

2022 Annual Drinking Water Quality Report

Town of East Bend

Water System Number: NC 02-99-025

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 the Town of East Bend at (336) 699-8560. 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 Town Hall on the second Monday of each month at 7:00 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. East Bend 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 Surface Water purchased from Yadkin County which comes from Forsyth County from the Yadkin River.

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 **Winston Salem / Forsyth County Utilities** 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
Yadkin River	Moderate	September, 2020

The complete SWAP Assessment report for the **Winston Salem / Forsyth County Utilities** 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. 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.

Violations that Your Water System Received for the Report Year

During 2022, we received no violations.

During 2023, we received Lead Consumer Notice and a TTHM and HAA5 Monitoring violations that covered the time period of 1/01/2023 - 3/27/2023 and 1/01/2023 – 3/31/2023. We have changed our Sampling and Reporting procedures to assure this does not happen again.

NOTICE TO THE PUBLIC

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Violation Awareness Date: 3/28/2023

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the compliance period specified in the table below, we *did not monitor or test or did not complete all monitoring or testing* for the contaminants listed and therefore cannot be sure of the quality of your drinking water during that time.

CONTAMINANT GROUP**	FACILITY ID NO./ SAMPLE POINT ID	COMPLIANCE PERIOD BEGIN DATE	NUMBER OF SAMPLES/ SAMPLING FREQUENCY	WHEN SAMPLES WERE TAKEN (Returned to Compliance)
(HAA5) HALOACETIC ACIDS	DO1 – B01 - B02	1/01/2023 – 3/31/2023	2 ROUTINE PER QUARTER	May 2023
(TTHM) TOTAL TRIHALOMETHANES	DO1 – B01 – B02	1/01/2023 – 3/31/2023	2 ROUTINE PER QUARTER	May 2023

(HAA5)- Haloacetic Acids - include Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid, Monobromoacetic Acid, Dibromoacetic Acid.

(TTHM) - Total Trihalomethanes - include Chloroform, Bromoform, Bromodichloromethane, and Dibromochloromethane.

What should I do? There is nothing you need to do at this time.

What is being done? We have changed our Sampling procedures to ensure this does not happen again.

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 about this violation, please contact the responsible person listed in the first paragraph of this report.

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.
- ***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 in excess of 5 NTU is just noticeable to the average person.
- **Variances and Exceptions** – State or EPA permission not to meet an MCL or Treatment Technique under certain conditions.
- **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.
- **Running Annual Average (RAA)** – The average of sample analytical results for samples taken during the previous four calendar quarters.
- **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.

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.

REVISED TOTAL COLIFORM RULE:

Microbiological Contaminants in the Distribution System

Contaminant (units)	MCL Violation Y/N	Number of Positive/Present Samples	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	N/A	N/A	N/A	TT*	Naturally present in the environment

<i>E. coli</i> (presence or absence)	N	1	0	Routine and repeat samples are total coliform-positive and either is <i>E. coli</i> -positive or system fails to take repeat samples following <i>E. coli</i> -positive routine sample or system fails to analyze total coliform-positive repeat sample for <i>E. coli</i> <u>Note:</u> If either an original routine sample and/or its repeat samples(s) are <i>E. coli</i> positive, a Tier 1 violation exists.	Human and animal fecal waste
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Lead and Copper Contaminants

Contaminant (units)	Sample Date	Your Water (90 th Percentile)	Number of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	7/20/2022	0	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	7/20/2022	8 ppb	1	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Disinfectant Residuals Summary

	MRDL Violation Y/N	Your Water (highest RAA)	Range		MRDLG	MRDL	Likely Source of Contamination
			Low	High			
Chlorine (ppm)	N	0.48 ppm	0.2	0.92 ppm	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		MCLG	MCL	Likely Source of Contamination
				Low	High			
TTHM (ppb)	2022	N				N/A	80	Byproduct of drinking water disinfection
Location (Ex. B01)								
B01			49 ppb	27	69 ppb			
B02			61 ppb	41	75 ppb			
HAA5 (ppb)	2022	N				N/A	60	Byproduct of drinking water disinfection
Location (Ex. B01)								
B01			23 ppb	19	36 ppb			
B02			21ppb	19	22 ppb			

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.

