2024 Annual Drinking Water Quality Report

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"Seymour Johnson Air Force Base, North Carolina"

Water System Number: "**04-96-055**"

We are pleased to present to you this year's Annual Drinking Water Quality Report, which is a snapshot of last year's water quality. This report is designed to inform you about the quality of the water and services we deliver to you every day. Included are details about your sources of water, what it contains, and how it compares to standards set by regulatory agencies. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and to providing you with this information because informed customers are our best allies.

If you have any questions about this report or concerning your water, please contact the 4th Medical Group, Bioenvironmental Engineering Flight, at (919) 722-5401.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

What the Environmental Protection Agency (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. Seymour Johnson Air Force Base 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.

When You Turn on Your Tap, Consider the Source

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 number 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.

Seymour Johnson Air Force Base (SJAFB) purchases its water from the City of Goldsboro (PWSID #04-96-010). The city'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 2024. The City of Goldsboro's annual drinking water quality report can be found online at https://www.goldsboronc.gov/public-utilities/annual-water-quality-report/

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.

Susceptibility of Sources to Potential Contaminant Sources (PCSs)

Source Name	Susceptibility Rating	SWAP Report Date
Neuse River	Higher	September 10, 2020

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). 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.

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 report 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 and number, as well as 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

We ask that all our customers help us protect our water resources. In March 2001, Goldsboro instituted a citywide Stormwater Management Program to improve water quality in the Neuse River Basin. Everyone can help in this effort to provide clean water for the citizens 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. Contact the City's Public Works Department at 919-734-8674 for assistance in disposal.

2. Properly dispose of fats, oils, and greases to prevent sanitary sewer overflows.

3. Fix leaking sanitary sewer pipes on their property and notify the City's Public Works Department whenever a leaking sanitary sewer pipeline is discovered.

4. Avoid straight piping of roof drains and floor drains to storm sewers and ditches. Roof drains should discharge directly onto grassed areas, and floor drains should be connected to the sanitary sewer. Contact the City's Public Works Department for assistance in correcting any problems.

5. Limit the use of pesticides and fertilizers on yards. Avoid application just prior to rain events so that a storm does not wash the pesticides and fertilizers into the storm sewer system.

6. Clean up grass clippings and yard waste and dispose of them properly, or deposit them into a mulch pile for use in gardens and flower beds.

7. Report any non-stormwater discharge (oil, foam, chemicals, sanitary waste, etc.) that have entered inlets, storm sewers or ditches to the City of Goldsboro's Illegal Discharge Hotline at 919-580-4369.

Violations to Our Drinking Water System

We did not have any violations in the 2024 reporting period. All contaminants measured were within acceptable limits.

Water Quality Data Tables of Detected Contaminants

To ensure that tap water is safe to drink, EPA prescribes regulations which limit the number 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.

We routinely monitor for over 150 contaminants in your drinking water, in accordance with Federal and State laws. The following tables list all the drinking water contaminants that we detected in the last round of sampling for that particular contaminant group. Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2024. The EPA and the State require 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.

Microbiological Contaminants in the Source Water

Fecal Indicator	Number of "Positive/Present" Samples	MCLG	MCL†	Typical Source(s)
E. coli, (presence or absence)	0	0	0	Naturally present in the environment
Escherichia coli (E. coli) (presence or absence)	0	N/A	TT	Human and animal fecal waste

Microbiological Contaminants in the Distribution System*

Substance (units)	MCL Violation	Your Water	MCLG	MCL†	Typical Source(s)
Total Coliform Bacteria (presence or absence)	No	0 positive out of 96	0	0	Naturally present in the environment
Escherichia coli (E. coli) (presence or absence)	No	0 positive out of 96	0	0	Human and animal fecal waste

** For systems that collect less than 40 samples per month. 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 a minimum of **eight** compliance samples each 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.

