Hemlock Mutual Water Company's

Annual Consumer Confidence Report

Important Information

Water System Name: **Hemlock Mutual Water Company**

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2012 and may include earlier monitoring data.

Type of water source(s) in use:

Ground Water Source (2) Wells

Name & location of source(s):

North Well & South Well

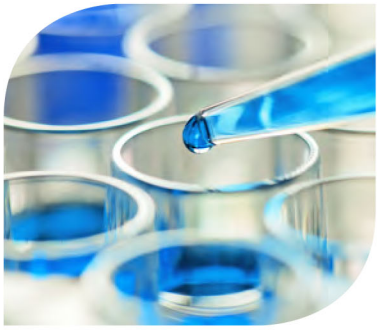
Drinking Water Source Assessment information:

The Drinking Water Source Assessment Report Conducted in January of 2002 can be obtain from California Department of Public Health Drinking Water Program (818) 551-2019

Time and place of regularly scheduled board meetings for public participation: Every Month on the last Saturday. For time and location please contact the number below

For more information, contact:

Blanca E. Becerra: 626-448-7100



Federal and State Water Quality Regulations

Water Quality

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 provide the same protection for public health.

Drinking Water Contaminants

Drinking water, including bottled water, may be reasonably 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 USEPA's Safe Drinking Water Hotline (800) 426-4791.

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.

Important Health Information

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 (800) 426-4791.

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.

Water Quality Test Data 2012

Understanding the Water Quality Chart

As in previous years, the Water Quality Report compares the quality of your tap water to state drinking water standards. The report includes information on all regulated and unregulated drinking water contaminants that were detected during calendar year 2012. More than 100 regulated contaminants that were tested for, but not detected, are not included in this report. A number of regulated chemicals and other compounds do not require annual monitoring. Their most recent test results and corresponding test year are footnoted, if applicable.

CDPH 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 data, though representative, are more than one year old.

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 U.S. Environmental Protection Agency.

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.

Primary Drinking Water Standard (PDWS):
MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

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.

Detection Limits for Purposes of Reporting (DLR):
The DLR is a parameter that is set by regulation for each reportable analyte. It is not laboratory specific and it is independent of the analytical method used (in cases where several methods are approved). It is expected that a laboratory can achieve a Reporting Limit that is lower than or equal to the DLR set by the CDPH.

NA: Contaminant or property was not analyzed.

n/a: Not applicable.

ND: Contaminant was not detected. The contaminant is less than the DLR.

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

Units of Measurement

ppm	parts per million
ppb	parts per billion
ppt	parts per trillion
pCi/L	picocuries per liter
LSI	Langelier Saturation Index
µS/cm	microsiemens per centimeter
NTU	Nephelometric Turbidity Units.

Other Factors Affecting Water Quality and Common Prevention Methods

Nitrates

Nitrate in drinking water at levels above 45 parts per million (ppm) is a health risk for infants under six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 ppm may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

Perchlorate

Perchlorate is a chemical used in solid rocket propellant, fireworks, explosives, matches, and road flares. It can block the iodide uptake into the thyroid gland which produces thyroid hormones. Perchlorate reduces the production of the thyroid hormones which are needed for the normal growth and development of the fetus as well as the normal growth and development of an infant and a child. Ten of PWP's groundwater wells have been detected with perchlorate. Water from five of these wells is blended with MWD water resulting in a blend that is below the perchlorate MCL of 6 parts per billion (ppb). Water from four other wells is treated at the MHTS. Once treated, the resulting perchlorate concentration is below the detection limit. One well is offline due to perchlorate contamination.

Chromium (VI)

Chromium (VI) is substance that is found naturally in both local well water and in imported surface water, and is also an industrially produced chemical. While some locales have received much attention over the years for the presence of chromium (VI) that is the result of industrial discharges, all of the chromium (VI) found in the Pasadena area is naturally occurring. The principal health concern with chromium (VI) is that it might cause cancer when consumed in drinking water. Currently, there is no legal health standard for chromium (VI) in drinking water but the CDPH will be publishing a draft MCL.

Lead and Copper

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and children. Lead in drinking water is primarily from materials associated with service lines and home plumbing. PWP is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800) 426-4791 or at www.epa.gov/safewater/lead.

Hardness

Water becomes hard as it passes over or through certain geological formations that contain calcium or magnesium. For example, groundwater becomes hard as it percolates down to the water table through limestone deposits containing calcium, or through dolomite and other magnesium bearing minerals that dissolve into water.

Hard water causes white, scaly deposits on plumbing fixtures, cooking utensils, and dishwashers. It reduces the cleaning power of soap and detergent and causes buildup in hot water heaters, thus reducing its effective lifetime. Though hardness causes aesthetics disadvantages, our bodies require calcium and magnesium and therefore there is no known health effect that is caused by hard water.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA					
Microbiological Contaminants (complete if bacteria detected)	**Highest No. of Detections**	**No. of months in violation**	**MCL**	**MCLG**	**Typical Source of Bacteria**
* Total Coliform Bacteria	*(In a mo.) 4 (Oct. 2012)	1	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or *E. coli*	(In the year) 0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or *E. coli*	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER						
Lead and Copper (complete if lead or copper detected in the last sample set)	**No. of samples collected**	**90th percentile level detected**	**No. sites exceeding AL**	**AL**	**PHG**	**Typical Source of Contaminant**
Lead (ppb)	20	ND	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	20	ND	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS						
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Sodium (ppm)	7/23/10	150	130-150	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	10/15/10	12	11-12	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

**Any violation of an MCL or AL is asterisked. Additional information regarding the violation is provided later in this report.*

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL [MRDL]**	**PHG (MCLG) [MRDLG]**	**Typical Source of Contaminant**
None	-	-	-	-	-	
None	-	-	-	-	-	

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
None	-	-	-	-	-	
None	-	-	-	-	-	
None	-	-	-	-	-	

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS					
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**Notification Level**	**Health Effects Language**
None	-	-	-	-	-

VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT				
Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**	**Health Effects Language**
Total Coliform MCL	More than one sample collected during October 2012 are total coliform positive	October 2012	After investigating, found that the problem was improper disinfection of sample site before sample was taken. We have adopted improved disinfection procedures when taking a sample from a location to ensure this does not happen again	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems
Ground Water Rule	Failed to comply with ground water rule regulations to collecting the triggered source water monitoring (coliform sample) from all HMWC's groundwater wells after coliform positive were detected from the distribution system in October 2, 2012	October 2012	Appropriate measures have been taken to better understand the rules and regulations of CDPH. In order to comply with all rules and regulations.	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems