



June 29, 2011

Annual Consumer Report on the Quality of Tap Water

318 Tuskegee Blvd
Dover, DE 19902
Dover AFB
PWSID# DE0000579
(Calendar Year 2010)

Introduction

This is an annual report on the quality of water delivered by Dover AFB. Under the "Consumer Confidence Reporting Rule" of the Federal Safe Drinking Water Act (SDWA), community water systems are required to report this water quality information to the consuming public. Presented in this report is information on the source of our water, its constituents and the health risks associated with any contaminants.

The Division of Public Health in conjunction with the Department of Natural Resources and Environmental Control has conducted source water assessments for nearly all community water systems in Delaware. Contact the Bioenvironmental Engineering office at (302) 677-2595 regarding how to obtain a copy of this assessment. 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: (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. (B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming. (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses. (D) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems. (E) 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, the United States Environmental Protection Agency (USEPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (800-426-4791).

While your drinking water meets USEPA's standards for arsenic, it does contain low levels of arsenic. USEPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. USEPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentration and is linked to other health effects such as skin damage and circulatory problems.

We continually monitor the drinking water for contaminants. We endeavor to provide safe drinking water; however, some people may be more vulnerable to contaminants in drinking water than the general population.

Immunocompromised persons such as individuals with cancer undergoing chemotherapy, people who have undergone organ transplants, or have 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. USEPA and 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 at 800-426-4791.

The drinking water for Dover AFB comes from four (4) wells. These wells draw water from underground sources of water called aquifers. The four wells draw from the Cheswold and Piney Point Aquifers, which are the deepest of the four aquifers in the area. These wells are located at various locations within the confines of the base and therefore have a limited susceptibility to external sources of contamination. After the water comes out of the wells it is disinfected with chlorine.

Monitoring of Your Drinking Water

At Dover AFB, we monitor for the contaminant groups listed in Column 1 of the following table using EPA-approved methods. Column 2 of the table specifies the monitoring frequency for these contaminant groups.

Analyte Groups and Monitoring Frequency Table

Analyte/Contaminant Group	Monitoring Frequency
Microbial and Chlorine	Monthly
Nitrate, pH and Sodium	Annually
Sodium, Inorganics, Pesticides and Herbicides, and Organics	Every 3 years
Radioactive contaminants	Every 9 years
Lead and Copper	Every 3 years

Definitions of Key Terms

To gain a better understanding of the content of this report, several key terms must be defined. They are as follows:

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 Contaminant Level (MCL)- 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.

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

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

Additional Acronyms/Terms Used In This Report

Below is a listing of acronyms and terms (with explanations) used in this Consumer Confidence Report:

ppm	parts per million; a unit of measure equivalent to a single penny in \$10,000
ppb	parts per billion; a unit of measure equivalent to a single penny in \$10,000,000
mg/kg	milligrams per kilogram; a unit of measure equivalent to part per million (ppm)
µg/L	micrograms per liter; a unit of measure equivalent to part per billion (ppb)
mg/L	milligrams per liter; a unit of measure equivalent to part per million (ppm)
CCR	Consumer Confidence Report
SDWA	Safe Drinking Water Act; Federal law which sets forth drinking water regulations
pCi/L	picocuries per liter; a measure of radioactivity in water
NTU	nephelometric turbidity unit; a measure of turbidity in water
TTHMs	total trihalomethanes; byproducts of drinking water disinfection

Level Found	laboratory analytical result for a contaminant; this value is evaluated against an MCL or AL to determine compliance.
Range	the range of the highest and lowest analytical values of a reported contaminant. For example, the range of reported analytical detection for an unregulated contaminant might be 10.1 ppm (lowest value) to 13.4 ppm (highest value). EPA requires this range to be reported.
HAA	Haloacetic Acids; byproduct of drinking water disinfection
CDBM	Chlorodibromomethane

The following tables present the results of our monitoring for the reporting period of 1 January – 31 December 2010 for Dover AFB. As of 1 October 2007, Dover AFB stopped supplying water to Eagle Heights and Tidewater Utilities assumed the responsibility to supply water to Eagle Heights. Dover AFB also stopped adding Fluoride to the drinking water in late 2007. Some of our data, although representative of the water quality, is more than one year old due to the required monitoring frequency. The presence of these contaminants in the water does not indicate that the water poses a health risk. The monitoring requirement for certain contaminants is less than once per year because the concentrations of these contaminants do not change frequently.

