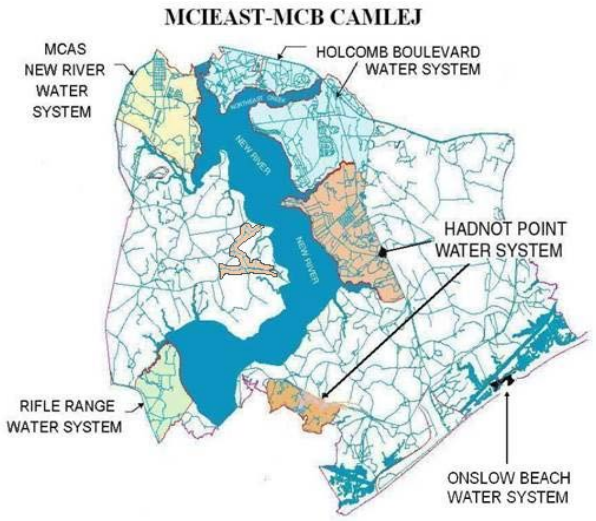
Important Drinking Water Definitions/Terms	
Term	**Definition**
MCLG	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
TT	Treatment Technique : A required process intended to reduce the level of a contaminant in drinking water.
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
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.
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.
NA	Not Applicable
SDWA	Safe Drinking Water Act: the federal law that protects public drinking water supplies throughout the nation.
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)



Questions?

For more information about this report, or for any questions relating to your drinking water, please call Charity Delaney (EMD) at (910) 451-9385.

2019 Annual Water Quality Report

Rifle Range Water Distribution System

PWSID # 04-67-046

Marine Corps Base Camp Lejeune (MCB CAMLEJ) is pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality.

MCB CAMLEJ is committed to providing you with information because informed customers are our best allies.

Source Water

The MCB CAMLEJ Rifle Range distribution system is supplied with drinking water from the Onslow Water and Sewer Authority (ONWASA), PWSID # 04-67-035. Eight water supply wells provide groundwater from the Castle Hayne Aquifer to ONWASA's Dixon Water Treatment Plant. There, the raw water is treated by filtration, disinfection, and softening practices prior to entering the Rifle Range's distribution system. A copy of ONWASA's 2019 Water Quality Report can be accessed at:

https://www.onwasa.com/DocumentCenter/View/3911

The North Carolina Department of Environmental Quality, Public Water Supply Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina in order to determine the susceptibility of each drinking water source to potential contaminant sources. More information on the SWAP, including source water assessment reports can be found on the web at:

http://www.ncwater.org/?page=600.

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

Water Quality Data

MCB Camp Lejeune routinely monitors for more than 150 contaminants that could potentially be in your drinking water. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of those contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. Unless otherwise noted, the table below lists all of the regulated drinking water contaminants that were detected during the 2019 calendar year. Although many more contaminants were tested, only those substances listed below were found in your water. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, definitions and abbreviations have been provided on the next page. In 2019, the Rifle Range distribution system met all Federal and State drinking water standards.

Regulated Contaminants	MCLG or MRDLG	MCL, TT OR MRDL	Amount Detected	Range		Year Sampled	Violations	Typical Source
				Low	High			
Disinfectants & Disinfection By-Products								
Chlorine (ppm)	4	4	1.21 [4]	0.22	1.34	2019	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60 (LRAA)	40 [1]	23	56	2019	No	By-product of drinking water disinfection
Total Trihalomethane (TTHMs) (ppb)	NA	80 (LRAA)	65 [1]	43	87	2019	No	By-product of drinking water disinfection

[1] Result reported is the highest locational running annual average (LRAA), which is the average of the sample results from the previous four quarters.

[4] Result reported is the running annual average (RAA), which is the average of the sample results from the previous four quarters. Minimum of 0.2 ppm disinfectant residual concentration required.

Regulated Contaminants	MCLG or MRDLG	MCL, TT OR MRDL	Amount Detected	Range		Year Sampled	Violations	Typical Source
				Low	High			
Inorganic Contaminants								
Fluoride (ppm)	4	4	0.78 [2]	NA		2017	No	Erosion of natural deposits, water additive which promotes strong teeth, discharge from fertilizer and aluminum factories.

[2] Data obtained from sampling conducted at ONWASA's Dixon Water Treatment Plant prior to delivery to the Rifle Range distribution system.

Regulated Contaminants	MCLG	AL	Amount Detected	# Samples Exceeding AL	Year Sampled	Exceeds AL	Typical Source
Inorganic Contaminants							
Copper (ppm)	1.3	1.3	<0.073 [3]	0	2019	No	Corrosion of household plumbing systems, erosion of natural deposits
Lead (ppb)	0	15	<3 [3]	0	2019	No	Corrosion of household plumbing systems, erosion of natural deposits

[3] Amount Detected represents the 90th percentile level of all samples detected and is the number used to determine if MCB Camp Lejeune is in compliance with federal, state and DOD guidance.

Lead and Drinking Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. MCB Camp Lejeune's Rifle Range water distribution system is responsible for providing high quality drinking water. When your water has been sitting for several hours, you can minimize the potential for lead exposure from historical plumbing components by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at:

http://www.epa.gov/safewater/lead

Additional information about lead and drinking water can be viewed on the web at:

http://www.lejeune.marines.mil/Offices-Staff/Environmental-Mgmt/.

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 to our Base population, MCB Camp Lejeune has monitored drinking water for compounds found in explosives (nitroaromatics, nitramines, nitrate esters) and perchlorate in finished water since 2004, and raw groundwater starting in 2011. These compounds, 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 2019 detected trace amounts of one munitions constituent in the finished water. These trace amounts are not considered to be a public health concern. There are no MCL's established for munitions constituents. Additionally, finished water was sampled for Volatile Organic Contaminants, Synthetic Organic Contaminants, Inorganic Contaminants and Per-and polyfluorinated Alkyl Substances (PFAS). This sampling was done voluntarily above what is required by current regulations and DOD requirements. Results of all voluntary testing were within federal, state, and DOD drinking water guidance. For more information on PFAS please visit:

https://www.defense.gov/pfas/

Detections for voluntary sampling conducted throughout the Rifle Range system can be viewed on the web at:

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

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 must 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 indicate that the 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 substances 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 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;

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

For more information about contaminants and potential health effects, call the USEPA's Safe Drinking Water Hotline at (800) 426-4791.

UCMR4 Monitoring

Additional monitoring was conducted at ONWASA's Dixon WTP as part of Phase 4 of the EPA's Unregulated Contaminant Monitoring Rule (UCMR4). Information collected through the monitoring of these contaminants/chemicals will help the EPA make future decisions on drinking water standards. Sampling resulted in no detections for any contaminants/chemicals listed in UCMR4. For more information about the Unregulated Contaminant Monitoring Rule please visit:

https://www.epa.gov/dwucmr

Contaminants	Average Level	Range		Year Sampled
		Low	High	
UCMR4 Contaminants				
No Detections				2019

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 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.