

Lead and Drinking Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Town of Purcellville 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 or at www.epa.gov/safewater/lead.



Town of Purcellville
130 East Main Street
Purcellville, VA 20132

♻️ Recycled and Recyclable
Copyright ©2008 Gemini Group LLC
All rights reserved
VA000718-1



ANNUAL WATER QUALITY REPORT

Water testing performed in 2007



PWS ID#: 6107600

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state allows us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2007	10	0	2	NA	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2007	2	2	0.028	ND-2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beta/Photon Emitters ¹ (pCi/L)	2007	50	0	7.32	ND-50	No	Decay of natural and man-made deposits
Chlorine (ppm)	2007	[4]	[4]	1.46	0.2-4	No	Water additive used to control microbes
Combined Radium (pCi/L)	2007	5	0	0.49	ND-5	No	Erosion of natural deposits
Endrin (ppb)	2007	2	2	0.06	ND-2	No	Residue of banned insecticide
Fluoride (ppm)	2007	4	4	0.8	ND-4	No	Water additive used to prevent tooth decay
Haloacetic Acids [HAA] (ppb)	2007	60	NA	15.3	ND-60	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2007	80	NA	44	ND-80	No	By-product of drinking water chlorination
Total Organic Carbon (ppm)	2007	TT	NA	1.75	NA	No	Naturally present in the environment
Turbidity ² (NTU)	2007	TT, <0.3 NTU	NA	0.18	0.01-0.18	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2007	TT, <0.3 NTU	NA	100	NA	No	Soil runoff

¹The MCL for beta particles is 4 mrem/year. U.S. EPA considers 50 pCi/L to be the level of concern for beta particles.

²Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

Definitions

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

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

Notice of Violation

On September 12, 2007 the Town of Purcellville waterworks received a Tier 3 notice of violation from the Virginia Department of Health that the Town may be in violation of section 12 VAC 5-370 B 7 b of the Virginia Waterworks Regulation. There was a mechanical failure to the continuous turbidity data monitoring system. This monitoring system records turbidity data from individual filters at the water plant. As far as we know, the treatment plant was operating properly and the available data does not indicate any water quality violation. However, without continuously recorded turbidity data we cannot be sure that there were no problems. This monitoring equipment has since been upgraded to a more reliable monitoring and recording system.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material; and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which 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 may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Q & A

Q: WHAT MAKES WATER HARD?

A: If substantial amounts of either calcium or magnesium, both nontoxic minerals, are present in drinking water, the water is said to be hard. Hard water does not dissolve soap readily, so making lather for washing and cleaning is difficult. Conversely, water containing little calcium or magnesium is called soft water.

Q: SHOULD I PUT A BRICK IN MY TOILET TANK TO SAVE WATER?

A: Toilet flushing uses a lot of water: about 40% of a household's total water usage. Putting something in the toilet tank that takes up space, like a toilet dam or a water filled jug, is a good idea. But putting a brick in the tank is not a good idea. Bricks tend to crumble and might damage your toilet.

Q: HOW LONG CAN I STORE DRINKING WATER?

A: The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria prior to filling up with the tap water the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

Q: HOW MUCH WATER IS LOST TO A DRIPPING FAUCET?

A: Dripping faucets waste a precious resource and it costs you money. As an example, if you have a faucet that drips 60 times a minute, this adds up to over 3 gallons each day or 1,225 gallons each year.



The Town of Purcellville is committed to providing quality drinking water to its citizens.

We are once again proud to present to you our annual water quality report. This edition covers all testing completed from January 1 through December 31, 2007. We continually strive to adopt new and better methods for delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the challenges of source water protection, water conservation and community education while continuing to serve the needs of all our water users.

The U.S. Environmental Protection Agency (EPA) is authorized by the U.S. Congress to enforce the Safe Drinking Water Act Amendments of 1996. The Amendments require all communities that provide drinking water to their citizens to prepare and distribute a water quality report on an annual basis. The Virginia Department of Health has the responsibility for enforcing Federal Drinking Water Quality Standards in the Commonwealth of Virginia.

Sincerely,

Samer Beidas, P.E., CCM

Director of Public Works

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

Where Does My Water Come From?

The sources of your drinking water are surface water and groundwater as described below:

The surface water source is the J.T. Hirst Reservoir. This reservoir is filled by three primary water springs: Harris Spring, Potts Spring, and Cooper Spring. Cooper Spring is piped to a 12-inch pipe just below the reservoir which carries water to the water treatment plant. The Harris and Potts springs flow directly into the J.T. Hirst Reservoir.

Forbes Well System, Main Street Village, and Hirst Farm Well System are the groundwater sources.

“WELL-INFORMED CUSTOMERS ARE OUR BEST ALLIES.”

Source Water Assessment

A Source Water Assessment Plan (SWAP) is now available at our office. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources.

According to the Source Water Assessment Plan, our well water systems had a susceptibility rating of 'high' and the J.T. Hirst Reservoir had a susceptibility rating of 'moderate'. If you would like to review the Source Water Assessment Plan, please feel free to contact our office during regular office hours.

Water Conservation

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Brian Lutton, Water Department Superintendent, at (540) 338-2513.