

ANNUAL
WATER
QUALITY
REPORT

Water testing performed in 2008



PWSID#: 2151002

This report was prepared by:
Hillcrest Water District
PO Box 317 / 124 Pine Street
Leicester, MA 01524

Continuing Our Commitment

We are presenting to you our annual water quality report. This edition covers all testing completed from January 1 through December 31, 2008. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal drinking water standards. We continually strive to adopt new and better methods for delivering the best quality drinking water to you. 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.

Please share with us your thoughts about the information in this report.

For more information about this report, or for any questions relating to your drinking water, please call Frank W. Lyon, Water Superintendent, at (508) 892-7585.

Community Participation

You are invited to voice your concerns about your drinking water at the monthly Commissioners Meetings. We meet the 2nd Monday of each month at 7 p.m. at the office of the Leicester Water Supply District. 124 Pine Street, Leicester, Ma. Please call to confirm date and times.

Where Does My Water Come From?

The Hillcrest Water District is a Municipal Water System that provides water to 1200 + residence along Pleasant Street from Hillcrest Road to King Street and includes the areas of Dawn Acres, Mayflower, Crestwood, Cricklewood and Lauralwood Areas. The water we distribute is groundwater, water that is pumped from aquifers in the bedrock. The sources included source ID #01G, and 02G which are located about 200 feet west of the intersection of Pleasant Street and Route 56 in Leicester. The 02G well has been off line since 2004 because of water level issues. A “standpipe “ storage tank is located on Lehigh Road next to the Memorial School and delivers water through our distribution system to your homes and business.

We also purchase water from the Leicester Water Supply District from a connection at Newfield Street during high usage times.

What's a Cross-connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems) or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand) causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. For more information, review the Cross-Connection Control Manual from the U.S. EPA's Web site at www.epa.gov/safewater/crossconnection.html. You can also call the Safe Drinking Water Hotline at (800) 426-4791.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the Department of Environmental Protection (Department) and the U.S. Environmental Protection Agency (U.S. EPA) prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and Massachusetts Department of Public Health (DPH) 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 and, in some cases, radioactive material, and can pick up 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 which 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.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

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 a 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.

Radon Monitoring

Radon samples for Hillcrest well 01G and Leicester Water Supply District's Rawson St. 06G well were taken on 5/7/2008. The results were 1200 pCi/L for HWD and 8800 pCi/L for LWSD which is less than the MA guideline of 10,000 pCi/L

Radon is a radioactive gas that occurs naturally in some ground water. It may pose a health risk when the gas is released from water into air, as occurs during showering, bathing, or washing dishes and clothes. Radon gas released from drinking water is a relatively small part of the total radon in air. Radon is released into homes and ground water from soil. Inhalation of radon gas has been linked to lung cancer, however, the effects of radon ingested in drinking water are not yet clear. If you are concerned about radon in your home, tests are available to determine the total exposure level. For additional information on how to have your home tested, call (800) SOS-RADON.

MCL Exceedances

Hillcrest Water District: Public notice of Arsenic occurrences were distributed by mail quarterly: January 1 through December 31, 2008:

Leicester Water Supply District: Public notice for Arsenic occurrences were distributed by mail quarterly: January 1 through September 30, 2008: MassDEP approved water treatment systems for the removal of arsenic for Wells #2 and #3 which was activated on October 2, 2008. Test results show that there are no detections of arsenic in the water provided to consumers from these wells since the activation of the treatment systems.

Some people who drink water containing Arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

Hillcrest Water District: Public notice of Uranium occurrences were distributed by mail quarterly: January 1 through December 31, 2008:

Some people who drink water containing Uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.

Water Treatment Process

The District started construction of a Treatment Plant in September 2008 which will remove both Arsenic and Uranium from the drinking water. It consists of two treatment skids each of which has two pressurized vessels. The vessels contain a specialized resin media that absorbs and removes the arsenic and uranium. Periodically, the vessels are back-washed to the sanitary sewer and the media is regenerated to begin the removal process over again. Chlorine is added before the treatment process to aid in the treatment and to remove the hydrogen sulfides (rotten egg smell) that some residence have problems with. The treated water is then pumped from a clear well in the treatment building to the water tank and distribution system.

The Treatment Plant began operation on April 1, 2009 with no detections of Arsenic or Uranium.

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. We are 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.

Source Water Assessment

A Source Water Assessment Plan (SWAP) is 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.

If you would like to review the Source Water Assessment Plans for Hillcrest Water District and Leicester Water Supply District, please feel free to contact our office at 124 Pine Street during regular office hours.

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/watrhme) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation and public health. Also, the DEP has a Web site (www.mass.gov/dep) that provides complete and current information on water issues in Massachusetts, including valuable information about our watershed.

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.

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									
				Hillcrest Water District		Leicester Water Supply District			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2008	15	0	11	0–11	7.6	2.5–7.6	No	Erosion of natural deposits
Arsenic (ppb)	2008	10	0	18	16–18	17	1–20	Yes	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Combined Radium (pCi/L)	2008	5	0	3.5	0–3.5	2.6	0–2.6	No	Erosion of natural deposits
Nitrate (ppm)	2008	10	10	ND	NA	4.4	0.161–4.4	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Coliform Bacteria (# positive samples)	2008	1 positive monthly sample	0	1	NA	NA	NA	No	Naturally present in the environment
Total Organic Carbon (ppm)	2008	TT	NA	NA	NA	.0094	.0067–.0094	No	Naturally present in the environment
Uranium (ppb)	2008	30	0	36	25–36	18	3.1–18	Yes	Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH% TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper ¹ (ppm)	2007	1.3	1.3	0.17	0/12	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2007	15	0	1.5	0/12	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES									
				Hillcrest Water District		Leicester Water Supply District			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Fluoride (ppm)	2008	2.0	NA	.27	0–.27	NA	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Manganese (ppb)	2008	50	NA	.002	0–.002	NA	NA	No	Leaching from natural deposits

UNREGULATED SUBSTANCES						
			Hillcrest Water District		Leicester Water Supply District	
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Sodium (ppm)	2008	15	0–15	35	0–35	NA

¹Consistently low values for lead & copper have earned a reduction in DEP required testing for the Hillcrest Water District and Leicester Water Supply District for this category. The frequency of testing for lead & copper is now once every three years. The next scheduled monitoring for this category is in Qtr. 3, 2010.

Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist U.S. EPA in determining their occurrence in drinking water and whether future regulation is warranted.

Definitions

90th Percentile: Out of every 10 homes sampled, 9 were at or below this level.

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.

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.