2014 Water Quality Report

City of Brisbane and GVMID

This report provides important information about your drinking water.

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

The City of Brisbane Public Works Department,

in coordination with the San Francisco Public Utilities Commission (SFPUC), is pleased to present its 2014 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 2014, 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 State Water Resources Control Board Division of Drinking Water (SWRCB) drinking water quality standards. The City of Brisbane/GVMID and the SFPUC vigilantly safeguard their water supplies and are committed to providing you with safe, high-quality drinking water.

CONSERVATION ALERT: Following another historically dry winter, we continue to ask all customers to voluntarily reduce water use by 10%. Also in accordance with new State of California emergency drought water restrictions, reductions in outdoor irrigation of ornamental landscape and turf are in place. See www.sfwater.org/conservation and www.bawsca.org/water-conservation for tips on how to cut back water use, ranging from simple shifts in routine habits to replacement of inefficient appliances and toilets.

WHAT BRISBANE DOESTO ENSURE WATER QUALITY

The City of Brisbane and GVMID conduct a comprehensive water quality assurance program. Water at various locations in the distribution system is sampled and then tested by an independent certified laboratory to ensure that the City's drinking water meets State and Federal requirements. During 2014, there were no positive samples out of 72 samples collected and tested for Total Coliform bacteria throughout the City of Brisbane and GVMID. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

In addition to Total Coliform, Total Chlorine residual is routinely monitored throughout the City's water distribution system to ensure the proper range of disinfectant is maintained to provide protection against disease-causing organisms. In 2014, approximately 220 total chlorine residual samples were collected and tested in the field.

Samples are collected weekly from the water storage tanks and tested for specific water quality parameters. 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 2014, over 150 samples were collected from the water storage tanks and tested for a series of 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 SWRCB. Total Disinfectant Byproducts (DBPs) are created by the disinfectant reacting with natural organic and inorganic matter in the source water and distribution system.

In addition to all of 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 2014, SFPUC Water Quality staff conducted more than 52,000 drinking water tests throughout the entire transmission and distribution systems. 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 the 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 2014, 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 Watershed, the major water source originates from spring snowmelt flowing down the Tuolumne River to storage in the Hetch Hetchy Reservoir. This pristine, well protected Sierra water source meets all federal and state criteria for watershed protection and has been granted a filtration exemption by the USEPA and SWRCB. Water treatments including disinfections by ultraviolet light and chlorine, pH adjustment for corrosion control, fluoridation for dental health protection, and chloramination for maintaining disinfectant residual and minimizing disinfection byproduct formation are in place to meet the drinking water regulation requirements.

ALAMEDA AND PENINSULA WATERSHEDS

The Hetch Hetchy water is supplemented with surface water from two local watersheds. Rainfall and runoff from the 35,000-acre Alameda Watershed spanning Alameda and Santa Clara counties are collected in the Calaveras and San Antonio Reservoirs and filtered 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 filtered and treated at the Harry Tracy Water Treatment Plant.

WATERSHEDS PROTECTION

The Hetch Hetchy Watershed is surveyed annually to evaluate the sanitary conditions, water quality, potential contamination sources, and the results of watershed management activities with partner agencies including the SFPUC, 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 SWRCB San Francisco District office, 510-620-3474.

CITY OF BRISBANE AND GVMID WATER DISTRIBUTION SYSTEM

In 2014, the City of Brisbane and GVMID supplied an average of 638,000 gallons per day to our residents, businesses and landscaping 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, more than 25 miles of underground pipeline, almost 700 valves, over 220 fire hydrants, and more than 1900 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 regularly to ensure the internal surface condition and health of the storage facilities are maintained. The tanks are sampled and monitored on a weekly basis to ensure proper levels of disinfectant are present. The exterior of the tanks are 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, 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 and ensure that the valve will work properly when needed.

