Consumer Confidence Report (CCR) Certification Form

Water System Name: Stokes County Water and Sewer Authority

Water System No.: NC 02-85-025 **Report Year: 2021** **Population Served: 420**

The Community Water System (CWS) named above hereby confirms that all provisions under 40 CFR parts 141 and 142 requiring the development of, distribution of, and notification of a consumer confidence report have been executed. Further, the CWS certifies the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the primacy agency by their NC certified laboratory. In addition, if this report is being used to meet Tier 3 Public Notification requirements, as denoted by the checked box below, the CWS certifies that public notification has been provided to its consumers in accordance with the requirements of 40 CFR 141.204(d).

Certified by: Name: Stewart Easter **Title:** Public Works Director

Signature: Stewart Easter **Phone #:** 336-593-2415

Delivery Achieved Date: 5/21/22 **Date Reported to State:** 5/23/22

☒ **The CCR includes the mandated Public Notice for a monitoring violation (check box, if yes).**

Check **all** methods used for distribution (see instructions on back for delivery requirements and methods):

- ☒ Paper copy to all US Mail Hand Delivery
- ☐ Notification of Availability of Paper Copy (Provide a copy of the notice.)
  Notification Method _____ (i.e. US Mail, door hanger)
- ☒ Notification of CCR URL (must be direct URL) URL: www.co.stokes.nc.us/scwsadwqreport21.pdf
  Notification Method _____(i.e. on bill, bill stuffer, separate mailing, email)
- ☐ Direct email delivery of CCR (attached? ___or embedded?___) (Provide a copy of the email.)
  Notification Method _____ (i.e. on bill, bill stuffer, separate mailing)
- ☐ Newspaper (attach copy) What Paper? _____Date Published: _____
  Notification Method _____ (i.e. US Mail, on bill, bill stuffer, door hanger, a postcard dedicated to the CCR, or email)

- ☒ **"Good faith" efforts** (in addition to one of the above required methods) were used to reach non-bill paying consumers such as industry employees, apartment tenants, etc. Extra efforts included the following methods:
  - ☐ posting the CCR on the Internet at URL: _____
  - ☐ mailing the CCR to postal patrons within the service area
  - ☐ advertising the availability of the CCR in news media (attach copy of announcement)
  - ☐ publication of the CCR in local newspaper (attach copy)
  - ☐ posting the CCR in public places such as: (attach list if needed) _____
  - ☐ delivery of multiple copies to single bill addresses serving several persons such as: apartments, businesses, and large private employers
  - ☐ delivery to community organizations such as: (attach list if needed)

Note: Use of social media (e.g., Twitter or Facebook) or automated phone calls DO NOT meet existing CCR distribution methods under the Rule.

Instructions for Notice of Availability and/or a Direct URL:

Systems serving 500 or fewer persons must either: (1) distribute the CCR by mail or direct delivery OR (2) notify their customers that the CCR is not being mailed, but a copy of the CCR will be made available upon request. [*Option (2) is not acceptable if using the CCR for Tier 3 Public Notification!]* **The Notice of Availability in the Example below must be delivered to each customer if Option (2) is being used.**

Regardless of the population, if the water system intends to provide delivery of the CCR report on a publicly available site on the Internet, a notice of availability containing the direct URL to that website must be directly delivered to all bill paying customers if the full report is not mailed or directly delivered by approved means.

Example Notice of Availability:

The Annual Drinking Water Quality Report for (YEAR) will not be distributed to each customer, but a copy is available upon request.

Contact your water system representative, [insert Name] at [insert phone number with area code],

or if applicable,

view the report on our website at the following direct link: example (www.yourwater.org/ccr).

Note: Water systems should provide a translation of this statement if >10 percent of the population served is non-English speaking.

Spanish Translation of the Example Notice of Availability:

El Informe Anual de Calidad de Agua Potable (Informe de Confianza del Consumidor) del año [YEAR] no se distribuirá a cada cliente, pero puede obtener una copia si la pide.

Contacte al representante de su compañía de agua,[insert Name] al [insert phone number with area code] para pedir una copia

o si es aplicable,

puede ver el Informe en nuestra página electrónica en el enlace siguiente: (example: ww.yourwater.org/ccr).

2021 Annual Drinking Water Quality Report
Stokes County Water and Sewer Authority

Water System Number: **NC 02-85-025**

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 Stewart Easter at (336) 593-2415. We want our valued customers to be informed about their water utility.**

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. Stokes County Water and Sewer Authority 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 Winston-Salem. Winston-Salem treats water from the Yadkin River, and Salem Lake.

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 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
Salem Lake	Higher	September 2020
Yadkin River (Idols Dam)	Higher	September 2020
Yadkin River (PWSWANN WT)	Moderate	September 2020

The complete SWAP Assessment report for Winston-Salem 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.).

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.

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.

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

REVISED TOTAL COLIFORM RULE:

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/A	N/A	N/A	TT*	Naturally present in the environment
E. coli (presence or absence)	N	Absent	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

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	ND	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90^{th} percentile)	2020	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 Low High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	2021	N	0.69 ppm	0.3 ppm – 1.12 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 Low High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)					N/A	80	Byproduct of drinking water disinfection
Location B01	2021	N	62 ppb	26 ppb- 80 ppb			
HAA5 (ppb)					N/A	60	Byproduct of drinking water disinfection
Location B01	2021	N	19 ppb	14 ppb- 24 ppb	14		

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.*

Water Purchased from Winston-Salem (from Winston-Salem's CCR)

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 MCL[1])	Ideal Goals (EPA's MCLG[2])	Range of Detections	Average Level Detected	Source
Fluoride, ppm[5]	4.0[6]	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[11]	0.91	Water treatment additive to prevent pipe corrosion
Total Organic Carbon, ppm	Treatment Technique[7]	N/A	ND - 1.3	0.43	Naturally present in the environment
Turbidity, NTU[8]	Treatment Technique[9]	N/A	0.02 - 0.42	0.04	Soil erosion
Regulated in the Distribution System					
Total Trihalomethanes, ppb[4]	80 LRAA[10]	0.0	19.0 - 95.8	43.4	Byproducts of drinking water disinfection
Total Haloacetic Acids (5), ppb	60 LRAA[10]	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[3]		Not Regulated	1.84 - 4.06	2.82	Byproduct of algae growth[12]
2-methylisoborneol, ppt		Not Regulated	ND - 10.1	2.29	Byproduct of algae growth[12]
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[13]	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[13]	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 an 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