

Important Contact Information

City Contacts

City of Sunnyvale

456 West Olive Ave.
Sunnyvale, CA 94086
Tel: (408) 730-7500
TDD: (408) 730-7501
sunnyvale.ca.gov

Utility Division (Billing)

(408) 730-7400

Hours of Operation:
8 a.m. to 5 p.m., M–F

**Environmental Services
Department (Leaks, Breaks,
Water Quality Questions)**
(408) 730-7900

**Backflow and Cross-
Connection Control Program**
(669) 600-7322
crossconnection@sunnyvale.ca.gov

Web Resources

Division of Drinking Water

waterboards.ca.gov/drinking_water

US EPA

water.epa.gov/drink

Department of Water Resources

water.ca.gov

Bay Area Water Supply and Conservation Agency

bawsca.org

American Water Works Assn.

awwa.org or DrinkTap.org

Valley Water Resources

Water Conservation

(408) 630-2554
conservation@valleywater.org

Access Valley Water

Reporting and requests
valleywater.org/AVWapp

To Report Water Waste

(408) 630-2000
waterwise@valleywater.org

Pollution Hotline

(888) 510-5151 (24 Hours)

To Get Involved

To provide input on decisions that affect drinking water quality, you are welcome to speak on any issue specifically coming before the City Council at a regularly scheduled council meeting. You can also speak on any topic you wish to bring to the Council's attention during the "Oral Communications" portion of the meeting agenda. Alternatively, you can send a letter in advance of a meeting.

City Council Meetings

City Hall Council Chambers
456 West Olive Ave.
Sunnyvale, CA 94086
Tuesdays, 7 p.m.

A list of City Council meetings, agenda items and study issues can be obtained by visiting sunnyvale.ca.gov or by calling the City Clerk's office at (408) 730-7483.



Health and Education Information

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. More information about contaminants and potential health effects can be obtained by calling the USEPA Safe Drinking Water Hotline.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons 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 from their health care providers.

USEPA/Centers for Disease Control 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.

USEPA Safe Drinking Water Hotline ►
(800) 426-4791

COVID-19 and Drinking Water

The USEPA and the CDC has reported that the virus that causes COVID-19 has not been detected in drinking water and there is no evidence that it can be transmitted through water supply. Conventional water treatment methods that use filtration and disinfection, such as those provided by SFPUC and Valley Water should remove or inactivate the virus that causes COVID-19. Both Valley Water and SFPUC have assured their customers that there is no impact to water quality and water supply and that the rigorous standards with which they, and the City of Sunnyvale, monitor water quality will continue to assure that your water is safe to use and drink.

No PFAS Detected

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that includes PFOA, PFOS, GenX, and other chemicals. PFAS have been manufactured and used in a variety of industries around the globe, including in the United States since the 1940s. When found in drinking water, it is typically localized and associated with a specific facility (e.g., manufacturer, landfill, wastewater treatment plant, firefighter training facility). We are very pleased to report that recent testing showed no detection of PFAS in the City's water supply.



Sunnyvale Water Quality Report 2019

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

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

Itong documento ay naglalaman nang mahalagang impormasyon tungkol sa tubig na maaring inumin. Mangyaring ipagsalin ito.

Báo cáo này chứa thông tin quan trọng về nước uống của bạn. Xin nhờ người dịch cho quý vị.

本報告包含閣下飲用水重要訊息。請找他人為你翻譯及解釋清楚。

この報告書には上水道に関する重要な情報が記されております。翻訳を依頼してください。

이 보고서는 당신의 식수에 관한 중요한 정보를 포함하고 있습니다. 이해하실 수 있는 분에게 번역을 부탁드립니다.

इस रपॉर्ट में आपके पीने के पानी से संबंधित महत्वपूर्ण जानकारी है। कृपया इसका अनुवाद करें, या किसी ऐसे व्यक्ति से बात करें जो इसे समझता है।

What's Inside

Important information about

- ◆ Your Drinking Water
- ◆ Water Conservation
- ◆ Ways to Contact the City



Where your water comes from

The City of Sunnyvale has three different sources of drinking water supply: treated surface water from the San Francisco Regional Water System (SFRWS) managed by the San Francisco Public Utilities Commission (SFPUC), treated surface water from the Santa Clara Valley Water District (Valley Water), and local groundwater. There are also pockets of Sunnyvale customers who receive water from the California Water Service Company (Cal Water); questions regarding the source and delivery of water provided by Cal Water can be directed to its local office at (650) 917-0152.

