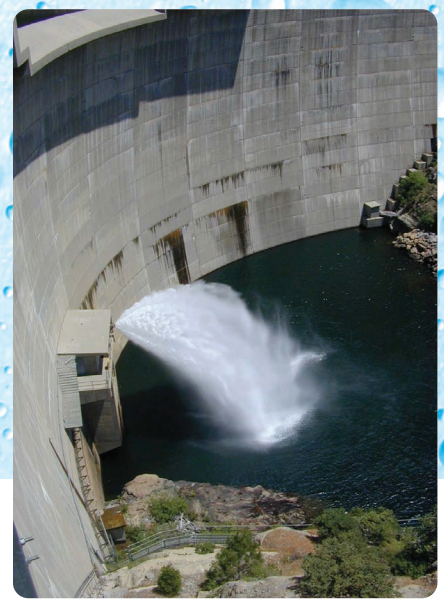
OUR WATER
OUR FUTURE

CITY OF PALO ALTO 2023 WATER QUALITY REPORT



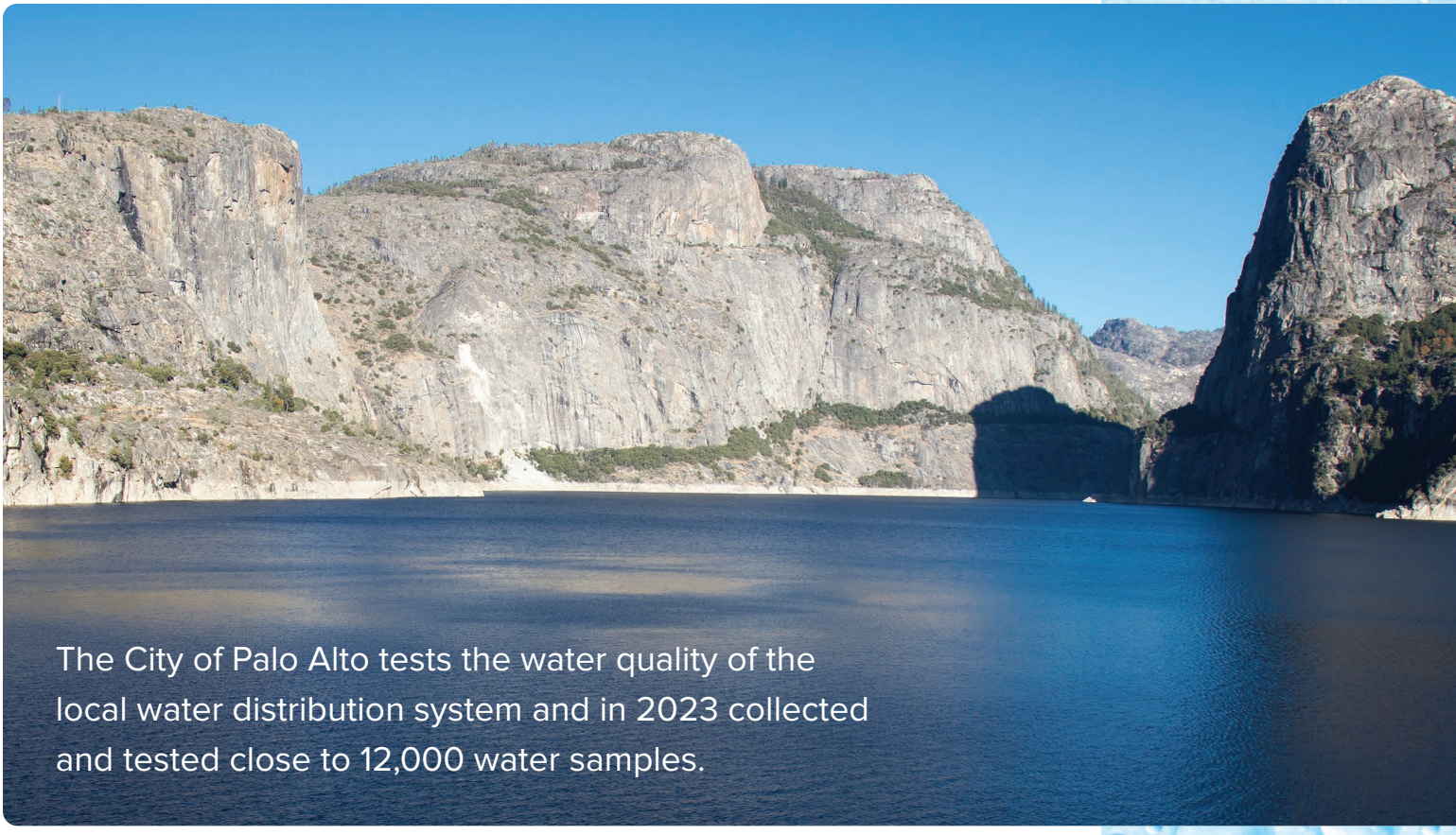
This document provides information on the City of Palo Alto's water quality for calendar year 2023. Palo Alto's water meets all federal and state drinking water standards. Find more details inside.

