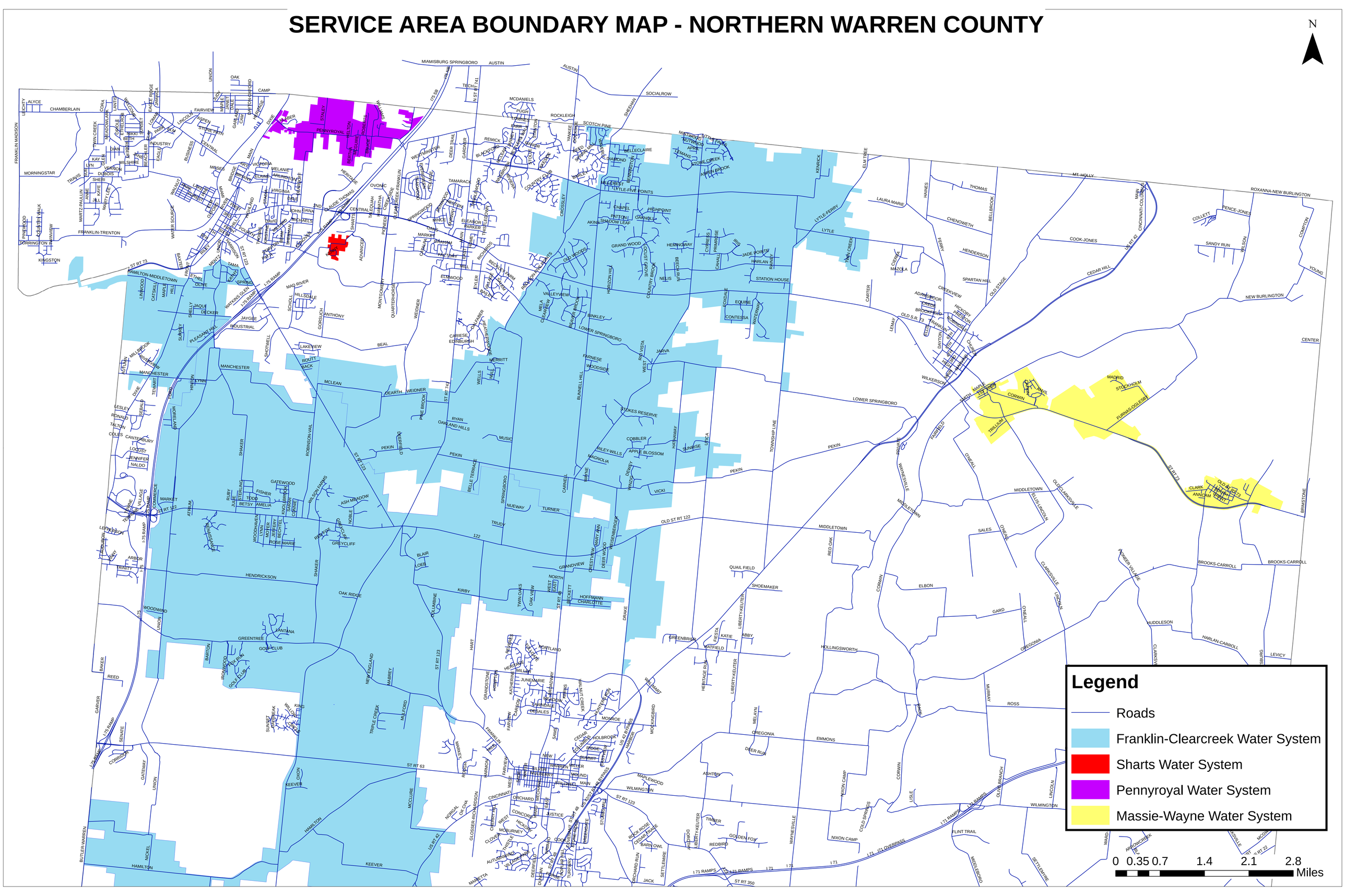
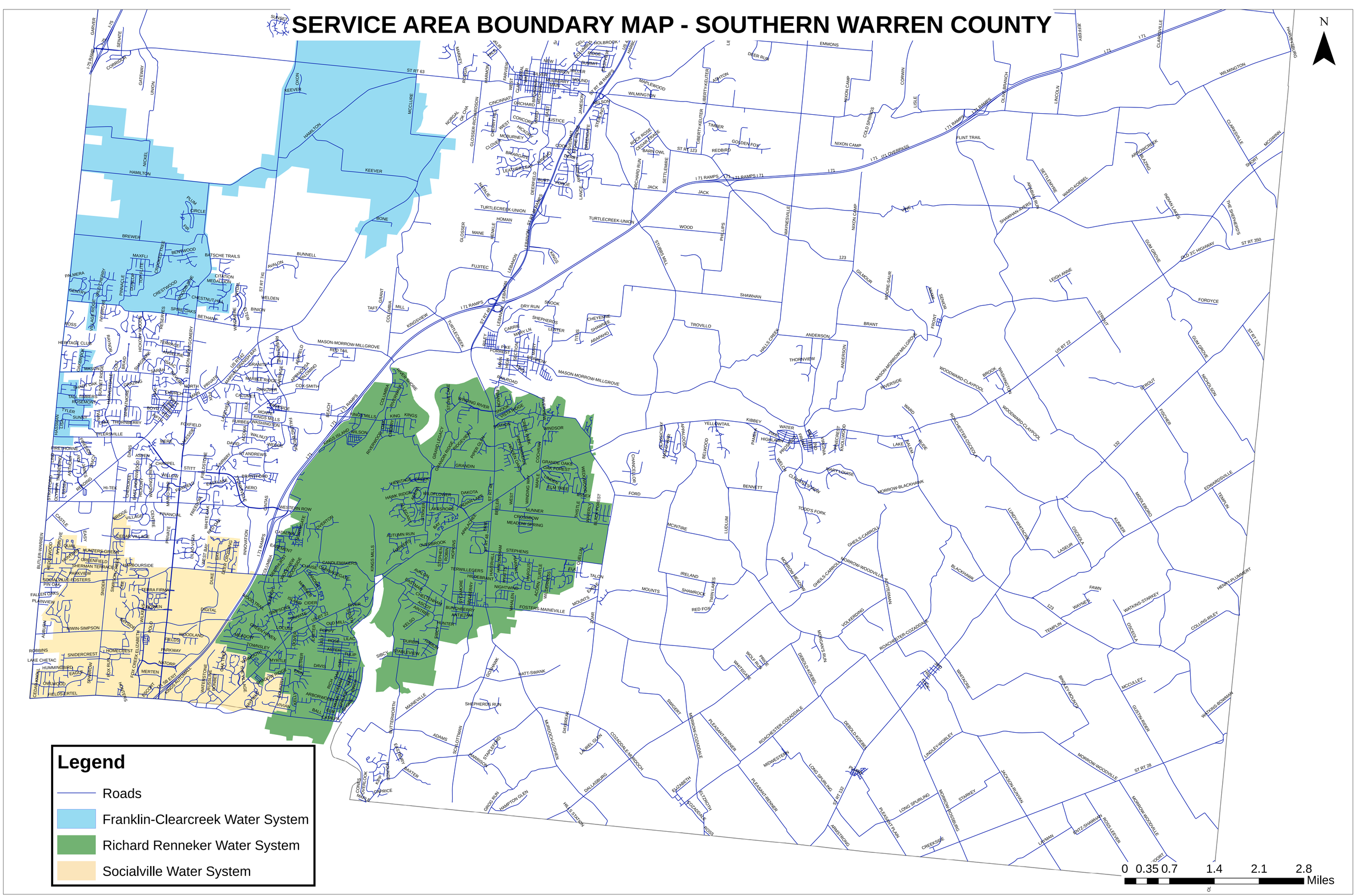
SERVICE AREA BOUNDARY MAP - NORTHERN WARREN COUNTY



SERVICE AREA BOUNDARY MAP - SOUTHERN WARREN COUNTY



Warren County Water and Sewer Department

CONSUMER CONFIDENCE REPORT (CCR)

2017 Water Quality Report for the Franklin-Clearcreek Water System
PWSID# 8301603

This annual water quality report identifies the water source, lists test results, and contains important information about drinking water. We encourage public participation in our community's future. The Warren County Board of Commissioners meeting is held on Tuesday at 9:00 A.M. and every other Thursday at 5:00 P.M. The public is welcome.

