

Annual
WATER
QUALITY
REPORT
Reporting Year 2015



Presented By _____
Warren County Public Utilities

PWS ID#: NC4093005

Maintaining High Standards For Our Customers

Warren County Public Utilities (WCPU) is once again proud to present our annual drinking water quality report. This report covers water quality testing performed from January 1 to December 31, 2015. WCPU remains vigilant in meeting the challenges of new regulations, water conservation, and community outreach and education while meeting the needs of our customers.

Community Participation

You are invited to attend Warren County Board of Commissioners meetings. They are held the first Monday of each month at 6:00 PM. Call the County Manager's Office at 252-257-3115 for meeting location.



Your Water Source

In 2015 your water was purchased from Northampton County and Kerr Lake Regional Water. The water source for the water purchased from Northampton County is the Roanoke Rapids Lake and the Roanoke River. The water source for the water purchased from Kerr Lake Regional Water is Kerr Lake

Our Revenue Sources

Our services are funded with fees and charges for the services we provide. Most of our revenue comes from our monthly bills for water and sewer service. We do not receive property taxes as a part of our revenue. We occasionally receive State or Federal grants for improvements or expansion of our systems.

What You Should Know About Lead and Drinking Water

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. We are 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 www.epa.gov/safewater/lead.

Questions?

For any questions or concerns relating to your drinking water or water service, please contact Warren County Public Utilities at 252-257-3645. For more information about this report, contact Teresa Harris, Utilities Superintendent at 252-257-3645, or email at TeresaHarris@warrencountync.gov.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or www.epa.gov/safewater/hotl

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 assessment 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 Warren County Northampton system 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). **According to the Source Water Assessment Plan from July 8, 2015, Roanoke Rapids Lake and the Roanoke River had a susceptibility rating of “moderate”.**

The complete SWAP Assessment report for Warren County-Northampton may be viewed on the Web at: <http://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. To obtain a printed copy of this report, please mail a written request to: Source Water Assessment Program– Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634, or email request to swap@ncdenr.gov. Please indicate your system name, PWSID, 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.

The relative susceptibility rating of each source for the Kerr Lake Regional Water System (KLRW) 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). **According to the Source Water Assessment Plan dated June 18, 2014, KLRW had a susceptibility rating of “moderate”.**

The complete SWAP Assessment report for Kerr Lake Regional System may be viewed on the Web at: <http://www.ncwater.org/pws/swap>. To obtain a printed copy of this report, please mail a written request to: Source Water Assessment Program– Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634, or email request to swap@ncdenr.gov. Please indicate your system name, PWSID, and provide your name, mailing address and phone number. If you have any questions about the SWAP report please contact our office during normal business hours at 252-257-3645.

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 PCS’s in the assessment area.

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 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.

RRSS - Roanoke Rapids Sanitary District

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 Byproducts Rule.

IMPORTANT MESSAGE BELOW:



Damage To Our Water Meter Could Cost You Money

Most automatic meter reading devices mount through the meter box lid. From the top, it looks like a black or silver disc about seven inches in diameter. It sticks up ½ inch to ¾ inch above the top of the meter box lid. The center part of the unit is made of hard plastic that is hard enough to support the weight of a car, but not able to survive an encounter with a lawn mower blade or a lawn aerator spike. Please be careful when you are aerating or mowing around water meter pits. Never run your aerator over the top of a meter pit, and check the clearance between your mower blade and the top of the meter box. The 2016 standard charge for replacing the entire meter assembly is approximately \$375.00.

While doing landscape projects, be sure the meter box lid remains exposed, level with the ground, and outside any fences or walls. Never put rocks, flower pots or other objects on the meter box.

Sampling Results

During the past year, there have been hundreds of water samples collected and analyzed in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The presence of contaminants does not necessarily indicate that the water poses a health risk. **Unless otherwise noted, the data presented in this table is from testing done January 1, 2015 through December 31, 2015.**

The state requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample date are included, along with the year in which the sample was taken.

