



MID-PENINSULA
WATER DISTRICT

2016

CONSUMER CONFIDENCE REPORT

Water You Can Trust

||||| SUSTAINABLE WATER FOR FUTURE GENERATIONS



||||| MidPeninsulaWater.org

ABOUT MPWD

MID-PENINSULA WATER DISTRICT

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BOARD OF DIRECTORS

The Board of Directors meets every fourth Thursday of the month at 6:30 p.m. at 3 Dairy Lane, Belmont.

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Serving You High Quality Water Is Our Business!

Recent precipitation levels within the San Francisco Regional Water System (SFRWS) have been record breaking and a much welcome relief! The Mid-Peninsula Water District (MPWD) relies 100% on the SFRWS for its water supply. Experienced operators and water quality staff within both the SFRWS and MPWD are focused on the safe delivery of water you can trust. The information contained within this report is important to you and reflects that the water you drink and use every day met or exceeded state and federal drinking water health standards.

Your continued water conservation efforts are appreciated and make a difference! Thank you for being actively involved in managing sustainability for future generations!

A significant component to system reliability is replacement of aged water infrastructure and rest assured that the MPWD has a progressive capital improvement program underway! Keep a look out soon for a brochure on this important program within the MPWD system.

Since 1929, the MPWD has been dedicated in its business of serving you. Please let us hear from you if we can make that experience better. ■



The SFPUC's Water Quality Division 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 2016, SFPUC staff conducted more than 50,200 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.

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 USEPA and 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. Translate it, or speak with someone who understands it. Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

此份水質報告，內有重要資訊。請找他人為你翻譯和解說清楚。

Drinking Water Sources and Treatment

Supplied by the San Francisco Regional Water System (SFRWS), which is owned and operated by the San Francisco Public Utilities Commission (SFPUC), our major water source originates from spring snowmelt flowing down the Tuolumne River to storage in Hetch Hetchy Reservoir. The well protected Sierra water source is exempt from filtration requirements by the United States Environmental Protection Agency (USEPA) and State Water Resources Control Board's Division of Drinking Water (SWRCB-DDW). Water from the Hetch Hetchy reservoir receives the following treatments to meet appropriate drinking water standards: disinfection by ultraviolet light and chlorine, corrosion control by adjustment of the water pH value, fluoridation for dental health protection, and chloramination for maintaining disinfectant residual and minimizing disinfection byproduct formation.



Hetch Hetchy water is supplemented with surface water from two local watersheds. Rainfall and runoff from the 35,000-acre Alameda Watershed in Alameda and Santa Clara counties are collected in the Calaveras and San Antonio reservoirs, and delivered to the Sunol Valley Water Treatment Plant (SVWTP). Rainfall and runoff from the 23,000-acre Peninsula Watershed in San Mateo County are stored in the Crystal Springs, San Andreas and Pilarcitos reservoirs, and

are delivered to the Harry Tracy Water Treatment Plant. In addition to these local sources, the SWRCB-DDW approved the SFPUC to use the surface water in Lake Eleanor, Lake Cherry and the associated creeks all conveyed via the Lower Cherry Aqueduct, Early Intake Reservoir and Tuolumne River (collectively known as Upcountry Non-Hetch Hetchy Sources, or UNHHS) as additional drinking water sources to the SFRWS. The UNHHS water, if used, will be treated at the SVWTP prior to service to customers. In 2016, the SFRWS did not use UNHHS. Water at the two local treatment plants is subject to filtration, disinfection, fluoridation, and pH adjustment for corrosion control optimization. ■

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.

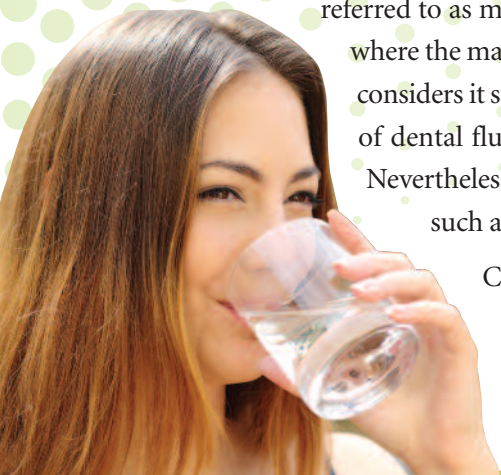
These people should seek advice about drinking water from their health care providers. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the **USEPA's Safe Drinking Water Hotline 800.426.4791** or at **www.epa.gov/safewater**. ■