Water Source

The well field is located in northwest Warren County. It is bordered by Franklin-Trenton Road on the north, Twin Creek on the west, the Great Miami River on the south, and the Conrail train tracks on the east. This is an area of the confluence of the Twin Creek and Great Miami Buried Valley Aquifers. The water quality is exceptional and does not require treatment other than the addition of fluoride and chlorine. The Aquifer that supplies the Franklin-Clearcreek wellfield has been determined to have a high susceptibility to contamination due to:

- Presence of significant potential contaminant sources in the protection area.

However, there is no evidence to suggest that ground water has been impacted by any significant levels of chemical contaminants from human activities.

License
The Franklin-Clearcreek Water System currently has an unconditioned license to operate.

Whom to Contact
For further information about water quality, contact the Warren County Water and Sewer Department (WCWSD).
Hours of operation are 8:00 AM -5:00 PM, Monday through Friday:

Superintendent of Operations	**(513) 683-3687**	**FAX (513) 697-1752**
Laboratory Supervisor	**(513) 583-3091**	**FAX (513) 583-3093**

WEB SITE: http://www.co.warren.oh.us/

Send correspondence to: **Warren County Water and Sewer, PO Box 530, Lebanon, OH 45036-0530**

An Explanation of the Water Quality Data Tables
This report is based upon tests conducted by the Warren County Water Laboratory and its contract laboratory. Terms used in the Water Quality Tables and in other parts of this report are defined here.
Maximum Contaminant Level or 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 or 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.
Action Level (AL): Concentration of a contaminant, when exceeded, triggers treatment or other requirements which a water system must follow.
ppm: parts per million
ppb: parts per billion
f/l: fibers per liter
n/r: not regulated

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people undergoing chemotherapy, people 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 Cryptospiridium and other microbial contaminants are available from the **Safe Drinking Water Hotline (800-426-4791)**.

Compliance Monitoring and Disinfection Requirements 2017

Substance	Highest Level Detected	Range of Detection	MCL	Ideal Goals (MCLG)	Sources of Substances
Fluoride (ppm)	1.11	0.8 - 1.3	4	4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Chlorine (ppm)	1.6	0.2 - 2.0	4.0	4.0	Element used for disinfection
Total Coliform Monitoring	None	n/a	None	None	Safely removed using chlorine. 360 samples taken with no positive coliforms

Action Levels (AL) control Copper and Lead. Samples are collected and ranked by how much lead or copper they contain. The 90th percentile of each ranking is determined. If the 90th percentile exceeds the Action Level, specific corrective actions are required. One of the 90th percentiles exceeded the Action Level. **Thirty samples were taken in 2017**.

Substance	Detected	Range	MCL	MCLG	Sources	Number of Samples Greater Than Action Level
Copper	258 ppb 90th percentile	17.3 to 627 ppb	AL = 1300 ppb	1300 ppb	Corrosion of household plumbing systems; erosion of natural deposits; leaching from	0
Lead	8.018ppb 90th percentile	<2.0 to 26.00 ppb	AL = 15 ppb	0 ppb	Corrosion of household plumbing; natural deposits.	1

"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 Franklin-Clearcreek 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 one (1) to five (5) 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. The WCWSD is making available lead sampling kits for a fee of $10. Call the WCWSD Main Office at 513-695-1377 for more information on these kits. For more information on lead in drinking water, testing methods, and steps you can take to minimize exposure: Safe Drinking Water Hotline at **http://www.epa.gov/safewater/lead**, and Ohio EPA: Learn About Lead: **http://epa.ohio.gov/pic/lead.aspx**."

The table below lists all the drinking water contaminants that were tested for between January 1 and December 31, 2017. The presence of the contaminants in the water does not necessarily indicate that the water poses a health risk**. Franklin-Clearcreek Water System Detected Contaminants 2017**

Substance	Highest Level Detected	Range of Detection	MCL	Ideal Goals (MCLG)	Sources of Substances	
Nitrate Nitrite (ppm)	0.902	n/a	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
Total Trihalo- methanes (ppb)	49.78	n/a	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants.	
Bromodichloromethane (ppb)	7.760	7.34-7.760	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants	
Bromoform (ppb)	1.51	<0.50-1.51	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants	
Chloroform (ppb)	16.07	9.09-16.07	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants	
Dibromochloromethane (ppb)	5.340	3.62-5.34	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants	
HAA5 Haloacetic acids (ppb)	7.63	n/a	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter	
Bromochloroacetic acid (ppb)	3.587	3.47-3.587	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter	
Dibromoacetic acid (ppb	2.568	1.331-2.568	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter	
Dichloroacetic acid (ppb)	7.185	4.837-7.185	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter	
Monobromoacetic acid (ppb)	<1.0	<1.0	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter	
Monochloroacetic acid (ppb)	<2.0	<2.0	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter	
Trichloroacetic acid (ppb)	6.322	3.533-6.322	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter	

Water Hardness averages 19 grains per gallon.

Additional Information

To ensure that tap water is safe to drink, the EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The sources of drinking water (including 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: (1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife, (2) 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, (3) pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses, (4) 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, (5) radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. More information about contaminants and potential health effects can be obtained by calling the **Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).**

Throughout the year southern portions of the Franklin Clearcreek system receive water from the Cincinnati Water Works.
The following is information pertaining to the water quality provided by the Cincinnati Water Works.

Water is withdrawn from both the Ohio River, which is surface water, and the Great Miami Aquifer, which is groundwater. The Ohio River water is treated at the Miller Treatment Plant and Great Miami Aquifer groundwater is treated at the Bolton Treatment Plant. The finished water is then distributed to Warren County customers.

Unregulated Contaminants for which the EPA requires monitoring 2017

	Miller Plant		Bolton Plant				
Substance	**Average Level detected**	**Range of Detection**	**Average Level Detected**	**Range of Detection**	**Violation**	**MCLG**	**Sources of Substances**
Chloroform (ppb)	8.96	.92-25.0	8.96	.92-25.0	n/a	70	Byproduct of drinking water disinfection
Bromodichloromethane (ppb)	9.62	4.23-19.6	9.62	4.23-19.6	n/a	0	Byproduct of drinking water disinfection
Dibromochloromethane (ppb)	12.1	4.98-23.5	12.1	4.98-23.5	n/a	60	Byproduct of drinking water disinfection .
Bromoform (ppb)	7.75	n/a	7.75	.56-26.3	n/a	0	Byproduct of drinking water disinfection.
Monochloroacetic Acid (ppb)	n/d	n/d-1.44	n/d	n/d-1.44	n/a	30	Byproduct of drinking water disinfection.
Monobromoacetic Acid (ppb)	1.07	nd-5.36	1.07	nd-5.36	n/a	n/a	Byproduct of drinking water disinfection.
Dibchloroacetic Acid (ppb)	2.91	nd-7.54	2.91	nd-7.54	n/a	0	Byproduct of drinking water disinfection.
Tricholoracetic Acid (ppb)	nd	nd-3.97	nd	nd-3.97	n/a	20	Byproduct of drinking water disinfection.
Dibromoacetic Acid (ppb)	3.51	nd-6.77	3.51	nd-6.77	n/a	n/a	Byproduct of drinking water disinfection
Sulfate (ppm)	64	47-95	n/a	n/a	n/a	n/a	Erosion of natural deposits
Chlorate (ppb) (2013)	23	n/d – 41	n/d	n/a	n/a	n/a	Detected during Unregulated Contaminant monitoring
Hexavalent Chromium Dissolved (ppb) (2013)	0.071	.048-.099	0.21	0.2-0.22	n/a	n/a	Detected during Unregulated Contaminant monitoring
1,4-Dioxane (ppb) (2013)	0.326	n/d-.575	0.545	0.276-0.814	n/a	n/a	Detected during Unregulated Contaminant monitoring
Molybdenum (ppb) (2013)	1.6	1.0-2.9	4.2	3.5-4.9	n/a	n/a	Detected during Unregulated Contaminant monitoring
Strontium (ppb) (2013)	204	170-240	170	160-180	n/a	n/a	Detected during Unregulated Contaminant monitoring
Vanadium (ppb) (2013)	0.26	nd-0.56	0.64	0.60-0.72	n/a	n/a	Detected during Unregulated Contaminant monitoring

The tables below list the drinking water contaminants detected between January 1 and December 31, 2017. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. These Substances were tested by Cincinnati Water Works

Regulated Contaminants: Contaminants subject to an MCL, Action Level, or Treatment Technique

