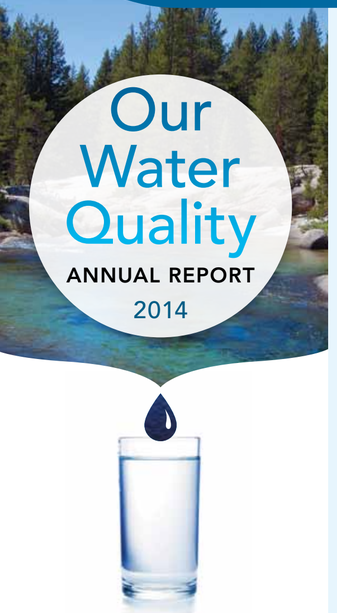
CITY OF PALO ALTO UTILITIES
Inspired by a brighter tomorrow.

# For More Information

**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 excellence in water quality.

**THE STATE OF CALIFORNIA** mandates that we make an Annual Water Quality Report available to you and this report is prepared according to Safe Drinking Water Act requirements.




## WATER QUALITY

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

## HEALTH CONCERNS & REGULATIONS

- California Department of Public Health (CDPH) **www.cdph.ca.gov**
- U.S. EPA **www.epa.gov**

## EMERGENCY PREPAREDNESS

- California Department of Public Health **http://bepreparedcalifornia.ca.gov**

關於燃氣的安全信息
**www.cityofpaloalto.org/WaterReportMandarin**

Para obtener más información sobre la calidad del agua, visite
**www.cityofpaloalto.org/WaterReportSpanish**

## Where Our Water Comes From

Over 80% of the water we purchased in 2013 from the San Francisco Public Utilities Commission (SFPUC) came from high Sierra snowmelt in Yosemite National Park. The remaining SFPUC regional water system supply comes from local watersheds in Alameda and Santa Clara counties.

## Our Drinking Water Sources

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. For the regional water system operated by the SFPUC, the major water source originates from spring snowmelt flowing down the Tuolumne River to the Hetch Hetchy Reservoir, where it is stored. This pristine water source is located in the well-protected Sierra region and meets all federal and state criteria for watershed protection. Based on the SFPUC's disinfection treatment practice, extensive bacteriological-quality monitoring and high operational standards, the State has granted the Hetch Hetchy water source a filtration exemption.

*In other words, the source is so clean and protected that the SFPUC is not required to filter water from the Hetch Hetchy Reservoir.*

The Hetch Hetchy water is supplemented with surface water collected from two local watersheds. Rainfall and runoff collected from the Alameda Watershed, which spans more than 35,000 acres in Alameda and Santa Clara Counties, are captured in Calaveras and San Antonio Reservoirs. Prior to distribution, the water from these two reservoirs is treated at the Sunol Valley Water Treatment Plant (SVWTP). Treatment processes include coagulation, flocculation, sedimentation, filtration and disinfection. Fluoridation, chloramination and corrosion control treatments are provided for the combined Hetch Hetchy and SVWTP water at the Sunol Chloramination and Fluoridation Facilities.

Rainfall and runoff captured in the 23,000-acre Peninsula Watershed, located in San Mateo County, are stored in four reservoirs: Crystal Springs (Lower and Upper), San Andreas, Pilarcitos and Stone Dam. The water from these reservoirs is treated at the Harry Tracy Water Treatment Plant (HTWTP). Treatment processes include ozonation, coagulation, flocculation, filtration, disinfection, fluoridation, chloramination and corrosion control treatment.

## Protecting Our Watershed

The SFPUC actively and aggressively protects the natural water resources entrusted to its care. Its annual Hetch Hetchy Watershed survey evaluates the sanitary conditions, water quality and potential contamination sources. SFPUC and its partner agencies, including the National Park Service, manage the watershed to reduce or eliminate contamination sources. The SFPUC also conducts sanitary surveys of the local Alameda and Peninsula watersheds every five years. These surveys identified wildllife and human activity as potential contamination sources. To request these reports for review, contact CDPH's San Francisco District office at (510) 620-3474.

## Drought Update

The end of calendar year 2014 marked one of the driest three-year periods of time in California history. In January 2014, the Governor called for a statewide 20% water use reduction and asked the State Water Resources Control Board to develop emergency drought regulations.