SFPUC Supply

The City purchases water from SFPUC to serve the northern part of the city. Filtered water turbidity from the SFRWS met the standard of 0.3 NTU or less, 95% of the time. SFRWS's major water source is in Yosemite National Park and originates from spring snowmelt that flows down the Tuolumne River to the Hetch Hetchy Reservoir. The well-protected Sierra water source is exempt from federal and state filtration requirements. To meet drinking water standards, water from Hetch Hetchy Reservoir is treated with ultraviolet light and chlorine disinfection, pH adjustment for optimum corrosion control, fluoridation for dental health protection, and chloramination for maintaining disinfectant residual and minimizing the formation of regulated disinfection byproducts.

The Hetch Hetchy supply is supplemented with surface water from local watersheds. Rainfall and runoff from the 35,000-acre Alameda Watershed in Alameda and Santa Clara counties are first collected in Calaveras and San Antonio Reservoirs for storage followed by delivery to the Sunol Valley Water Treatment Plant. Water delivered to the treatment plant is subject to filtration, disinfection, fluoridation, optimum corrosion control, and taste and odor removal to ensure that federal and state drinking water standards are met. In 2019, average fluoride levels in the treated water were maintained at levels up to 0.7 mg/L as required by the State Water Resources Control Board (State Water Board). Since May 2015, water has been fluoridated at the new optimum level of 0.7 mg/L.

The SFPUC actively protects the water resources entrusted to its care. Its annual update of the Hetch Hetchy Watershed Sanitary Survey evaluates the sanitary conditions, water quality, potential contamination sources and the results of watershed protection and management activities with partner agencies (such as the National Park Service and US Forest Service).

The SFPUC also conducts sanitary surveys every five years to detect and track sanitary concerns for local Bay Area watersheds. The latest 5-year surveys were completed in 2016 for the period of 2011-2015. These surveys identified wildlife, stock and human activities as potential contamination sources. To review the Sanitary Surveys at the District office, contact DDW at (510) 620-3474.

More information on SFPUC and the SFRWS ►
[Visit sfwater.org](http://www.sfwater.org)

Valley Water Supply

The City purchases treated surface water from Valley Water and delivers it to the southern portion of the city. Valley Water's surface water is mainly imported from the South Bay Aqueduct, Dyer Reservoir, Lake Del Valle, and San Luis Reservoir, which all draw water from the Sacramento - San Joaquin Delta watershed. Valley Water's local water sources include Anderson and Calero Reservoirs.

Valley Water sources are vulnerable to potential contamination from a variety of land use practices such as agricultural and urban runoff, recreational activities, livestock grazing, and residential and industrial development. Imported sources are vulnerable to wastewater treatment plant discharges, seawater intrusion and wildfires in open space watershed areas. Local sources are also vulnerable to contamination from commercial stables and historic mining practices. No contaminant associated with these activities has been detected in treated Valley Water. Water treatment provides multiple barriers for physical removal of contaminants and disinfection against pathogens. To review the Sanitary Surveys, contact DDW at (510) 620-3474.

More information on Valley Water ►
[Visit valleywater.org](http://www.valleywater.org)

Local Groundwater

The City owns, operates and maintains six deep wells. The wells are used to help supplement the imported water supplies during peak demands in the summer months and emergency situations. The City is always working to increase flexibility in local groundwater supplies, enhance water quality, reduce operating costs and increase reliability. The City maintains and monitors the wells on a regular basis. Groundwater pumped from these wells is taxed by Valley Water.

The City completed a Drinking Water Source Assessment Program (DWSAP) in January 2003 for these groundwater sources. The City's groundwater sources are considered most vulnerable to contamination by leaky underground fuel tanks, dry cleaning chemicals, sewer collection systems, old septic systems and machine shops.

Visit waterboards.ca.gov/drinking_water/certlic/drinkingwater/DWSAP.html for more information, or call (408) 730-7400 to schedule a time to view it.