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 SFPUC's fluoride target level in the water is 0.7 milligram per liter, 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 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 health provider or SWRCB-DDW if you have concerns about dental fluorosis. For additional information about fluoridation or oral health, visit the CDC website www.cdc.gov/fluoridation or SWRCB-DDW website www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml. ■



Unregulated Contaminant Measurement Rule

In May 2012, USEPA published the third Unregulated Contaminant Monitoring Rule (UCMR3) that lists a total of 28 chemical contaminants and two viruses for monitoring by some public water systems between 2013 and 2015. USEPA uses the UCMR to collect data for contaminants suspected to be present in drinking water to help determine if drinking water standards need to be developed in the future. The SFPUC is required to monitor the 28 chemical contaminants, and completed four quarters of UCMR3 monitoring in 2013.

Only 5 of the 28 contaminants were detected at very low levels as reported in the following table. In the absence of identifiable industrial sources other than chlorate, these contaminants are naturally occurring in our watersheds. Chlorate is a degradation product of the disinfectant used by the SFPUC for water disinfection, and is a common contaminant found in water treatment facilities throughout the nation. ■

UCMR3 Sampling Results

DETECTED CONTAMINANTS	Unit	MCL1	PHG or (MCL6)	Range or Level Found	Average or [Max]	Major Sources in Drinking Water
Chlorate	ppb	800 (NL)	N/A	75-200	145.3	Degradation of disinfectant
Chromium-total	ppb	50	(100.00)	N/D	N/D	Erosion of natural deposits; industrial discharges
Chromium-6	ppb	10	0.02	0.037-0.12	0.049	Erosion of natural deposits; industrial discharges
Strontium	ppb	N/A	N/A	15-210	63.3	Erosion of natural and pipe deposits
Vanadium	ppb	50 (NL)	N/A	0.29-0.50	< 0.1	Erosion of natural and pipe deposits

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 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. The SFPUC regularly tests for this waterborne pathogen, and found it at very low levels in source water and treated water in 2016. 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.

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.

MPWD's Water Quality Data For 2016

The table below lists all 2016 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. The SFPUC holds a SWRCB-DDW monitoring waiver for some contaminants and therefore their monitoring frequencies are less than annual.

DETECTED CONTAMINANTS¹

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	0.3 - 0.5 ⁽²⁾	[3.2]	Soil runoff
Filtered Water from Sunol Valley Water	NTU	1 ⁽³⁾	N/A	-	[1]	Soil runoff
Treatment Plant (SVWTP)	-	Min 95% of samples ≤ 0.3 NTU ⁽³⁾	N/A	98-100%	-	Soil runoff
Filtered Water from Harry Tracy Water	NTU	1 ⁽³⁾	N/A	-	[0.06]	Soil runoff
Treatment Plant (HTWTP)	-	Min 95% of samples ≤ 0.3 NTU ⁽³⁾	N/A	100%	-	Soil runoff
DISINFECTION BYPRODUCTS AND PRECURSOR						
Total Trihalomethanes	ppb	80	N/A	27.6 - 73.3	58.3 ⁽⁴⁾	Byproduct of drinking water disinfection
Haloacetic Acids	ppb	60	N/A	31.0 - 58.4	47.1 ⁽⁴⁾	Byproduct of drinking water disinfection
Total Organic Carbon ⁽⁵⁾	ppm	TT	N/A	1.6 - 5.3	2.4	Various natural and man-made sources
MICROBIOLOGICAL						
Total Coliform ⁽⁶⁾	-	NoP ≤ 5.0% of monthly samples	(0)	N/A ¹	0	Naturally present in the environment
<i>Giardia lamblia</i>	cyst/L	TT	(0)	0 - 0.11	0.03	Naturally present in the environment
INORGANICS						
Fluoride (source water) ⁽⁷⁾	ppm	2.0	1	ND - 0.8	0.3 ⁽⁸⁾	Erosion of natural deposits; water additive to promote strong teeth
Chloramine (as chlorine)	ppm	MRDL = 4.0	MRDLG = 4	0.31 - 2.83	2.14 ⁽⁹⁾	Drinking water disinfectant added for treatment

