



**PURISSIMA  
HILLS** EST. 1955  
.....  
**WATER DISTRICT**



2020  
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**ANNUAL WATER QUALITY REPORT**

# 2020 | PHWD ANNUAL

## Our Drinking Water Sources and Treatment

San Francisco Regional Water System's (SFRWS) major drinking water supply consists of surface water 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 the 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. ■



## Water Quality

SFRWS regularly collects and tests water samples from reservoirs and designated sampling points throughout the sources and the 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 the transmission system. This is in addition to the extensive treatment process 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 that tap water is safe to drink, the United States Environmental Protection Agency (USEPA) 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. ■

This report contains important information about our drinking water. For assistance or additional information concerning this report, please contact the Purissima Hills Water District at (650) 948-1217 or email the District at [samv@purissimawater.org](mailto:samv@purissimawater.org). Translate it, or speak with someone who understands it.

### PHWD BOARD OF DIRECTORS

**President:** Brian Holtz **Vice President:** Steve Jordan  
**Directors:** Kathy Knopoff, Peter Evans, Essy Stone

### PHWD MANAGEMENT

**General Manager:** Phil Witt

# WATER QUALITY REPORT

## 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 milligram 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 risk. The Centers of 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 [www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/Fluoridation.html](http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.html) or the CDC website [www.cdc.gov/fluoridation](http://www.cdc.gov/fluoridation) ■

## 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 [www.epa.gov/safewater](http://www.epa.gov/safewater) ■

## 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 EPA's Safe Drinking Water Regional Offices at **(415) 947-4280** or go to [www.epa.gov/lead](http://www.epa.gov/lead) for a lead test. Information about lead in drinking water, testing methods, and steps you can take to minimize exposure is available at [www.epa.gov/safewater/lead](http://www.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. ■

## Watersheds Protection

SFRWS conducts watershed sanitary surveys for the Hetch Hetchy source annually and for non-Hetch Hetchy surface water sources every five years. The latest sanitary surveys for the non-Hetch Hetchy watersheds were completed in 2021 for the period of 2016-2020. All these surveys together with 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 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. ■



## Groundwater Storage and Recovery (GSR) Project

Groundwater is a renewable source of naturally-occurring fresh water that is found in underground and is replenished primarily by rainfall. The use of groundwater helps diversify water sources and makes drinking water supply even more reliable. SFRWS completed installation of eight deep-water wells in its GSR project Phase 1. These wells were tested throughout 2020 and had intermittently delivered water to blend with the surface water supply in the north San Mateo County. For the past decade, SFRWS has collected water quality and quantity data from the Westside Basin aquifer, from which the groundwater was extracted. With extensive monitoring and testing, SFRWS knows that after adding groundwater to its water supplies, it will continue providing our customers with high-quality drinking water that meets or exceeds all regulatory health-based and aesthetic standards set by the SWRCB-DDW and the USEPA. ■

## 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 in September 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 [www.waterboards.ca.gov/pfas](http://www.waterboards.ca.gov/pfas) and/or USEPA website [www.epa.gov/pfas](http://www.epa.gov/pfas) ■

# Lead and Copper Tap Sampling Results

We conducted the triennial Lead and Copper Rule (LCR) monitoring on October 1, 2019, and these tap sampling results are accessible at [www.waterboards.ca.gov](http://www.waterboards.ca.gov). The next round of LCR monitoring will be conducted in 2022. ■

## 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 [www.epa.gov/safewater](http://www.epa.gov/safewater)

## Key Water Quality Terms

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

**Public Health Goal (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the USEPA.

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

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

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

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

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

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

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

**Cryptosporidium** is a parasitic microbe found in most surface water. 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.

## PLEASE BE PREPARED!

Your water service may be interrupted at any time if a District's main pipe breaks, or our supplier's pipes break from a natural disaster such as an earthquake. You must be responsible for supplying your family with water for drinking and sanitation in an emergency. Keep an emergency supply of bottled water in your home or garage and refresh it every 4-5 months.

# PHWD's Water Quality Data for Calendar Year 2020<sup>1</sup>

The table below 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.

