

Serving Those Who Serve.®

2018 Water Quality Report
Fort Bragg Main Base
PWS ID#: NC 50-26-019
Old North Utility Services, Inc.
American States Utility Services, Inc.



Dedicated to Delivering Clean Water

Every day, people in the United States depend on American States Utility Services, Inc. (ASUS) for the water that enhances their quality of life. We operate and maintain water and wastewater systems on military bases across the country, dedicating ourselves to producing drinking water that meets all state and federal standards and continually striving to adopt new methods for delivering the best quality drinking water to the military installations we serve. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education, while continuing to meet the needs of all of our water users.

At ASUS, we are proud to provide the integral services that truly empower our nation's military communities, from the ground up. With our smart infrastructure systems, we create and maintain the efficiencies that allow installations across the country to focus on their own true mission. Ours is simple: to continue building upon their strength as effectively as possible.

Old North Utility Services, Inc. (ONUS), a wholly-owned subsidiary of ASUS, is the provider of your water service. Our certified operators ensure the safe delivery of all potable water, taking water samples at approved sites to ensure the its quality throughout our system. With a deep commitment to customer care, ASUS works diligently to protect every drop of water. As a utility provider, we constantly analyze our systems to determine which areas might need repair, replacement, or even supplementary facilities. ASUS also puts a strong focus on water efficiency, actively providing educational outreach for customers to further encourage better resource management.

We at ASUS are proud to be able to provide our services to the military personnel, civilians, and family members who live and work at Fort Bragg Main Base. We are honored to support the role your military installation plays in defending the country, both at home and abroad. We achieve this goal by always putting our fundamental ideals into practice. We pay special attention to the ultimate measure of success: our customer's peace of mind. With our own team's deeply-rooted military background, we have an intimate understanding of what it takes to make an installation thrive, and we take pride in delivering unparalleled care in this regard.

We at ASUS are pleased to present you with this annual water quality report and thank you for allowing us to serve you and your family. Please remember that we are always available to assist you should you ever have any questions or concerns about your water. For more details, you can view our past and current Water Quality Reports at www.asusinc.com.

Sincerely,

Adam Loughman
Utility Manager



Susan Miller
Director, Mid-Atlantic Region



Important Information about Your Water

What the 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 at (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 at (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. [Name of Utility] 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 byproducts 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 a result of oil and gas production and mining activities.

In order to ensure that the 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*

Fort Bragg customers are fortunate because we enjoy an abundant water supply from two sources, the Harnett County Water Treatment Plant, which treats water from the Cape Fear River, and Fayetteville Public Works Commission (PWC) Water Treatment Plant, which treats water from both the Cape Fear River and Glenville Lake. Both water treatment plants are located within the Cape Fear River Basin.

Important Information about Your Water

Source Water Assessment Program

The North Carolina Department of Environmental Quality (DEQ), Public Water Supply (PWS) Section, and 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 Old North Utility Services – Fort Bragg 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	Inherent Vulnerability Rating	Contaminant Ruling	Susceptibility Rating	SWAP Report Date
Fayetteville PWC- Cape Fear River	Higher	Moderate	Higher	August 2017
Fayetteville PWC - Glenville Lake	Higher	Lower	Moderate	August 2017
Harnett County - Cape Fear River	Higher	Lower	Moderate	August 2017

The complete SWAP Assessment report for Public Works Commission may be viewed on the Web at: <https://www.ncwater.org/?page=600>. Note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this web site may differ from the results that were available at the time this CCR was prepared. If you are unable to access your SWAP report on the web, you may mail a written request for a printed copy to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634, or email requests to swap@ncdenr.gov. Please indicate your system name, number, and provide your name, mailing address and phone number. If you have any questions about the SWAP report please contact the Source Water Assessment staff by phone at 919-707-9098.

It is important to understand that a susceptibility rating of “higher” does not imply poor water quality, only the system’s potential to become contaminated by PCSs in the assessment area.

2018 Water Quality Results

Old North Utility Services, Inc. (ONUS), in conjunction with our purveyors, Fayetteville PWC and Harnett County, routinely monitored for more than 150 contaminants in your drinking water in accordance with state and federal regulations. The tables that follow 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, 2018. The EPA and the State of North Carolina 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.

For more information about this report, or for any questions relating to your drinking water, please contact Meaghan Till, Environmental Coordinator of Old North Utility Services, Inc. at (910) 495-1311.

2018 Water Quality Results (cont'd)

Key to Abbreviations

MCL – Maximum Contaminant Level – The highest level of contaminant that is allowed in drinking water
MCLG – Maximum Contaminant Level Goal – The level of a contaminant in drinking water below which there is no known or expected risk to health
MRDL – Maximum Residual Disinfectant Level – 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.
MRDLG – Maximum Residual Disinfectant Level Goal – 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.
AL – Action Level – The concentration of a contaminant which triggers a treatment or other requirement which a water system must follow.
TT – Treatment Technique – A required process intended to reduce the level of a contaminant in drinking water.
pCi/L – picoCuries per liter (a measure of radioactivity)
mrem/yr – Millirems per year (a measure of radiation absorbed by the body)
mg/L – Milligrams per liter
SDWR – Secondary Drinking Water Regulations (State Options). State regulatory agencies make the determination about whether a limit applies to controlling parameters that primarily affect the aesthetic qualities of drinking water.
NTU – Nephelometric Turbidity Units, a measure of the suspended material in water.
NS – No Standard
ug/L – Micrograms per liter
TTHM – Total Trihalomethanes
THAA – Total Haloacetic Acid
N/A – Not Applicable – Information not applicable/not required for that particular water system or for that particular rule.
MFL – Million Fibers per Liter – A measure of the presence of asbestos fibers that are longer than 10 micrometers.
VOC – Volatile Organic Compounds
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.

Detected Contaminants By Old North Utility Services, Inc.

Microbiological Contaminants

Parameters (units)	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source
Total Coliform Bacteria	N/A	0.20%	N/A	TT (a)	Naturally present in the environment
Fecal Coliform or E. coli	NO	0	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 for E. coli (See Note.)	Human and animal fecal waste

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

Lead and Copper

Contaminant (units)	Sample Date (b)	Your Water	# of sites above the AL	MCLG	AL	Likely Source
Copper (ppm) 90th Percentile	6/2018 - 7/2018	>0.050	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) 90th Percentile	6/2018 - 7/2019	>0.003	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits

(b) 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. The Public Works Commission is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791), or at <http://www.epa.gov/safewater/lead>.

Disinfectant Residuals Summary

Disinfectant	Year Sampled	MRDL Violation Y/N	Highest RAA	Range	MRDLG	MRDL	Likely Source
Chlorine (ppm) (c)	2018	NO	0.54	0.00-2.07	4	4	Water additive used to control microbes
Chloramines (ppm) (c)	2018	NO	1.68	0.03-3.1	4	4	Water additive used to control microbes

(c) Chlorine disinfection is used only during the month of March each year.

2018 Water Quality Results (cont'd)

Detected Contaminants By Old North Utility Services, Inc.

Stage 2 Disinfection Byproduct Compliance - Based upon Locational Running Annual Average (LRAA)

