

# WATER QUALITY **REPORT** 2023

## WATER SOURCE **INFORMATION**

Northern Kentucky Water District (NKWD) is the largest water district and the third largest water utility in the Commonwealth of Kentucky. NKWD serves approximately 300,000 people in Campbell and Kenton Counties and portions of Boone, Grant and Pendleton Counties. NKWD staff are fully committed to excellence, working hard to uphold NKWD's mission – to provide our customers a safe, clean and sufficient water supply through a reliable and interactive system that meets all State and Federal standards, while delivering great value at a reasonable cost.

NKWD operates three water treatment plants: Taylor Mill, Fort Thomas and Memorial Parkway. The Taylor Mill treatment plant's water source is the Licking River while the Fort Thomas and Memorial Parkway treatment plants draw water from the Ohio River.



## DRINKING WATER REGULATIONS

NKWD's drinking water meets all of the Environmental Protection Agency's (EPA) health standards. Our staff gather water samples from over 155 locations each month. We want to make sure that we have an accurate picture of the water quality. Please refer to the charts for more information regarding the water quality data for the calendar year of 2023.

The surface water sources for NKWD are the Ohio and Licking rivers. A source water assessment has been completed on each. The following is a summary of the susceptibility analysis that is part of the source water assessment. Several areas of concern are related to the extensive development of transportation infrastructure, the potential for spills, high degree of impervious cover and polluted runoff. Areas of row crops and urban and recreational grasses introduce the potential for herbicide, pesticide, and fertilizer use – possible nonpoint source contaminants. Bridges, railroads, ports, waste handlers or generators, and Tier II hazardous chemical users\* in the area introduce the potential for spills or leaks of hazardous materials into the source water. Landfills and permitted discharges are relatively high in number for a supply area. Other areas of concern include several segments of streams already assessed as having impairments, power lines right-of-way with potential herbicide use, and residential septic systems located throughout the watershed. Since the intakes are in urban areas, the threat of underground storage tanks leaking must also be taken into account. The entire source water assessment report is available at the Northern Kentucky Area Development District, 22 Spiral Drive, Florence, KY 41042. Phone: **859-283-1885**.

\* Tier II hazardous chemical users apply to any facility that is required under regulations by the Occupational Safety and Health Administration to prepare or have available a Safety Data Sheet for a hazardous chemical present at the facility.






## REGULATED CONTAMINANTS IN THE WATER SUPPLY

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at **1-800-426-4791**.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

### CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:

-  **Microbial Contaminants.** Examples include viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
-  **Inorganic Contaminants.** Examples include salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
-  **Pesticides and Herbicides.** These may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
-  **Organic Chemical Contaminants.** These include synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
-  **Radioactive Contaminants.** These can be naturally-occurring or be the result of oil and gas production and mining activities.

# IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

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 report in a public place or distributing copies by hand or mail.

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 for 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** at **1-800-426-4791**.



## STAGE 2 DISINFECTANTS AND DISINFECTION BYPRODUCTS RULE (DBPR)

Disinfection of drinking water is one of the important steps in water treatment, but sometimes the disinfectants can react with naturally-occurring materials in the water to form byproducts. Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5) are disinfection byproducts that NKWD is required to monitor. The Stage 2 DBPR is an EPA Federal Regulation that looks at levels of TTHMs and HAA5 in drinking water. Please refer to the 2023 Water Quality Data charts.

In an effort to reduce the disinfection byproducts and meet the Stage 2 DBPR requirements, NKWD has implemented advanced treatment technologies.

The major components of advanced treatment include post-filtration granular activated carbon (GAC) adsorption followed by ultraviolet light (UV) treatment. The EPA considers GAC to be the “best available treatment” for the DBPR regulation and is an additional barrier for some of the emerging compounds. Implementation of advanced treatment allows NKWD to meet Stage 2 DBPR requirements and other current and future water quality concerns.

## INFORMATION ABOUT LEAD

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. NKWD is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk.

Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water.

