

Livingston Community Water Authority

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A Community Water Utility Partnership Of The Livingston County, Michigan Communities of
Brighton Charter Township, Green Oak Charter Township, and Hamburg Township

June 20, 2016

Dear Customer,

Enclosed with this letter, you will find your Consumer Confidence Report (CCR) along with a fact sheet from the Water Authority's engineer regarding copper and lead in water.

Drinking water quality is important to our community and the region. We at the Authority are committed to meeting state and federal water quality standards including the Lead and Copper Rule. We are committed to protecting public health and maintain open communication with the public about our drinking water.

Safe drinking water is a shared responsibility. The water that the Authority delivers to your community does not contain lead. Unlike the Flint community, the water for the Authority is well water, not surface water. Our water is less acidic than surface waters. The water mains of the Authority's system are High Density Plastic (HDPE) or Ductile Iron with a protective concrete liner. Lead can leach into drinking water through home plumbing fixtures, and in some cases, customer service lines.

The Michigan Department of Environmental Quality requires the Authority to take representative samples throughout the system for lead and copper. The results of past testing has been distributed in your yearly CCRs. To date, lead has not been detected in samples conducted at homes or within the system.

With over 1,200 users, the Authority's board wishes to expand our testing beyond what is required by regulation. As part of our proactive measures, a new testing schedule has been developed to sample additional sites across our water system. We are looking to expanded testing system wide, with special attention within our more mature subdivisions, which are Saxony, Wilmor, and Country Club.

To accomplish this task, the authority will be looking for volunteers to collect samples of their tap water. Sample analysis will be by the Authority. We will provide sampling materials and sample collection instructions. Test results will be distributed to those sampling the water and will be a part of our database for the system. To volunteer to be a sampling site, please contact my office at supervisor@greenoaktwp.com or 810-231-1333 ext. 102.

The Authority is committed to safeguarding our water supply and delivering the highest quality drinking water to protect public health. Thank you for considering this and the following information.

A handwritten signature in black ink, appearing to read "Mark St. Charles". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Mark St. Charles, Chairperson LCWA

Quick Facts: Lead in Drinking Water

LEAD AND COPPER RULE

- USEPA published the Lead and Copper Rule in 1991. The primary purpose of the LCR is to protect public health by minimizing lead and copper levels in drinking water. The LCR was issued under the authority of the Safe Drinking Water Act.
- The LCR has four basic requirements:
 1. Require water suppliers to optimize their treatment system to control corrosion in customer's plumbing
 2. Determine tap water levels of lead and copper for customers who have lead service lines or lead-based solder in their plumbing system
 3. Rule out the source water as a source of significant lead levels, and
 4. If lead action levels are exceeded, require the suppliers to educate their customers about lead and suggest actions they can take to reduce their exposure to lead through public notices and public education programs.
- The LCR establishes action levels (AL) for lead at 0.015 mg/L (15 µg/L) and 1.3 mg/L for copper. The AL for lead is a screening tool for assessing optimal corrosion control based on treatment feasibility, and is not a health-based threshold. The AL for copper is based on a health reference (to prevent nausea).

HOW LEAD ENTERS THE SYSTEM

- Lead is typically not found in drinking water sources or in drinking water treatment chemicals.
- Lead can enter drinking water when service pipes that contain lead corrode, especially where the water has high acidity or low mineral content that corrodes pipes and fixtures.
 - Homes built before 1986 are more likely to have lead pipes, fixtures and solder.
 - Corrosion is a dissolving or wearing away of metal caused by a chemical reaction between water and plumbing.
 - The most important water quality parameters for lead solubility are pH, alkalinity, dissolved inorganic carbonate, and orthophosphate levels.
 - For ideal corrosion control, water should have moderate alkalinity (40-70 mg/L) and a pH between 7-8.2.
 - The following factors are considered as it relates to lead entering the waters:
 - the chemistry of the water (acidity and alkalinity) and the types and amounts of minerals in the water,
 - the amount of lead it comes into contact with,
 - the temperature of the water,
 - the amount of wear in the pipes,
 - how long the water stays in pipes, and
 - the presence of protective scales or coatings inside the plumbing materials.
- Lead control in drinking water can be provided by treatment means of pH adjustment, carbonate adjustment, orthophosphate addition, silicate addition, and calcium carbonate deposition.

MONITORING AND SAMPLING

- The LCR has a sample site tiering system for prioritizing the selection of sampling sites based on the likelihood of the sites to release lead and copper.
 - The minimum number of tap samples required by a community is based on the community's population size.
 - Samples are to be collected from single family residences and/or buildings with copper pipe and lead solder installed after 1982, or with lead pipes, and/or are served by lead service lines.
 - Most monitoring is done once every three years.
 - Samples are one-liter in volume and are first-draw samples from taps. Samples are to be taken after at least 6 hours of stagnation.
- If at least 10 percent of the samples tested are above the AL then the water system must increase monitoring, undertake additional corrosion control efforts, and develop/implement training and public education for customers.