Disinfection Byproduct	Year	MCL Violation	Highest LRAA	Range	MCLG	MCL	Likely source
TTHM (ppb)	2018		44.1 (Location Code B07)			80	Byproduct of drinking water disinfection
TTHM Location B01	2018	NO		25.8-42.8	N/A	80	Byproduct of drinking water disinfection
TTHM B02	2018	NO		26.6-66.5	N/A	80	Byproduct of drinking water disinfection
TTHM B03	2018	NO		24.8-42.6	N/A	80	Byproduct of drinking water disinfection
TTHM B04	2018	NO		29.5-56.4	N/A	80	Byproduct of drinking water disinfection
TTHM B05	2018	NO		29.2-49.0	N/A	80	Byproduct of drinking water disinfection
TTHM B06	2018	NO		26.3-54.2	N/A	80	Byproduct of drinking water disinfection
TTHM B07	2018	NO		23.7-71.7	N/A	80	Byproduct of drinking water disinfection
TTHM B08	2018	NO		38.4-39.9	N/A	80	Byproduct of drinking water disinfection
HAA5 (ppb)			21.4 (Location Code B08)		N/A	60	Byproduct of drinking water disinfection
HAA5 Location B01	2018	NO		2.5-23.2	N/A	60	Byproduct of drinking water disinfection
HAA5 B02	2018	NO		14.3-30.6	N/A	60	Byproduct of drinking water disinfection
HAA5 B03	2018	NO		14.1-30.9	N/A	60	Byproduct of drinking water disinfection
HAA5 B04	2018	NO		14.0-30.3	N/A	60	Byproduct of drinking water disinfection
HAA5 B05	2018	NO		2.0-18.8	N/A	60	Byproduct of drinking water disinfection
HAA5 B06	2018	NO		11.9-29.3	N/A	60	Byproduct of drinking water disinfection
HAA5 B07	2018	NO		12.6-28.1	N/A	60	Byproduct of drinking water disinfection
HAA5 B08	2018	NO		14.0-33.8	N/A	60	Byproduct of drinking water disinfection

Miscellaneous Water Characteristics Contaminants

Contaminant (units)	Your Water (Low-High)	Secondary MCL
pH	7.02-8.45	6.5-8.5

Source Water Quality - Detected Contaminants By Harnett County

Turbidity

Turbidity (NTU)	Treatment Technique (TT) Violation	Your Water	Treatment Technique (TT) Violation IF:	Likely Source
Highest single measurement	NO	0.10 NTUs	Turbidity > NTU	Soil runoff
Lowest monthly percentage of samples meeting turbidity limits	NO	100%	Less than 95% of monthly turbidity measurements are < or = to 0.3 NTU	Soil runoff

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

2018 Water Quality Results (cont'd)

Source Water Quality - Detected Contaminants By Harnett County

Microbiological Contaminants

Parameters (units)	MCL Violation	Your Water	MCLG	MCL	Likely Source
Total Coliform Bacteria	NO	4.0%	N/A	>5% triggers Level 1 Assessment	Naturally present in the environment
Fecal Coliform or E. coli	NO	0	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 for E. coli (See Note.)	Human and animal fecal waste

NOTE: If either an original routine sample and/or its repeat sample(s) are E. coli positive, a Tier 1 violation exists. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water.

Regulated Inorganic Contaminants

Contaminant (units)	MCL	MCLG	Your Water	Range	Sample Date	Violation	Likely Source of Contamination
Fluoride (ppm)	4	4	0.54	N/A	1/3/2018	NO	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Lead and Copper Contaminants

Contaminant (units)	Sample Date	MCL	MCLG	Your Water	Range	Violation	Likely Source
Copper (ppm) 90th Percentile	8/2016	AL=1.3	1.3	0.155	N/A	NO	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) 90th Percentile	8/2016	AL=15	0	N/D	N/A	NO	Corrosion of household plumbing systems; erosion of natural deposits

Disinfection By-Product Precursors Contaminants

Contaminant	TT Violation Y/N	Your Water Ratio	Range	MCLG	MCL	Violation	Likely Source of Contamination	Compliance Method
Total Organic Carbon (ratio)	NO	1.33	1.04-1.51	N/A	TT	NO	Naturally present in the environment	Step 1

Step 1 TOC Removal Requirements

Source Water Alkalinity mg/l as CaCO3 (in percentages)

Source Water TOC (mg/l)	0-60	>60-120	>120
> 2.0 - 4.0	35.0	25.0	15.0
> 4.0 - 8.0	45.0	35.0	25.0
> 8.0	50.0	40.0	30.0

Disinfection By-Product Contaminants

Contaminant	Year	MCL	MCLG	Highest LRAA	Range of Results	Violation	Likely Source of Contamination
TTHM (ppb)	2018	80	N/A	59.7	28.0-59.7	NO	By-product of chlorination
HAA5 (ppb)	2018	80	N/A	26.0	14.5-26.0	NO	By-product of chlorination
Chlorite (ppm)	2018	1.0	0.8	0.275	0.13-0.43	NO	By-product of drinking water disinfection

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.

