Mid-Peninsula Water District
2007 Annual Water Quality Report

"This report contains important information about your drinking water. Translate it, or speak with someone who understands it."
Spanish: "Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien."
Tagalog: "Mahalaga ang impormasyong ito. Mangyaring ipasalin ito."
French: "Ce rapport contient des informations importantes concernant votre eau potable. Veuillez traduire, ou parlez avec quelqu'un qui peut le comprendre."
Polish: "Ta broszura zawiera wazne informacje dotyczace jakosci wody do picia. Przetlumacz zawartosc tej broszury lub skontaktuj sie z osoba ktora pomoze ci w zrozumieniu zawartych informacji."

The Mid-Peninsula Water District is pleased to present this 2007 Annual Water Quality Report (Consumer Confidence Report) to our customers. It is important to our Board of Directors and Staff that our customers are informed about the quality of their drinking water. The Mid-Peninsula Water District exists to serve our customers by obtaining and distributing a safe, reliable, high quality supply of water for current and future needs in the most cost efficient manner. Should you have any questions or concerns regarding this report, please feel free to call the District Office at (650) 591-8941 and one of our Office Specialists or Technicians will be happy to assist you.

Where SFPUC Water Comes From
In 2007, the Hetch Hetchy watershed provided approximately 87% of our total water supply with the rest supplemented by local watersheds.

Protecting Our Watersheds
The SFPUC actively and aggressively protects the natural water resources entrusted to its care. An annual report on the Hetch Hetchy and its neighboring watersheds is prepared to evaluate their sanitary conditions, water quality, and potential contamination sources. The report also presents performance results of watershed management activities implemented by the SFPUC and its partner agencies, such as the National Park Service, to reduce or eliminate the potential contamination sources. The 2007 sanitary survey concludes that very low levels of contaminants associated with wildlife and human activities exist in these upcoming watersheds.

The SFPUC also conducts sanitary surveys of the two local watersheds every five years. The potential contamination sources identified in the 2005 survey are similar to the up country watersheds. These survey reports are available at the CDPH San Francisco District office at (510-620-3474)

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 our system, 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 remaining water in the supply consists of 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 treatment 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.

MPWD Board Meetings Held Every 4th Thursday of Every Month
The Mid-Peninsula Water District Board of Directors hold a Board Meeting on the 4th Thursday of each month. Customers are encouraged to attend these meetings. The meetings are held at our District Office at 3 Dairy Lane, Belmont at 6:30 p.m.

The Highest Quality Water
The SFPUC's Water Quality Division regularly collects and tests water samples from reservoirs and designated sampling points throughout the system to ensure that the SFPUC's water meets or exceeds federal and state drinking water standards. In 2007, Water Quality staff conducted 42,250 drinking water tests in the Regional System, and treatment plant operators collected more than 77,000 water samples for treatment process control monitoring.

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.

The table on the inside lists all drinking water contaminants detected in 2007. Contaminants below detection limits, such as arsenic, perchlorate, MTBE, and others, are not listed. 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.

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.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) 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 about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791)

Cryptosporidium is a parasitic microbe found in surface water. The SFPUC regularly tests for this waterborne pathogen, and found it at very low levels in source water and treated water in 2007. However, current test methods approved by the USEPA do not distinguish between dead organisms and those capable of causing disease. If ingested these parasites may produce symptoms of nausea, stomach cramps, diarrhea, and associated headaches.

Lead and Copper Sampling Volunteers for 2009
Mid Peninsula Water District will be asking for volunteers for a tap sample for Lead and Copper in 2009. This service is free of charge and results of the test will be provided to the volunteers. The exact date has not been determined but will take place during the months of June, July, August or September. If your home has copper pipes with lead solder that was installed between 1982 and 1988 and wish to volunteer please contact our office at 650-591-8941.

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. 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 (1-800-426-4791) or at www.epa.gov/safewater.

To Learn More
Want to learn more about drinking water regulations? Visit the CDPH website at www.cdph.ca.gov or the USEPA website at www.epa.gov.