CHLORAMINE DISINFECTION

The SFPUC converted its primary drinking water disinfectant from free chlorine to chloramines in 2004. Since the conversion to chloramines, disinfection by-products such as trihalomethanes (THMs) in the water have continued to remain at lower levels. IMPORTANT REMINDER: Chloraminated water must be treated before use for certain sensitive purposes such as fish and amphibian tanks, kidney dialysis and industrial processes. For more information, visit the SFPUC website at better.sfwater.org.

FLUORIDE

The City of Brisbane and GVMID, along with all the other Bay Area communities served by the SFPUC, typically receive an average fluoride concentration of 1.0 mg/l.

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 Thursdays of every month at the Brisbane City Hall Community Meeting Room. Please call the Brisbane City Clerk at (415) 508-2113 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. Inquiries 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.

Water Regulations Regarding the Drought

Water Use Restrictions and Reductions Remain in Effect. California's severe drought continues; take immediate action and keep saving.

What water use restrictions are in effect now?

Since January 2014, California Governor Jerry Brown has issued several Executive Orders to address California's severe drought. To implement the Governor's directives, the State Water Resources Control Board established emergency water conservation regulations that direct urban and small water suppliers, their customers, and all Californians to reduce water use and waste.

What's Required for Residents and Businesses in Brisbane

- You cannot water or use outdoor irrigation during or within 48 hours of measurable precipitation
- Watering or outdoor irrigation must take place per the following 2 day/week schedule:
  1. Addresses ending in an odd number may only water Monday and Thursday
  2. Addresses ending in an even number may only water Tuesday and Friday
  3. Sites with no address may only water on Monday and Thursday
- Landscapes can only be watered between 6 PM and 9 AM
- You cannot wash sidewalks, driveways, and "hardscape" with potable water
- Watering your outdoor landscape cannot result in runoff outside the landscape
- When washing vehicles, you need to use a hose with an automatic shutoff nozzle
- All decorative water fountains/features using potable water need to have a recirculating system

What's Required for Businesses

- Food service establishments may only serve water to customers upon request
- Hotels and motels must offer guests the option to not launder towels and linens daily

IMPORTANT DEFINITIONS FOR UNDERSTANDING THIS REPORT

KEY WATER QUALITY TERMS

Following are definitions of key terms referring to standards and goals of water quality noted on the data table 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 USEPA.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs or MCLGs as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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

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

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

Turbidity: A water clarity indicator that measures cloudiness of the water, and is also used to indicate the effectiveness of the filtration system. High turbidity can hinder the effectiveness of disinfectants.

Cryptosporidium is a parasitic microbe found in most surface water. The SFPUC regularly tests for this waterborne pathogen, and found it at very low levels in source water and treated water in 2014. 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 DOES THIS TABLE MEAN?

Contaminants listed in the following tables were detected in 2014 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 accord with SWRCB guidance. The SWRCB allows monitoring for some contaminants less than once per year because their concentrations don't change frequently or because the State has issued a monitoring wavier for certain contaminants that were absent in the water based on many years of monitoring.

CITY OF BRISBANE AND GVMID WATER QUALITY DATA FOR 2014[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 - 0.6[2]	[2.8]	Soil run-off
Filtered Water – from Sunol Valley WTP	NTU	1[3]	N/A		(0.98)	Soil run-off
min. 95% of samples ≤ 0.3 NTU[3]	%	TT	N/A	97%-100%	-	Soil run-off
Filtered Water – from Harry Tracy WTP	NTU	1[3]	N/A		[0.07]	Soil run-off
min. 95% of samples ≤ 0.3 NTU[3]	%	TT	N/A	100%	-	Soil run-off
DISINFECTION BYPRODUCTS AND PRECURSORS (City of Brisbane and GVMID Distribution System)						
Total Trihalomethanes (City of Brisbane)	ppb	80	N/A	13.7-49.7	32.05[4]	Byproduct of drinking water disinfection
Total Trihalomethanes (GVMID)	ppb	80	N/A	18-48.3	35.32 [4]	Byproduct of drinking water disinfection
Haloacetic Acids (City of Brisbane)	ppb	60	N/A	12-39.1	27.35 [4]	Byproduct of drinking water disinfection
Haloacetic Acids (GVMID)	ppb	60	N/A	15.9-43.3	28.32 [4]	Byproduct of drinking water disinfection
Total Organic Carbon [5]	ppm	TT	N/A	1.3 - 2.8	1.9	Various natural and man-made sources
MICROBIOLOGICAL (City of Brisbane and GVMID Distribution System)						
Total Coliform [6] % of monthly samples	-	NoP ≤ 5.0	(0)	0	[0%]	Naturally present in the environment
Giardia lamblia	cyst/L	TT	(0)	<0.01 - 0.04	<0.01	Naturally present in the environment
INORGANIC CHEMICALS						
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)(City of Brisbane)	ppm	MRDL = 4.0	MRDLG = 4	0.9-2.35	2.08 [9]	Drinking water disinfectant added for treatment
Chloramine (as chlorine)(GVMID)	ppm	MRDL = 4.0	MRDLG = 4	0.9-2.3	2.13 [9]	Drinking water disinfectant added for treatment