## DETECTED CONTAMINANTS<sup>1</sup>

▼ TURBIDITY	Unit	MCL	PHG or (MCLG)	Range or Level Found	Average or [Max]	Major Sources in Drinking Water
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
▼ DISINFECTION BYPRODUCTS AND PRECURSOR						
Total Trihalomethanes	ppb	80	N/A	-	43.2 <sup>(4)</sup>	Byproduct of drinking water disinfection
Haloacetic Acids	ppb	60	N/A	-	36.3 <sup>(4)</sup>	Byproduct of drinking water disinfection
Total Organic Carbon <sup>(5)</sup>	ppm	TT	N/A	1.7 - 3.4	2.9	Various natural and man-made sources
▼ MICROBIOLOGICAL						
Total Coliform <sup>(6)</sup>	-	NoP ≤ 5.0% of monthly samples	(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
▼ INORGANICS						
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	2.79 - 3.03	2.85 <sup>(9)</sup>	Drinking water disinfectant added for treatment

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

Please distribute this Water Quality Report and make available to everyone, including tenants, employees, homeowner association members, etc. The District welcomes the opportunity for public participation in discussing the Water Quality Report. Board Meetings are held at the District Office 26375 Fremont Rd., Los Altos Hills at 6:30 pm on the second Wednesday of every month.

# DETECTED CONTAMINANTS <sup>1</sup>

## ▼ CONSTITUENTS WITH SECONDARY STANDARDS

	Unit	SMCL	PHG	Range	Average	Major Sources of Contaminant
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

## ▼ LEAD AND COPPER

	Unit	AL	PHG	Range	90th Percentile	Major Sources in Drinking Water
Copper	ppb	1300	300	13 - 880 <sup>(10)</sup>	98	Internal corrosion of household water plumbing systems
Lead	ppb	15	0.2	<1.0 - 230 <sup>(11)</sup>	5.3	Internal corrosion of household water plumbing systems

## ▼ OTHER WATER QUALITY PARAMETERS

	Unit	ORL	Range	Average
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>(12)</sup>	ppb	(800) NL	67 - 1200	262
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

### 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 = part per billion
- ppm = part per million
- µS/cm = microSiemens /centimeter

### 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 SWWTP only.
- (6) The Purissima Hills Water District had zero positive for total coliform.
- (7) The SWRCB recommended an optimal fluoride level of 0.7 ppm be maintained in the treated water. In 2020, the range and average of the fluoride levels were 0.6 ppm - 0.9 ppm and 0.7 ppm, respectively.
- (8) Natural fluoride in the Hetch Hetchy source was ND. Elevated fluoride levels in raw water for the SWWTP and HTWTP were attributed to the transfer of fluoridated Hetch Hetchy water into the local reservoirs.
- (9) This is the highest running annual average value.
- (10) The most recent Lead and Copper Rule monitoring was in October 1, 2019. 0 of the 20 site samples collected at consumer taps had copper concentrations above the AL.
- (11) The most recent Lead and Copper Rule monitoring was in October 1, 2019. 0 of the 20 site samples collected at consumer taps had lead concentrations above the AL.
- (12) The detected chlorate in the treated water is a degradation product of sodium hypochlorite used by the SFRWS for water disinfection.

Additional water quality data may be obtained by calling Phil Witt, General Manager, Purissima Hills Water District at (650) 948-1217 or SFPUC Water Quality Division at (877) 737-8297.



26375 Fremont Road  
Los Altos Hills, CA 94022

# 2020



## PHWD Annual Water Quality Report

This report contains important information about our drinking water. Translate it, or speak with someone who understands it. Este informe contiene información importante sobre nuestra agua potable. Tradúzcalo, o hable con alguien que lo entienda.

本报告中包含有关我们的饮用水的重要信息。翻译这份报告，或与了解的人谈一谈。

이 보고서는 식수에 관한 중요한 정보를 포함하고 있습니다. 번역하거나 이해할 수 있는 사람과 이야기하십시오.

Maglalaman ang ulat na ito ng mahalagang impormasyon tungkol sa ating ininom na tubig. Isaling-wika ito, o makipag-usap sa isang taong naiintindihan ito.

Báo cáo này bao gồm những tin quan trọng về nước uống của chúng ta. Dịch hoặc trao đổi với người nào hiểu báo cáo này.

# ANNUAL WATER QUALITY REPORT

# 2020

