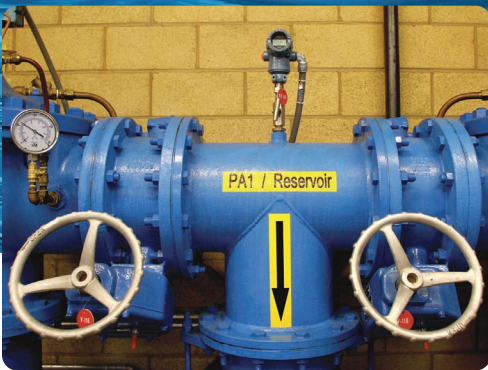


# OUR WATER OUR FUTURE

## CITY OF PALO ALTO 2024 WATER QUALITY REPORT



This document provides important information on the City of Palo Alto's water quality for calendar year 2024. Palo Alto's water meets all federal and state drinking water standards. Find more details inside.

Este informe contiene información importante sobre su agua potable.  
Visite [palocalto.gov/waterresources](https://palocalto.gov/waterresources) para obtener una copia en español.

該報告包含有關您的飲用水的重要資訊。  
請造訪 [palocalto.gov/waterresources](https://palocalto.gov/waterresources) 以取得該報告的翻譯版本。

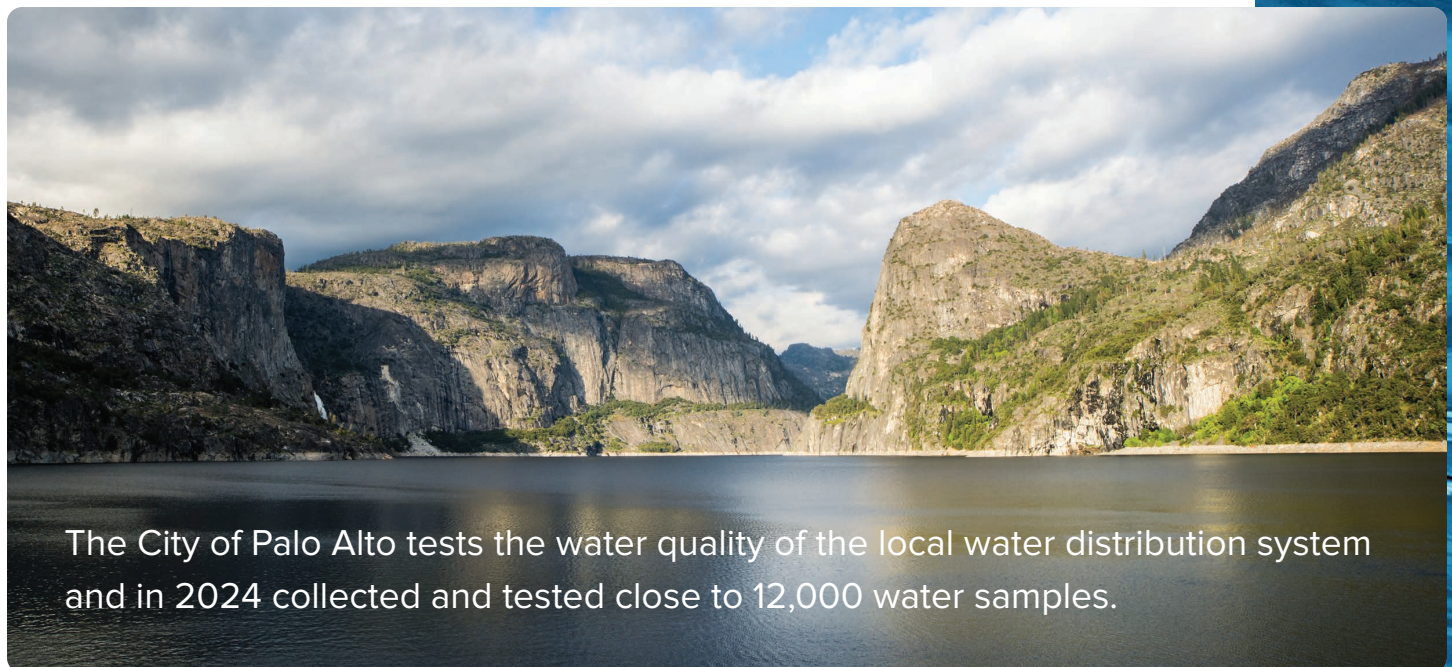
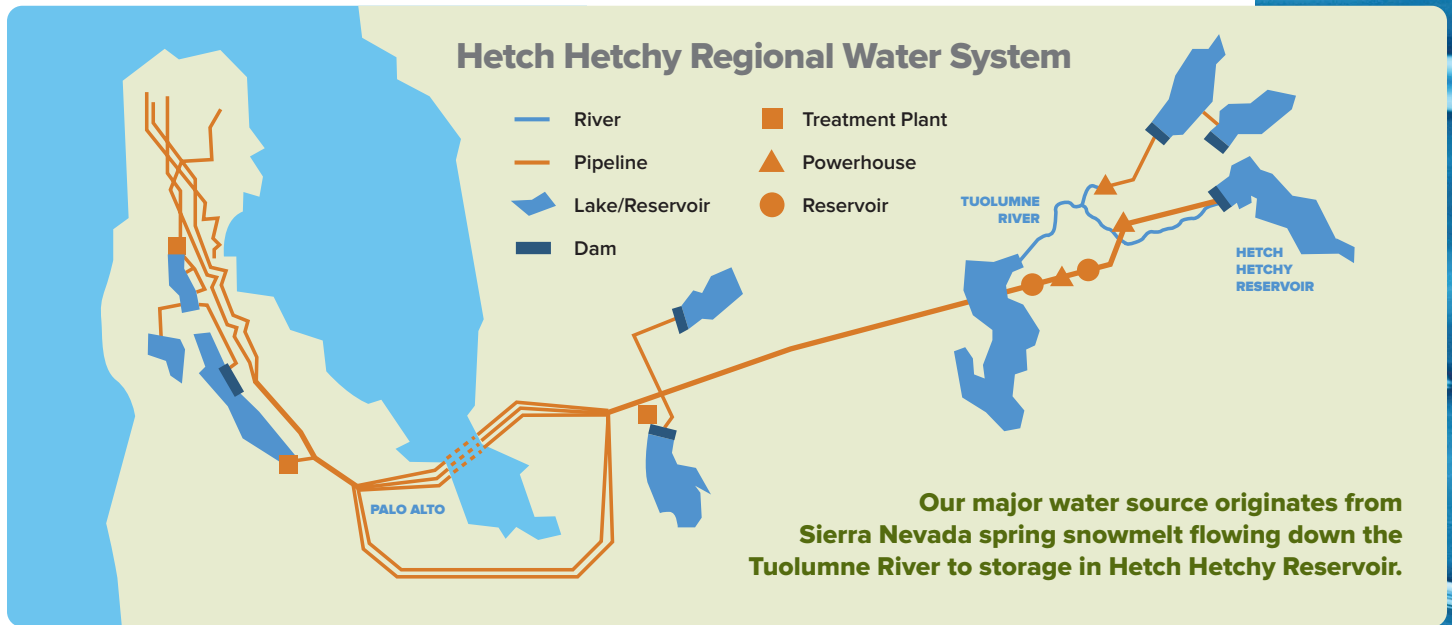



