

DEPARTMENT OF THE NAVY
ENVIRONMENTAL PROTECTION OFFICE (CODE N8N)
1 SIMONPIETRI DRIVE
NEWPORT, RI 02841
FOR OFFICIAL BUSINESS



June 2011

Naval Station Newport Drinking Water Consumer Confidence Report

Water Quality Report for Calendar Year 2010
For our customers in the towns of
Portsmouth, Middletown, and Newport

Your Water is Safe to Drink

The preparation and distribution of this report to our customers is required by the United States Environmental Protection Agency (EPA). Naval Station (NAVSTA) Newport is committed to providing our customers with high quality drinking water 24 hours a day, 365 days a year. We have established a close working relationship with the City of Newport Water Department which is our water provider, made investments in water monitoring facilities and water quality monitoring, and improvements to the distribution systems in order to deliver a quality product to our customers. We are pleased to report this information along with the results of our 2010 water quality testing directly to you, so that *you will know about your drinking water first hand.*

INSIDE THIS ISSUE

- **Your Drinking Water Source**
- **2010 Water Quality Report**
- **Interesting Facts About Your Water**
- **Information on Substances Found in Your Water**
- **Source Water Assessments**

Your Drinking Water Source

Here are some simple facts you should know about the water you drink. Aquidneck Island contains seven fresh water ponds that serve as drinking water resources. These include Easton North Pond, Easton South Pond, Lawton Valley Reservoir, Gardiner Pond, Saint Mary's Pond, Paradise Pond and Sisson Pond. There are also two additional drinking water resources located off Aquidneck Island: Nonquit Pond in Tiverton and Watson Reservoir in Little Compton. These ponds and reservoirs are interconnected through a complex network of pipelines and pumping stations. They are located in a basin area totaling 18.625 square miles or 11,920 acres of rural, forested and some developed land.

The Navy purchases tap water from the City of Newport and the Portsmouth Water and Fire District. The water is treated at either of Newport's two treatment plants before being distributed to Naval Station Newport or Fort Adams. A majority of the base is provided water by the City of Newport from the Lawton Valley Treatment Plant. Since September 2006, Portsmouth Water and Fire District has supplied water from the Lawton Valley Treatment Plant to the Melville Housing area, Melville Elementary School and Melville Campground. The Lawton Valley Treatment Plant, located in Portsmouth, built in 1944, has a capacity of 5 million gallons per day. The remaining portion of the water comes from the Station 1 Newport Treatment Plant in Newport. This plant is the primary supplier for Coasters Harbor Island, the Naval Ambulatory Care Center and the Fort Adams public water system. This facility was built in 1991 and has a capacity of 9 million gallons per day. Both treatment plants service over 1,100 Navy connections through a distribution system of more than 62 miles of piping.

Naval Station Newport conducts daily, weekly, monthly, quarterly and yearly testing to ensure you receive safe, high quality drinking water. The Utilities Branch of Public Works is responsible for operating the water system. The water distribution system and its operation have undergone some improvements over the past year, including routine flushing and maintenance, draining and cleaning the fire protection reservoirs, as well as the installation of strategically located chlorine monitors to provide continuous feedback on chlorine levels within the Naval Station Newport distribution system. In total, more than \$300,000 was spent on maintenance and water quality testing to ensure the safe and effective operation of the water system.

Facts About Your Water

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

Additionally, Ms. Darlene Ward, the NAVSTA Water Quality Engineer, can be reached at 401-841-6376 or by email at darlene.ward@navy.mil, to answer any questions. This 2010 report as well as previous annual reports can be found online at <https://www.cnrc.navy.mil/Newport/Departments/PublicWorksandEnvironmental/EnvironmentalPrograms/WaterQuality/>

Source Water Assessment

The University of Rhode Island (URI), in cooperation with Rhode Island Department of Health (RIDOH) and other state and federal agencies, has assessed the threats to Newport Water's water supply sources. The assessment considered the intensity of development; the presence of businesses that use, store or generate potential contaminants; how easily contaminants may move through the watersheds; and the sampling history of the water. The assessment results will be used to plan source protection efforts in the future.

The assessment found that the water sources on Aquidneck Island and in Little Compton and Tiverton are moderately susceptible to contamination. The average ranking for the entire system is based on land use and existing water quality. Because most land in source water areas are privately owned, the focus of the assessments has been on identifying threats from land use so local governments, residents, and water suppliers can take action to protect valuable drinking water supplies. This means that monitoring and protection efforts are especially important to assure continued water quality. The complete Source Water Assessment Report is available from the Newport Water Department or by calling the Rhode Island Department of Health, Office of Drinking Water Quality at (401) 222-6867. The assessments are also made available at the RIDOH website at www.health.ri.gov/environment/dwq/swap/index.php or the URI website at: <http://www.uri.edu/ce/wq/RESOURCES/dwater/Assessments/index.htm>.

2010 Water Quality Report

This table shows the results of the combined water-quality analyses for both Naval Station Newport and Fort Adams as well as analytical data from the City of Newport and the Portsmouth Water and Fire District for the period January 1, 2010 - December 31, 2010. Not all substances were detected in every system or required to be tested in every system.

