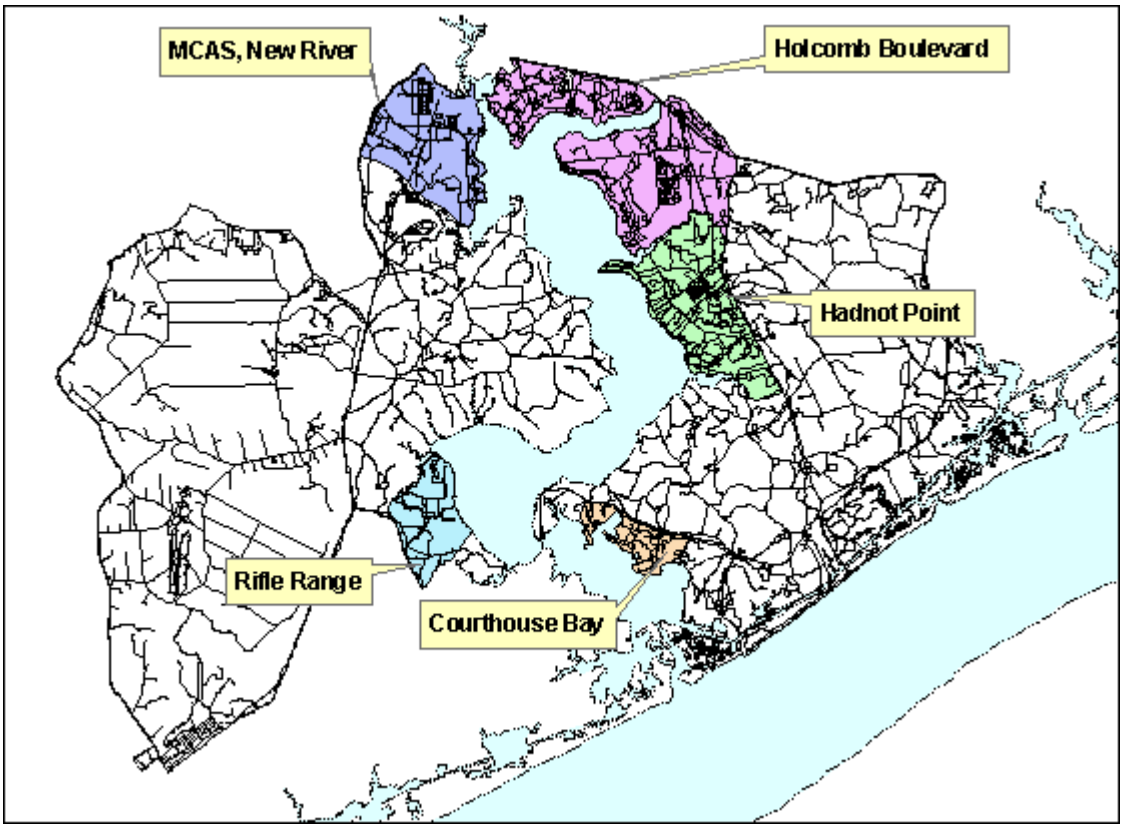
2004 Water Quality Report for Courthouse Bay Water Treatment System
(PWS ID: 04-67-047)



For more information
Courthouse Bay Water Treatment
Attn: Steven Whited
Marine Corps Base, Camp Lejeune
PSC Box 20004
Camp Lejeune, NC 28542-0004

Phone: 910-451-5068
Fax: 910-451-5997
E-mail: steven.whited@usmc.mil

Web Address: www.lejeune.usmc.mil/emd

2004 Water Quality Report for Courthouse Bay Water Treatment System

Introduction

Marine Corps Base (MCB), Camp Lejeune is committed to providing you with drinking water that is safe and reliable. We believe that providing you with accurate information about your water is the best way to assure you that your water is safe. This 2004 Water Quality Report for Courthouse Bay Water Treatment System is a snapshot of last year's water quality. Included are details about where your water comes from, 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. In 2004, Courthouse Bay Water Treatment System met all U.S. Environmental Protection Agency (EPA) and State drinking water health standards.

As part of the effort of ensuring that the water it distributes to the Base population continues to meet and exceed the requirements of the Safe Drinking Water Act, MCB, Camp Lejeune began monitoring for explosives (nitroaromatics, nitramines, nitrate esters), and perchlorate in well water and treated water in 2004. Although there are no current regulations requiring this particular sampling, Camp Lejeune samples treated water on a monthly basis to ensure that the safest, most reliable drinking water is provided to the Base population.

Sampling in August 2004 and October 2004 showed that the wells supplying water to the water treatment plant were below the detection limit for nitroaromatics, nitramines, nitrate esters, and perchlorate. Monthly treated water sampling did not detect nitroaromatics, nitramines, nitrate esters, or perchlorate in any sample in 2004.

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 microbiological 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

The Courthouse Bay community water system obtains water from seven (7) groundwater wells. Groundwater is pumped from the Castle Hayne aquifer approximately 180 feet below the ground. This water is relatively free of contaminants. It is pumped from the wells to a detention basin located at the Courthouse Bay Water Treatment Plant. At the detention basin air is bubbled through the water, calcium carbonate is added (to raise the pH of the water), and chlorine is added to the water to protect against microbial contamination. This water is then pumped to a series of pressure filters to remove particles. After filtration, the water is passed through a set of softening units to remove minerals and then is stored in a large reservoir called a clearwell. When you open a faucet or turn on a water hose, treated drinking water from the clearwell is pumped through the distribution system to your taps.

Source Water Assessment Program (SWAP) Results

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate, or Lower.

The relative susceptibility rating of each source for Courthouse Bay Water Treatment 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.). Out of Courthouse Bay Water Treatment Plant's seven (7) sources, three (3) sources had a rating of Lower, three (3) sources had a rating of Moderate, and one (1) source had a rating of Higher.

The complete SWAP Assessment report for Courthouse Bay Water Treatment System may be viewed on the Web at: http://www.deh.enr.state.nc.us/pws/swap Please 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. To obtain a printed copy of this report, please mail a written request to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh NC 27699-1634, or email request to swap@ncmail.net. Please indicate your system name, PWSID, 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 919-715-2633.

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

Educational Statement for Lead

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to flush you tap for at least 60 seconds before using tap water. You may also wish to have your home's water tested. Additional information is available from Safe Drinking Water Hotline (800-426-4791).

