



The Monocacy River at Fort Detrick's intake

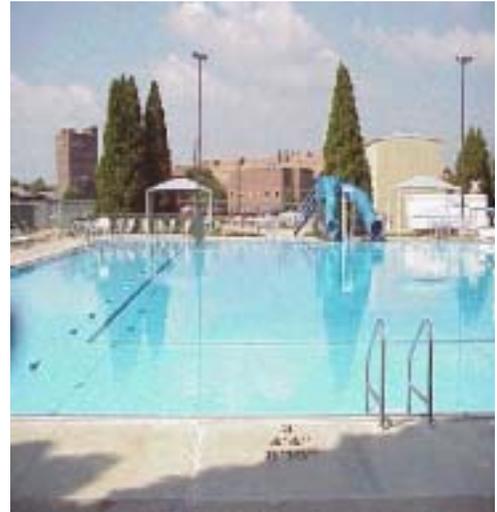


Fort Detrick Water Treatment Plant

## **The Fort Detrick Consumer Confidence Report for the Year 2000**



Fort Detrick Water Tower near Building 810



The Fort Detrick Pool

## **Introduction**

This is an annual report on the quality of water delivered by Fort Detrick. Under the "Consumer Confidence Reporting Rule" (CCR) 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.

General 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, Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which 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 EPA's Safe Drinking Water Hotline (800-426-4791).

Fort Detrick is permitted to withdraw water from local resources in accordance with permits regulated by the Maryland Department of Environment (MDE). Source water is withdrawn from the Monocacy River and processed at the Fort Detrick Water Treatment Plant located approximately 1.5 miles east of area A. The average monthly water production at Fort Detrick is roughly 1.4 million gallons per day and is operated and staffed 24 hours a day.

## Monitoring of Your Drinking Water

The Maryland Department of the Environment (MDE) issued a Notice of Violation (NOV) to Fort Detrick on February 11, 2001. State and federal drinking water regulations require routine testing for inorganic compounds (metals) in the drinking water. This NOV was a monitoring violation issued because sampling for these inorganic compounds (metals) was incomplete for the year 2000. Of the ten metals required for testing, three were inadvertently omitted. Fort Detrick took immediate action to correct the oversight with sampling and all three of the metals initially omitted had test results below laboratory detection limits. The health effects are unknown for failing to take these samples on time. A public notice was published in the *Fort Detrick Standard* newspaper on March 8, 2001 giving information on the NOV and the steps taken to correct the oversight. The Fort Detrick Environmental office has received verbal notification from MDE that the water treatment plant is back in regulatory compliance.

Our water system uses only EPA-approved laboratory methods to analyze your drinking water. Our personnel take water samples from the distribution system. These samples are then shipped to an accredited laboratory where a full spectrum of water quality analyses are performed.

At Fort Detrick, 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/Contaminant Groups and Monitoring Frequency Table**

<b>Analyte/Contaminant Group</b>	<b>Monitoring Frequency</b>
<b>Arsenic</b>	<b>Once yearly</b>
<b>Fluoride</b>	<b>Once yearly</b>
<b>Nitrate</b>	<b>Once yearly (1<sup>st</sup> quarter)</b>
<b>Metals (Phase II/V)</b>	<b>Once yearly</b>
<b>Atrazine</b>	<b>Once yearly (2<sup>nd</sup> quarter)</b>
<b>SOC (Phase II/V)<sup>1</sup></b>	<b>Once yearly</b>
<b>SOC (Method 525)</b>	<b>Twice yearly (2 quarters yearly)</b>
<b>VOC<sup>2</sup></b>	<b>Once yearly</b>
<b>Gross Alpha<sup>3</sup></b>	<b>Every 4 years (Next sampling in 2003)</b>
<b>Total Trihalomethanes</b>	<b>Four times yearly (4 quarters yearly)</b>
<b>Bacteriologic samples</b>	<b>7 per month</b>
<b>Lead</b>	<b>20 samples for triennial (3 yr) period taken between 01 Jun and 30 Sep (Next sampling in 2002).</b>
<b>Copper</b>	<b>20 Samples for triennial (3 yr) period taken between 01 Jun and 30 Sep (Next sampling in 2002).</b>

1 - Synthetic Organic Contaminants (SOC) include Carbofuran, Dalapon and 2,4-D.

2 - Volatile Organic Contaminants (VOC) include Benzene, Styrene and Toluene.

3 - Gross Alpha emitters.

### Definitions of Key Terms/Acronyms Used in this Report

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

**CCR** Consumer Confidence Report

**EPA – Environmental Protection Agency** Environmental regulatory agency for the federal government

**Level Found** Laboratory analytical result for a contaminant; this value is evaluated against an MCL or AL to determine compliance.

