Meeting Standards. Surpassing Expectations.

Fayetteville Public Works Commission 2022 Water Quality Report

At PWC, we care deeply about the quality of the water we provide for our customers, and we're proud of the exceptional standards we maintain. Each year we publish a "Water Quality Report" with the results of testing we are required to perform. You can find full details of this report on our website – www.faypwc.com/water-quality-report.

However, we don't test our water just because we "have to." It's part of our unparalleled commitment to provide you with the highest quality drinking water that meets and surpasses regulatory requirements.

Above and Beyond

PWC is proud to be a charter member of the national Partnership for Safe Water. We were the first utility in North Carolina to earn the Environmental Protection Agency (EPA) Director's Award for water treatment, recognizing our extra efforts in providing clean and safe drinking water that exceeds federal drinking water standards. PWC has received this prestigious recognition for 20 consecutive years.

In 2011, PWC became a charter member of the Partnership for Safe Water Distribution System Optimization Program. This program focuses on the operation and maintenance of water treatment facilities, water mains and storage tanks. In 2014, when we completed the 18-month self-assessment phase of the program, we were among the first utilities in the country to be recognized for this achievement.

9 Billion Gallons. 150,000 Tests.

To make sure your drinking water is clean and safe, PWC's two Water Treatment Facilities – P.O. Hoffer and Glenville Lake – use advanced technology and proven methods to process the water we provide. In 2022, we treated over 9 billion gallons of water for our customers! To ensure strict compliance with EPA regulations and to ensure the safety of the water we provide, we continuously monitor our water quality by performing more than 150,000 tests a year.

Where Your Water Comes From

All of the water treated by PWC is "surface water." The water processed at our P.O. Hoffer Water Treatment Facility comes from the Cape Fear River. Water processed at our Glenville Lake Facility comes from the Cape Fear River, Big Cross Creek and the Little Cross Creek Watershed, which contains four bodies of water used for water storage: Bonnie Doone Lake, Kornbow Lake, Mintz Pond and Glenville Lake. Both of our treatment facilities provide water to our general distribution system, so the water you drink is a blend of water we process from these sources.

How is Your Water Treated?

While the treatment process varies slightly at our two water treatment facilities, the basic steps are similar.

The Disinfection Method

PWC uses chloramination as our main disinfectant. Chloramine inactivates and prevents pathogen growth in our system by utilizing both ammonia and chlorine. Ammonia is added to the water at a carefully controlled level, and the chlorine and ammonia react chemically to produce chloramines. This method inactivates the COVID-19 virus, as well as other coronaviruses. Chloraminated water is perfectly safe for drinking, cooking, bathing and other daily water uses. There are, however, two groups of people who need to take special care with chloraminated water: customers who use drinking water for kidney dialysis machines and fish owners. For more information on chloramination, including special precautions these special groups should take, contact PWC. As an extra measure of safety, the North Carolina Department of Environmental Quality (NCDEQ) requires all water systems using chloramination to suspend the addition of ammonia for a one-month period each year. We do this each March to prevent any biological growth and nitrification from occurring in the water distribution system.

The Treatment Process

PWC operations and maintenance staff at our facilities are committed to providing safe, high quality drinking water for our customers. When raw surface water enters the facility, ferric sulfate is added, causing small particles to adhere to one another. This makes the particles heavy enough to settle out of the water in a sedimentation basin. The water is then filtered through sand and anthracite to remove any remaining fine particles. Ammonia and chlorine are added to kill harmful bacteria, protozoans and viruses. Lime or caustic soda and a corrosion inhibitor are added to minimize the potential for dissolving the lead solder used on copper piping in older household plumbing. Fluoride is added as an aid in preventing tooth decay. Both facilities also add powdered activated carbon to reduce substances that produce unpleasant tastes and odors. Treated water proceeds through a series of pumps and storage facilities before being delivered to your home.

An Extra Measure of Concern

As noted above, PWC adds fluoride to your water supply. Proven as a safe and healthy way to effectively prevent tooth decay, community water fluoridation has been recognized by the U.S. Centers for Disease Control (CDC) as one of ten great public health achievements of the 20th century.

