

This report gives important information about your drinking water.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo a alguien que lo entienda bien.



Water Quality Report 2012

City of Brisbane and GVMID

The City of Brisbane Public Works Department, in coordination with the San Francisco Public Utilities Commission (SFPUC), is pleased to present its 2012 Annual Water Quality Consumer Confidence Report. We want our customers to know where their drinking water comes from, how it is treated and maintained, the results of water quality monitoring, and other important information about water quality. During 2012, water delivered to customers in the City of Brisbane and Guadalupe Valley Municipal Improvement District (GVMID) met all United States Environmental Protection Agency (USEPA) and California Department of Public Health (CDPH) drinking water quality standards. The City of Brisbane and the SFPUC vigilantly safeguard their water supplies and are committed to providing you with safe, high-quality drinking water.

CITY OF BRISBANE AND GVMID WATER DISTRIBUTION SYSTEM

In 2012, the City of Brisbane and GVMID supplied an average of 578,000 gallons per day to our residents, businesses and landscaping services in Brisbane. The City of Brisbane and GVMID receive water directly from two large SFPUC pipelines carrying water from the Hetch Hetchy system. The GVMID Water District supplies Crocker Industrial Park and the Northeast Ridge Development, while the City of Brisbane Water District supplies the remainder of the City. The City of Brisbane and GVMID water distribution system includes 5 water storage tanks and 4 booster pump stations serving 7 pressure zones and more than 25 miles of underground pipeline and almost 700 valves, over 220 fire hydrants and over 1,900 customer services. The two water districts are interconnected through various valves and pressure reducing stations. Effective operation, maintenance and monitoring of the distribution system by City staff assure that the water maintains a high quality and adequate pressure as it travels through the system to your tap.

Safeguarding Water Supply and System

Securing our water storage and pumping facilities is a top priority. The City performs routine water sampling, equipment and facility maintenance, and daily security monitoring of all the critical water facilities. We inspect and test our emergency backup power generators on a monthly basis.

Water Storage Tanks Inspection and Cleaning

The inside of all the City water storage tanks are inspected and cleaned annually to ensure the internal surface condition and health of the storage facilities are maintained. The tanks are routinely sampled and monitored



Watershed, the major water source originates from 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. The SFPUC maintains stringent disinfection treatment practices extensive bacteriological monitoring, and high operational standards. As a result, the CDPH and USEPA have granted the Hetch Hetchy water source a filtration exemption.

ALAMEDA AND PENINSULA WATERSHEDS
The Hetch Hetchy water is supplemented with surface water from two local watersheds. 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 and San Antonio reservoirs and treated at the Sunol Valley Water Treatment Plant.

Rainfall and runoff from the 23,000-acre Peninsula Watershed in San Mateo County are stored in Crystal Springs, San Andreas, and

Pilarcitos reservoirs and treated at the Harry Tracy Water Treatment Plant (WTP).

WATERSHED PROTECTION
The SFPUC actively protects the water resources entrusted to its care. Hetch Hetchy Watershed is surveyed annually to evaluate the sanitary conditions, water quality, potential contamination sources, and the results of watershed management activities conducted by SFPUC and its partner agencies (including National Park Service and US Forest Service). Once every five years the local watersheds and the approved standby water sources in Early Intake Watershed, which includes Cherry Lake and Lake Eleanor are surveyed. The latest 5-year survey was completed in 2011 for the period of 2006-2010. These surveys identified wildlife, stock, and human activities as potential contamination sources. The reports are available for review at the CDPH San Francisco District office, 510-620-3474.

The City closely monitors the water in all the storage tanks, and operational procedures are in place to quickly respond to slight changes in the water quality. In 2012, over 200 samples were collected and tested from the water storage tanks and tested for specific water quality parameters.

Disinfection Byproducts, such as Trihalomethanes (THMs) and Haloacetic Acids (HAAs) are also monitored quarterly by the City to ensure that concentrations do not exceed levels set by the USEPA and CDPH. Total Disinfectant Byproducts (DBPs) are created by the disinfectant reacting with natural organic and inorganic matter in source water and water in the distribution system. With the conversion from chlorine to chloramines as the water disinfectant, the level of DBPs in our drinking water has consistently remained below the current and proposed regulatory limits.