2018 Water Quality Results (cont'd)

Source Water Quality - Detected Contaminants By Harnett County

Disinfection Residuals Summary

Contaminant	Year	MRDL	MRDLG	Your Water LRAA	Range of Results	MRDL Violation	Likely Source
Chlorine Dioxide (ppb)	2018	800	800	16.5	0-602	NO	Water additive used to control microbes
Chloramines (ppm)	2018	4	4	2.98	1.15-3.98	NO	Water additive used to control microbes
Chlorine (March only) (ppm)	2018	4	4	0.58	0-2.70	NO	Water additive used to control microbes

Misc. Water Characteristics Contaminants

Contaminant (units)	Sample Date	Your Water	Secondary MCL
pH	1-3-18	6.8	6.5 to 8.5
Sulfate (ppm)	1-3-18	63.8	250
Sodium (ppm)	1-3-18	54.11	N/A

Source Water Quality - Detected Contaminants By Fayetteville Public Works Commission (PWC)

Filter Water Quality Data (Regulated)

Parameters (units)	MCL	MCLG	MCL Violation Y/N	Your Water Level	Range of Detected Levels	Most Recent Testing Date (a)	Likely Source
Barium (mg/l)	2	2	NO	<0.400	N/A	1/2018	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries
Copper (mg/l)	AL-1.3	1.3	NO	0.061	<0.05-0.11	9/2017	Corrosion of household plumbing systems; erosion of natural deposits leaching from wood preservatives
Fluoride (mg/l)	4	4	NO	0.709	0.538-0.88	12/2018	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum deposits
Lead (ug/l)	AL-15	0	NO	0.001 (a)	0.001-0.004	9/2017	Corrosion of household plumbing systems; erosion of natural deposits
Nitrate (mg/l)	10	10	NO	<1.0	N/A	1/2018	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Total Asbestos (MFL)	7	7	NO	<0.2	N/A	6/2011	Decay of asbestos cement water mains; erosion of natural deposits

(a) Lead and Copper action levels are exceeded if the concentrations in more than 10% of tap water samples collected during any monitoring period are greater than the MCL Action Levels shown above.

Filter Water Quality Data (Non-regulated)

Parameters (units)	Your Water	SDWR	MRDLG	Likely Source
Alkalinity (mg/l)	26.6	NS	NS	Erosion of natural deposits, water treatment processes
Hardness (mg/l)	34.6	NS	NS	Presence of mineral deposits, most commonly calcium and magnesium
Iron (mg/l)	<0.20	0.3	NS	Erosion of natural deposits
Manganese (mg/l)	<0.01	0.05	NS	Erosion of natural deposits
pH (pH units)	7.7	7.0-8.65	NS	Measurement of acid or base neutralizing capacities of water
Sodium (mg/l)	19.3	NS	NS	Erosion of natural deposits, chemical use in water treatment
Sulfate (mg/l)	15.0	250	NS	Erosion of natural deposits, decay or organic matter

2018 Water Quality Results (cont'd)

Source Water Quality - Detected Contaminants By Fayetteville Public Works Commission (PWC)

Turbidity

Parameters (units)	MCL	Your Water	Average	Range	MCLG Violation	Likely Source
Turbidity (NTU) (a)	95% of samples <0.30	100% <0.3 NTU	0.06	0.03-0.28	NO	Soil Runoff

(a) Turbidity is a measure of the cloudiness of the water. PWC monitors it because it is a good indicator of the effectiveness of the filtration system.

