



City of Brisbane and GVMID

Water Quality Report 2017

This report gives important information about your drinking water.
Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo ó hable con alguien que lo entienda bien.
此份有關你的水質報告，內有重要資訊。請翻譯或找他人為你解說清楚。

THE CITY OF BRISBANE PUBLIC WORKS DEPARTMENT,

in coordination with the San Francisco Public Utilities Commission (SFPUC), is pleased to present its 2017 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 2017, 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-DDW) 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.

CITY OF BRISBANE AND GVMID WATER DISTRIBUTION SYSTEM

In 2017, the City of Brisbane and GVMID supplied an average of 674,000 gallons per day to our residents, businesses and landscaping customers 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 combined 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 once every two years 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. There are currently 381 certified backflow assemblies in the City that are tested 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.

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.

IMPORTANT DEFINITIONS FOR READING 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 (AL): 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.

distribution system.

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 2017, over 155 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 remain in compliance with 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 2017, SFPUC Water Quality staff conducted more than 55,273 drinking water tests throughout the entire transmission and distribution systems. This monitoring effort is in addition to the extensive treatment process control monitoring performed by the SFPUC's certified operators and online instruments.

FLUORIDATION AND DENTAL FLUOROSIS

Mandated by California State law, water fluoridation is a widely accepted practice proven to be safe and effective for preventing and controlling tooth decay. The SFPUC's fluoride target level in the water is 0.7 milligram per liter, consistent with the May 2015 State regulatory guidance on optimal fluoride level.

Infants fed formula mixed with water containing fluoride at this level may have a chance of developing tiny white lines or streaks in their teeth. These marks are referred to as mild to very mild fluorosis, and are often only visible under a microscope. Even in cases where the marks are visible, they do not pose any health risk. The Centers for Disease Control (CDC) considers it safe to use optimally fluoridated water for preparing infant formula. To lessen this chance of dental fluorosis, you may choose to use low-fluoride bottled water to prepare infant formula. Nevertheless, children may still develop dental fluorosis due to fluoride intake from other sources such as food, toothpaste and dental products.

Contact your health provider or SWRCB-DDW if you have concerns about dental fluorosis. For additional information about fluoridation or oral health, visit the following websites: <http://www.cdc.gov/fluoridation> http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml.

CRYPTOSPORIDIUM is a parasitic microbe found in most surface water. The SFPUC test regularly for this water-borne pathogen, and found it at very low levels in source water and treated water in 2017. 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 will cause disease only if ingested. Additionally, it may be spread through means other than drinking water, such as swimming.

WHAT BRISBANE DOES TO ENSURE WATER QUALITY

<http://brisbaneca.org/water-quality-status>

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 2017, 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 2017, approximately 226 total chlorine residual samples were collected and tested throughout the City's drinking water

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.



Rick Voss photo

REDUCING LEAD FROM PLUMBING FIXTURES

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. There are no known lead service lines in the City of Brisbane and GVMID. The City is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. It is possible that lead levels at your home may be higher than at others because of the plumbing materials used in your property.

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.

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 1 (800) 426-4791 or at www.epa.gov/safewater.

FEDERALLY REQUIRED 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.

CHLORAMINE DISINFECTION

The SFPUC converted its primary drinking water disinfectant from free chlorine to chloramine in 2004. **IMPORTANT REMINDER: Chloraminated water must be treated before use for certain sensitive uses such as fish and amphibian tanks, kidney dialysis and industrial processes. For more information about chloramines, visit the SFPUC website at <http://better.sfwater.org/index.aspx?page=357>.**

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 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 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.

