Annual Drinking Water Quality Report for 2009
City of Beacon Water Supply
1 Municipal Plaza, Beacon N.Y. 12508
Public Water Supply ID# 1302760; 1330557

INTRODUCTION

To comply with State and Federal regulations, the City of Beacon Water Supply annually issues a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water standards. In 2009, we conducted tests for 116 contaminants. We detected 16 of those contaminants. The levels of detection of these contaminants were all below those allowed by the State. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact David Russell at 845-831-3185. We want you to be informed about your drinking water. Beacon City Council meetings are held the first and third Mondays of the month at the Municipal Center- 1 Municipal Plaza, Beacon, N.Y.

WHERE DOES OUR WATER COME FROM?

In general, 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 can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water source consists of three surface sources- Cargill, Mt.Beacon and Melzingah reservoirs, and three ground water sources-City of Beacon Wells 1and 2 and Village of Fishkill Well 8. The water from these sources is blended in various combinations depending on source condition and demand for water. The blended water is then treated at the water filtration facility at 470 Liberty St. The current capacity of the plant is 4 million gallons per day. Chemicals are added to the blended water to facilitate filtration. The water is then filtered and chemicals are added for disinfection and corrosion control. The water is then pumped to the distribution system entry point tank. The following chemicals, including their purpose and amounts, were used to treat our water in 2009: Alum- coagulant for filtration- 89,573 lbs; Polymer- coagulant aid- 359 lbs; Zinc Orthophosphate- corrosion control- 8504 lbs; Chlorine- disinfection- 13,552 lbs.

The NYS DOH has completed a **source water assessment** for our water system, based on available information. Possible and actual threats to this drinking water source were evaluated. The state source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the wells. **The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is, or will become contaminated.** Please see the following table for a list of contaminants that were detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

The source water assessment has rated our water source as having an elevated susceptibility to microbials, nitrates, industrial solvents and other industrial contaminants. These ratings are due primarily to the close proximity of the wells to permitted discharge facilities (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government), and the residential land use and related activities in the assessment area. In addition, the wells draw from fractured bedrock and the overlying soils may not provide adequate protection from potential contamination, and are located in an area that is prone to flooding.

The county and state health departments will use this information to direct future source water protection activities. These may include water quality monitoring, resource management, planning and education programs. A copy of the assessment can be obtained by contacting us, as noted above. (cont. pg 2)

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FACTS AND FIGURES

The City of Beacon Water Supply serves approximately 19,000 people and has 4534 metered accounts. The total water produced in 2009 was 809,646,000 gallons of water. The daily average production was 2,218,210 gallons. The highest single day production was 2,437,000 gallons. The amount of water delivered to customers was accounted for as follows: Residential and Commercial-344,010,000gallons, Dept. of Corrections-160,662,000gallons, Town of Fishkill- 94,767,000gallons. This leaves an Unaccounted for water amount of- 210,206,000gallons. Unaccounted for water is water lost due to system leaks, water main breaks, use in municipal buildings and operations, system flushing, meter error and theft of service.

City residents were charged for water as follows- $21.00 for the first 600 cu/ft, then $2.55 per 100 cu/ft additional. (cu/ft= cubic feet. 100cu/ft= 748gallons)

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, synthetic organic compounds, radioactive contaminants and disinfection byproducts. The table presented below depicts which compounds were detected in your drinking water in 2008 and other years. The State allows us to test 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.

It should be noted that all drinking water, including bottled drinking water, may be reasonably 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) or the Dutchess County Health Department at (845) 486 3400.

