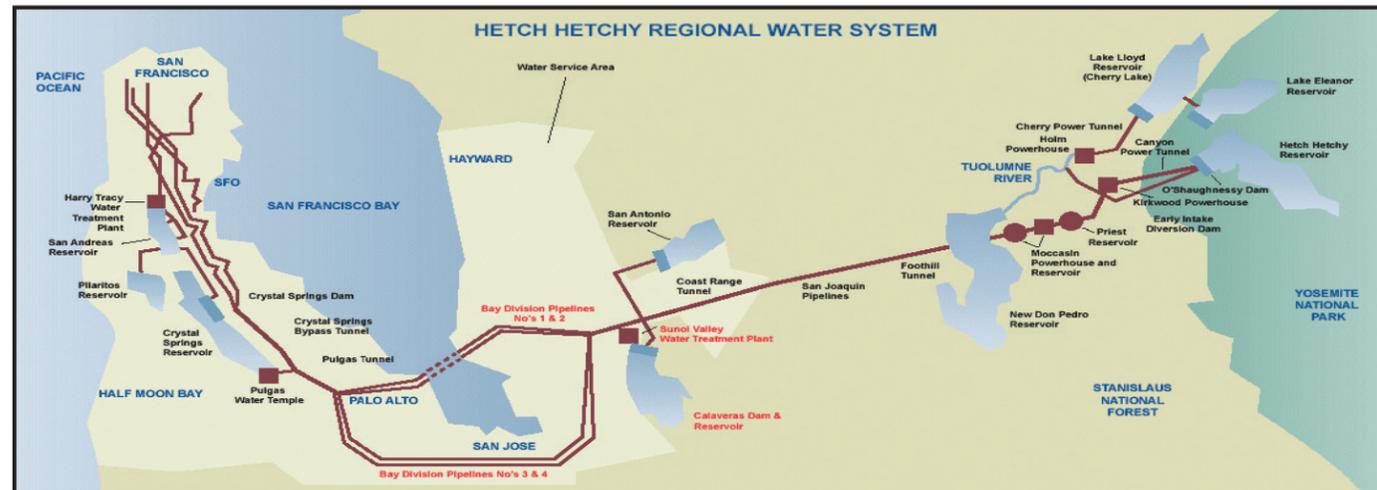
The Hetch Hetchy water is supplemented with surface water from two local watersheds. Additionally, rainfall and runoff from the Alameda Watershed — within the greater 128,424-acre Southern Alameda Creek Watershed and spanning more than 35,000 acres in Alameda and Santa Clara counties — are collected 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 treated at the Harry Tracy Water Treatment Plant. Similar treatment processes to the Sunol plant are used for treating this local source.

In 2013, 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 part-



ner 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 CDPH San Francisco District office, (510) 620-3474.

Reducing Lead from Plumbing Fixtures

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. 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 levels 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 800-426-4791, or at www.epa.gov/safewater/lead.

Water Quality Data for Year 2013

The attached table lists all 2013 detected drinking water contaminants and the information about their typical sources. Contaminants below detection limits are not shown, in accord with the California Department of Public Health (CDPH) regulatory guidance. The CDPH 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 2013, 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 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 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 and reporting requirements, 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 and 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 CDPH 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's (despite the waiver), radionuclides (in Table 64442), cyanide, and asbestos in addition to the annual VOCs and inorganics monitoring in June 2011.
(Data based Town of Hillsborough, Hetch Hetchy water and effluents from both SVWTP and HTWTP.)

Town of Hillsborough — Water Quality Data for Year 2013⁽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 - 0.3 ⁽²⁾	[3.6] ⁽⁵⁾	Soil runoff
Filtered Water from Sunol Valley Water Treatment Plant (SVWTP)	NTU	1 ⁽⁴⁾	N/A	-	[0.98]	Soil runoff
	-	min 95% of samples ≤ 0.3 NTU ⁽⁴⁾	N/A	99.9%	-	Soil runoff
Filtered Water from Harry Tracy Water Treatment Plant (HTWTP)	NTU	1 ⁽⁴⁾	N/A	-	[0.13]	Soil runoff
	-	min 95% of samples ≤ 0.3 NTU ⁽⁴⁾	N/A	100%	-	Soil runoff
DISINFECTION BYPRODUCTS AND PRECURSORS - Hillsborough Distribution System						
Total Trihalomethanes	ppb	80	N/A	38.4 - 60.5	54.1 ⁽⁵⁾	Byproduct of drinking water disinfection
Haloacetic Acids	ppb	60	N/A	33.1 - 43.4	39.2 ⁽⁵⁾	Byproduct of drinking water disinfection
Total Organic Carbon ⁽⁶⁾	ppm	TT	N/A	1 - 3.4	2.2	Various natural and man-made sources
MICROBIOLOGICAL - Hillsborough Distribution System						
Total Coliform ⁽⁷⁾	-	2	[0]	0	0%	Naturally present in the environment
Giardia lamblia	cyst/L	TT	[0]	ND - 0.07	[0.07]	Naturally present in the environment
INORGANICS						
Fluoride (source water) ⁽⁸⁾	ppm	2.0	1	ND - 0.8	0.4 ⁽⁹⁾	Erosion of natural deposits, water additive to promote strong teeth
Monochloramine (as chlorine) - Hillsborough Distribution System	ppm	MRDL = 4.0	MRDLG = 4	1.07 - 2.98	2.49 ⁽¹⁰⁾	Drinking water disinfectant added for treatment
RADIONUCLIDES						
Gross Alpha Particle Activity	pCi/L	15	(0)	ND - 3.9	ND	Erosion of natural deposits