Our Water is Safe to Drink

PWC annually tests for 118 elements and contaminants regulated by the EPA and meets or surpasses all the standard requirements annually. Your drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. However, the presence of contaminants does not necessarily indicate that water poses a health risk.

We understand that reports of contaminants in local water sources cause concerns about the safety of our drinking water. Unregulated synthetic or naturally occurring chemicals, are not commonly monitored by water utilities. Those identified in our area include GenX and 1,4-dioxane. While the EPA has not required monitoring for unregulated contaminants, we sample at least quarterly for GenX and other unregulated contaminants.

The reports of GenX being discharged into the Cape Fear River are below the PWC/Fayetteville water service area and more than 20 miles downstream of where we take water from the river to treat. However, instances of GenX and other Per- and polyfluoroalkyl substances (PFAS) have been found in our sampling. Traces of GenX found are considerably below the Science Board Advisory limit of 10 parts per trillion (for comparison, 1 part per trillion is approximately the equivalent of one drop of water in 10 million gallons). The EPA has recently announced proposed drinking water standards for six PFAS with a final rule expected sometime in 2023. PWC is currently monitoring these proposals and are actively preparing to meet these new, more stringent standards.

1,4-dioxane has been detected in the Cape Fear River as well as other areas in our region, state and nation. The EPA currently has no standards for 1,4-dioxane and has not yet issued regulated safe limits. However, PWC monitors 1,4-dioxane levels in our drinking water monthly, and levels remain below the EPA advisory lifetime health goal (minimal risk level) for drinking water. Since 1,4-dioxane cannot be removed through our existing traditional water treatment process, we have partnered with other communities and the NCDEQ to get this compound regulated and out of the Cape Fear River. This is the fastest and most effective way to remove the contaminants.

PWC has funded research which has identified multiple sources of 1,4-dioxane (typically industrial discharges that pass untreated through wastewater treatment facilities) to reduce or eliminate it so there will be no long-term exposure to our customers. As a result of this research, sources in communities upstream of Fayetteville have been identified and they are now required by the state to monitor monthly for 1,4-dioxane in their wastewater treatment facility discharges.

In 2021, PWC continued to advocate for the safety of our drinking water. PWC joined with several environmental organizations, taking legal action against state regulatory agencies to improve response/responsibility for industrial polluters in the Cape Fear River. This was specifically pertaining to the City of Greensboro's responsibility for the wastewater discharge that includes the industrial pollutant 1,4-dioxane. As a result of this action, PWC was successful in getting the state to impose stricter discharge limits, higher penalties for exceeding those limits and additional monitoring.

PWC is also currently conducting a water treatment pilot using a granulated carbon to determine its effectiveness of removing contaminants such as 1,4-dioxane, GenX, and others as part of our water treatment process.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, organ transplant recipients, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly vulnerable to infections. These people should seek advice about drinking water from their health care providers.

More information on PFAS, including monthly PWC testing results, can be found on our website:faypwc.com/water-service/.

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

Extra Measures of Caution

If present in drinking water, 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. PWC is responsible for providing high quality drinking water but cannot control the variety of materials used in private homes/businesses plumbing fixtures.

Copper piping with lead solder as well as lead service lines are more likely to be found in homes built before 1986. Among homes without lead service lines, brass or chrome-plated brass faucets may also create lead exposure.

Since 1991, PWC has participated in the lead and copper sampling program as required by the Safe Drinking Water Act (SDWA). As a result, PWC implemented a corrosion control program to stop lead from the pipes and fixtures from entering the water system. This corrosion control program has been successful in that all PWC's samples are well below the EPA mandated thresholds for lead in drinking water.

In 1997, PWC obtained reduced monitoring based on three years of sampling data that indicated our corrosion control program was effective and our system followed the requirements of the SDWA pertaining to lead and copper. Since that time, PWC tests a minimum of fifty locations once every three years. The most recent testing was 2020 in which no lead was detected. Additionally, PWC collects tap water samples for customers on a requested basis.