If you are concerned about lead in your water and wish to have your water tested, contact NKWD at **(859) 578-5451**. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at

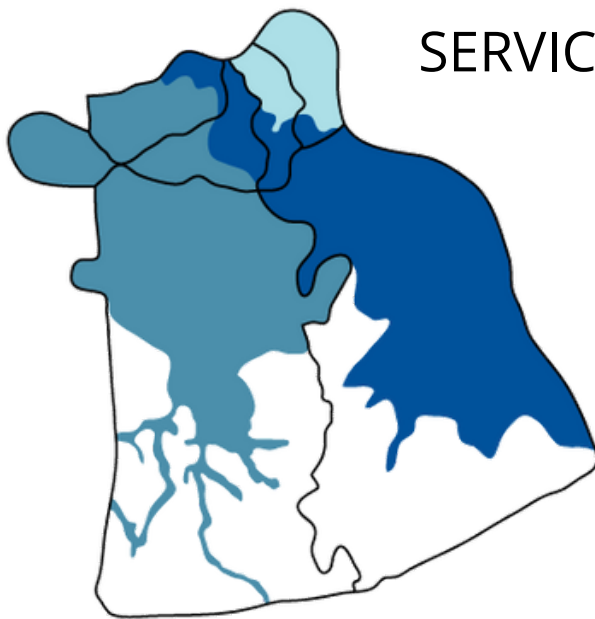
**[epa.gov/safewater/lead](https://epa.gov/safewater/lead)**

*Example of a lead pipe*





# SERVICE AREA BY TREATMENT SYSTEM



- Fort Thomas System Only
- Fort Thomas and Taylor Mill System
- Memorial Parkway System

The map does not include wholesale customers.



Fort Thomas  
Treatment Plant



Memorial Parkway  
Treatment Plant



Taylor Mill  
Treatment Plant

## ABBREVIATIONS AND DEFINITIONS

**MCL** = Maximum Contaminant Level. 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.

**MCLG** = Maximum Contaminant Level Goal. 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.

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

**AL** = Action Level. The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Turbidity** = A measurement of the cloudiness of the water. We monitor turbidity because it is a good indicator of the effectiveness of our filtration system.

**ND** = Not Detected above the reporting limit.

**ntu** = Nephelometric turbidity units.


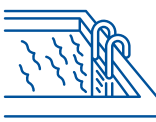

**mrem/yr** = Millirems per year.

**pCi/l** = Picocuries per liter.

**Range of Detection** = The lowest and highest levels of detection.

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

**MRDLG** = Maximum Residual Disinfectant Level Goal. 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.

ppm = parts per million or milligrams per liter, mg/l.	ppb = parts per billion, or micrograms per liter, ug/l.	ppt = parts per trillion, or nanograms per liter, ng/l.
 <p>One part per million corresponds to one minute in two years or <i>one drop of water in a hot tub.</i></p>	 <p>One part per billion corresponds to one minute in 2,000 years or <i>one drop of water in an Olympic size swimming pool.</i></p>	 <p>One part per trillion corresponds to 30 seconds in one million years or <i>one drop of water in a six acre lake.</i></p>

# 2023 WATER QUALITY DATA: FORT THOMAS SYSTEM

Contaminant (units)	Average Level Detected	Range of Detections		Highest Annual Average	MCL	MCLG	Violation Yes/No	Typical Sources of Contaminant
		Lowest	Highest					
<b>Total Coliform Bacteria</b> (% positive samples)	0%	0%	2.40%	-	TT ( <5% Positive )	N/A	No	Naturally present in the environment
<b>Barium</b> (ppm)	0.030	0.030	0.030	0.030	2	2	No	Erosion of natural deposits; discharge of drilling wastes; and discharge from metal refineries
<b>Chlorine</b> (ppm)	1.15	1.07	1.23	1.15	4 (MRDL)	4 (MRDLG)	No	Water additive used to control microbes
<b>Fluoride</b> (ppm)	0.82	0.82	0.82	-	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
<b>Nitrate</b> (ppm)	0.53*	0.53	0.53	-	10	10	No	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks; sewage
<b>Turbidity</b> (ntu)	0.04	0.02	0.09	100%**	TT**	N/A	No	Soil runoff
<b>HAA5</b> [haloacetic acid 5] (ppb) Stage 2 Disinfectants and Disinfection Byproducts Rule Data	6.1	ND	19.9	19.24†	60	N/A	No	Byproduct of drinking water disinfection
<b>TTHMs</b> [total trihalomethanes] (ppb) Stage 2 Disinfectants and Disinfection Byproducts Rule Data	28.7	9.9	54.8	43.55†	80	N/A	No	Byproduct of drinking water chlorination
<b>TOC</b> [total organic carbon] (ppm) measured as ppm, but reported as a ratio.	2.78	2.29	3.12	2.68‡	TT‡	N/A	No	Naturally present in the environment

