

We are proud to provide you with some of the nation's highest quality water that meets or exceeds all state and federal standards for drinking water.

This brochure highlights important information about your drinking water and our commitment to providing excellent water quality.

This **Annual Consumer Confidence Report** about your water supply is prepared according to California law.



OUR  
WATER  
QUALITY



**WATER QUALITY**

- City of Palo Alto Utilities, Water Transmission (650) 496-6967
- City of Palo Alto [cityofpaloalto.org/water](http://cityofpaloalto.org/water)
- San Francisco Public Utilities Commission (SFPUC) [sfwater.org](http://sfwater.org)
- U.S. Environmental Protection Agency (USEPA) Drinking Water [epa.gov/safewater](http://epa.gov/safewater)
- USEPA Safe Drinking Water Hotline (800) 426-4791

**HEALTH CONCERNS & REGULATIONS**

- State Water Resources Control Board (SWRCB) [swrcb.ca.gov](http://swrcb.ca.gov)
- USEPA [epa.gov](http://epa.gov)

**EMERGENCY PREPAREDNESS**

- California Department of Public Health [bepreparedcalifornia.ca.gov](http://bepreparedcalifornia.ca.gov)



**Our Drinking Water Sources and Treatment**

The San Francisco Regional Water System's (SFRWS) major drinking water supply consists of surface and groundwater that are well protected and carefully managed by the San Francisco Public Utilities Commission (SFPUC). These sources are diverse in both the origin and the location with surface water stored in reservoirs located in the Sierra Nevada, Alameda County and San Mateo County, and groundwater stored in a deep aquifer located in the northern part of San Mateo County.

To meet drinking water standards for consumption, all surface water supplies from SFRWS undergo treatment before it is delivered to our customers. Water from the Hetch Hetchy Reservoir is exempt from state and federal filtration requirements but receives the following treatment: 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. Water from local

Bay Area reservoirs in Alameda County and San Mateo County is delivered to Sunol Valley Water Treatment Plant (SVWTP) and Harry Tracy Water Treatment Plant (HTWTP), respectively, and is treated by filtration, disinfection, fluoridation, optimum corrosion control, and taste and odor removal processes. In 2020, a small amount of groundwater from five of the eight recently completed wells was intermittently added to the SFRWS's surface water supply.

**Protecting Our Watersheds**

SFRWS conducts watershed sanitary surveys for the Hetch Hetchy source every five years for non-Hetch Hetchy surface water sources. The latest 2016-2020 sanitary surveys for the non-Hetch Hetchy watersheds were completed in 2021. These surveys and our stringent watershed protection management activities were completed with support from partner agencies including National Park Service and US Forest Service. The purposes of the surveys are to evaluate the sanitary conditions and water quality of the watersheds and to review the results of watershed management activities conducted in the preceding years. Wildlife, stock, and

human activities continue to be the potential contamination sources. You may contact the San Francisco District office of the State Water Resources Control Board's Division of Drinking Water (SWRCB-DDW) at 510-620-3474 for the review of these reports.

**Ensuring the Highest Water Quality**

SFRWS regularly collects and tests water samples from reservoirs and designated sampling points throughout the sources and transmission system to ensure the water delivered to you meets or exceeds federal and State drinking water standards. In 2020, SFRWS conducted more than 47,200 drinking water tests in the sources and transmission system. This is in addition to the extensive control monitoring performed by SFRWS'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

tap water is safe to drink, the United States Environmental Protection Agency (U.S. EPA) and the 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.

**Water Supply Conditions**

Because water supply availability is a long-term challenge, the State and Palo Alto are continuing efforts to make water conservation a way of life. A number of prohibitions on wasteful practices, such as watering turf and ornamental landscapes between 10 am and 6 pm, are permanently in place via City ordinance. To learn more about current water supply conditions, water use restrictions, and available efficiency resources, please visit [cityofpaloalto.org/water](http://cityofpaloalto.org/water)

**Protecting the SFPUC Water System from Seismic Disaster**

The SFPUC has invested more than \$4 billion in the Water System Improvement Program (WSIP) to ensure that the regional water system will be able to deliver water for public health, firefighting and disaster recovery as quickly as possible following a seismic event. The majority of the WSIP's infrastructure projects have been completed. The current forecasted date to complete the overall WSIP is June 2023.

**Monitoring of Per- and Polyfluoroalkyl Substances (PFAS)**

PFAS is a group of approximately 5,000 man-made chemicals used in a variety of industries and consumer products. These chemicals are

very persistent in the environment and human body. SFRWS conducted a special round of PFAS monitoring of its surface water sources and transmission system in 2019 and five groundwater wells in 2020. The monitoring effort was entirely proactive and voluntary with the objective to identify if SFRWS's water supplies are impacted by PFAS. Using the State's stringent sampling procedures and based on the approved/certified method of analysis for 18 PFAS contaminants, SFRWS confirmed no PFAS was detected in its water sources and transmission system. Considering USEPA's recent development of a newer method of analysis for additional PFAS contaminants, SFRWS intends to conduct another round of monitoring when the new analytical method is available at its contract laboratory.