CONSTITUENTS WITH SECONDARY STANDARDS	Unit	SMCL	PHG	Range	Average	Typical Sources in Drinking Water
Aluminum ⁽¹¹⁾	ppb	200	600	ND - 52	ND	Erosion of natural deposits, some water treatment residue
Chloride	ppm	500	N/A	<3 - 18	12.3	Runoff / leaching from natural deposits
Color	unit	15	N/A	<5 - 7	<5	Naturally occurring organic materials
Specific Conductance	µS/cm	1600	N/A	31 - 344	169	Substances that form ions when in water
Sulfate	ppm	500	N/A	0.9 - 40	16.6	Runoff / leaching from natural deposits
Total Dissolved Solids	ppm	1000	N/A	<20 - 195	71	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 ⁽¹²⁾	71	Internal corrosion of household plumbing systems
Lead	ppb	15	0.2	<1.0 - 296.6 ⁽¹³⁾	10.4	Internal corrosion of household plumbing systems

OTHER WATER QUALITY PARAMETERS	Unit	ORL	Range	Average	KEY
Alkalinity (as CaCO ₃)	ppm	N/A	7 - 71	46	< / ≤ = less than / less than or equal to
Bromide	ppb	N/A	17 - 24	21	AL = Action Level
Calcium (as Ca)	ppm	N/A	3 - 23	13	Max = Maximum
Chlorate ⁽¹⁴⁾	ppb	(800) NL	39 - 690	303	Min = Minimum
Hardness (as CaCO ₃)	ppm	N/A	7 - 89	53	N/A = Not Available
Magnesium	ppm	N/A	<0.2 - 8.3	5.3	ND = Non-Detect
pH	-	N/A	6.5 - 9.4	8.4	NL = Notification Level
Silica	ppm	N/A	4.8 - 5.2	5	NoP = Number of Coliform-Positive Sample
Sodium	ppm	N/A	3 - 18	12	NTU = Nephelometric Turbidity Unit
					ORL = Other Regulatory Level
					ppb = parts per billion
					ppm = parts per million
					µS/cm = microSiemens / centimeter

Footnotes:

- All the San Francisco PUC and the Town of Hillsborough testing results met State and Federal drinking water health standards.
- Turbidity is measured every four hours. These are monthly average turbidity values.
- The highest turbidity of the unfiltered water in 2012 was 2.9 NTU but the water was not served to customers. The brief turbidity spike indicated in the table was not observed upstream in San Joaquin Pipelines.
- There is no turbidity MCL for filtered water. The limits are based on the TT requirements for filtration systems in the State drinking water regulations.
- This is the highest locational running annual average values for Stage 2 DBP monitoring for 2nd through 4th quarters 2012
- Total organic carbon is a precursor for disinfection byproduct formation. The TT requirement applies to the filtered water from the SVWTP only. It is not measured in the Hillsborough water system.
- For systems collecting <40 samples per month, the MCL is 2 for each month.
- The SFPUC adds fluoride to an optimum level of 1.0 ppm to help prevent dental caries in consumers. The CDPH specifies the fluoride levels in the treated water to be maintained within a range of 0.8 ppm - 1.5 ppm. In 2012, the range and average of the fluoride levels were 0.4 ppm - 1.3 ppm and 1.0 ppm, respectively.
- The fluoride levels in the Hetch Hetchy and SVWTP raw water were ND and 0.2 ppm, respectively. The HTWTP raw water had elevated fluoride levels of 0.6 ppm - 0.8 ppm attributed to the transfer of fluoridated Hetch Hetchy & SVWTP treated water into the Lower Crystal Springs Reservoir, which supplies water via the San Andreas Reservoir to the HTWTP for treatment.
- This is the highest quarterly running annual average value.
- Aluminum also has a primary MCL of 1,000 ppb.
- The most recent Lead and Copper Rule monitoring was in 2010. 0 of 68 site samples collected at consumer taps had copper concentrations above the Action Level. Next sampling period is Aug-Sept 2013.
- 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 byproduct of sodium hypochlorite used by the SFPUC for water disinfection.
- 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 Town of Hillsborough water system phone number: (650) 375-7444.