✱ **Nitrate** = Highest Level Detected not Average Level Detected

✱✱ **Turbidity TT** = Lowest monthly percentage of samples meeting the turbidity limits. Never more than 1 NTU. Less than 0.3 NTU 95% of samples each month.

† Highest locational running annual average calculated quarterly.

‡ TT for TOCs is based on the lowest running annual average of the monthly ratios of the percent TOC removal achieved to the percent TOC removal required. A minimum ratio of 1.00 is required to meet the TT.

The data presented in this report are from the most recent testing done in 2023 unless otherwise stated and is 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.

# 2023 WATER QUALITY DATA: TAYLOR MILL SYSTEM

Contaminant (units)	Average Level Detected	Range of Detections		Highest Annual Average	MCL	MCLG	Violation Yes/No	Typical Sources of Contaminant
		Lowest	Highest					
<b>Total Coliform Bacteria</b> (% positive samples)	0%	0%	2.40%	-	TT ( <5% Positive )	N/A	No	Naturally present in the environment
<b>Barium</b> (ppm)	0.022	0.022	0.022	0.022	2	2	No	Erosion of natural deposits; discharge of drilling wastes; and discharge from metal refineries
<b>Chlorine</b> (ppm)	1.15	1.07	1.23	1.15	4 (MRDL)	4 (MRDLG)	No	Water additive used to control microbes
<b>Fluoride</b> (ppm)	0.71	0.71	0.71	-	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
<b>Nitrate</b> (ppm)	0.17*	0.17	0.17	-	10	10	No	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks; sewage
<b>Turbidity</b> (ntu)	0.05	0.02	0.18	100%**	TT**	N/A	No	Soil runoff
<b>HAA5</b> [haloacetic acid 5] (ppb) Stage 2 Disinfectants and Disinfection Byproducts Rule Data	6.1	ND	19.9	19.24†	60	N/A	No	Byproduct of drinking water disinfection
<b>TTHMs</b> [total trihalomethanes] (ppb) Stage 2 Disinfectants and Disinfection Byproducts Rule Data	28.7	9.9	54.8	43.55†	80	N/A	No	Byproduct of drinking water chlorination
<b>TOC</b> [total organic carbon] (ppm) measured as ppm, but reported as a ratio.	1.46	1.13	1.85	1.46‡	TT‡	N/A	No	Naturally present in the environment

✱ **Nitrate** = Highest Level Detected not Average Level Detected

✱✱ **Turbidity TT** = Lowest monthly percentage of samples meeting the turbidity limits. Never more than 1 NTU. Less than 0.3 NTU 95% of samples each month.

† Highest locational running annual average calculated quarterly.

‡ TT for TOCs is based on the lowest running annual average of the monthly ratios of the percent TOC removal achieved to the percent TOC removal required.  
A minimum ratio of 1.00 is required to meet the TT.

The data presented in this report are from the most recent testing done in 2023 unless otherwise stated and is 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.