Turbidity (RRSD)

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	.043 NTU	N/A	Turbidity > 1 NTU	Soil runoff
Turbidity (NTU) - Lowest monthly percentage (%) of samples meeting turbidity limits		%	N/A	Less than 95% of monthly turbidity measurements are \leq 0.3 NTU	

Turbidity is a measure of the cloudiness of the water. The staff at Roanoke Rapids Sanitary District monitors it because it is a good indicator of the effectiveness of their 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 (RRSD)

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Fluoride (ppm)	Annual Average	N	.64 mg/L	.55mg/L—	.75mg/L	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Nitrate/Nitrite Contaminants (RRSD)

Contaminant (units)	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
			Low	High			
Nitrate (as Nitrogen) (ppm)	N	Less than 1 mg/l	N/A		10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Total Organic Carbon (TOC) (RRSD)

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	1.68	1.33-2.07	N/A	TT	Naturally present in the environment	

Sampling Results

During the past year Kerr Lake Regional Water has taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water.

The state requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample dates are included, along with the year in which the sample was taken.

Regulated Substances - Sampling Conducted by Kerr Lake Regional Water System (KLRW)

Substance (Unit of Measure)	Year Sampled	MCL [MRDL]	MCLG [MRDLG]	Amount Detected	Range Low- High	Violation	Typical Source
Chlorine (ppm)	2015	[4]	[4]	0.92	0.08-1.85	No	Water additive used to control microbes
Fluoride (ppm)	2015	4	4	0.78	0.83-0.83	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Barium	2015	2	2	0.0200	0.0200- 0.0200	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Total Organic Carbon [TOC] (ppm)	2015	TT	NA	1.33	1.21 - 1.48	No	Naturally present in the environment
Turbidity (NTU)	2015	TT = 1 NTU	NA	0.09	0.02 - 0.09	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2015	95%of samples< 0.3 NTU	NA	100	NA	No	Soil runoff

Turbidity is a measure of the cloudiness of the water. The staff at Kerr Lake Regional Water monitors it because it is a good indicator of the effectiveness of their filtration system. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU.

Secondary Substances - Samples Collected by Kerr Lake Regional Water (KLRW)

Substance (Unit of Measure)	Year Sampled	SMCL	MCLG [MRDLG]	Amount Detected	Range Low- High	Violation	Typical Source
Fluoride (ppm)	2015	2.0	NA	0.76	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Sulfate (ppm)	2015	250	NA	19.2	NA	No	Runoff/leaching from natural deposits; Industrial wastes
pH (Units)	2015	6.5-8.5	NA	7.1	NA	No	Naturally occurring

Unregulated Substances - Samples Collected by Kerr Lake Regional Water (KLRW)

Substance (Unit of Measure)	Year Sampled	Amount Detected	Range Low- High	Typical Source
Sodium (ppm)	2015	15.4	15.4-15.4	Naturally present in the environment

Warren County-Northampton Water System Test Results - Regulated Substances

Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

Substance (Unit of Measure)	Year Sampled	AL	MCLG	Amount Detected (90th%TILE)	Sites Above AL/Total Sites	Violations	Typical Source
Copper (ppm)	2013	1.3	1.3	0.210	0/10	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2013	15	0	0.000	0/10	No	Corrosion of household plumbing systems; Erosion of natural deposits

Stage 2 Disinfection Byproducts Compliance—Based upon Locational Running Annual Average (LRAA)

Substance (Unit of Measure)	Year Sampled	MCL [MRDL]	MCLG [MRDLG]	Your Water (highest LRAA)	Range Low-High	Violation	Typical Source
TTHM (ppb) [Total Trihalomethanes] BO1	2015	80	NA	120	38-79	Yes	By-product of drinking water disinfection
HAA5 (ppb) [Total Haloacetic Acids] B02	2015	60	NA	38	24-49	No	By-product of drinking water disinfection
Chlorine (ppm)	2015	[4]	[4]	.64	2 - 146	No	Water additive used to control microbes

VIOLATIONS RECEIVED IN 2015

Our Warren County Northampton water system received the following violations for exceeding the maximum contaminant level (MCL) for TOTAL TRIHALOMETHANES (TTHMs). The standard for TTHMs is 0.080 milligrams per liter (mg/L). The table below shows the time period and the local running annual average (LRAA) of the samples we collected that exceeded the standard.

TIME PERIOD	TTHM ALLOWABLE LIMIT	LRAA AVERAGE
Ending December 31, 2014	0.080 milligrams per liter (mg/L)	0.082 mg/L
Ending March 31, 2015	0.080 milligrams per liter (mg/L)	0.082 mg/L

This was not an immediate risk. If it had been, you would have been notified immediately. However, *some people who drink the water containing Trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.*

We are flushing our waterlines on a routine basis. The waterline has been installed across the Eaton's Ferry Bridge and is now in operation. We are hoping this will resolve the problem we have been having with the elevated TTHM levels.

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.).