VOC Contaminants (Non-regulated)*

Parameters (units)	Your Water	Range of Detected Level	Sample Date
Chloroform (ug/l)	19.61	15.88-30.19	11/2018
Bromodichloromethane (ug/l)	15.38	9.13-23.38	11/2018
Bromoform (ug/l)	2.86	1.00-5.00	11/2018
Chlorodibromomethane (ug/l)	9.94	5.38-15.75	11/2018

* These compounds are associated with chlorine disinfection.

Microbiological Contaminants (PWC Surface Water Distribution)

Parameters (units)	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source
Total Coliform Bacteria	N/A	N/A	N/A	TT (a)	Naturally present in the environment
Fecal Coliform or E. coli	NO	0	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 for E. coli (See Note.)	Human and animal fecal waste

Note: If either an original routine fecal coliform sample and/or its repeat sample(s) are E. coli positive, a Tier 1 Violation exists.

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

Lead and Copper Contaminants

Contaminants (units)	Sample Date**	Your Water	# of sites found above AL	MCLG	MCL	Likely Source
Copper (mg/l) (90th percentile)	6/2017	0.061	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosions of natural deposits; leaching from wood preservatives
Lead (mg/l) (90th percentile)	6/2017	0.001	0	0	AL=.015	Corrosion of household plumbing systems, erosion of natural deposits

* 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. The Public Works Commission is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791), or at <http://www.epa.gov/safewater/lead>.

**Contaminants tested every three years.



2018 Water Quality Results (cont'd)

Source Water Quality - Detected Contaminants By Fayetteville Public Works Commission (PWC)

Disinfection By-Products Precursor Contaminants

Contaminants (units)	Sample Date	MCL/TT Violation	Your Water	Range	MCLG	MCL	Compliance Method	Likely Source
Total Organic Carbon (ppm) (TOC) Raw	Monthly	NO	N/A	3.3-9.9	N/A	TT	N/A	Naturally present in the environment
TOC Removal Ratio (TOC) Treated	Monthly	NO	2.08	1.3-2.8	N/A	TT	Alt 4 (SUVA < or =2.0 l/mg-min)	Naturally present in the environment

Disinfectant Residuals Summary

	Year Sampled	MRDL Violation Y/N	Highest RAA	Range	MRDLG	MRDL	Likely Source
Chlorine (ppm)*	2018	NO	1.27	0.13-2.31	4	4	Water additive used to control microbes
Chloramines (ppm)	2018	NO	2.79	1.10-3.80	4	4	Water additive used to control microbes

*Chlorine disinfection is used only during the month of March each year.

Stage 2 Disinfection Byproduct Compliance

Disinfection Byproduct	Year	MCL Violation Y/N	Highest LRAA	Range	MCLG	MCL	Likely source
TTHM (ppb)	2018	NO	55	37-55	N/A	80	By-product of drinking water disinfection
HAA5 (ppb)	2018	NO	35	24-35	N/A	60	By-product of drinking water disinfection

