



NAVAL AMPHIBIOUS BASE LITTLE CREEK

VIRGINIA BEACH, VIRGINIA

2008 CONSUMER CONFIDENCE REPORT

Inside this issue:

NABLC Source Water	1
Definitions and Abbreviations	2
2008 Sampling Results Table	3
Violations and Exceedences	4

For additional information:

City of Norfolk Division of
Water Quality
441-5678
<http://www.norfolk.gov/utilities/quality/default.asp>

Virginia Department of
Health
683-2000
<http://www.vdh.state.va.us/DrinkingWater/>

USEPA Safe Drinking
Water Hotline
(800) 426-4791
<http://www.epa.gov/safewater/>

NAVFAC Mid-Atlantic
Environmental
444-3544



The source of NABLC's drinking water is from Lake Gaston and Lake Wright and Western Branch Reservoirs.

The base is committed to providing you drinking water that is safe and reliable. NAB Little Creek believes that providing you with accurate information about your water is the best way to assure that your water is safe.

This Consumer Confidence Report is a snapshot of the quality of your drinking water in 2008. The purpose of this annual report is to advise consumers of where their water comes from, water quality data, advance understanding of drinking water, and heighten awareness to conserve water resources.

NABLC SOURCE WATER

Little Creek purchases drinking water from the City of Norfolk. Water from Lake Gaston is blended with Norfolk's water and is treated at the Moores Bridges Water Treatment Plant in Norfolk. Norfolk's primary water supply comes from Lake Wright and Western Branch Reservoirs. From the reservoirs, water is pumped through pipes to the treatment plant. Water treatment chemicals are added to the water, causing small solid particles to clump together and sink to the bottom of a settling basin. The water is then filtered to remove bacteria, algae, and other impurities. Finally, the water is disinfected to kill any remaining bacteria.

The Moores Bridges Water Treatment Plant provides state of the art treatment technology and surpasses all state and federal water quality standards and regulations. Moores Bridges not only treats the water, but also tests it for more than 250 substances. Once the water reaches Little Creek, the Naval Facilities Engineering Command, Mid-Atlantic operates and maintains your potable water system and is dedicated to ensuring quality drinking water through monthly monitoring for coliform bacteria and quarterly monitoring for disinfection by-products.

ABOUT DRINKING WATER

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. Substances (referred to as contaminants) in source water may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming activities, urban storm water runoff, residential uses, and many other types of activities. Water from surface sources is treated to make it drinkable while groundwater many or may not have any treatment.

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 come from gas stations, urban storm water runoff, and septic systems.

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

In addition to these contaminants, all lakes and streams contain algae, which are microscopic plants that can cause taste and odor problems in drinking water.

ABOUT DRINKING WATER (continued)

All 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. 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).

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. The Food and Drug Administration (FDA) establishes limits for contaminants in bottled water, which must provide the same protection for public health.

Last year, the Moores Bridges Water Treatment Plant conducted tests for more than 250 potential contaminants. All of those tests met EPA regulatory standards. The Navy tested the Little Creek drinking water for 11 potential contaminants. One was found to temporarily exceed drinking water standards. (For more information, see the section labeled VIOLATIONS AND EXCEEDENCES in this report).



DEFINITIONS AND ABBREVIATIONS

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The table on the following pages shows the results of monitoring for 2008. In the tables and elsewhere in this report you may have found many terms and abbreviations that you might not be familiar with. The following definitions are provided to help you better understand these terms:

- **Action Level (AL)** - The concentration of a contaminant that, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Maximum Contaminant Level (MCL)** - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology.
- **Maximum Contaminant Level Goal (MCLG)** - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **Maximum Residual Disinfectant Level (MRDL)** - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **Maximum Residual Disinfectant Level Goal (MRDLG)** - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.
- **Nephelometric Turbidity Unit (NTU)** - A measure of the clarity, or cloudiness, of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is monitored because it is a good indicator of the effectiveness of our filtration system.
- **Non-detection (ND)** - Laboratory analysis indicates that the contaminant is not present.
- **Picocuries per liter (pCi/L)** - A measure of the radioactivity in water.
- **Parts per million (ppm) or Milligrams per liter (mg/L)** - A measurement of the amount of contaminant per unit of water. A part per million is like one cent in \$10,000 or one minute in two years.
- **Parts per billion (ppb) or Micrograms per liter (ug/L)** - A measurement of the amount of contaminant per unit of water. A part per billion is like one cent in \$10,000,000 or one minute in 2,000 years.
- **Treatment Technique (TT)** - A required process intended to reduce the level of a contaminant in drinking water.

Who needs to take special precautions?

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 systems 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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Kidney dialysis patients should consult with their health care providers or dialysis centers in order to take special precautions when using chloraminated water. Fish owners should be sure chloramines are removed from the water before it is used in aquariums or ponds. Most pet stores sell water conditioners for chloraminated 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. NAB Little Creek is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 15 to 30 seconds or until it becomes cold or reaches a steady temperature before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

WATER QUALITY DATA

The tables below list only those contaminants that were present in your drinking water at levels detectable by laboratory equipment. Unless otherwise noted, the data presented in these tables is from testing done in 2008. We are required to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. The EPA sets the Maximum Contaminant Levels (MCLs) and the Maximum Contaminant Level Goals (MCLGs) as listed in the tables. The Regulated Substances Table and the Unregulated Substances Table are provided for your information and as required by the Consumer Confidence Rule.

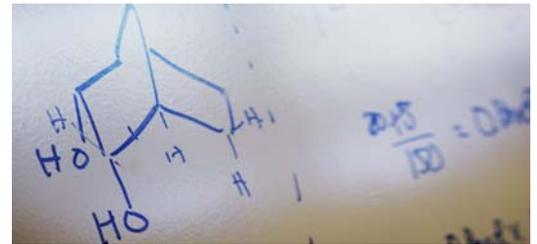
2008 WATER QUALITY TABLE

Inorganic Contaminants	Unit	MCLG	MCL	Highest Level	Average Level	Range	Meets EPA Standards	Possible Source of Contamination
Barium	ppb	2000	2000	32	29	23 - 32	Yes	Erosion of natural deposits
Copper	ppm	1.3	AL=1.3	1.63	90 th percentile = 0.222*	0.007 - 1.63	Yes	Corrosion of pipes; Erosion of natural deposits
Fluoride	ppm	4	4	1.1 ¹	0.7	0.1 - 1.6	Yes	Added for the prevention of tooth decay
Gross Alpha Activity	pCi/L	0	15	0.1	0.1	0.1 - 0.1	Yes	Erosion of natural deposits
Gross Beta Activity	pCi/L	NA	50 ²	3.3	3.3	3.3 - 3.3	Yes	Erosion of natural deposits
Hexachloro-cyclopentadiene	ppb	50	50	0.1	ND	ND - 0.1	Yes	Pesticide component from runoff
Lead (1 st Half 2008)	ppb	0	AL=15	206	90 th Percentile = 3*	ND - 206	Yes	Corrosion of household plumbing systems; Erosion of natural deposits
* 2 out of 41 samples had lead levels and 1 out of 41 samples had copper levels in excess of the AL for sampling conducted during the first half of 2008. Additional sampling was conducted at the site and resulted in concentrations still above the action limit. Further investigation indicated the site was inactive and the exceedance was due to water stagnation. The SDWA states that 90% of samples must be below the action level. NAB Little Creek is currently under reduced monitoring for lead and copper.								
Nitrate as Nitrogen	ppm	10	10	0.15	0.7	0.01 - 0.15	Yes	Erosion of natural deposits—runoff
Microbiological Contaminants	Unit	MCLG	MCL	Highest Level	Average Level	Range	Meets EPA Standards	Possible Source of Contamination
Total Coliform	# Positive	0	1	2*	NA	0 - 2	No	Naturally present in the environment
* This number represents the highest number of positive coliform samples in a month. See Violations and Exceedances for explanation.								
Residual Disinfectants	Unit	MCLG	MCL	Highest Level	Average Level	Range	Meets EPA Standards	Possible Source of Contamination
Total Chlorine Residual	ppm	4	4	5.3	2.3 ³	0.2 - 5.3	Yes	Drinking water disinfectant
Radioactive Contaminants	Unit	MCLG	MCL	Highest Level	Average Level	Range	Meets EPA Standards	Possible Source of Contamination
Radium 226/228	pCi/L	0	5	0.2	0.2	0.2 - 0.2	Yes	Erosion of natural deposits
Substance	Unit	MCLG	MCL	Highest Level (NTU)	Lowest monthly percentage of samples meeting the limit		Likely Source	
Turbidity	NTU	NA	< 95 %	0.42	99.5 %		Soil Run-off	
Turbidity is a measure of the cloudiness of water. Turbidity, by itself, is not harmful, but it can interfere with the disinfection of drinking water.								
Volatile Organic Chemicals	Unit	MCLG	MCL	Highest Level	Average Level	Range	Meets EPA Standards	Possible Source of Contamination
Haloacetic Acids (HAA5)	ppb	NA	60	22 ⁴	29 ⁵	<1 - 31	Yes	Drinking water disinfectant by-product
Trihalomethanes (TTHM)	ppb	NA	80	59 ⁴	54 ⁵	29 - 80	Yes	Drinking water disinfectant by-product
Total Organic Carbon	ppm	NA	TT	2.9 ¹	2.1	1.5 - 2.9	Yes	Occurs naturally in environment

