

Producing more than 3 Billion gallons of drinking water a year, with more than 200 miles of water line, Henderson Water Utility is at your service!



## 2016 Consumer Confidence Report

DRINKING WATER QUALITY REPORT FOR  
2016

REPORTING DATA COLLECTED IN 2015  
NORTH WATER TREATMENT PLANT

PWSID: KY0510188



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**JULY 2016**



This report is designed to inform the public about the quality of water and services provided on a daily basis. Our commitment is to provide our customers with a safe, clean, and reliable supply of drinking water. We want to assure that we will continue to monitor, improve, and protect the water system and deliver a high quality product. Water is the most indispensable product in every home and we ask everyone to be conservative and help us in our efforts to protect the water source and the water system.

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.

### CRYPTOSPORIDIUM

We constantly monitor the water supply for various contaminants. It is important for you to know that Cryptosporidium may cause serious illness in 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. These people should seek advice from their healthcare providers. We are required to monitor the source of your drinking water for Cryptosporidium in order to determine whether treatment at the water treatment plant is sufficient to adequately remove Cryptosporidium from your drinking water. Henderson Water Utility levels are below detectable limits on all Cryptosporidium testing.

**YOUR RIGHT TO KNOW:** If you have any questions regarding this report or your water utility, please contact Kevin Roberts (270-869-6616) or Ashley Cooper (270-869-6591). 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 regularly scheduled Water & Sewer Commission Board Meetings scheduled the third Monday of each month at 4:30 PM at the Bobby Gish Administration Building, 111 5th Street.

### Did You Know?...

- A hot water faucet that leaks 60 drops per minute can waste 192 gallons of water and 48 kilowatt hours of electricity per month?
- Drinking 5 glasses of water a day decreases the risk of colon cancer by 45%, the risk of breast cancer by 79%, and bladder cancer by 50%?
- There are many people in the world who walk at least 3 hours for water.
- It takes 7.5 years for the average American household to use the same amount of water that flows over Niagara Falls in one second (750,000 gallons)
- In a 100-year period, a water molecule spends 98 years in the ocean, 20 months as ice, about 2 weeks in lakes and rivers, and less than a week in the atmosphere.

*Henderson Water Utility works around the clock to provide the best quality water to every tap. We ask that all of our customers help us protect our water sources—they are the heart of our community, our way of life, and our children's future.*

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 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.

	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Contamination
Turbidity (NTU) TT *Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.07	100	No	Soil Runoff

#### Regulated Contaminant Results

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
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#### Radioactive Contaminants

Combined Radium (pCi/L)	5	0	1.4	1.40 to 1.40	Aug-14	No	Erosion of natural deposits
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#### Inorganic Contaminants

Asbestos (MFL)	7	7	0.10	0.102 to 0.102	Jun-11	No	Decay of asbestos cement water mains; erosion of natural deposits
Barium [1010] (ppm)	2	2	0.067	0.067 to 0.067	Oct-15	No	Drilling wastes; metal refineries; erosion of natural deposits
Di (2-ethylhexyl) phthalate [2039] ppb	6	0	0.950	0 to 3.8	Aug-15	No	Discharge from rubber and chemical factories
Copper [1022] (ppm) Sites exceeding action level : 0	AL = 1.3	1.3	0 (90 <sup>th</sup> percentile)	0 to 0.21	Jul-15	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	.89	0.89 to 0.89	Oct-15	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level = 0	AL = 15	0	0 (90 <sup>th</sup> percentile)	0 to 13	Jul-15	No	Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	2.300	1.28 to 2.300	Mar-15	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

#### Disinfectants/Disinfection Byproducts and Precursors

Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.47 (lowest average)	1.06 to 2.08 (monthly ratios)	N/A	No	Naturally present in environment
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\*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	MRDLG = 4	1.63 (highest avg)	0.2 to 2.5	N/A	No	Water additive used to control microbes
Chlorite (ppm)	1	0.8	0.23 (average)	0 to 0.31	Dec-15	No	Byproduct of drinking water disinfection
Chlorine Dioxide (ppb)	MRDL = 800	MRDLG = 800	130	0 to 130	Jan-15	No	Water additive used to control microbes
HAA (ppb) [Haloacetic Acids]	60	N/A	37 (highest location average)	15 to 84	N/A	No	Byproduct of drinking water disinfection
TTHM (ppb) [Total Trihalomethanes]	80	N/A	37 (highest location average)	14 to 76	N/A	No	Byproduct of drinking water disinfection

