

2020 Water Quality Report

Volume 23, Issue 1

June 2021

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
- 7 booster pump stations
- 8 water tanks with a total capacity of about two million gallons
- 4 water wells with an average production of 794,000 gallons per day in 2020.
- Two Class II & Five Class I OEPA licensed operators.

Water Facts

LHWA water hardness is about 385 mg/l (as CaCO₃) 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:

Drinking Water Source	2
Danger from Wells,	2
Contamination Sources	2
Lead Information	2
Water Sampling Results	3
Definition of Terms	3
Hot Water Heater	4
Immuno-compromised Persons	4
Backflow Prevention	4
PFOA (C8) and GenX Contamination	5

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 2020. 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 not established any drinking water standard for PFOA (also called C8). Although the US EPA has required treatment of Little Hocking source water because the PFOA level exceeds 400 parts per trillion, there is still no established “safe” level for PFOA in drinking water. The US EPA does have an unenforceable Health Advisory of 70 parts per trillion for PFOA and PFOS, either individually or combined. 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 6:00 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. However, due to the Coronavirus impact on the economy, we have elected not to increase our rates at this time. Rates shall remain as follows:

Rate Block	Existing	New	Change
0 to 2,000 gals.	\$23.50/2,000 gals.	\$23.50/2,000 gals.	\$0.00/1,000 gals.
2,001 to 8,000 gals.	\$7.60/1,000 gals.	\$7.60/1,000 gals.	\$0.00/1,000 gals.
8,001 to 20,000 gals.	\$6.25/1,000 gals.	\$6.25/1,000 gals.	\$0.00/1,000 gals.
OVER 20,000 gals.	\$5.25/1,000 gals.	\$5.25/1,000 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.

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 or Ohio EPA at 614-644-2752.

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 2020, 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)**.

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>.

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 2020. 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	0.819	NA	NO	2020	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	1.10	0.8 - 1.35	NO	2020	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum

Residual Disinfectants

Total Chlorine (ppm)	MRDLG 4	MRDL 4	1.30	1.08 - 1.50	NO	2020	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	6.5	0 - 165	NO	2020	Corrosion of household plumbing systems
	One out of 30 samples was found to have lead levels in excess of the lead action level of 15 ppb.						
Copper (ppm)	1.3	NA	0.188	0.63 - 0.991	NO	2020	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)	0.80	2020	0.7—0.9 (Distribution System)
Dibromochloromethane (ppb)	0.80	2020	0.7—0.9 (Distribution System)
Chloroform (ppb)	0.50	2020	NA

We were informed by the Ohio EPA that a significant deficiency of only having one (instead of two) diaphragm-operated anti-siphon devices on the fluorosilicic acid feed system had been identified on December 29, 2020. Similarly, we were informed by the Ohio EPA on December 29, 2020 that there was a violation of three small elements in our Contingency Plan, including: procedures for authorizing emergency expenditures, documentation of practice exercises, and procedures for providing at least one gallon of water per person per day within 24 hours in the event of a service disruption. We installed a second anti-siphon device and provided the requested documentation for the Contingency Plan to the Ohio EPA on March 10, 2021. On May 7, 2021, Ohio EPA concurred the significant deficiency and the violation had been resolved.

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.

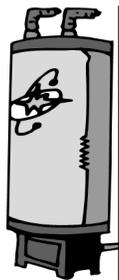
Maximum Residual Disinfectant Level (MRDL): The highest residual disinfectant level allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contamination.

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 as 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 public 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.

PFOA (C8) and GenX Contamination Of Wells

PFOA

The Little Hocking Water Association is aware that there is 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 2020 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. Reporting limits are the levels below which PFOA cannot be measured and reported under the methods used by DuPont/Chemours (now being carried out by Chemours).

It should be noted that Chemours is reporting PFOA results at 10 parts-per-trillion (ppt). Little Hocking is now aware that the standard reporting limit under the method used by Chemours is 2 ppt. Little Hocking will seek future reporting at the 2 ppt reporting limit.

In 2020, the Ohio EPA also sampled the finished (treated) water at the Little Hocking Water Association as part of a sampling effort of 1,542 public water supplies to see if PFAS (per- and polyfluoroalkyl substances) were present in drinking water. The water was sampled for six individual PFAS, including PFOA, PFOS, GenX, PFBS, PFHxS, and PFNA. PFAS were not detected above the reporting limits in samples collected from the finished drinking water in our system. To view the results for the Little Hocking Water Association as well as the other water systems, go to <https://epa.ohio.gov/pfas> and click on the PFAS Action Plan Interactive Dashboard and Map. You can see the results by clicking on the Test Results tab.

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. Although, in February 2021, the US EPA filed notice to look into adopting a standard for PFOA, there still is no final regulatory level [maximum contaminant level (MCL)] for PFOA. 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 2020, 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*** as it enters our distribution system. However, the wellfield levels of GenX have increased ten-fold since its initial detection in the wellfield.

Our Promise

Since many of our water users have historically high levels of C8 in their blood and the chemical remains in the blood for a long time, Little Hocking’s policy 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 candidly report on developments related to these chemicals.

	LITTLE HOCKING WATER ASSOCIATION, INC.	
	3998 Newbury Road P.O. Box 188 Little Hocking, OH 45742 Phone: 740-989-2181 (24 hours) Fax: 740-989-5543 Website: www.littlehockingwater.org	