

SOURCES OF CONTAMINATION

What are sources of contamination to drinking water? 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, USEPA prescribes regulations which 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 Federal Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

This newsletter is distributed to Hecla Water Association consumers in order to provide information about their drinking water source. Direct questions or comments to tim@heclawater.com

**Hecla Water Association, Inc.
3190 SR 141 Ironton, Ohio 45638**

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45638**

This is your 2018 Drinking Water Quality Report

**Pay your water bill online at
<http://www.heclawater.com>**

Hecla Water Association

2018 Annual Water Quality Report (Test Results from 2017)

This report is designed to inform you about the drinking water and services we deliver everyday. Our constant goal is to provide you with a safe dependable supply of drinking water and we would like for you to understand the efforts we make continually to improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.



**Hecla Water Association, Inc.
3190 SR 141 Ironton, Ohio 45638
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HECLA WATER TREATMENT PLANT RESULTS Table #1 * PWS—OH4401612 Source—Groundwater well field on SR 7 near Athalia. The Hecla Water Association routinely monitors for contaminants in your drinking water according to Federal and State laws. These tables show the most recent testing done in accordance with the regulations.

Contaminant	MCLG	MCL	Level Found	Range	Any Violation	Year	Typical Source of contamination
Chlorine (ppm)	MRDLG=4	4	0.99	0.96-0.99	No	2017	Water additive used to control microbes, by-product of drinking water chlorination
Nitrate (ppm)	10	10	0.58	N/A	NO	2017	Runoff from fertilizer use; erosion of natural deposits ; leaching from septic tanks, sewage
Fluoride (ppm)	4	4	1.095	0.82-1.3	No	2017	Water additive which promotes strong teeth; erosion of natural deposits
Total Trihalomethanes (ppb)	N/A	80	52.3	16.4-84.7	Yes	2017	By-product of drinking water chlorination
Five Haloacetic Acids (ppb)	NA	60	29.4	8.6-52.3	Yes	2017	By-product of drinking water chlorination
Alpha emitter	NA	50 pci/l	4.77 pci/l	N/A	No	2015	Decay of natural and man made products
Radium 228	N/A	N/A	1.52 pci/l	N/A	No	2015	Decay of natural and man made products
Contaminant	MCLG	MCL	90th Percentile	Range	Any Violation	Year	Typical Source of contamination
Lead** (ppb)	0	Action limit=15	0	N/A	No	2017	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppb)	1,300	Action Limit=1,300	278	N/A	No	2017	Corrosion of household plumbing systems; erosion of natural deposits; leaching of wood preservatives.

Table 1 Additions:

Forty (40) samples were collected per month and in October 2015 one sample was total coliform positive. This sample represents a level found of 2.5% with a range of 0% to 2.5%

The sample site was retested and sites upstream and downstream of the site were tested and all resample sites were total coliform negative.

**Lead was not detected at the 90th percentile for community tap water samples

0 of 30 lead samples exceeded the action level.

0 of 30 copper samples exceeded the action level.

Variances & Exemptions (V & E) - State of EPA permission not to meet an MCL or a treatment technique under certain conditions. NOT GIVEN IN OHIO

TABLE #2 City of Ironton—Surface Water Treatment Plant	MCLG [MRDL G]	MCL [MRD L]	Level Found	Range Low-High	Any Violation	Year	Typical Source of contamination
Barium (ppm)	2	2	0.0367	N/A	No	2017	Discharge of drilling wastes; Discharge from Metal refineries; Erosion of natural deposits
Chlorine (ppm)	4	4	1.54	1.28-1.96	No	2017	Water additive used to control microbes
Fluoride (ppm)	4	4	0.96	0.80-1.30	No	2017	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] - Stage 2 (ppb)	N/A	60	27.03	13.10-33.98	No	2017	By-product of drink water disinfection
Nitrate (ppm)	10	10	114	0.56-114	No	2017	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHM [Total Trihalomethanes] - Stage 2 (ppb)	N/A	80	56.01	52.40-60.85	No	2017	By-product of drinking water disinfection
Total Organic Carbon (ppm)	N/A	TT	1.40	1.4-2.1	No	2017	Naturally present in environment
Turbidity (NTU)	N/A	TT	0.21	0.04-0.21	No	2017	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	N/A	TT	100	N/A	No	2017	Soil Runoff
Secondary Substances Fluoride	N/A	SMCL 2.0	0.93	0.80-1.30	No	2017	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Contaminant	MCLG	AL	Amount Detected (90th Percentile)	Sites Above AL Total Sites	Any Violation	Year	Typical Source of contamination
Copper (ppm)	1.3	1.3	0.058	0/30	No	2017	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	0	15	<5.0	0/30	No	2017	Corrosion of household plumbing systems; Erosion of natural deposits

