2024 Consumer Confidence Report (CCR) Certification Form

Water System Name: Southgate MHP

Water System No.: NC 04 - 67 - 229 **Report Year:** 2024 **Population Served:** 94

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

Certified by: Name: Ben Aragona Title: President

Signature: Ben Aragona Phone #: 910-455-3743

Delivery Achieved Date: 07/31/2025 Date Reported to State: 07/31/2025

☐ The CCR includes the mandated Tier 3 Public Notice for a monitoring/reporting violation (check box, if yes).

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

☑ A copy the full report was sent to all customers via the following method(s):

☐ US Mail ☑ Hand Delivery ☐ Email *(A copy of the email must be submitted with the report.)*

☐ Notification of the availability of the full report was delivered to all customers via the following method(s): (*A copy of the notice must be submitted with the report.*)

☐ US Mail ☐ Hand Delivery ☐ Email ☐ Posting (*location must be specified in the good faith efforts section.*)

☐ **"Good faith" efforts** (in addition to one of the above required methods) were used to reach non-bill paying consumers such as industry employees, apartment tenants, etc. These efforts included the following methods:

- ☐ posting the CCR on the Internet at URL: _____
- ☐ mailing the CCR to postal patrons within the service area
- ☐ advertising the availability of the CCR in news media (attach copy of announcement)
- ☐ publication of the CCR in local newspaper (attach copy of newspaper)
- ☐ posting the CCR in public places such as: (attach list if needed) _____
- ☐ delivering multiple copies to single bill addresses serving several persons such as: apartments, businesses, and large private employers
- ☐ delivery to community organizations such as: (attach list if needed) _____
- ☐ other: _____

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

2024 Annual Drinking Water Quality Report
Southgate MHP

Water System Number: NC0467229

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

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is a snapshot of last year's water quality. Included are details about your source(s) of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and to providing you with this information because informed customers are our best allies. **If you have any questions about this report or concerning your water, please contact Scientific Water and Sewer at (910) 455-3743.**

What EPA Wants You to Know

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

When You Turn on Your Tap, Consider the Source

The water supplied to Southgate MHP is purchased from Onslow Water & Sewer Authority (ONWASA). ONWASA's water quality report provides a detailed description of their groundwater sources. The 2024 Consumer Confidence Report/Water Quality Report from ONWASA is available at the following link: https://www.onwasa.com/DocumentCenter/View/4875/2024-Water-Quailty-Report_CCR?bidId=

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.

All water used by Southgate MHP system is purchased from ONWASA. ONWASA also purchases water from MCAS New River Water System during times of high demand. The relative susceptibility rating of each source for Onslow Water and Sewer Authority & MCAS New River Water 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). The assessment findings are summarized in the table below:

Susceptibility of Sources to Potential Contaminant Sources (PCSs)
(ONWASA Source Wells)

Source Name	Susceptibility Rating	SWAP Report Date
Black Creek Well # 1	Lower	September 10, 2020
Black Creek Well # 2	Moderate	September 10, 2020
Black Creek Well # 4	Lower	September 10, 2020
Black Creek Well # 5	Moderate	September 10, 2020
Black Creek Well # 6	Lower	September 10, 2020
Dixon Well # 1	Lower	September 10, 2020
Dixon Well # 2	Lower	September 10, 2020
Dixon Well # 3	Lower	September 10, 2020
Dixon Well # 5	Lower	September 10, 2020
Dixon Well # 6	Lower	September 10, 2020
Dixon Well # 7	Moderate	September 10, 2020
Dixon Well # 8	Lower	September 10, 2020
Dixon Well # 9	Lower	September 10, 2020
Hubert # 11 – Pridgen	Lower	September 10, 2020
Hubert # 12 – Rogers	Lower	September 10, 2020
Hubert # 13 – Howard 1	Lower	September 10, 2020
Hubert # 14 – Howard B	Lower	September 10, 2020
Hubert # 15 – Weyerhauser	Lower	September 10, 2020
Hubert # 1	Moderate	September 10, 2020
Hubert Well # 10	Lower	September 10, 2020
Hubert Well # 2	Lower	September 10, 2020
Hubert Well # 3	Moderate	September 10, 2020
Hubert Well # 4	Moderate	September 10, 2020
Hubert Well # 7	Lower	September 10, 2020
Hubert Well # 8	Moderate	September 10, 2020
Hubert Well # 9	Lower	September 10, 2020
Hubert Well # 6	Higher	September 10, 2020
Well # 10	Moderate	September 10, 2020
Well # 11	Moderate	September 10, 2020
Well # 12	Lower	September 10, 2020
Well # 13	Lower	September 10, 2020
Well # 2 Richland	Moderate	September 10, 2020
Well # 3 Richland	Lower	September 10, 2020
Well # 8	Lower	September 10, 2020
Well # 9	Moderate	September 10, 2020

Susceptibility of Sources to Potential Contaminant Sources (PCSs)
(MCAS New River Source Wells)

Source Name	Susceptibility Rating	SWAP Report Date
VL 101	Moderate	September 10, 2020
VL 102	Moderate	September 10, 2020
VL 103	Moderate	September 10, 2020

VL 104	Moderate	September 10, 2020
VL 105	Moderate	September 10, 2020
VL 106	Moderate	September 10, 2020
VL 107	Moderate	September 10, 2020
VL 109	Moderate	September 10, 2020

The complete SWAP Assessment report for ONWASA and USMC Lejune – New River Air Station 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 website 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@deq.nc.gov. Please indicate your system name, number, and provide your name, mailing address and phone number. If you have any questions about the SWAP report, please contact the Source Water Assessment staff by phone at (919) 707-9098.

