

# 2006 WATER QUALITY REPORT FOR THE HIGHFIELD WATER SYSTEM

## **Is my water safe?**

Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. The Washington County Department of Water Quality vigilantly safeguards its water supplies and once again we are proud to report that our system has never violated a maximum contaminant level or any other water quality standard.

## **Do I need 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 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/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).

## **Where does my water come from?**

The Highfield System utilizes four wells as its primary water source. This water is pH adjusted; fluoridated; and chlorinated prior to entering the distribution system. During periods of low water table conditions, water can be purchased from the Washington Township Municipal Authority. Washington Township Municipal Authority uses three springs and three wells as their water source. No water was purchased from Washington Township Municipal Authority in 2000 through 2006.

## **Source water assessment and its availability**

The Maryland Department of the Environment's Water Supply Program (WSP) has conducted a Source Water Assessment for the Highfield Water System. The required components of this report as described in Maryland's Source Water Assessment Program (SWAP) are 1) delineation of an area that contributes water to the source, 2) identification of potential sources of contamination, and 3) determination of susceptibility of the water supply to contamination. Recommendations for protecting the drinking water supply conclude this report.

The sources of Highfield's water supply are four wells that draw from an unconfined fractured rock aquifer. The Source Water Assessment area was delineated by the WSP using EPA approved methods specifically designed for this source type.

Point sources of contamination were identified within the assessment area from field inspections, contaminant inventory databases, and previous studies. The Maryland Office of Planning's 2000 digital land use map for Washington County was used to identify non-point sources of contamination. Well information and water quality data were also reviewed. An aerial photograph and maps showing potential contaminants sources and land use within the Source Water Assessment area are included in this report.

The susceptibility analysis is based on review of the existing water quality data for the Highfield Water System, the presence of potential sources of contamination in the source water assessment area, well integrity, and the inherent vulnerability of the aquifer. It was determined that Radon-222, a naturally occurring contaminant, may pose a risk to the Highfield water supply. The water supply is not susceptible to contamination by inorganic compounds, other radionuclides, volatile organic compounds, synthetic organic compounds, or microbiological contaminants.

For more information on the report, please contact Mr. William Dean of our office at (240) 313-2600.

## **Why are there contaminants in my drinking water?**

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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

## **How can I get involved?**

The Washington County Department of Water Quality has an Advisory Board that meets on a monthly basis. For information about attending a meeting, please contact our main office at (240) 313-2600.

# Water Quality Data Table

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

<u>Contaminants</u>	<u>MCLG or MRDLG</u>	<u>MCL, TT, or MRDL</u>	<u>Your Water</u>	<u>Range</u> <u>Low</u> <u>High</u>		<u>Sample Date</u>	<u>Violation</u>	<u>Typical Source</u>
<b>Inorganic Contaminants</b>								
Barium (ppm)	2	2	0.022		0.022	2005	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4	4	0.84	NA		2005	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen] (ppm)	10	10	2.6	0.37	2.6	2006	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (optional) (ppm)		MPL	11	4.41	11	2005	No	Erosion of natural deposits; Leaching
<b>Radioactive Contaminants</b>								
Alpha emitters (pCi/L)	0	15	3		3	2002	No	Erosion of natural deposits
Beta/photon emitters (pCi/L)	0	50	2		2	2004	No	Decay of natural and man-made deposits. The EPA considers 50 pCi/L to be the level of concern for Beta particles.
<b>Volatile Organic Contaminants</b>								
Tetrachloroethylene (ppb)	0	5	1.5		1.5	2004	No	Discharge from factories and dry cleaners
<u>Contaminants</u>	<u>MCLG</u>	<u>AL</u>	<u>Your Water</u>	<u>Sample Date</u>	<u># Samples Exceeding AL</u>	<u>Exceeds AL</u>	<u>Typical Source</u>	
<b>Inorganic Contaminants</b>								
Copper - action level at consumer taps (ppm)	1.3	1.3	0.33	2006	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	
Lead - action level at consumer taps (ppb)	0	15	12	2006	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	
<b>Unit Descriptions</b>								
<u>Term</u>	<u>Definition</u>							
ppm	ppm: parts per million, or milligrams per liter (mg/L)							
ppb	ppb: parts per billion, or micrograms per liter (µg/L)							
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)							
NA	NA: not applicable							
ND	ND: Not detected							
NR	NR: Monitoring not required, but recommended.							
<b>Important Drinking Water Definitions</b>								
<u>Term</u>	<u>Definition</u>							
MCLG	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	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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	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 to control microbial contaminants.
MRDL	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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

### Results of voluntary monitoring

The Washington County Department of Water Quality conducts routine testing on your water system that is not included in the Water Quality Data Table. A list of parameters and their results are listed in the Table of Results of Customer Interest below.

**TABLE OF TEST RESULTS OF CUSTOMER INTEREST**

PARAMETER	LEVEL/RANGE DETECTED	UNIT OF MEASUREMENT
PH	6.8 to 7.8	Standard Unit
Chlorine	0.1 to 1.2	ppm
Turbidity	0.019 to 0.820	NTU
Fluoride	0.2 to 1.3	ppm

### Results of radon monitoring

On May 18, 1999, the Maryland Department of the Environment tested for radon in the Highfield Well and on October 22, 2001, MDE tested the Pennersville Well. The results of the Highfield Well Test were 30 pCi/L and the results of the Pennersville Well were 2,415 pCi/l. Radon is a radioactive gas that you can't see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air-containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your state radon program or call EPA's Radon Hotline (800-SOS-RADON).

### What Levels of Radon in my water should I be concerned about?

There are currently no federally enforced drinking water standards for Radon. EPA is proposing to regulate radon in drinking water from community water supplies (water systems that serve 25 or more year-round residents). EPA proposed the rule in October 1999 and plans to finalize it in 2008.

EPA is proposing to require community water suppliers to provide water with radon levels no higher than 4,000 pCi/L, which contributes about 0.4 pCi/L to the air in your home. This requirement assumes that the State is also taking action to reduce levels in indoor air by developing EPA approved enhanced State radon indoor air programs. (Called Multimedia Mitigation Programs). This is because most of the Radon you breathe comes from the soil under your home. This option gives the States flexibility to focus on the greatest problems. By encouraging the public to fix radon in indoor air problems and homes that keep radon from entering.

For States that choose not to develop enhanced indoor programs, community water systems in that State will be required to reduce radon in drinking water to 300 pCi/L. This amount contributes 0.03 pCi/L of radon in the air of your home. Even if a State does not develop enhanced indoor air program, water systems may choose to develop their own local indoor radon program

and meet a radon standard for drinking water of 4,000 pCi/L.

EPA has set up this option, under the framework specified in the 1996 Amendments to the Safe Drinking Water Act, so that the overall risks from exposure to radon, both through air and water are reduced.

For more information on the Washington County Department of Water Quality, please visit our website at [www.washco-md.net/water\\_sewer](http://www.washco-md.net/water_sewer)

**For more information on the Highfield Water System**

**Contact: William H. Dean, Jr. at (240) 313-2600**