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Maximum) (Range)	Unit Measure-ment	MCLG	Regulatory Limit (MCL,TT or AL)	Likely Source of Contamination
Microbiological Contaminants							
Turbidity (1)	No	07/02/09	0.24	NTU	n/a	TT= < 0.3 NTU	Soil runoff
Turbidity (1)	No	2009	100%	NTU	n/a	TT= 95% of samples < 0.3 NTU	Soil runoff
Disinfection Byproducts							
Total Trihalomethanes	No	08/12/09	30 (4) 20-50	ug/l	n/a	MCL= 80	By-product of drinking water chlorination
Haloacetic Acids	No	11/12/09	30 (4) 9-33	ug/l	n/a	MCL= 60	By-product of drinking water chlorination

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Inorganic Contaminants							
Barium	No	11/17/09	0.022	mg/l	2	MCL= 2.0	Discharge of drilling wastes, discharge from metal refineries, erosion of natural deposits.
Fluoride	No	11/17/09	0.10	mg/l	n/a	MCL= 2.2	Erosion of natural deposits. Discharge from fertilizer factories
Chloride	No	9/15/09	27.8(4) 16.7-49.2	mg/l	n/a	MCL= 250	Road salt; natural occurrence
Nitrate	No	11/06/09	0.18	mg/l	10	MCL= 10	Runoff from fertilizer use; leaching from septic tanks
Sodium	No	9/15/09	12.9(4) 6.81- 18.3	mg/l	n/a	Dietary restrictions-20mg for severe, 270mg moderate	Road salt; water softeners; natural occurrence
Copper	No	7/16/08	0.29 (2) 0.02 – 0.56	mg/l	1.3	AL= 1.3	Corrosion of household plumbing; Erosion of natural deposits
Lead	No	7/30/08	2.3 (2) ND – 8.3	ug/l	0	AL= 15	Corrosion of household plumbing; Erosion of natural deposits
Asbestos	No	1/14/04	0.20	MFL (3)	7	MCL= 7	Decay of asbestos-cement pipe. Erosion of natural deposits
Radioactive Contaminants							
Gross Alpha	No	3/24/09	1.70	pCi/l	0	MCL= 15	Erosion of natural deposits
Radium 226	No	3/24/09	0.12	pCi/l	0	Combined MCL = 5	Erosion of natural deposits
Radium 228	No	3/24/09	0.37	pCi/l	0		Erosion of natural deposits

1 – Turbidity is a measure of the cloudiness of the water. It is a good indicator of filtration effectiveness. All (100%) of our filtered water turbidity measurements were below the regulatory limit of 0.3 NTU, with the highest being 0.24 NTU on 7/02/09.

2 – The level listed represents the 90th percentile of 30 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The action level (AL) value for copper was not exceeded at any of the sites and for lead at one site

3 – MLF= million fibers per liter-a measure of the presence of asbestos fibers longer than 10 micrometers

4 - The level listed represents the annual quarterly average calculated from the data collected

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.

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.

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

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

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Non-Detects (ND): Laboratory analysis indicates that the constituent is not present.
Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).
Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb)
Picocuries per liter (pCi/L): A measure of the radioactivity in water.

Do I Need to Take Special Precautions?

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens 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 from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

Compliance with other State Sanitary Code requirements

The City of Beacon was found to be in violation of the following New York State Sanitary Code sections: 5-1.31(a) (3) - for failure to assure that all backflow prevention devices are tested annually. The City is sending letters to the owners of these devices notifying them that the devices must be tested annually and that the results of these tests must be forwarded to the City; 5-1.52 table10A – for failure to record individual filter effluent turbidity every 15 minutes. At present all filters are continuously monitored. The City is installing equipment to record the monitored values every 15 minutes; 5-1.71 – for failure to provide necessary maintenance to distribution storage tanks. The City has included the project in it's capital plan and will solicit bids for the painting and any needed repairs to the tanks.

INFORMATION FOR NON-ENGLISH SPEAKING RESIDENTS

Spanish

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

System Improvements

The City is installing a leak detection system which was purchased with money from stimulus funding. The system will provide for much more rapid detection and repair of leaks and thus save water.

Why Save Water and How to Avoid Wasting It?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- Saving water saves energy and some of the costs associated with both of these necessities of life;
- Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it up an you can save almost 6,000 gallons per year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, then check the meter after 15 minutes. If it moved, you have a leak.

Closing

Thank you for taking the time to read this report. We hope it was informative. We ask that all our customers help us protect our water resources. Please call our office if you have questions.