	Miller Plant		Bolton Plant				
Substance	**Highest Level Detected**	**Range of Detection**	**Highest Level Detected**	**Range of Detection**	**MCL**	**Ideal Goals (MCLG)**	**Sources of Substances**
Fluoride (ppm)	0.87	0.73-1.01	0.88	0.62-1.00	4	4	Erosion of natural deposits; additive that promotes strong teeth.
Nitrate (ppm)	1.39	0.55-1.39	0.94	n/a	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Total Organic Carbon (ppm)	1.90	1.73-3.43	nr	nr	TT[1]	n/a	Naturally present in the environment.
Turbidity	0.09 100% < 0.3 NTU	0.04 - 0.15	nr	nr	n/a	TT[1] < 1 NTU max and TT2 <0.3 NTU 95% of the time	Soil erosion runoff.
Barium (ppm)	0.036	n/a	0.017	n/a	2	2	Erosion of natural deposits; Discharge of drilling waste; discharge from metal refineries.
Trihalomethanes (ppb)	51.7	18.7-71.2	51.7	18.7-71.2	80	0	Byproduct of drinking water chlorination
Haloacetic Acids (ppb)	11.7	3.30-17.7	11.7	3.30-17.7	60	0	Byproduct of drinking water chlorination
Lead (ppb)	90th percentile 10.0ppb	nd-53.8	90th percentile 10.0 ppb	nd-53.8	15	0	Corrosion of household plumbing; natural deposits.
Copper (ppm)	90th percentile 0.027ppm	n/a	90th percentile 0.027ppm	n/a	1.3	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from

****From Cincinnati Water Works, "11 out of 172 samples tested during the most recent compliance period were > the Action Level for Lead".**

**** From Cincinnati Water Works, "0 out of 172 samples tested during the most recent compliance period were > the Action Level for Copper".**

Note1. The Ohio EPA requires monitoring certain contaminants once per year. The value is the maximum detected concentration.

TT = A required process intended to reduce the level of a contaminant in drinking water

Results of GCWW Voluntary Monitoring for Cryptosporidium: GCWW has tested for Crypto in treated waters and never detected it. GCWW also tested for Crypto in the Ohio River surface water and it was found in 0 of 22 samples during 2015.

Sodium: Tested as water leaves treatment plants Miller Plant: 33mg/ l
Bolton Plant: 31mg/l.

[1] The value reported under "highest compliance level detected" for TOC is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value of <1 indicates that the water system is in compliance with TOC removal requirements. A value of >1 indicates a violation of the TOC removal requirements.

Average Water Hardness: **Miller Plant - 8 grains per gallon (137 mg/L)**
Bolton Plant - 10 grains per gallon (171 mg/l)

Warren County Water and Sewer Department

CONSUMER CONFIDENCE REPORT (CCR)
2017 Water Quality Report for the Massie-Wayne Water System

PWSID# 8345912

This annual water quality report describes the water source, lists test results, and contains important information about drinking water from the previous year. Reporting is a requirement of the Safe Drinking Water Act of 1996. We encourage public participation in our community's future. The Warren County Board of Commissioners meeting is held on Tuesday at 9:00 A.M. and every other Thursday at 5:00 P.M. The public is welcome.

Water Source

Warren County purchases its water for the Massie-Wayne Water System from the Village of Waynesville. The water source is known as the Little Miami Buried Valley Aquifer. Water is supplied from four wells located in the Waynesville Water wellfield at 7198 North US Route 42. This location is approximately one-half mile north on State Route 42 from the intersection of State Route 73 and US Route 42. The aquifer that supplies the wellfield has been determined to have a high susceptibility to contamination due to the presence of significant potential contaminant sources in the protection area. However, there is no evidence to suggest that ground water has been impacted by significant levels of chemical contaminants from human activities.

License

The Massie Wayne Water System currently operates with an unconditioned license to operate.

Whom to Contact

For further information about water quality, contact the Warren County Water and Sewer Department (WCWSD).
Hours of operation are 8:00 AM - 5:00 PM, Monday through Friday:

Superintendent of Operations	**(513) 683-3687**	**FAX (513) 697-1752**
Laboratory Supervisor	**(513) 583-3091**	**FAX (513) 583-3093**

WEB SITE: http://www.co.warren.oh.us/

Send correspondence to: **Warren County Water and Sewer, PO Box 530, Lebanon, OH 45036-0530**

An Explanation of the Water Quality Data Tables

This report is based upon tests conducted by the Village of Waynesville and Warren County's Water Laboratory. Terms used in the Water Quality Tables and in other parts of this report are defined here.
Maximum Contaminant Level or 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 or 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.
Action Level (AL): Action level or concentration of a contaminant when exceeded triggers treatment or other requirements which a water system must follow.
ppm: parts per million
ppb: parts per billion
n. r.: not regulated

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people undergoing chemotherapy, people 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 Cryptospiridium and other microbial contaminants are available from the **Safe Drinking Water Hotline (800-426-4791).**

The table below lists all the drinking water contaminants that were detected between January 1 and December 31, 2017 (unless otherwise noted). The presence of the contaminants in the water does not necessarily indicate that the water poses a health risk.

Massie-Wayne Detected Contaminants

Substance	Highest Level Detected	Range	MCL	Ideal Goals (MCLG)	Sources of Substances
**Total Trihalomethane (ppb)	33.00	n/a	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants.
Bromodichloromethane	10.40	8.44-10.40	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants.
Bromoform	1.79	1.73-1.79	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants.
Chloroform	14.35	9.19-14.35	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants.
Dibromochloromethane	6.520	6.13-6.52	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants.
**HAA5 (Haloacetic Acid) (ppb)	8.946	1.923-8.946	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Bromochloroacetic acid (ppb)	3.413	1.346-3.413	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Dibromoacetic acid (ppb)	2.645	<1.0-2.645	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Dichloroacetic acid (ppb)	4.432	<1.0-4.432	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Monobromoacetic acid (ppb)	<1.0	<1.0	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Monochloroacetic acid (ppb)	<1.0	<1.0	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Trichloroacetic acid (ppb)	1.923	1.869-1.923	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter

Substance	Highest Level Detected	Range	MCL	Ideal Goals (MCLG	Sources of Substances
**Chlorine (ppm)	1.8	0.2 - 2.0	4.0	4.0 ppm	Element used for disinfection
*Nitrogen, Nitrate+Nitrite (ppm)	1.81	n/a	10.0	10.0	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
*Barium (ppm) 2016	.0744	n/a	4	4	Discharge of Drilling wastes; Discharge from metal refineries; Erosion of natural deposits
*Alpha Emitters pCi/L 2013	6.38	n.a.	15	0	Erosion of natural deposits
*Combined Radium pCi/L 2013	1.60	n.a.	5	0	Erosion of natural deposits

Collected by the Village of Waynesville

** Samples collected by the Warren County Water Department

Compliance Monitoring and residual Disinfection Requirments 2017

Substance	Violation	Level Detected	MCL	Ideal Goals (MCLG)	Sources of Substances
Total Coliform Monitoring	NO	None	1	0	Safely removed using chlorine. 24 samples collected and none positive for Total Coliform

The Average water Hardness was 20 grains per gallon.

Action Levels (AL) control copper and lead. Samples are collected and ranked by how much lead or copper they contain. The 90th percentile of each ranking is determined. If the 90th percentile exceeds the Action Level, specific corrective actions are required. None of our 90th percentiles exceeded the Action Levels. **Samples collected in 2015 as part of triennial sampling**

Substance	Detected	Range	MCL	MCLG	Sources	Number of Samples Greater Than Action Level
Copper	161 ppb 90th Percentile	34.5 to 543ppb	AL = 1300 ppb	1300 ppb	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.	0
Lead	3.87 ppb 90th Percentile	< 2.0-5.04ppb	AL = 15 ppb	0 ppb	Corrosion of household plumbing; natural deposits.	0

"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 Massie-Wayne 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 one (1) to five (5) 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. The WCWSD is making available lead sampling kits for a fee of $10. Call the WCWSD Main Office at 513-695-1377 for more information on these kits. For more information on lead in drinking water, testing methods, and steps you can take to minimize exposure: Safe Drinking Water Hotline at http://www.epa.gov/safewater/lead, and Ohio EPA: Learn About Lead: http://epa.ohio.gov/pic/lead.aspx."

Additional Information

To ensure that tap water is safe to drink, the EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The sources of drinking water (including 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: (1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife, (2) 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, (3) pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses, (4) 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, (5) radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. More information about contaminants and potential health effects can be obtained by calling the **Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).**

During 2017 the Massie Wayne Water System received water from the Western Water Company. The following Table shows water quality for the Western Water Company.

