

# Nicholas County Water District

## Water Quality Report 2020

Water System ID: KY0910314  
Manager: Kirk Robinson  
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Meeting location and time:  
Nicholas Co. Water District Office  
Fourth Tuesday, monthly at 5 PM

Nicholas County Water District purchases water from several suppliers. All of our suppliers withdraw and treat surface water from the following sources: Western Fleming Water District and Carlisle Water Department (Licking River) and Paris Water Works (Stoner Creek). The water from Paris is purchased through KY American (Millersburg). All of these sources have had an assessment conducted to determine the susceptibility to contamination. These analyses indicate that the susceptibility for all sources are generally moderate. There are numerous permitted operations, activities and other potential contaminant sources of moderate concern within the watersheds, which cumulatively increase the potential for the release of contaminants. Areas of concern include transportation corridors, with numerous bridges and culverts, and agricultural activities which can result in pesticides and herbicides being washed into the source water as runoff during rain events. The complete Source Water Assessment Plans can be reviewed at the respective water system offices. Contact our office for information regarding specific service areas for each water source.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects may be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and may pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include: Microbial contaminants, such as viruses and bacteria, (sewage plants, septic systems, livestock operations, or wildlife). Inorganic contaminants, such as salts and metals, (naturally occurring or from stormwater runoff, wastewater discharges, oil and gas production, mining, or farming). Pesticides and herbicides, (stormwater runoff, agriculture or residential uses). Organic chemical contaminants, including synthetic and volatile organic chemicals, (by-products of industrial processes and petroleum production, or from gas stations, stormwater runoff, or septic systems). Radioactive contaminants, (naturally occurring or from oil and gas production or mining activities). In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water to provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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. Your local public water system is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

### Some or all of these definitions may be found in this report:

**Maximum Contaminant Level (MCL)** - the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**Maximum Contaminant Level Goal (MCLG)** - the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**Maximum Residual Disinfectant Level (MRDL)** - the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG)** - the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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

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

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

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

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

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

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

**Millirems per year (mrem/yr)** - measure of radiation absorbed by the body.

**Million Fibers per Liter (MFL)** - a measure of the presence of asbestos fibers that are longer than 10 micrometers.

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

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

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

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

Spanish (Español) Este informe contiene información muy importante sobre la calidad de su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.

**This report will not be mailed unless requested. Copies are available at our office. If you would like a copy mailed to you please contact our office.**

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

**To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.**

**Regulated Contaminant Test Results from Nicholas County Water District:**

<b>Regulated Contaminant Test Results Nicholas County Water District</b>							
<b>Contaminant [code] (units)</b>	<b>MCL</b>	<b>MCLG</b>	<b>Report Level</b>	<b>Range of Detection</b>	<b>Date of Sample</b>	<b>Violation</b>	<b>Likely Source of Contamination</b>
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.11 (highest average)	0.69 to 1.57	2020	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	54 (high site average)	11 to 103 (range of individual sites)	2020	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	78 (high site average)	12 to 97 (range of individual sites)	2020	No	Byproduct of drinking water disinfection.
<b>Household Plumbing Contaminants</b>							
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.168 (90th percentile)	0.0147 to 0.214	Jul-20	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	2 (90th percentile)	0 to 3	Jul-20	No	Corrosion of household plumbing systems

**Regulated Contaminant Test Results from Western Fleming County Water District:**

<b>Regulated Contaminant Test Results Western Fleming Water District</b>							
<b>Contaminant [code] (units)</b>	<b>MCL</b>	<b>MCLG</b>	<b>Report Level</b>	<b>Range of Detection</b>	<b>Date of Sample</b>	<b>Violation</b>	<b>Likely Source of Contamination</b>
Barium [1010] (ppm)	2	2	0.016	0.016 to 0.016	May-20	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.60	0.6 to 0.6	May-20	No	Water additive which promotes strong teeth
Mercury [1035] (ppb)	2	2	0.2	0.2 to 0.2	May-20	No	Erosion of natural deposits; refineries and factories; landfills; runoff from cropland
Nitrate [1040] (ppm)	10	10	0.369	0.369 to 0.369	Feb-20	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.38 (lowest average)	1.00 to 2.55 (monthly ratios)	2020	No	Naturally present in environment.