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

“2022” Annual Drinking Water Quality Report

“Yadkin County-East Bend Water”

Water System Number: “30-99-034”

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 Terry Foster at (336) 849-7575. 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. You can see these dates and times at www.yadkincountync.gov.**

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. Yadkin County-East Bend Water 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 storm water 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 storm water 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 storm water 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 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 purchased from Winston Salem/Forsyth County Utilities Commission, which is a surface treatment operation at PW Swan Water Treatment Plant that gets its source water from the Yadkin River, and is located at 2800 River Ridge Rd. Pfafftown NC 27040

Source Water Assessment Program (SWAP) Results

The North Carolina Department of Environment and Natural Resources (DENR), 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 Yadkin County-East Bend Water 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
Yadkin River (PW Swann WT)	Moderate	September 2020

The complete SWAP Assessment report for Yadkin County-East Bend Water, (Winston Salem/Forsyth County Utilities 02-34-010) may be viewed on the Web at: www.ncwater.org/pws/swap. 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.

Violations that Your Water System Received for the Report Year

During 2022, the Yadkin County-East Bend Water system received **NO** violations. This comes from continuously monitoring water quality and a good action plan for controlling contaminants.

Water Quality Data Tables of Detected Contaminants

We (along with Winston Salem- Forsyth County Utilities Commission) routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The table below lists all the drinking water contaminants that we detected in the last round of sampling for the 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. Lead and Copper for example

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:

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.

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.

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

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.

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 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 - For systems that collect *less than 40* samples per month)

Contaminant (units)	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	N	Absent	0	one positive monthly sample	Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (presence or absence)	N	Absent	0	0 (Note: The MCL is exceeded if a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive)	Human and animal fecal waste

***E. coli* - Fecal coliforms and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely-compromised immune systems.**

Fecal Indicators (enterococci or coliphage) - Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

Asbestos Contaminant

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Total Asbestos (MFL)	1/7/20	N	Non-Detect	Non-Detect		7	7	Decay of asbestos cement water mains; erosion of natural deposits

Lead and Copper Contaminants (Reduced Monitoring to every 3 years)

Contaminant (units)	Sample Date	Your Water	# of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	6/14/21	0.053	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	6/14/21	Non-Detect	0	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits

Disinfectants and Disinfection Byproducts Contaminants (Disinfection Byproducts have been reduced to once yearly, (TTHM and HAA5)).

Contaminant (units)	MCL/MR DL Violation Y/N	Your Water RAA (Stage 1)	Range Low High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb) [Total Trihalomethanes]	N	37	48 – 57	N/A	80	By-product of drinking water chlorination
HAA5 (ppb) [Total Haloacetic Acids]	N	24	18 - 100	N/A	60	By-product of drinking water disinfection
Chlorine (ppm)	N	0.94 mg/l	0.52- 1.66	MRDLG = 4	MRDL = 4	Water additive used to control microbes

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.*

North Carolina Source Water Assessment

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 the City of Winston-Salem (PWSID 0234010) 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.

Source Water Assessment Program Results Summary			
Source Name	Inherent Vulnerability Rating	Containment Rating	Susceptibility Rating
Salem Lake	Moderate	Higher	Higher
Yadkin River (Idols Dam)	Higher	Moderate	Higher
Yadkin River (PW Swann WTP)	Higher	Lower	Moderate

The complete SWAP Assessment report for the City of Winston-Salem may be viewed on the Web at: ncwater.org/?page=600. Please indicate your system name (Winston-Salem, City of) and number (0234010).

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 report 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 (Winston-Salem, City of), number (0234010), 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.



Water Quality

The following substances were detected in Winston-Salem/Forsyth County public water supply during the 2022 calendar year.

