LITTLE HOCKING WATER ASSOCIATION, INC.

2021 Water Quality Report

Volume 24, Issue 1 June 2022

Little Hocking Water is the largest rural water system in Washington County

- We serve a population of about 12,000 people
- Over 250 miles of water lines
- 8 booster pump stations
- 8 water tanks with a total capacity of about two million gallons
- 4 water wells with an average production of 750,460 gallons per day in 2021.
- One Class II, Three Class I OEPA licensed operators and One Distribution I license.

Water Facts

LHWA water hardness is about 385 mg/l (as $CaCO_3$) or 22.5 grains (very hard).

The treatment that we provide to the water is granular activated carbon filtration (as of November 2, 2007) plus the addition of chlorine and fluoride.

Inside this issue:

Water Quality Meets OEPA Standards

The Little Hocking Water Association has prepared the following report to provide information to you, the consumer, on the quality of our drinking water. This report is a summary of the quality of water provided in 2021. In the future, similar reports will be issued annually, as required by the Safe Drinking Water Act Reauthorization of 1996. This report includes general health information, water quality test results, water system contacts and information on how to participate in decisions concerning your drinking water. As indicated in this report, the Little Hocking Water Association meets the water quality standards of the Ohio Environmental Protection Agency (OEPA).* We have a current, unconditioned license to operate our water system.

* The Ohio EPA has established an unenforceable Action Level of 70 parts per trillion (ppt) for PFOA (also called C8) and PFOS, either individually or combined. The current Ohio Action Level mirrors a US EPA unenforceable Health Advisory. Similarly, Ohio EPA has also established an unenforceable Action Level of 21 ppt for GenX (also called HFPO-DA). There are currently no enforceable drinking water standards for any perfluorinated compounds (also collectively called PFAS) in Ohio. Although the US EPA has required treatment of Little Hocking source water because the PFOA level exceeds USEPA's unenforceable advisory level, there is still no established "safe" level for PFOA in drinking water. The Little Hocking Water Association continues to maintain that there should be no detectable level of PFOA and related compounds in its water.

Public Participation Information

Public participation and comment are encouraged at regular meetings of the Little Hocking Water Association which meets at the Association office on the second Monday of each month at 7:00 PM. The Association office is located in Little Hocking across from the U.S. Post Office.

If you have any questions regarding this report, or any other matter regarding our drinking water, you may contact John Smith, General Manager at (740) 989-2181.

Future Water Rates

In order for our water system to stay financially healthy, water rate increases, like cost increases for everything else, are inevitable. Currently, a rate study is being performed by the Rural Community Assistance Partnership (RCAP). Until that study is completed, rates shall remain as follows:

Rate Block	Existing	New	Change
0 to 2,000 gals.	$27.02/2,000 gals.	$27.02/2,000 gals.	$0.00/1,000 gals.
2,001 to 8,000 gals.	$8.74/1,000 gals.	$8.741,000 gals.	$0.00/1,000 gals.
8,001 to 20,000 gals.	$7.19/1,000 gals.	$7.19/1,000 gals.	$0.00/1,000 gals.
OVER 20,000 gals.	$6.04/1,000 gals.	$6.04/1,000 gals.	$0.00/1,000 gals.

Drinking Water Source is Wells

The Little Hocking Water Association's water source is groundwater obtained from four water wells located in the Porterfield area. The source of water for the wells is the Ohio River Valley Aquifer. This aquifer, which supplies drinking water to the Little Hocking Water Association, has a high susceptibility to contamination as determined by Ohio EPA because of the following reasons:

- The depth to water in the buried valley aquifer is less than 30 feet below the ground surface;
- Less than 25 feet of sand gravel and clay exists between the ground surface and the aquifer, providing minimal protection from contaminants infiltrating from the ground surface to the aquifer; and
- Potential significant contaminant sources exist within the protection area.

A copy of the Source Water Assessment Report prepared by Ohio EPA in 2003 is available on the Little Hocking Water website.

This does not mean that this wellfield will become contaminated, only that conditions are such that the groundwater could be impacted by potential contaminant sources. Future contamination may be avoided by implementing protective measures. More information is available by calling 740-989-2181.