Protecting your water supply

To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Board 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.

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. 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 stormwater runoff, agricultural application and septic systems.
- **Radioactive Contaminants** that can be naturally-occurring or be the result of oil and gas production and mining activities.

Protection begins in the watersheds. Protecting the water supply is important to ensure that water is safe from contamination and aesthetically pleasing for use. Contamination requires treatment, which increases the cost to deliver water to your tap. Here are ways that you can help protect our watershed:

- Eliminate excess use of lawn and garden fertilizers and pesticides.
- Pick up after your pets.
- Take used motor oil and other recyclables to the SMaRT Station.
- Dispose of pharmaceuticals at any Sunnyvale fire station. Medications should not be flushed down drains or put in the garbage.
- Dispose of cleaners, chemicals and paints at a Household Hazardous Waste Drop-off Event.
- Volunteer in your community. The Creek Connections Action Group works to protect the County's waterways. Visit cleanacreek.org.
- Participate in public meetings and forums. It allows decision-makers to hear your perspective and you to be involved in protecting your water supply.

More information about disposal and recycling ►
Call (408) 730-7262

SMaRT Station

301 Carl Road, Sunnyvale, CA 94089
Open daily, 8 a.m. to 5 p.m., Tel: (408) 752-8530

Household Hazardous Waste Drop-off

Third Saturday in January, April, July, and October, 8 a.m. to 1 p.m.
Visit hhw.org or call (408) 299-7300 to schedule an appointment

Water conservation tips

The City works cooperatively with our water wholesalers to provide residents with advice, assistance and access to programs. The following water-saving tips are simple ways to conserve water indoors and out, and are provided jointly by the City and Valley Water.

Steps to save water indoors

- Turn off the faucet while you brush your teeth.
- Take shorter showers. You will save 2.5 gallons of water each minute.
- Install water-efficient faucet aerators and showerheads in your kitchen and bathrooms.
- Check toilets and faucets for leaks. Running toilets can waste two gallons a minute while leaky faucets can waste thousands of gallons.
- Do not use the toilet as a wastebasket.
- Only wash full loads of laundry and dishes.
- Rinse fruits and vegetables in a pan instead of using running water.
- Keep a pitcher of drinking water in the refrigerator. Running tap water to cool it off for drinking is wasteful.
- Replace your old top-loading clothes washer with a high-efficiency model. For information about rebates call the Water Conservation Hotline.
- If your toilet uses more than 3.5 gallons per flush, replace it with a high-efficiency toilet. New models use 70 percent less water. For information about rebates, call the Water Conservation Hotline.



Steps to save water outdoors

- Plant native or drought-tolerant plants that require less watering. Native plants promote healthier local ecosystems.
- Use a broom to sweep off pavement. Using a hose to wash sidewalks, driveways and patios wastes money and water.
- Apply organic mulch around plants to reduce moisture loss, keep weed-growth down and promote healthier soil.
- Deeply soak your lawn to ensure moisture reaches the roots. Light sprinkle watering evaporates quickly and encourages shallow root systems that need more frequent watering.
- Check for leaks in pipes, sprinkler heads and valves.
- Water during cool parts of the day. Early morning is the best time because it helps prevent growth of fungus.
- Water your lawn only when it needs it. If the grass springs back up after stepping on it, it does not need watering.
- Avoid watering on windy days.
- Use drip irrigation in larger gardens with weather-based irrigation control. For information about rebates call the Water Conservation Hotline.

Water Conservation Hotline ►
SCVWD (408) 630-2554
valleywater.org



The spillway at O'Shaughnessy Dam, Hetch Hetchy Reservoir

2019

Water Quality Test Results

The City of Sunnyvale has instituted a comprehensive water quality monitoring program that encompasses City-owned wells and all water purchased from SFPUC and Valley Water. This program ensures that all of our customers receive water that complies with all regulatory criteria and that no maximum contaminant levels (MCLs) or action levels (ALs) for regulated chemicals, bacteria or pollutants are exceeded.



