

Purissima Hills Water District
26375 Fremont Road
Los Altos Hills CA 94022

**PURISSIMA HILLS WATER DISTRICT
2007 ANNUAL WATER QUALITY REPORT**

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PURISSIMA PIPELINE

WATER QUALITY REPORT

Purissima Hills Water District (PHWD) is pleased to present this edition of the 2007 Annual Water Quality Report (Consumer Confidence Report). This report is prepared in conjunction with the San Francisco Public Utilities Commission (SFPUC) as a public service to provide information on the physical and chemical elements of our water supplies. This is in response to the National Primary Drinking Water Regulation and California Code of Regulation, Title 22, Section 116470, Regulations, which require all public water supply agencies to issue an Annual Water Quality Report to their customers by July 1.

We want our customers to know where their drinking water comes from, how it is treated to make it safe and healthy and the results of water quality monitoring performed by the SFPUC on a daily basis. With this knowledge, customers can make health decisions concerning water use for themselves and their families. During 2007, the SFPUC monitored water quality, both source and treated water supplies, and has met the maximum contaminant levels (MCLs) and treatment standards. The PHWD and SFPUC continue their commitment to consistently provide safe and high quality drinking water.

ADDITIONAL INFORMATION

Additional information about the contents of this report can be obtained by calling the District office at 650/948-1217. Decisions about water issues are made in public meetings. The Board of Directors meets the second Wednesday of each month at 6:30 p.m. in the District office at 26375 Fremont Road, Los Altos Hills. Inquiries regarding these meetings can be made by calling the District Secretary at (650) 948-1217.

Patrick Walter
General Manager
June 2008

**PURISSIMA HILLS WATER DISTRICT
2007 ANNUAL WATER QUALITY REPORT
(CONSUMER CONFIDENCE REPORT)**

WATER SOURCES

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. For the San Francisco Public Utility Commission (SFPUC) 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 process includes coagulation, flocculation, sedimentation, filtration, and disinfection. Fluoridation, chloramination and corrosion control treatment are provided for both the 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) prior to serving customers north of Belmont. The treatment process includes ozonation, coagulation, flocculation, filtration, disinfection, fluoridation, chloramination, and corrosion control treatment.

In 2007, the Hetch Hetchy Watershed provided approximately 87% of the total water supply with the remainder contributed by the two local watersheds.

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 adjacent table 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.

Purissima Hills Water District (PHWD)
2007 Water Quality Data⁽¹⁾
Hetch Hetchy and Sunol Valley Water Treatment Plant

DETECTED CONTAMINANTS	Unit	MCL	PHG or [MCLG]	Range	Average or [Max]	Typical Sources in Drinking Water
TURBIDITY⁽²⁾						
Unfiltered Hetch Hetchy Water, max 5 NTU	-	TT	N/A	0.22 - 0.48 ⁽³⁾	[1.98] ⁽⁴⁾	Soil runoff
Filtered Water - Harry Tracy WTP, max 1 NTU	-	TT	N/A	-	[0.17]	Soil runoff
more than 95% of samples =< 0.3 NTU	-	TT	N/A	100% ⁽⁵⁾	-	Soil runoff
Filtered Water - Sunol Valley WTP, max 1 NTU	-	TT	N/A	-	[0.54]	Soil runoff
more than 95% of samples =< 0.3 NTU	-	TT	N/A	98% ⁽⁵⁾	-	Soil runoff
DISINFECTION BYPRODUCTS AND PRECURSOR (SFPUC Regional System) - for information only						
Total Trihalomethanes	ppb	80	N/A	11 - 44	[32] ⁽⁶⁾	Byproduct of drinking water chlorination
Haloacetic Acids	ppb	60	N/A	3 - 29	[18] ⁽⁶⁾	Byproduct of drinking water chlorination
Total Organic Carbon ⁽⁷⁾	ppm	TT	N/A	0.7 - 2.5	1.94	Various natural and man-made sources
DISINFECTION BYPRODUCTS AND PRECURSOR						
Total Trihalomethanes	ppb	80	N/A	24.6-40.8	37.0 ⁽⁶⁾	Byproduct of drinking water chlorination
Haloacetic Acids	ppb	60	N/A	10.0-28.3	17.7 ⁽⁶⁾	Byproduct of drinking water chlorination
Total Organic Carbon ⁽⁷⁾	ppm	N/A	N/A	1.05-2.34	1.26	Various natural and man-made sources
MICROBIOLOGICAL						
Total Coliform, highest % of positives detected in any month	%	≤ 5.0	[0]	0	0	Naturally present in the environment
<i>Giardia lamblia</i>	cyst/L	TT	[0]	ND - 0.03	[0.03]	Naturally present in the environment
INORGANIC CHEMICALS						
Fluoride (source water) ⁽⁸⁾	ppm	2.0	1	< 0.1 - 0.7	0.3	Erosion of natural deposits
Chlorine (including free chlorine and chloramine)	ppm	MRDL = 4.0	MRDLG = 4	1.2-2.5	2.07 ⁽⁶⁾	Drinking water disinfectant added for treatment

CONSTITUENTS WITH SECONDARY STANDARDS	Unit	SMCL	PHG	Range	Average	Typical Sources in Drinking Water
Chloride	ppm	500	N/A	< 3 - 17	9	Runoff / leaching from natural deposits
Specific Conductance	μS/cm	1600	N/A	32 - 320	185	Substances that form ions when in water
Sulfate	ppm	500	N/A	0.8 - 37	17.6	Runoff / leaching from natural deposits
Total Dissolved Solids	ppm	1000	N/A	25 - 193	109	Runoff / leaching from natural deposits
Turbidity	NTU	5	N/A	0.08 - 0.24	0.15	Soil runoff