Definitions for Test Results Tables

Parts per million (ppm) or Milligrams per liter –one part per million corresponds to a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to a single penny in \$10,000,000.

Less Than = <] [More Than = >] [N/A or NA = not applicable] [nonreg = non regulated by EPA] [TT = treatment technique] [NTU = nephelometric turbidity units]

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

Maximum contaminant Level (MCL) - the “Maximum Allowed” (MCL) is the highest level of a contaminant that is allowed in drinking water. MCL’s are set as close to the MCLGs as feasible using the best available treatment technology.

Drinking Water Source

Hecla Water's primary water source is groundwater from the Ohio River Valley Aquifer System located along side State Route 7, just south east of Athalia, Ohio. The well field contains eight wells which pump over two million gallons of water each day. The treatment process includes sand filtering, fluoridation and chlorination. The softening process was eliminated due to the increase in demand. Hecla Water has a source protection plan which is being updated to include added security measures. The Homeland Security Act protects the details of the protection plan and additional security. If you have any questions about this report or concerning your water company, contact Tim Dalton at 533-0526. If you want to learn more about your water system, attend the regularly scheduled meetings, held each month on the fourth Thursday at 11:30 AM at the office on State Route 141.

Contaminant Levels

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

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 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 microbiological contaminants are available at 1-800-426-4791.

Lead in Drinking Water

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 Hecla 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 drinking water, testing methods, and steps you can take to minimize exposure is available from the safe drinking water Hotline at www.epa.gov/safewater/lead.

Initial Distribution System Evaluation

Under the Stage 2 Disinfectants/Disinfection byproducts Rule (D/DBPR), our public water system was required by USEPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE), and is intended to identify locations in our distribution system with elevated disinfection byproduct concentrations. The locations selected for the IDSE may be used for compliance monitoring under Stage 2 DBPR, beginning in 2012. Disinfection byproducts are the result of providing continuous disinfection of your drinking water and form when disinfectants combine with organic matter naturally occurring in the source water. Disinfection byproducts are grouped into two categories. Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5). USEPA sets standards for controlling the levels of disinfectants and disinfectant byproducts in drinking water, including both TTHMs and HAA5s.

Hecla Water has a current, unconditioned license to operate this water system.

Turbidity

Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is {0.3 NTU) in 95% of the daily samples and shall not exceed 5 NTU at any time. As reported above, The purchased water from the city of Ironton's highest recorded turbidity result for 2017 was 0.21 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%.

Unregulated Contaminants

Unregulated contaminants monitoring helps the EPA to determine where certain contaminants occur and whether the EPA needs to regulate those contaminants.

Name	Average	Range	Year
Molybdenum	1.316 µg/l	1.1-1.6	2015
Strontium	178.75 µg/l	160-230	2015
1,4 Dioxane	.29 yg.k	0.110-0.47	2015
Hexavalent Chromium	0.0595 µg/l	0.034-0.095	2015
Chromium	0.067 µg/l	N/A	2015
Chlorate	25 µg/l	N/A	2015
Vanadium	0.265 µg/l	0.24-0.29	2015

Hecla Laboratory Averages

A table containing the averages of various values from the daily lab testing is listed below:

Name	Average	Range
pH*	7.31	7.25-7.38
Phenol Alkalinity	0 mg/L	0
Total Alkalinity	111.72 mg/L	98.52-122.26
Total Hardness	164.12 mg/L	155.16-177.35
Total Hardness	9.59 grains/gal	9.06-10.36
*pH is scaled from 0 (acidic) to 14 (alkaline)		

Drinking Water Violations

The Hecla Water Association failed to collect the appropriate number of TTHM and HAA5 sample as required by the Ohio EPA during the July-September 2013 monitoring period. Steps have been taken to ensure that all sampling will be conducted as required by our sample monitoring plan.