In 2022, PWC began Operation Clean and Clear, a water system improvement project that will identify all water service lines in our distribution system and determine whether homes and businesses have any lead lines. Based on records and knowledge of our system, we anticipate there to be minimal instances of lead service lines, but we will be documenting all locations. Any locations within our system that we can't confirm with existing data, will require PWC and our contractors to conduct site surveys at those customer locations.

Site surveys will start in 2023 and by October 2024, PWC will provide our customers a public resource for identifying properties with lead lines/plumbing. To learn more about Operation Clean and Clear, visit faypwc.com.

If you are concerned about lead in your water, information on lead in drinking water, testing methods, steps you can take to minimize exposure and additional information are available from the Safe Drinking Water Hotline (800-426-4791) or at epa.gov/safewater/lead.

For PWC's full annual water quality report, visit faypwc.com/water-quality-report

PWC Fayetteville's HOMETOWN UTILITY

www.faypwc.com

Click here to view the report

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2022 Annual Drinking Water Quality Report
Fayetteville Public Works Commission

Water System Number: NC 03-26-010

Informe Anual de Calidad del Agua Potable 2022
Comisión de Obras Públicas de Fayetteville

Número del sistema de agua: NC 03-26-010

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

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 Jason Green at (910) 624-8214. 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 online meetings. The schedule can be accessed at faypwc.com/commission-meetings/.

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. Fayetteville Public Works Commission 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 https://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.

To ensure that tap water is safe to drink, EPA prescribes regulations which limit the number 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 the Cape Fear River and Little Cross Creek. The P.O. Hoffer Facility is located at 508 Hoffer Drive and the Glenville Lake Facility is located at 628 Filter Plant Drive.

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 Fayetteville Public Works Commission 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
Cape Fear River	Higher	September 2020
Glenville Lake	Higher	September 2020

The complete SWAP Assessment report for Fayetteville Public Works Commission may be viewed on the Web at: https://www.ncwater.org/?page=600. 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. We have a robust and proactive watershed management program that helps protect our valuable water resources. Please visit https://www.faypwc.com/watershed-protection for more information. You can help protect your community's drinking water sources in several ways: by disposing of chemicals properly; taking used motor oil to a recycling center, volunteering 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, 2022.** 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.

Important Drinking Water Definitions:

Not-Applicable (N/A) – Information not applicable/not required for that particular water system or for that particular rule.

Non-Detects (ND) - Laboratory analysis indicates that the contaminant is not present at the level of detection set for the particular methodology used.

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 (ug/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) or Nanograms per liter (nanograms/L) - 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) or Picograms per liter (picograms/L) - 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) - Picocuries per liter is a measure of the radioactivity in water.

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

Nephelometric Turbidity Unit (NTU) - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity more than 5 NTU is just noticeable to the average person.

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

Microbiological Contaminants in the Distribution System

Contaminant (units)	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (Presence or Absence)	N	N	N/A	TT*	Naturally present in the environment
E. coli (Presence or Absence)	N	N	0	Routine and repeat samples are total coliform-positive and either is *E. coli*-positive, or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli* Note: If either an original routine sample and/or its repeat samples(s) are *E. coli* positive, a Tier 1 violation exists.	Human and animal fecal waste

* If a system collecting 40 or more samples per month finds greater than 5% of monthly samples are positive in one month, an assessment is required.