In August 2014, the Palo Alto City Council adopted outdoor potable water use restrictions for compliance with the State emergency drought regulations. To encourage more conservation, the City increased its rebate amounts, offered new water efficiency programs, applied for and received grants for innovative water-saving technologies from the Santa Clara Valley Water District, and expanded customer outreach about water supply conditions. Staff closely monitor the City and community's water use and measures savings to track how successfully we are responding to requests for conservation.

As the drought continued on past 2014, the City continued its outreach and education to encourage sustained conservation practices. To learn more about current water supply conditions, drought regulations, and available water efficiency resources, please visit **www.cityofpaloalto.org/water**

## WATER IS LIFE. USE IT WISELY.

It is important to use water wisely every day, regardless of drought conditions. In order to have a sufficient future supply of water, everyone in California has to make wise water use a priority. The City of Palo Alto Utilities offers many resources to help its customers easily save water with free services, educational tools and rebates for upgrading appliances and high-water using landscapes. Attend one of our workshops to learn how you can have a beautiful, sustainable, low water use landscape while maintaining the health of trees and our urban canopy.

Call or visit us online to discover how you can live a water wise life which will benefit current and future generations, as well as fish and wildlife species, urban, rural and wildland ecosystems.

**WATER EFFICIENCY SERVICES AND REBATE PROGRAMS**
City of Palo Alto Utilities, Utility Marketing Services
(650) 329-2241 **www.cityofpaloalto.org/water**

## GET INVOLVED

We welcome your input on important water issues. Visit **www.cityofpaloalto.org** for details about upcoming public meetings.

**CITY COUNCIL MEETINGS**
**Mondays, 7 PM, City Hall**

**UTILITIES ADVISORY COMMISSION (UAC)**
**1st Wednesday of each month, 7 PM, City Hall**

## 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!

## Protecting the SFPUC Water System from Seismic Disaster

More than $4 billion is being invested in seismic-related water infrastructure repairs, replacements or retrofits to protect the SFPUC's regional water system in the event of an earthquake. The SFPUC and CPAU are making this investment in the Water System Improvement Program (WSIP) to ensure that the regional water system will be able to deliver water for public health, fighting fires and disaster recovery as quickly as possible following a seismic event. The majority of the 84 water infrastructure projects are in preconstruction or have been completed.

In 2013, SFPUC completed a $62.6 million Phase II improvement project for the Sunol Valley Water Treatment Plant. The upgrades increase the plant's reliability and will allow it to maintain production in the event of emergency or prolonged maintenance activities.

The Harry Tracy Water Treatment Plant Long Term Improvements Project is currently under construction to improve delivery reliability and provide seismic upgrades. This $280 million project includes significant upgrades to the ozonation system, five new filters, and a new treated water reservoir.

## Palo Alto Infrastructure Improvements

CPAU began implementing a long term infrastructure replacement plan for aging pipes after studies indicated that much of the water distribution and supply system was deteriorating. Nearly 75 miles of aging cast iron water mains were identified as needing replacement in order to increase the reliability of the local system, improve water quality and increase fire protection capacity.

## Recycled Water Pipeline

The City has used recycled water since 1980 at the municipal golf course, Greer Park, the Emily Renzel Marsh, the duck pond and the Regional Water Quality Control Plant. The City is evaluating expanding the distribution system for recycled water to customers in Palo Alto. The target area for the project being evaluated is primarily irrigation in the Stanford Research Park area and City parks along a proposed pipeline route. Funding from state and federal grant and loan programs is being pursued to reduce the City's cost.

## 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 in your home and place of business.

- ❑ 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 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.

## Ensuring the Highest Water Quality

The SFPUC's Water Quality Division (WQD) regularly collects and tests water samples from reservoirs and designated sampling points throughout the system to ensure the water delivered to you meets or exceeds federal and state drinking water standards. In 2014, WQD staff conducted more than 52,000 drinking water tests in the transmission and distribution systems. This is in addition to the extensive treatment process control monitoring performed by the SFPUC's certified operators and online instruments.

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.

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.