CONSTITUENTS WITH SECONDARY STANDARDS	Unit	SMCL	PHG	Range	Average	Major Sources of Contaminant
Chloride	ppm	500	N/A	<3 - 15	9	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[10] (City of Brisbane and GVMID Distribution System)	Unit	AL	PHG	Range	90th Percentile	Major Sources in Drinking Water
Copper (Brisbane) - Septmember 2013	ppb	1300	300	0-188	44.7µg/L	Internal corrosion of household water plumbing systems
Copper (GVMID) - Septmember 2013	ppb	1300	300	39.2-72.2	72.2µg/L	Internal corrosion of household water plumbing systems
Lead(Brisbane) - Septmember 2013	ppb	15	0.2	0-25	3.3µg/L	Internal corrosion of household water plumbing systems
Lead(GVMID) - Septmember 2013	ppb	15	0.2	0-1.2	1.2µg/L	Internal corrosion of household water 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	µg/L	= micrograms/liter

OTHER WATER QUALITY PARAMETERS

	Unit	ORL	Range	Average
Alkalinity (as CaCO3)	ppm	N/A	8-94	37
Bromide[11]	ppb	N/A	ND-27	5
Calcium (as Ca)	ppm	N/A	3 – 20	11
Chlorate[12]	ppb	(800)NL	34-740	314
Hardness (as CaCO3)	ppm	N/A	7-77	46
Magnesium	ppm	N/A	<0.2 – 6.4	3.9
Potassium	ppm	N/A	0.2-1	0.6
pH	-	N/A	6.9-10.2	9.3
Silica	ppm	N/A	2-5	4
Sodium	ppm	N/A	2.4 - 16	10

NOTES:

(1) All results met State and Federal drinking water health standards.
(2) These are monthly average turbidity values measured every 4 hours daily.
(3) There is no turbidity MCL for filtered water. The limits are based on the TT requirements for filtration systems.
(4) This is the highest locational running annual average value.
(5) Total organic carbon is a precursor for disinfection byproduct formation. The TT requirement applies to the filtered water from the Sunol Valley Water Treatment Plant (SVWTP) only.
(6) The highest number of positive samples collected in any one month.
(7) 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.
(8) The natural fluoride level in the Hetch Hetchy supply was ND. Elevated fluoride levels in the SVWTP and Harry Tracy Water Treatment Plant (HTWTP) raw water are attributed to the transfer of fluoridated Hetch Hetchy water into the reservoirs.
(9) This is the highest running annual average value.
(10) The most recent Lead and Copper Rule monitoring was in 2013. Zero of 15 site samples collected at consumer taps had copper concentrations above the AL.
(11) Bromide was detected in HTWTP effluent only.
(12) The detected chlorate in the treated water is a degradation product of sodium hypochlorite used by the 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. 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 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.

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 (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.

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. 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 Safe Drinking Water Hotline (1-800-426-4791) or at www.epa.gov/safewater/lead.