Regulated Substances

Substance (units)	Sample Date	MCL Violation	Your Water	MCLG	MCL	Typical Source(s)
Asbestos* (MFL – Goldsboro)	2021	No	ND	7	7	Decay of asbestos cement water mains; erosion of natural deposits
Asbestos* (MFL – SJAFB)	2022	No	ND	7	7	
Fluoride (ppm)	2024	No	0.68	4	4	Water additive that promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum
Nitrate (as Nitrogen) (ppm) (Goldsboro)	2024	No	<10	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrate (as Nitrogen) (ppm) (SJAFB)	2024	No	<10	10	10	
Nitrite (as Nitrogen) (ppm) (Goldsboro)	2024	No	<1.0	1	1	
Nitrite (as Nitrogen) (ppm) (SJAFB)	2024	No	<1.0	1	1	

** Asbestos monitoring is performed every 9 years. The next sampling event for SJAFB will take place in August 2031. Goldsboro will perform sampling in 2030.*

Turbidity*

Contaminant (units)	Treatment Technique (TT) Violation	Your Water	MCLG	Treatment Technique (TT) Violation if:	Likely Source of Contamination
Turbidity (NTU) - Highest single turbidity measurement	No	0.3 NTU	0.3	Turbidity > 1 NTU	Soil runoff
Turbidity (%) - Lowest monthly percentage (%) of samples meeting turbidity limits	No	100%	0.3	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.*

Lead and Copper Contaminants*

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. SJAFB 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. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. 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.

Substance (units)	Sample Date	Your Water	MCLG	Action Level (AL)	Number of sites found above the AL	Typical Source(s)
Copper (ppm) (90th percentile)	8/2022	0.333	1.3	1.3	0	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90th percentile)	8/2022	<0.003	0	15	1	

** Lead and copper sampling is performed every 3 years. The next sampling event for SJAFB will take place in 2025.*

Lead Service Line Inventory

4 Civil Engineering (CE) has been working to identify service line materials throughout the water system and prepared an inventory of all service lines in our water system. SJAFB completed the inventory before the EPA's deadline in October and is happy to announce no lead service lines were discovered. To access this inventory, please visit: https://www.seymourjohnson.af.mil/Home/SJAFB-Environmental-Management/

Unregulated Substances & Other Miscellaneous Water Characteristics

The PWS Section requires monitoring for other miscellaneous contaminants, some for which the EPA has set national secondary drinking water standards (SMCLs) because they may cause cosmetic effects or aesthetic effects (such as taste, odor, and/or color) in drinking water. The contaminants with SMCLs normally do not have any health effects and normally do not affect the safety of your water.

Substance (units)	Sample Date	Your Water	Secondary MCL
pH (SJAFB)	2024	7.3	6.5 – 8.5
Sodium (mg/L)	2024	41.7	N/A*
Sulfate (mg/L)	2024	40	250 mg/L
Nickel (ppm)	2024	<0.01	N/A
Manganese (ppm)	2024	<0.02	0.05
Iron (ppm)	2024	<0.016	0.3

** The EPA and American Heart Association recommend a limit of 20 mg/L to assist those on a restricted sodium diet (<500 mg/day)*

Disinfectant Residuals Summary

The City of Goldsboro uses chloramines for disinfection in its drinking water. Two groups who need to be aware of this are 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 was installed to remove chloramines. Tropical fish owners must remove chloramines from water before use with fish. 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.