## Reducing Lead from Plumbing Fixtures

Some homes in the community may have increased levels of lead in their tap water caused by the deterioration of household plumbing materials that contain lead. CPAU provides high-quality drinking water, but cannot control the variety of materials associated with your home plumbing. Pregnant women, infants and young children are typically at the greatest health risk. If you are concerned about lead levels in your water, you may wish to have your water tested. You can also flush your tap for 30 seconds to 2 minutes before using the water whenever the tap has not been used for several hours. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available by calling the Safe Drinking Water Hotline (800) 426-4791 or online at www.epa.gov/safewater/lead

## Special Health Needs

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, 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) provide guidelines on appropriate means to lessen the risk of infection from Cryptosporidium and other microbial contaminants. Find information at the following sources.

**Safe Drinking Water Hotline**
**(800) 426-4791**

**www.epa.gov/safewater**

*For more information about the contents of this report, contact **CPAU Water Quality Transmission Staff at (650) 496-6967** or visit us online at www.cityofpaloalto.org/utilities*

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

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# City of Palo Alto WATER QUALITY DATA FOR YEAR 2014(1)

www.cityofpaloalto.org/water
(650) 329-2161

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| DETECTED CONTAMINANTS | UNIT | MCL | PHG OR [MCLG] | RANGE OR LEVEL FOUND | AVERAGE OR [MAX] | MAJOR SOURCES IN DRINKING WATER |
|---|---|---|---|---|---|---|
| **TURBIDITY** (Turbidity is a water clarity indicator; it also indicates the effectiveness of the filtration plants.) | | | | | | |
| Unfiltered Hetch Hetchy Water | NTU | 5 | N/A | 0.2 - 0.6 (2) | [2.8] | Soil runoff |
| Filtered Water from Sunol Valley Water Treatment Plant (SVWTP) | NTU | 1 (3) | N/A | – | [0.98] | Soil runoff |
| | – | Min 95% of samples | N/A | 97% - 100% | – | Soil runoff |
| Filtered Water from Harry Tracy Water Treatment Plant (HTWTP) | NTU | 1 (3) | N/A | – | [0.07] | Soil runoff |
| | – | Min 95% of samples ≤ 0.3 NTU (3) | N/A | 100% | – | Soil runoff |
| **DISINFECTION BYPRODUCTS AND PRECURSOR** | | | | | | |
| Total Trihalomethanes | ppb | 80 | N/A | 28-58 | 37.2 (4) | Byproduct of drinking water disinfection |
| Haloacetic Acids | ppb | 60 | N/A | 20-42 | 29.4 (4) | Byproduct of drinking water disinfection |
| Total Organic Carbon(5) | ppm | TT | N/A | 1.3 - 2.8 | 1.9 | Various natural and man-made sources |
| **MICROBIOLOGICAL** | | | | | | |
| Total Coliform | - | NoP ≤ 5.0% of monthly samples | [0] | – | 0 | Naturally present in the environment |
| *Giardia lamblia* | cyst/L | TT | [0] | <0.01 - 0.04 | <0.01 | Naturally present in the environment |
| **INORGANIC** | | | | | | |
| Fluoride (source water)(6) | ppm | 2.0 | 1 | ND - 0.8 | 0.4(7) | Erosion of natural deposits; water additive to promote strong teeth |
| Chloramine (as chlorine) | ppm | MRDL = 4.0 | MRDLG = 4 | 0.46-3.07 | 2.62(8) | Drinking water disinfectant added for treatment |

| CONSTITUENTS WITH SECONDARY STANDARDS | UNIT | SMCL | PHG | RANGE | AVERAGE | MAJOR SOURCES OF CONTAMINANT |
|---|---|---|---|---|---|---|
| Chloride | ppm | 500 | N/A | <3 - 15 | 9 | Runoff / leaching from natural deposits |
| Odor Threshold | TON | 3 | N/A | ND - 1 | ND | Naturally-occurring organic materials |
| Specific Conductance | µS/cm | 1600 | N/A | 32 - 222 | 151 | Substances that form ions when in water |
| Sulfate | ppm | 500 | N/A | 0.9 - 32 | 17 | Runoff / leaching from natural deposits |
| Total Dissolved Solids | ppm | 1000 | N/A | 31 - 120 | 81 | Runoff / leaching from natural deposits |
| Turbidity | NTU | 5 | N/A | 0.1 - 0.2 | 0.1 | Soil runoff |

