

2019 Annual Drinking Water Quality Report

Seymour Johnson Air Force Base (SJAFB), NC

Public Water Supply (PWS) ID: 04-96-055

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 concerning your water, please contact the SJAFB
4th Medical Group, Bioenvironmental Engineering Flight, at 919-722-5401.**

What the Environmental Protection Agency (EPA) Wants You to Know

Drinking water, including bottled water, can be reasonably expected to contain at least small amounts of some contaminants. Extensive water testing is performed to ensure that any contaminants present are controlled and at an acceptable level. 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 EPA'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, and 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.

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. Seymour Johnson AFB's Civil Engineering Squadron 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 <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, the EPA enforces regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) establishes regulations to limit contaminants in bottled water, which must provide the same protection for public health.

Public Involvement

If you have any questions regarding this report, please contact Major Lacie Collins, Chief of the 4th Fighter Wing Public Affairs Office, at (919) 722-0027.

When You Turn on Your Tap, Consider the Source

Seymour Johnson AFB purchases its water from the City of Goldsboro (PWS ID: 04-96-010). The City of Goldsboro's water source is a surface supply from the Neuse River. The city's alternate water source, a surface supply from the Little River, was not used in 2019.

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 SJAFB 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
Neuse River	Higher	September 1, 2017
Little River	Higher	June 17, 2014

The complete SWAP Assessment report for SJAFB may be viewed online 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.

Violations to Our Drinking Water System

We did not receive any violations during the 2019 reporting period. All contaminants measured were within acceptable limits.

Help Protect Your Source Water

Protection of drinking water is everyone's responsibility. In March 2001, Goldsboro instituted a citywide Stormwater Management Program to improve water quality in the Neuse River Basin. Everyone can help on this effort to provide clean water for the citizen of North Carolina and Goldsboro if they will: 1.) Dispose of chemicals, oils, unused fertilizers, old pesticides, and other liquids properly, and do not dump them into storm sewer inlets or ditches. 2.) Properly dispose or recycle fats, oils and greases to prevent sanitary sewer overflows. 3.) Clean up grass clippings and yard waste and dispose of them properly, or deposit them into a mulch pile for use in gardens and flowerbeds. 4.) Volunteer in your community to participate in group efforts to protect your source.

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. 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.

Note: Unless otherwise specified, the data presented in these tables is from testing performed by the City of Goldsboro or SJAFB personnel from January 1 through December 31, 2019.

Tables of Detected Contaminants

Microbiological Contaminants in the Distribution System - For systems that collect *less than 40* samples per month*

Contaminant (units)	MCL Violation	Your Water	MCLG	MCL [†]	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	No	1 positive out of 96 [‡]	0	0	Naturally present in the environment
<i>Escherichia coli</i> (<i>E. coli</i>) (presence or absence)	No	1 positive out of 96 [‡]	0	0	Human and animal fecal waste

* If a system collecting fewer than 40 samples per month has two or more positive samples in one month, an assessment is required. SJAFB is required to take eight compliance samples per month.

[†] 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.

[‡] In September 2019, one of the eight samples tested *E. coli* positive. After notifying the State and the consumer, repeat samples were taken upstream, downstream, and at the original site, with all results coming back negative for both total coliform and *E. coli*. No violations were issued.

Turbidity*

Contaminant (units)	TT Violation	Your Water	MCLG	TT Violation if:	Likely Source of Contamination
Turbidity (NTU) - Highest single turbidity measurement	No	0.56 NTU	Not applicable (N/A)	Turbidity > 1 NTU	Soil runoff
Turbidity (NTU) - Lowest monthly percentage of samples meeting turbidity limits	No	99% under 0.3	N/A	Less than 95% of monthly turbidity measurements are < 0.3 NTU	

* Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our 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

Contaminant (units)	Sample Date	MCL Violation	Your Water	Range Low - High	MCLG	MCL	Likely Source of Contamination
Arsenic (ppb)	2019	No	Not Detected (ND)	N/A	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Fluoride (ppm)	2019	No	0.59	N/A	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Nitrate/Nitrite Contaminants