Important Drinking Water Definitions:

AL: Action Level: The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.
Contaminant: Any natural or man-made physical, chemical, biological, or radiological substance or matter in water, which is at a level that may have an adverse effect on public health, and which is known or anticipated to occur in public water systems.
Coliform: A group of bacteria commonly found in the environment. They are an indicator of potential contamination of water. Adequate and appropriate disinfection effectively destroys coliform bacteria.
Disinfection: A process that effectively destroys coliform bacteria.
MCL: Maximum Contaminant Level: 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.
MCLG: Maximum Contaminant Level Goal: 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.
MFL: Million fibers per liter. Million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.
MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL: Maximum residual disinfectant level. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Nitrates: A dissolved form of nitrogen found in fertilizers and sewage by-products that may leach into groundwater and other water sources. Nitrates may also occur naturally in some waters.
ND: Non-Detects. Laboratory analysis indicates that the contaminant is not present at the level of detection set for the particular methodology used.
NTU: (Nephelometric turbidity unit) A measure of the clarity of water.
Pathogens: (Disease-causing pathogens, waterborne pathogens) A pathogen is a bacterium, virus, or parasite that causes or is capable of causing disease. Pathogens may contaminate water and cause waterborne disease.
pCi/L: (picocuries per liter) A measurement of radiation released by a set amount of a certain compound.
pH: A measure of the acidity or alkalinity of water.
ppb, ppm: (Part per billion, part per million) Measurements of the amount of contaminant per unit of water. A part per million is like one cent in $10,000 and a part per billion is like one cent in $10,000,000.
THM: (Trihalomethanes) Four separate compounds (chloroform, dichlorobromomethane, dibromochloromethane, and bromoform) that form as a result of disinfection.

Extra note: MCLs 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.

Water Quality Data Table - Courthouse Bay

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The table below lists all the drinking water contaminants that we detected in the last round of sampling for the 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 Jan 1 through Dec 31, 2004. The EPA or the State requires 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, through representative of water quality, is more than a 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 occurence of unregulated contaminants in drinking water and whether future regulation is warranated.

Volatile Organic Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Carbon Tetrachloride (ppb) *	0	5	1.65	---	---	Jun-04	No	Discharge from chemical plants and other industrial activities

* This sample was not a State required compliance sampling event. Camp Lejeune proactively samples finished water monthly and drinking water semi-annually for volatile organic compounds. Follow up samples showed no detections for Carbon Tetrachloride. *

Inorganic Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Asbestos (mfl)	7	7	ND		---	2003 Data	No	Decay of asbestos cement water mains; Erosion of natural deposits
Fluoride (ppm)	4	4	0.11			2003 Data	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories

Disinfection Byproducts Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Total Trihalomethanes [TTHMs] (ppb)	NA	80	71.1	44.1	111.2	2004	No	By-product of drinking water disinfection
Haloacetic Acids [HAA5] (ppb)	NA	60	36.6	21.5	54.5	2004	No	By-product of drinking water disinfection

Microorganisms

Contaminant(s) (units)	MCLG	MCL	Your Water	# of Postive Samples	Sample Date	Violation	Typical Source
Total Coliform	0	5.0%*	---	1	Jun-04	No	Naturally present in the environment

One site tested positive for total coliform in June of 2004, however, the follow up sample tested negative.

* The water system is in violation if more than 5% of the sites tested positive for total coliform.

Lead and Copper Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	# of Samples > AL	Sample Date	Violation	Typical Source
Copper (ppm) (90th percentile)	1.3	1.3	0.635	0	2002 Data	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb) (90th percentile)	0	15	5	1	2002 Data	No	Corrosion of household plumbing systems; Erosion of natural deposits

Water Quality Data Table - Courthouse Bay

Unregulated Volatile Organic Contaminants			Range		
Contaminant(s) (units)	**Your Water**	**Sample Date**	**Low**	**High**	**Violation**
Bromodichloromethane (ppb)	7.75	2004	3.82	13.2	No
Bromoform (ppb)	2.61	2004	31.3	31.3	No
Chlorodibromomethane (ppb)	3.62	2004	0.96	20.4	No
Chloroform (ppb)	33.98	2004	5.09	60.4	No

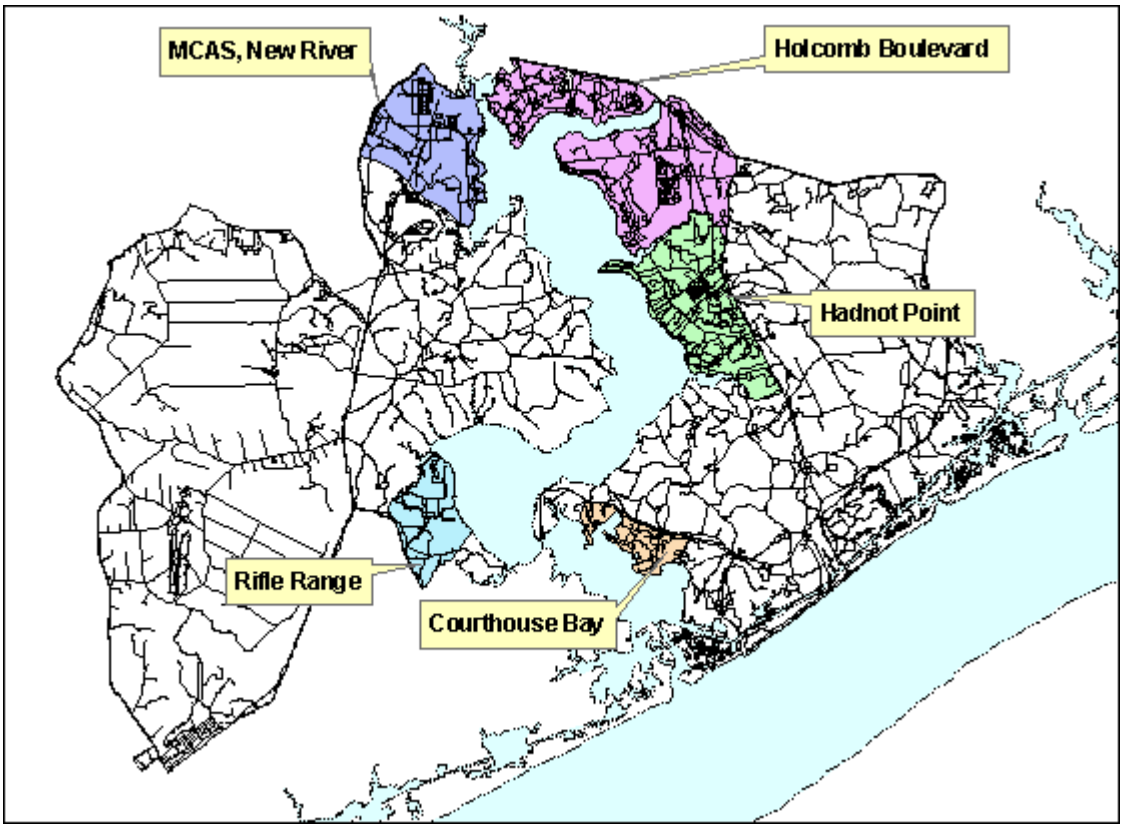
Potential Health Effects:

Asbestos	Increased risk of developing benign intestinal polyps
Carbon Tetrachloride	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Fluoride	Bone disease (pain and tenderness of the bones); Children may get mottled teeth.
HAA5	Increased risk of cancer.
Lead	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
TTHM	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Units Description:

NA: Not Applicable	MFL: million fibers per liter	ppm: parts per million, or milligrams per liter (mg/L)
ND: Not detected	MNR: Monitoring not required, but recommended.	ppb: parts per billion, or micrograms per liter (ug/L)

2004 Water Quality Report for MCAS, New River Water Treatment System
(PWS ID: 04-67-042)



For more information
MCAS, New River Water Treatment
Attn: Steven Whited
Marine Corps Base, Camp Lejeune
PSC Box 20004
Camp Lejeune, NC 28542-0004

Phone: 910-451-5068
Fax: 910-451-5997
E-mail: steven.whited@usmc.mil

Web Address: www.lejeune.usmc.mil/emd

2004 Water Quality Report for MCAS, New River Water Treatment System

Introduction

Marine Corps Base (MCB), Camp Lejeune is committed to providing you with drinking water that is safe and reliable. We believe that providing you with accurate information about your water is the best way to assure you that your water is safe. This 2004 Water Quality Report for Marine Corps Air Station (MCAS), New River Water Treatment System is a snapshot of last year's water quality. Included are details about where your water comes from, 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. In 2004, MCAS, New River Water Treatment System met all U.S. Environmental Protection Agency (EPA) and State drinking water health standards.

As part of the effort of ensuring that the water it distributes to the Base population continues to meet and exceed the requirements of the Safe Drinking Water Act, MCB, Camp Lejeune began monitoring for explosives (nitroaromatics, nitramines, nitrate esters), and perchlorate in well water and treated water in 2004. Although there are no current regulations requiring this particular sampling, Camp Lejeune samples treated water on a monthly basis to ensure that the safest, most reliable drinking water is provided to the Base population.

Sampling in August 2004 and October 2004 showed that the wells supplying water to the water treatment plant were below the detection limit for nitroaromatics, nitramines, nitrate esters, and perchlorate. Monthly treated water sampling did not detect nitroaromatics, nitramines, nitrate esters, or perchlorate in any sample in 2004.

What EPA Wants You to Know

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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 microbiological 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

The MCAS, New River community water system obtains water from 14 groundwater wells located in the Verona Loop area. Groundwater is pumped from the Castle Hayne freshwater aquifer approximately 180 feet below the ground. This water is relatively free of contaminants. It is pumped from the wells to a water treatment plant located on the air station. The water enters the water treatment plant and is pumped into a set of cone-shaped devices called spiractors. The spiractors are used to soften the water by removing minerals. The water is then passed through a set of filters, which contain layers of sand and carbon to remove particles through a process called filtration. The clean water is then placed in a large storage tank called a clearwell. When water is needed by customers, the water is pumped from the clearwell; chlorine is added (to protect against microbial contamination) and distributed throughout the MCAS New River community water system.

Source Water Assessment Program (SWAP) Results

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate, or Lower.

The relative susceptibility rating of each source for MCAS, New River Water Treatment 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.). Out of MCAS, New River Water Treatment Plant's fourteen (14) sources, two (2) sources had a rating of Lower, eleven (11) sources had a rating of Moderate, and one (1) source had a rating of Higher.

The complete SWAP Assessment report for MCAS, New River Water Treatment System may be viewed on the Web at: http://www.deh.enr.state.nc.us/pws/swap Please 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. To obtain a printed copy of this report, please mail a written request to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh NC 27699-1634, or email request to swap@ncmail.net. Please indicate your system name, PWSID, 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 919-715-2633.

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

Educational Statement for Lead

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to flush you tap for at least 60 seconds before using tap water. You may also wish to have your home's water tested. Additional information is available from Safe Drinking Water Hotline (800-426-4791).

Important Drinking Water Definitions:

AL: Action Level: The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.
Contaminant: Any natural or man-made physical, chemical, biological, or radiological substance or matter in water, which is at a level that may have an adverse effect on public health, and which is known or anticipated to occur in public water systems**.**
Coliform: A group of bacteria commonly found in the environment. They are an indicator of potential contamination of water. Adequate and appropriate disinfection effectively destroys coliform bacteria**.**
Disinfection: A process that effectively destroys coliform bacteria.
MCL: Maximum Contaminant Level: 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.
MCLG: Maximum Contaminant Level Goal: 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.
MFL: Million fibers per liter. Million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.
MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL: Maximum residual disinfectant level. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants**.**
Nitrates: A dissolved form of nitrogen found in fertilizers and sewage by-products that may leach into groundwater and other water sources. Nitrates may also occur naturally in some waters.
NTU: (Nephelometric turbidity unit) A measure of the clarity of water.
Pathogens: (Disease-causing pathogens, waterborne pathogens) A pathogen is a bacterium, virus, or parasite that causes or is capable of causing disease. Pathogens may contaminate water and cause waterborne disease.
pCi/L: (picocuries per liter) A measurement of radiation released by a set amount of a certain compound.
pH: A measure of the acidity or alkalinity of water.
ppb, ppm: (Part per billion, part per million) Measurements of the amount of contaminant per unit of water. A part per million is like one cent in $10,000 and a part per billion is like one cent in $10,000,000.
THM: (Trihalomethanes) Four separate compounds (chloroform, dichlorobromomethane, dibromochloromethane, and bromoform) that form as a result of disinfection**.**

Extra note: MCLs 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.

Water Quality Data Table - MCAS, New River

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The table below lists all the drinking water contaminants that we detected in the last round of sampling for the 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 Jan 1 through Dec 31, 2004. The EPA or the State requires 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, through representative of water quality, is more than a 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 occurence of unregulated contaminants in drinking water and whether future regulation is warranated.