CITY OF  
**PALO ALTO**  
UTILITIES



## 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. The surface water is stored in reservoirs in the Sierra Nevada, Alameda County, and San Mateo County, and the groundwater is kept in a deep aquifer in the northern part of San Mateo County. Maintaining this variety of sources is an important component of the near- and long-term water supply management strategy of the SFRWS. 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 human consumption, all surface water the San Francisco Public Utilities Commission (SFPUC) supplies must undergo proper treatment. Water from Hetch Hetchy Reservoir is exempt from state and federal filtration requirements due to its exceptional quality. It undergoes 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 are delivered to the Sunol Valley Water Treatment Plant. Water from reservoirs in San Mateo County is delivered to the Harry Tracy Water Treatment Plant. Water treatment at these plants consists of filtration, disinfection, fluoridation, taste and odor removal, and optimum corrosion control. In 2024, neither upcountry non-Hetch Hetchy sources of water nor groundwater was used.

## **WATER QUALITY AND REGULATIONS**

The SFRWS regularly collects and tests water samples from reservoirs and designated sampling locations throughout the systems to ensure that the water delivered to you meets all federal and state drinking water standards. In 2024, the SFRWS conducted more than 45,650 drinking water tests of samples from source and transmission system locations. This is in addition to the extensive treatment process control monitoring performed by its certified operators and online instruments.