Substance	Detected	Range	MCL	MCLG	Violation	Sources
Fluoride (ppm)	1.05	.86-1.22	4.0	4.0	None	Erosion of natural deposits. Water additive which promotes strong teeth. Discharge from fertilizer and aluminum factories
Nitrates (ppm)	.52	N/A	10.0	10.0	None	Runoff from fertilizer use. Leaching from septic tanks, sewage, erosion of natural deposits
Total Coliform	0	0	0	0	No	Naturally present in the environment. .Safely removed using chlorine
Total Chlorine (ppm)	1.12	.55-1.45	4.0	4.0	No	Water additive for disinfection
Haloacitic Acid (HAA5)	9.9 ppb	<6.0-9.9ppb	60 ppb	N/A	None	By product of drinking water chlorination
TTHM's	39.1 ppb	32.5-39.1 ppb	80 ppb	N/A	None	By product of drinking water chlorination
Lead (2015)	<5.0 ppb	N/A	AL=15.0 ppb	AL=15.0 ppb	None	Corrosion of house-hold plumbing systems
Copper (2015)	582 ppb	N/A	AL=1300 ppb	AL=1300 ppb	None	Corrosion of house-hold plumbing systems
Barium (2016)	45.0 ppb	N/A	2 ppm	2 ppm	None	Erosion of natural deposits. Discharge from drilling wastes and metal refineries

Warren County Water and Sewer Department

CONSUMER CONFIDENCE REPORT (CCR)

2017 Water Quality Report for Pennyroyal Water System

PWSID# 8301803

This annual water quality report describes the water source, lists test results, and contains important information about drinking water from the previous year. Reporting is a requirement of the Safe Drinking Water Act of 1996. We encourage public participation in our community's future. The Warren County Board of Commissioners meeting is held on Tuesday at 9:00 A.M. and every other Thursday at 5:00 P.M. The public is welcome.

Water Source

Warren County purchases the water for the Pennyroyal Water System from the City of Springboro. The City of Springboro obtains its drinking water supply from the buried sand and gravel aquifers associated with the Great Miami River. The City of Springboro has five (5) wells to draw water from the aquifer. The wells are located on the west side of the Great Miami River near 8858 Dayton-Oxford Road. The Water Treatment Plant and well field is south of Chautauqua and borders the Village of Carlisle. Well water is pumped directly to the water treatment plant, where the water is filtered and treated with chlorine and fluoride.

License

The Pennyroyal Water System currently has an unconditioned license to operate.

Whom to Contact

For further information about water quality, contact the Warren County Water and Sewer Department (WCWSD). Hours of operation are 8:00 AM - 5:00 PM, Monday through Friday:

Superintendent of Operations	**(513)683-3687**	**FAX (513)697-1752**
Laboratory Supervisor	**(513) 583-3091**	**FAX (513) 583-3093**

WEB SITE: http://www.co.warren.oh.us/

Send correspondence to: **Warren County Water and Sewer, PO Box 530, Lebanon, OH 45036-0530**

An Explanation of the Water Quality Data Tables

This report is based upon tests conducted by the City of Springboro and Warren County's Water Laboratory. Terms used in the Water Quality Tables and in other parts of this report are defined here.

Maximum Contaminant Level or 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 or 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.

Action Level (AL): Action level or concentration of a contaminant when exceeded triggers treatment or other requirements which a water system must follow.

ppm: parts per million

ppb: parts per billion

n. r.: not regulated

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

The table below lists all the drinking water contaminants that were detected between January 1 and December 31, 2017. The presence of the contaminants in the water does not necessarily indicate that the water poses a health risk.

Pennyroyal- Required Monitoring information - 2017

Substance	Highest Level Detected	Range of Detection	MCL	Ideal Goals (MCLG)	Sources of Substances
**Fluoride (ppm)	1.09	0.79 - 1.09	4	4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
**Nitrate (ppm)	1.08	1.08	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
*Total Coliform Monitoring	None	None	n/a	n/a	Safely removed using chlorine. No coliform bacteria detected in 24 samples collected in 2017
*Chlorine Residual (ppm)	1.8	0.2 - 2.0	4.0	4.0	Element used for disinfection
*Total Trihalomethane (ppb)	18.65	n/a	80.0	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants products of drinking water chlorination
Bromodichloromethane	5.460	4.46-5.46	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Bromoform	1.81	1.76-1.81	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Chloroform	6.59	4.85-6.59	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Dibromochloromethane	4.79	4.74-4.79	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
*HAA5 (Total Haloacetic Acids) (ppb)	9.468	5.735-9.468	60.0	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Bromochloroacetic Acid	2.93	2.437-2.930	60.0	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Dibchloroacetic Acid	4.338	3.007-4.338	60.0	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Dibromoacetic Acid	2.728	2.52-2.728	60.0	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Monobromoacetic Acid	<1.00	<1.00	60.0	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Monochloroacetic Acid	<2.00	<1.00	60.0	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Tricholoracetic Acid	2.610	<1.00-2.61	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter

***** Collected by the Springboro Water Department.***

***Collected by the Warren County Water Department.**

Action Levels (AL) control Copper and Lead. Samples are collected and ranked by how much lead or copper they contain. The 90th percentile of each ranking is determined. If the 90th percentile exceeds the Action Level, specific corrective actions are required. None of our 90th percentiles exceeded the Action Levels. **The Warren County Water Laboratory collected ten samples in 2017.**

Substance	Detected	Range of Detection	MCL	MCLG	Sources	Number of Samples Greater Than Action Level
Copper	176 ppb 90th percentile	28.7 to 194 ppb	AL = 1300 ppb	1300 ppb	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.	0
Lead	5.59 ppb 90th percentile	<2.0-12.2 ppb	AL = 15 ppb	0.0 ppb	Corrosion of household plumbing; natural deposits.	0

"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 Pennyroyal 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 one (1) to five (5) 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. The WCWSD is making available lead sampling kits for a fee of $10. Call the WCWSD Main Office at 513-695-1377 for more information on these kits. For more information on lead in drinking water, testing methods, and steps you can take to minimize exposure: Safe Drinking Water Hotline at **http://www.epa.gov/safewater/lead**, and Ohio EPA: Learn About Lead: **http://epa.ohio.gov/pic/lead.aspx**."

Additional Information

To ensure that tap water is safe to drink, the EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The sources of drinking water (including 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: (1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife, (2) 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, (3) pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses, (4) 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, (5) radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities, (6) Cryptospiridium is a microscopic organism that, when ingested, can result in diarrhea, fever, and other intestinal symptoms. Most healthy people can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised persons to consult their doctor about precautions to take to avoid infection. Cryptospiridium must be ingested to cause disease, and it can be spread through means other than drinking water.

More information about contaminants and potential health effects can be obtained by calling the **Environmental Protection Agency's Drinking Water Hotline (800-426-4791)**.

Warren County Water and Sewer Department

CONSUMER CONFIDENCE REPORT (CCR)

2017 Water Quality Report for the Richard Renneker Water System

PWSID# 8301512

This annual water quality report describes the water source, lists test results, and contains important information about drinking water from the previous year. Reporting is a requirement of the Safe Drinking Water Act of 1996. We encourage public participation in our community's future. The Warren County Board of Commissioners meeting is held on Tuesday at 9:00 A.M. and every other Thursday at 5:00 P.M. The public is welcome.

Water Source Assessment

The Richard Renneker Water Treatment Plant withdraws water from three separate well fields. One well field is located on the east side of the Little Miami River, about one-half mile southwest of the Powder Plant and two miles north of Foster, Ohio. The nine wells draw water from the Little Miami River Buried Valley Aquifer. The second well field, having five wells, is located southeast of the intersection of Ohio Route 48 and Mason-Morrow-Milgrove Road. The other is across the Little Miami River (South). Both of these well fields are in South Lebanon. The well field is bounded on the north and east sides by Turtle Creek, on the south by the Little Miami River, and on the west by Ohio Route 48. This is the origin of the Shaker Creek Buried Valley Aquifer and the confluence of the Little Miami River Buried Valley Aquifer. The treatment process consists of iron and manganese removal by aeration, filtration, and the addition of fluoride and chlorine. The Little Miami River Buried Valley Aquifer that supplies the Deerfield-Hamilton well field(s) has been determined to a have a high susceptibility to contamination due to;

- Presence of significant potential contaminant sources in the protection area, and;

However, there is no evidence to suggest that ground water has been impacted by any significant levels of chemical contaminants from human activities.

License

The Richard Renneker Water System currently has an unconditioned license to operate.

Whom to Contact

For further information about water quality, contact the Warren County Water and Sewer Department,
Hours of operation are 8:00 AM -5:00 PM, Monday through Friday.