Volatile Organic Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Carbon Tetrachloride (ppb) *	0	5	2.04	---	---	Jun-04	No	Discharge from chemical plants and other industrial activities

* This sample was not a State required compliance sampling event. Camp Lejeune proactively samples finished water monthly and drinking water semi-annually for volatile organic compounds. Follow up samples showed no detections for Carbon Tetrachloride. *

Inorganic Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Asbestos (mfl)	7	7	ND		---	2003 Data	No	Decay of asbestos cement water mains; Erosion of natural deposits
Fluoride (ppm)	4	4	0.24		---	2003 Data	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories

Disinfection Byproducts Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Total Trihalomethanes [TTHMs] (ppb)	NA	80	68.6	62.5	75.5	2004	No	By-product of drinking water disinfection
Haloacetic Acids [HAA5] (ppb)	NA	60	17.1	11.4	23.7	2004	No	By-product of drinking water disinfection

Lead and Copper Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	# of Samples > AL	Sample Date	Violation	Typical Source
Copper (ppm) (90th percentile)	1.3	1.3	< .05	0	2004	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb) (90th percentile)	0	15	11	2	2004	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Synthetic Organic Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
2,4-D (ppb) *	70	70	0.73	---	---	Jul-04	No	Runoff from herbicides used on row crops

* Follow up samples showed no detections for 2,4-D *

Water Quality Data Table - MCAS, New River

Unregulated Volatile Organic Contaminants			Range		
Contaminant(s) (units)	Your Water	Sample Date	Low	High	Violation
Bromodichloromethane (ppb)	10.98	2004	1.31	25.8	No
Bromoform (ppb)	0.83	2004	0.26	2.8	No
Chlorodibromomethane (ppb)	7.44	2004	1.04	14.2	No
Chloroform (ppb)	24.2	2004	15.7	44.9	No

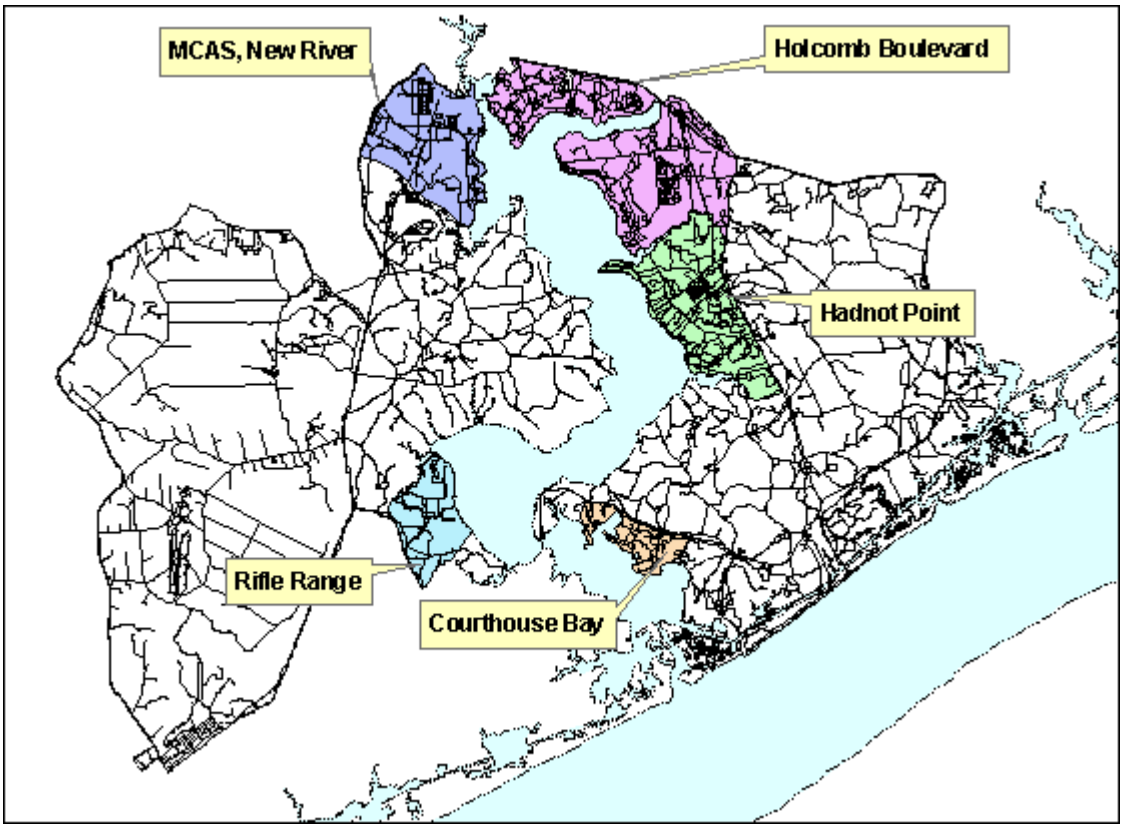
Potential Health Effects:

2,4-D	Kidney, liver, or adrenal gland problems
Asbestos	Increased risk of developing benign intestinal polyps
Carbon Tetrachloride	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Fluoride	Bone disease (pain and tenderness of the bones); Children may get mottled teeth.
HAA5	Increased risk of cancer.
Lead	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
TTHM	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Units Description:

NA: Not Applicable	MFL: million fibers per liter	ppm: parts per million, or milligrams per liter (mg/L)
ND: Not detected	MNR: Monitoring not required, but recommended.	ppb: parts per billion, or micrograms per liter (ug/L)

2004 Water Quality Report for Holcomb Boulevard Water Treatment System
(PWS ID: 04-67-043)



For more information
Holcomb Boulevard Water Treatment
Attn: Steven Whited
Marine Corps Base, Camp Lejeune
PSC Box 20004
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Phone: 910-451-5068
Fax: 910-451-5997
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2004 Water Quality Report for Holcomb Boulevard Water Treatment System

Introduction

Marine Corps Base (MCB), Camp Lejeune is committed to providing you with drinking water that is safe and reliable. We believe that providing you with accurate information about your water is the best way to assure you that your water is safe. This 2004 Water Quality Report for Holcomb Boulevard Water Treatment System is a snapshot of last year's water quality. Included are details about where your water comes from, 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. In 2004, Holcomb Boulevard Water Treatment System met all U.S. Environmental Protection Agency (EPA) and State drinking water health standards.

As part of the effort of ensuring that the water it distributes to the Base population continues to meet and exceed the requirements of the Safe Drinking Water Act, MCB, Camp Lejeune began monitoring for explosives (nitroaromatics, nitramines, nitrate esters), and perchlorate in well water and treated water in 2004. Although there are no current regulations requiring this particular sampling, Camp Lejeune samples treated water on a monthly basis to ensure that the safest, most reliable drinking water is provided to the Base population.

Sampling in August 2004 showed that all wells, raw water tanks, and finished water tanks were below the detection limit for explosives. Perchlorate was detected in well WH646. Camp Lejeune resampled all active wells (to include WH 646), raw water tanks, and finished water tanks for explosives and perchlorate again in October 2004. Samples from WH 646 were analyzed by two independent laboratories for additional assurance. The results from this sampling event confirmed that no explosive residue or perchlorate was present in any of the water wells, raw water tanks, and finished water tanks at Camp Lejeune. Monthly treated water sampling did not detect nitroaromatics, nitramines, nitrate esters, or perchlorate in any sample in 2004.