Contaminant (units)	Sample Date	MCL Violation	Your Water	Range Low - High	MCLG	MCL	Likely Source of Contamination
Nitrate (as Nitrogen) (ppm)	2019	No	ND	N/A	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Asbestos Contaminant*

Contaminant (units)	Sample Date	MCL Violation	Your Water	Range Low - High	MCLG	MCL	Likely Source of Contamination
Total Asbestos (MFL)	2013	No	ND	N/A	7	7	Decay of asbestos cement water mains; erosion of natural deposits

* Based upon the latest asbestos sampling done at SJAFB in 2013. Asbestos monitoring is performed every nine years; next sampling event for SJAFB is scheduled in 2022.

Lead and Copper Contaminants*

Contaminant (units)	Sample Date	Your Water	MCLG	Action Level	Number of sites found above the AL	Likely Source of Contamination
Copper (ppm) (90th percentile)	8/2019	0.192	1.3	1.3	0	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90th percentile)	8/2019	< 0.003	0	15	0	

* These reports indicated no detection of lead in the service lines. Furthermore, the plumbing does not contain lead materials. Lead and copper sampling is performed every 3 years; next sampling event for SJAFB is scheduled in 2022.

Synthetic Organic Chemical (SOC) Contaminants Including Pesticides and Herbicides

Contaminant (units)	Sample Date	MCL Violation	Your Water	Range Low - High	MCLG	MCL	Likely Source of Contamination
Dalapon (ppb)	2019	No	ND	N/A	200	200	Runoff from herbicide used on rights of way

Total Organic Carbon (TOC)

Contaminant (units)	TT Violation	Your Water (RAA Ratio Range)	Monthly RR Range Low - High	MCLG	MCL	Likely Source of Contamination
Total Organic Carbon (RR)	No	1.25	1.11 – 1.39	N/A	N/A	Naturally present in the environment

Disinfectant Residuals Summary

The City of Goldsboro uses chloramine disinfection in its drinking water. Two groups need to be especially aware of this: Kidney dialysis patients and tropical fish owners. Dialysis machines require water with no chlorine or chloramines. Goldsboro has informed all local dialysis centers and area hospitals of the disinfection method so that appropriate treatment could be installed to remove chloramines. Tropical fish owners must remove chloramines from water before use with fish, because chloramines will not dissipate from water like chlorine will. Local pet stores are aware of the disinfection method and carry de-chlorinators that remove chlorine and ammonia.

Disinfectant Residual (units)	Sample Date	MRDL Violation	Your Water (highest RAA)	Range Low - High	MRDLG	MRDL	Likely Source of Contamination
Chloramines (ppm)	2019	No	2.63	1.19 – 3.69	4	4.0	Water additive used to control microbes
Chlorine (ppm)	2019	No	1.77	0.41 – 2.86	4	4.0	

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

Location	Sample Date	MCL Violation	Your Water (highest LRAA)	Range Low - High	MCLG	MCL	Likely Source of Contamination
Total Trihalomethanes (TTHM) (µg/L)							
Slocumb Meter Pit	2019	No	38	30 – 55	0	80	Disinfection byproducts
Ash Meter Pit	2019	No	39	31 – 52	0	80	
Haloacetic Acids (HAA5) (µg/L)							
Slocumb Meter Pit	2019	No	37	32 – 52	0	60	Disinfection byproducts
Ash Meter Pit	2019	No	32	29 – 52	0	60	

* 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.

Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA)

Although PFOS and PFOA are unregulated and commonly used, the U.S. Air Force is taking aggressive measures to reduce the risk of mission-related PFOS/PFOA contamination to installation and supporting communities' drinking water sources. PFOS and PFOA are synthetic, fluorinated, organic compounds used in many industrial and consumer products, as well as in foam used by commercial industries and the armed services to extinguish petroleum-based fires. These chemicals have been used for many years to make products resistant to heat, stains, grease and water. In 1970, the Air Force began using aqueous film forming foam (AFFF), which contains PFOS and PFOA, to extinguish petroleum fires. AFFF is the most efficient extinguishing method for petroleum-based fires and is widely used across the firefighting industry, including all commercial airports, to protect people and property.