**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.

**MDE – Maryland Department of the Environment** Environmental regulatory department for the State of Maryland

**mg/kg** milligrams per kilogram; a unit of measure equivalent to parts per million (ppm)

**mg/L** milligrams per liter; a unit of measure equivalent to parts per million (ppm)

**NOV** Notice of Violation

**NTU** Nephelometric turbidity unit; a measure of turbidity in water

**pCi/L** picocuries per liter; a measure of radioactivity in water

**ppb** parts per billion; a unit of measure equivalent to a single penny in \$10,000,000

**ppm** parts per million; a unit of measure equivalent to a single penny in \$10,000

**ppq** parts per quadrillion; a unit of measure equivalent to a single penny in \$10,000,000,000,000

**ppt** parts per trillion; a unit of measure equivalent to a single penny in \$10,000,000,000

**Range** The range of the highest and lowest analytical values of a reported contaminant. For example, the range of reported analytical detections for an unregulated contaminant might be 10.1 ppm (lowest value) to 13.4 ppm (highest value). EPA requires this range to be reported.

**SDWA** Safe Drinking Water Act; Federal law which sets forth drinking water regulations.

**TTHMs** Total trihalomethanes; byproducts of drinking water disinfection

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

**µg/L** micrograms per liter; a unit of measure equivalent to parts per billion (ppb)

## **Monitoring Results**

The following table presents the results of our monitoring for the reporting period of 2000. **Fort Detrick tests for over one hundred other regulated and unregulated contaminants in addition to the ones listed in the results table below.** These include volatile organic compounds, synthetic organic compounds, metals, and other inorganics. None of these additional contaminants were detected in our samples.

## Results Table - Detected Contaminants

Contaminant	MCLG	MCL <sup>1</sup>	Level Found <sup>2</sup>	Range	Sample Date	Exceeded Standard?
Nitrate	10 ppm	10 ppm	1.4 ppm	N/A	Mar 23, 2000	No
Atrazine	3 ppb	3 ppb	.13 ppb	N/A	Jun 7, 2000	No
Di(2-hylhexyl) phthalate	0 ppb	6 ppb	1.23 ppb	N/A	Jun 7, 2000	No
Barium	2 ppm	2 ppm	.021 ppm	N/A	Jul 19, 2000	No
Trihalomethanes	N/A	100 ppb	38 ppb <sup>3</sup>	19-75 ppb	Feb 13, 2000; Apr 4, 2000; Jul 25,2000; Oct 12, 2000	No
1,1,1 Trichloroethane	200 ppb	200 ppb	0.9 ppb	N/A	July 19, 2000	No
Fluoride	4 ppm	4 ppm	.1 ppm	N/A	Jul 19, 2000	No
Lead	0 ppb	15 ppb	4 ppb	N/A	Jun 16 & 17, 1999	No
Copper	1.3 ppm	1.3 ppm	0.1 ppm	N/A	Jun 16 & 17, 1999	No
Turbidity	N/A	.5 NTU <sup>4</sup>	0.81 NTU <sup>5</sup>	N/A	High reading – Aug 8, 2000	No

1 - Applicable State, Local, or Federal MCL, TT, or AL value.

2 - Level Found or 90<sup>th</sup> percentile value found for Lead and Copper.

3 – Rolling Yearly Average

4 - The turbidity level of representative samples of our system's filtered water must be less than or equal to 0.5 NTU in at least 95 percent of the measurements taken each month.

5-The **lowest** monthly percentage of samples meeting our turbidity limits of 0.5 NTU was **99%**. Turbidity is a measure of the cloudiness of the water. Turbidity levels are monitored to indicate the effectiveness of our filtration systems.

>The state allows the Fort Detrick Water Treatment Plant to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. <

### Likely Sources of Contaminants Detected

**Nitrate** – Runoff from fertilizer use, leaching from septic tanks, sewage; Erosion of natural deposits.

**Atrazine** – Runoff from herbicide used in row crops.

**Di(2-ethylhexyl) phthalate** – Discharge from rubber and chemical factories.

**Barium** – Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

**Trihalomethanes** – By-product of drinking water chlorination.

**1,1,1-Trichloroethane** – Discharge from metal degreasing sites and other factories.

**Fluoride** – Erosion of natural deposits; Water additive, which promotes strong teeth; discharge from fertilizer and aluminum factories.

**Lead** - Corrosion of household plumbing systems; Erosion of natural deposits.

**Copper** - Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.

**Turbidity** – Soil runoff.

## **Public Involvement**

**We continually monitor the drinking water for contaminants. This past year the tap water at Fort Detrick met all EPA and MDE drinking water health standards.** However, 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 at 800-426-4791.

For additional information concerning the Fort Detrick Consumer Confidence Report, please contact the Fort Detrick Public Affairs Office at 301-619-2018.