To ensure water quality standards are met, drinking water samples are collected weekly throughout Sunnyvale and analyzed for a variety of regulated and unregulated contaminants. Samples are tested by our certified laboratory and by an independent certified laboratory using the latest testing procedures and equipment. We collect more samples than required by the State Water Board to provide you with the highest quality of water at all times. In addition, the City's wholesalers, Valley Water and SFPUC, conduct their own testing before delivering water to the City. Such measures help us to continue meeting established water quality standards.

The table to the right shows the results of the distribution system and source water analyses conducted by the City, Valley Water and SFPUC. Water quality data are grouped by water source. In 2019 we conducted more than 20,000 tests for more than 80 parameters. We detected only 11 of these parameters, and none were detected at levels higher than the State Water Board allows.

Only the parameters detected are shown. Other constituents were analyzed but are not listed because they were not detected. Additionally, unregulated parameters are shown to provide you with supplemental information.

Some data—although representative—were collected prior to 2019, as the State Water Board requires monitoring for some constituents less than once per year since the concentrations do not vary frequently or significantly.

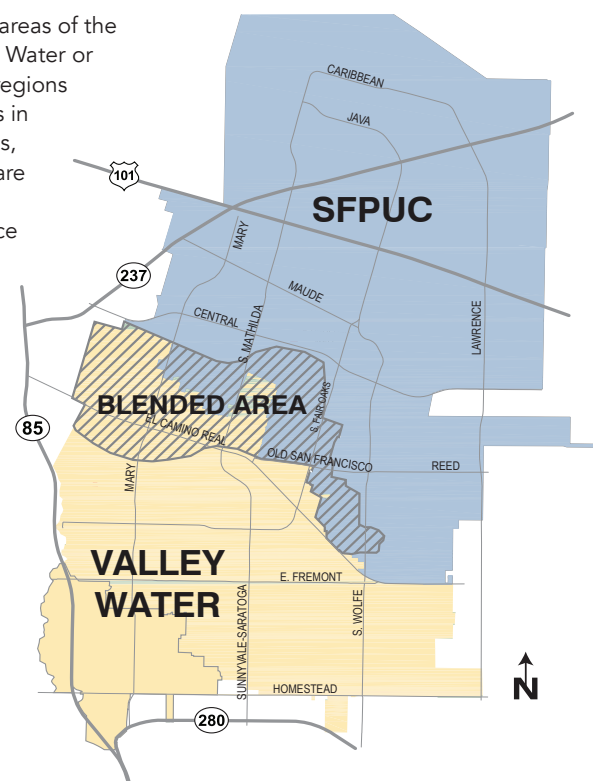
Water Supply Map

The adjacent map indicates which areas of the City are supplied by SFPUC, Valley Water or a mixture of the two. The colored regions correspond to the colored columns in the table above. Groundwater wells, which are not shown on this map, are located throughout the City. Local groundwater is blended with surface water supplies from SFPUC and Valley Water. SFPUC water is fluoridated but Valley Water and groundwater supplies are not.

More information

For more information about this report or the City's water quality monitoring program, please contact:

Joseph De la Cruz
City of Sunnyvale
Water Operations Manager
Tel: (408) 730-7900
TDD: (408) 730-7501
JDeLaCruz@sunnyvale.ca.gov



