



# Burlingame

## 2017 Water Quality Report

PWSID# CA4110003



This report contains important information about our drinking water. Translate it, or speak with someone who understands it. Este informe contiene información muy importante sobre su agua potable Tradúzcalo o hable con alguien que lo entienda bien. 此份水質報告，內有重要資訊。請找他人為你翻譯和解說清楚。

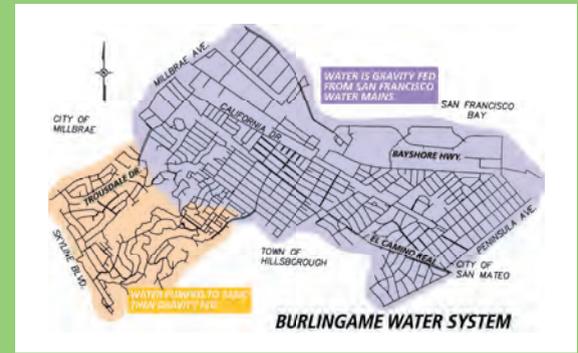
## Our Mission: QUALITY WATER

The City of Burlingame in coordination with the San Francisco Public Utilities Commission (SFPUC) is pleased to present our 2017 Annual Water Quality Consumer Confidence Report. We want our customers to know where their water comes from, how it is treated to ensure it is top quality and the results of water quality monitoring performed by the City of Burlingame and the SFPUC. With this knowledge, consumers can make health decisions concerning their water use. The SFPUC supplied an average of 205 million gallons per day (MGD) of water via its Regional Water System to serve 2.6 million people in the Bay Area in 2017. The City of Burlingame and the SFPUC are committed to customer service and providing you with high quality water.



# Burlingame Water System Service Area

The City of Burlingame purchases all of its water from San Francisco Public Utilities Commission (SFPUC). The San Francisco Regional Water System (SFRWS) has several large pipelines running through town. We have several metered connections at various locations throughout the city. These connections feed directly into the Aqueduct Zone (Purple area on map). Water is pumped to the higher elevations by booster pump stations and to storage reservoirs. The City of Burlingame has several pressure reducing valves to regulate the water pressure in higher elevation areas.



## A Drinking Water Sources and Treatment

Supplied by the San Francisco Regional Water System (SFRWS), which is owned and operated by the San Francisco Public Utilities Commission (SFPUC), our major water source originates from spring snowmelt flowing down the Tuolumne River to storage in Hetch Hetchy Reservoir. The well protected Sierra water source is exempt from filtration requirements by the United States Environmental Protection Agency (USEPA) and State Water Resources Control Board's Division of Drinking Water (SWRCB-DDW). Water from the Hetch Hetchy reservoir receives the following treatments to meet appropriate drinking water standards: ultraviolet light and chlorine disinfection, pH adjustment for optimal corrosion control, fluoridation for dental health protection, and chloramination for maintaining disinfectant residual and minimizing disinfection byproduct formation.

Hetch Hetchy water is supplemented with surface water from two local watersheds. Rainfall and runoff from the 35,000-acre Alameda Watershed in Alameda and Santa Clara counties are collected in the Calaveras and San Antonio reservoirs, and delivered to the Sunol Valley Water Treatment Plant (SVWTP). Rainfall and runoff from the 23,000-acre Peninsula Watershed in San Mateo County are stored in the Crystal Springs, San Andreas and Pilarcitos reservoirs, and are delivered to the Harry Tracy Water Treatment Plant. In addition to these local sources, the SWRCB-DDW approved the SFPUC to use the surface water in Lake Eleanor, Lake Cherry and the associated

creeks all conveyed via the Lower Cherry Aqueduct, Early Intake Reservoir and Tuolumne River (collectively known as Upcountry Non-Hetch Hetchy Sources, or UNHHS) as additional drinking water sources to the SFRWS. The UNHHS water, if used, will be treated at the SVWTP prior to service to customers. In 2017, the SFRWS did not use UNHHS. Water at the two local treatment plants is subject to filtration, disinfection, fluoridation, and optimum corrosion control by pH adjustment.