CITY OF
PALO ALTO
UTILITIES

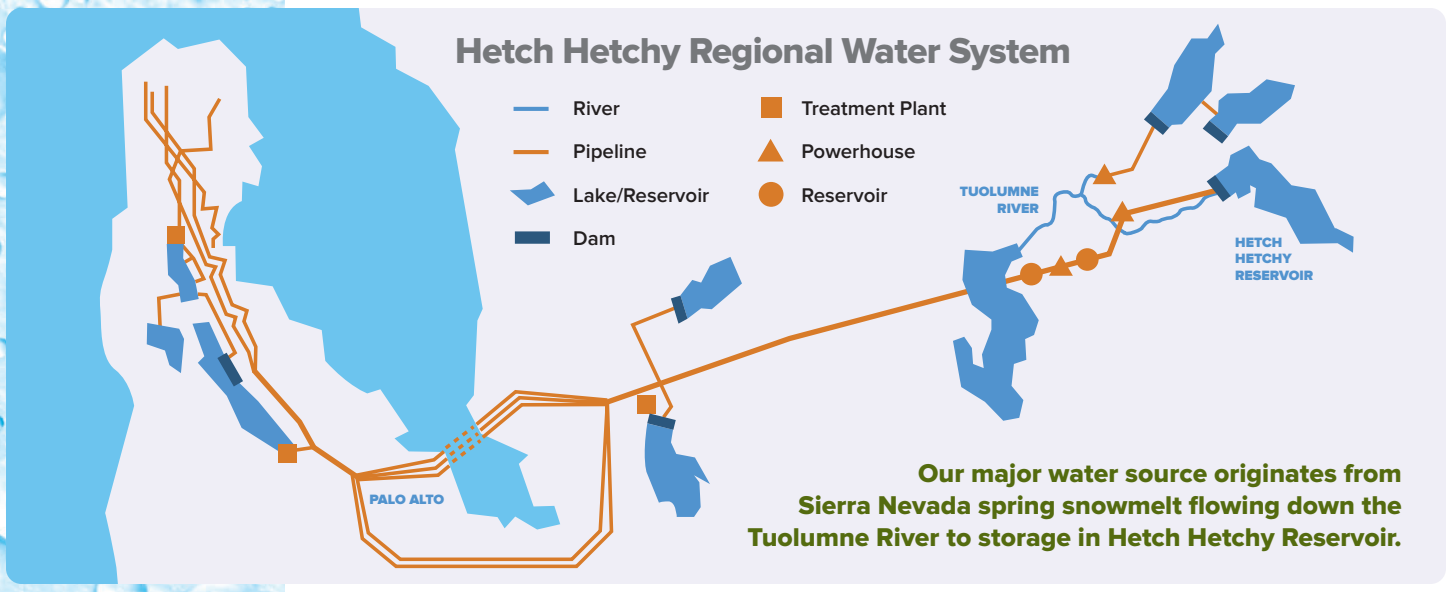
DRINKING WATER SOURCES AND TREATMENT

The San Francisco Regional Water System (SFRWS) drinking water supply consists of surface water and groundwater that are well protected and carefully managed. These sources are diverse in both origin and location with the surface water stored in reservoirs located in the Sierra Nevada, Alameda County and San Mateo County, as well as groundwater stored in a deep aquifer located in the northern part of San Mateo County. Maintaining this variety of sources is an important component of our near- and long-term water supply management strategy. A diverse mix of sources protects us from potential disruptions due to emergencies or natural disasters, provides resiliency during periods of drought, and helps us ensure a long-term, sustainable water supply as we address issues such as climate uncertainty, regulatory changes, and population growth.

To meet drinking water standards for consumption, all surface water sources including the upcountry non-Hetch Hetchy sources undergo treatment before it is delivered to our customers. While the water from Hetch Hetchy Reservoir is exempt from state and federal filtration requirements, it does receive the following treatment before being delivered for your consumption: disinfection using ultraviolet light and chlorine, 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 upcountry non-Hetch Hetchy sources is delivered to Sunol Valley Water Treatment Plant; whereas water from local reservoirs in San Mateo County is delivered to Harry Tracy Water Treatment Plant. Water treatment at these plants consists of filtration, disinfection, fluoridation, optimum corrosion control, and taste and odor removal. In 2023, neither upcountry non-Hetch Hetchy sources nor groundwater was used by the SFRWS.