CITY OF BRISBANE AND GVMID WATER QUALITY DATA TABLE FOR 2017⁽¹⁾

Detected Contaminants	Unit	MCL	PHG or (MCLG)	Range or Level Found	Average or [Max]	Major Sources in Drinking Water
TUBIDITY						
Unfiltered Hetch Hetchy Water	NTU	5	N/A	0.3 – 1.1 ⁽²⁾	[2.7]	Soil runoff
Filtered Water from Sunol Valley Water Treatment Plant (SVWTP)	NTU	1 ⁽³⁾ Min 95% of samples ≤0.3 NTU ⁽³⁾	N/A	99%-100%	[1]	Soil runoff
Filtered Water from Harry Tracy Water Treatment Plant (HTWTP)	NTU	1 ⁽³⁾ Min 95% of samples ≤0.3 NTU ⁽³⁾	N/A	100%	[0.1]	Soil runoff
DISINFECTION BYPRODUCTS AND PRECURSOR						
Total Trihalomethanes (City of Brisbane)	ppb	80	N/A	13.5 - 38	42.3 ⁽⁴⁾	Byproduct of drinking water disinfection
Total Trihalomethanes (GVMID)	ppb	80	N/A	12 - 35	42.9 ⁽⁴⁾	Byproduct of drinking water disinfection
Haloacetic Acids (City of Brisbane)	ppb	60	N/A	10.8 - 50	47.5 ⁽⁴⁾	Byproduct of drinking water disinfection
Haloacetic Acids (GVMID)	ppb	60	N/A	7.2 - 52	47.6 ⁽⁴⁾	Byproduct of drinking water disinfection
Total Organic Carbon ⁽⁵⁾	ppm	TT	N/A	1.0 – 3.7	2.4	Byproduct of drinking water disinfection
MICROBIOLOGICAL						
Total Coliform ⁽⁶⁾		NoP ≥ 1 per month	(0)	0	0	Naturally present in the environment
<i>Giardia lamblia</i>	cyst/ L	TT	(0)	0-0.22	0.05	Naturally present in the environment
INORGANICS						
Fluoride (source water) ⁽⁷⁾	ppm	2.0	1	ND-0.6	0.2 ⁽⁸⁾	Erosion of natural deposits; water additive to promote strong teeth
Chloramine (as Total Chlorine) (City of Brisbane)	ppm	MRDL = 4.0	MRDLG = 4	1.64 – 2.74	2.42 ⁽⁹⁾	Drinking Water disinfectant added for treatment
Chloramine (as Total Chlorine) (GVMID)	ppm	MRDL = 4.0	MRDLG = 4	0.69 – 2.78	2.39 ⁽⁹⁾	Drinking Water disinfectant added for treatment

Constituents with Secondary Standards	Unit	SMCL	PHG	Range	Average	Major Sources of Contaminant
Aluminum ⁽¹⁰⁾	ppb	200	600	ND – 99	ND	Erosion of natural deposits; some surface water treatment residue
Chloride	ppm	500	N/A	<3 - 17	9.0	Runoff / leaching from natural deposits
Color	unit	15	N/A	<5 - 13	<5	Naturally occurring organic material
Specific Conductance	µS/cm	1600	N/A	29 - 256	168	Substances that form ions when in water
Sulfate	ppm	500	N/A	0.9 - 34	17	Runoff / leaching from natural deposits
Total Dissolved Solids	ppm	1000	N/A	<20-122	76	Runoff / leaching from natural deposits
Turbidity	NTU	5	N/A	0.1 - 1	0.4	Soil runoff

Lead and Copper	Unit	AL	PHG	Range	90 th Percentile	Major Sources in Drinking Water
Copper (City of Brisbane) September 2016	ppb	1300	300	5.7-54 ⁽¹¹⁾	42 µg/L	Internal corrosion of household water plumbing systems
Copper (GVMID) September 2016	ppb	1300	300	6-99 ⁽¹¹⁾	72 µg/L	Internal corrosion of household water plumbing systems
Lead (City of Brisbane) September 2016	ppb	15	0.2	0-17 ⁽¹²⁾	11 µg/L	Internal corrosion of household water plumbing systems
Lead (GVMID) September 2016	ppb	15	0.2	0-0.58 ⁽¹²⁾	ND µg/L	Internal corrosion of household water plumbing systems

WHAT DOES THIS TABLE MEAN?

Contaminants listed in the **WATER QUALITY DATA TABLE** were detected in 2017 drinking water samples. The table above lists all 2017 detected drinking water contaminants and the information about their typical sources. Contaminants below detection limits for reporting are not shown, in accord with regulatory guidance. The SFPUC holds a SWRCB-DDW monitoring waiver for some contaminants and therefore their monitoring frequencies are less than annual.

OTHER WATER QUALITY PARAMETERS				
	Unit	ORL	Range	Average
Alkalinity (as CaCO ₃)	ppm	N/A	6 - 131	52
Boron	ppb	1000 (NL)	ND – 203	ND
Bromide	ppb	N/A	<5 – 30	13
Calcium (as Ca)	ppm	N/A	2 - 31	16
Chlorate ⁽¹³⁾	ppb	800 (NL)	51 - 180	86
Hardness (as CaCO ₃)	ppm	N/A	7 - 82	51
Magnesium	ppm	N/A	0.2 – 11	6.2
pH	-	N/A	7.4 - 9.8	9.2
Potassium	ppm	N/A	0.2 - 2	1.0
Silica	ppm	N/A	4.6 - 12	7.6
Sodium	ppm	N/A	2.3 - 31	18
Strontium	ppb	N/A	12 - 234	111

KEY			
<	= less than	>	= greater than
≤	= less than or equal to	≥	= greater than or equal to
AL	= Action Level		
Max	= Maximum		
Min	= Minimum		
N/A	= Not Available		
ND	= Non-detect		
NL	= Notification Level		
NoP	= Number of Coliform Positive Samples		
NTU	= Nephelometric Turbidity Unit		
ORL	= Other Regulatory Level		
ppb	= part per billion = µg/L		
ppm	= part per million = mg/L		
µS/cm	= microSiemens/centimeter		
µg/L	= micrograms/liter		