We have mutual aid agreements with the Tupper's Plains-Chester Water District, the City of Belpre, and the Warren Water Association. The only actual pipe interconnection is with the Warren Water Association, which has limited capacity to assist us. In 2021, we did not pump water from any other water source other than our own water wells.

Danger From Wells, Cisterns, Springs and Ponds !!!

It is mandated by the Ohio Environmental Protection Agency (Ohio EPA) that residential auxiliary water supplies such as private wells, cisterns, springs, and ponds must **not** be connected in any way to our water system, because some are not safe. Therefore, they represent a danger to the public health.

All private sources of water must be completely disconnected and physically separated from our water system. (A valve separating the systems is not acceptable.) All of our customers have signed a Water User's Agreement by which they agree "that no other present or future source of water will be connected to any water lines served by the Association's water lines…". **Violations of this Agreement endanger the public health and can result in the loss of water service.**

Sources of Water Contamination

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.

Contaminants that may be present in source water include: (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife; (B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; (D) 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 storm water runoff, and septic systems; (E) Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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. FDA 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 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 Environmental Protection Agency's **Safe Drinking Water Hotline (1-800-426-4791).**

Drinking Water Sampling

The EPA requires sampling to ensure drinking water safety. The Little Hocking Water Association collected numerous samples for bacteria, fluoride, chlorine, nitrate, disinfection by-products, and inorganics during 2021. Samples were collected for a total of 16 different contaminants most of which were not detected in the LHWA water supply. The Ohio EPA requires 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 accurate, may be more than one year old. Listed below is information on regulated and unregulated contaminants that were detected in the Little Hocking Water Association drinking water.

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Inorganic Contaminants							
Nitrate (ppm)	10	10	0.767 - 0.77	NA	NO	2021	Runoff from fertilizer use; Leaching from septic tanks, Sewage; Erosion of natural deposits
Barium (ppm)	2	2	0.0705	NA	NO	2019	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4	4	1.04	0.97 - 1.09	NO	2021	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Residual Disinfectants							
Total Chlorine (ppm)	MRDLG 4	MRDL 4	1.39	1.14 - 1.62	NO	2021	Water additive used to control microbes

Lead and Copper							
Contaminants	**Action Level (AL)**	**Individual Results over the AL**	**90% of test levels were less than**	**Range of Detections**	**Violation**	**Year Sampled**	**Typical source of Contaminants**
Lead (ppb)	15	165 ppb	4.9	0 - 223	NO	2021	Corrosion of household plumbing systems; Erosion of natural deposits
	One out of 30 samples was found to have a lead level of 223, which is in excess of the lead action level of 15 ppb.						
Copper (ppm)	1.3	NA	0.165	0.04 - 0.462	NO	2021	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
	None of the 30 samples were found to have copper levels in excess of the copper action level of 1.3 ppm.						

Unregulated Contaminants			
Name	**Average**	**Year Sampled**	**Range**
Bromodichloromethane (ppb)	1.0	2021	0.8 - 1.2 (Distribution System)
Bromoform (ppb)	0.35	2021	0.3 - 0.4 (Distribution System)
Dibromochloromethane (ppb)	1.0	2021	0.8 - 1.2 (Distribution System)
Chloroform (ppb)	0.70	2021	0.4 - 1.2 (Distribution System)
Total Trihalomethanes (TTHM) (ppb)	2.45	2021	1.6 - 3.3 (Distribution System)

Definition of Terms

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 contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Parts per Million (**ppm**) or Milligrams per Liter (**mg/L**) are units of measure for concentration of a contaminant. A part per million corresponds to one second in a little over 11.5 days.

Parts per Billion (**ppb**) or Micrograms per Liter (**µg/L**) are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.

Parts per Trillion (**ppt**) or Nanograms per Liter (**ng/L**) are units of measure of concentration of a contaminant. A part per trillion corresponds to one second in 31,700 years.

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

The '<' symbol: A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.

Maximum Residual Disinfectant Level (**MRDL**): The highest residual disinfectant level allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contamination.

