



# BARK HILL

PWSID # 0060019

Community Water System • Carroll County, Maryland

## 2006 Annual Water Quality Report

*This is an annual report on the quality of water delivered by the Carroll County Bureau of Utilities, Department of Public Works. This report meets the Federal Safe Drinking Water Act (SDWA) requirement for "Consumer Confidence Reports" and contains information on the source of the water, its constituents, and the health risks associated with any contaminants. Safe water is vital to the community. Please read this report carefully and, if you have questions, call the Bureau of Utilities at 410-386-2164.*

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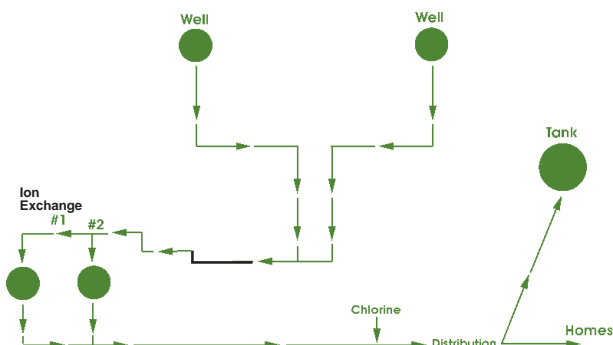
### Water Source

The source of Bark Hill's water supply, which serves the Community of Bark Hill, is an unconfined fractured-rock/carbonate rock aquifer. One well is currently being used to draw water out of the aquifer. A second well is available as a standby. The wells are within the Ijamsville formation located in proximity to the Francis Scott Key High School.

A source water assessment was completed for the Carroll County Bureau of Utilities, Department of Public Works in 2000. Copies are available by stopping by, calling or writing the Bureau of Utilities, Carroll County Government, 225 North Center Street, Room 218, Westminster, MD 21157, 410-386-2164.

The susceptibility analysis of Bark Hill's water supply is based on a review of the water quality data, potential sources of contamination, aquifer characteristics, and well integrity. It was determined that Bark Hill's water supply is susceptible to contamination by nitrates but not to other inorganic compounds. The water supply is not susceptible to volatile organic compounds, synthetic organic compounds, bacteria or protozoans.

### Bark Hill Treatment Process



(continued)

## Important Health Information

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 Safe Drinking Water Hotline (800-426-4791).

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, that 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.

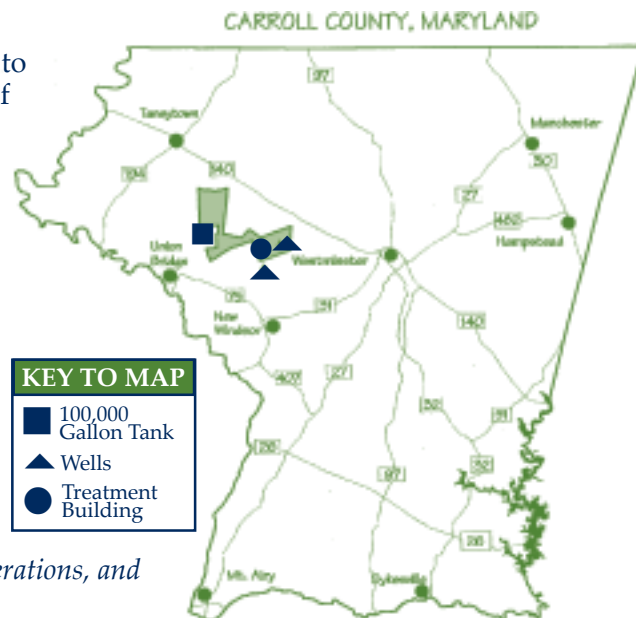
In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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. The 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).

## Cryptosporidium and Radon Information

Bureau of Utilities, Department of Public Works tested for *Cryptosporidium* on January 21, 1999. *Cryptosporidium* was not detected in our water. *Cryptosporidium* is a microbial pathogen found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. Immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

The Bureau of Utilities tested for Radon in 2005. The water showed a Radon quarterly annual average of 981 picocuries per liter (pCi/L). The U.S. Environmental Protection Agency (EPA) is preparing a regulation which will specify a Maximum Contaminant Level for Radon, proposed at a range of 300-4,000 pCi/L. Radon is a radioactive gas that you can't see, taste, or smell. It is found throughout the United States and 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 four 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).