LEAD AND COPPER	Unit	AL	PHG	Range	90th Percentile	Typical Sources in Drinking Water
Copper	ppb	1300	170	<0.1 - 940 ⁽⁹⁾	150	Corrosion of household plumbing systems
Lead	ppb	15	2	<0.1 - 21 ⁽¹⁰⁾	<0.1	Corrosion of household plumbing systems

OTHER WATER QUALITY PARAMETERS	Unit	ORL	Range	Average
Alkalinity (as CaCO ₃)	ppm	N/A	8 - 112	59
Calcium	ppm	N/A	3 - 29	15.3
Hardness (as CaCO ₃)	ppm	N/A	8 - 116	61
Magnesium	ppm	N/A	< 0.2 - 9.4	5.4
pH	unit	N/A	8.7 - 9.3	9.0
Potassium	ppm	N/A	0.3 - 1.5	0.9
Silica	ppm	N/A	4.2 - 9.3	6.1
Sodium	ppm	N/A	3 - 22	14

KEY:
< / ≤ = less than / less than or equal to
AL = Action Level
Max = Maximum
N/A = Not Available
ND = Non-detect
NTU = Nephelometric Turbidity Unit
ORL = Other Regulatory Level
ppb = parts per billion
ppm = parts per million
μS/cm = microSiemens / centimeter

Note:

- (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 the highest single measurement in 2007. The startup of the San Joaquin Pipeline No. 2 caused elevated turbidity on 2/24/07 as a result of sediment resuspension in the pipeline. The SFPUC took proactive action by pumping the water to San Antonio Reservoir instead of serving to customers.
- (5) This is the minimum percentage of time that the filtered water turbidity was equal to or less than 0.3 NTU.
- (6) This is the highest quarterly running annual average value.
- (7) Total organic carbon is a precursor for disinfection byproduct formation.
- (8) The SFPUC adds fluoride to the naturally occurring level to help prevent dental caries in consumers. The fluoride levels in the treated water are maintained within a range of 0.8 - 1.5 ppm, as required by CDPH regulations.
- (9) The latest round of Lead and Copper Rule monitoring was in September, 2007. 0 out of 41 residences were over the COPPER Action Level at consumer taps.
- (10) The latest round of Lead and Copper Rule monitoring was in September, 2007. 1 out of 41 residences were over the LEAD Action Level at consumer taps.

Note: Additional water quality data may be obtained by calling the Purissima Hills Water District at (650) 948-1217.

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, 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- **Radioactive Contaminants** can be naturally occurring or the result of oil and gas production and mining activities.
- **Pesticides and Herbicides** may come from a variety of sources such as agricultural, urban storm water runoff, and residential uses.

In order to ensure that tap water is safe to drink, the United States 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 (800) 426-4791.

IMPORTANT DEFINITIONS FOR UNDERSTANDING THIS WATER QUALITY REPORT

The 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 and MCLGs (see definitions below) as is economically or technologically feasible. Secondary MCLs (SMCLs) are set to protect odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water for 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 for 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 for which there is no known or expected risk of 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: A required process intended to reduce the level of a contaminant in drinking water.

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

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.

SFPUC PROTECTS THE WATERSHED

The SFPUC actively and aggressively protects the natural water resources entrusted to its care. An annual report on 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 upcountry watersheds. These survey reports are available at the CDPH San Francisco District office (510) 620-3474.

SPECIAL HEALTH NEEDS

Some people may be more vulnerable to contaminants in drinking water, including bottled 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 USEPA Safe Drinking Water Hotline (800) 426-4791 or on the USEPA website www.epa.gov/safewater.

CRYPTOSPORIDIUM AND GIARDIA

Cryptosporidium and Giardia are parasitic microbes found in most surface water supplies and can pose a potential health threat. The SFPUC regularly tests for these waterborne pathogens, and found them at very low levels in both source and treated water supplies 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 diarrhea, stomach cramps, upset stomach, slight fever, and associated headaches. More information about contaminants and potential health effects can be obtained by calling the USEPA Safe Drinking Water Hotline (800) 426-4791.

REDUCING LEAD FROM PLUMBING FIXTURES

Some homes in the District may have increased levels of lead in their tap water caused by the deterioration of household plumbing materials that contain lead. Infants and young children are typically at greatest health risk. If you are concerned about elevated lead levels in your water, have your water tested or flush your tap for 30 seconds to 2 minutes before using the water whenever the tap has not been used for several hours.

PURISSIMA HILLS OPERATION AND MAINTENANCE

The Purissima Hills Water District, serving two-thirds of Los Altos Hills, operates the distribution system to ensure that the treated water maintains residual chloramine to prevent the re-growth of microorganisms during the storage and transmission of water. Water is kept fresh by flushing mains and cycling storage tanks, as well as maintaining an active backflow, or cross-connection control, program to help prevent the intrusion of potentially harmful materials into the drinking water system.

STORING EMERGENCY WATER SUPPLIES

Although the PHWD strives to ensure a reliable supply of water for our customers, a natural disaster such as a major earthquake could interrupt water delivery. Residents are encouraged to store drinking water in case of an emergency. We recommend storing at least three days worth of water (one gallon of water per person, per day, including pets) in food-grade plastic containers, such as two-liter soda bottles, and replacing supplies every six months. To learn more about emergency preparedness for yourself and your family, visit www.72hours.org.