Microbiological Contaminants in the Source Water

Fecal Indicator	Number of "Positive/ Present" Samples	Date(s) of fecal indicator-positive source water samples	Source of fecal contamination, if known	Significant Deficiency Cited by the State? Y/N	MCLG	MCL	Likely Source of Contamination
E. coli, (Presence or Absence)	365	1/1 – 12-31	Runoff, upstream contributors	N	0	0	Human and animal fecal waste
enterococci or coliphage, (Presence or Absence)	365	1/1 – 12/31	Runoff, upstream contributors	N	N/A	TT	Human and animal fecal waste

Turbidity

Contaminant (units)	Treatment Technique (TT) Violation Y/N	Your Water	MCLG	Treatment Technique (TT) Violation if:	Likely Source of Contamination
Turbidity (NTU) - Highest single turbidity measurement	N	0.15 NTU	N/A	Turbidity > 1 NTU	Soil runoff
Turbidity (NTU) - Lowest monthly percentage (%) of samples meeting turbidity limits	N	100%	N/A	Less than 95% of monthly turbidity measurements are $\leq$ 0.3 NTU	

***** Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU.

Inorganic Contaminants

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range Low-High	MCLG	MCL	Likely Source of Contamination
Fluoride (ppm)	12/22	N	0.67	0.23 – 0.90	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

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)	8/2020	ND	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90^{th} percentile)	8/2020	ND	1	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Total Organic Carbon (TOC)

Contaminant (units)	TT Violation Y/N	Your Water (RAA Removal Ratio)	Range Monthly Removal Ratio Low - High	MCLG	TT	Likely Source of Contamination	Compliance Method (Step 1 or ACC#__)
Total Organic Carbon (removal ratio) (TOC)-TREATED	N	2.0	1.0 – 2.1	N/A	TT	Naturally present in the environment	ALT. 4 (SUVA <2.0 L/mg-min)

Disinfectant Residuals Summary

	Year Sampled	MRDL Violation Y/N	Your Water (Highest RAA)	Range Low-High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	2022	N	1.98	1.05 – 2.25	4	4.0	Water additive used to control microbes
Chloramines (ppm)	2022	N	2.93	2.01 – 3.30	4	4.0	Water additive used to control microbes

Other Miscellaneous Water Characteristics Contaminants

Contaminant (units)	Sample Date	Your Water	Range Low-High	SMCL
Sodium (ppm)	6/22	39.80	ND – 39.80	N/A
pH	Continuous	7.6	7.3 – 8.3	6.5 to 8.5

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**.**

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)					N/A	80	Byproduct of drinking water disinfection
B01	2022	N	54 ppb Location Code: B04 – 5392 Fisher Road	30 – 67	N/A	80	
B02	2022	N		31 – 70	N/A	80	
B03	2022	N		28 – 63	N/A	80	
B04	2022	N		31 - 68	N/A	80	
B05	2022	N		31 – 66	N/A	80	
B06	2022	N		31 – 64	N/A	80	
B07	2022	N		29 – 66	N/A	80	
B08	2022	N		26 – 66	N/A	80	
HAA5 (ppb)					N/A	60	Byproduct of drinking water disinfection
B01	2022	N	24 ppb Location Code: B06 – 4424 Grip Drive	13 – 24	N/A	60	
B02	2022	N		15 – 25	N/A	60	
B03	2022	N		14 – 28	N/A	60	
B04	2022	N		15 – 26	N/A	60	
B05	2022	N		14 – 24	N/A	60	
B06	2022	N		15 – 30	N/A	60	
B07	2022	N		14 – 25	N/A	60	
B08	2022	N		14 – 22	N/A	60	

For TTHM: ***Some people who drink water containing trihalomethanes more than 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 more than the MCL over many years may have an increased risk of getting cancer.***

Cryptosporidium

Our system monitored for *Cryptosporidium* and found levels of 0.09 oocysts/liter in April 2017. In 2017, the highest concentration found in the Cape Fear River was 0.09 oocysts/liter in April of that year.

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they can cause disease. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

Unregulated Contaminants

1,4-dioxane

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determine the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted. Although, the EPA has not set a Maximum Contaminant Level for 1,4-dioxane, they have issued an advisory lifetime health goal of less than 35 ug/L for drinking water.