# 2023 WATER QUALITY DATA: MEMORIAL PARKWAY SYSTEM

Contaminant (units)	Average Level Detected	Range of Detections		Highest Annual Average	MCL	MCLG	Violation Yes/No	Typical Sources of Contaminant
		Lowest	Highest					
<b>Total Coliform Bacteria</b> (% positive samples)	0%	0%	2.40%	-	TT (<5% Positive)	N/A	No	Naturally present in the environment
<b>Barium</b> (ppm)	0.029	0.029	0.029	0.029	2	2	No	Erosion of natural deposits; discharge of drilling wastes; and discharge from metal refineries
<b>Chlorine</b> (ppm)	1.15	1.07	1.23	1.15	4 (MRDL)	4 (MRDLG)	No	Water additive used to control microbes
<b>Fluoride</b> (ppm)	0.73	0.73	0.73	-	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
<b>Nitrate</b> (ppm)	0.44*	0.44	0.44	-	10	10	No	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks; sewage
<b>Turbidity</b> (ntu)	0.05	0.02	0.13	100%**	TT**	N/A	No	Soil runoff
<b>Beta/Photon Emitters</b> (pCi/l)*** Data collected in 2016	4.6	4.6	4.6	-	50	0	No	Decay of natural and man-made deposits
<b>HAA5</b> [haloacetic acid 5] (ppb) Stage 2 Disinfectants and Disinfection Byproducts Rule Data	6.1	ND	19.9	19.24†	60	N/A	No	Byproduct of drinking water disinfection
<b>TTHMs</b> [total trihalomethanes] (ppb) Stage 2 Disinfectants and Disinfection Byproducts Rule Data	28.7	9.9	54.8	43.55†	80	N/A	No	Byproduct of drinking water chlorination
<b>TOC</b> [total organic carbon] (ppm) measured as ppm, but reported as a ratio.	3.03	2.44	3.50	2.97‡	TT‡	N/A	No	Naturally present in the environment

✱ **Nitrate** = Highest Level Detected not Average Level Detected

✱✱ **Turbidity TT** = Lowest monthly percentage of samples meeting the turbidity limits. Never more than 1 NTU. Less than 0.3 NTU 95% of samples each month.

✱✱✱ The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/l to be the level of concern for beta particles.

† Highest locational running annual average calculated quarterly.

‡ TT for TOCs is based on the lowest running annual average of the monthly ratios of the percent TOC removal achieved to the percent TOC removal required.  
A minimum ratio of 1.00 is required to meet the TT.

The data presented in this report are from the most recent testing done in 2023 unless otherwise stated and is 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.

LEAD AND COPPER PARAMETERS

2023	LEAD	COPPER
PARAMETER	Fort Thomas, Memorial Parkway, and Taylor Mill	Fort Thomas, Memorial Parkway, and Taylor Mill
90th percentile levels	< 2 ppb	0.235 ppm
Number of Sites Above Action Level	0	0
Number of Allowable Sites Above Action Level	5	5
Action Level	15 ppb	1.3 ppm
MCLG	0 ppb	1.3 ppm
Range of Samples	< 2 - 5 ppb	0.022 - 1.29 ppm
Typical Sources of Contaminant	Corrosion of household plumbing system; erosion of natural deposits	Corrosion of household plumbing system; erosion of natural deposits

Lead and copper compliance is met when 90% of the samples collected from worst case sites have lead and copper below the action level (AL). Compliance was met for both lead and copper.  
Data was collected in 2021.

ADDITIONAL WATER QUALITY PARAMETERS

This data is not required by the EPA, but the additional information is provided as a service to our customers.

	FORT THOMAS SYSTEM			TAYLOR MILL SYSTEM			MEMORIAL PARKWAY SYSTEM		
Parameter	Average Level Detected	Range of Detections		Average Level Detected	Range of Detections		Average Level Detected	Range of Detections	
		Lowest	Highest		Lowest	Highest		Lowest	Highest
Alkalinity (mg/L)	70.6	48.2	91.6	78.6	52.8	121.0	72.9	52.6	95.4
Aluminum (mg/L)*	0.025	<0.01	0.076	0.018	<0.01	0.061	0.021	<0.01	0.073
Calcium (mg/L)	29.8	21.1	38.3	33.3	24.5	46.0	30.6	22.3	36.9
Chloride (mg/L)	29.9	18.9	40.9	26.5	11.0	43.0	31.2	20.7	42.9
Conductivity (uS/cm)	344	267	449	330	208	429	351	284	430
Hardness, Total (mg/L)	119	88	152	125	88	156	124	94	154
Hardness, Total (grains per gallon)	6.97	5.14	8.88	7.29	5.14	9.11	7.24	5.49	9.00
Iron (mg/L)**	0.013	<0.005	0.090	0.010	<0.005	0.070	0.006	<0.005	0.025
Langelier Index***	-1.30	-1.30	-1.30	-0.85	-0.85	-0.85	-1.17	-1.17	-1.17
Manganese (mg/L)****	0.001	<0.001	0.005	0.001	<0.001	0.005	0.001	<0.001	0.003
Odor (threshold odor number)	1.4	1.4	1.4	4.0	4.0	4.0	4.0	4.0	4.0
Orthophosphate (mg/L)	0.099	0.062	0.164	0.135	0.069	0.185	0.135	0.066	0.173
pH (pH units)	7.28	7.09	7.46	7.25	7.01	7.80	7.26	6.84	7.49
Potassium (mg/L)	2.51	1.55	3.45	3.16	2.08	5.12	2.54	1.67	3.49
Sodium (mg/L)	23.6	12.3	34.0	20.6	4.82	34.8	24.7	12.9	35.5
Sulfate (mg/L)	61.6	32.4	90.6	53.4	23.4	85.4	63.1	35.0	88.5
Temperature (degrees Celsius, °C)	19.3	5.5	27.8	19.7	7.3	27.3	19.8	7.24	29.5
Temperature (degrees Fahrenheit, °F)	66.7	41.9	82.0	67.5	45.1	81.1	67.7	45.0	85.1
Total Dissolved Solids (mg/L)	198	107	247	195	115	260	206	141	263