| LEAD AND COPPER | UNIT | AL | PHG | RANGE | 90TH PERCENTILE | TYPICAL SOURCES IN DRINKING WATER |
|---|---|---|---|---|---|---|
| Copper | ppb | 1300 | 300 | 2.1-384 (9) | 30.2 | Internal corrosion of household water plumbing systems |
| Lead | ppb | 15 | 0.2 | ND-2.0 | 1.1 | Internal corrosion of household water plumbing systems |

| OTHER WATER QUALITY PARAMETERS | UNIT | ORL | RANGE | AVERAGE |
|---|---|---|---|---|
| Alkalinity (as $CaCO_3$) | ppm | N/A | 8 - 94 | 37 |
| Bromide | ppb | N/A | ND - 27 | 5 |
| Calcium (as Ca) | ppm | N/A | 3 - 20 | 11 |
| Chlorate(10) | ppb | 800 (NL) | 34 - 740 | 314 |
| Hardness (as $CaCO_3$) | ppm | N/A | 7 - 77 | 46 |
| Magnesium | ppm | N/A | <0.2 - 6.4 | 3.9 |
| pH | - | N/A | 6.9 - 10.2 | 9.3 |
| Potassium | ppm | N/A | 0.2 - 1 | 0.6 |
| Silica | ppm | N/A | 2 - 5 | 4 |
| Sodium | ppm | N/A | 2.4 - 16 | 10 |

**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
NTU = Nephelometric Turbidity Unit
ORL = Other Regulatory Level
ppb = parts per billion
ppm = parts per million
µS/cm = microSiemens / centimeter

(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 SVWTP only.
(6) The SWRCB specifies the fluoride level in the treated water be maintained within a range of 0.8 ppm - 1.5 ppm. In 2014, the range and average of the fluoride levels were 0.6 ppm - 1.2 ppm and 0.9 ppm, respectively.
(7) 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 reservoirs.
(8) This is the highest running annual average value.
(9) The most recent Lead and Copper Rule monitoring was in 2014. 0 of 37 site samples collected at consumer taps had copper concentrations above the AL.
(10) The detected chlorate in the treated water is a degradation product of sodium hypochlorite used by the SFPUC for water disinfection.

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

The adjacent table lists all drinking water contaminants detected in 2014. Contaminants below detection limits, such as arsenic, perchlorate, MTBE and others, are not listed. In 2014, the SFPUC completed four quarters of monitoring of 25 contaminants as required under the US EPA second Unregulated Contaminant Monitoring Regulation. None of the 25 contaminants were detected in the water supplied to you. The list of the 25 contaminants is available at US EPA website:

**water.epa.gov/drink/contaminants/#List**

The table contains the name of each contaminant, the applicable drinking water standards or regulatory action levels, the ideal goals for public health, the amount detected in water, the typical contaminant sources, and footnotes explaining the findings. The State allows the SFPUC to monitor for some contaminants less than once per year because their concentrations do not change. For certain other contaminants that were absent in the water based on many years of monitoring, the SFPUC received a monitoring waiver from the State.

## Key Water Quality Terms

Following are definitions of key terms noted on the adjacent water quality data table. These terms refer to the standards and goals for water quality described below.

**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 (EPA).

**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 US EPA.

**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 (see definitions above) 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 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.

**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.

**PRIMARY DRINKING WATER STANDARD (PDWS):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.

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

**REGULATORY ACTION LEVEL:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

*** Contaminants that may be present in source water include:**

**MICROBIAL CONTAMINANTS,** such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

**INORGANIC CONTAMINANTS,** such as salts and metals, 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** may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.

**CHEMICAL CONTAMINANTS**–inorganic, synthetic and volatile organic chemicals are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application and septic systems.

**RADIOACTIVE CONTAMINANTS** can be naturally occurring or be the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the California Department of Public Health (CDPH) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. More information on contaminants and potential health effects can be obtained by calling the U.S. EPA Safe Drinking Water Hotline at (800) 426-4791.