## Protecting Our Watersheds

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 completed in 2016 for the period of 2011-2015. Additionally, the SFPUC conducted a watershed sanitary survey for UNHHS in 2015 as part of its drought response plan efforts. These surveys evaluate the sanitary conditions, 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.

# Water Quality Data for Year 2017 <sup>(1)</sup>

The table below 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.

DETECTED CONTAMINANTS	Unit	MCL	PHG or (MCLG)	Range or Level Found	Average or [Max]	Major Sources in Drinking Water	
<b>TURBIDITY</b>							
Unfiltered Hetch Hetchy Water	NTU	5	N/A	0.3 - 1.1 <sup>(2)</sup>	[2.7]	Soil runoff	
Filtered Water from Sunol Valley Water Treatment Plant (SVWTP)	NTU	1 <sup>(3)</sup>	N/A	-	[1]	Soil runoff	
	-	Min 95% of samples ≤ 0.3 NTU <sup>(3)</sup>	N/A	99% - 100%	-	Soil runoff	
Filtered Water from Harry Tracy Water Treatment Plant (HTWTP)	NTU	1 <sup>(3)</sup>	N/A	-	[0.1]	Soil runoff	
	-	Min 95% of samples ≤ 0.3 NTU <sup>(3)</sup>	N/A	100%	-	Soil runoff	
<b>DISINFECTION BYPRODUCTS AND PRECURSOR</b>							
Total Trihalomethanes	ppb	80	N/A	18.0 - 50.2	32.4 <sup>(4)</sup>	Byproduct of drinking water disinfection	
Haloacetic Acids	ppb	60	N/A	7.3 - 37.6	20.6 <sup>(4)</sup>	Byproduct of drinking water disinfection	
Total Organic Carbon <sup>(5)</sup>	ppm	TT	N/A	1.0 - 3.7	2.4	Various natural and man-made sources	
<b>MICROBIOLOGICAL</b>							
Total Coliform	-	NoP ≤ 5.0% of monthly samples	(0)	0%	0%	Naturally present in the environment	
Giardia lamblia	cyst/L	TT	(0)	0 - 0.22	0.05	Naturally present in the environment	
<b>INORGANICS</b>							
Fluoride (source water) <sup>(6)</sup>	ppm	2.0	1	ND - 0.6	0.2 <sup>(7)</sup>	Erosion of natural deposits; water additive to promote strong teeth	
Chloramine (as chlorine )	ppm	MRDL = 4.0	MRDLG = 4	0.04- 3.03	2.37 <sup>(8)</sup>	Drinking water disinfectant added for treatment	
<b>CONSTITUENTS WITH SECONDARY STANDARDS</b>							
Aluminum <sup>(9)</sup>	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 materials	
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	
<b>LEAD AND COPPER</b>							
LEAD AND COPPER	Unit	AL	PHG	Range	90th Percentile	Major Sources in Drinking Water	Number of Schools Requesting Lead Sampling <sup>(12)</sup> 0
Copper	ppb	1300	300	1.7 - 130 <sup>(10)</sup>	55.3	Internal corrosion of household water plumbing systems	
Lead	ppb	15	0.2	<1 - 32.9 <sup>(11)</sup>	1.8		
<b>OTHER WATER QUALITY PARAMETERS</b>							
Alkalinity (as CaCO3)	ppm			ORL	Range	Average	
Boron	ppb			1000 (NL)	ND - 203	ND	
Bromide	ppb			N/A	<5 - 30	13	
Calcium (as Ca)	ppm			N/A	2 - 31	16	
Chlorate <sup>(13)</sup>	ppb			800 (NL)	51 - 180	86	
Hardness (as CaCO3)	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	

## Footnotes:

- (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 SVWTP only.
- (6) In May 2015, the SWRCB recommended an optimal fluoride level of 0.7 ppm be maintained in the treated water. In 2017, the range and average of the fluoride levels were 0.5 ppm - 0.9 ppm and 0.7 ppm, respectively.
- (7) The natural fluoride levels in the upcountry sources were 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.