¹ This number is the highest monthly value of compliance samples for the calendar year; ² EPA considers 50 pCi/L to be the level of concern for Beta particles; ³ Annual average; ⁴ This number is the highest quarterly average of compliance samples for the calendar year; ⁵ This number is the highest running average calculated from compliance samples for the calendar year;

Unregulated Monitored Substances	Unit	MCL	Highest Level	Average Level	Range	Likely Source
Aluminum	ppm	NA	0.03	0.02	0.01 - 0.03	Erosion of natural deposits; also from use of chemicals at water treatment plant
Boron	ppm	NA	0.12	0.07	ND - 0.12	Erosion of natural deposits
Manganese	ppm	NA	0.01	ND	ND - 0.01	Natural in environment
Nickel	ppb	NA	2	ND	ND - 2	Corrosion of plumbing materials
Sodium	ppm	NA*	21	18	15 - 21	Erosion of natural deposits; also from use of chemicals at water treatment plant
*For physician-prescribed "no salt diets" a limit of 20 ppm is suggested.						
Sulfate	ppm	NA	41	37	33 - 42	Erosion of natural deposits; also from use of chemicals at water treatment plant

Additional Information	Unit	Suggested MCL	Average Level	Range
Alkalinity	ppm	NA	26	17 - 42
Hardness	ppm	NA	56	43 - 67
pH (acidity)	pH Units	6.5 - 8.5	7.2	6.5 - 9.1
Silica	ppm	NA	9	7 - 11
Total Dissolved Solids	ppm	500	126	122 - 129



VIOLATIONS AND EXCEEDENCES

Weekly testing for coliform bacteria is performed throughout the NAB Little Creek distribution system. Coliform bacteria are naturally present in the environment. They are used as an indicator that other, potentially harmful bacteria may be present. If these bacteria are detected, we are required to take further samples in that portion of the distribution system. In March 2008, Total Coliform samples from Buildings 3680 and 3147 tested positive on two separate sampling events, which was a violation of the PMCL. Subsequent samples collected after flushing of the water lines were in compliance, so there were no health concerns. Public notification was made to affected customers. Extensive flushing of the water system was performed and follow-up sampling showed that the water quality was restored.