Radiological Contaminants

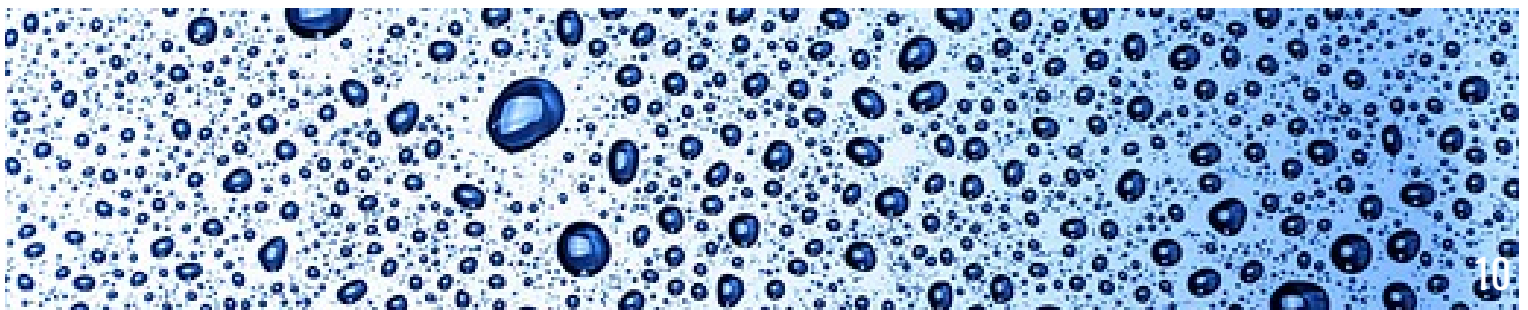
Contaminants (units)	Sample Date	MCL Violation Y/N	Your Water	Range	MCLG	MCL	Likely Source
Gross Alpha (pCi/l)	11-2016	NO	3.40	N/A	0	15	Erosion of natural deposits
Gross Beta (pCi/l)	11-2016	NO	4.60	N/A	0	50*	Decay of natural and man-made deposits
Radium 226 (pCi/l)	11-2016	NO	<1.0	N/A	0	3	Erosion of natural deposits
Radium 228 (pCi/l)	11-2016	NO	<1.0	N/A	0	2	Erosion of natural deposits
Uranium 226 (pCi/l)	11-2016	NO	<2.0	N/A	0	20.1	Erosion of natural deposits

*Note: The MCL for beta/photon emitters is 4 mrem/year. EPA considers 50 pCi/l to be the level of concern for beta particles.

Treatment Technique Violations

TT Violation	Explanation	Length of Violation	Steps taken to correct the violation	Health Effects Language	MRDLG	MRDL	Likely Source
Giardia	See note	1 day	See note	See note	4	4	Water additive used to control microbes

On February 19, 2018, the PWC system did not meet the treatment technique requirements for Giardia Lamblia at PWC's Glenville Lake Water Treatment Facility on January 6, 2018, when multiple water main breaks caused low water pressure in the PWC system.



2018 Water Quality Results (cont'd)

Source Water Quality - Detected Contaminants By Fayetteville Public Works Commission (PWC)

Unregulated Contaminant Monitoring Rule 4 - Distribution System

Sample Site B01 (Gristmill)	3/19/18	6/6/18	9/20/18	12/3/18
Bromochloroacetic acid (ug/l)	8.75	9.27	11.1	2.42
Bromodichloroacetic acid (ug/l)	9.07	6.5	8.58	2.71
Chlorodibromoacetic acid (ug/l)	2.94	1.47	5.71	0.624
Dibromoacetic acid (ug/l)	2.61	1.76	5.3	0.464
Dichloroacetic acid (ug/l)	12.2	19	15.3	7.72
Monobromoacetic acid (ug/l)	0.585	0.445	0.549	<0.30
Monochloroacetic acid (ug/l)	<2.0	<2.0	<2.0	<2.0
Tribromoacetic acid (ug/l)	<2.0	<2.0	<2.0	<2.0
Trichloroacetic acid (ug/l)	13	9.01	7.19	4.16

Sample Site B02 (Waters Edge)	3/19/18	6/6/18	9/20/18	12/3/18
Bromochloroacetic acid (ug/l)	7.16	9.97	10.9	2.43
Bromodichloroacetic acid (ug/l)	8.26	6.86	8.41	2.75
Chlorodibromoacetic acid (ug/l)	2.71	1.5	5.46	0.636
Dibromoacetic acid (ug/l)	1.9	1.82	5.03	0.477
Dichloroacetic acid (ug/l)	12	20.4	15.08	7.48
Monobromoacetic acid (ug/l)	0.538	0.469	0.471	<0.30
Monochloroacetic acid (ug/l)	<2.0	<2.0	<2.0	<2.0
Tribromoacetic acid (ug/l)	<2.0	<2.0	<2.0	<2.0
Trichloroacetic acid (ug/l)	14.3	10.2	7.76	4.15