For additional information about PFAS, visit SWRCB-DDW website [waterboards.ca.gov/pfas](http://waterboards.ca.gov/pfas) and/or USEPA website [epa.gov/pfas](http://epa.gov/pfas).

**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 fluoride target level in the water is 0.7 milligrams per liter (mg/L, or part per million, ppm), 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 risks. 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 healthcare provider or SWRCB-DDW if you have concerns about dental fluorosis. For additional information about fluoridation or oral health, visit the SWRCB-DDW website [waterboards.ca.gov/drinking\\_water/certific/drinkingwater/Fluoridation.shtml](http://waterboards.ca.gov/drinking_water/certific/drinkingwater/Fluoridation.shtml), or the CDC website at [cdc.gov/fluoridation](http://cdc.gov/fluoridation).

**Drinking Water and Lead**

Exposure to lead, if present, can cause serious health effects in all age groups, especially for pregnant women and young children. Infants and children who drink water containing lead could have decreases in IQ and attention span and increases in learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems.

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 our water distribution system. We are responsible for providing high-quality drinking water and removing lead pipes, but we cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting

yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to remove lead from drinking water. If you are concerned about lead in your water you may wish to have your water tested, call (650) 496-6967 for a lead test. Information about lead in drinking water, testing methods, and steps you can take to minimize exposure is available at [epa.gov/safewater/lead](http://epa.gov/safewater/lead).

As previously reported in 2018, we completed an inventory of lead user service lines (LUSL) in our system and there are no known pipelines and connectors between water mains and meters made of lead. Our policy is to remove and replace any LUSL promptly if it is discovered during pipeline repair and/or maintenance.

**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 healthcare 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 [epa.gov/safewater](http://epa.gov/safewater).

**Tap vs. Bottled**

City of Palo Alto Utilities (CPAU) customers are fortunate to have access to high quality water flowing from the faucet—the pristine snowmelt from the Hetch Hetchy reservoir.

**Avoid the high cost, lower quality and environmental impact of buying bottled water, and enjoy a glass of tap water today!**

**Bay Tunnel and New Irvington Tunnel Projects**

These new SFPUC facilities were brought into service in 2015 and have strengthened the seismic reliability of the SFRWS by providing crucial system redundancies. They are part of the SFPUC's Water System Improvement Program: a \$4.8 billion investment in capital projects that strengthens SFPUC's ability to provide reliable, high-quality water to 2.6 million customers, even after a natural disaster.



**Prepare Yourself for Emergencies**

Although the SFPUC and CPAU strive to ensure a reliable supply of water for our customers, a natural disaster such as a major earthquake could interrupt water delivery. As a result, it is imperative that everyone be prepared for the unexpected both at home and at work.

- Store at least three to five days worth of tap water in a dark, cool place (one gallon of water per person, per day, including pets) in clean, airtight food grade containers.
- Label each container with a date and replace the water every six months.
- At the time of usage, add 8 drops of bleach to each gallon to ensure disinfection. (Use

- pure household bleach only—not products with scents or other additives.) Mix and allow to stand for 30 minutes before use. If a camp stove is available, you can also disinfect the water by bringing it to a rolling boil for 5 to 10 minutes.
- If you run out of stored drinking water, strain and treat water from your water heater. To strain, pour it through a clean cloth or

- layers of paper towels. Treat with household bleach, as directed above. Other sources of water inside the home are ice cubes and the reservoir tank of your toilet (not the bowl).
- Remember to drain your water heater periodically to remove any sediment build up.
- If your water supply is not sufficient for hand washing, use antiseptic hand gel or wipes.

CUT AND SAVE FOR QUICK REFERENCE

Individuals with disabilities who require accommodations to access City facilities, services or programs, or who would like information on the City's compliance with the Americans with Disabilities Act (ADA) of 1990, may contact the City's ADA Coordinator at (650) 329-2368 (voice) or email [ada@cityofpaloalto.org](mailto:ada@cityofpaloalto.org)