KEY

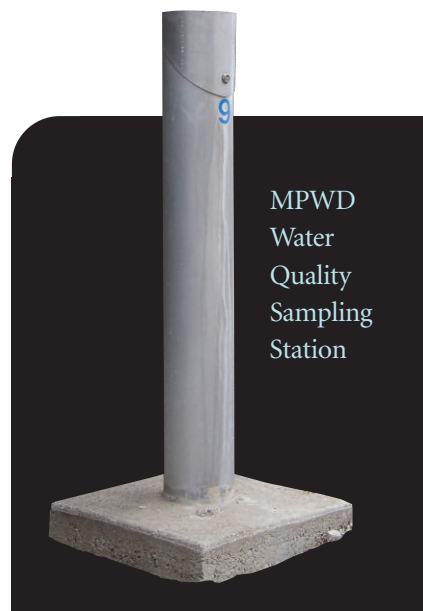
< / ≤ = less than /less than or equal to
 AL = Action Level
 Max = Maximum
 Min = Minimum

N/A = Not Available
 ND = Non-detect
 NL = Notification Level
 NoP = Number of Coliform-Positive Sample
 NTU = Nephelometric Turbidity Unit

ORL = Other Regulatory Level
 ppb = part per billion
 ppm = part per million
 µS/cm = microSiemens / centimeter

DETECTED CONTAMINANTS¹

CONSTITUENTS WITH SECONDARY STANDARDS	Unit	SMCL	PHG	Range	Average	Major Sources of Contaminant
Aluminum ⁽¹⁰⁾	ppb	200	600	ND - 55	ND	Erosion of natural deposits; some surface water treatment residue
Chloride	ppm	500	N/A	<3 - 16	8.8	Runoff / leaching from natural deposits
Color	unit	15	N/A	<5 - 11	<5	Naturally-occurring organic materials
Specific Conductance	µS/cm	1600	N/A	31 - 218	146	Substances that form ions when in water
Sulfate	ppm	500	N/A	1 - 30	16	Runoff / leaching from natural deposits
Total Dissolved Solids	ppm	1000	N/A	<20 - 95	63	Runoff / leaching from natural deposits
Turbidity	NTU	5	N/A	ND - 0.5	0.2	Soil runoff
LEAD AND COPPER	Unit	AL	PHG	Range	90th Percentile	Major Sources in Drinking Water
Copper	ppb	1300	300	<1.7 - 40 ⁽¹¹⁾	32.3	Internal corrosion of household water plumbing systems
Lead	ppb	15	0.2	<1.0 - 2.9 ⁽¹²⁾	1.5	Internal corrosion of household water plumbing systems
OTHER WATER QUALITY PARAMETERS	Unit	ORL	Range	Average		
Alkalinity (as CaCO ₃)	ppm	N/A	7 - 112	39		
Boron	ppb	1000 (NL)	ND - 123	ND		
Bromide	ppb	N/A	<5 - 19	8		
Calcium (as Ca)	ppm	N/A	2 - 18	10		
Chlorate ⁽¹³⁾	ppb	(800) NL	47 - 250	143		
Hardness (as CaCO ₃)	ppm	N/A	8 - 76	44		
Magnesium	ppm	N/A	0.2 - 6	3.6		
pH	-	N/A	8.2 - 9.8	9.4		
Phosphate (Ortho)	ppm	N/A	<0.03 - 0.11	0.04		
Potassium	ppm	N/A	0.2 - 1	0.6		
Silica	ppm	N/A	5.1 - 5.7	5.3		
Sodium	ppm	N/A	2.6 - 17	11		
Strontium	ppb	N/A	13 - 204	95		



FOOTNOTES

- (1) All results met State and Federal drinking water health standards and were confirmed by the MPWD.
- (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 Mid-Peninsula Water District had zero positives for Total Coliform in 2016.
- (7) In May 2015, the SWRCB recommended an optimal fluoride level of 0.7 ppm be maintained in the treated water. In 2016, the range and average of the fluoride levels were 0.5 ppm - 0.8 ppm and 0.6 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 2015. 0 of 32 site samples collected at consumer taps had copper concentrations above the AL.
- (12) The most recent Lead and Copper Rule monitoring was in 2015. 0 of 32 site samples collected at consumer taps had lead concentrations above the AL.
- (13) 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 Mid-Peninsula Water District phone number at 650-591-8941.



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WATER DISTRICT

3 Dairy Ln., Belmont, CA 94002

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Information on Drinking Water and Lead

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 the SFRWS. We are responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. It is possible that lead levels at your home may be higher than at others because of plumbing materials used in your property.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Infants and young children are typically more vulnerable to lead in drinking water than the general population. You can minimize the potential for lead exposure, when your water has been sitting for several hours, by flushing your tap for 30 seconds to 2 minutes (or until the water temperature has changed) before using water for drinking or cooking. If you are concerned about lead levels in your water, you may wish to have your water tested. Additional information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the USEPA's Safe Drinking Water Hotline 800.426.4791, or at www.epa.gov/lead ■