\*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.

**Other Constituents**

<b>Turbidity (NTU) TT</b> * Representative samples	<b>Allowable Levels</b>	<b>Highest Single Measurement</b>	<b>Lowest Monthly %</b>	<b>Violation</b>	<b>Likely Source of Turbidity</b>
Turbidity is a measure of the clarity of the water and not a contaminant.	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.06	100	No	Soil runoff

### Regulated Contaminant Test Results from Paris Water:

Regulated Contaminant Test Results		Paris Water Works					
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Barium [1010] (ppm)	2	2	0.01	0.01 to 0.01	Feb-20	No	Drilling wastes; metal refineries; erosion of natural deposits
Beryllium [1075] (ppb)	4	4	0.1	0.1 to 0.1	Feb-20	No	Coal-burning factories; metal refineries; electrical, defense, and aerospace industries
Fluoride [1025] (ppm)	4	4	0.70	0.7 to 0.7	Feb-20	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	1.7	1.7 to 1.7	Feb-20	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.5 (lowest average)	1.32 to 3.56 (monthly ratios)	2020	No	Naturally present in environment.
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.							
Other Constituents							
Turbidity (NTU) TT * Representative samples	Allowable Levels		Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity	
Turbidity is a measure of the clarity of the water and not a contaminant.	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples		0.158	100	No	Soil runoff	

### Regulated Contaminant Test Results from Carlisle Water Department:

Regulated Contaminant Test Results		Carlisle Water Department					
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Barium [1010] (ppm)	2	2	0.011	0.011 to 0.011	Feb-20	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.73	0.73 to 0.73	Feb-20	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.374	0.374 to 0.374	Feb-20	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.51 (lowest average)	1.36 to 1.95 (monthly ratios)	2020	No	Naturally present in environment.
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.							
Other Constituents							
Turbidity (NTU) TT * Representative samples	Allowable Levels		Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity	
Turbidity is a measure of the clarity of the water and not a contaminant.	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples		0.29	100	No	Soil runoff	

#### Violation 2020-9917647 from Carlisle Water Department

In May of 2019, Carlisle Water Department received a violation because more than 5% of their samples had a high turbidity reading during a time in which they had a main intake pump failure. They informed their customers of the turbidity issue at the time, but did not perform a full public notice. A public notification was sent to their customers, but the notification was sent late. Notification was due by 9/14/2019 but wasn't sent out until 12/6/2019. Because of this, they were issued another violation once the state reviewed the paperwork. All paperwork has been submitted to the state and Carlisle has taken steps to ensure they do not have this kind of oversight in the future.

**Violation 2020-9950457**

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we did to correct this situation.

*We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During 1/1/2020-3/31/2020, we did not complete all monitoring by failing to report or correctly report testing for Haloacetic Acids and Trihalomethanes (OEL). Therefore, we could not verify the quality of your drinking water to the primacy agency during that time.*

For the Stage 2 DBPR requirements we monitor for trihalomethanes (THM) and haloacetic acids (HAA). The standard for THM is 0.080 mg/L and the standard for HAA is 0.060 mg/L.

A calculation of analytical results is part of an Operational Evaluation Level Report (OEL) to determine the potential of exceeding these standards. The operational evaluation requirements are intended as an indicator of operational performance and to allow systems to identify proactive steps to remain in compliance. Failure to submit an evaluation report to the State in the required time frame is a violation and requires a public notification.

We submitted an OEL for the period 1/1/2020-3/31/2020, but the report was late. There is nothing you need to do.

There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

For more information, please contact Kirk Robinson at (859) 289-3157 or 1639 Old Paris Road, Carlisle, KY 40311.

*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*