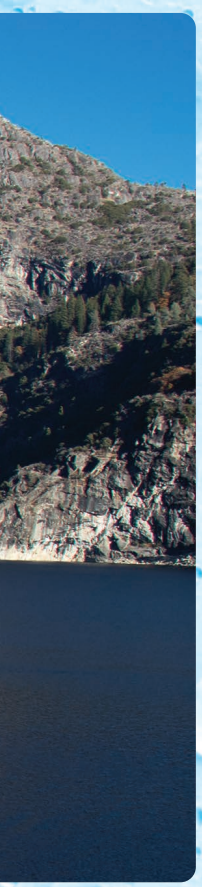
The City of Palo Alto tests the water quality of the local water distribution system and in 2023 collected and tested close to 12,000 water samples.



WATER QUALITY

The SFRWS regularly collects and tests water samples from reservoirs and designated sampling locations throughout its system to ensure the water delivered to you meets all state and federal drinking water standards. In 2023, the SFRWS conducted more than 49,610 drinking water tests in the source, transmission, and distribution system. This is in addition to its extensive treatment process control monitoring performed by the certified operators and online instruments.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (**800-426-4791**). In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. 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.



PROTECTION OF WATERSHEDS

The SFRWS conducts watershed sanitary surveys for its Hetch Hetchy source annually and every five years for its local water sources and upcountry non-Hetch Hetchy sources. The latest sanitary surveys for the non-Hetch Hetchy watershed 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 the National Park Service and the United States Forest Service. The purposes of these annual and quinquennial 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. Wildfire, wildlife, livestock, 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 at **510-620-3474** for more information.

MAKING WISE WATER USE A WAY OF LIFE

Stretching our water resources requires collaboration! Homes and businesses, working together with the City, can become even more efficient users of water. Here's how:

Our Home Efficiency Genie service includes free phone and low-cost virtual or in-person consultation about how to improve water use efficiency inside your home. Visit **cityofpaloalto.org/efficiencygenie** or call **(650) 713-3411** to get started!

Optimize your water usage with WaterSmart, Palo Alto's new online water management tool. Get started at **cityofpaloalto.org/watersmart**.

The Water-Wise Outdoor Survey program provided by Valley Water is a free survey for outdoor water use. Email **waterwise@valleywater.org** or call **(408) 630-2000** to schedule an appointment.

Consider converting your high water-using landscape such as turf grass or a pool to low water-use landscaping. Check out our videos on landscape conversion at **cityofpaloalto.org/workshops**, then go to the Valley Water Landscape Rebate Program webpage at watersavings.org to learn more.

Rebates are available for rain barrels, cisterns, and rain gardens. It may not rain often in Palo Alto, but when it does, we want to capture every drop!

For a complete list of water efficiency services and rebate programs, visit **cityofpaloalto.org/waystosave** or call **(650) 329-2241**. Valley Water also offers free water conservation devices that can help you save water. Visit **cloud.valleywater.org/shopping-cart** to order your free gear and literature today!

Don't stop there. If you want to go the extra mile, we welcome your participation in the discussion of water issues at City Council meetings, which typically take place the first three Mondays of each month, as well as the Utilities Advisory Commission, which typically meets the first Wednesday of each month. Learn more at **cityofpaloalto.org/councilagendas**.

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, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (**800-426-4791**).

The United States Environmental Protection Agency and the Centers for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the United States Environmental Protection Agency's Safe Drinking Water Hotline at **800-426-4791** or at **epa.gov/safewater**.

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 service lines and home plumbing. CPAU 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 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at **epa.gov/lead**.

CONTAMINANTS AND REGULATIONS

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

BORON DETECTION ABOVE NOTIFICATION LEVEL IN SOURCE WATER

In 2023, boron was detected at a level of 1.7 ppm in the raw water stored in Pond F3 East, one of the San Francisco Regional Water System's approved sources in the Alameda Watershed. Similar levels were also previously detected in the same pond. Although the detected value was above the California Notification Level (NL) of 1 ppm, the water was typically delivered to San Antonio Reservoir where it was substantially diluted to below the NL before treatment at the Sunol Valley Water Treatment Plant. Boron is an element in nature and is typically released into air and water when soils and rocks naturally weather.

UNREGULATED CONTAMINANT MONITORING RULE

The SFRWS conducted four consecutive quarters of monitoring at designated locations approved by the United States Environmental Protection Agency in 2023, and no unregulated contaminants were detected.