Substance	Highest Allowed by Law	Ideal Goals	Highest Levels Detected				SDWA Violation	Range	Major Source
			Naval Station Newport	Fort Adams	City of Newport	Portsmouth Water & Fire District (a)			
Inorganic Compounds									
	(MCL)	(MCLG)							
Arsenic (ppb)	10	0	NS	NS	2 (2010)	NS	No	ND-2	Erosion of natural deposits
Barium (ppb)	2	2	NS	NS	0.020 (2010)	NS	No	0.005-0.020	Discharge of drilling wastes; discharge from metal refineries;
Copper (ppm) (b)	AL=1.3	1.3	NS	NS	0.05 (2010)	0.043(2009)	No	0	Copper piping / corrosion of plumbing system
Fluoride (ppm)	4	4	NS	NS	2.05 (2010)	NS	No	0.07-2.05	Erosion of natural deposits; water additive which promotes strong
Lead (ppb) (b)	AL = 15	0	NS	NS	5 (2010)	0.043 (2009)	No	0	Corrosion of household plumbing
Nitrate (ppm)	10	10	NS	NS	1.90 (2010)	NS	No	0.15-1.90	Runoff from fertilizer use
Disinfectants									
	(MRDL)	(MRDLG)							
Chlorine (ppm)	4	4	0.62 (2010)	0.29 (2010)	0.87 (2010)	0.56 (2010)	No	0.04-0.98	Water additive
Chlorine Dioxide (ppb)	800	800	NS	NS	760 (2010)	NS	No	40-760	Water additive
Disinfection Byproducts									
	(MCL)	(MCLG)							
Chlorite (ppm)	1.0	0.8	NS	NS	0.767 (2010)	NS	No	0.150-0.870	By-product of chlorination.
Total Trihalomethanes (ppb) (c)	80	N/A	89.5	NS	71.04 (2010)	87 (2010)	Yes (c)	49.0-170.0	By-product of chlorination.
Haloacetic Acids (ppb)	60	N/A	25.3	NS	25.95 (2010)	27.4 (2010)	No	20.0-30.0	By-product of chlorination.
Microbiology									
	(MCL)	(MCLG)							
Turbidity (NTU) (d)	1.0	TT	NS	NS	0.64 (2010)	NS	No	98.32%	Soil runoff
Total Organic Carbon	Removal	N/A	NS	NS	1.03 (2010)	NS	No	.89-1.43	Naturally present
Organic Compounds									
	(MCL)	(MCLG)							
Alachlor (ppb)	2	0	NS	NS	0.18 (2010)	NS	No	Nd-0.18	Herbicide runoff.
Atrazine (ppb)	3	3	NS	NS	0.13 (2010)	NS	No	ND-0.13	Herbicide runoff.
Simazine (ppb)	4	4	NS	NS	0.19 (2010)	NS	No	ND-0.19	Herbicide runoff.
Unregulated Contaminant									
	(MCL)	(MCLG)							
Sodium (ppm)	N/A	N/A	NS	NS	39.70 (2010)	NS	No	14.50-39.70	Naturally occurring
Metolachlor (ppb)	5	0	NS	NS	2.00 (2008)	NS	No	0.12-0.24	Herbicide for weed control
Radioactive Contaminants									
	(MCL)	(MCLG)							
Combined Radium (pCi/l)	5	0	NS	NS	2.00 (2010)	NS	No	ND-2.00	Erosion of natural deposits.

Definitions

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.

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

MRDLG (Maximum Residual Disinfectant 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) 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.

ppm parts per million; equivalent of 1 penny in \$10,000 or 1 milligram per liter (mg/L)

ppb parts per billion; equivalent of 1 penny in \$10,000,000 or 1 microgram per liter (µg/L)

ppt parts per trillion; equivalent of 1 penny in \$10,000,000,000 or 1 nanogram per liter (ng/L)

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

pCi/L picocuries per liter; measure of radioactivity in drinking water.

NS Not Sampled (Note: Not all contaminants are required to be sampled within each water system)

ND Not Detected

NTU (Nephelometric Turbidity Unit) A measure of very small particulate matter in drinking water.

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

Explanation

- (a) Water was purchased from the Portsmouth Water and Fire District for the Melville Housing area, Melville Campground and Melville Elementary School beginning in September 2006.
- (b) Detected level indicates the 90th percentile value of 30 samples. The range indicates the number of samples above the action level.
- (c) Some people who drink water containing TTHMs 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. The detected level indicates the highest four quarter running annual average. In 2010, Naval Station Newport boosted chlorine levels in the water line leading to Melville. The reported results indicated TTHM levels at the Melville Community Center. Naval Station Newport is presently receiving water from Portsmouth Water and Fire District and is no longer adding chlorine at this time.
- (d) The turbidity level (cloudiness of water) of the filtered water can be greater than or equal to 0.3 NTU in only 5% of the measurements taken each month and shall not exceed 1.0 NTU at any time. Turbidity is sampled at the City of Newport's drinking water treatment plants.

Additional Health Information

The sources of drinking water, both tap and bottled, 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 human activity. Other contaminants, including volatile organic chemicals, which are by-products of industrial processes, can come from gas stations or urban storm water runoff. We have included the health effects information for any contaminant near the Maximum Contaminant Levels (MCL) and any unusual contaminants.

Contaminants that may be present in the 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 septic systems.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also 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 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 supply systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Lead: 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. Naval Station Newport is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Total Trihalomethanes: 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.

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

Additional Notes

General Health Effects Note: 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 / Center for Disease Control 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).

Treatment Note: Customers of the Newport Water Department, which includes all Navy customers, may at times receive water with a yellow to brown color. This is occasionally due to the level of naturally occurring mineral "manganese" in the reservoirs and ponds. This mineral does not respond to treatment. The EPA has established secondary drinking water regulations for contaminants such as manganese which are recommended goals. These contaminants primarily affect aesthetic qualities (taste, color, and odor) of drinking water. The Newport Water Department balances the treatment processes to meet both the enforceable levels of the primary drinking water regulations with the goals of the secondary drinking water regulations. The Newport Water Department and the Navy regret the inconvenience of the discolored water and we work diligently to avoid these situations.