The City of Palo Alto tests the water quality of the local water distribution system and in 2024 collected and tested close to 12,000 water samples.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Water 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.

## **CONTAMINANTS AND DRINKING WATER**

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, 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

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 U.S. EPA's Safe Drinking Water Hotline at **(800) 426-4791**.



## PROTECTION OF WATERSHEDS

The 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. These surveys document the SFPUC's stringent watershed protection activities that are implemented with support from partner agencies including the National Park Service and the United States Forest Service.

These surveys not only evaluate the sanitary conditions and water quality of the watersheds but also describe 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 SWRCB Division of Drinking Water at **(510) 620-3474** or by email at [DWPDIST04@waterboards.ca.gov](mailto:DWPDIST04@waterboards.ca.gov) for more information.

## BORON DETECTION ABOVE NOTIFICATION LEVEL IN SOURCE WATER

In 2024, boron was detected at a level of 2.3 parts per million (ppm) in the raw water stored in Pond F3 East, one of the SFRWS's approved sources in the Alameda Watershed. Similar levels were detected in the same pond in preceding years. Although the detected value was above the California Notification Level of 1 ppm, the water was typically delivered to San Antonio Reservoir where it was substantially diluted to below the Notification Level 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.

## NO PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) DETECTED

You may have heard about PFAS. These are man-made chemicals that have been used in industry and consumer products worldwide since the 1940s. We did not detect PFAS in our water. To learn more, visit [waterboards.ca.gov/pfas](https://waterboards.ca.gov/pfas), and/or [epa.gov/pfas](https://epa.gov/pfas).


## FLUORIDATION AND DENTAL FLUOROSIS

Mandated by State law, water fluoridation is a widely accepted practice proven safe and effective for preventing and controlling tooth decay. Based on the recommendation from the Centers for Disease Control and Prevention (CDC) and the State Water Resources Control Board's (SWRCB) regulatory guidance, the San Francisco Public Utilities Commission has maintained an optimal fluoride level at 0.7 milligram per liter (mg/L, or part per million, ppm), since 2015. The optimal level provides the benefits of tooth decay prevention while minimizing the chance that children develop dental fluorosis. Infants fed formula mixed with water containing fluoride at this level may still have a chance of developing mild to very mild fluorosis, which can cause tiny white lines or streaks in their teeth. These marks are often only visible under a microscope. Even in cases where the marks are visible, they do not pose any health risk. To lessen the 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 the SWRCB if you have concerns about dental fluorosis. For additional information about fluoridation or oral health, visit the SWRCB's website [waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/Fluoridation.html](https://waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.html), the CDC's website [cdc.gov/fluoridation](https://cdc.gov/fluoridation), or [sfpuc.gov/TapWater](https://sfpuc.gov/TapWater).

## SPECIAL HEALTH NEEDS

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 about drinking water from their health care providers. U.S. EPA/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 at **(800) 426-4791**.





Cryptosporidium is a parasitic microbe found in surface water. We regularly test for this waterborne pathogen and found it at very low levels in source water and treated water in 2024. However, current test methods approved by the United States Environmental Protection Agency (USEPA) do not distinguish between dead organisms and those capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis with 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.

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 at **(800) 426-4791** or at [epa.gov/safewater](https://epa.gov/safewater).

## **DRINKING WATER AND LEAD**

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. The City of Palo Alto is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time.

You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water and wish to have your water tested, contact the City of Palo Alto at **(650) 496-6967**. The City does not offer lead sampling for individual homeowners, however we can provide information on how to obtain a drinking water lead sampling kit from a state certified laboratory. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at [epa.gov/safewater/lead](https://epa.gov/safewater/lead).

## **LEAD SERVICE LINE INVENTORY AND REPLACEMENT**

The City of Palo Alto has completed an inspection of water service lines to comply with the U.S. Environmental Protection Agency's 2021 Lead and Copper Rule Revisions (LCRR). These federal regulations required all public water systems to submit a verified inventory of service lines by October 16, 2024. As part of this effort, Palo Alto conducted physical inspections and submitted the required initial inventory by the deadline. No lead service lines (LSL) were found in the City's water system.

To search for an address and see the results of the LSL inventory, use this link to access the interactive map: [gis.cityofpaloalto.org/LCRR/index.html](https://gis.cityofpaloalto.org/LCRR/index.html).