In addition to all the monitoring performed by the City of Brisbane, the SFPUC Water Quality Division regularly collects and tests water samples from reservoirs and designated sampling points throughout the system to ensure that the water delivered to the City of Brisbane and GVMID meets or exceeds federal and state drinking water standards. In 2012, SFPUC Water Quality staff conducted more than 60,640 drinking water tests throughout the entire transmission and distribution system. This monitoring effort is in addition to the extensive treatment process control monitoring.

WHERE DOES OUR WATER COME FROM!
Brisbane customers receive 100% of their water from SFPUC. The SFPUC supplies water to Brisbane from two major sources: Hetch Hetchy Watershed located in the Yosemite National Park, and local watersheds in Alameda, Santa Clara, and San Mateo Counties.

HETCH HETCHY WATERSHED
In 2012, the Hetch Hetchy Watershed, located in Yosemite National Park, provided the majority of the total water supply, with the remainder contributed by the two local watersheds. For the Hetch Hetchy

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Rainfall and runoff from the 23,000-acre Peninsula Watershed in San Mateo County are stored in Crystal Springs, San Andreas, and

on a weekly basis to ensure proper levels of disinfectant are present.

The exterior of each tank is inspected daily for any signs of tampering or exterior surface damage.

Cross Connection Control Program

The City of Brisbane and GVMID, in coordination with the San Mateo County Department of Environmental Health, operate and enforce an active cross connection control program to prevent the intrusion of potentially harmful materials into the drinking water system. Cross connection is controlled by isolating potential hazards from the drinking water supply with the installation of approved backflow prevention devices that are tested and inspected annually.

Water Main Flushing and Valve Exercising

Flushing of the water mains and exercising of the main line valves is an important part of the routine maintenance program that is performed throughout the year by City staff. Flushing of the water mains is necessary to maintain high water quality and clean the inside of the pipes and remove the sediment that finds its way into our system. Exercising the many valves in the City on a routine basis is necessary to clean each valve seat to ensure that the valves will work properly when needed.

Chloramine Disinfection

The SFPUC converted its primary drinking water disinfectant from free chlorine to chloramine in 2004. Since the conversion to chloramines, the levels of disinfection by-products such as trihalomethanes (THMs) in the water have continued to remain at lower levels. IMPORTANT

PUBLIC PARTICIPATION

The Brisbane City Council is the governing authority of the Brisbane and GVMID Water Systems. The City Council generally meets at 7:30 pm on the first and third Mondays of every month at the Brisbane City Hall Community Meeting Room. Please call the Brisbane City Clerk for more information. SFPUC, the governing authority of the wholesale water suppliers to Brisbane, meets on the second and fourth Tuesday of the month at 1:30 pm at San Francisco City Hall, Room 400. Inquires about the SFPUC meetings can be made by calling the Office of the Commission Secretary at (415)554-3165.

FOR MORE INFORMATION

Additional information about the content of this report can be obtained by calling Jerry Flanagan, City of Brisbane Public Works Department, at 415-508-2130, contacting the SFPUC Water Quality Bureau at 877-737-8297, or visiting the SFPUC website at www.sfwater.org.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER
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Monitoring Requirements Not Met in August 2012 for City of Brisbane, Water System No. 41110002

On September 6, 2012, we became aware that our system recently failed to collect the correct number of drinking water samples. Although this incident was not an emergency as our customers, you have a right to know what you should do, what happened, and what we did to correct this situation.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. According to our bacteriological sampling schedule, we are required to collect four (4) bacteriological samples in August 2012. During August 2012, we collected only three of the required four bacteriological samples.

What should I do?
There is nothing you need to do at this time. The City performed the required testing since August 2012 with no water quality concerns and no water quality concerns were noted from the tests that were performed in August 2012.

The information below lists the contaminant(s) we didn't properly test for in August 2012, how many samples we are required to take and how often, how many samples we took, when samples should have been taken, and the date which follow-up samples were taken.

- Total Coliform Bacteria**
- Four routine samples from City of Brisbane Water System required each month
 - Three samples were taken in August 2012
 - Four samples should have been taken in August 2012
 - Four samples were taken in September 2012 and every month since.