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

Help Protect Your Source Water

Protection of drinking water is everyone's responsibility. We have implemented the following source water protection actions: 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.).

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.
- ***Parts per trillion (ppt) or Nanograms per liter (nanograms/L)*** - One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.
- ***Parts per quadrillion (ppq) or Picograms per liter (picograms/L)*** - One part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in $10,000,000,000,000.
- ***Picocuries per liter (pCi/L)*** - Picocuries per liter is a measure of the radioactivity in water.
- ***Million Fibers per Liter (MFL)*** - Million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.
- ***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.
- ***Variances and Exceptions*** – State or EPA permission not to meet an MCL or Treatment Technique under certain conditions.
- ***Action Level (AL)*** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- ***Treatment Technique (TT)*** - A required process intended to reduce the level of a contaminant in drinking water.
- ***Maximum Residual Disinfection Level (MRDL)*** – The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

- ***Maximum Residual Disinfection Level Goal (MRDLG)*** – The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

- ***Locational Running Annual Average (LRAA)*** – The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters under the Stage 2 Disinfectants and Disinfection Byproducts Rule.

- ***Running Annual Average (RAA)*** – The average of sample analytical results for samples taken during the previous four calendar quarters.

- ***Level 1 Assessment*** - *A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.*

- ***Level 2 Assessment*** - *A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.*

➢ ***Maximum Contaminant Level (MCL)*** - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

➢ ***Maximum Contaminant Level Goal (MCLG)*** - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Water Quality Data Tables of Detected Contaminants

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The tables below list all the drinking water contaminants that we detected in the last round of sampling for each particular contaminant group. The presence of contaminants does not necessarily indicate that water poses a health risk. **Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2024.** The EPA and the State allow us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

Lead and Copper Contaminants

Contaminant (units)	Sample Date	Your Water (90th Percentile)	Number of sites found above the AL	Range Low High	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90th percentile)	Dec 2019	0	0	ND - ND	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90th percentile)	Dec 2019	0	0	ND - ND	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

The table above summarizes our most recent lead and copper tap sampling data. If you would like to review the complete lead tap sampling data, please email us at scientificwaterjax@gmail.com.

We have been working to identify service line materials throughout the water system and prepared an inventory of all service lines in our water system. To access this inventory, email us at scientificwaterjax@gmail.com.

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. Scientific Water & Sewer is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact Scientific Water & Sewer by email at scientificwaterjax@gmail.com, or by phone at 910-455-3743. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at *http://www.epa.gov/safewater/lead*.

Total Trihalomethanes (TTHM) and Haloacetic Acids (five) (HAA5)

Disinfection Byproduct	Year Sampled	MCL Violation Y/N	Your Water	Range Low	Range High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)	2024	N	70	35	64	N/A	80	Byproduct of drinking water disinfection
HAA5 (ppb)	2024	N	34	13	24	N/A	60	Byproduct of drinking water disinfection

Disinfectant Residuals Summary

	MRDL Violation Y/N	Your Water (RAA)	Range Low	Range High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	N	1.28	1.16	.137	4.0	4.0	Water additive used to control microbes

ONWASA™

2024 WATER QUALITY REPORT

04-67-035
70-67-008

Introduction

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. Included are details about your sources 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 or this report, please contact Seth A. Brown at (910) 937-7520 or visit the ONWASA website at www.onwasa.com.** We want our valued customers to be informed about their water utility.

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 Safe Drinking Water Hotline (800-426-4791) of the Environmental Protection Agency (EPA).

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 persons 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).

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 storm water 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 storm water 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 storm water runoff, and septic systems; and radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

When You Turn on Your Tap, Consider the Source

ONWASA utilizes groundwater wells located throughout Onslow County as its water source. Thirteen (13) wells draw from the Black Creek and Peedee Aquifers and require minimal treatment prior to use. The Hubert and Dixon treatment facilities are served from a total of twenty-four (24) wells that draw water from the Castle Hayne Aquifer. In addition, ONWASA purchases water (during periods of high demand) from the Marine Corps Base Camp Lejeune, New River Air Station. Their Water Quality report is attached.

ONWASA also operates a purchased water system named Old Settlers Beach, with a service area located on Topsail Island from Sloan Street to Broadway Street on Hwy 210 and North Shore Drive. The water for this service area is supplied by the Town of Surf City. Water quality reports for both Old Settlers Beach and Surf City are attached.

The North Carolina Department of Environmental Quality (NCDEQ), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) has conducted assessments for all drinking water sources across North Carolina. The purpose of these assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results 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 ONWASA 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:

Source Name	Susceptibility Rating	SWAP Report Date
Well 1	Lower	September 2020
R2	Moderate	September 2020
Dixon 1	Lower	September 2020
Hubert 1	Moderate	September 2020

The complete SWAP Assessment report for ONWASA may be viewed on the Web at: https://www.ncwater.org/SWAP_Reports/NC0467035_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. 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 (ONWASA), number (04-67-035), and provide your name, mailing address and phone number. If you have any questions about the SWAP report please contact the Source Water Assessment staff by phone at 919-707-9098.It is important to understand that a susceptibility rating of "higher" does not imply poor water quality, only the system's potential to become contaminated by PCSs in the assessment area.