Substance (units)	Sample Date	MRDL Violation	Your Water (LRAA)	Range Low - High	MRDLG	MRDL	Typical Source(s)
Chloramines (ppm) - Goldsboro	2024	No	2.2	1.01 – 3.45	4	4	Water additive used to control microbes
Chloramines (ppm) - SJAFB	2024	No	1.75	0.6 - 3	4	4	
Chlorine (ppm) – Goldsboro	2024	No	1.53	0.27 – 2.54	4	4	
Chlorine (ppm) – SJAFB	2024	No	1.15	0.9 - 1.3	4	4	

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

Location	Sample Date	MCL Violation	Your Water (LRAA)	Range Low - High	MCLG	MCL	Typical Source(s)
Total Trihalomethanes (TTHM) (µg/L)							
Slocumb Meter Pit	2024	No	49	36 – 68	0	80	Disinfection byproducts
Ash Meter Pit	2024	No	51	37 – 76	0	80	
Haloacetic Acids (HAA5) (µg/L)							
Slocumb Meter Pit	2024	No	40	33 – 54	0	60	Disinfection byproducts
Ash Meter Pit	2024	No	37	36 – 47	0	60	

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Total Organic Carbon (TOC)

Contaminant (units)	TT Violation Y/N	Your Water (LRAA)	Range Monthly Removal Ratio Low-High	MCLG	Treatment Technique (TT) violation if:	Likely Source of Contamination
Total Organic Carbon (TOC) Removal Ratio (no units) - Goldsboro	N	1.25	35 - 63	N/A	Removal Ratio RAA<1.00 and alternative compliance criteria was not met	Naturally present in the environment.

Per- and Polyfluoroalkyl Substances (PFAS)

What are per- and polyfluoroalkyl substances and where do they come from?

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of man-made chemicals. PFAS have been used in a variety of industries and consumer products around the globe, including in the U.S., since the 1940s. PFAS have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. They are also contained in some foams such as aqueous film-forming foam, or AFFF, used for fighting petroleum fires at airfields and in industrial fire suppression processes. PFAS compounds are persistent in the environment, and some are persistent in the human body – meaning they do not break down and they can accumulate over time.

Is there a regulation for PFAS in drinking water?

In May 2016, the Environmental Protection Agency (EPA) established a lifetime health advisory (LHA) level at 70 parts per trillion (ppt) for individual or combined concentrations of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). Both compounds are types of PFAS. On 10 April 2024, the EPA published new drinking water standards for certain PFAS under the Safe Drinking Water Act (SDWA). AF is reviewing the EPA's new rule now and will incorporate these standards into future sampling and analysis efforts.

Out of an abundance of caution, DoD pursued PFAS testing and response actions beyond EPA SDWA requirements. In 2020, the DoD established a policy to monitor drinking water for 17 PFAS compounds at all service owned and operated water systems. If results confirmed the drinking water contained PFOA and PFOS at individual or combined concentrations greater than 70ppt, water systems quickly took action to reduce exposures. While not a SDWA requirement, in 2023, DoD improved upon its 2020 PFAS drinking water monitoring policy by expanding the list of PFAS compounds monitored to 29, implementing continued monitoring of systems with detectable PFAS over the laboratory Method Reporting Limits (MRL), and requiring initial mitigation planning actions.

PFAS Results

In November 2024, the City of Goldsboro began monitoring under the Unregulated Contaminant Monitoring Rule 5 (UCMR 5). UCMR5 is composed of 29 PFAS compounds and Lithium. Only compounds that were detected are listed below.

CONTAMINANT (UNIT OF MEASURE)	Sample Date	Your Water	Maximum Contaminant Level
PFea	Nov 2024	4.4	6.5-8.5
PFBA	Nov 2024	4	Not established
PFHxA	Nov 2024	3.9	Not established
PFOA	Nov 2024	6.6	4
PFOS	Nov 2024	6.8	4
PFBS	Nov 2024	3.3	2000*
PFHpA	Nov 2024	1.8	Not established
PFHxS	Nov 2024	2.5	10

** Established as a Health Based Water Concentration for mixtures of select PFAS compounds*

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.

Extra 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.

Minimum Reporting Level (MRL) - - The minimum concentration that can be reported by a laboratory as a quantitated value for a method analyte in a sample following analysis.

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 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.

Public Involvement: If you have any questions regarding the distribution of this report, please contact the 4th Fighter Wing Public Affairs Office at (919) 722-0027 or email 4fw.pa@us.af.mil.