Consumer Confidence Report Deficiencies

The Ohio EPA notified the Hecla Water Association of four deficiencies in the 2017 Consumer Confidence Report. These deficiencies have been addressed, corrected, and added to the 2018 Consumer Confidence report. The deficiencies included mandatory language concerning sources of contamination, 90th percentile data for Copper detection, susceptibility analysis from the Source Water Assessment Summary, and mandatory language regarding turbidity.

Mandatory language for the sources of contamination was added to Tables 1 and 2

Monitoring requirements not met for Hecla Water Association-Plant PWS

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the third quarter of 2013 time period we did not monitor for the following contaminant and therefore cannot be sure of the quality of our drinking water during that time: Total Trihalomethanes (TTHM), Haloacetic acids, Five (HAA5).

What should I do?

This notice is to inform you that Hecla Water Association-Plant PS did not monitor and report results for the presence of the contaminant listed above in the public drinking water system during the third quarter of 2013 time period, as required by the Ohio Environmental Protection Agency. You do not need to take any actions in response to this notice.

What is being done?

Upon being notified of this violation, the water supply was required to have the drinking water analyzed for the above mentioned parameters. The water supplier will take steps to ensure that adequate monitoring will be performed in the future. Additional information may be obtained by contacting Hecla Water Association-Plant PWS at:

Hecla Water Association Inc.
3190 State Route 141
Ironton, OH 45638
PWSID: OH4401612 Facility ID: DS1

Contact Person: Tim Dalton Phone number: 740-533-0526

Date notice was distributed in the Ironton Tribune Newspaper: December 8, 2013 through December 15, 2013. This notice also appears on the Hecla Water web site (heclawater.com) and will be included in the 2018 Consumer Confidence Report for the Hecla Water Association.

The Source Water Assessment for Hecla Water Association is available online at <http://wwwapp.epa.ohio.gov/gis/swpa/OH4401612.pdf>

A direct link to the 2018 Consumer Confidence Report for Hecla Water Association is listed on the June billing statements and hard copies are available at the office.

The 2018 CCR is available online at <http://heclawater.com/PDF/HeclaWater-CCR-2018.pdf>

Susceptibility Analysis

The aquifer that supplies drinking water to the Hecla Water Association wells is moderately susceptible to contamination. This determination was made because of the following reasons:

- The water table of the sand and gravel aquifer begins approximately 40 feet below the ground surface.
- There is approximately 15-25 feet of sandy clay overlying the sand and gravel. This may slow the migration of contaminants into the aquifer.
- Potential significant contaminant sources exist within the protection area.

Water quality data were evaluated using the drinking water compliance database at Ohio EPA. The available data do not indicate that contamination has impacted the aquifer at Hecla Water Association's wellfield. Because sampling requirements are for treated water, the lack of water quality impacts does not necessarily indicate a lack of contamination. This determination is limited by the sampling that is performed for the water system. Eight (8) potential sources of contamination have been identified by Hecla Water Association including SR 7, the Ohio River, home septic systems, an auto body shop, commercial facilities with fuel/fuel oil tanks, and a salvage yard. Because of these potential sources of contamination that exist within the wellhead/source water protection area and the moderate sensitivity of the aquifer, the Hecla Water Association's wellfield is considered to be moderately susceptible to contamination. In summary, there is a moderate likelihood for contamination of the Hecla Water Association's source water. Implementing appropriate protection strategies for the potential contaminant sources will help reduce the likelihood of contamination affecting the aquifer.