Help Protect Your Source Water

Protection of drinking water is everyone's responsibility. ONWASA maintains a Wellhead Plan adopted in 2002 to help protect our drinking water source. Customers can view this plan on our web site at www.onwasa.com. You can help protect your community's drinking water source in several ways, such as: disposing of chemicals properly; taking used motor oil to a recycling center; and, volunteering in your community to participate in group efforts to protect source waters. ONWASA is also involved in the community and is available to speak to civic groups, schools, youth organizations, and others to educate our consumers on Source Water Protection.

Violations that ONWASA Received in 2024

ONWASA NC 04-67-035 is pleased to announce during 2024, *no* violations were received.

Important Drinking Water Definitions

Not-Applicable (N/A) – Information not applicable/not required for that particular water system or 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) - A measure of concentration; 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) - A measure of concentration; one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per trillion (ppt) or Nanograms per liter (nanograms/L) - A measure of concentration; one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

Parts per quadrillion (ppq) or Picograms per liter (picograms/L) - A measure of concentration; one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in $10,000,000,000,000.

Picocuries per liter (pCi/L) - A measure of the radioactivity in a unit volume of water.

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

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

Maximum Residual Disinfection Level (MRDL) – The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfection Level Goal (MRDLG) – The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Locational Running Annual Average (LRAA) – The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters under the Stage 2 Disinfectants and Disinfection Byproducts Rule.

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.

Secondary Maximum Contaminant Level (SMCL) - 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.

ONWASA routinely monitors for over 150 contaminates in your drinking water, in accordance with Federal and State laws.

Water Quality Data Tables of Detected Contaminants

The tables that follow list all the drinking water contaminants that ONWASA sampled 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, 2024.** The EPA and the State allow for monitoring 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.

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.

2024 Analytical Results for Regulated Substances

Microbiological Group

Substance	Violation Y/N	Your Water	MCLG	MCL	Likely Source
Total Coliform Bacteria	N	0.07%	0	5% of monthly samples are positive.	Naturally present in the environment.
Fecal Coliform and E. Coli	N	0	0	A routine sample and repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive.	Human and animal fecal waste.

What the chart means: ONWASA samples 120 sites per month throughout the service area for bacteriological contaminants. Two (2) of the 1,440 routine samples taken in 2024 tested positive for Total Coliform Contamination. The repeat sample of this site tested negative. Total Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present. ONWASA draws these samples from sampling stations in the distribution system which allows us to sample in strategic areas. Although ONWASA does not sample at each individual residence, all areas of the system are represented in the sampling plan. ONWASA received no violation because 5% of the samples did not test positive for Total Coliforms Bacteria.

Inorganic Group

Contaminant (units)	Sample Date	Your Water (90th Percentile)	Number of sites found above the AL	Range Low High	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90th percentile)	July-Dec 2022	0.337	0	0.054-0.697	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90th percentile)	July-Dec 2022	0	0	3 - 4	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

What the chart means: The sampling results shown are from the 2022 compliance period, which are the most recent results available. **ONWASA's next sampling compliance period is July-Dec. 2025. ONWASA** has been working to identify service line materials throughout the water system and prepared an inventory of all service lines in our water system. You can access this inventory at **https://lead-service-line-inventory-onwasa.hub.arcgis.com/.** 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. ONWASA is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact Seth A. Brown at (910) 937-7520 at . Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at http://www.epa.gov/safewater/lead.

2024 Analytical Results (continued)

Inorganic Group

Secondary Inorganics

Substance	Sample Date	MCL Violation Y/N	Your Water	Range Low - High	MCLG	MCL in mg/l	Likely Source
Fluoride (ppm)	2020	N	3.50	0.64 - 3.5	4.00	4.00	Erosion of natural deposits/ water additive which promotes strong teeth/discharge from fertilizer and aluminum factories

Notice to the Public for Exceedance of Secondary MCL for Fluoride. Sampling results are from the 2020 compliance period. This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2.0 milligrams per liter (mg/l) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community water system [ONWASA] has a fluoride concentration as high as 3.5 mg/l. Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water. Drinking water containing more than 4.0 mg/l of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4.0 mg/l of fluoride, but the utility is required to notify you when we discover that the fluoride levels in your drinking water exceed 2.0 mg/l because of the possibility of a cosmetic dental problem.

For more information, please contact Seth A. Brown of Onslow Water and Sewer Authority at 910-937-7520. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Fluoride is naturally occurring in all of ONWASA's water sources with the exception of the Dixon and Hubert Water Treatment Plants where it is added for dental benefits. This addition is well below the Secondary Maximum Contaminant Level (SMCL) of 2.00 mg/l. The results shown in these tables represent the highest level detected of all the source water samples. All other Inorganics results, to include Antimony, Arsenic, Barium, Beryllium, Cadmium, Cyanide, Mercury, Nickle, Selenium, Sulfate, and Thallium, were below the detection limit. **The next sampling compliance period is 2023-2025**

Iron	12/07/2020	N/A	0.36	<0.011	0.36	0.3	NA	Erosion of natural deposits.
Manganese	12/16/2020	N/A	0.085	<0.010	0.285	0.05	NA	Erosion of natural deposits.
Sodium	11/09/2020	N/A	233.0	38.1	233.0	N/A	NA	Erosion of natural deposits.
Chloride	10/01/2020	N/A	85.5	3.76	85.5	250	NA	Erosion of natural deposits.
pH	3/10/2020	N/A	8.80	7.62	8.80	6.50 units to 8.50 units	NA	Natural dissolved gases and minerals

2024 Analytical Results (continued)

Secondary Inorganics (continued)

What the chart means: Sampling results are from the 2020-2022 compliance period. The next routine sampling event will occur between 2023-2025. Secondary Inorganics are naturally occurring elements in the water supply that are regulated for aesthetic purposes rather than the health affects. The results in the table on the previous page are for compliance purposes, however ONWASA samples daily for iron, manganese and fluoride to insure water quality. These results represent the highest level detected of all the source water samples.