PRIMARY DRINKING WATER STANDARDS (PUBLIC HEALTH RELATED STANDARDS)										
PARAMETER	Unit	MCL, (AL), or (MRDL)	PHG, (MCLG), or (MRDLG)	Groundwater Well		Valley Water		SFPUC		Typical Sources*
				Average or [Max]	Range	Average or [Max]	Range	Average or [Max]	Range	
SOURCE WATER SAMPLING										
INORGANIC CHEMICALS										
Aluminum	ppm	1	0.6	ND	ND	ND	ND	ND	ND-0.068	3, 4
Fluoride	ppm	2	1	0.16	0.15-0.19	ND	ND	0.3	ND-0.9	3, 5, 6
Nitrate (as Nitrogen)	ppm	10	10	3.4	2.4-6.5	ND	ND-0.5	ND	ND	3, 7, 8
DISINFECTION BYPRODUCT PRECURSORS										
TOC (precursor control)	ppm	TT	NA			2.0	1.4-2.3	2.1	1.6-2.6	10
MICROBIOLOGICAL										
Giardia Lamblia	cyst/L	TT	(0)			ND	ND	0.02	ND-0.09	1
Turbidity	NTU	TT _a	NA			[0.51]	100% _b	[1]	99.89-100% _b	2
DISTRIBUTION SYSTEM SAMPLING										
LEAD AND COPPER RULE STUDY (SUNNYVALE 2019 AT-THE-TAP SAMPLING)				90th Percentile			# of Samples Above AL			
Lead	ppb	(15)	0.2	ND			0 out of 50			
Copper	ppm	(1.3)	0.3	0.181			0 out of 50			
DISINFECTION RESIDUALS AND BYPRODUCTS				Highest Location RAA			Range			
Disinfectant Residual as Chlorine	ppm	[4]	[4]	2.6			0.07-4.0			
Total Trihalomethanes	ppb	80	NA	51.9			19.2-59.6			
Haloacetic Acids	ppb	60	NA	29.0			4.6-39.0			
MICROBIOLOGICAL				Average			Range			
Total Coliform Bacteria	% pos / month	5.0%	(0)	0.2%			0-0.8%			
SECONDARY DRINKING WATER STANDARDS (AESTHETIC STANDARDS)										
PARAMETER	Unit	MCL	Average	Range	Average	Range	Average	Range	Sources*	
Aluminum	ppb	200	ND	ND	ND	ND	ND	ND-68	3, 4	
Chloride	ppm	500	46	35-67	51	27-72	8.7	ND-17	11, 12, 14	
Color	C.U.	15	ND	ND	ND	ND	ND	ND-10	13	
Odor - Threshold	T.O.N.	3	ND	ND	1	1	ND	ND	13	
Specific Conductance	µS/cm	1600	702	640-750	445	365-517	158	32-234	14, 16	
Sulfate	ppm	500	35	25-41	58	52-62	15	1-29	11, 12, 15	
Total Dissolved Solids	ppm	1000	387	350-410	265	240-292	76	ND-119	11, 12	
UNREGULATED PARAMETERS (UCMR 4 sampled in 2018)										
PARAMETER	Unit	MCL	Average	Range	Average	Range	Average	Range	Sources*	
Haloacetic Acids 6 _s	ppb	NS	17.2				0.3-37.0			
Haloacetic Acids 9 _s	ppb	NS	34.2				20.7-53.4			
Manganese _s	ppb	50	1.4				ND-4.8		12	
Alpha-hexachlorocyclohexane _s	ppb	NS	ND				ND-0.016			
n-Butyl alcohol (1-butanol) _s	ppb	NS	ND				ND-2.3			
OTHER WATER QUALITY PARAMETERS										
PARAMETER	Unit	MCL	Average	Range	Average	Range	Average	Range	Sources*	
Hardness (as Calcium Carbonate)	ppm	NS	320	300-340	104	93-120	47	9-77		
pH	Units	NS	NA	NA	7.8	7.7-7.9	9.3	8.8-10.1		
Sodium	ppm	NS	30	23-42	49	33-63	14	2.8-21		
Temperature	°C	NS	18	13-22	17	13-21	NA	NA		

Definitions of Key Terms

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 are set to protect the odor, taste and appearance of drinking water. MCLs are established by USEPA and the State Water Board.

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 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.

Notification Level (NL). Notification levels are health-based advisory levels established by the State Water Board for chemicals in drinking water that lack MCLs. When chemicals are found at concentrations greater than their notification levels, certain requirements and recommendations apply.

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

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 Office of Environmental Health Hazard Assessment.

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.

Total Organic Carbon (TOC). TOC has no health effects. However, TOC provides a medium for the formation of disinfection byproducts including trihalomethanes and haloacetic acids. Drinking water containing disinfection byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems or nervous system effects and may lead to an increased risk of cancer.

Turbidity. Turbidity has no health effects. It is a measure of the clarity of the water and is monitored because it is a good indicator of water quality and the effectiveness of a filtration system. The MCL for turbidity is based on the TT. For unfiltered water, the MCL is 5.0 NTU. For filtered water, the MCL is ≤0.3 NTU 95% of the time.

UCMR. Unregulated Contaminant Monitoring Rule requires monitoring for contaminants not currently regulated. This monitoring provides a basis for future regulatory actions to protect public health.

