

2020 Annual Drinking Water Quality Report

Town of Pikeville

Water System Number: **04-96-030**

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is a snapshot of last year's water quality. Included are details about your source(s) of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and to providing you with this information because informed customers are our best allies. **If you have any questions about this report or concerning your water, please contact Town Hall at (919) 242-5126. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held at the Town Hall on the first Monday of each month at 6:00 PM.**

What EPA Wants You to Know

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 (800-426-4791).

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. The Town of Pikeville 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>.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; inorganic contaminants, such as 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, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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

When You Turn on Your Tap, Consider the Source

The water that is used by this system is purchased water from the Town of Fremont and Wayne Water District.

We are pleased to report there were no violations during the compliance period for 2020.

Source Water Assessment Program (SWAP) Results

The North Carolina Department of Environmental Quality (DEQ), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate or Lower.

The relative susceptibility rating of each source for Wayne Water District and Town of Fremont was determined by combining the contaminant rating (number and location of PCSs within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). The assessment findings are summarized in the table below:

Susceptibility of Sources to Potential Contaminant Sources (PCSs)

Source Name	Susceptibility Rating	SWAP Report Date
Fremont- 14 Wells	Lower/Moderate	September 2020
Wayne Water District -32 Wells	Lower/Moderate	September 2020

The complete SWAP Assessment report for Town of Pikeville may be viewed on the Web at https://www.ncwater.org/SWAP_Reports/NC0496065_SWAP_Report-20200909.pdf. Note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this web site may differ from the results that were available at the time this CCR was prepared. If you are unable to access your SWAP report on the web, you may mail a written request for a printed copy to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634, or email requests to swap@ncdenr.gov. Please indicate your system name, number, and provide your name, mailing address and phone number. If you have any questions about the SWAP report please contact the Source Water Assessment staff by phone at 919-707-9098.

It is important to understand that a susceptibility rating of “higher” does not imply poor water quality, only the system’s potential to become contaminated by PCSs in the assessment area.

Help Protect Your Source Water

Protection of drinking water is everyone’s responsibility. You can help protect your community’s drinking water source(s) in several ways: (examples: dispose of chemicals properly; take used motor oil to a recycling center, volunteer in your community to participate in group efforts to protect your source, etc.).

Water Quality Data Tables of Detected Contaminants

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The tables below list all the drinking water contaminants that we detected in the last round of sampling for each particular contaminant group. The presence of contaminants does not necessarily indicate that water poses a health risk. **Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2020.** The EPA and the State allow us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.

Important Drinking Water Definitions:

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

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

Maximum Residual Disinfection 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 Disinfection 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.

Locational Running Annual Average (LRAA) – The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters under the Stage 2 Disinfectants and Disinfection Byproducts Rule.

Level 1 Assessment - A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment - A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

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.

Tables of Detected Contaminants

Lead and Copper Contaminants

Contaminant (units)	Sample Date	Your Water	Number of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	2019	0.357	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	2019	0	0	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Disinfectant Residuals:

- **Monitoring for chlorine**
- **System size: 896 people**
- **Samples: 1 time per month**
- **Chlorine MRDL: 4 ppm**
- **MRDL in CCR units: 4 ppm**

2020 Results:

Samples (ppm)	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept	Oct.	Nov.	Dec.
Sample 1	1.10	1.11	1.27	1.0	1.17	1.11	0.70	0.46	0.73	0.38	0.82	1.12
Monthly Average	1.10	1.11	1.27	1.0	1.17	1.11	0.70	0.46	0.73	0.38	0.82	1.12
Quarterly RAA	0.81			0.78			0.88			0.91		

Disinfectant Residuals Summary

	Year Sampled	MRDL Violation Y/N	Your Water (highest RAA)	Range		MRDLG	MRDL	Likely Source of Contamination
				Low	High			
Chlorine (ppm)	2020	N	0.91	0.38	1.27	4	4.0	Water additive used to control microbes

Stage 2 Disinfection Byproduct Compliance - Based upon Locational Running Annual Average (LRAA)

Disinfection Byproduct	Year Sampled	MCL Violation Y/N	Your Water (highest LRAA)	Range Low High	MCLG	MCL	Likely Source of Contamination
TTHM (ppm)					N/A	80	Byproduct of drinking water disinfection
Location B01	2020	N	42.0	NA			
Location B02	2019	N	0	NA			
HAA5 (ppb)					N/A	60	Byproduct of drinking water disinfection
Location B01	2019	N	0	NA			
Location B02	2018	N	13.0	NA			

For TTHM: *Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.*

For HAA5: *Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.*

Fremont Result

Lead and Copper Contaminants

Contaminant (units)	Sample Date	Your Water	Number of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	2020	0.1321	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	2020	0.00	0	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Disinfectant Residuals Summary