\* <0.01 indicates the result was below the minimum reporting limit of 0.01 mg/L  
\*\* <0.005 indicates the result was below the minimum reporting limit of 0.005 mg/L  
\*\*\* Langelier Index is an index reflecting the equilibrium pH of water with respect to calcium and alkalinity. The value is used as an indicator to determine if the water is stabilized to control both corrosion and scale deposit.  
\*\*\*\* <0.001 indicates the result was below the minimum reporting limit of 0.001 mg/L.



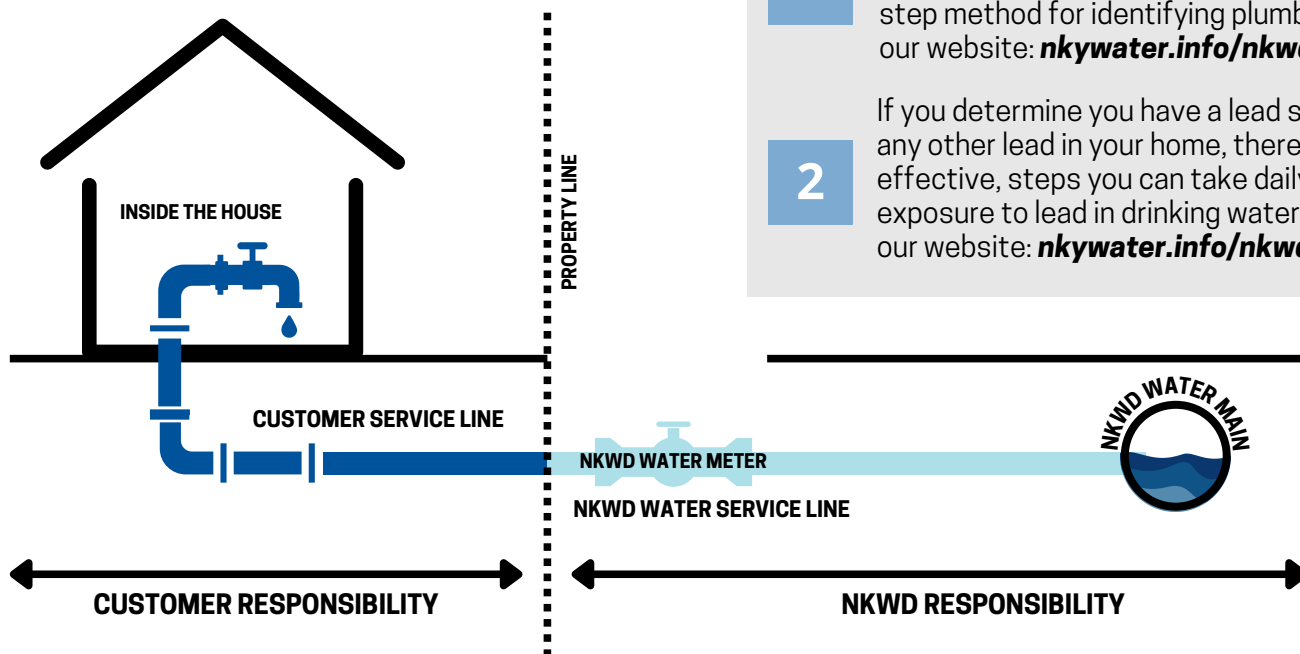
# LEAD AWARENESS

When water leaves NKWD's treatment plants, it does not contain lead.