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.asp?documentid=1691>.

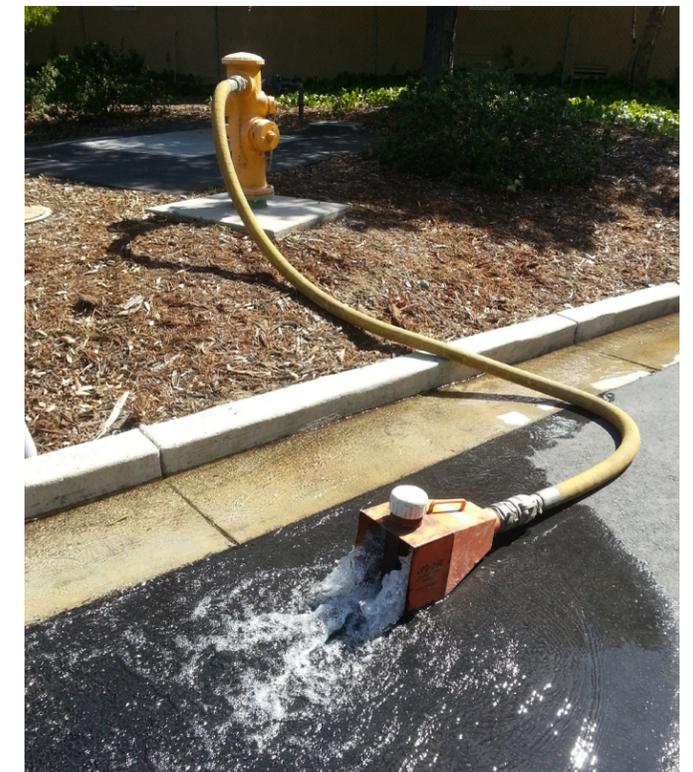
Why Does Hillsborough Flush Fire Hydrants?

Sometimes it looks like Hillsborough is just pouring water down the gutter; however there are reasons why the Hillsborough Department of Public Works must open fire hydrants.

Water Quality: The disinfectant chloramine becomes less effective with age. Where there are dead end pipes and very low water demand, the Town must flush the fire hydrant to ensure that fresh water is pulled into the water main increasing the disinfectant residual.

No-Des: The No-Des flushing method is an environmentally friendly alternative to conventional water main flushing (unidirectional flushing). Water quality is improved without wasting millions of gallons of water. Key benefits of this type of flushing are virtual elimination of water waste, and the removal of particles and biofilm from mains.

Fire Flows- Each fire hydrant must be tested periodically to ensure that that it is functioning properly. Fire hydrants are then color coded according to the fire flow rate that it produces. This assists the Fire Department with determining which hydrants to use and how to use them.

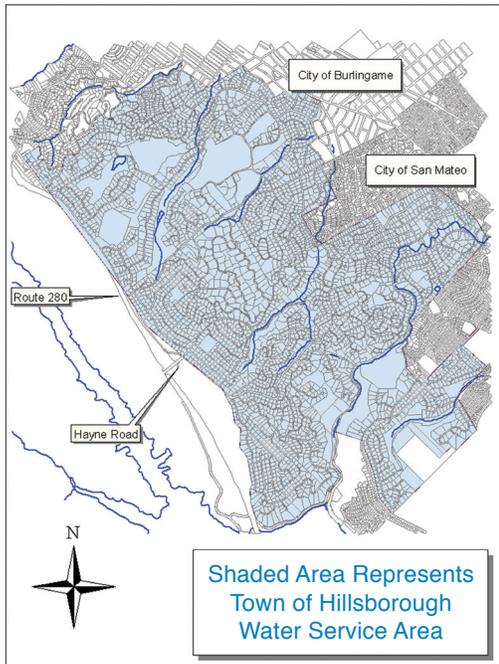


Water department personnel conducting a fire flow



Town of Hillsborough
1600 Floribunda Avenue
Hillsborough, CA 94010

PRSRT STANDARD
U.S. POSTAGE PAID
SAN FRANCISCO, CA
PERMIT NO. 4118



2013 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 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 (CRFA)

BAWSCA, 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

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

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

Translation Languages

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