2007 MCB Quantico
Annual Drinking Water Quality Report
Camp Upshur Water System

Introduction

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality of water and services we deliver to you every day.

Our constant goal is to provide you with a safe and dependable supply of drinking water.

We are committed to ensuring the quality of your water. To help us meet this goal, we have established a *water quality response team*. Personnel from the Naval Medical Clinic join with our Water Quality Assurance Technician, to respond to customer concerns and water quality questions. Together, they have the resources to test the chemical and bacteriological quality at the consumer's tap.

Our water sources for Camp Upshur are two deep wells.

Under a new program being developed by the Virginia Department of Health (VDH), a detailed source water assessment will be conducted within the next few years to find ways to better protect our water sources.

After the assessment is conducted, we will provide you with information about potential sources of contamination and measures to reduce or eliminate the sources of contamination.

Our water sources are within the confines of the Base and are therefore protected from most outside sources of contamination.

Summary

The Camp Upshur Water system is routinely monitored for constituents in your drinking water according to Federal and State laws. This report shows the results of our monitoring for the period of January 1 to December 31, 2007.

As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may be expected to contain at least small amounts of some constituents.

It's important to remember that the presence of these constituents does not necessarily pose a health risk. In order to ensure tap water is safe to drink, the USEPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems.

The Virginia Department of Health, Office of Drinking Water, enforces the regulations.

More information about contaminants and potential health effects can be obtained by calling the US EPA's *Safe Drinking Water Hotline* at **1-800-426-4791.**

The Facts

This report contains information on all regulated contaminants found in your drinking water. Additionally, over 85 water tests are performed for a variety of contaminants ***not*** found in the water delivered to the Base. An explanation of the results is included.

Maximum Contaminants Levels (MCL) 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.

Microbiological Contaminants

Total Coliform: Coliforms are bacteria that are present naturally in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

When Coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If the limit is exceeded, the water supplier must notify the public by newspaper, radio or television.

We are pleased to announce that there was no evidence of bacterial contamination of our drinking water. We have not experienced any positive samples since July 1999.

Systems

We have 3 different sources of water at Quantico and each source tastes a little different. We encourage our customers to report bad tasting or discolored water. At that time we will visit the site and determine if we need to run additional tests.

*If you have any questions about this report or concerning your water utility, please contact **Carl Morgans**, Water/Wastewater Commodities Manager, Public Works Branch at (703) 784-5201.*

Should some people take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population.

Immune system 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.* We constantly monitor the water supply for various constituents.

We believe it is important for you to know that *cryptosporidium* may cause serious illness in immune system compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders. These people should seek advice from their health care providers.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels in 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 your tap for 30 seconds to 2 minutes before using tap water.

The lead levels found in samples taken at Upshur are well below regulatory limits.

The drinking water hot line can answer your questions about lead contamination. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

We strongly recommend that our customers not use water from the hot water tap for consumption.

Any contaminants found in the water may accumulate in the hot water tank. This would be true anywhere, regardless of the water source. This does not mean that there is anything wrong with our drinking water.

All water tests are conducted on water from the cold-water tap. Our concern is that the water quality is unknown when water from the hot-water tap is consumed. We believe you are better served by heating cold-water for this purpose.

Conclusion

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply, we sometimes need to make improvements that will benefit all of our customers.

As reported in the *Quantico Sentry*, water mains and fire hydrants are flushed twice a year. This may cause temporary water discoloration. We apologize for any inconvenience. Our goal is to provide water of excellent quality to every customer. We work around the clock to provide top quality water to every tap.

Our customers can help protect themselves and our water system by careful use of this resource, which is the heart of our community, our way of life, and our children's future.

If you have questions about what you can do to help, please contact ***Carl Morgans,*** *Water/Wastewater Commodities Manager, Public Works Branch at (703) 784-5201.*

Marine Major General William P. Upshur, recipient of the nation's highest decoration, the Medal of Honor during the Haitian Campaign in 1915. Born on October 28, 1881 in Richmond, Virginia. Died in plane crash near Sitka, Alaska, on August 18, 1943.