# Water Quality Table

Inorganic Contaminants	Date Tested	Unit	MCL	MCLG	Detected Level	Range	Major Sources
Copper <sup>1</sup>	2004	ppm	AL=1.3	1.3	.126	0.028 - .126	Corrosion of household plumbing systems; erosion of natural deposits
Lead <sup>2</sup>	2004	ppb	AL=15	0	3	<2. - 3	Corrosion of household plumbing systems; erosion of natural deposits
Nitrate <sup>3</sup>	2006	ppm	10	10	2.4	<.05 - 2.4	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Microbiological Contaminants	Date Tested	Unit	MCL	MCLG	Detected Level	Range	Major Sources
Turbidity <sup>4</sup>	4/12/01	NTU	TT	na	0.04	---	Soil runoff
Disinfectants & Disinfection By-Products	Date Tested	Unit	MCL	MCLG	Detected Level	Range	Major Sources
Total Trihalomethanes <sup>5</sup>	8/9/06	ppb	80	na	18.74	—	By-product of drinking water disinfection
Haloacetic Acids <sup>5</sup> (HAA5)	8/9/06	ppb	60	na	12.18	—	By-product of drinking water Chlorination
Secondary Inorganic Chemical Parameters	Date Tested	Unit	SMCL	MCLG	Detected Level	Range	Major Sources
Iron	6/18/01	ppb	300*	na	30	—	Erosion of natural deposits; leaching from pipes; residual of drinking water treatment process
pH	2006	pH Units	6.5 - 8.5*	na	7.6	6.8 - 7.6	Erosion of natural deposits; algae blooms
Radioactive Contaminants	Date Tested	Unit	MCL	HLD	Major Sources		
Gross Alpha	07/28/04	pCi/L	15	2pCi/L	Erosion of natural deposits		
Gross Beta	07/28/04	pCi/L	50 <sup>6</sup>	4pCi/L	Decay of natural and man-made deposits		

## Key to Table

AL = Action Level

MCL = Maximum Contaminant Level

SMCL = Secondary Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal

TT = Treatment Technique

\* Indicates SMCL

pCi/L = picocuries per liter (a measure of radioactivity)

ppm = parts per million, or milligrams per liter (mg/L)

ppb = parts per billion, or micrograms per liter (µg/L)

NTU = Nephelometric Turbidity Units

na = Not Applicable

HLD = Highest Level Detected

## Water Quality Table Footnotes

<sup>1</sup> None of the samples tested for copper exceeded the current action level of 1.3 ppm.

<sup>2</sup> None of the samples tested for lead exceeded the current action level of 15 ppb. [Lead and copper are regulated in a Treatment Technique which requires systems to take tap water samples at sites with lead pipes or copper pipes that have lead solder and/or are served by lead service lines. The action level, which triggers water systems into taking treatment steps if exceeded in more than 10% of tap water samples, for copper is 1.3 mg/L and for lead is 0.015 mg/L.]

<sup>3</sup> Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

<sup>4</sup> Turbidity is a measure of the cloudiness of water.

<sup>5</sup> Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants:

- Haloacetic acids: dichloroacetic acid (zero); trichloroacetic acid (0.3 mg/L)
- Trihalomethanes: bromodichloromethane (zero); bromoform (zero); dibromochloromethane (0.06 mg/L)

<sup>6</sup> The MCL for Gross Beta is 4 millirems per year (a measure of radiation by the body). The EPA considers 50 pCi/L to be the level of concern for Beta particles.

(continued)

## MTBE (Methyl - Tert - Butyl - Ether) Information

The Maryland department of Environment sampled the Bark Hill well No. 2 (K50) on 8/9/06, and found that MTBE was present at a value of .7 ppb. There is currently insufficient data to determine the health risk, if any, from low level exposure to MTBE. EPA's advisory notes that MTBE levels at or below 20 - 40 ppb provides a large margin of safety from toxic effects. Martel Labs retested the MTBE on August 14, 2006, with the results being 0.98 ppb.

## What Does The Water Quality Table Mean?

The table in this report provides representative analytical results of water samples collected in 2006 from our system. The State allows the County to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the Bark Hill data, though representative, is more than one year old.

## Important Drinking Water Definitions

**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.

**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.

**Detected Level:** The highest level detected of a contaminant for comparison against the acceptance levels for each parameter. These levels could be the highest single measurement, or an average of values depending on the contaminant.

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

**Range:** The lowest to the highest values for all samples tested for each contaminant. If only one sample is tested, or no range is required for this report, then no range is listed for that contaminant in the table.

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

For additional information, contact Mr. Gregory Wantz, Water Treatment Plant Superintendent, Bureau of Utilities, Department of Public Works, at 410-386-2164; or consult our web site at [ccgov.carr.org/utility](http://ccgov.carr.org/utility). For further information, see U. S. Environmental Protection Agency (EPA) water information at [www.epa.gov/safewater/ccr1.html](http://www.epa.gov/safewater/ccr1.html), and [www.waterdata.com](http://www.waterdata.com); or by calling EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Water Quality Data for other community water systems throughout the United States is available at [www.waterdata.com](http://www.waterdata.com).

For billing information, call 410-386-2000, and for Operation and Maintenance inquiries, call 410-386-2164, Monday through Friday from 8:00 a.m. to 5:00 p.m. An answering machine is available after hours.

The Board of Carroll County Commissioners meets regularly with Department staff. The Carroll County Commissioners' weekly agenda is available on the Internet at [ccgov.carr.org/meetings/index.html](http://ccgov.carr.org/meetings/index.html) or by calling the Commissioners' Office at 410-386-2043. The Carroll County Commissioners welcome and encourage public participation.



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BARK HILL COMMUNITY WATER SYSTEM



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