DETECTED CONTAMINANTS	Unit	MCL	PHG (MCLG)	Range	Average (Maximum)	Typical Sources in Drinking Water
TURBIDITY [2]						
Unfiltered Hetch Hetchy Water, max 5 NTU	-	TT	NA	0.22 - 0.48 [3]	(1.98) [4]	Soil run-off
Filtered water - Harry Tracy WTP, max 1 NTU	-	TT	NA	-	(0.17)	Soil run-off
more than 95% of measurements < 0.3 NTU	-	TT	NA	100% [5]	-	Soil run-off
Filtered Water - Sunol Valley WTP, max 1 NTU	-	TT	NA	-	(0.54)	Soil run-off
more than 95% of measurements < 0.3 NTU	-	TT	NA	98% [5]	-	Soil run-off
DISINFECTION BY-PRODUCTS (SFPUC Regional System)						
Total Trihalomethanes (TTHMs)	ppb	80	NA	11- 44	(32) [6]	By-product of drinking water chlorination
Total Haloacetic Acids (HAAs)	ppb	60	NA	3 - 29	(18) [6]	By-product of drinking water chlorination
Total Organic Carbon (TOC) [7]	ppm	TT	NA	0.7 - 2.5	1.94	Various natural and man-made sources
DISINFECTION BY-PRODUCTS (MPWD)						
Total Trihalomethanes (TTHMs)	ppb	80	NA	28.8 - 42.1	33.7 [6]	By-product of drinking water chlorination
Total Haloacetic Acids (HAAs)	ppb	60	NA	17.8 - 26.0	21.2 [6]	By-product of drinking water chlorination
Total Organic Carbon (TOC) [7]	ppm	NA	NA	0.7 - 2.5	1.94	Various natural and man-made sources
MICROBIOLOGICAL [7] (MPWD)						
Total Coliform, highest % of positives detected in any month	%	≤5	(0)	0	0	Naturally present in the environment
Giardia lamblia	cyst/L	TT	(0)	ND - 0.03	0.03	Naturally present in the environment
INORGANIC CHEMICALS						
Fluoride [9]	ppm	2.0	1.0	<0.1 - 0.7	0.3	Erosion of natural deposits
Chlorine (MPWD)	ppm	MRDL=4.0	MRDLG=4	1.29 - 2.17	1.73 [6]	Water additive that promotes strong teeth Drinking water disinfectant added for treatment
CONSTITUENTS WITH SECONDARY STANDARDS	**Unit**	**SMCL**	**PHG**	**Range**	**Average**	**Typical Sources in Drinking Water**
Chloride	ppm	500	NA	3 - 22	9	Runoff / leaching from natural deposits
Specific Conductance	µS/cm	1600	NA	24 - 376	1.85	Substances that form ions when in water
Sulfate	ppm	500	NA	0.8 - 44	17.6	Runoff / leaching from natural deposits
Total Dissolved Solids	ppm	1000	NA	20 - 190	109	Runoff / leaching from natural deposits
Turbidity	NTU	5	NA	0.08.45	0.15	Soil runoff
LEAD AND COPPER RULE STUDY (MPWD)	**Unit**	**AL**	**PHG**	**Range**	**90th Percentile**	**Typical Sources in Drinking Water**
Copper	ppb	1300	170	7.5 - 235.4 [10]	123.1	Corrosion of household plumbing systems
Lead	ppb	15	2	0.2 - 12.9 [11]	7.8	Corrosion of household plumbing systems
OTHER WATER QUALITY PARAMETERS	**Unit**	**ORL**	**Range**	**Average**		
Alkalinity (as $CaCO_3$)	ppm	NA	8- 112	59		
Calcium	ppm	NA	3 - 29	15.3		
Hardness (as $CaCO_3$)	ppm	NA	8 - 116	61		
Magnesium	ppm	NA	<0.2 - 9.4	5.4		
pH	Unit	NA	8.7 - 9.3	9.0		
Potassium	ppm	NA	0.3 - 1.5	0.9		
Silica	ppm	NA	4.2 - 9.3	6.1		
Sodium	ppm	NA	3 - 22	14		

(1) All results met State and Federal drinking water regulations.
(2) Turbidity is the water clarity indicator; it also indicates the quality of the water and the treatment system efficiency.
(3) Turbidity is measured every four hours. These are monthly average turbidity values.
(4) This is a single, maximum measurement. This elevated turbidity was caused by start-up of the Hetch Hetchy Aqueduct after shutdown for maintenance work. The turbid water was not served to customers.
(5) This is the minimum percentage of time that the filtered water tubidity was less than 0.3 NTU.
(6) This is the highest quarterly running annual average value.
(7) TOC is a precursor for disinfection by-product formation
(8) The Mid-Peninsula Water District had 0 positive samples in 2007
(9) There is 1.0 ppm of fluoride in your drinking water.
(10) Latest round of Lead and Copper Rule monitoring was in 2006. 0 out of 30 residences were over the copper action level at consumer taps.
(11) Latest round of Lead and Copper Rule monitoring was in 2006. 0 out of 30 residences were over the lead action level at consumer taps.

Note: Additional water quality data may be obtained by calling the Mid-Peninsula Water District phone number at (650) 591-8941.

Key:

< / ≤ = less than / less than or equal to
AL = Action Level
cyct/L = cycts per liter
Max = Maximum
NA = Not Available
ND = Non-detect
NTU = Nephelometric Turbidity Unit
ORL = Other Regulatroy Level
ppb = parts per billion
ppm = parts per million
µS/cm = microSiemens/centimeter

How Your Water Measures Up

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

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 are set to protect the odor, taste, and appearance of drinking water.

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.

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 Residual Disinfectant Level (MRDL): The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the USEPA.

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.

Water System Improvement Program (WSIP) Update: New UV Treatment Facility Planned for Hetch Hetchy System

Projects that enhance high water quality are a key component of the multi-billion dollar WSIP, a program developed to upgrade the SFPUC water delivery system.

The SFPUC's future Advanced Disinfection Project will use ultraviolet (UV) light to disinfect Hetch Hetchy water to meet new federal requirements to control the waterborne parasite Cryptosporidium. The new 20,000-square-foot facility, inside a SFPUC property in San Joaquin County, will be one of the largest drinking-water UV disinfection facilities in North America. In the same location, a new disinfection station with control room, offices and a water-quality laboratory, will replace the present station, which was built in 1937 and no longer meets current fire or earthquake safety standards

Also under way are major upgrades of the SVWTP in the East Bay and the HTWTP on the Peninsula.

For further information on these and other WSIP water quality projects, visit www.sfwater.org