PER- AND POLY-FLUOROALKYL SUBSTANCES (PFAS)

PFAS is a group of approximately 5,000 man-made, persistent chemicals used in a variety of industries and consumer products. The SFPUC has been proactive in PFAS monitoring of its drinking water supplies since 2012. The most recent PFAS results can be accessed in the SFPUC 2022 CEC Final Report at **sfpuc.org/sites/default/files/documents/SFPUC_2022_Final_ Report_CECs.pdf**. All PFAS results were below detection limits at the time of monitoring. The City of Palo Alto's PFAS monitoring results for 2023 were also below detection limits. For additional information about PFAS, you may visit the SWRCB website **waterboards.ca.gov/pfas**, the SFPUC website sfpuc.org, and/or the USEPA website **epa.gov/pfas**.

City of Palo Alto Water Quality Data for 2023[1]

This report is a snapshot of last year's water quality. The tables below list detected contaminants in our drinking water in 2023 and the information about their typical sources. Contaminants below detection limits for reporting are not shown, in accordance with regulatory guidance. The San Francisco Public Utilities Commission holds a State Water Resources Control Board monitoring waiver for some contaminants in our surface water and groundwater supplies, and therefore their monitoring frequencies are less than annual. Visit **sfpuc.org/WaterQuality** for a list of all water quality parameters monitored in both raw water and treated water in 2023.

DETECTED CONTAMINANTS	Unit	MCL/TT	"PHG or (MCLG)"	Range or Level Found	"Average or [Max]"	Typical Sources in Drinking Water
TURBIDITY						
Unfiltered Hetch Hetchy Water	NTU	5	N/A	0.3 - 0.9[2]	[2]	Soil runoff
Filtered Water from Sunol Valley Water Treatment Plant (SVWTP)	NTU	1[3]	N/A	-	[0.2]	Soil runoff
	-	"Min 95% of samples ≤ 0.3 NTU[3]"	N/A	100%	-	Soil runoff
Filtered Water from Harry Tracy Water Treatment Plant (HTWTP)	NTU	1[3]	N/A	-	[0.6]	Soil runoff
	-	"Min 95% of samples ≤ 0.3 NTU[3]"	N/A	99.4% - 100%	-	Soil runoff
DISINFECTION BYPRODUCTS AND PRECURSOR						
Total Trihalomethanes	ppb	80	N/A	27.0 - 46.5	[43.3][4]	Byproduct of drinking water disinfection
Five Haloacetic Acids	ppb	60	N/A	20.0 - 53.0	[41.5][4]	Byproduct of drinking water disinfection
Bromate	ppb	10	0.1	ND - 1.7	[1][5]	Byproduct of drinking water disinfection
Total Organic Carbon[6]	-	"TT (% Removal Ratio)"	N/A	1.2 - 1.8	[1.5][5]	Various natural and man-made sources
MICROBIOLOGICAL						
E. coli	-	0 PS	(0)	-	[0]	Human or animal fecal waste
Giardia lamblia	cyst/L	TT	(0)	0 - 0.13	0.03	Naturally present in the environment
INORGANICS						
Fluoride[7]	ppm	2.0	1	0.4 - 2.6	0.6	Erosion of natural deposits; water additive to promote strong teeth
Nitrate (as N)	ppm	10	10	ND - 0.6	ND	Erosion of natural deposits
Chloramine (as chlorine)	ppm	MRDL = 4.0	MRDLG = 4	1.16 - 3.63	[2.83][5]	Drinking water disinfectant added for treatment

NON-REGULATED WATER QUALITY PARAMETERS	Unit	ORL	Range	Average
Alkalinity (as $CaCO_3$)	ppm	N/A	3.1 - 103	46
Boron	ppb	1000 (NL)	22 - 65	40
Calcium (as Ca)	ppm	N/A	2.9 - 24	13
Chlorate[11]	ppb	800 (NL)	30 - 749	141
Chromium (VI)	ppb	N/A	0.11 - 0.35	0.23
Hardness (as $CaCO_3$)	ppm	N/A	7.5 - 86	46
Magnesium	ppm	N/A	0.2 - 8.4	4.7
pH	-	N/A	8.4 - 9.8	9.2
Potassium	ppm	N/A	0.3 - 1.7	1
Silica	ppm	N/A	4.4 - 9.4	6.2
Sodium	ppm	N/A	2.7 - 20	14
Strontium	ppb	N/A	14 - 331	139