Sample Dates 2021	P.O. Hoffer Point of Entry (ug/L)
1/13/21	0.17
2/17/21	0.21
3/17/21	0.31
4/14/21	0.22
5/20/21	0.32
6/16/21	0.28
7/7/21	0.25
8/24/21	0.66
9/14/21	0.49
10/6/21	0.46
11/9/21	0.82
12/16/2021	6.70

Sample Dates 2022	P.O. Hoffer Point of Entry (ug/L)
1/25/22	0.36
2/9/22	0.47
3/14/22	0.28
4/12/22	0.39
5/16/22	0.36
6/23/22	BQL
7/20/22	1.23
8/24/22	BQL
9/19/22	BQL
10/13/22	BQL
11/10/22	BQL
12/7/22	1.15

*BQL – Below Quantifiable Limit

PWC meets or surpasses all the standard requirements annually. While 1,4-Dioxane has been detected in the Cape Fear River as well as other areas in our region, state and nation, the Environmental Protection Agency (EPA) currently has no standards for 1,4-Dioxane and has not yet issued regulated safe limits. If the EPA believed 1,4 Dioxane was an immediate threat, a directive would have been issued. Since 1,4-Dioxane cannot be removed through our traditional water treatment process, we have partnered with other communities to research and identify its sources to reduce or eliminate it so there will be no long-term exposure to our customers. You can find additional information on our website: faypwc.com/the-facts-about-1-4-dioxane.

Per- and Polyfluoroalkyl Substances (PFOA and PFOS)

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that have been in use since the 1940s and are (or have been) found in many consumer products like cookware, food packaging, and stain repellants. PFAS manufacturing and processing facilities, airports, and military installations that use firefighting foams are some of the main sources of PFAS. PFAS may be released into the air, soil, and water, including sources of drinking water.

Perfluorooctanesulfonic acid (PFOA) and Perfluorooctanoic acid (PFOS) are the most studied PFAS chemicals and have been voluntarily phased out by industry, though they are still persistent in the environment.

Recent testing has detected PFOA and PFOS in Fayetteville's drinking water. While perfluorinated chemicals have been detected, our water is below the EPA's *health advisory level* for the combination of PFOS and PFOA of 70 parts per trillion (ppt). The table below shows our monitoring results for combined PFOS and PFOA at PWC's water treatment Point of Entry (POE). POE refers to water that has undergone all treatment steps at the water treatment facilities, and is ready to be pumped to you, our customer.

EPA issues *health advisories*, which are based on the best available peer-reviewed studies about the health effects of the unregulated chemicals. *Health advisories* provide information on contaminants that can cause human health effects and are known or anticipated to occur in drinking water. EPA's *health advisories* are non-enforceable and non-regulatory and provide technical information to states agencies and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water.

Fayetteville PWC is working to stay ahead of the science, as these substances continue to be measured at ever smaller concentrations. With modern laboratory methods, these substances can now be measured down to parts per trillion concentrations. For comparison, 1 part per trillion is approximately the equivalent of one drop of water in 10 million gallons of water. PWC reports the formal results of regulatory testing and unregulated contaminant monitoring in our annual Consumer Confidence Report, which provides an annual summary of water system operations and water quality management throughout the water system.

The table below shows the total concentration of the 42 PFAS unregulated compounds for which PWC monitors quarterly, as well as the total concentration of the combination of PFOS and PFOA, which although unregulated, does have an EPA Health Advisory level of 40 ppt.

Date	P.O. Hoffer Point of Entry Total PFAS (ppt)	EPA Health Advisory Level PFOS + PFOA (ppt)	P.O. Hoffer Point of Entry PFOA + PFOS (ppt)	EPA Health Advisory Exceeded
01/2022	55.57	70	Not Collected	No
04/2022	44.15	70	46.01	No
07/2022	72.93	40	72.59	Yes
10/2022	60.17	40	57.41	Yes

Date	Glenville Lake Point of Entry Total PFAS (ppt)	EPA Health Advisory Level PFOS + PFOA (ppt)	Glenville Lake Point of Entry PFOA + PFOS (ppt)	EPA Health Advisory Exceeded
01/2022	75.77	70	Not Collected	No
04/2022	76.28	70	41.43	No
07/2022	110.98	40	72.87	Yes
10/2022	124.60	40	56.58	Yes