Disinfectant By-Products

Disinfection Byproduct	Year Sampled	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)	2024	N	69	22 – 71	N/A	80	Byproduct of drinking water disinfection
HAA5 (ppb)	2024	N	43	10 – 50	N/A	60	Byproduct of drinking water disinfection

What the chart means: Disinfection By-Products are substances that can form when water is chlorinated for disinfection purposes. In 2024 ONWASA sampled 6 sites every quarter and the ranges of detection are reported in the prior table. The maximum level reported for Total Trihalomethanes was below the MCL for that substance at all 6 sample stations in the system. ONWASA takes every precaution to minimize the levels of Disinfection By-Products in the distribution system, including placing automatic flushing devices at strategic points to pull fresh water into remote areas of the system where Trihalomethanes are most likely to occur. We also perform daily chlorine monitoring to maintain levels sufficient for disinfection while minimizing the creation of Disinfection By-Products. State mandates chlorine levels be maintained between 4.00 mg/l to 0.20 mg/l. Through a regular flushing program, use of advanced membrane filtering and extra monitoring, ONWASA has lowered the TTHM levels below the MCL. **The next sampling compliance period is 2025.**

2024 Analytical Results (continued)

Disinfectant Residuals Summary

	Year Sampled	MRDL Violation Y/N	Your Water (Highest RRA)	Range Low High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (PPM)	2024	N	1.24	0.32 - 2.59	4	4.0	Water additive used to control microbes

Other Constituents

Nitrates: 2024 sampling for in all 13 water sources detected levels less than the reportable level. There were No Detections reported in all 13 source water Nitrite samples. **The next sampling compliance period is 2025.**

Synthetic Organic Chemical (SOC) Contaminants Including Pesticides and Herbicides

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
Dalapon (ppb)	07/23/2024	N	1.58	0—1.58	200	200	Runoff from herbicide used on rights of way

2024 sampling for 26 Pesticides & Synthetic Organic Chemicals (SOC) found levels lower than the reportable levels for all substances except for Dalapon. These are commonly referred to as No Detection. SOCs are found as herbicides, pesticides and defoliants. They include: Endrin, Lindane, Methoxychlor, Toxaphene, Dalapon, Di(2-ethylhexyl)phthalate, Oxamyl (vydate), Simazine, Di-(2-ethylhexyl)phthalate, Picloram, Diinoseb, Atrazine, Carbofuran,Hexachlorocyclopentadiene, Alachlor, Heptachlor, Heptachlor epoxide, 2,4-D, 2,4,5-TP(Silvex), Hexachlorobenzene, Benzo(a)pyrene, Pentachlorophenol, PCBs(as decachlorobiphenol), 1,2- Dibromo-3-chloropropane(DBCP), Ethylene, Dibromide (EDB), Chlordane. **The next sampling compliance period is 2025.**

2024 Analytical Results (continued)

Asbestos Contaminant: ONWASA was not required to conduct Asbestos sampling in 2024, however is pleased to report all water sources sampled in 2022 for the presence of Asbestos, found levels lower than the reportable level.

Volatile Organic Chemicals (VOC): ONWASA is pleased to report all water sources sampled in 2024 for the presence of these contaminants found levels lower than the reportable level for all water sources sampled: VOCs are usually found as chlorinated solvents and fuel components. They include: 1,2,4-Trichlorobenzene, Cis-1,2-Dichloroethylene, Xylenes, Dichloromethane, o-Dichlorobenzene, p-Dichlorobenzene, Vinyl chloride, 1,1-Dichloroethylene, Trans-1,2-Dichloroethylene, 1,2-Dichloroethane, 1,1,1-Trichloroethane, Carbon tetrachloride, 1,2-Dichloropropane, Trichloroethylene, 1,1,2-Trichloroethane, Tetrachloroethylene, Chlorobenzene, Benzene, Toluene, Ethylbenzene, Styrene. **The next sampling compliance period is 2025.**

Unregulated Contaminant Monitoring Rule (UCMR): 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.

ONWASA was Not required to conduct UCMR sampling in 2024, 2023 UCMR5 sampling of 29 PFAS and PFAS derivates

Contaminant (units)	Your Water	Likely Source
Lithium (µg/L)	29.5	Lithium is a naturally occurring element and may be found at higher concentrations in certain parts of the country, particularly in groundwater sources in arid locations in the

Voluntary Sampling

Per- and Poly-fluoroalkyl Substances (PFAS)

ONWASA is pleased to report no detects for all treatment facility sampling results for 2024.