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DETECTED CONTAMINANTS	UNIT	MCL	PHG OR [MCLG]	RANGE OR LEVEL FOUND	AVERAGE OR [MAX]	MAJOR SOURCES IN DRINKING WATER
<b>TURBIDITY (Turbidity is a water clarity indicator; it also indicates the effectiveness of the filtration plants.)</b>						
Unfiltered Hetch Hetchy Water	NTU	5	N/A	0.2 - 0.5 <sup>(2)</sup>	[1.3]	Soil runoff
Filtered Water from Sunol Valley Water Treatment Plant (SVWTP)	NTU	1 <sup>(3)</sup>	N/A	–	[0.4]	Soil runoff
	–	Min 95% of samples ≤ 0.3 NTU <sup>(3)</sup>	N/A	99.8% - 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	8.5 - 44.0	28.8	Byproduct of drinking water disinfection
Haloacetic Acids	ppb	60	N/A	8.6 - 41.0	28.5	Byproduct of drinking water disinfection
Total Organic Carbon <sup>(6)</sup>	ppm	TT	N/A	1.7 - 3.4	2.9	Various natural and man-made sources
<b>MICROBIOLOGICAL</b>						
Total Coliform <sup>(8)</sup>	-	NoP ≤ 5.0% of monthly samples	(0)	–	[0.0%]	Naturally present in the environment
<i>Giardia lamblia</i>	cyst/L	TT	(0)	0 - 0.05	0.01	Naturally present in the environment
<b>INORGANICS</b>						
Fluoride (source water) <sup>(7)</sup>	ppm	2.0	1	ND - 0.7	0.3 <sup>(8)</sup>	Erosion of natural deposits; water additive to promote strong teeth
Chloramine (as chlorine)	ppm	MRDL = 4.0	MRDLG = 4	0.52 - 3.17	2.69	Drinking water disinfectant added for treatment
<b>CONSTITUENTS WITH SECONDARY STANDARDS</b>						
Chloride	ppm	500	N/A	<3 - 15	8.7	Runoff / leaching from natural deposits
Specific Conductance	µS/cm	1600	N/A	30 - 260	160	Substances that form ions when in water
Sulfate	ppm	500	N/A	1 - 34	17	Runoff / leaching from natural deposits
Total Dissolved Solids	ppm	1000	N/A	<20 - 137	72	Runoff / leaching from natural deposits
Turbidity	NTU	5	N/A	ND - 0.2	ND	Soil runoff
<b>LEAD AND COPPER</b>						
Copper	ppb	1300	300	12.0 - 104.0	34.78	Internal corrosion of household water plumbing systems
Lead	ppb	15	0.2	0.02 - 3.91	1.971	Internal corrosion of household water plumbing systems
<b>OTHER WATER QUALITY PARAMETERS</b>						
Alkalinity (as CaCO <sub>3</sub> )	ppm	N/A		6.7 - 138	55	
Calcium (as Ca)	ppm	N/A		2.9 - 22	12	
Chlorate <sup>(13)</sup>	ppb	800 (NL)		67 - 480	240	
Hardness (as CaCO <sub>3</sub> )	ppm	N/A		8.0 - 79	45	
Magnesium	ppm	N/A		0.2 - 6.8	4.0	
pH	-	N/A		8.6 - 9.8	9.3	
Potassium	ppm	N/A		0.3 - 1.3	0.8	
Silica	ppm	N/A		2.8 - 7	4.8	
Sodium	ppm	N/A		2.4 - 22	14	
Strontium	ppb	N/A		14 - 242	110	

(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 Treatment Technique (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) For systems collecting <40 samples per month, the highest number (not the percentage) of positive samples collected in any one month are reported.  
 (7) In May 2015, the SWRCB recommended an optimal fluoride level of 0.7 ppm be maintained in the treated water. In 2019, the range and average of the fluoride levels were 0.2 ppm - 0.9 ppm and 0.7 ppm, respectively.

(8) The natural fluoride level 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 2017. 0 of 55 site samples collected at consumer taps had copper concentrations above the AL.  
 (12) The most recent Lead and Copper Rule monitoring was in 2017. 0 of 55 site samples collected at consumer taps had copper concentrations above the AL.  
 (13) The detected chlorate in the treated water is a degradation product of sodium hypochlorite used by the SFRWS for water disinfection.  
 (14) Chromium (VI) has a PHG of 0.02 ppb but no MCL. The previous MCL of 10 ppb was withdrawn by the SWRCB-DDW on September 11, 2017. Currently, the SWRCB-DDW regulates all chromium through a MCL of 50 ppb for Total Chromium.  
 Note: Additional water quality data may be obtained by calling City of Palo Alto Utilities Staff at (650) 496-6967.

The adjacent table lists all 2020 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. SFRWS holds a SWRCB-DDW monitoring waiver for some contaminants in its surface water supply and therefore the associated monitoring frequencies are less than annual.

- KEY**
- < / ≤ = 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
  - pCi/L = picocurie per liter
  - ppb = parts per billion
  - ppm = parts per million
  - µS/cm = microSiemens / centimeter

## Key Water Quality Terms

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 disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control over 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, MRDLs and treatment techniques for contaminants that affect health, along with their monitoring and reporting 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 the cloudiness of water, and is also used to indicate the effectiveness of the filtration system. High turbidity can hinder the effectiveness of disinfectants.

**Cryptosporidium:** A parasitic microbe found in most surface water. SFRWS regularly tests for this waterborne pathogen and found it at very low levels in source water and treated water in 2020. 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.

## Hetch Hetchy Regional Water System



## Contaminants and Regulations

Generally, 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,

**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 [epa.gov/safewater](http://epa.gov/safewater).