## Other Contaminants

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Cryptosporidium [oocysts/L]	0	TT (99% Removal)	0 (positive samples)	12 (# of Samples)	N/A	No	Human and animal fecal waste

## AVAILABILITY OF MONITORING DATA FOR UNREGULATED CONTAMINANTS

Our water system has sampled for a series of unregulated contaminants. These contaminants do not yet have a drinking water standard set by USEPA. The purpose of monitoring for these contaminants is to help EPA decide whether they should have a standard. As our customers, you have a right to know that this data is available upon request.

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

## STORMWATER: WHEN IT RAINS IT DRAINS

**Stormwater** runoff occurs when precipitation 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.

When it rains, the stormwater runoff is carried away by pipes and ditches or 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 life. This is the same water we use for swimming, fishing, and drinking.

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

### What Can You Do?

1. Don't dump anything down storm drains
2. Use pesticides and fertilizers sparingly
3. Collect yard waste & keep it out of storm drains/street

4. Keep dumpster doors closed, covered, and clean
5. Sweep driveways (do not spray wash)
6. Put litter in its place
7. Use a car wash (they recycle dirty water)
8. Recycle used motor oil
9. Check and repair fluid leaks in vehicles
10. Inspect your septic tank every 3—5 years
11. Promote recycling
12. Pick up after your pet
13. Dispose of hazardous materials properly
14. Cover or seed exposed soil to prevent erosion
15. Store and apply manure away from waterways

Taking an interest in keeping our waterways safe and unpolluted will go a long way towards sustaining them for the future of our children in this community.

Report any pollution that you see because **YOU** are the solution to pollution!

**To find out more about stormwater, visit the internet site below:**

[www.epa.gov/npdes/npdes-stormwater-program](http://www.epa.gov/npdes/npdes-stormwater-program)

## TYPE & LOCATION OF YOUR WATER SOURCE



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. 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, 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 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 & gas production and mining activities.

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 that must provide the same protection for public health.



## WATER WORDS & 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. *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.*

**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, ( $\mu\text{g/L}$ ). 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.

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).

## INFORMATION ABOUT LEAD



Elevated levels of lead in the water 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.

Your local public water system 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>.



## HARMFUL ALGAL BLOOMS (HABs)

Harmful Algal Blooms (HABs) are algae that have the potential to release toxins when under stress, which is a lot like us! Last summer was the first year that Henderson has dealt with a harmful algal bloom on the river and the potential of resulting toxins getting into our water supply. While more is being learned about how HABs behave and what are the best methods of treatment, there is still very little that is certain regarding either of these. Simply put, HABs are unpredictable and inconsistent in how they form, what causes them to release toxins and how they are effectively treated.

The impact that HABs had on Henderson was very slight compared to municipalities and recreational waters upstream on the Ohio. Until agricultural and industrial impacts on the Ohio River watershed are addressed and minimized, the issue of HABs are likely to be a recurring problem. Henderson Water Utility has implemented a monitoring program that will help us identify impending and existing conditions that make HAB formation favorable. We have also increased our ability to identify HAB species. This will help us in treating your water more effectively.

**FLUORIDE REGULATION**—The U.S. Dept of Health & Human Services (HHS) recently announced a new recommendation which lowers the optimal level for fluoride in drinking water to 0.7 ppm. Kentucky statute stipulates that water plants dose fluoride within a range between 0.8 to 1.4 ppm. Kentucky has no plans to change from this. HWU's goal is to maintain a 0.9 ppm residual at all times to ensure compliance while keeping it on the low range of the scale. If you have any questions about fluoridation please contact Kevin Roberts at 270-869-6616.