Per- and poly-fluoroalkyl substances (PFAS) are synthetic chemicals that have been manufactured and used by a broad range of industries since the 1940s. PFAS are used in many applications because of their unique physical properties such as resistance to high and low temperatures, resistance to degradation, and nonstick characteristics. PFAS have been detected worldwide in the air, soil, and water. Due to their widespread use and persistence in the environment, most people in the United States have been exposed to PFAS. There is evidence that continued exposure above specific levels to certain PFAS may cause adverse health effects

PFOA and **PFOS** In 2016, EPA published **health advisories** for PFOA and PFOS based on the evidence available at that time. The science has evolved since then, and EPA is now replacing the 2016 advisories with interim updated lifetime health advisories for PFOA and PFOS that are based on human epidemiology studies in populations exposed to these chemicals

Summary of the Four Health Advisories

Chemical	Lifetime Health Advisory Level/Value (ppt)	Minimum Reporting Level (ppt)
PFOA	0.004 (Interim)	4
PFOS	0.02 (Interim)	4
GenX Chemicals	10 (Final)	5
PFBS	2,000 (Final)	3

2024 WATER QUALITY REPORT

ONWASA

Onslow Water and Sewer Authority
228 Georgetown Road
Jacksonville, North Carolina 28540
(910) 455-0722
WWW. ONWASA.COM

2024 Annual Water Quality Report

MCAS New River Water Treatment System

PWSID # 04-67-042

Marine Corps Installations East-Marine Corps Base Camp Lejeune (Camp Lejeune) is pleased to present the Annual Water Quality Report (Consumer Confidence Report). This report provides details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This is an annual report of the water quality from January 1 to December 31, 2024

Camp Lejeune is committed to providing you with information because informed customers are our best allies.

Source Water

Eight drinking water supply wells provide groundwater from the Castle Hayne Aquifer to the MCAS New River Water Treatment Plant (WTP). There, the raw water is treated by ion exchange to soften the water and disinfection practices prior to distribution to our customers.

Report Summary

This Annual Report updates the water quality information gathered since the last interim report was issued in December 2024. Specifically, this report summarizes voluntary and compliance sampling data received during the January to December 2024 period. Camp Lejeune has no violations or Action Level Exceedances to report during this period.

Distribution

Please share this information with anyone who drinks this water (or their guardians), especially those who may not have received this report directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this report in a public place or distributing copies by hand, mail, email, or another method.

For more information **about this report, or for any questions relating to your drinking water, please call David Towler (EMD) at 910-451-9385. This report can be viewed at:**

https://www.lejeune.marines.mil/Offices-Staff/Environmental-Mgmt/Annual-Reports/

If you prefer a paper copy of the this Water Quality Report, please call 910-451-5003.

MARINE CORPS BASE
CAMP LEJEUNE
"Home of Expeditionary Forces in Readiness"

Important Drinking Water Terms and Definitions	
Term	**Definition**
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Contaminant	Any physical, chemical, biological, or radiological substance or matter in water.
HAA	Halo Acetic Acids: Chlorine from the water disinfection process can react with organic matter and small amounts of bromide present in water to produce various HAAs.
Herbicide	Any chemical(s) used to control unwanted vegetation.
HI	The Hazard Index is an approach that determines the health concerns associated with mixtures of certain PFAS in finished drinking water. Low levels of multiple PFAS, that individually would not likely result in adverse health effects, may pose health concerns when combined in a mixture. The Hazard Index MCL represents the maximum level for mixtures of PFHxS, PFNA, HFPO-DA (Gen-X), and/or PFBS allowed in water delivered by a public water system. A Hazard Index greater than 1 requires a system to take action.
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.
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 Disinfection Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
NA	Not Applicable: Information not applicable / not required for that particular water system or for that particular rule.
Pesticide	Generally, any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest.
SDWA	Safe Drinking Water Act: The federal law that protects public drinking water supplies throughout the nation.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
UCMR	Unregulated Contaminant Monitoring Rule: Monitoring used by the EPA to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the SDWA.
Unit Descriptions	
Term	**Definition**
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (ug/L)
ppt	ppt: parts per trillion, or nanograms per liter (ng/L)

Water Quality Data

The MCAS New River water distribution system met all Federal and State drinking water standards in 2024. Camp Lejeune routinely monitors drinking water quality for more than 190 substances that may be in your drinking water. The information below lists all of the regulated drinking water substances that were detected in recent water quality sampling. The detected substances do not necessarily affect health. **Unless otherwise noted, the information below is from testing done January 1 through December 31, 2024.** The EPA and the State allow us to monitor certain substances less than once per year because the concentrations of those substances are not expected to vary significantly from year to year. Some of the information below, though representative of the water quality, is more than one year old. Other information presented in this report is from recent monitoring. Although many more substances were tested, only those substances listed below were detected in your water.

Compliance Monitoring

Camp Lejeune sampled the MCAS New River water system for compliance for Synthetic Organic Compounds (SOCs), Volatile Organic Compounds (VOCs), and Nitrate-Nitrite during 2024. All sample results were non-detect. Inorganic Compounds and Radiologicals were also sampled with the detections noted below. All results were within established regulatory limits.

Inorganic Contaminants

Regulated Contaminants	MCLG or MRDLG	MCL, TT OR MRDL	Amount Detected	Range		Year Sampled	Violations	Typical Source
				Low	High			
Fluoride (ppm)	4	4	0.26	NA		2024	No	Erosion of natural deposits, water additive which promotes strong teeth, discharge from fertilizer and aluminum factories.
Manganese (ppm)	N/A	N/A	0.0041	Only Detection		2024	No	Naturally occurring in the environment.
Sodium (ppm)[3]	NA	NA	93	NA		2024	No	Naturally occurring in the environment. Adequate levels of sodium are required for good health.
Barium (ppm)	2	2	0.00057	Only Detection		2024	No	Discharge of wastes; Discharge from metal refineries; Erosion of natural deposits

Radiologicals

Regulated Contaminants	MCLG or MRDLG	MCL, TT OR MRDL	Amount Detected	Range		Year Sampled	Violations	Typical Source
				Low	High			
Radium 226 (picocuries per liter)	0	5	0.163	Only Detection		2024	No	Erosion of natural deposits

Disinfectants & Disinfection By-Products

Regulated Contaminants	MCLG or MRDLG	MCL, TT OR MRDL	Amount Detected	Range		Year Sampled	MCL or MRDL Violations	Typical Source
				Low	High			
Chlorine (ppm)	4	4	1.25 [1]	0.51	1.80	2024	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60 (LRAA)	21 [2]	12	25	2024	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHMs) (ppb)	NA	80 (LRAA)	57 [2]	38	76	2024	No	By-product of drinking water disinfection

[1] Result reported is the Running Annual Average (RAA), which is the average of the sample analytical results from the previous four calendar quarters.
Minimum of 0.2 ppm disinfectant residual concentration required.