# Water Quality and Treatment Spotlights

## SAN FRANCISCO PUBLIC UTILITIES COMMISSION'S WATER TREATMENT PLANTS RECOGNIZED FOR EXCELLENCE

In 2024, the American Water Works Association (AWWA) honored the SFPUC with two awards for exceptional water quality. The awards were granted through the AWWA's Partnership for Safe Water, which requires participating utilities to produce water quality that is significantly higher than regulatory requirements. The Harry Tracy Water Treatment Plant and the Sunol Valley Water Treatment Plant were recognized for meeting strict water quality standards for the last 20 and 25 years respectively.

DETECTED CONTAMINANTS	Unit	MCL/TT	PHG or (MCLG)	Range or Level Found	Average or [Max]	Typical Sources in Drinking Water
<b>TURBIDITY</b>						
Unfiltered Hetch Hetchy Water	NTU	5	N/A	0.3 - 0.5 <sup>(1)</sup>	[2.1]	Soil runoff
Filtered Water from Sunol Valley Water Treatment Plant (SVWTP)	NTU	TT = Max 1	N/A	-	[0.4]	Soil runoff
	-	TT = Min 95% of samples ≤ 0.3 NTU	N/A	99.97%	-	Soil runoff
Filtered Water from Harry Tracy Water Treatment Plant (HTWTP)	NTU	TT = Max 1	N/A	-	[0.1]	Soil runoff
	-	TT = Min 95% of samples ≤ 0.3 NTU	N/A	100%	-	Soil runoff
<b>DISINFECTION BYPRODUCTS AND PRECURSOR</b>						
Total Trihalomethanes	ppb	80	N/A	14 - 64	[41.5] <sup>(2)</sup>	Byproduct of drinking water disinfection
Five Haloacetic Acids	ppb	60	N/A	13 - 48	[34.5] <sup>(2)</sup>	Byproduct of drinking water disinfection
Bromate	ppb	10	0.1	ND - 5.9	[3] <sup>(3)</sup>	Byproduct of drinking water disinfection using ozone
<b>MICROBIOLOGICAL</b>						
<i>E. coli</i>	-	0 PS	(0)	-	[0]	Human or animal fecal waste
<b>INORGANICS</b>						
Chromium (VI)	ppb	10	0.02	ND - 0.2	0.1	Leaching from natural deposits
Fluoride <sup>(4)</sup> (raw water)	ppm	2.0	1	ND - 0.8	0.3	Erosion of natural deposits; water additive to promote strong teeth
Nitrate (as N)	ppm	10	10	ND - 0.4	ND	Erosion of natural deposits
Chlorine (including free chlorine and chloramine)	ppm	MRDL = 4.0	MRDLG = 4	0.34 - 3.54	[2.81] <sup>(3)</sup>	Drinking water disinfectant added for treatment

NON-REGULATED WATER QUALITY PARAMETERS	Unit	ORL	Range	Average
Alkalinity (as CaCO <sub>3</sub> )	ppm	N/A	7.4 - 120	60
Bromide	ppb	N/A	<10 - 29	<10
Boron	ppb	1000 (NL)	23 - 65	41
Calcium (as Ca)	ppm	N/A	3.2 - 28	15
Chlorate <sup>(7)</sup>	ppb	800 (NL)	24 - 597	144
<i>Giardia lamblia</i>	cyst/L	N/A	0 - 0.06	0.02
Hardness (as CaCO <sub>3</sub> )	ppm	N/A	8.4 - 106	60
Lithium	ppb	N/A	<2 - 4	<2
Magnesium	ppm	N/A	0.2 - 9.5	5.7
pH	-	N/A	8.6 - 10.0	9.5
Silica	ppm	N/A	4.9 - 9.9	7.5
Sodium	ppm	N/A	3.1 - 24	16
Total Organic Carbon <sup>(8)</sup>	ppm	N/A	11 - 1.8	1.5

### KEY

**< / ≤** = less than / less than or equal to  
**Max** = Maximum  
**cyst/L** = cyst per Liter  
**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  
**RAL** = Regulatory Action Level  
**µS/cm** = microSiemens/centimeter



The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our representative data is more than a year old.