Superintendent of Operations	**(513) 683-3687**	**FAX (513) 697-1752**
Laboratory Supervisor	**(513) 583-3091**	**FAX (513) 583-3093**

WEB SITE: http://www.co.warren.oh.us/

Send correspondence to: **Warren County Water and Sewer, PO Box 530, Lebanon, OH 45036-0530**

An Explanation of the Water Quality Data Tables

This report is based upon tests conducted by the Warren County Water Laboratory and its contract laboratory. Terms used in the Water Quality Tables and in other parts of this report are defined here:

Maximum Contaminant Level or 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 or 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.

Action Level (AL): Action level or concentration of a contaminant when exceeded triggers treatment or other requirements which a water system must follow.

(MRL): Minimum Reporting Limit

ppm: parts per million

ppb: parts per billion

pCi/L: parts per trillion per liter

n/r: not regulated

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people undergoing chemotherapy, people 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 Cryptospiridium and other microbial contaminants are available from the **Safe Drinking Water Hotline (800-426-4791)**.
Compliance Monitoring and Disinfection Requirements 2017. Please note that fluoride is added to the water to help prevent tooth decay and chlorine is added for disinfection purposes.

Substance	Highest Level Detected	Range	Violation	MCL	Ideal Goals (MCL)	Sources of Substances
Fluoride (ppm)	1.12	0.8 -1.30	No	4	4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Chlorine (ppm)	1.4	0.2 - 2.0	No	4	4	Element used for disinfection
Total Coliform Monitoring	None	n/a	No	None	None	Safely removed using chlorine. 480 samples taken with no positive coliforms.

Action Levels (AL) control Copper and Lead. Samples are collected and ranked by how much lead or copper they contain. The 90th percentile of each ranking is determined, and if it exceeds the Action Level, specific corrective actions are required. **Thirty samples were collected in 2016.**

Substance	Detected 90th percentile	Range	MCL	Ideal Goals (MCLG)	Sources	Number of Samples Greater Than Action Level
Copper (ppb)	421.6	0-470	AL = 1300	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.	0
Lead (ppb)	5.0	0-17.6	AL = 15	0	Corrosion of household plumbing; natural deposits.	0

"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 Richard Renneker 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 at http://www.epa.gov/safewater/lead

Additional Information

To ensure that tap water is safe to drink, the EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The sources of drinking water (including 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: (1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife, (2) 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, (3) pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses, (4) 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, (5) radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. More information about contaminants and potential health effects can be obtained by calling the **Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791)**.

The tables below list the drinking water contaminants detected between January 1 and December 31, 2017. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk

Richard Renneker Water System monitoring requirement results 2017

Substance	Highest Level Detected	Range	Violation	MCL	Ideal Goals (MCLG)	Sources of Substances
Nitrate Nitrtite (ppm)	0.505	<0.10-0.505	No	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Total Trihalo-methanes (TTHM) (ppb)	24.52	16.92-24.52	No	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Bromodichloromethane (ppb)	7.45	4.72-7.45	No	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Bromoform (ppb)	3.45	3.27-3.45	No	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Chloroform (ppb)	5.58	3.04-5.58	No	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Dibromochloromethane (ppb)	8.04	5.89-8.04	No	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Total HAA5 Haloacetic Acid (ppb)	9.23	3.526-9.23	No	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Bromochloroacetic acid (ppb)	2.61	1.813-2.61	No	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Dibromoacetic acid (ppb	3.070	2.619-3.070	No	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Dichloroacetic acid (ppb)	2.129	1.357-2.129	No	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Monobromoacetic acid (ppb)	<1.0	<1.0	No	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Monochloroacetic acid (ppb)	<1.0	<1.0	No	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Trichloroacetic acid (ppb)	1.34	<1.0-1.34	No	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter

***Water Hardness averages 23 grains per gallon. (393 mg/l)**

Throughout the year the Richard Renneker Water System receives water from the Franklin Clearcreek Water System. The following tables show testing results for the Franklin Clearcreek System during 2017.

Compliance Monitoring and Disinfection Requirements 2017

. Please note that fluoride is added to the water to help prevent tooth decay and chlorine is added for disinfection purposes.

Substance	Highest Level Detected	Range of Detection	Violation	MCL	Ideal Goals (MCLG)	Sources of Substances
Fluoride (ppm)	1.11	0.8 - 1.3	No	4	4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and
Chlorine (ppm)	1.6	0.2 - 2.0	No	4	4	Element used for disinfection
Total Coliform Monitorin	None	n/a	No	None	None	Safely removed using chlorine. 360 samples taken with no positive coliforms

***The average water hardness is 20 grains per gallon (342mg/l)**

Action Levels (AL) control Copper and Lead. Samples are collected and ranked by how much lead or copper they contain. The 90th percentile of each ranking is determined. If the 90th percentile exceeds the Action Level, specific corrective actions are required. One of the 90th percentiles exceeded the Action Level. **Thirty samples were taken in 2017**.

Substance	Detected	Range	MCL	MCLG	Sources	Number of Samples Greater Than Action Level
Copper	258 ppb 90th percentile	17.3 to 627 ppb	AL = 1300 ppb	1300 ppb	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.	0
Lead	8.018ppb 90th percentile	<2.0 to 26.00 ppb	AL = 15 ppb	0 ppb	Corrosion of household plumbing; natural deposits.	1

"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 Franklin-Clearcreek 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 at http://www.epa.gov/safewater/lead."

The table below lists all the drinking water contaminants that were tested for between January 1 and December 31, 2017. The presence of the contaminants in the water does not necessarily indicate that the water poses a health risk.

Franklin-Clearcreek Water System Detected Contaminants 2017

Substance	Highest Level Detected	Range of Detection	MCL	Ideal Goals (MCLG)	Sources of Substances
Nitrate Nitrite (ppm)	0.902	n/a	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Total Trihalo- methanes (ppb)	49.78	n/a	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Bromodichloromethane (ppb)	7.760	7.34-7.760	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Bromoform (ppb)	1.51	<0.50-1.51	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Chloroform (ppb)	16.07	9.09-16.07	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Dibromochloromethane (ppb)	5.340	3.62-5.34	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
HAA5 Haloacetic acids (ppb)	7.63	n/a	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Bromochloroacetic acid (ppb)	3.587	3.47-3.587	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Dibromoacetic acid (ppb	2.568	1.331-2.568	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Dichloroacetic acid (ppb)	7.185	4.837-7.185	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Monobromoacetic acid (ppb)	<1.0	<1.0	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Monochloroacetic acid (ppb)	<2.0	<2.0	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Trichloroacetic acid (ppb)	6.322	3.533-6.322	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter

Additional Information

To ensure that tap water is safe to drink, the EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The sources of drinking water (including 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: (1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife, (2) 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, (3) pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses, (4) 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, (5) radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. More information about contaminants and potential health effects can be obtained by calling the **Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791)**.

Throughout the year, some of the Richard Rennker System receives water from the Socialville Water System.

The following is information pertaining to the water quality supplied by the Socialville System.

Water Source

Water for the Socialville Water System is purchased by Warren County from the Cincinnati Water Works. Water is withdrawn from both the Ohio River, which is surface water, and the Great Miami Aquifer, which is groundwater. The Ohio River water is treated at the Miller Treatment Plant and Great Miami Aquifer groundwater is treated at the Bolton Treatment Plant. The finished water is then distributed to Warren County customers. It has been determined by the OEPA that the aquifer that supplies the Bolton Treatment Plant has a high susceptibility to contamination due to;

- The absence of a protective clay surface, and;
- The water is shallow, and;
- There are potential sources of contaminate sources nearby, and;
- Low levels of nitrates within the aquifer.

This does not mean that the aquifer is contaminated; only that it is vulnerable to contamination. The use of land ordinances, public education, and emergency response plans to prevent contamination of the aquifer.

License

The Socialville Water System currently operates with an unconditioned license to operate.