[2] Result reported is the highest locational running annual average (LRAA), which is the average of the sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters under the Stage 2 Disinfection and Disinfectant Byproducts Rule.

Microbiological Contaminants

Regulated Contaminants	MCLG or MRDLG	MCL, TT or MRDL	Amount Detected	Range		Year Sampled	Violations	Typical Source
				Low	High			
Total Coliform Bacteria	0	One positive sample per month [4]	0 [5]	N/A		2024	No	Naturally present in the environment; used as an indicator that other, potentially harmful bacteria may be present.

[4] For a water system collecting less than 40 samples per month.

[5] There were no coliforms found in samples.

UCMR5 Monitoring

Camp Lejeune conducted additional monitoring as part of Phase 5 of the EPA's Unregulated Contaminant Monitoring Rule (UCMR5). 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.

UCMR5 specifies monitoring for 29 per- and polyfluoroalkyl substances (PFAS) and lithium. There were no detections of any PFAS constituents. A detection of Lithium is detailed below. For more information about the UCMR please visit:

https://www.epa.gov/dwucmr

UCMR5 Contaminants	Amount Detected	Range		Year Sampled	Typical Source
		Low	High		
Lithium (ug/L)	26.8	N/A		2024	Naturally occurring in the environment.

Inorganic Contaminants

Regulated Contaminants (Units)	Sample Date	Your Water (90th Percentile)	# Sites found above the AL	Range		MCLG	AL	Likely Sources of Lead and Copper
				Low	High			
Copper (ppm)	2022	0.713 [6]	1	0.062	2.280	1.3	1.3	Corrosion of household plumbing systems, erosion of natural deposits
Lead (ppb)	2022	4 [6]	1	3	0.025	0	15	Corrosion of household plumbing systems, erosion of natural deposits

[6] The 90th percentile level of all samples is the number used to determine if Camp Lejeune is in compliance with Federal, State, and DOD guidance.

Lead, Copper, and Drinking Water

The table above summarizes our most recent lead and copper tap sampling data. If you would like to review the complete lead tap sampling data, please contact David Towler at 910-451-9385.

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risk of heart disease, high blood pressure, kidney or nervous system problems.

Lead can cause serious health effects in people of all ages, especially for pregnant women, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and home plumbing. MCAS New River's water treatment system is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you are concerned about lead in your water and wish to have your water tested, contact Camp Lejeune Environmental Management Division at 910-451-5003. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at: https://www.epa.gov/safewater/lead

Additional information about lead and drinking water can be viewed on the web at: https://www.lejeune.marines.mil/Offices-Staff/Environmental-Mgmt/Additional-Resources/

A drinking water service line inventory has been completed for the MCAS New River water system. Based on available data and records, Camp Lejeune has verified that there is no indication of any lead service lines being installed in the MCAS New River water system. The MCAS New River Service Line Inventory can be found at: https://www.lejeune.marines.mil/Offices-Staff/Environmental-Mgmt/Service-Line-Inventories/

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Help Protect Your Water

Protection of drinking water is everyone's responsibility. You can help protect our drinking water sources in several ways: dispose of chemicals properly, take used motor oil to recycling centers, volunteer to participate in group efforts to protect our water sources, etc.

Voluntary Sampling Program

In addition to what is required by regulation, and as part of our commitment to ensure that we are providing the safest, most reliable drinking water possible, Camp Lejeune has monitored drinking water for substances found in explosives (nitroaromatics, nitramines, nitrate esters) and perchlorate in finished water since 2004, and raw groundwater starting in 2011. These substances, commonly known as "munitions constituents", are used in the manufacture of explosives or are the breakdown products of compounds used in explosives. Voluntary water sampling in 2024 detected trace amounts of one munitions constituent in the finished water. These trace amounts are not a health concern. There are no MCLs established for munitions constituents.

Additionally, Camp Lejeune sampled both raw groundwater and finished water for Volatile Organic Compounds, Synthetic Organic Compounds, Inorganic Compounds, and Per- and polyfluorinated Alkyl Substances (PFAS). This sampling was done voluntarily above what is required by current regulations and Department of Defense (DOD) requirements. Results of all voluntary testing were within Federal, State, and DOD drinking water guidance.

Detections for voluntary sampling conducted throughout the MCAS New River system can be viewed on the web at:

http://www.lejeune.marines.mil/Offices-Staff/Environmental-Mgmt/Annual-Reports/Voluntary-Monitoring-Detected-Contaminants/

Important Health Information

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, persons with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These persons or their parents or guardians should seek advice about drinking water from health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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 compounds. PFAS have been used in a variety of industrial and consumer products around the globe, including the United States, since the 1940s. PFAS have been used to make coatings and products that are used as oil and water repellants for carpets, clothing, paper packaging for food, and cookware. They are also contained in some foams (aqueous film-forming foam (AFFF)) currently used for fighting petroleum fires at airfields and in industries. 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 federal or North Carolina state regulation for PFAS in drinking water?