## Contaminants and Regulations

The sources of drinking water (both tap water and bottled water) include rivers, lakes, oceans, 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, and may be present in source water as:

- **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, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application and septic systems, and
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline 800-426-4791, or at [www.epa.gov/safewater](http://www.epa.gov/safewater).

## Drinking Water and Lead

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 SFRWS. We are 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 plumbing materials used in your property.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Infants and young children are typically more vulnerable to lead in drinking water than the general population. You can minimize the potential for lead exposure, when your water has been sitting for several hours, by flushing your tap for 30 seconds to 2 minutes (or until the water temperature has changed) 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. Additional information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the USEPA's Safe Drinking Water Hotline 800-426-4791, or at [www.epa.gov/lead](http://www.epa.gov/lead).

- (8) This is the highest running annual average value.
- (9) Aluminum also has a primary MCL of 1,000 ppb.
- (10) The most recent Lead and Copper Rule monitoring was in 2016. 0 of 30 site samples collected at consumer taps had copper concentrations above the AL.
- (11) The most recent Lead and Copper Rule monitoring was in 2016. 1 of 30 site samples collected at consumer taps had lead concentrations above the AL.
- (12) Zero schools requested testing in 2017 through a voluntary program. However, all required schools will be tested by July 1, 2019 in accordance with Assembly Bill 746.
- (13) 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 City of Burlingame water system phone number at (650) 558-7670*

## 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, some elderly people and infants, can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline 800-426-4791 or at [www.epa.gov/safewater](http://www.epa.gov/safewater).

## Fluoridation and Dental Fluorosis

Mandated by 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 still 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 CDC website [www.cdc.gov/fluoridation](http://www.cdc.gov/fluoridation) or SWRCB-DDW website [www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/Fluoridation.shtml](http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml).

## *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 2017. 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.

## Boron Detection above Notification Level in Source Water

In 2017, boron was detected at a level of 1.74 ppm in the raw water stored in one of our approved sources, Pond F3 East, in Alameda Watershed. Although the detected value is above the California Notification Level of 1 ppm for source water, the corresponding treated water boron level from the SVWTP was only 0.2 ppm.



## Key Water Quality Terms

< / ≤	= less than / less 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 Sample
NTU	= Nephelometric Turbidity Unit
ORL	= Other Regulatory Level
ppb	= part per billion
ppm	= part per million
µS/cm	= microSiemens/centimeter

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

**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.

**PWSID#:** The Public Water System Identification

# Water Main FLUSHING PROGRAM

The Burlingame Public Works Water Division routinely flushes water mains throughout the City in order to maintain water quality and remove sediment that may be present. Tuberculation (a form of corrosion inside iron pipes) and sediment can discolor water, and over time, impede the flow of water through the distribution system. The mains are flushed through a systematic opening and closing of valves to force the flow of water in one direction. This technique, known as unidirectional flushing, allows section by section of pipeline to be cleaned, which reduces the amount of water required to effectively clean the pipeline distribution system.

For more information about water main flushing, go to [www.burlingame.org/watermainflushing](http://www.burlingame.org/watermainflushing)



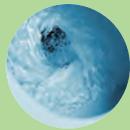
## Drought Update



On April 7, 2017, Governor Edmund G. Brown Jr. ended the drought state of emergency in several counties in California, including San Mateo County, while maintaining water reporting requirements and prohibitions on wasteful practices.

Burlingame residents and property owners are eligible for a range of programs and rebates that support water conservation. For more information on these programs, please visit [www.burlingame.org/waterconservation](http://www.burlingame.org/waterconservation)

## Conservation Programs and Resources



**High-Efficient Toilet Rebate** - if you have not replaced your toilet in over 20 years, you may be eligible to receive up to \$100 off a new toilet.