Waiver. State permission to decrease the monitoring frequency for a particular contaminant.

Abbreviations

°C	Degrees Celsius
CU	Color unit
cysts/L	Cysts per liter
DDW	Division of Drinking Water
Max	Maximum
NA	Not applicable
ND	Not detected
NS	No standard
NTU	Nephelometric turbidity unit
ppb	parts per billion (micrograms per liter)
ppm	parts per million (milligrams per liter)
µS/cm	microSiemens per centimeter
% pos	% positive
RAA	Running annual average
TON	Threshold odor number
USEPA	United States Environmental Protection Agency

NOTES

- For unfiltered water, the MCL is 5.0 NTU. For filtered water, the MCL is ≤0.3 NTU 95% of the time.
- Percent of time ≤0.3 NTU.
- Levels in the distribution system.
- Levels in the distribution system and groundwater wells.

Important information about your water quality

Fluoride

Currently, all water from SFPUC is fluoridated while water from Valley Water, the City's other wholesale water provider is not. The City also does not fluoridate well water. As a result, some areas of Sunnyvale receive fluoridated water, other areas receive non-fluoridated water and some areas receive a mixture of both. See map at bottom left. According to the Centers for Disease Control and Prevention (CDC), if a child under the age of six months is exclusively consuming infant formula reconstituted with fluoridated water, there may be an increased chance of dental fluorosis. Consult your child's health care provider for more information.

Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with privately owned service lines and home plumbing. The City is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. 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 two minutes before using water for drinking or cooking. If you do so, you may wish to collect the flushed water and use it for another purpose, such as watering plants. 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 at (800) 426-4791 or at epa.gov/lead.

Disinfection

The Sunnyvale system distributes water disinfected with chloramine and well water that is tested but not treated. Chloramine, a combination of chlorine and ammonia, lasts longer in water to provide more protection against pathogens such as bacteria and viruses, and produces lower levels of disinfection byproducts such as trihalomethanes. The water provided by SFPUC and Valley Water is disinfected with chloramines, which can affect dialysis treatment. Residents on home dialysis should contact their physicians to discuss the impact on their treatment. The End Stage Renal Disease Network 17, at (415) 897-2400, can provide more information about chloramines and dialysis. Fish and aquarium owners should check with their local pet stores for information on chloramine removal.

Cryptosporidium/Giardia

Cryptosporidium and *Giardia* are microbial pathogens commonly found in surface water throughout the U.S. SFRWS regularly tests for these waterborne pathogens and found them at very low levels in source water and treated water in 2019. 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.

Nitrate

Nitrate in drinking water at levels above 10 ppm is a health risk for infants younger than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 ppm may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask for advice from your health care provider.

Hardness

Water hardness is determined mainly by the presence of calcium and magnesium salts. Although hard water does not pose a health risk, it may be considered undesirable for other reasons. Some benefits of water softening are reductions in soap usage, longer life for water heaters and a decrease in encrustation of pipes; disadvantages are an increase in sodium intake, an increase in maintenance and servicing and potential adverse effects on salt-sensitive plants. To convert hardness from ppm to grains per gallon, divide by 17.1. A hardness scale is provided below for your reference.

Hardness Classification	Grains per Gallon	mg/L or ppm
Soft	< 1.0	< 17.1
Slightly hard	1.0-3.5	17.1-60
Moderately hard	3.5-7.0	60-120
Hard	7.0-10.5	120-180
Very hard	> 10.5	> 180

* Typical Sources In Drinking Water

- Naturally present in the environment
- Soil runoff
- Erosion of natural deposits
- Residue from some surface water treatment processes
- Water additive that promotes strong teeth
- Discharge from fertilizer and aluminum factories
- Runoff and leaching from fertilizer use
- Leaching from septic tanks and sewage
- By-product of drinking water disinfection
- Various natural and man-made sources
- Runoff from natural deposits
- Leaching from natural deposits
- Naturally-occurring organic materials
- Seawater influence
- Industrial wastes
- Substances that form ions when in water
- Internal corrosion of household plumbing systems
- Leaching from wood preservatives
- Discharges from industrial manufacturers
- Drinking water disinfectant added for treatment