



# 2021 Water Quality Report

## North Water Treatment Plant

510 North Water Street

Henderson, KY 42420

PWSID: KY0510188

General Manager: Tom Williams

Director of Operations: Kevin Roberts

Treatment Manager: Josh Thompson

Chief Operator: Jim Harper

### Water Board Commissioners

R. Paul Bird, JR, Chairman

George Jones, Secretary-Treasurer

Gary L. Jennings, DMD |

John Henderson | Julie Wischer

### Your Right To Know

If you have any questions regarding this report or your water utility, please contact Josh Thompson or our Water Quality Specialist at 270.826.2421. We want you to be informed about your water utility.

You can also access our website at [www.hkywater.org](http://www.hkywater.org). You are also invited to attend any of our regular Water & Sewer Commission Board Meetings, which are open to the public, scheduled the third Monday of each month at 4:30 PM at the HWU Administration Building, 111 Fifth Street.

Henderson Water Utility strives to provide economical, dependable, and safe potable water, wastewater, and stormwater services to our customers through well maintained facilities, infrastructure, and a professional trained work force.

In order to do so, Henderson Water Utility operates the North Drinking Water Treatment Plant located in Henderson, KY. Beginning operation in 1961, it is capable of producing 12.0 million gallons per day of treated

water. Built to supply water to the City of Henderson the NWTP also supplies water to Henderson County Water District, 24 hours a day, 365 days a year.

HWU North Drinking Water Treatment Plant strives to not only meet all state and federal regulations but to far exceed them. This plant is a member of the American Water Works Association's Partnership for Safe Water. It also participates in and has received awards from the Kentucky Division of Water's Area Wide Optimization Program (AWOP).

The operators and administrators of Henderson Water Utility take the responsibility of providing safe, clean water very seriously and also take great pride in what we deliver every day.



Data in this report reflects testing conducted during

January 1st, 2020—December 31st, 2020

Additional copies of this report are available upon request.

For 24/7 live customer service, call **270.826.2421**

# Where Does Our Water Come From?

The area around your water source is mostly residential but also contains some industrial activity. The final source water assessment for this system has been completed and is contained in the Henderson County Water Supply Plan. The plan is available for inspection at HWU, or the GRADD office in Owensboro, KY.

An analysis of the susceptibility of Henderson's Ohio River water supply to contamination indicates that this susceptibility is generally moderate.



However, there are areas of high concern. Potential sources of concern include bridges, waste generators, transporters, landfills, railroad, row crop land, urban and recreational grass coverage, and sewer lines. Each of these are rated as high in susceptibility because of the contaminant type, proximity to the intakes, and chance of release. Our surface water source comes from the Ohio River at river mile marker 803. Surface water is classified as rivers, lakes, streams, ponds, and reservoirs.

---

## Water Sources

The sources of drinking water, both tap and bottled water, include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Our water source is the Ohio River. 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.

## Potential Contaminants

**Contaminants 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, and wildlife.

**Inorganic Contaminants** such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

**Pesticides & 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 can also come from gas stations, urban stormwater runoff, and septic systems.

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

To make sure 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 also establish limits for contaminants in bottled water that must provide the same protection for public health.

---

## Important Health Information

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).

## Water Words and Definitions

**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.

**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 Residual Disinfectant Level (MRDL)** - 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.

**Maximum Residual Disinfectant Level Goal (MRDLG)** - 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.

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

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

**Variations & Exemptions (V&E)** - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

**Nephelometric Turbidity Unit (NTU)** - a measure of the clarity of water. Turbidity has no health effects. However, turbidity can provide a medium for microbial growth. Turbidity is monitored because it is a good indicator of the effectiveness of the filtration system.

**Below Detection Levels (BDL)** - laboratory analysis indicates that the contaminant is not present.

**Parts per million (ppm)** - or milligrams per liter, (mg/l). One part per million corresponds to 1 minute in 2 years, or 1 penny in \$10,000.