If you have health issues concerning the consumption of this water, you may wish to consult your doctor.

What is being done?

The error occurred when a consultant for the City failed to obtain the proper samples and failed to inform the City. The City has established a tighter quality control program and has employed a new water quality consultant in order to better manage the rigorous sampling requirements of the City.

For more information, please contact the Public Works Department at 415-508-2130.

IMPORTANT DEFINITIONS FOR UNDERSTANDING THIS REPORT

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 or technologically feasible. Secondary MCLs 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 is also used to indicate the effectiveness of the filtration plants. High turbidity can hinder the effectiveness of disinfectants.

WHAT DOES THIS TABLE MEAN?

Contaminants listed in the following tables were detected in 2012 drinking water samples. The tables contain the name of each substance, the highest level allowed by regulation (MCL), if applicable, the ideal goal for public health (PHG), if applicable, the amount detected, typical sources of the contamination, a key to the units of measurements, and notes to explain the findings. Contaminants below detection limits are not shown, in accordance with CDPH guidance. The CDPH allows monitoring for some contaminants less than once per year because their concentrations do not change frequently or because the State has issued a monitoring waiver for certain contaminants that were absent in the water based on many years of monitoring.

CITY OF BRISBANE AND GVMID WATER QUALITY DATA FOR 2012⁽¹⁾

DETECTED CONTAMINANTS	Unit	MCL	PHG or (MCLG)	Range or Level Found	Average or (Max)	Typical Sources in Drinking Water
TURBIDITY						
Unfiltered Hetch Hetchy Water	NTU	5	N/A	0.2 - 0.5 ⁽²⁾	(2.8) ⁽³⁾	Soil run-off
Filtered Water – from Sunol Valley WTP	NTU	1.0 ⁽⁴⁾	N/A		(0.26)	Soil run-off
min 95% of samples ≤ 0.3 NTU ⁽⁴⁾	%	TT	N/A	100%	-	Soil run-off
DISINFECTION BYPRODUCTS AND PRECURSORS (City of Brisbane and GVMID Distribution System)						
Total Organic Carbon (TOC) ⁽⁶⁾	ppm	TT	N/A	2.3-3.7	2.7	Various natural and man-made sources
Total Trihalomethanes (City of Brisbane)	ppb	80	N/A	32.7 - 48.6	(40.4) ⁽⁵⁾	By-product of drinking water chlorination
Total Trihalomethanes (GVMID)	ppb	80	N/A	33.8 – 65.1	(47.6) ⁽⁵⁾	By-product of drinking water chlorination
Total Haloacetic Acids (City of Brisbane)	ppb	60	N/A	15.8 - 49.3	(35.2) ⁽⁵⁾	By-product of drinking water chlorination
Total Haloacetic Acids (GVMID)	ppb	60	N/A	17.0 - 36.7	(27.8) ⁽⁵⁾	By-product of drinking water chlorination
MICROBIOLOGICAL (City of Brisbane and GVMID Distribution System)						
Total Coliform ⁽⁷⁾ highest % of positives detected in any one month	%	NoP ≤ 5	(0)	0	(0)	Naturally present in the environment
Giardia lamblia	cyst/L	TT	(0)	< 0.01-0.06	<0.01	Naturally present in the environment
INORGANIC CHEMICALS ⁽⁸⁾						
Fluoride (source water) ⁽⁸⁾	ppm	2.0	1.0	ND – 0.8	0.3 ⁽⁹⁾	Erosion of natural deposits
Chloramine (as total chlorine) (City of Brisbane)	ppm	MRDL=4	MRDLG=4	1.42 - 2.30	2.05 ⁽¹⁰⁾	Disinfectant added by SFPUC for treatment
Chloramine (as total chlorine) (GVMID)	ppm	MRDL=4	MRDLG=4	1.66 – 2.49	2.06 ⁽¹⁰⁾	Disinfectant added by SFPUC for treatment
RADIONUCLIDES						
Radium – 226	pCi/L	N/A	0.05	ND – 1.2	<1	Erosion of natural deposits
CONSTITUENTS WITH SECONDARY STANDARDS						
Aluminum ⁽¹¹⁾	ppb	200	600	ND – 90	ND	Erosion of natural deposits
Chloride	ppm	500	N/A	2 – 20	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	202	Substances that form ions when in water
Sulfate	ppm	500	N/A	0.9 – 40	20	Runoff / leaching from natural deposits
Total Dissolved Solids	ppm	1000	N/A	<20 - 195	108	Runoff / leaching from natural deposits
Turbidity	NTU	5	N/A	0.1 - 0.2	0.1	Soil runoff
LEAD AND COPPER⁽¹²⁾						
Copper (Brisbane) - August 2010	ppb	1300	300	0 – 154.0	114.0	Corrosion of household plumbing systems
Copper (GVMID) - August 2010	ppb	1300	300	28.8 – 112.0	69.0	Corrosion of household plumbing systems
Lead (Brisbane) - August 2010	ppb	15	2	0 – 14.0	3.7	Corrosion of household plumbing systems
Lead (GVMID) - August 2010	ppb	15	2	0 – 3.9.0	1.2	Corrosion of household plumbing systems