The tables below list the drinking water contaminants detected between January 1 and December 31, 2017. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. These Substances were tested by Cincinnati Water Works

Regulated Contaminants: Contaminants subject to an MCL, Action Level, or Treatment Technique

	Miller Plant		Bolton Plant				
Substance	**Highest Level Detected**	**Range of Detection**	**Highest Level Detected**	**Range of Detection**	**MCL**	**Ideal Goals (MCLG)**	**Sources of Substances**
Fluoride (ppm)	0.87	0.73-1.01	0.88	0.62-1.00	4	4	Erosion of natural deposits; additive that promotes strong teeth.
Nitrate (ppm)	1.39	0.55-1.39	0.94	n/a	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Total Organic Carbon (ppm)	1.90	1.73-3.43	nr	nr	TT[1]	n/a	Naturally present in the environment.
Turbidity	0.09 100% < 0.3 NTU	0.04 - 0.15	nr	nr	n/a	TT[1] < 1 NTU max and TT2 <0.3 NTU 95% of the time	Soil erosion runoff.
Barium (ppm)	0.036	n/a	0.017	n/a	2	2	Erosion of natural deposits; Discharge of drilling waste; discharge from metal refineries.
Trihalomethanes (ppb)	51.7	18.7-71.2	51.7	18.7-71.2	80	0	Byproduct of drinking water chlorination
Haloacetic Acids (ppb)	11.7	3.30-17.7	11.7	3.30-17.7	60	0	Byproduct of drinking water chlorination
Lead (ppb)	90th percentile 10.0ppb	nd-53.8	90th percentile 10.0	nd-53.8	15	0	Corrosion of household plumbing; natural deposits
Copper (ppm)	90th percentile 0.027ppm	n/a	90th percentile 0.027ppm	n/a	1.3	0	Corrosion of household plumbing; natural deposits

****From Cincinnati Water Works, "11 out of 172 samples tested during the most recent compliance period were > the Action Level for Lead".**

**** From Cincinnati Water Works," 0 out of 172 samples tested during the most recent compliance period were > the Action Level for Copper".**

Note1. The Ohio EPA requires monitoring certain contaminants once per year. The value is the maximum detected concentration.

TT = A required process intended to reduce the level of a contaminant in drinking water

Results of GCWW Voluntary Monitoring for Cryptosporidium: GCWW has tested for Crypto in treated waters and never detected it. GCWW also tested for Crypto in the Ohio River surface water and it was found in 0 of 22 samples during 2015.

Sodium: Tested as water leaves treatment plants Miller Plant: 33mg/ l

[1] The value reported under "highest compliance level detected" for TOC is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value of <1 indicates that the water system is in compliance with TOC removal requirements. A value of >1 indicates a violation of the TOC removal requirements.

Bolton Plant: 31mg/l.

Average Water Hardness: **Miller Plant - 8 grains per gallon (137 mg/L)**
Bolton Plant - 10 grains per gallon (171 mg/l)

Unregulated Contaminants for which the EPA requires monitoring 2017

	Miller Plant		Bolton Plant				
Substance	**Average Level Detected**	**Range of Detection**	**Average Level Detected**	**Range of Detection**	**Violation**	**MCLG**	**Sources of Substances**
Chloroform (ppb)	8.96	.92-25.0	8.96	.92-25.0	n/a	70	Byproduct of drinking water disinfection
Bromodichloromethane (ppb)	9.62	4.23-19.6	9.62	4.23-19.6	n/a	0	Byproduct of drinking water disinfection
Dibromochloromethane (ppb)	12.1	4.98-23.5	12.1	4.98-23.5	n/a	60	Byproduct of drinking water disinfection .
Bromoform (ppb)	7.75	n/a	7.75	.56-26.3	n/a	0	Byproduct of drinking water disinfection.
Monochloroacetic Acid (ppb)	n/d	n/d-1.44	n/d	n/d-1.44	n/a	30	Byproduct of drinking water disinfection.
Monobromoacetic Acid (ppb)	1.07	nd-5.36	1.07	nd-5.36	n/a	n/a	Byproduct of drinking water disinfection.
Dibchloroacetic Acid (ppb)	2.91	nd-7.54	2.91	nd-7.54	n/a	0	Byproduct of drinking water disinfection.
Tricholoracetic Acid (ppb)	nd	nd-3.97	nd	nd-3.97	n/a	20	Byproduct of drinking water disinfection.
Dibromoacetic Acid (ppb)	3.51	nd-6.77	3.51	nd-6.77	n/a	n/a	Byproduct of drinking water disinfection
Sulfate (ppm)	64	47-95	n/a	n/a	n/a	n/a	Erosion of natural deposits
Chlorate (ppb) (2013)	23	n/d – 41	n/d	n/a	n/a	n/a	Detected during Unregulated Contaminant monitoring
Hexavalent Chromium Dissolved (ppb) (2013)	0.071	.048-.099	0.21	0.2-0.22	n/a	n/a	Detected during Unregulated Contaminant monitoring
1,4-Dioxane (ppb) (2013)	0.326	n/d-.575	0.545	0.276-0.814	n/a	n/a	Detected during Unregulated Contaminant monitoring
Molybdenum (ppb) (2013)	1.6	1.0-2.9	4.2	3.5-4.9	n/a	n/a	Detected during Unregulated Contaminant monitoring
Strontium (ppb) (2013)	204	170-240	170	160-180	n/a	n/a	Detected during Unregulated Contaminant monitoring
Vanadium (ppb) (2013)	0.26	nd-0.56	0.64	0.60-0.72	n/a	n/a	Detected during Unregulated Contaminant monitoring

Compliance Monitoring and Disinfection Requirements. Warren County Water Department 2017

Substance	Highest Level Detected	Range of Detection	MCL	Ideal Goals (MCLG)	Sources of Substances
Chlorine (ppm)	1.1	0.2 - 2.0	4.0	4.0	Element used for disinfection
Total Coliform Monitoring	None	n/a	None	None	Safely removed using chlorine. 180 samples taken with no positive coliforms

Action Levels (AL) control copper and lead. Samples are collected and ranked by how much lead or copper they contain. The 90th percentile of each ranking is determined. If the 90th percentile exceeds the Action Level, specific corrective actions are required. None of our 90th percentiles exceeded the Action Levels from the 30 samples collected from the Socialville System residences in 2015 as part of our triennial testing requirements.

Substance	Highest Level Detected	Range of Detection	MCL	Ideal Goals (MCLG)	Sources of Lead and Copper	Number of Samples Greater Than Action Level
Copper (ppb)	164	5.0-164	1300	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.	0
Lead (ppb)	11.2	<2.0-11.2	AL = 15	0	Corrosion of household plumbing; natural deposits.	0

"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 Socialville 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 one (1) to five (5) 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. The WCWSD is making available lead sampling kits for a fee of $10. Call the WCWSD Main Office at 513-695-1377 for more information on these kits. For more information on lead in drinking water, testing methods, and steps you can take to minimize exposure: Safe Drinking Water Hotline at **http://www.epa.gov/safewater/lead**,and Ohio EPA: Learn About Lead: **http://epa.ohio.gov/pic/lead.aspx**."

Unregulated Contaminants for which the EPA required monitoring under the Information Collection Rule to determine where certain substances occur and whether or not the substances should be regulated. Stage II Disinfection by-products monitored by Warren County Water Department**. 2017**

Substance	Highest Level Detected	Range of Detection	MCL	Ideal Goals (MCLG)	Sources of Substances
Total Trihalomethanes (TTHM) (ppb)	52.07	17.93-52.07	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants.
Bromodichloromethane (ppb)	12.53	4.31-12.53	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Bromoform (ppb)	14.35	0.9-14.35	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Chloroform (ppb)	13.74	2.07-13.74	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Dibromochloromethane (ppb)	20.66	7.11-20.66	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Total Haloacetic acids (HAA5) (ppb)	14.85	5.445-14.85	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Bromochloroacetic acid (ppb)	5.483	2.306-5.483	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Dibromoacetic acid (ppb	7.512	4.395-7.512	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Dichloroacetic acid (ppb)	7.595	1.050-7.595	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Monobromoacetic acid (ppb)	<1.0	<1.0	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Monochloroacetic acid (ppb)	<2.0	<2.0	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Trichloroacetic acid (ppb)	3.929	<1.0-3.929	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter

Additional Information

To ensure that tap water is safe to drink, the EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The sources of drinking water (including 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: (1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife, (2) 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, (3) pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses, (4) 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, (5) radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities, (6)

Cryptospiridium is a microscopic organism that, when ingested, can result in diarrhea, fever, and other intestinal symptoms. Most healthy people can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised persons to consult their doctor about precautions to take to avoid infection. Cryptospiridium must be ingested to cause disease, and it can be spread through means other than drinking water.

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Warren County Water and Sewer Department

CONSUMER CONFIDENCE REPORT (CCR)

2017 Water Quality Report for Sharts Road System

PWSID# 8346912

This annual water quality report describes the water source, lists test results, and contains important information about drinking water from the previous year. Reporting is a requirement of the Safe Drinking Water Act of 1996.
We encourage public participation in our community's future. The Warren County Board of Commissioners meeting is held on Tuesday at 9:00 A.M. and every other Thursday at 5:00 P.M. The public is welcome.