Regulated at the Treatment Plant					
Substance	Highest Level Allowed (EPA's MCL ¹)	Ideal Goal (EPA MCLG ²)	Range of Detections	Average Level Detected	Source
Fluoride, ppm ⁵	4.0 ⁶	4.0	0.06 - 1.20	0.82	Erosion of natural deposits; Water additive, promotes strong teeth
Orthophosphate, ppm	NA	1.0	0.732 - 1.137 ¹¹	0.91	Water treatment additive to prevent pipe corrosion
Total Organic Carbon, ppm	Treatment Technique ⁷	n/a	0.895 - 1.910	1.260	Naturally present in the environment
Turbidity, NTU ⁸	Treatment Technique ⁹	n/a	0.020 - 0.295	0.040	Soil erosion
Regulated in the Distribution System					
Total Trihalomethanes, ppb ⁴	80 LRAA ¹⁰	0.0	13.8 - 123.6	49.0	Byproducts of drinking water disinfection
Total Haloacetic Acids (5), ppb	60 LRAA ¹⁰	0.0	13.9 - 57.4	31.9	Byproducts of drinking water disinfection
Chlorine, ppm	4.0	4.0	0.03 - 1.92	0.95	Water treatment additive for disinfection
Total Coliforms	Less than 5% positive	0.0	ND - 0.54% ¹⁵	0.05%	Naturally present in the environment
Unregulated Substances at the Treatment Plant - Point of Entry ¹⁴					
Geosmin, ppt ³	Not Regulated	Not Regulated	ND - 8.71	4.21	Byproduct of algae growth ¹²
2-methylisoborneol, ppt	Not Regulated	Not Regulated	ND - 7.32	1.60	Byproduct of algae growth ¹²
Unregulated Substances at the Treatment Plant - Source Water ¹⁴					
Geosmin, ppt	Not Regulated	Not Regulated	ND - 8.05	3.52	Byproduct of algae growth ¹²
2-methylisoborneol, ppt	Not Regulated	Not Regulated	ND - 16.20	5.24	Byproduct of algae growth ¹²
Perfluorooctanesulfonic acid (PFOS), ppt	Not Regulated ¹³	Not Regulated	ND - 1.58	0.61	These compounds are used in the manufacture of carpets, clothing, fabrics for furniture, paper packing for foods and other materials. They are also used in the manufacturing of non-stick cookware, fire-fighting foams and a number of different manufacturing processes.
Perfluorooctanoic acid (PFOA), ppt	Not Regulated ¹³	Not Regulated	ND - 1.07	0.41	

DEFINITIONS:

¹ Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water.

² Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health.

³ ppt - One part per trillion. - (For example, one penny in \$10,000,000,000.)

⁴ ppb - One part per billion. - (For example, one penny in \$10,000,000.)

⁵ ppm - One part per million. - (For example, one penny in \$10,000.)

⁶ The EPA's maximum contaminant level for fluoride is 4.0 mg/L, however the State of North Carolina has established a maximum contaminant level of 2.0 mg/L.

⁷ Treatment technique for total organic carbon was complied with throughout 2022.

⁸ NTU - nephelometric turbidity unit, a measure of the cloudiness of water.

⁹ 95% of the measurements taken in one month must be below 0.3 NTU. Turbidity treatment technique was complied with throughout 2022.

¹⁰ Locational running annual average - average of last four quarters of samples collected at each location at 12 monitoring sites.

¹¹ A corrosion study was conducted that determined the ideal orthophosphate range for reducing lead and copper corrosion in our system was between 0.50 – 5.00 ppm.

¹² These compounds are created by algae in raw water that can cause an earthy/musty taste or odor in drinking water. While some people may find this unpleasant, there are no known negative health impacts associated with their consumption.

¹³ EPA Health Advisory Levels: PFOS 0.02 ppt and PFOA 0.004 ppt. Our water supply has no history of high levels of per- and polyfluoroalkyl substances (PFAS). In anticipation of future EPA requirements, we began proactive sampling of treated drinking water at all water plants in August of 2022 and PFAS were not detected.

¹⁴ Unregulated substances are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining its occurrence in drinking water and whether future regulation is warranted.

¹⁵ 1 positive TC sample in July 2022 out of 185 samples

ND = not detected