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 microbiological 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

The Holcomb Boulevard community water system obtains water from 21 groundwater wells located on Base. Groundwater is pumped from the Castle Hayne freshwater aquifer, approximately 180 feet below the ground. This water, which is relatively free of contaminants, is pumped from the wells to a water treatment plant located near the main gate of the Base. As the water enters the water treatment plant it is chlorinated to protect against microbial contamination and placed into a storage reservoir. From the storage reservoir the water is moved to a set of large, cone-shaped devices called spiractors. The spiractors are used to soften the water by removing minerals. Lime is added at the bottom of the spiractors to aid the softening process. The water is then passed through a set of filters, which contain layers of sand and carbon, to remove particles through a process called filtration. Fluoride (to prevent tooth decay) is added to the water and then the clean water is placed in a large storage tank called a clearwell. When water is needed by customers, it is pumped from the clearwell and distributed throughout the Holcomb Boulevard community water system.

Source Water Assessment Program (SWAP) Results

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate, or Lower.

The relative susceptibility rating of each source for Holcomb Boulevard Water Treatment 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.). Out of Holcomb Boulevard Water Treatment Plant's twenty-one (21) sources, six (6) sources had a rating of Lower, eleven (11) sources had a rating of Moderate, and four (4) sources had a rating of Higher.

The complete SWAP Assessment report for Holcomb Boulevard Water Treatment System may be viewed on the Web at: http://www.deh.enr.state.nc.us/pws/swap Please 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. To obtain a printed copy of this report, please mail a written request to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh NC 27699-1634, or email request to swap@ncmail.net. Please indicate your system name, PWSID, 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 919-715-2633.

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

Educational Statement for Lead

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to flush you tap for at least 60 seconds before using tap water. You may also wish to have your home's water tested. Additional information is available from Safe Drinking Water Hotline (800-426-4791).

Important Drinking Water Definitions:

AL: Action Level: The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.
Contaminant: Any natural or man-made physical, chemical, biological, or radiological substance or matter in water, which is at a level that may have an adverse effect on public health, and which is known or anticipated to occur in public water systems.
Coliform: A group of bacteria commonly found in the environment. They are an indicator of potential contamination of water. Adequate and appropriate disinfection effectively destroys coliform bacteria.
Disinfection: A process that effectively destroys coliform bacteria.
MCL: Maximum Contaminant Level: 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.
MCLG: Maximum Contaminant Level Goal: 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.
MFL: Million fibers per liter. Million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.
MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL: Maximum residual disinfectant level. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Nitrates: A dissolved form of nitrogen found in fertilizers and sewage by-products that may leach into groundwater and other water sources. Nitrates may also occur naturally in some waters.
NTU: (Nephelometric turbidity unit) A measure of the clarity of water.
Pathogens: (Disease-causing pathogens, waterborne pathogens) A pathogen is a bacterium, virus, or parasite that causes or is capable of causing disease. Pathogens may contaminate water and cause waterborne disease.
pCi/L: (picocuries per liter) A measurement of radiation released by a set amount of a certain compound.
pH: A measure of the acidity or alkalinity of water.
ppb, ppm: (Part per billion, part per million) Measurements of the amount of contaminant per unit of water. A part per million is like one cent in $10,000 and a part per billion is like one cent in $10,000,000.
THM: (Trihalomethanes) Four separate compounds (chloroform, dichlorobromomethane, dibromochloromethane, and bromoform) that form as a result of disinfection.

Extra note: MCLs 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.

Water Quality Data Table - Holcomb Boulevard

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The table below lists all the drinking water contaminants that we detected in the last round of sampling for the 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 Jan 1 through Dec 31, 2004. The EPA or the State requires 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, through representative of water quality, is more than a 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 occurence of unregulated contaminants in drinking water and whether future regulation is warranated.

Inorganic Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Asbestos (mfl)	7	7	ND	---		2003 Data	No	Decay of asbestos cement water mains; Erosion of natural deposits
Fluoride (ppm)	4	4	1.24	---		2003 Data	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories

Disinfection Byproducts Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Total Trihalomethanes [TTHMs] (ppb)	NA	80	46.4	39.5	58.6	2004	No	By-product of drinking water disinfection
Haloacetic Acids [HAA5] (ppb)	NA	60	22.7	14.5	35.2	2004	No	By-product of drinking water disinfection

Microorganisms

Contaminant(s) (units)	MCLG	MCL	Your Water	# of Postive Samples	Sample Date	Violation	Typical Source
Total Coliform	0	5.0%*	---	1	Jul-04	No	Naturally present in the environment

One site tested positive for total coliform in July of 2004, however, the follow up sample tested negative.

* The water system is in violation if more than 5% of the sites tested positive for total coliform.

Lead and Copper Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	# of Samples > AL	Sample Date	Violation	Typical Source
Copper (ppm) (90th percentile)	1.3	1.3	0.16	0	2004	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb) (90th percentile)	0	15	4	2	2004	No	Corrosion of household plumbing systems; Erosion of natural deposits

Water Quality Data Table Holcomb - Boulevard

Unregulated Volatile Organic Contaminants			Range		
Contaminant(s) (units)	**Your Water**	**Sample Date**	**Low**	**High**	**Violation**
Bromodichloromethane (ppb)	7.73	2004	2.54	6.74	No
Bromoform (ppb)	---	2004	---	---	No
Chlorodibromomethane (ppb)	2.86	2004	1.34	4.56	No
Chloroform (ppb)	12.55	2004	4.95	21.4	No