2016 Water Quality Report for L.C.W.A. Wssn#3929

This report covers the drinking water quality for the L.C.W.A. water system calendar year 2015. This information is a snapshot of the quality of the water that we provided to you in 2015. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards.

Your water comes from 2 groundwater wells located at 9220 Rickett Rd. near the well house on the east side of Arbor Meadows. The State has performed an assessment of our source water. Such an assessment was completed on all of the sources of drinking water across the country that provides water to 25 people or more. Each system's wells were given a rating based on how susceptible the source water is to contamination from identified sources. This will help communities understand the potential threats to their water supplies and prioritize needs for protecting the water from contamination. This *does not mean* that your water is or will become contaminated. The possible susceptibility rating ranges from low to very high. **The rating for the wells in your community is moderate to moderately high.** A complete copy of the assessment report is available from the community. If you would like one, please contact the name and number at the bottom of the report.

- **Contaminants and their presence in water:**

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

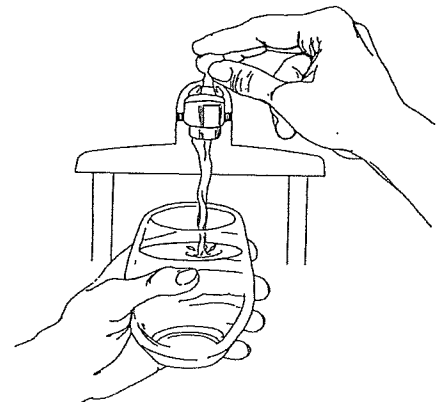
- **Vulnerability of sub-populations:** Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune systems 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. EPA/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).

- **Sources of drinking water:** The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Our water comes from 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.

- Contaminants that may be present in source water include:
 - T **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
 - T **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
 - T **Pesticides and herbicides**, which may come from a variety of sources such as agriculture and residential uses.
 - T **Radioactive contaminants**, which are naturally occurring or be the result of oil and gas production and mining activities.
 - T **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which provide the same protection for public health.



Water Quality Data

The table below lists all the drinking water contaminants that we detected during the 2015 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 – December 31, 2015. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All of the data is representative of the water quality, but some are more than one year old.

Terms and abbreviations used below:

- **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 allow for a margin of safety.
- **Maximum Contaminant Level (MCL):** 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.
- **N/A:** Not applicable **ND:** not detectable at testing limit **ppb:** parts per billion or micrograms per liter **ppm:** parts per million or milligrams per liter **pCi/l:** picocuries per liter (a measure of radioactivity).
- **Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Regulated Contaminant	MCL	MCLG	(Our Water)	Range	Sample Date	Violation Yes / No	Typical Source of Contaminant
Arsenic (ppb)	10	0	N/D	N/A	2011	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	.12	N/A	2008	No	Discharge of drilling wastes; Discharge of metal refineries; Erosion of natural deposits
Selenium(ppm)	50	50	N/D	N/A	2008	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	0.18	N/A	2015	No	Erosion of natural deposits. Discharge from fertilizer and aluminum factories.
Total Trihalomethanes (TTHM's)(ppb)	80	N/A	39.2	N/A	2015	No	By-product of drinking water chlorination
(HAA5'S)(ppb)	60	N/A	7	N/A	2015	No	By-product of drinking water chlorination
Chlorine(ppm)	4	4	0.82 avg	0.1-2.3	2015	No	Water additive used to control microbes
Radioactive Contaminant							
Alpha emitters (pCi/L)	15	0	1.1	NA	2014	NO	Erosion of natural deposits
Combined radium (pCi/L)	5	0	0.6	NA	2012	NO	Erosion of natural deposits
Contaminant subject to AL	Action level	90% of samples ≤ this level	Range	Sample date	Number Of Samples Above AL	Typical Source of Contamination	

Lead(ppb)	15	Oppb	NA	2014	0	Corrosion of household plumbing;erosion of natural deposits
Copper(ppm)	1.3	0.14ppm	NA	2014	0	Corrosion of household plumbing;erosion of natural deposits;

Special Monitoring and Unregulated Contaminant **	Average Level Detected	Range	Sample Date	Typical Source of Contaminant
Sodium (ppm)	23	NA	2015	Erosion of natural deposits
Sulfate(ppm)	45	NA	2015	Erosion of natural deposits

**Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Microbial Contaminants	MCL	MCLG	Number Detected	Violation Yes / No	Typical Source of Contaminant
Total Coliform Bacteria	1 positive monthly sample (5% of monthly samples positive)	0	0	NO	Naturally present in the environment

Monitoring and Reporting Requirements: The State and EPA require us to test our water on a regular basis to ensure its safety. We met all the monitoring and reporting requirements for 2015.

CHLORINE (MRDL,MRDLG)-

Some people who drink water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing Chlorine well in excess of the MRDL could experience stomach discomfort.

LEAD

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 L.C.W.A 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 <http://www.epa.gov/safewater/lead>.

We will update this report annually and will keep you informed of any problems that may occur throughout the year, as they happen.

For more information about your water, or the contents of this report, contact: Green Oak Township@ (810)231-1333 For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/.