	Year Sampled	MRDL Violation Y/N	Your Water (highest RAA)	Range Low High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	2020	N	1.80	0.34-2.90	4	4.0	Water additive used to control microbes

Stage 2 Disinfection Byproduct Compliance - Based upon Locational Running Annual Average (LRAA)

Disinfection Byproduct	Year Sampled	MCL Violation Y/N	Your Water (highest LRAA)	Range Low High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)							
Location B01	2020		42.0	N/A	N/A	80	Byproduct of drinking water disinfection
HAA5 (ppb)							
Location B01	2020		20.0	N/A	N/A	60	Byproduct of drinking water disinfection

For TTHM: *Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.*

For HAA5: *Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.*

Wayne Water Result

Tables of Detected Contaminants

Inorganic Contaminants

Contaminant (units)	Sample Date	MCL Violation YIN	Your Water	Range Low Hi	MCLG	MCL	Likely Source of Contamination
Fluoride (ppm)	2020		0.51	0.48 - 1.0	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Volatile Organic Chemical - VOC

Contaminant (units)	Sample Date	MCL Violation YIN	Your Water	Range Low Hi	MCLG	MCL	Likely Source of Contamination
Vinyl Chloride (ppb)	2020	N	N/A	N/A		2	Leaching from PVC piping; discharge from plastics factories

Radiological Contaminants

Contaminant (units)	Sample Date	MCL Violation YIN	Your Water	Range Low Hi	MCLG	MCL	Likely Source of Contamination
Combined radium (pCi/L)	2020	N	0.0	0.0- 1.3 pci/l	0	5	Erosion of natural deposits

Nitrate/Nitrite Contaminants

Contaminant (units)	Sample Date	MCL Violation YIN	Your Water	Range Low Hi h	MCLG	MCL	Likely Source of Contamination
Nitrate (as Nitrogen) (ppm)	2020	N		N/A	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (as Nitrogen) (ppm)				N/A	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Stage 2 Disinfection Byproduct Compliance - Based on Locational Running Annual Average LRAA

Disinfection Byproduct	Year Sample	MCL Violation	Your Water (highest LRAA)	Range Low High	MCL G	MCL	Likely Source of Contamination
TTHM (ppb)	2020				N/A	80	Byproduct of drinking water disinfection
LOCATION BOI			.00121	.00068-0.0242			
Location B02			0.0142	0.0059-0.0355			
HAA5 (ppb)	2020				N/A	60	Byproduct of drinking water disinfection
Location BOI			0.0033	0.0013-0.0066			
Location B02			0.0045	0.0032 to 0.0068			

For TTHM: Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

For HAAS: Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

The PWS Section requires monitoring for other misc. contaminants, some for which the EPA has set national secondary drinking water standards (SMCLs) because they may cause cosmetic effects or aesthetic effects (such as taste, odor, and/or color) in drinking water. The contaminants with SMCLs normally do not have any health effects and normally do not affect the safety of your water.

Other Miscellaneous Water Characteristics Contaminants

Contaminant (units)	Sample Date	Your Water	Range Low High	SMCL
Iron (ppm)	2020	.299	0.066-0.617	0.3 mg/L
Manganese (ppm)	2020	.026	.013 to .083	0.05 mg/L
Sodium (ppm)	2020	28.408	4.838-107.10	N/A
pH	2020	6.77	5.9-7.8	6.5 to 8.5

Synthetic Organic Chemical (SOC) Contaminants Including Pesticides and Herbicides

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
2,4-D (ppb)		ND				70	70	Runoff from herbicide used on row crops
2,4,5-TP (Silvex) (ppb)		ND				50	50	Residue of banned herbicide
Alachlor (ppb)		ND				0	2	Runoff from herbicide used on row crops
Atrazine (ppb)		ND				3	3	Runoff from herbicide used on row crops
Benzo(a)pyrene (PAH) (ppt)		ND				0	200	Leaching from linings of water storage tanks and distribution lines
Carbofuran (ppb)		ND				40	40	Leaching of soil fumigant used on rice and alfalfa
Chlordane (ppb)		ND				0	2	Residue of banned termiticide
Dalapon (ppb)		ND				200	200	Runoff from herbicide used on rights of way
Di(2-ethylhexyl) adipate (ppb)		ND				400	400	Discharge from chemical factories
Di(2-ethylhexyl) phthalate (ppb)		ND				0	6	Discharge from rubber and chemical factories
DBCP [Dibromochloropropane] (ppt)		ND				0	200	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Dinoseb (ppb)		ND				7	7	Runoff from herbicide used on soybeans and vegetables
Endrin (ppb)		ND				2	2	Residue of banned insecticide
EDB [Ethylene dibromide] (ppt)		ND				0	50	Discharge from petroleum refineries
Heptachlor (ppt)		ND				0	400	Residue of banned pesticide
Heptachlor epoxide (ppt)		ND				0	200	Breakdown of heptachlor
Hexachlorobenzene (ppb)		ND				0	1	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene (ppb)		ND				50	50	Discharge from chemical factories
Lindane (ppt)		ND				200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens

Methoxychlor (ppb)		ND				40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl [Vydate] (ppb)		ND				200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
PCBs [Polychlorinated biphenyls] (ppt)		ND				0	500	Runoff from landfills; discharge of waste chemicals
Pentachlorophenol (ppb)		ND				0	1	Discharge from wood preserving factories
Picloram (ppb)		ND				500	500	Herbicide runoff
Simazine (ppb)		ND				4	4	Herbicide runoff
Toxaphene (ppb)		ND				0	3	Runoff/leaching from insecticide used on cotton and cattle

Inorganic Contaminants

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Antimony (ppb)		ND				6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)		ND				0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)		ND				2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium (ppb)		ND				4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium (ppb)		ND				5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Chromium (ppb)		ND				100	100	Discharge from steel and pulp mills; erosion of natural deposits
Cyanide (ppb)		ND				200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	04/01/20	N	.58	.35	to 1.2	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury (inorganic) (ppb)		ND				2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Selenium (ppb)		ND				50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Thallium (ppb)		ND				0.5	2	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

FOG (fats, oils, and grease)

You may not be aware of it, but every time you pour fat, oil, or grease (FOG) down your sink (e.g., bacon grease), you are contributing to a costly problem in the sewer collection system. FOG coats the inner walls of the plumbing in your house as well as the walls of underground piping throughout the community. Over time, these greasy materials build up and form blockages in pipes, which can lead to wastewater backing up into parks, yards, streets, and storm drains. These backups allow FOG to contaminate local waters, including drinking water. Exposure to untreated wastewater is a public health hazard. FOG discharged into septic systems and drain fields can also cause malfunctions, resulting in more frequent tank pump-outs and other expenses. Communities spend billions of dollars every year to unplug or replace grease-blocked pipes, repair pump stations, and clean up costly and illegal wastewater spills. Here are some tips that you and your family can follow to help maintain a well-run system now and in the future.

NEVER:



- Pour fats, oil, or grease down the house or storm drains.
- Dispose of food scraps by flushing them.
- Use the toilet as a waste basket.

ALWAYS:



- Scrape and collect fat, oil, and grease into a waste container such as an empty coffee can and dispose of it with your garbage.
- Place food scraps in waste containers or garbage bags for disposal with solid wastes.
- Place a wastebasket in each bathroom for solid wastes like disposable diapers, creams and lotions, and personal hygiene products, including nonbiodegradable wipes.

Violations that Your Water System Received for the Report Year

See the inserted Notice to the Public concerning "Elevated Fluoride Levels"

Note:

Notice to the Public regarding the Benzopyrene detection at E38

- a. For the compliance period April 1st 2019 through March 31st 2020 there was a detection of Benzopyrene at P38/E38 that showed our system exceeds the standard.
- b. Water samples were taken at P38/E38 in 3rd Quarter 2019, 4th Quarter 2019, 1st Quarter 2020, 2nd Quarter 2020 with NO Detects
- c. Public Water Supply Section will direct to us to continue to monitor Benzopyrene until 2nd Quarter 2021

NOTICE TO THE PUBLIC

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Elevated Fluoride Levels Detected in WAYNE WATER DISTRICTS

(Exceedance of the Secondary Maximum Contaminant Level)

This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2.0 milligrams per liter (mg/l) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community water system [WAYNE WATER DISTRICTS] has a fluoride concentration of 2.5 mg/l.

Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4.0 mg/l of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4.0 mg/l of fluoride, but we're required to notify you when we discover that the fluoride levels in your drinking water exceed 2.0 mg/l because of this cosmetic dental problem.

For more information, please call THREEWITTS, JOSEPH H of WAYNE WATER DIST COMBINED BD at []. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP.

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.

For more information, please contact:

Responsible Person <i>JOEY THREEWITTS</i>	System Name WAYNE WATER DISTRICTS	System Address (Street) <i>3600 COMMERCIAL DR</i>
Phone Number <i>919-731-2310</i>	System Number NC0496065	System Address (City, State, Zip) <i>GENESBORO, N.C. 27534</i>

Awareness Date: June 10, 2020

Date Notice Distributed: APRIL 2021

Method of Distribution: 2021 CCR

Public Notification Certification:

The public water system named above hereby affirms that public notification has been provided to its consumer in accordance with all delivery, content, format, and deadline requirements specified in 15A NCAC 18C 1523.

Owner/Operator: *Joe H. Threewitts*

(Signature)

JOEY THREEWITTS
(Print Name)

2/22/2021
(Date)