On April 26, 2024, the United States Environmental Protection Agency (EPA) published Maximum Contaminant Levels (MCLs) for some PFAS. See table below.

Compound	Final MCLG	Final MCL (enforceable levels)
PFOA	0	4.0 ppt
PFOS	0	4.0 ppt
PFHxS	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
HFPO-DA (commonly known as Gen-X)	10 ppt	10 ppt
Mixtures containing two or more of: PFHxS, PFNA, HFPO-DA, and PFBS	1 (unitless) Hazard Index (HI)	1 (unitless) HI

ppt = parts per trillion or nanograms per liter (ng/L)

$$HI\ MCL = \left(\frac{[HFPO\text{-}DA_{water}]}{[10\ ppt]}\right) + \left(\frac{[PFBS_{water}]}{[2000\ ppt]}\right) + \left(\frac{[PFNA_{water}]}{[10\ ppt]}\right) + \left(\frac{[PFHxS_{water}]}{[10\ ppt]}\right) = 1$$

Within three years after the MCL publication date, the EPA requires the start of sampling in accordance with the new MCLs, and the EPA requires implementation of any required treatment within five years after the publication date.

The Department of Defense (DoD) proactively published policies to monitor drinking water quality for certain PFAS at all service owned and operated water systems at least every two years. The DoD policy stated that if water sampling confirmed that drinking water contained perfluorooctanoic acid (PFOA) or perfluorooctane sulfonic acid (PFOS) at individual or combined levels greater than the 2016 EPA health advisory level of 70 parts per trillion (ppt), the water systems would immediately reduce the PFOS or PFOA levels. For levels less than 70 ppt but above the 4 ppt (draft at the time of policy publication), the DoD policy committed to planning for reducing the levels after the EPA's published MCLs took effect.

Has Camp Lejeune tested its water for PFAS?

Yes. In May and October 2024, samples were collected from the MCAS New River distribution system. There were no detections in finished water of the 29 PFAS compounds covered by the sampling methods in the 2024 sampling. We will continue to closely monitor the drinking water quality.

Substances That Could Be in the Water

To ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which provide the same protection for public health. 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 mean that water poses a health risk. 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 and transport substances (contaminants) resulting from the presence of animals or from human activity.

Substances that may be present in the water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife;

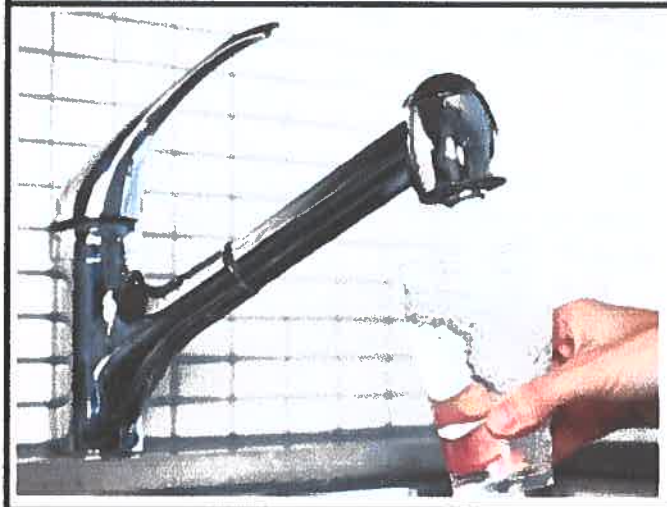
Inorganic Contaminants, such as salts and metals, which can occur naturally in the soil or groundwater or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil or gas production, mining, or farming;

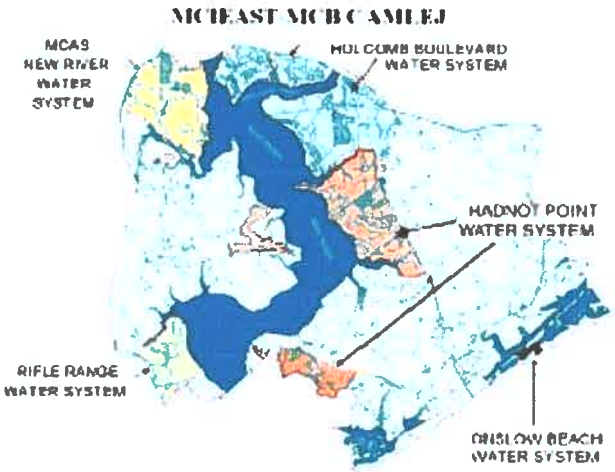
Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic compounds, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can occur naturally or be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by contacting the Environmental Protection Agency by calling the Safe Drinking Water Hotline (1-800-426-4791) or visiting the website: https://www.epa.gov/ground-water-and-drinking-water.





N.C. Drinking Water Protection Program

Protecting the water you drink.

SOURCE WATER ASSESSMENT PROGRAM (SWAP) RESULTS

The North Carolina Department of Environmental Quality (NCDEQ), Public Water Supply Section (PWSS), 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 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 MCAS New River Water Treatment System was determined by combining the contaminant rating (number and location of PCSs within the assessment area) and inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). The assessment findings based on the SWAP report completed on September 10, 2020 are summarized in the table below:

MCAS New River Drinking Water Supply Wells	
Source Name	**Susceptibility Rating**
VL 101	Moderate
VL 102	Moderate
VL 103	Moderate
VL 104	Moderate
VL 105	Moderate
VL 106	Moderate
VL 107	Moderate
VL 109	Moderate

It is important to note that susceptibility ratings do not imply higher or lower water quality, only the system's potential to become contaminated by PCSs in the assessment area.