Contaminant (units)	Sample Date	Your Water	EPA Health Advisory*	Likely Source of Contamination
PFOS (ppt)	12/2019	4.99	70	Firefighting at airfields - release of aqueous film forming foam
PFOA (ppt)	12/2019	6.25	70	

* EPA established lifetime health advisory levels of 70 part per trillion for PFOS and PFOA in drinking water.

Unregulated Contaminants

The City of Goldsboro also monitors for unregulated contaminants. Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. The contaminants listed in the below table contribute to the regulated total count of *TTHM/HAA5 Disinfectant Byproducts* but are not regulated individually.

Unregulated Contaminant Monitoring Rule (UCMR4) Results

Contaminant (units)	Sample Date*	Required Reporting Limit	Allowable Limit	Distribution			
				B01	B02	B03	B04
Bromochloroacetic Acid (µg/L)	8/2019 11/2019	1	80	6.7 4.2	5.5 3.7	5.3 3.9	6.0 4.2
Bromodichloroacetic Acid (µg/L)	8/2019 11/2019	1	80	5.7 3.7	5.7 3.9	5.4 4.1	5.9 4.0
Chlorodibromoacetic Acid (µg/L)	8/2019 11/2019	1	80	1.1 0.67	1.2 0.86	1.1 0.94	1.2 0.69
Monobromoacetic Acid (µg/L)	8/2019 11/2019	1	60	0.35 0.35	0.42 ND	0.30 ND	0.41 0.49
Dibromoacetic Acid (µg/L)	8/2019 11/2019	1	60	0.90 0.71	0.77 0.64	0.75 0.68	0.81 0.69
Dichloroacetic Acid (µg/L)	8/2019 11/2019	1	60	30 17	21 14	21 14	23 16
Monochloroacetic Acid (µg/L)	8/2019 11/2019	2	60	3.4 ND	2.9 ND	2.8 ND	ND
Trichloroacetic Acid (µg/L)	8/2019 11/2019	1	60	21 12	18 11	18 12	20 12

* Table above presents the results for the last two quarters of 2019. B01 – B04 are the meter pits operated by the City of Goldsboro.

Other Miscellaneous Water Characteristics Contaminants

The PWS Section requires monitoring for other miscellaneous contaminants, some of which the EPA has set Secondary MCLs (SMCLs) because they may cause undesirable cosmetic or aesthetic effects, such as taste, odor, and/or color of your drinking water. The contaminants with SMCLs normally do not have any health effects and do not affect the safety of your water. More info about National Secondary Drinking Water Regulations (NSDWRs) can be found at EPA.gov.

Contaminant (units)	Sample Date	Your Water	Typical Values	Secondary MCL
TOC (mg/L)	8/2019 11/2019	5.2 5.8	Less than 25	N/A
Manganese (µg/L)	8/2019 11/2019	23 5.7	N/A	50
Bromide (µg/L)	8/2019 11/2019	30 45	Less than 500	N/A
Sodium (mg/L)	5/2019	5.59	N/A	20*
Sulfate (ppm)	5/2019	33	N/A	250
pH	5/2019	7.3	N/A	6.5 – 8.5

* The EPA and American Heart Association recommend a limit of 20 mg/L to assist those on a severely restricted sodium diet.

Key Terms and Abbreviations

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

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. NOTE: MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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.

Million Fibers per Liter (MFL) - Million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

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.

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.

Parts per million (ppm) or Milligrams per liter (mg/L) - One part per million corresponds to a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (µg/L) - One part per billion corresponds to a single penny in \$10,000,000.

Parts per trillion (ppt) or Nanograms per liter (ng/L) - One part per trillion corresponds to a single penny in \$10,000,000,000.

pH - Power of Hydrogen; a measure of the acidity or alkalinity of a substance.

Running Annual Average (RAA) - Average of all samples pulled during that time frame.

Removal Ratio (RR) - Represents the removal amount from source water.

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.