Water Source

Warren County purchases its water for the Sharts Road area from the City of Springboro. The City of Springboro obtains its public drinking water supply from the buried sand and gravel aquifers associated with the Great Miami River. The City of Springboro has five (5) wells to draw water from the aquifer. The wells are located on the west side of the Great Miami River at 8858 Dayton-Oxford Road. The Water Treatment Plant and well field is south of Chautauqua and borders the Village of Carlisle. Well water is pumped directly to the water treatment plant, where the water is filtered and treated with chlorine and fluoride.

License

The Sharts Road System currently has an unconditioned license to operate.

Whom to Contact

For further information about water quality, contact the Warren County Water and Sewer Department. Hours of operation are 8:00 AM -5:00 PM, Monday through Friday:

Superintendent of Operations	**(513)683-3687**	**FAX (513)697-1752**
Laboratory Supervisor	**(513) 583-3091**	**FAX (513) 583-3093**

WEB SITE: http://www.co.warren.oh.us/

Send correspondence to: **Warren County Water and Sewer, PO Box 530, Lebanon, OH 45036-0530**

An Explanation of the Water Quality Data Tables

This report is based upon tests conducted by the City of Springboro and Warren County's Water Laboratory. Terms used in the Water Quality Tables and in other parts of this report are defined here.
Maximum Contaminant Level or 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 or 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.
Action Level (AL): Action level or concentration of a contaminant when exceeded triggers treatment or other requirements which a water system must follow.
ppm: parts per million
ppb: parts per billion
n. r.: not regulated

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people undergoing chemotherapy, people 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 Cryptospiridium and other microbial contaminants are available from the **Safe Drinking Water Hotline (800-426-4791)**.

Sharts Road - Required Monitoring information - 2017

Substance	Highest Level Detected	Range of Detection	MCL	Ideal Goals (MCLG)	Sources of Substances
**Fluoride (ppm)	1.09	0.79 - 1.09	4	4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
**Nitrate (ppm)	1.08	1.08	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
*Total Coliform Monitoring	None	None	n/a	n/a	Safely removed using chlorine. No coliform bacteria detected in 12 samples collected in 2017
*Chlorine Residual (ppm)	1.6	0.2 - 2.0	4.0	4.0	Element used for disinfection

***** Collected by the Springboro Water Department***
****Collected by the Warren County Water Department***

The table below lists all the drinking water contaminants that were detected between January 1 and December 31, 2017. The presence of the contaminants in the water does not necessarily indicate that the water poses a health risk.

Sharts Road - Required Monitoring Information - 2017

Substance	Highest Level Detected	Range of Detection	MCL	Ideal Goals (MCLG)	Sources of Substances
*Total Trihalomethanes (TTHM's) (ppb)	19.18	n/a	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants products of drinking water chlorination
Bromodichloromethane (ppb)	5.75	5.75	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Bromoform (ppb)	1.85	1.85	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Chloroform (ppb)	6.52	6.52	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Dibromochloromethane (ppb)	5.06	5.06	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
*HAA5 (Total Haloacetic Acids) (ppb)	7.077	n/a	60	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants products of drinking water chlorination
Bromochloroacetic Acid (ppb)	2.628	2.628	60	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants products of drinking water chlorination
Dibromoacetic Acid (ppb)	2.670	2.670	60	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants products of drinking water chlorination
Dichloroacetic Acid (ppb)	3.363	3.363	60	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants products of drinking water chlorination
Monobromoacetic Acid (ppb)	<1.0	<1.0	60	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants products of drinking water chlorination
Monochloroacetic Acid (ppb)	<1.0	<1.0	60	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants products of drinking water chlorination
Trichloroacertic Acid (ppb)	1.044	1.044	60	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants products of drinking water chlorination

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Action Levels (AL) control Copper and Lead. Samples are collected and ranked by how much lead or copper they contain. The 90th percentile of each ranking is determined. If the 90th percentile exceeds the Action Level, specific corrective actions are required. None of our 90th percentiles exceeded the Action Levels. **Warren County collected five (5) samples during 2017.**

Substance	Detected	Range of Detection	MCL	MCLG	Sources	Number of Samples Greater Than Action Level
Copper	142ppb 90th percentile	<50.0-191.0 ppb	AL = 1300 ppb	1300 ppb	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.	0
Lead	<5.0 ppb 90th percentile	<5.0 ppb	AL = 15 ppb	0 ppb	Corrosion of household plumbing; natural deposits.	0

"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 Sharts Road 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 one (1) to five (5) 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. The WCWSD is making available lead sampling kits for a fee of $10. Call the WCWSD Main Office at 513-695-1377 for more information on these kits. For more information on lead in drinking water, testing methods, and steps you can take to minimize exposure: Safe Drinking Water Hotline at **http://www.epa.gov/safewater/lead**, and Ohio EPA: Learn About Lead: **http://epa.ohio.gov/pic/lead.aspx**."

Additional Information

To ensure that tap water is safe to drink, the EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The sources of drinking water (including 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: (1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife, (2) 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, (3) pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses, (4) 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, (5) radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities, (6) Cryptospiridium is a microscopic organism that, when ingested, can result in diarrhea, fever, and other intestinal symptoms. Most healthy people can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised persons to consult their doctor about precautions to take to avoid infection. Cryptospiridium must be ingested to cause disease, and it can be spread through means other than drinking water. More information about contaminants and potential health effects can be obtained by calling the **Environmental Protection Agency's Drinking Water Hotline (800-426-4791)**.

Warren County Water and Sewer Department

CONSUMER CONFIDENCE REPORT (CCR)

2017 Water Quality Report for the Socialville Water System
PWSID# 8304203

This annual water quality report describes the water source, lists test results, and contains important information about drinking water. We encourage public participation in our community's future. The Warren County Board of Commissioners meeting is held on Tuesday at 900 A.M. and every other Thursday at 5:00 P.M. The public is welcome.

Water Source

Water for the Socialville Water System is purchased by Warren County from the Cincinnati Water Works. Water is withdrawn from both the Ohio River, which is surface water, and the Great Miami Aquifer, which is groundwater. The Ohio River water is treated at the Miller Treatment Plant and Great Miami Aquifer groundwater is treated at the Bolton Treatment Plant. The finished water is then distributed to Warren County customers. It has been determined by the OEPA that the aquifer that supplies the Bolton Treatment Plant has a high susceptibility to contamination due to;

- The absence of a protective clay surface, and;
- The water is shallow, and;
- There are potential sources of contaminate sources nearby, and;
- Low levels of nitrates within the aquifer.

This does not mean that the aquifer is contaminated; only that it is vulnerable to contamination. The use of land ordinances, public education, and emergency response plans to prevent contamination of the aquifer.

License

The Socialville Water System currently operates with an unconditioned license to operate.

Whom to Contact

For further information about water quality, contact the Warren County Water and Sewer Department.
Hours of operation are 8:30 AM -5:00 PM, Monday through Friday:

Superintendent of Operations	**(513) 683-3687**	**FAX (513) 697-1752**
Laboratory Supervisor	**(513) 583-3091**	**FAX (513) 583-3093**

WEB SITE: http://www.co.warren.oh.us/

Send correspondence to: **Warren County Water and Sewer, PO Box 530, Lebanon, OH 45036-0530**

An Explanation of the Water Quality Data Tables

This report is based upon tests conducted by the Cincinnati Water Works and the Warren County Water Laboratory. Terms used in the Water Quality Tables and in other parts of this report are defined here.
Maximum Contaminant Level or 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 or 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.
Action Level (AL): Action level or concentration of a contaminant when exceeded triggers treatment or other requirements which a water system must follow.
ppm: parts per million
ppb: parts per billion
n. r.: not regulated
NTU: Nephelometric Turbidity Unit, used to measure clarity in drinking water
n. d.: Not detected or less than the detection level
n/a: Not Applicable
pCi/L: picoCuries per Liter

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised peopleundergoing chemotherapy, people 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 Cryptospiridium and other microbial contaminants are available from the **Safe Drinking Water Hotline (800-426-4791)**.