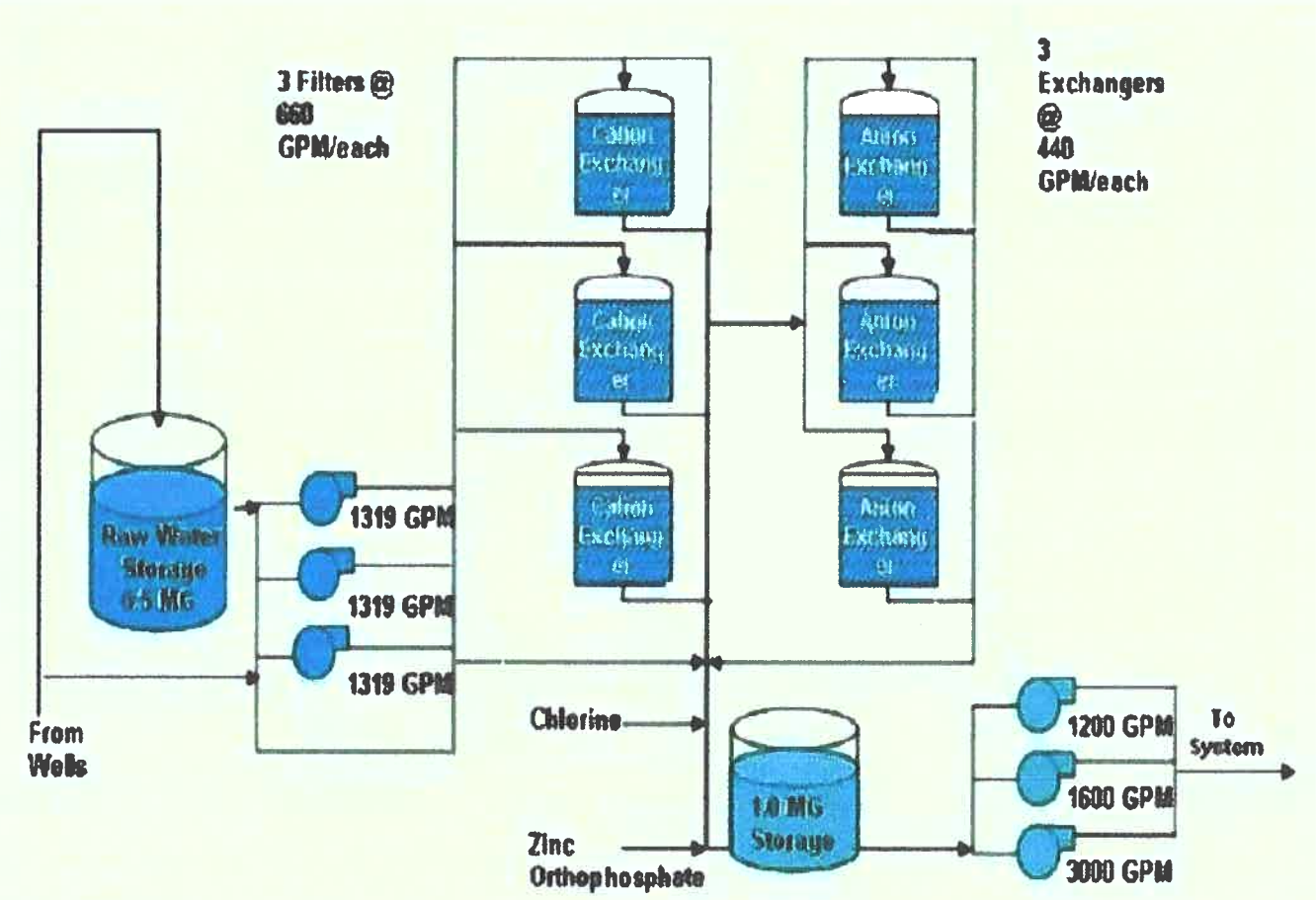
To obtain a copy of the complete SWAP report for the MCAS New River Water Treatment System, request a copy from NCDEQ at swap@deq.nc.gov.

System Name: USMC Lejeune - New River Air Station

PWS ID: 0467042

MCAS New River Water Treatment Process

Groundwater is pumped from the drinking water supply wells to a water reservoir located at the MCAS New River Water Treatment Plant. This water is then pumped to a series of cation (softening) and anion (TOC removal) exchangers. Chlorine (disinfection) and zinc orthophosphate (corrosion control) are added to the water before it enters the finished water reservoir. When water is needed by customers, it is pumped from the reservoir and distributed throughout the MCAS New River Community water system.



PROCESS SCHEMATIC
MCAS New River WTP

WATER CONSERVATION

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? You can play a role in conserving water by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever possible. It is not hard to conserve water. Small changes can make a big difference. Here are a few tips:

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Check every faucet in your home for leaks. Just a slow drip can waste 15-20 gallons a day.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Water plants only when necessary and adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Don't run the hose while washing your car. Use a bucket of water and a quick hose rinse at the end or wash vehicles at a carwash that recycles its water. Saves 150 gallons each time.

Teach your kids about water conservation to ensure a future generation that uses water wisely. Visit www.epa.gov/watersense for more information.

Remember, when you conserve water you also conserve energy!