

# ***2021 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** 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 **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](mailto: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: NONE

## 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, (2021).** 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 in excess of 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.

***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

### REVISED TOTAL COLIFORM RULE:

#### 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/A	N/A	N/A	TT*	Naturally present in the environment
<i>E. coli</i> (presence or absence)	N	Absent	0	<p>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></p> <p><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.</p>	Human and animal fecal waste

#### 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 <sup>th</sup> percentile)	4/26-5/01/19	ND	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 <sup>th</sup> percentile)	4/26-5/01/19	ND	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		MRDLG	MRDL	Likely Source of Contamination
				Low	High			
Chlorine (ppm)	2021	N	0.53 ppm	0.21	0.96 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)						N/A	80	Byproduct of drinking water disinfection
Location								
B01	2021	N	48 ppb	24	57 ppb	N/A	80	Byproduct of drinking water disinfection
B02	2021	N	62 ppb	37	73 ppb	N/A	80	Byproduct of drinking water disinfection
HAA5 (ppb)						N/A	60	Byproduct of drinking water disinfection
Location								

B01	2021	N	19 ppb	14 - 20 ppb	N/A	60	Byproduct of drinking water disinfection
B02	2021	N	18 ppb	15 - 21 ppb	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.*

## Winston Salem / Forsyth County Utilities 2021 Results

### Water Quality

The following substances were detected in Winston-Salem/Forsyth County Utilities public water supply during the 2021 calendar year.

#### Regulated at the Treatment Plant

Substance	Highest Level Allowed (EPA's MCL1)	Ideal Goals (EPA's MCLG2)	Range of Detections	Average Level Detected	Source
Fluoride, ppm <sup>5</sup>	4.0 <sup>6</sup>	4.0	0.58 - 1.14	0.78	Erosion of natural deposits; Water additive, promotes strong teeth
Orthophosphate, ppm	N/A	1.0	0.68 - 1.13 <sup>11</sup>	0.91	Water treatment additive to prevent pipe corrosion
Total Organic Carbon, ppm	Treatment Technique <sup>7</sup>	N/A	ND - 1.3	0.43	Naturally present in the environment
Turbidity, NTU <sup>8</sup>	Treatment Technique <sup>9</sup>	N/A	0.02 - 0.42	0.04	Soil erosion

#### Regulated in the Distribution System

Total Trihalomethanes, ppb <sup>4</sup>	80 LRAA <sup>10</sup>	0.0	19.0 - 95.8	43.4	Byproducts of drinking water disinfection
Total Haloacetic Acids (5), ppb	60 LRAA <sup>10</sup>	0.0	17.0 - 46.0	25.6	Byproducts of drinking water disinfection
Chlorine, ppm	4.0	4.0	0.04 - 1.76	1.05	Water treatment additive for disinfection
Total Coliforms	Less than 5% positive	0.0	0.0%	0.0%	Naturally present in the environment

#### Unregulated Substances at the Treatment Plant - Point of Entry

Geosmin, ppt <sup>3</sup>	Not Regulated	1.84 - 4.06	2.82	Byproduct of algae growth <sup>12</sup>
2-methylisoborneol, ppt	Not Regulated	ND - 10.1	2.29	Byproduct of algae growth <sup>12</sup>

#### Unregulated Substances at the Treatment Plant - Source Water

Geosmin, ppt	Not Regulated	0.89 - 5.94	2.59	Byproduct of algae growth
2-methylisoborneol, ppt	Not Regulated	ND - 21.0	5.94	Byproduct of algae growth
Perfluorooctanesulfonic acid (PFOS), ppt	Not Regulated <sup>13</sup>	ND - 4.12	1.4	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 <sup>13</sup>	ND - 2.15	0.7	

## Physical & Mineral Characteristics Calendar Year 2021

CONSTITUENT	ANNUAL RANGE DETECTED	ANNUAL AVERAGE
Alkalinity, ppm	15.0 - 27.0	21.3
Calcium, ppm	3.3 - 5.2	4.10
Carbon Dioxide, ppm	0.5 - 9.5	3.2
Chlorine, ppm	0.86 - 2.04	1.47
Conductivity, micromhos/cm	77 - 128	96.5
Hardness, ppm	10.5 - 30.0	17.7
pH, Standard Units	7.0 - 8.3	7.5
Phosphate, ppm	0.61 - 1.25	0.91
Silica, ppm	3.7 - 17.2	10.55
Sodium, ppm	9.5 - 11.4	10.3
Temperature, Deg. C	2.1 - 29.9	19.7

## NOTICE TO THE PUBLIC

### IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER WINSTON-SALEM HAS NOT MET MONITORING REQUIREMENTS

*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 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 OR WILL BE TAKEN (Water System to Complete)
Turbidity (Individual Filter Effluent)	WP2/EP2	July 2021	Continuous Monitoring	Sampling was started as soon as the issue was discovered and continued until the instrument was repaired July 14, 2021 at 1:40 p.m.

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

**What is being done?** Turbidity is the measure of the clarity of water. This is an important measurement we monitor because suspended particles in water that can cause high turbidities can shield harmful bacteria that our disinfection process targets. All our facilities are required to continuously monitor each individual filter and points downstream in our process. Should any of our continuous monitoring devices fail we are required to take "grab" samples at that location no less than four hours a part.

At 12:04 AM on July 14, 2021, the turbidimeter failed on Filter #6 at the Neilson WTP. Because the value went to zero and did not alarm, the operators did not notice the failed device until 9:00 AM and failed to collect the required grab samples every four hours. Upon noticing the failed device, the required sampling was started and continued until the unit was repaired at 1:40 PM on July 14, 2021.

During the time the Filter #6 turbidimeter was out of service, our staff monitored three working turbidimeters downstream in the process. All three of these turbidimeters indicated the process was operating within acceptable parameters and that there was no danger to public health.

*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, 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:  
Bill Brewer, Water Treatment Superintendent 336-397-7727  
City of Winston-Salem, System Number: NC0234010

**Violation Awareness Date: July 29, 2021**

## Yadkin County-East Bend Water 2021 Results

### 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 <sup>th</sup> percentile)	6/14/21	0.053	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 <sup>th</sup> 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/MRDL Violation Y/N	Your Water RAA (Stage 1)	Range Low High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb) [Total Trihalomethanes]	N	53	48 – 57	N/A	80	By-product of drinking water chlorination
HAA5 (ppb) [Total Haloacetic Acids]	Y	59	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