**Parts per billion (ppb)** - or micrograms per liter, (µg/L). One part per billion corresponds to 1 minute in 2,000 years, or 1 penny in \$10,000,000.

**Parts per trillion (ppt)** - One part per trillion corresponds to 1 minute in 2,000,000 years, or 1 penny in \$10,000,000,000.

**Parts per quadrillion (ppq)** - 1 part per quadrillion corresponds to 1 minute in 2,000,000,000 years, or 1 penny in \$10,000,000,000,000.

**Picocuries per liter (pCi/L)** - a measure of the radioactivity in water.

**Not Applicable (N/A)** - does not apply.

---

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

## A Word About Lead

A common material used in plumbing until the 1980s, lead is also a powerful toxin that is harmful to human health. Pregnant women, infants, and young children are particularly vulnerable because even low levels of lead in the blood of children can result in behavior and learning problems, lower IQ and hyperactivity, slowed growth, hearing problems, and anemia.

We take our responsibility to protect your health very seriously and want you to make informed decisions about your drinking water. Lead is not present in the water when it leaves our community's treatment facility or in the water mains that run below the streets. However, lead can be present in old service lines connecting homes to the water system or in home plumbing.

We take steps at the treatment plant to reduce the potential of lead dissolving into the water and ending up at the tap. But as long as lead is in contact with water in the service line or home, some risk remains. We test high risk homes in the community to evaluate if lead may be dissolving into the water. The results of our testing are provided in this report.

According to blueprints and records available to us, all lead service lines have been eliminated. However, there have been instances when we have discovered service lines that were not documented. If you believe your home is at risk, we encourage you to have your water tested by a certified laboratory, particularly if there are children under 6 or pregnant women in the household. More information on water testing is available on our website at

[www.hkywater.org/i-didnt-know-that/lead-and-copper-in-your-drinking-water](http://www.hkywater.org/i-didnt-know-that/lead-and-copper-in-your-drinking-water).

You can also call one of our Water Quality Specialists at **270.826.2421**.

If your water does contain lead, there are immediate steps you can take to minimize your family's exposure. That information is also available online, or through contacting us directly at **270.826.2421**.

While Henderson Water Utility meets all federal regulations for lead, levels can vary among neighborhoods or even from house to house, depending upon the materials used in plumbing system construction. We strongly encourage you to visit the EPA's website ([www.epa.gov/lead](http://www.epa.gov/lead)) and learn more about what you can do to protect your family. Together, let's get the lead out.

---

## Do You Have Lead Pipes In Your Home?

We encourage customers with lead service lines or lead in home plumbing to consider replacing these potential sources of exposure.

*"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. Henderson Water Utility 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](http://www.epa.gov/safewater/lead)."*

The data presented in this report are from the most recent testing done in accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by the EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data in this table, though representative, may be more than one year old. Unless otherwise noted, the report level is the highest level detected. **Copies of this report are available upon request by contacting our office during business hours.**

Regulated Contaminant Test Results							
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
<b>Inorganic Contaminants</b>							
Barium [1010] (ppm)	2	2	0.029	0.029 to 0.029	Feb-20	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.68	0.68 to 0.68	Feb-20	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	1.24	1.24 to 1.24	Feb-20	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
<b>Disinfectants/Disinfection Byproducts &amp; Precursors</b>							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT * (Treatment Technique)	N/A	1.76 (lowest average)	1.16 to 2.67 (monthly ratios)	2020	No	Naturally present in environment
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average of the monthly ratios must be 1.00 or greater for compliance.							
Chlorine (ppm)	MRDL = 4	MRDG = 4	1.67 (highest avg)	0.85 to 2.40	2020	No	Water additive used to control microbes
Chlorite (ppm)	1	0.8	0.60 (average)	0.05 to 0.65	2020	No	By-product of drinking water disinfection
Chlorine Dioxide (ppb)	MRDL = 800	MRDG = 800	130	0 to 130	2020	No	Water additive used to control microbes
STAGE II HAA (ppb) (Stage II) [Haloacetic acids]	60	N/A	25 (high site)	14 to 37 (range of individual sites)	2020	No	By-product of drinking water disinfection
STAGE II TTHM (ppb) (Stage II) [total trihalomethanes]	80	N/A	40 (high site)	19 to 51 (range of individual sites)	2020	No	By-product of drinking water disinfection