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BACTERIOLOGICAL QUALITY

Microbiological Contaminates	MCLG	MCL	No. of Positive	Highest no. Positive	In Compliance	Source
Total Coliform Bacteria	0	Not to exceed one Sample per Month	0	0 *	Yes	Naturally present in the environment

We may not exceed one positive sample a month.
**** no positive samples since 1999.***

REGULATED CONTAMINANTS

METALS

Parameter	Units	MCLG	Action Level	Results	No. of Sites Exceeding AL	Range	In Compliance	Source
Copper **	ppm	1.3	1.3	0.05 - .447	0	.20 ppm is the lowest detection level for copper, range of test <.20 - .75 ppm.	Yes	Corrosion of household plumbing systems
Lead **	ppb	0	15	< 5	0	2 ppb is the lowest detection level for lead, range of test <2 - 6.65 ppb.	Yes	Corrosion of household plumbing systems

**** * The Lead and Copper results are from July 2006. Next test to be conducted in June 2009.***

CHLORINE (Cl_2)

Parameter	Units	MRDL	MRDLG	Average	Range	In Compliance	Samples taken from distribution system.	Source
Chlorine	ppm	4	4	0.90	0.7 - 1.2	Yes		Used for disinfection

INORGANIC CONTAMINATES

Parameter	Units	MCLG	MCL	Average	Range	In Compliance		Source
Nitrate + Nitrite	ppm	10	10	0.13	0.36 - 0.76	Yes		Erosion of natural deposits, fertilizer runoff, leaching from septic tanks
Barium	ppm	2	2	0.38	.27 - .49	Yes		Erosion of natural deposits, discharge of drilling wastes; metal refineries

UNREGULATED CONTAMINANTS

Parameter	Units	MCLG	MCL	Average	Range	In Compliance		Source
Chloride	ppm	0	250	8.6	8.31 - 8.93	Yes		Naturally present in the environment
Sodium	ppm	0	0	25.6	21.4 - 29.8	Yes		Naturally present in the environment
Aluminum	ppm	0	0.2	0.12	<0.05 - 0.23	Yes		Naturally present in the environment

WATER QUALITY (Key to Abbreviations)

Non-Detects	**(ND)**	Laboratory analysis indicates that the constituent is below the detection level.
Parts per million,	**(PPM)**	One part per million corresponds to one minute in two years, or a penny in $10,000.
Milligrams per liter	**(MgL)**	Miligrams per liter is the same as parts per million.
Parts per billion	**(ppb)**	One part per billion corresponds to one minute in 2000 years, or a penny in $10,000,000.
Micrograms per liter	**(µ/L or mcL)**	Micrograms per liter is the same as parts per billion.
Picocuries per liter	**(pCi/l)**	Picocuries per liter is a measure of the radioactivity in the water.
Nephelometric	**(NTU)**	Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just visibly cloudy.
Action Level	**(AL)**	Concentration of a contaminant which, if exceeded, triggers treatment or other requirements a water system must follow.
Treatment Techniques	**(TT)**	A treatment technique is a required process intended to reduce level of contaminant in drinking water
Maximum Contaminant Level	**(MCL)**	The "Maximum Allowed" is the highest level of contaminant allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
Maximum Contaminant Level Goal	**(MCLG)**	The "Goal" (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk. MCLG's allow for a margin of safety.
MRDL	*Maximum Residual Disinfection Level:*	The highest level of disnfectant allowed in drinking water. There is convincing evidence that addition of a disinfection is necessary for control of microbial contaminants.
MRDLG	*Maximum Residual Disinfection Level Goal:*	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants.

We don't often pause to consider the incredible value of a safe, reliable water supply and the water system that delivers it in our everyday lives. But consider what tap water does that no other water can do.

Only tap water delivers public health protection:

In a world where an estimated 3 million people die every year from preventable waterborne disease, our water systems allow us to drink from virtually any public tap with a high assurance of safety. Each community water supply meets rigorous federal and state health-protective standards.

Fire protection:

A well-maintained water system is critical in protecting our communities from the ever-present threat of fire. A system that provides reliable water at an adequate pressure can be the difference between a small fire and an urban inferno. The ability to suppress fires also influences new home construction, business location decisions and insurance rates.

Support for the economy:

Businesses or housing developments do not succeed without a safe and sustainable water supply. Tap water is critical to businesses' day-to-day operations and is often a primary ingredient in the products they create. The incredible value of water is magnified during times of drought and when populations expand into arid climates.

The overall quality of life we enjoy:

Any measure of a successful society (low mortality rates, economic diversity, productivity, and public safety) is in some way related to access to safe water.

In North America, we take for granted that safe water is always accessible to drink, to wash our clothes, to water our lawns and for a myriad of other purposes. When water service is interrupted, we're all reminded of the extraordinary value of water resources and service.

Up to 60 % of the human body is water... Water allows our bodies to work.