Lead found in drinking water is primarily caused from materials and parts connected to home plumbing and **service lines**. A service line is the pipe connecting your home to the water main. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children.

## WHAT IS A SERVICE LINE AND WHO OWNS IT?

The service line is the small line that connects your home to the public water main. A portion of the service line from the water main to the water meter is owned by NKWD. The remainder is privately owned. The property owner is responsible for the private portion from the meter to the home. For meters found inside the home, NKWD is responsible up to the curb stop or the property line if no curb stop is present.



## REPORT YOUR SERVICE LINE MATERIAL



NKWD needs your help identifying the type of pipe material used for your water service line. Learn more about how to identify the type and how to report it: [nkywater.info/nkwdserviceline](https://nkywater.info/nkwdserviceline)

## WHAT IS BEING DONE TO CONTROL YOUR EXPOSURE TO LEAD?

Protecting you against exposure to lead is a shared responsibility. NKWD is required to provide treatment that minimizes the corrosivity of the water. We do this by adjusting the pH and using a safe additive, a corrosion inhibitor, that protects the pipe material and helps lower the potential for lead to be released into the water. Although corrosion control can reduce risks, the best way to ensure that your home is safe from lead exposure through water is to remove the potential sources of lead.

## WHAT CAN YOU DO?

NKWD is responsible for providing high-quality drinking water and replacing utility-owned lead pipes, but we cannot control the variety of materials used in plumbing components in your home.

1

You can take responsibility for identifying plumbing materials within your home, including the service line going into the home. Use the two-step method for identifying plumbing materials on our website: [nkywater.info/nkwdserviceline](https://nkywater.info/nkwdserviceline)

2

If you determine you have a lead service line or any other lead in your home, there are simple, but effective, steps you can take daily to reduce your exposure to lead in drinking water. Learn more on our website: [nkywater.info/nkwdleadaction](https://nkywater.info/nkwdleadaction)

## QUESTIONS? CONTACT US:



(859) 578-5451



[SLI@nkywater.org](mailto:SLI@nkywater.org)



## WHAT IF I WANT MY WATER TESTED FOR LEAD?

You may contact a state-certified laboratory to request a test for lead, or you may contact our laboratory at **(859) 441-0482** to request a free initial water test.

# UNREGULATED CONTAMINANTS MONITORING RULE (UCMR5)

The 1996 Safe Drinking Water Act Amendments required the EPA to publish a list of unregulated contaminants that are to be monitored. From this monitoring the EPA will decide if a contaminant will be added to the list of contaminants for possible new drinking water standards. The UCMR5 contains the new list of contaminants that the public water systems are required to monitor. NKWD has sampled for this series of unregulated contaminants. Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. As our customers, you have a right to know that these data are available. If you are interested in examining the results, please contact our Water Quality Lab at **859-441-0482**.



NKWD completed the monitoring requirements of the UCMR5 in 2024. The UCMR5 monitoring program includes 30 contaminants. We had 29 of these that were not detected above the minimum reporting limit including:

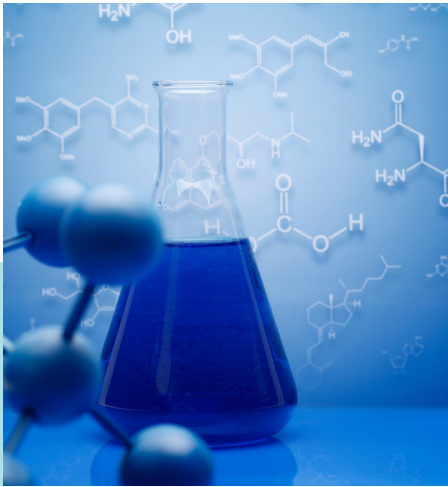
- 1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)
  - 1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)
  - 1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)
  - 4,8-dioxa-3H-perfluorononanoic acid (ADONA)
  - hexafluoropropylene oxide dimer acid (HFPO-DA)(GenX)
  - nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
  - perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
  - perfluoro-3-methoxypropanoic acid (PFMPA)
  - perfluoro-4-methoxybutanoic acid (PFMBA)
  - perfluorobutanesulfonic acid (PFBS)
  - perfluorobutanoic acid (PFBA)
  - perfluorodecanoic acid (PFDA)
  - perfluorododecanoic acid (PFDaA)
  - 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)
  - N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)
  - N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)
  - 11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF30UdS)
- perfluoroheptanesulfonic acid (PFHpS)
  - perfluoroheptanoic acid (PFHpA)
  - perfluorohexanesulfonic acid (PFHxS)
  - perfluorohexanoic acid (PFHxA)
  - perfluorononanoic acid (PFNA)
  - perfluorooctanesulfonic acid (PFOS)
  - perfluorooctanoic acid (PFOA)
  - perfluoropentanesulfonic acid (PFPeS)
  - perfluoroundecanoic acid (PFUnA)
  - perfluorotetradecanoic acid (PFTA)
  - perfluorotridecanoic acid (PFTTrDA)
  - lithium

Please refer to the chart below regarding the data from the UCMR5 monitoring for the contaminants that were detected.

Unregulated Contaminants (UCMR5)		Average (ppb)	Range (ppb)	Date
Fort Thomas Treatment Plant				
Finished Water	Perfluoropentanoic Acid	0.0031	ND to 0.0031	4/2023 - 1/2024
Taylor Mill Treatment Plant				
Finished Water	Perfluoropentanoic Acid	0.0030	ND to 0.0030	4/2023 - 1/2024
Memorial Parkway Treatment Plant				
Finished Water	Perfluoropentanoic Acid	0.0045	ND to 0.0045	4/2023 - 1/2024

EPA has not established drinking water standards for unregulated contaminants. There are no MCLs and therefore no violations if found. The treatment plant and distribution system sampling protocol was determined by the UCMR5 regulation requirements and the Kentucky Division of Water

# UCMR5 DATA: PER- AND POLYFLUOROALKYL SUBSTANCES FOREVER CHEMICALS



## WHAT ARE FOREVER CHEMICALS (PFAS) AND WHAT DO THEY DO?

Per- and polyfluoroalkyl substances (PFAS) are a class of chemicals that have been used in industry and consumer products for decades, and some continue to be used today. Certain PFAS, such as PFOA and PFOS, do not breakdown in the environment, can build up in living things, and can adversely impact human health and the environment.

Researchers at the Environmental Protection Agency (EPA) and other health agencies are working to better understand how toxic or harmful PFAS are to people and the environment. This process includes conducting long, in-depth evaluations of a few specific PFAS, as well as shorter scientific studies that provide information about hundreds of PFAS. Learn more about EPA's research efforts here: [bit.ly/epapfashealth](https://bit.ly/epapfashealth)

## WHERE ARE PFAS FOUND?

Exposure to PFAS is through a variety of sources, including contaminated drinking water, soil, dust, or air. Some other examples include:



### Household & Personal Care Items

(certain floss, waxes, paints, stains, makeup, shampoo, etc.)



### Non-stick Cookware



### Stain Resistant Products

(certain carpets, rugs, clothes, furniture, etc.)



### Firefighting Foams



### Water Resistant Gear



### Food

(such as fish from contaminated water or PFAS exposed livestock)



### Food Packaging

## WHAT IS THE EPA DOING ABOUT PFAS?

The EPA is conducting research to identify PFAS sources and occurrence in the outdoor and indoor environment to characterize how PFAS moves through the environment and to identify the relative importance of ways we might be exposed to PFAS. The EPA is conducting the most comprehensive monitoring effort for PFAS ever – testing water for 29 different PFAS (as well as lithium) at every large and midsize public water system in America, and at a nationally representative sample of small water systems. The UCMR5 data was comprised of 29 different PFAS compounds.