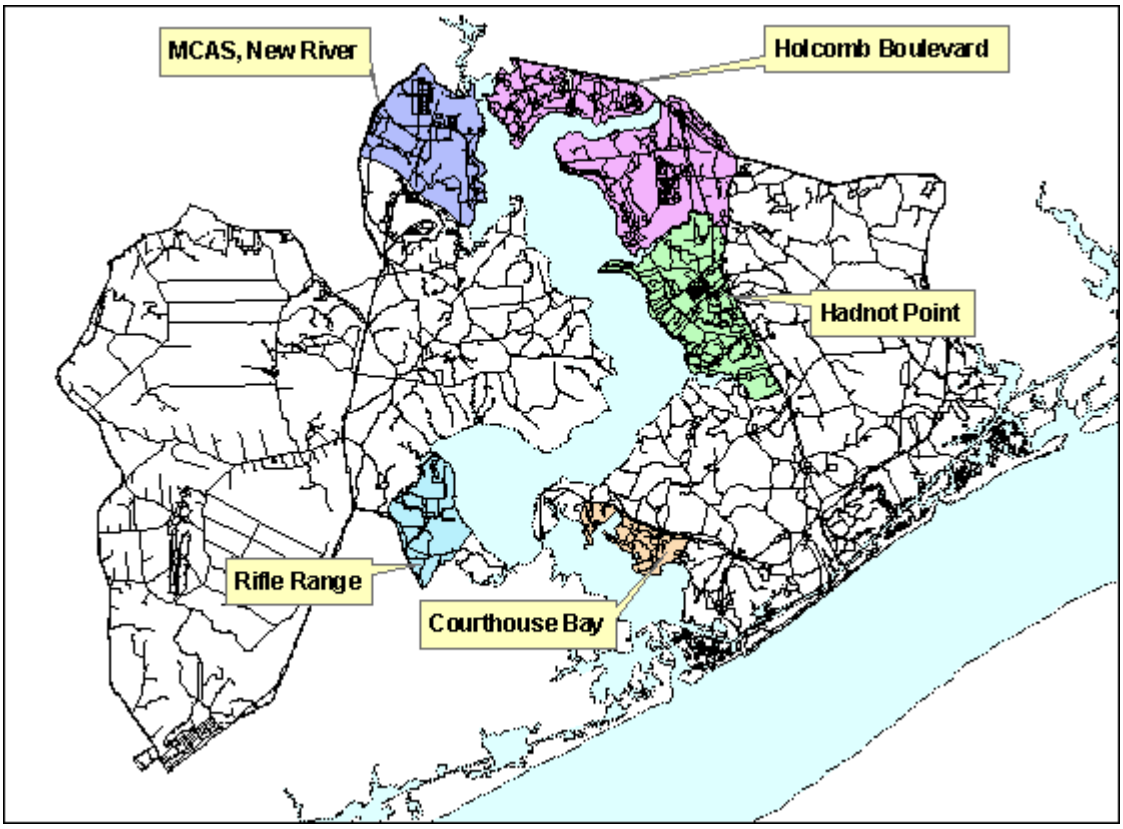
Potential Health Effects:

Asbestos	Increased risk of developing intestinal polyps
Fluoride	Bone disease (pain and tenderness of the bones); Children may get mottled teeth.
HAA5	Increased risk of cancer.
Lead	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
TTHM	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Units Description:

NA: Not Applicable	MFL: million fibers per liter	ppm: parts per million, or milligrams per liter (mg/L)
ND: Not detected	MNR: Monitoring not required, but recommended.	ppb: parts per billion, or micrograms per liter (ug/L)

2004 Water Quality Report for Hadnot Point Water Treatment System
(PWS ID: 04-67-041)



For more information
Hadnot Point Water Treatment
Attn: Steven Whited
Marine Corps Base, Camp Lejeune
PSC Box 20004
Camp Lejeune, NC 28542-0004

Phone: 910-451-5068
Fax: 910-451-5997
E-mail: steven.whited@usmc.mil

Web Address: www.lejeune.usmc.mil/emd

2004 Water Quality Report for Hadnot Point Water System

Introduction

Marine Corps Base (MCB), Camp Lejeune is committed to providing you with drinking water that is safe and reliable. We believe that providing you with accurate information about your water is the best way to assure you that your water is safe. This 2004 Water Quality Report for Hadnot Point Water Treatment System is a snapshot of last year's water quality. Included are details about where your water comes from, 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. In 2004, Hadnot Point Water Treatment System met all U.S. Environmental Protection Agency (EPA) and State drinking water health standards.

As part of the effort of ensuring that the water it distributes to the Base population continues to meet and exceed the requirements of the Safe Drinking Water Act, MCB, Camp Lejeune began monitoring for explosives (nitroaromatics, nitramines, nitrate esters), and perchlorate in well water and treated water in 2004. Although there are no current regulations requiring this particular sampling, Camp Lejeune samples treated water on a monthly basis to ensure that the safest, most reliable drinking water is provided to the Base population.

Sampling in August 2004 and October 2004 showed that the wells supplying water to the water treatment plant were below the detection limit for nitroaromatics, nitramines, nitrate esters, and perchlorate. Monthly treated water sampling did not detect nitroaromatics, nitramines, nitrate esters, or perchlorate in any sample in 2004.

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 microbiological 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

The Hadnot Point community water system obtains water from 32 groundwater wells located on Base. Groundwater is pumped from the Castle Hayne aquifer, approximately 180 feet below the ground. This water, which is relatively free of contaminants, is pumped from the wells to a water treatment plant located on the main portion of the Base. As the raw water enters the storage reservoir, chlorine is added to protect against microbial contamination. Raw water pumps are used to move the water from the reservoir to a set of large, cone-shaped devices called spiractors. The spiractors are used to soften the water by removing minerals. Lime is added at the bottom of the spiractors to assist in the softening process. The water is then passed through a set of filters, which contain layers of sand and carbon, to remove particles through a process called filtration. Fluoride (to prevent tooth decay) is added to the water as it is placed in a large storage tank called a clearwell. When customers need water, treated water is pumped from the clear well and distributed throughout the Hadnot Point community water system.

Source Water Assessment Program (SWAP) Results

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate, or Lower.

The relative susceptibility rating of each source for Hadnot Point Water Treatment 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.). Out of Hadnot Point Water Treatment Plant's thirty-two (32) sources, eleven (11) sources had a rating of Lower, seventeen (17) sources had a rating of Moderate, and four (4) sources had a rating of Higher.

The complete SWAP Assessment report for Hadnot Point Water Treatment System may be viewed on the Web at: http://www.deh.enr.state.nc.us/pws/swap Please 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. To obtain a printed copy of this report, please mail a written request to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh NC 27699-1634, or email request to swap@ncmail.net. Please indicate your system name, PWSID, 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 919-715-2633.

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

Educational Statement for Lead

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to flush you tap for at least 60 seconds before using tap water. You may also wish to have your home's water tested. Additional information is available from Safe Drinking Water Hotline (800-426-4791).