REGULATED CONTAMINANTS							
Contaminant	Units	MCLG	MCL	Level Detected	Sample Date	Violation (Yes/No)	Likely Source of Contaminant
Radioactive Contaminants							
Gross Alpha Particle	pCi/L	0	15	0.10	12/28/09	No	Erosion of natural deposits
Gross Beta Particle	pCi/L	0	50	0.02	12/28/09	No	Erosion of man-made deposits
Inorganic Contaminants							
Fluoride	ppm	4	4	0.98	8/6/07	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Chromium	ppm	0.1	0.1	0.0062	9/19/08	No	Discharge from steel and pulp mills; Erosion of natural deposits
Nickel	ppm	0.1	0.1	0.0009	2/2/10	No	Nickel released to soil may leach into ground water or be washed into surface water
Volatile Organic Chemicals							
Xylenes	ppb	10	10	0.58	9/23/08	No	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

Note: We monitored for Arsenic and Nitrate and the levels were below the detection limit.

UNREGULATED CONTAMINANTS							
Contaminant	Units	MCLG	MCL	Level Detected	Sample Date	Violation (Yes/No)	Likely Source of Contaminant
Alkalinity	ppm	N/A	N/A	151	12/30/10	N/A	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and if it needs to regulate those contaminants
Hardness	ppm	N/A	N/A	88.8	12/28/09	N/A	
Sodium	ppm	N/A	N/A	15.7	12/30/10	N/A	
Chlorine Residual, Free	ppm	N/A	4	1.27	12/28/09	No	Excess chlorine in drinking water to help keep water disinfected during transportation
Disinfection Byproducts							
<i>Total Haloacetic Acid</i>	ppm	N/A	0.06	0.0123	9/23/08	No	Byproduct of drinking water chlorination
Bromochloroacetic Acid	ppm	0	N/A	0.0016	9/23/08	N/A	
Dichloroacetic Acid	ppm	0	N/A	0.0067	9/23/08	N/A	
Trichloroacetic Acid	ppm	0.02	N/A	0.0056	9/23/08	N/A	
<i>Total Trihalomethanes (TTHMs)</i>	ppm	N/A	0.08	0.02465	9/23/08	No	
Bromodichloromethane	ppm	0	N/A	0.00362	12/28/09	N/A	
Chloroform	ppm	0.07	N/A	0.0103	12/28/09	N/A	
Chlorodibromomethane	ppm	0.06	N/A	0.000999	12/28/09	N/A	
Secondary Drinking Water Standards							
Chloride	ppm	N/A	250	7.2	12/30/10	N/A	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and if it needs to regulate those contaminants
Manganese	ppm	N/A	0.05	0.0213	9/15/10	N/A	
pH, Field (0-14) scale	N/A	N/A	6.5-8.5	8.2	12/30/10	N/A	
Solids, Total Dissolved	ppm	500	500	212	12/30/10	N/A	
Sulfate	ppm	N/A	250	2.6	12/28/09	N/A	

Note: We monitored for Iron and the levels were below the detection limit.

Lead and copper	Units	AL	MCLG	Level Found	Sample Date	Exceeded Standard?	Likely Source of Contaminant
Lead	ppm	15	0	0.008	2008	No	Corrosion of household plumbing systems and erosion of natural deposits
Copper	ppm	1.3	1.3	0.195	2008	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Compliance with the National Primary Drinking Water Regulations

We constantly monitor for various contaminants in the water supply to meet all regulatory requirements. The table lists only those contaminants that had some level of detection. Many other contaminants have also been analyzed, but were not present or were below the detection limits of the laboratory equipment.

This Consumer Confidence Report was prepared by SSgt Christopher Bozley and reviewed by 1Lt William Downs of the Bioenvironmental Engineering office. For additional information regarding this report, please contact our office at 302-677-2595.