Maximum Residual Disinfectant Level Goal (**MRDLG**): The level of residual disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Per-and polyfluoroalkyl substances (**PFAS**) are a group of man-made chemicals applied to many industrial, commercial and consumer products to make them waterproof, stain resistant, or nonstick. PFAS are also used in products like cosmetics, fast food packaging, and a type of firefighting foam called aqueous film forming foam (AFFF), which are mainly used on large spills of flammable liquids, such as jet fuel. PFAS are classified as contaminants of emerging concern, meaning that research into the harm they may cause to human health is still ongoing.

Potential Danger From Hot Water Heaters Due To Thermal Expansion

Water is a non-compressible fluid that expands when it is heated. This phenomenon is called **thermal expansion**. If heated water does not have any place into which to expand, it builds up pressure in the plumbing. In some cases in a "closed system" this pressure may cause the pressure relief valve on the hot water tank to "pop-off" or seep. **If the pressure relief valve on the hot water tank is not operating properly, the hot water heater could be damaged or even explode, due to thermal expansion.**

"Closed systems" can be caused by closed valves, single check valves, pressure reducing valves, dual check valves, and backflow prevention devices. As part of our backflow prevention program, mandated by the Ohio EPA, Little Hocking Water has been installing metersetters with dual check valves in residential meter pits for the past several years. Many of our customers have "closed systems" of some type. Therefore, the installation of a thermal expansion tank or other suitable pressure-relieving device is recommended within your plumbing system. **We recommend that you contact a reputable plumber or plumbing supplier to recommend a device that will meet your specific needs.**

Immuno-Compromised Persons

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 infection. 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 (1-800-426-4791).**

Simple Backflow Prevention Measures for Homes

Never submerge hoses in buckets, pools, tubs or sinks.

Never use spray attachments without a backflow prevention device.

Do buy and install inexpensive backflow prevention devices on all threaded faucets in your home. They are available at hardware and home improvement stores.

Backflow Prevention

What is Water Backflow?

Backflow is the flow of water from a house (or building) plumbing system back into the public water system. This reversal of flow can be caused by a drop in water pressure in the public system (such as a water main break or hydrant usage) or an increase of pressure from within a building. Water pressure drops are not uncommon.

What Dangers May Arise from Backflow?

This backflow of water may carry some contaminants from cross connections with your home (or a building) back into the public water system. Some harmful substances such a weed killers, fertilizers for grass and flowers, as well as the bacteria in your wading pool can flow backward to the water distribution lines where that can be carried to other water users.

What is Cross Connection?

A connection between drinking water pipes and any source of potential contamination is a cross connection. Common household cross connections are garden hoses left in chemicals, a pool, or even a puddle. Attachments to hoses such as in a sink or bathtub as well as those used to apply lawn chemicals are also cross connections. If a pressure drop occurs, either in the house (due to water use) or in the distribution line (due to water line breaks, hydrant flushing or fires), the contaminants move into the water lines.

What is a Backflow Preventer?

Backflow preventers protect the safety of the publics water system and all users by physically preventing the backflow of water and any potential contaminants from the plumbing system in a home or building into the public water system. The devices are installed on plumbing after the water meter.

Who Needs a Backflow Prevention Device?

Backflow preventers are required by the Ohio EPA (Ohio Administrative Code 3745-95) and the Ohio Plumbing Code (Chapter 608) to be installed where there is a potential health or contamination threat within the consumer's plumbing system. Most commercial buildings and homes with an in-ground irrigation system require a backflow prevention device. Most of these types of backflow prevention devices must be tested annually by a State certified backflow tester.

Lead Information

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 Little Hocking Water Association 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. A list of laboratories certified in the State of Ohio to test for lead may be found at https://epa.ohio.gov/pic/lead or by calling 614-644-2752. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 800-426-4791 or http://www.epa.gov/safewater/lead.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may with to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children should show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Why is My Water Suddenly Discolored?

Common Causes of Discolored Water

Minerals, sediment and rust accumulate in water mains over time. When your water is suddenly discolored, it means some type of disturbance has stirred up these deposits. The presence of unwanted particles is triggered by a change in water pressure that causes the water to flow faster or reverse directions. The most common sources of discolored water at the tap are from damaged or recently-replace water pipes, build up of sediment or iron in a hot water tank and/or reversal of flow in water pipes caused by a water main break, routine hydrant flushing by the water department, or use of a large amount of water quickly, such as in a fire.