Important Drinking Water Definitions:

AL: Action Level: The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.
Contaminant: Any natural or man-made physical, chemical, biological, or radiological substance or matter in water, which is at a level that may have an adverse effect on public health, and which is known or anticipated to occur in public water systems.
Coliform: A group of bacteria commonly found in the environment. They are an indicator of potential contamination of water. Adequate and appropriate disinfection effectively destroys coliform bacteria.
Disinfection: A process that effectively destroys coliform bacteria.
MCL: Maximum Contaminant Level: 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.
MCLG: Maximum Contaminant Level Goal: 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.
MFL: Million fibers per liter. Million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.
MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL: Maximum residual disinfectant level. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Nitrates: A dissolved form of nitrogen found in fertilizers and sewage by-products that may leach into groundwater and other water sources. Nitrates may also occur naturally in some waters.
NTU: (Nephelometric turbidity unit) A measure of the clarity of water.
Pathogens: (Disease-causing pathogens, waterborne pathogens) A pathogen is a bacterium, virus, or parasite that causes or is capable of causing disease. Pathogens may contaminate water and cause waterborne disease.
pCi/L: (picocuries per liter) A measurement of radiation released by a set amount of a certain compound.
pH: A measure of the acidity or alkalinity of water.
ppb, ppm: (Part per billion, part per million) Measurements of the amount of contaminant per unit of water. A part per million is like one cent in $10,000 and a part per billion is like one cent in $10,000,000.
THM: (Trihalomethanes) Four separate compounds (chloroform, dichlorobromomethane, dibromochloromethane, and bromoform) that form as a result of disinfection.

Extra note: MCLs 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.

Water Quality Data Table - Hadnot Point

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The table below lists all the drinking water contaminants that we detected in the last round of sampling for the 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 Jan 1 through Dec 31, 2004. The EPA or the State requires 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, through representative of water quality, is more than a 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 occurence of unregulated contaminants in drinking water and whether future regulation is warranated.

Inorganic Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Asbestos (mfl)	7	7	ND	---	---	2003 Data	No	Decay of asbestos cement water mains; Erosion of natural deposits
Fluoride (ppm)	4	4	0.96			2003 Data	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories

Disinfection Byproducts Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Total Trihalomethanes [TTHMs] (ppb)	NA	80	30.4	28.3	36	2004	No	By-product of drinking water disinfection
Haloacetic Acids [HAA5] (ppb)	NA	60	11.4	8	21.4	2004	No	By-product of drinking water disinfection

Lead and Copper Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	# of Samples > AL	Sample Date	Violation	Typical Source
Copper (ppm) (90th percentile)	1.3	1.3	0.19	0	2004	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb) (90th percentile)	0	15	12	1	2004	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Unregulated Volatile Organic Contaminants

Contaminant(s) (units)	Your Water	Sample Date	Range Low	Range High	Violation
Bromodichloromethane (ppb)	5.3	2004	2.54	6.74	No
Bromoform (ppb)	---	2004	---	---	No
Chlorodibromomethane (ppb)	2.86	2004	1.34	4.56	No
Chloroform (ppb)	12.55	2004	4.95	21.4	No

Water Quality Data Table Hadnot Point

Potential Health Effects:	
Asbestos	Increased risk of developing benign intestinal polyps
Fluoride	Bone disease (pain and tenderness of the bones); Children may get mottled teeth.
HAA5	Increased risk of cancer.
Lead	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
TTHM	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Units Description:

NA: Not Applicable	MFL: million fibers per liter	ppm: parts per million, or milligrams per liter (mg/L)
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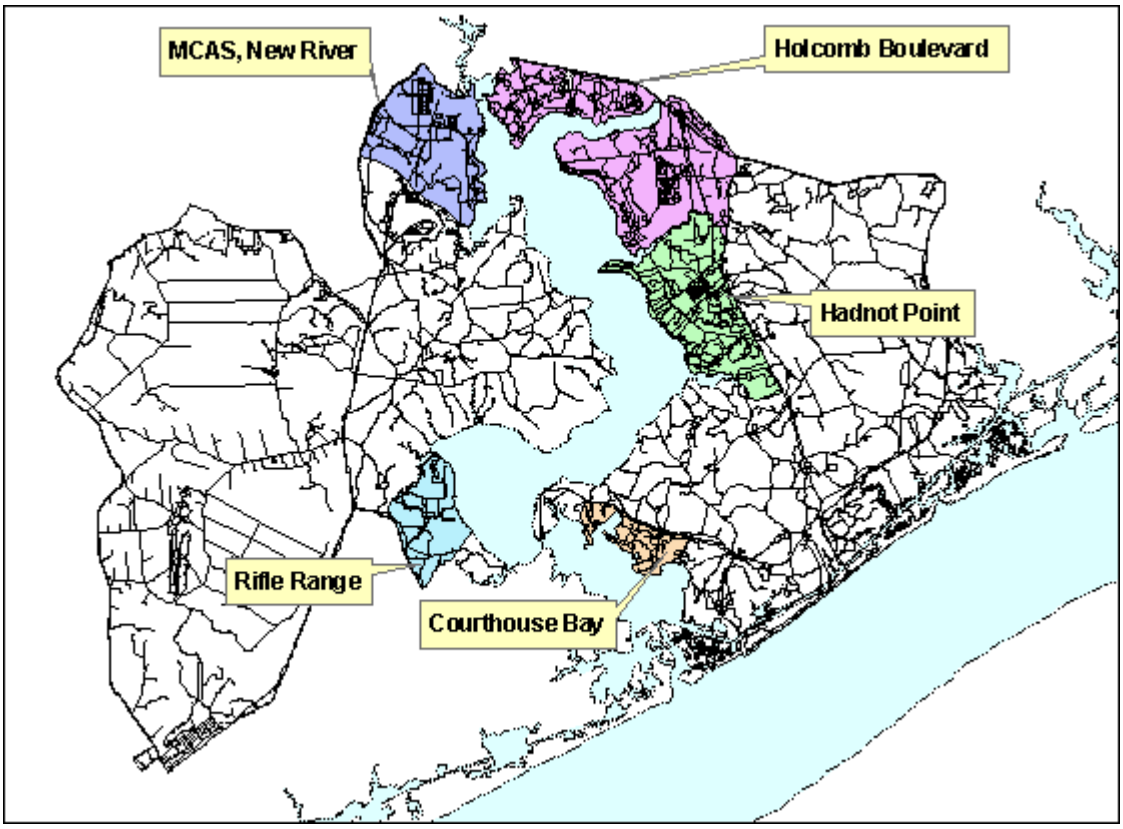
2004 Water Quality Report for Rifle Range Water Treatment System
(PWS ID: 04-67-046)



For more information
Rifle Range Water Treatment
Attn: Steven Whited
Marine Corps Base, Camp Lejeune
PSC Box 20004
Camp Lejeune, NC 28542-0004

Phone: 910-451-5068
Fax: 910-451-5997
E-mail: steven.whited@usmc.mil

Web Address: www.lejeune.usmc.mil/emd

2004 Water Quality Report for Rifle Range Water Treatment System

Introduction

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As part of the effort of ensuring that the water it distributes to the Base population continues to meet and exceed the requirements of the Safe Drinking Water Act, MCB, Camp Lejeune began monitoring for explosives (nitroaromatics, nitramines, nitrate esters), and perchlorate in well water and treated water in 2004. Although there are no current regulations requiring this particular sampling, Camp Lejeune samples treated water on a monthly basis to ensure that the safest, most reliable drinking water is provided to the Base population.