LEAD AND COPPER	Unit	RAL	PHG	Range	90th Percentile	Typical Sources in Drinking Water
Copper	ppb	1300	300	14.3 - 114 <sup>(5)</sup>	61.9	Internal corrosion of household water plumbing systems
Lead	ppb	15	0.2	0.2 - 9.74 <sup>(6)</sup>	0	Internal corrosion of household water plumbing systems

CONSTITUENTS WITH SECONDARY STANDARDS	Unit	SMCL	PHG	Range	Average	Typical Sources in Drinking Water
Aluminum	ppb	200 (MCL = 1000)	600	ND - 59	ND	Erosion of natural deposits; some surface water treatment residue
Chloride	ppm	500	N/A	<3 - 18	9.3	Runoff / leaching from natural deposits
Iron	ppb	300	N/A	<6 - 41	14	Leaching from natural deposits
Manganese	ppb	50	N/A	<2 - 2.7	<2	Leaching from natural deposits
Specific Conductance	µS/cm	1600	N/A	31 - 317	193	Substances that form ions when in water
Sulfate	ppm	500	N/A	1 - 41	18	Runoff / leaching from natural deposits
Total Dissolved Solids	ppm	1000	N/A	24 - 169	102	Runoff / leaching from natural deposits
Turbidity	NTU	5	N/A	0.1 - 0.4	0.2	Soil runoff

## 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 United States Environmental Protection Agency.

**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 the 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.

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

**Primary Drinking Water Standard (PDWS):** MCLs, MRDLs, and TT 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.

**Turbidity:** A water clarity indicator that measures the cloudiness of the water and is also used to indicate the effectiveness of a filtration system.

## FOOTNOTES

<sup>(1)</sup> These are monthly average turbidity values measured every 4 hours daily at Tesla Treatment Facilities.

<sup>(2)</sup> This is the highest locational running annual average value.

<sup>(3)</sup> This is the highest running annual average value.

<sup>(4)</sup> Natural fluoride in Hetch Hetchy water was ND. Elevated fluoride levels in raw water at both SVWTP and HTWTP were attributed to transfers of fluoridated Hetch Hetchy water into local reservoirs.

<sup>(5)</sup> CPAU meets the standards required to be on a reduced triennial monitoring schedule for lead and copper. 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 regulatory action level.

<sup>(6)</sup> CPAU meets the standards required to be on a reduced triennial monitoring schedule for lead and copper. 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 regulatory action level.

<sup>(7)</sup> The detected chlorate in the treated water is a degradation product of sodium hypochlorite used by the SFRWS for water disinfection.

<sup>(8)</sup> The range and average values of the total organic carbon were from operational monitoring results at Tesla Treatment Facilities.

# Get Involved!

We welcome your input on important water issues. Information about upcoming public meetings can be found online at the websites below:

## **City Council Meetings**

[paloalto.gov/Departments/City-Clerk/City-Meeting-Groups](http://paloalto.gov/Departments/City-Clerk/City-Meeting-Groups)

City Council Meetings are held on the first three Mondays of the month at 5:30 p.m.

## **Utilities Advisory Commission (UAC) Meetings**

[paloalto.gov/Departments/Utilities/Utilities-Advisory-Commission](http://paloalto.gov/Departments/Utilities/Utilities-Advisory-Commission)

Meetings are held on the first Wednesday of every month at 6 p.m.

# For More Information

## **WATER QUALITY**

### **City of Palo Alto Utilities, Water Transmission, Marco Torres**

(650) 496-6967

[paloalto.gov/waterresources](http://paloalto.gov/waterresources)

### **San Francisco Public Utilities Commission (SFPUC)**

(415) 551-3000

[sfwater.org](http://sfwater.org)

### **U.S. Environmental Protection Agency (USEPA) Drinking Water**

(415) 947-8000

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

### **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)**

(916) 341-5300

[swrcb.ca.gov](http://swrcb.ca.gov)

### **U.S. Environmental Protection Agency (USEPA) Safe Drinking Water Hotline**

(800) 426-4791

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

## **EMERGENCY PREPAREDNESS**

### **California Department of Public Health**

(916) 558-1784

[bepreparedcalifornia.ca.gov](http://bepreparedcalifornia.ca.gov)

### **City of Palo Alto Office of Emergency Services**

(650) 617-3197

[paloalto.gov/preparedness](http://paloalto.gov/preparedness)



CITY OF  
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UTILITIES

250 Hamilton Avenue, Palo Alto, CA 94301  
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[paloalto.gov/utilities](http://paloalto.gov/utilities)