Sample Site B03 (Gillis Hill)	3/19/18	6/6/18	9/20/18	12/3/18
Bromochloroacetic acid (ug/l)	11	9.34	12	2.43
Bromodichloroacetic acid (ug/l)	12.8	6.27	8.59	2.75
Chlorodibromoacetic acid (ug/l)	4.56	1.48	5.39	0.636
Dibromoacetic acid (ug/l)	3.45	1.86	5.59	0.636
Dichloroacetic acid (ug/l)	12.9	18.8	16.6	7.48
Monobromoacetic acid (ug/l)	0.804	<0.30	<0.30	<0.30
Monochloroacetic acid (ug/l)	<2.0	<2.0	<2.0	<2.0
Tribromoacetic acid (ug/l)	<2.0	<2.0	<2.0	<2.0
Trichloroacetic acid (ug/l)	14.5	8.23	7.33	4.15

Cryptosporidium

Fayetteville Public Works Commission (PWC) monitored for *Cryptosporidium* in Glenville Lake during 2018. The highest concentration was 0.09 oocysts/liter in April 2018.

In 2017, the highest concentration found in the Cape Fear River was 0.09 oocysts/liter in April 2017. *Cryptosporidium* is a microbial pathogen found in surface water throughout the United States.

Although filtration removes *Cryptosporidium*, the most commonly-used filtration methods cannot guarantee 100 percent removal. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease.

Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection.

Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.



2018 Water Quality Results (cont'd)

Source Water Quality - Detected Contaminants By Fayetteville Public Works Commission (PWC)

Unregulated Contaminant Monitoring Rule 4 - Distribution System

Sample Site B04 (Fisher Rd.)	3/19/18	6/6/18	9/20/18	12/3/18
Bromochloroacetic acid (ug/l)	10.2	9.29	10.8	2.47
Bromodichloroacetic acid (ug/l)	10.4	6.8	8.53	2.86
Chlorodibromoacetic acid (ug/l)	3.57	1.23	5.37	0.67
Dibromoacetic acid (ug/l)	3.38	1.58	5.26	0.479
Dichloroacetic acid (ug/l)	10.8	19.7	13.7	7.41
Monobromoacetic acid (ug/l)	0.661	0.58	0.577	<0.30
Monochloroacetic acid (ug/l)	<2.0	<2.0	<2.0	<2.0
Tribromoacetic acid (ug/l)	<2.0	<2.0	<2.0	<2.0
Trichloroacetic acid (ug/l)	11.1	11.6	7.17	4.14

Sample Site B05 (Blackwell)	3/19/18	6/6/18	9/20/18	12/3/18
Bromochloroacetic acid (ug/l)	3.98	6.5	11	1.78
Bromodichloroacetic acid (ug/l)	3.31	3.27	7.33	1.75
Chlorodibromoacetic acid (ug/l)	0.536	0.512	3.43	0.391
Dibromoacetic acid (ug/l)	0.538	0.843	4.12	<0.30
Dichloroacetic acid (ug/l)	17.9	26.5	21.7	9.51
Monobromoacetic acid (ug/l)	<0.30	<0.30	0.358	<0.30
Monochloroacetic acid (ug/l)	2.25	<2.0	<2.0	<2.0
Tribromoacetic acid (ug/l)	<2.0	<2.0	<2.0	<2.0
Trichloroacetic acid (ug/l)	24.5	14.3	8.95	5.06

Sample Site B06 (Grip)	3/19/18	6/6/18	9/20/18	12/3/18
Bromochloroacetic acid (ug/l)	8.75	6.55	11.8	2.11
Bromodichloroacetic acid (ug/l)	9.02	3.47	7.98	1.94
Chlorodibromoacetic acid (ug/l)	2.3	0.717	4.22	0.436
Dibromoacetic acid (ug/l)	1.98	1.06	4.84	0.348
Dichloroacetic acid (ug/l)	17.1	23.1	19.9	11
Monobromoacetic acid (ug/l)	0.567	<0.30	<0.30	<0.30
Monochloroacetic acid (ug/l)	2.18	<2.0	<2.0	<2.0
Tribromoacetic acid (ug/l)	<2.0	<2.0	<2.0	<2.0
Trichloroacetic acid (ug/l)	21.5	10.6	8.5	5.51

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.