Key:

</≤	= less than/less than or equal to	AL	= Action Level
ppb	= parts per billion	NL	= Notification Level
ppm	= parts per million	N/A	= Not Available
NTU	= Nephelometric Turbidity Unit	ORL	= Other Regulatory Level
µS/cm	= microSiemens/centimeter	Max	= Maximum
cyst/L	= # cysts/liter	Min	= Minimum
NoP	= # of Coliform-Positive Samples	ND	= Non-detect
pCi/L	= picocuries per liter		

OTHER WATER QUALITY PARAMETERS

	Unit	ORL	Range	Average
Alkalinity (as CaCO ₃)	ppm	N/A	10 – 111	61.0
Bromide	ppb	N/A	<10 – 24	<10
Calcium (as Ca)	ppm	N/A	3 – 28	15.0
Chlorate ⁽¹³⁾	ppb	(800)NL	53 – 399	221.0
Hardness (as CaCO ₃)	ppm	N/A	8 – 114	62.0
Magnesium	ppm	N/A	0.2 – 10.8	6.1
pH	-	N/A	6.7 – 9.7	8.5
Silica	ppm	N/A	3.2 – 5.3	4.1
Sodium	ppm	N/A	3 – 20	13.5

NOTES:

- All 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 served to customers 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 MCL for filtered water. The limits are based on the TT requirements for filtered systems in the State drinking water regulations.
- This is the highest locational 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.
- In 2012, 0 out of 51 samples collected in the City of Brisbane and 0 out of 26 samples collected in GVMID were total coliform-positive.
- The SFPUC adds fluoride to an optimum level of 1.0ppm 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 – 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 naturally occurring fluoride levels in the Hetch Hetchy and SVWTP raw water were ND and .2 ppm, respectively.
- This is the highest quarterly running annual average value.
- Aluminum also has a primary MCL of 1000 ppb.
- The most recent Lead and Copper Rule monitoring was in 2010. Zero out of 30 customers in the City of Brisbane and GVMID were over the Copper and Lead Action Level s at the consumer taps in 2010. The City of Brisbane and GVMID are on a reduced frequency triennial monitoring program and samples will again be collected in 2013.
- The detected chlorate in treated water is a byproduct of the degradation of sodium hypochlorite, the primary disinfectant used by SFPUC for water disinfection.

FEDERALLY REQUIRED GENERAL INFORMATION ABOUT DRINKING WATER

The sources of drinking water (both tap water 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. 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 the 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.

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 that 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 by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water 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.

More information about contaminants and potential health effects may be obtained by calling the USEPA Safe Drinking Water Hotline at (800)426-4791 or visiting www.epa.gov/safewater.

SPECIAL HEALTH NEEDS

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as individuals 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 USEPA Safe Drinking Water Hotline (800) 426-4791.

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 2012. 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. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness and are encouraged to consult their doctor regarding appropriate precautions to take to avoid infection.

Reducing Lead from Plumbing Fixtures

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Brisbane is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. There are no known lead service lines in the transmission and distribution system. 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 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 USEPA Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.