Is This Water Harmful or Poisonous?

The simple answer is no. Likely the brown color in the water is from too much iron. Iron is a common, naturally-occurring metal in soil and in your drinking water. Just because it is not poisonous, we do not recommend that you drink it. Similarly, it is not recommended that the discolored water be used for laundry because the water can cause staining in fabrics that is not easily removed.

What Should I Do If My Water is Discolored or Brown?

Usually the water will clear up on its own in a few hours. Try running the cold water tap for about 20 minutes and see if the water clears. **If not, please call the office of Little Hocking Water Association and report it so we can check on the issue if we are not already aware of it.** Frequently, we can assist in clearing the brown water from the distribution system by flushing a fire hydrant in the area.

If you talk with your neighbors, and you are the only one experiencing discolored water, it may be a problem in your lines or hot water heater in the house. If the problem is in your hot water only, then you could need to flush or replace your hot water tank. Scale and rust in hot water tanks can sink to the bottom and cause discolored water or indicate that your tank is rusting through and needs replaced.

PFOA (C8) and GenX Contamination Of Wells

PFOA

The Little Hocking Water Association is aware that there are PFOA and related chemicals in our wellfield and there is a history of PFOA in the blood of many of our customers. The granular activated carbon (GAC) plant, which filters Little Hocking water, operated throughout 2021 with the purpose of filtering water from our wellfield so the PFOA in the water is ***below reporting limits*** as it enters our distribution system. Chemours (formerly DuPont) has the water analyzed at a laboratory using USEPA-approved Method 537.1 for PFOA in drinking water. Chemours asks the laboratory to report concentrations of PFOA that are 10 parts per trillion (ppt) or higher (called a reporting limit). Little Hocking is now aware that the standard reporting limit under Method 537.1 used by Chemours is 2 ppt. Little Hocking will again seek future reporting at the 2 ppt reporting limit.

In the 2017 report, we informed you that the US EPA, once again, lowered its health advisory level for PFOA. The current level is 70 parts per trillion (ppt). The health advisory level is not a final standard or regulation. In February 2021, the US EPA filed notice to look into adopting a standard for PFOA, although there still is no proposed or final regulatory level [maximum contaminant level (MCL)] for PFOA. Ohio has adopted an Action Level (also non-enforceable) of 70 ppt. In the interim, several states have adopted enforceable regulatory MCLs for PFOA—and all are less than the US EPA health advisory level. The 70 ppt number is less protective than the MCLs set by Michigan (8 ppt), New York (10 ppt), New Hampshire (12 ppt) and New Jersey (14 ppt). In addition, Massachusetts has adopted a MCL for the sum of 6 perfluorinated compounds (including PFOA) of 20 ppt and Vermont has adopted a MCL of 20 ppt for the sum of 5 perfluorinated compounds (including PFOA).

GenX

In 2018, Little Hocking also learned that an additional chemical (known as GenX) from the DuPont/ Chemours Washington Works plant has already reached Little Hocking's wellfield. Chemours uses GenX as a replacement for PFOA. In March 2018, we advised users of the detection of GenX in the wellfield and explained what Little Hocking had been able to learn about the health risks that GenX may present. During 2021, testing continued to detect GenX in Little Hocking's wellfield. The GAC plant filtered water from our wellfield so the GenX in the water is ***below Chemours' reporting limits of 10 ppt*** as it enters our distribution system, but the wellfield levels of GenX have increased over ten-fold since its initial detection in the wellfield. The US EPA has not yet adopted a health action level for GenX. However, in early 2022, Ohio adopted a new lower Action Level for GenX at 21 ppt. Although not enforceable, this lower Action Level was based on new toxicological data for GenX that became publicly available in October 2021.

Our Promise

Since many of our water users historically have high levels of C8 in their blood and the chemical remains in the blood for a long time, Little Hocking's position remains there should be ***no detectable level*** of PFOA and related compounds, including GenX, in its water after GAC filtration. Little Hocking will continue to do all it can to prevent any detectable contamination from entering the finished water and will continue to report developments related to these chemicals.

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