2018 Water Quality Results (cont'd)

Source Water Quality - Detected Contaminants By Fayetteville Public Works Commission (PWC)



Unregulated Contaminant Monitoring Rule 4 - Distribution System

Sample Site B07 (Golfview)	3/19/18	6/6/18	9/20/18	12/3/18
Bromochloroacetic acid (ug/l)	9.24	9.53	11.2	2.63
Bromodichloroacetic acid (ug/l)	11.5	6.35	8.47	2.89
Chlorodibromoacetic acid (ug/l)	3.83	1.52	5.28	0.738
Dibromoacetic acid (ug/l)	2.7	1.87	5.35	0.534
Dichloroacetic acid (ug/l)	10.8	18.2	14.8	7.79
Monobromoacetic acid (ug/l)	0.685	0.473	0.386	<0.30
Monochloroacetic acid (ug/l)	<2.0	<2.0	<2.0	<2.0
Tribromoacetic acid (ug/l)	<2.0	<2.0	<2.0	<2.0
Trichloroacetic acid (ug/l)	12.4	8.01	6.92	3.84
Sample Site B08 (Morgonton Rd)	3/19/18	6/6/18	9/20/18	12/3/18
Bromochloroacetic acid (ug/l)	6.49	9.68	10.4	2.59
Bromodichloroacetic acid (ug/l)	7.41	7.62	8.15	2.77
Chlorodibromoacetic acid (ug/l)	3.09	1.52	5.54	0.671
Dibromoacetic acid (ug/l)	2.23	1.59	4.97	0.515
Dichloroacetic acid (ug/l)	9.09	20.4	13.9	8.71
Monobromoacetic acid (ug/l)	0.528	0.547	0.514	<0.30
Monochloroacetic acid (ug/l)	<2.0	<2.0	<2.0	<2.0
Tribromoacetic acid (ug/l)	<2.0	<2.0	<2.0	<2.0
Trichloroacetic acid (ug/l)	9.64	12.3	7.14	4.19

Unregulated Contaminant Monitoring Rule 4 - Glenville Lake WTF

Entry Point	3/19/18	6/6/18	9/10/18	12/3/18
Manganese (ug/l)	0.987	2.33	5.58	1.3
Quinoline (ug/l)	0.02	0.0359	0.0266	<0.02
Source Water	3/19/18	6/6/18	9/10/18	12/3/18
Bromide	22	72.8	31.1	<20.0
Total Organic Carbon	3540	7990	2280	1420

Unregulated Contaminant Monitoring Rule 4 - P.O. Hoffer WTF

Entry Point	3/19/18	6/6/18	9/10/18	12/3/18
Manganese (ug/l)	1.16	3.13	23	0.936
Quinoline (ug/l)	0.0223		0.0533	<0.02
Source Water	3/19/18	6/6/18	9/10/18	12/3/18
Bromide	144	83.3	34	<20.0
Total Organic Carbon	6570	8690	2110	1790

A photograph of three parachutists in a clear blue sky. The largest parachute is in the upper right, with its canopy partially cut off by the top edge of the frame. Two other parachutes are visible in the middle and lower left. The text 'Serving Those Who Serve' is overlaid on the top half of the image.

Serving Those Who Serve.®

2018 Water Quality Report
Fort Bragg Main Base
PWS ID#: NC 50-26-019
Old North Utility Services, Inc.
American States Utility Services, Inc.