KEY

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

CONSTITUENTS WITH SECONDARY STANDARDS	Unit	SMCL	PHG	Range	Average	Typical Sources in Drinking Water
Aluminum[8]	ppb	200	600	ND - 82	ND	Erosion of natural deposits; some surface water treatment residue
Chloride	ppm	500	N/A	<3 - 17	8.7	Runoff / leaching from natural deposits
Color	Unit	15	N/A	<5 - 5	<5	Naturally-occurring organic materials
Iron	ppb	300	N/A	<6 - 42	19	Leaching from natural deposits
Manganese	ppb	50	N/A	<2 - 4.6	2.6	Leaching from natural deposits
Specific Conductance	µS/cm	1600	N/A	32 - 289	175	Substances that form ions when in water
Sulfate	ppm	500	N/A	1.2 - 36	17	Runoff / leaching from natural deposits
Total Dissolved Solids	ppm	1000	N/A	<20 - 153	84	Runoff / leaching from natural deposits
Turbidity	NTU	5	N/A	0.1 - 0.6	0.3	Soil runoff

LEAD AND COPPER	Unit	AL	PHG	Range	90th Percentile	Typical Sources in Drinking Water
Copper	ppb	1300	300	14.3 - 114[9]	61.9	Internal corrosion of household water plumbing systems
Lead	ppb	15	0.2	0.2 - 9.74[10]	0	Internal corrosion of household water plumbing systems

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 (SMCL) 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, MRDLs and treatment techniques (TTs) for contaminants that affect health, along with their monitoring and reporting requirements.

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

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

Turbidity: A water clarity indicator that measures cloudiness of the water. It 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. The San Francisco Regional Water System (SFRWS) regularly tests for this waterborne pathogen and found it at very low levels in source and treated water in 2023. However, current test methods approved by the USEPA do not distinguish between dead organisms and those capable of causing disease. Ingestion of live 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.

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) This is a TT requirement for filtration systems.

(4) This is the highest locational running annual average value.

(5) This is the highest running annual average value.

(6) Total organic carbon (TOC) is a precursor for disinfection byproduct formation. The TT requirement applies to the filtered water from the SVWTP only. In 2023, the range of the SVWTP effluent TOC levels were 0.6 ppm-3.3 ppm.

(7) Natural fluoride in the Hetch Hetchy source was ND. Elevated fluoride levels in raw water to the water treatment plants were attributed to the transfer of fluoridated Hetch Hetchy water into the local reservoirs. In 2023, the average fluoride level in raw water sources was 0.3 mg/L.

(8) Aluminum also has a primary MCL of 1,000 ppb.

(9) The most recent Lead and Copper Rule monitoring was in 2023. Out of 38 site samples collected at consumer taps, 0 had Copper concentrations above the AL.

(10) The most recent Lead and Copper Rule monitoring was in 2023. Out of 38 site samples collected at consumer taps, 0 had Lead concentrations above the AL.

(11) The detected chlorate in the treated water is a degradation product of sodium hypochlorite used by the SFRWS for water disinfection.

Note: Additional water quality data may be obtained by calling the City of Palo Alto phone number at (650) 496-6967.

For More Information

WATER QUALITY

City of Palo Alto Utilities, Water Transmission, Marco A. Torres
(650) 496-6967

City of Palo Alto
cityofpaloalto.org/waterresources

San Francisco Public Utilities Commission (SFPUC)
sfwater.org

U.S. Environmental Protection Agency (USEPA) Drinking Water
epa.gov/safewater

USEPA Safe Drinking Water Hotline
(800) 426-4791

Office of Emergency Services Warning Center
(800) 852-7550 or (916) 845-8911
When reporting a water quality emergency to the Warning Center, please ask for the State Water Resources Control Board Division of Drinking Water Duty Officer.

HEALTH CONCERNS & REGULATIONS

State Water Resources Control Board (SWRCB)
swrcb.ca.gov

USEPA
epa.gov

EMERGENCY PREPAREDNESS

California Department of Public Health
bepreparedcalifornia.ca.gov

This report containing important information about your drinking water is also available in Spanish and Chinese. For those people more comfortable reading this report in Spanish or Chinese, please feel free to access this report in your preferred language. Para obtener más información sobre la calidad del agua, visite cityofpaloalto.org/waterresources.

Este informe contiene información importante sobre su agua potable. también está disponible en español y chino. Para aquellas personas que se sientan más cómodas leyendo este informe en español o chino, no duden en acceder a este informe en su idioma preferido.

这篇关于您的饮用水的报告包含重要信息，请找人为您翻译和解释。

CITY OF PALO ALTO UTILITIES
250 Hamilton Avenue, Palo Alto, CA 94301
(650) 329-2161
cityofpaloalto.org/utilities