Regulated Contaminant Test Results Continued					
Other Constituents					
Turbidity (NTU) TT *Representative samples of filtered water	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Contamination
Turbidity is a measure of the clarity of the water and not a contaminant.	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.053	100%	No	Soil Runoff

### Unregulated Contaminants

Your drinking water has been sampled for a series of unregulated contaminants. Unregulated contaminants are those that the EPA has not established drinking water standards. There are no MCL's and therefore no violations if found. The purpose of monitoring for these contaminants is to help the EPA determine where the contaminants occur and whether they should have a standard. As our customers, you have the right to know that this data is available. If you are interested in examining the results, please contact our office during normal business hours.

Unregulated Contaminants (UCMR 4)	Average	Range of Detection	Date of Sample
HAA5 (ppb)	25.375	15 to 36	Dec-20
HAA6Br (ppb)	11.675	7.2 to 16	Dec-20
HAA9 (ppb)	35.5	27 to 44	Dec-20

We constantly monitor the water supply for various contaminants.

Some people may be more vulnerable to contaminants in drinking water than the general population.

Immunocompromised persons such as persons with cancer undergoing chemo-therapy, 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 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).

Cryptosporidium can be present wherever warm-bodies are and can contaminate a water supply that people are exposed to. As summer pool season is upon us, ensure proper hygiene with yourself, kids, and especially diapers.

**Henderson Water Utility levels are below detectable limits on all Cryptosporidium testing.**



## When it Rains it Drains

### What is Stormwater?

Stormwater runoff occurs when precipitation from rain or melting snow flows over the ground. Impervious surfaces like driveways, sidewalks, streets, and rooftops prevent stormwater from naturally soaking into the ground. To manage this, communities have storm sewers that help to carry stormwater away from homes and businesses.

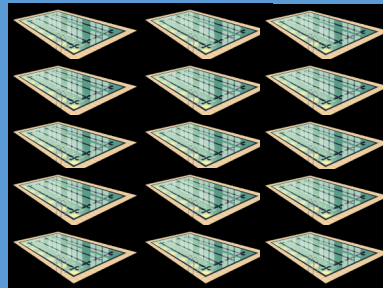
### Did you Know?

When it rains, the stormwater runoff is carried away by pipes and ditches of our storm sewers. These pipes and ditches are different than our regular sewers because the water goes directly into our streams, rivers, and lakes. Unlike sewage, stormwater runoff does not drain to a treatment plant.

As it flows, stormwater picks up debris, chemicals, dirt, and other pollution and carries it into our waterways where it can harm fish, frogs, and other aquatic plants and animals. This is the same water that we use for swimming, fishing, and drinking.

### New Importance

Communities like Henderson are facing new federal regulations to reduce pollution. These regulations focus on improving the quality of our streams by reducing the amount of pollution carried by stormwater runoff into our waterways.



Henderson Water Utility treats approximately 10 Million gallons of Drinking Water per day. That is enough to fill 15 Olympic size swimming pools.

Henderson Water Utility maintains 220 miles of Drinking Water Distribution lines, 203 miles of Wastewater Collection lines, and 56 miles of Stormwater Collection lines.



Henderson Water Utility personnel work around the clock to ensure that water services to your homes and businesses are safe and reliable.

Henderson Water Utility is proud to be of service to our community. Our employees work diligently to provide these vital services to our community, businesses, and families. For any further information, or to schedule a tour of one of our facilities, please contact us at

270.826.2824.