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 filtered water from the SVWTP only.
- (6) The MCL for Coliform Positive Samples for the City of Brisbane/GVMID is a single positive sample or greater.
- (7) In May 2015, the SWRCB recommended a fluoride level in the treated water be maintained at 0.7 ppm. In 2017, the range and average of the fluoride levels were 0.5 ppm – 0.9 ppm and 0.7 ppm, respectively.
- (8) The natural fluoride levels in the Hetch Hetchy supply was ND. Elevated fluoride levels in the SVWTP and HTWTP raw water are attributed to the transfer of fluoridated Hetch Hetchy water into the local reservoirs.
- (9) This is the highest running annual average value.
- (10) Aluminum also has a primary MCL of 1,000 ppb.
- (11) The most recent Lead and Copper Rule monitoring was in 2016. Zero of 20 site samples collected at consumer taps had copper concentrations above the AL.
- (12) The most recent Lead and Copper Rule monitoring was in 2016. One of 20 site samples collected at consumer taps had lead concentrations above the AL.
- (13) The detected chlorate in the treated water is a degradation product of sodium hypochlorite used by the SFPUC for water disinfection.

WATER CONSERVATION

Although Governor Brown declared an end to California's historic five-year drought in 2017, two new laws have been signed recently that will require cities and water districts across the state to set permanent water conservation rules, even in non-drought years. This new legislation is in response to the implementation of Executive Order B-37-16 related to the report "*Making Water Conservation a Way of Life*". As customers, we need to make water conservation a permanent part of our lifestyle. The City will provide more information and guidance on meeting future water conservation goals as they develop.

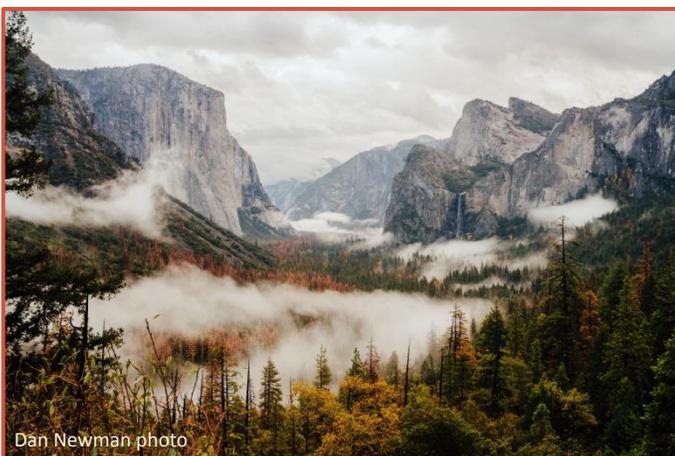
Please continue to comply with the following conservation measures:

- Don't water or use outdoor irrigation during or within 48 hours of measurable precipitation
- Residential and Commercial Landscapes can only be watered between 6pm and 9am
- You can't wash sidewalks, driveways, and "hardscape" with potable water
- Watering your outdoor landscape can't 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
- Water leaks from any identified broken or defective plumbing, sprinklers, watering or irrigation system must be repaired within a period of forty-eight (48) hours from the time the leak was discovered.
- 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.

More information on the continuing prohibitions on water waste may be obtained by contacting the Department of Public Works at 415-508-2130.

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 2017, 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 disinfection 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.

UPCOUNTRY NON-HETCH HETCHY SOURCES

Beginning in 2015, the SWRCB approved the SFRWS to use surface water collected in Lake Eleanor, Lake Cherry and the Early Intake Reservoir. This water is conveyed via the lower Cherry Aquaduct and the associated creeks as an additional drinking water supply. The Upcountry Non-Hetch Hetchy source water, if used, will be treated at the SWWTP prior to service to customers. In 2017, the SFRWS did not use Upcountry Non-Hetch Hetchy Source water.

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 SFPUC conducts watershed sanitary surveys for the Hetch Hetchy source annually and local water sources every five years. The last local sanitary survey was done in 2016. The SFPUC conducted a special watershed sanitary survey for UNHHS in 2015 as part of its drought response plan efforts. These surveys evaluate the sanitary condition, water quality, potential contamination sources and the results of watershed management activities, and were completed with support from partner agencies including National Park Service and US Forest Service.

These surveys identified wildlife, stock, and human activities as potential contamination sources. You may contact the San Francisco District office of SWRCB-DDW at 510-620-3474 for the review of these reports.

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, visiting the SFPUC website at www.sfwater.org