The tables below list the drinking water contaminants detected between January 1 and December 31, 2017. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. These Substances were tested by Cincinnati Water Works

Regulated Contaminants: Contaminants subject to an MCL, Action Level, or Treatment Technique

	Miller Plant		**Bolton Plant**				
Substance	**Highest Level Detected**	**Range of Detection**	**Highest Level Detected**	**Range of Detection**	**MCL**	**Ideal Goals (MCLG)**	**Sources of Substances**
Fluoride (ppm)	0.87	0.73-1.01	0.88	0.62-1.00	4	4	Erosion of natural deposits; additive that promotes strong teeth.
Nitrate (ppm)	1.39	0.55-1.39	0.94	n/a	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Total Organic Carbon (ppm)	1.90	1.73-3.43	nr	nr	TT[1]	n/a	Naturally present in the environment.
Turbidity	0.09 100% < 0.3 NTU	0.04 - 0.15	nr	nr	n/a	TT[1] < 1 NTU max and TT2 <0.3 NTU 95% of the time	Soil erosion runoff.
Barium (ppm)	0.036	n/a	0.017	n/a	2	2	Erosion of natural deposits; Discharge of drilling waste; discharge from metal refineries.
Trihalomethanes (ppb)	51.7	18.7-71.2	51.7	18.7-71.2	80	0	Byproduct of drinking water chlorination
Haloacetic Acids (ppb)	11.7	3.30-17.7	11.7	3.30-17.7	60	0	Byproduct of drinking water chlorination
Lead (ppb)	90th percentile 10.0ppb	nd-53.8	90th percentile 10.0 ppb	nd-53.8	15	0	Corrosion of household plumbing; natural deposits
Copper (ppm)	90th percentile 0.027ppm	n/a	90th percentile 0.027ppm	n/a	1.3	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from

****From Cincinnati Water Works, " 11 out of 172 samples tested during the most recent compliance period were > the Action Level for Lead".**

**** From Cincinnati Water Works, " 0 out of 172 samples tested during the most recent compliance period were > the Action Level for Copper".**

[1] The value reported under "highest compliance level detected" for TOC is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value of <1 indicates that the water system is in compliance with TOC removal requirements. A value of >1 indicates a violation of the TOC removal requirements.

Note1. The Ohio EPA requires monitoring certain contaminants once per year. The value is the maximum detected concentration.

TT = A required process intended to reduce the level of a contaminant in drinking water

Results of GCWW Voluntary Monitoring for Cryptosporidium: GCWW has tested for Crypto in treated waters and never detected it. GCWW also tested for Crypto in the Ohio River surface water and it was found in 0 of 22 samples during 2015.

Sodium: Tested as water leaves treatment plants Miller Plant: 33mg/ l
Bolton Plant: 31mg/l.

Average Water Hardness: **Miller Plant - 8 grains per gallon (137 mg/L)**
Bolton Plant - 10 grains per gallon (171 mg/l)

Unregulated Contaminants for which the EPA requires monitoring 2017

	Miller Plant		**Bolton Plant**				
Substance	**Average Level Detected**	**Range of Detection**	**Average Level Detected**	**Range of Detection**	**Violation**	**MCLG**	**Sources of Substances**
Chloroform (ppb)	8.96	.92-25.0	8.96	.92-25.0	n/a	70	Byproduct of drinking water disinfection
Bromodichloromethane (ppb)	9.62	4.23-19.6	9.62	4.23-19.6	n/a	0	Byproduct of drinking water disinfection
Dibromochloromethane (ppb)	12.1	4.98-23.5	12.1	4.98-23.5	n/a	60	Byproduct of drinking water disinfection .
Bromoform (ppb)	7.75	n/a	7.75	.56-26.3	n/a	0	Byproduct of drinking water disinfection.
Monochloroacetic Acid (ppb)	n/d	n/d-1.44	n/d	n/d-1.44	n/a	30	Byproduct of drinking water disinfection.
Monobromoacetic Acid (ppb)	1.07	nd-5.36	1.07	nd-5.36	n/a	n/a	Byproduct of drinking water disinfection.
Dibchloroacetic Acid (ppb)	2.91	nd-7.54	2.91	nd-7.54	n/a	0	Byproduct of drinking water disinfection.
Tricholoracetic Acid (ppb)	nd	nd-3.97	nd	nd-3.97	n/a	20	Byproduct of drinking water disinfection.
Dibromoacetic Acid (ppb)	3.51	nd-6.77	3.51	nd-6.77	n/a	n/a	Byproduct of drinking water disinfection
Sulfate (ppm)	64	47-95	n/a	n/a	n/a	n/a	Erosion of natural deposits
Chlorate (ppb) (2013)	23	n/d – 41	n/d	n/a	n/a	n/a	Detected during Unregulated Contaminant monitoring

Hexavalent Chromium Dissolved (ppb) (2013)	0.071	.048-.099	0.21	0.2-0.22	n/a	n/a	Detected during Unregulated Contaminant monitoring
1,4-Dioxane (ppb) (2013)	0.326	n/d-.575	0.545	0.276-0.814	n/a	n/a	Detected during Unregulated Contaminant monitoring
Molybdenum (ppb) (2013)	1.6	1.0-2.9	4.2	3.5-4.9	n/a	n/a	Detected during Unregulated Contaminant monitoring
Strontium (ppb) (2013)	204	170-240	170	160-180	n/a	n/a	Detected during Unregulated Contaminant monitoring
Vanadium (ppb) (2013)	0.26	nd-0.56	0.64	0.60-0.72	n/a	n/a	Detected during Unregulated Contaminant monitoring

Compliance Monitoring and Disinfection Requirements. Warren County Water Department 2017

Substance	Highest Level Detected	Range of Detection	MCL	Ideal Goals (MCLG)	Sources of Substances
Chlorine (ppm)	1.1	0.2 - 2.0	4.0	4.0	Element used for disinfection
Total Coliform Monitoring	None	n/a	None	None	Safely removed using chlorine. 180 samples taken with no positive coliforms

Action Levels (AL) control copper and lead. Samples are collected and ranked by how much lead or copper they contain. The 90th percentile of each ranking is determined. If the 90th percentile exceeds the Action Level, specific corrective actions are required. None of our 90th percentiles exceeded the Action Levels from the 30 samples collected from the Socialville System residences in 2015 as part of our triennial sampling requirements.

Substance	Highest Level Detected	Range of Detection	MCL	Ideal Goals (MCLG)	Sources of Lead and Copper	Number of Samples Greater Than Action Level
Copper (ppb)	164	5.0-164	1300	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.	0
Lead (ppb)	11.2	<2.0-11.2	AL = 15	0	Corrosion of household plumbing; natural deposits.	0

"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 Socialville 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 one (1) to

five (5) 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. The WCWSD is making available lead sampling kits for a fee of $10. Call the WCWSD Main Office at 513-695-1377 for more information on these kits. For more information on lead in drinking water, testing methods, and steps you can take to minimize exposure: Safe Drinking Water Hotline at **http://www.epa.gov/safewater/lead**,and Ohio EPA: Learn About Lead: **http://epa.ohio.gov/pic/lead.aspx**."

Unregulated Contaminants for which the EPA required monitoring under the Information Collection Rule to determine where certain substances occur and whether or not the substances should be regulated. Stage II Disinfection by-products monitored by Warren County Water Department**. 2017**

Substance	Highest Level Detected	Range of Detection	MCL	Ideal Goals (MCLG)	Sources of Substances
Total Trihalomethanes (TTHM) (ppb)	52.07	17.93-52.07	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants.
Bromodichloromethane (ppb)	12.53	4.31-12.53	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Bromoform (ppb)	14.35	0.9-14.35	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Chloroform (ppb)	13.74	2.07-13.74	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Dibromochloromethane (ppb)	20.66	7.11-20.66	80	0	By-products of drinking water chlorination. Form when naturally occurring organic matter reacts with chlorine and other disinfectants
Total Haloacetic acids (HAA5) (ppb)	14.85	5.445-14.85	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Bromochloroacetic acid (ppb)	5.483	2.306-5.483	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Dibromoacetic acid (ppb	7.512	4.395-7.512	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Dichloroacetic acid (ppb)	7.595	1.050-7.595	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter

Monobromoacetic acid (ppb)	<1.0	<1.0	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Monochloroacetic acid (ppb)	<2.0	<2.0	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter
Trichloroacetic acid (ppb)	3.929	<1.0-3.929	60	0	By-products of drinking water Chlorination. Are formed when chlorine reacts with naturally occurring organic matter

Additional Information

To ensure that tap water is safe to drink, the EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The sources of drinking water (including 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: (1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife, (2) 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, (3) pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses, (4) 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, (5) radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities, (6)

Cryptospiridium is a microscopic organism that, when ingested, can result in diarrhea, fever, and other intestinal symptoms. Most healthy people can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised persons to consult their doctor about precautions to take to avoid infection. Cryptospiridium must be ingested to cause disease, and it can be spread through means other than drinking water.

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).