**Rain Barrel Rebate** - capture rainwater to use later for watering your plants and save \$50 off a qualifying barrel.



**Turf Replacement Program** - The State is offering a rebate of up to \$2,000 for residents who convert their water-intensive turf lawn into a drought-tolerant garden (until funds last).



**Free Landscape Classes** - learn how to garden beautifully while reducing your water use. Visit [www.bawsca.org/classes](http://www.bawsca.org/classes) for a list of upcoming workshops.

## Prohibited Wasteful Water Practices



Watering outdoor landscapes that causes runoff onto streets or sidewalks.



Using a hose without a shut-off nozzle.



Watering during or within 48 hours of measurable rainfall.



Using water to wash hard or paved surfaces.



Using water in a non-recirculating fountain.



## Water Quality

The SFPUC's Water Quality Division (WQD) regularly collects and tests water samples from reservoirs and designated sampling points throughout the system to ensure the water delivered to you meets or exceeds federal and state drinking water standards. In 2017, WQD staff conducted more than 55,273 drinking water tests in the transmission and distribution systems. This is in addition to the extensive treatment process control monitoring performed by the SFPUC's certified operators and online instruments.

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 SWRCB-DDW prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

## Lead Testing in Burlingame Schools

In early 2017, the State Board issued amendments to the domestic water supply permits of community water systems including City of Burlingame. The amendments allow schools that are served by a public water system to request water sampling for lead and receive technical assistance if elevated lead levels are found. Later in 2017, Governor Jerry Brown signed AB 746 which became effective January 1, 2018 and requires community water systems like the City of Burlingame to provide lead testing of drinking water at public kindergarten through 12th grade schools, as well as preschools and child care facilities located on public school property constructed prior to 2010. This mandatory schools testing must be completed by July 1, 2019. Information on lead in drinking water, testing methods and steps you can take to minimize lead exposure is available at [www.epa.gov/lead](http://www.epa.gov/lead).



## For more information

If you would like additional information or if you have any questions concerning the City of Burlingame's testing data or water distribution system, please call the Public Works Department at **(650) 558-7670**, or write to Public Works Corporation Yard, Attn: Water Quality Report, 1361 N. Carolan, Burlingame, CA 94010. You may also wish to visit [www.burlingame.org](http://www.burlingame.org).

Decisions about our drinking water are made from time to time in public meetings. The City of Burlingame City Council meets twice a month on the first and third Monday at 7:00 p.m. in the Council Chambers at City Hall. The San Francisco Public Utilities Commission (SFPUC) meets twice a month on the second and fourth Tuesday at 1:30 p.m. Meetings are held at San Francisco City Hall, Room 400. Inquiries about these meetings can be made by calling the office of the Commission Secretary at **(415) 554-3165** or visit their website at [www.sfwater.org](http://www.sfwater.org).

Do you want to learn more about drinking water regulations? Visit the State Water Resources Control Board at [www.swrcb.ca.gov](http://www.swrcb.ca.gov), or the U.S. Environmental Protection Agency website at [www.epa.gov](http://www.epa.gov).

### City of Burlingame

Public Works Department, (650) 558-7670  
[www.burlingame.org](http://www.burlingame.org)

### San Francisco Public Utilities Commission

Water Quality Bureau, (650) 872-5950  
Customer Service Bureau, (415) 551-3000  
[www.sfwater.org](http://www.sfwater.org)

### State Water Resources Control Board

District 17 - Santa Clara/San Mateo, (510) 620-3474  
Home Treatment Device Certification Unit, (916) 327-1140  
[www.swrcb.ca.gov](http://www.swrcb.ca.gov)

### Safe Drinking Water Hotline

(800) 426-4791  
[www.epa.gov](http://www.epa.gov)

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

此份水質報告，內有重要資訊。請找他人為你翻譯和解說清楚。