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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 microbiological 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

The MCB, Camp Lejeune Rifle Range Water System is supplied with drinking water from Onslow County. Onslow County obtains raw water from the Black Creek and Castle Hayne groundwater aquifers. Onslow County maintains and operates a series of groundwater pumps that are used to withdraw raw water from these aquifers and transfer the raw water to Onslow County's Water Treatment Plant. At the treatment plant, licensed operators are responsible for using state-of-the-art equipment to remove contaminants from the water. As the water is pumped from the water treatment plant, chlorine is added to protect against microbial contamination. This treated water passes through the Onslow County water distribution system and then to the MCB, Camp Lejeune Rifle Range Water System.

Source Water Assessment Program (SWAP) Results

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate, or Lower.

The sources for Rifle Range Water Treatment System are the same as the sources for Onslow County Water Treatment System. Out of Onslow County Water Treatment System's twenty-one (21) sources, eleven (11) sources had a rating of Lower, nine (9) sources had a rating of Moderate, and one (1) source had a rating of Higher.

The complete SWAP Assessment report for Rifle Range Water Treatment System may be viewed on the Web at: http://www.deh.enr.state.nc.us/pws/swap Please 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. To obtain a printed copy of this report, please mail a written request to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh NC 27699-1634, or email request to swap@ncmail.net. Please indicate your system name, PWSID, 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 919-715-2633.

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

Educational Statement for Lead

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to flush you tap for at least 60 seconds before using tap water. You may also wish to have your home's water tested. Additional information is available from Safe Drinking Water Hotline (800-426-4791).

Important Drinking Water Definitions:

AL: Action Level: The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.
Contaminant: Any natural or man-made physical, chemical, biological, or radiological substance or matter in water, which is at a level that may have an adverse effect on public health, and which is known or anticipated to occur in public water systems.
Coliform: A group of bacteria commonly found in the environment. They are an indicator of potential contamination of water. Adequate and appropriate disinfection effectively destroys coliform bacteria.
Disinfection: A process that effectively destroys coliform bacteria.
MCL: Maximum Contaminant Level: 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.
MCLG: Maximum Contaminant Level Goal: 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.
MFL: Million fibers per liter. Million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.
MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL: Maximum residual disinfectant level. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Nitrates: A dissolved form of nitrogen found in fertilizers and sewage by-products that may leach into groundwater and other water sources. Nitrates may also occur naturally in some waters.
NTU: (Nephelometric turbidity unit) A measure of the clarity of water.
Pathogens: (Disease-causing pathogens, waterborne pathogens) A pathogen is a bacterium, virus, or parasite that causes or is capable of causing disease. Pathogens may contaminate water and cause waterborne disease.
pCi/L: (picocuries per liter) A measurement of radiation released by a set amount of a certain compound.
pH: A measure of the acidity or alkalinity of water.
ppb, ppm: (Part per billion, part per million) Measurements of the amount of contaminant per unit of water. A part per million is like one cent in $10,000 and a part per billion is like one cent in $10,000,000.
THM: (Trihalomethanes) Four separate compounds (chloroform, dichlorobromomethane, dibromochloromethane, and bromoform) that form as a result of disinfection.

Extra note: MCLs 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.

Water Quality Data Table - Rifle Range

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The table below lists all the drinking water contaminants that we detected in the last round of sampling for the 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 Jan 1 through Dec 31, 2004. The EPA or the State requires 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, through representative of water quality, is more than a 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 occurence of unregulated contaminants in drinking water and whether future regulation is warranated.

Inorganic Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Asbestos (mfl)	7	7	ND	---		2003 Data	No	Decay of asbestos cement water mains; Erosion of natural deposits
Asbestos (Onslow) (mfl)	7	7	0.17	---		2004	No	Decay of asbestos cement water mains; Erosion of natural deposits

Synthetic Organic Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Dalapon (Onslow) (ppb)	200	200	0.002	---	---	2004	No	Runoff from herbicide used on row crops

Disinfection Byproducts Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Total Trihalomethanes [TTHMs] (ppb)	NA	80	66.7	47.7	100.6	2004	No	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] (Onslow) (ppb)	NA	80	45	---	---	2004	No	By-product of drinking water disinfection
Haloacetic Acids [HAA5] (ppb)	NA	60	36.4	23	49	2004	No	By-product of drinking water disinfection
Haloacetic Acids [HAA5] (Onslow) (ppb)	NA	60	15	---	---	2004	No	By-product of drinking water disinfection

Microorganisms

Contaminant(s) (units)	MCLG	MCL	Your Water	# of Postive Samples	Sample Date	Violation	Typical Source
Total Coliform (Onslow)	0	5.0%*	---	1	Jun-05	No	Naturally present in the environment

One site tested positive for total coliform in July of 2004, however, the follow up sample tested negative.

* The water system is in violation if more than 5% of the sites tested positive for total coliform.

Water Quality Data Table - Rifle Range

Lead and Copper Contaminants

Contaminant(s) (units)	MCLG	MCL	Your Water	# of Samples > AL	Sample Date	Violation	Typical Source
Copper (ppm) (90th percentile)	1.3	1.3	1.2	1	2004	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb) (90th percentile)	0	15	3	0	2004	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Unregulated Volatile Organic Contaminants

Contaminant(s) (units)	Your Water	Sample Date	Range Low	Range High	Violation
Bromoform (ppb)	0.13	2004	1.6	1.6	No
Bromoform (Onslow) (ppb)	2.8	2004	NA		No
Bromodichlormethane	6.41	2004	3.32	13	No
Bromordichloromethane (Onslow) (ppb)	2.46	2004	NA		No
Chlorodibromomethane (ppb)	0.96	2004	0.5	3.69	No
Chlorodibromomethane (Onslow) (ppb)	1.6	2004	NA		No
Chloroform (ppb)	48.02	2004	23.3	69.2	No
Chloroform (Onslow) (ppb)	5.58	2004	NA		No

Potential Health Effects:

Asbestos	Increased risk of developing benign intestinal polyps
Dalapon	Minor kidney changes
HAA5	Increased risk of cancer.
Lead	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
TTHM	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Units Description:

NA: Not Applicable

ND: Not detected

MFL: million fibers per liter

MNR: Monitoring not required, but recommended.

ppm: parts per million, or milligrams per liter (mg/L)

ppb: parts per billion, or micrograms per liter (ug/L)