## OTHER RESOURCES:

Kentucky Energy & Environment Cabinet

<http://eec.ky.gov>

Environmental Protection Agency

[www.epa.gov/pfas](http://www.epa.gov/pfas)

## WHAT ARE WE DOING ABOUT PFAS?

NKWD uses advanced treatment processes of granular activated carbon (GAC) and ultraviolet disinfection as part of a multi-barrier approach that also includes coagulation, sedimentation, filtration, and chlorine disinfection. The EPA has deemed that GAC is one of the best-available technologies for removing PFAS. The EPA indicates that GAC can remove 99% of PFOA and PFOS, but for other PFAS, the removal rate varies. NKWD takes drinking water quality very seriously and our water consistently meets State and EPA requirements. NKWD will continue to monitor this issue and will look to the State and EPA for further information and guidance.



GAC at the Fort Thomas Treatment Plant





# WATER TREATMENT PROCESS

## WHERE DOES YOUR WATER COME FROM AND HOW IS IT TREATED?

NKWD operates three water treatment plants. They are Taylor Mill, Fort Thomas and Memorial Parkway. The Taylor Mill treatment plant's water source is the Licking River while the Fort Thomas and Memorial Parkway treatment plants draw water from the Ohio River.

### HOW WATER IS TREATED:

#### PHASE 1

##### Intake & Pre-Treatment

The drinking water process begins at the river. Raw water passes through a traveling screen which removes large debris. From there, high-capacity transmission mains carry water to our reservoirs for storage or to the treatment process.

#### PHASE 2

##### Clarification & Filtration

Water then travels through the rapid mixer (which acts like a large blender), where additional chemicals are added. After rapid mixing, water moves to clarification basins and then to filters. In this process, particles in the water become heavy and fall to the bottom of the basins where a large rake pushes them out. Conventional filtration then removes the tiniest of particles.

#### PHASE 3

##### Advanced Treatment and Disinfection

NKWD uses a multi-barrier treatment approach for disinfection by using post-filtration granular activated carbon (GAC) adsorption followed by ultraviolet light (UV) treatment. Treated water is then stored in clearwells before being sent to water tanks for distribution.

FINISHED  
WATER TO  
CUSTOMERS



Fort Thomas Treatment Plant



## MORE ABOUT US



**Regular Business Hours:**  
Monday - Friday, 8:00 AM - 5:00 PM



**Website:**  
[nkywater.org](http://nkywater.org)



**After Hours Emergency:**  
(513) 244-9016



**General Customer Service:**  
(859) 578-9898



**Board of Commission Meetings**  
3rd Thursday of each month at 12:00 PM  
(subject to change)

2835 Crescent Springs Road  
Erlanger, KY 41018



## BILL QUESTIONS & PAYMENTS



**Billing Inquiries:**  
(859) 578-9898



**Pay Your Bill by Phone via Credit Card:**  
(859) 578-9898



**Pay Your Bill In-Person:**  
2835 Crescent Springs Road, Erlanger, KY 41018 or  
Most area banks



**Pay Your Bill via Drop Boxes:**

- 2835 Crescent Springs Road, Erlanger, KY 41018
- Campbell County Library, Cold Spring, KY 41076
- 1045 Eaton Drive, Fort Wright, KY 41017



**Pay Your Bill Online:**  
[nkywater.org/payyourbill.html](http://nkywater.org/payyourbill.html)



**Pay Your Bill By Mail:**  
P.O. Box 449, Burlington, KY 41005



**Correspondence:**  
P.O. Box 18640, Erlanger, KY 41018



**Pre-Authorized Payment:**  
Contact our office to have your payment automatically deducted from your savings account, checking account or credit card.



## WATER QUALITY QUESTIONS & REPORTS

Water quality questions/concerns, questions about this report, and for additional Water Quality Reports, contact us:



(859) 441-0482

## LEAD & COPPER QUESTIONS



(859) 441-0482



[SLI@nkywater.org](mailto:SLI@nkywater.org)

## OTHER PHONE NUMBERS



**U.S. EPA Safe Drinking Water Hotline:**  
1-800-426-4791



**Public Service Commission Hotline:**  
1-800-772-4636

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

(This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it.)