



## CITY OF BEACON WATER DEPARTMENT

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James McCollum – Superintendent John Bushek – Chief Water Treatment Plant Operator

### **2012 ANNUAL WATER QUALITY REPORT**

**Public Water Supply ID # 1302760; 1330557**

#### **INTRODUCTION**

To comply with State and Federal regulations, the city of Beacon Water Department issues an annual report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water, and your awareness of the need to protect our drinking water sources. Last year, your tap water met all state drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standards. This report provides an overview of last years' 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 John Bushek, Chief Water Treatment Plant Operator at (845) 831-3185. We want you to be informed about your drinking water. Beacon City Council meetings are held the first and third Monday of the month at the Municipal Center – 1 Municipal Plaza, Beacon, NY.

#### **WHERE DOES OUR WATER COME FROM?**

In general, the sources of drinking water (both tap and bottle 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: microbiological contaminants; inorganic contaminants; pesticides & 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 and the FDA's regulations establish limits for contaminants in bottle water which must provide the same protection for public health.

Our water sources consists of three surface sources- Cargill, Mt. Beacon, and Melzingah reservoirs, and three ground water sources- City of Beacon wells 1 & 2 and Village of Fishkill well 8. The water from these sources is blended in various ratios depending on source condition and demand for water. The blended water is then treated at the water filtration facility located 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 2012; Alum-coagulant for filtration (91,595 lbs.); Polymer- coagulant aid (365 lbs.); Zinc Orthophosphate- corrosion control (9,634 lbs.); Chlorine- disinfection (13,898 lbs.).

The NYS DOH has completed a source water assessment for our water system, based on available information. Possible and actual threats to our drinking water sources 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 assessment provides resource managers with additional information for protecting source water into the future. The source water assessment has rated our water sources as having an elevated susceptibility to microbial, nitrate, 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.

### **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 & 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 2012 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 bottle water, maybe reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the 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.

### **DEFINITIONS**

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCL are set as close to the MCLG's 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. MCLG allow for a margin of safety.

**Turbidity (NTU):** A measure of the cloudiness of water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

**NTU's – Nephelometric Turbidity Units:** A measure of the clarity of water. Turbidity in excess of 5 NTU's is just noticeable to the average person.

**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.

**Non-Detects (ND):** Laboratory analysis indicates that the constituent is not present.

**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.

**MRDL- Maximum Residual Disinfection Level:** A level of disinfectant added for water treatment that may not be exceeded at the consumers' tap without an unacceptable possibility of adverse health effects. MRDL's are currently regulated in the same manner as MCL's.

### TABLE OF DETECTED CONTAMINANTS

#### Microbiological Contaminant

Contaminant	Violation	Date	Level	Unit Measured	Limit Type	Likely Source
Filtered Turbidity	No	May 2012	99.2	Minimum Monthly %	> 95 TT	Soil Runoff
Filtered Turbidity	No	5/25/2012	4.91	Maximum NTU	<5 MCL	Soil Runoff
Distribution Turbidity	No	4/13/2012	0.32	Maximum NTU	<1 MCL	Soil Runoff

#### Disinfection Byproducts

Contaminant	Violation	Date of Sample	Level Detected Maximum Average	Unit Measured	MCLG	Limit MCL	Likely Source of Contaminant
Total Trihalomethanes	No	11/20/2012	47.86	ug/L	n/a	80	By product of drinking water Chlorination
		2012	30 $\mu$	ug/L	n/a		
Haloacetic Acid	No	5/16/2012	34.36	ug/L	n/a	60	By product of drinking water Chlorination
		2012	20 $\mu$	ug/L	n/a		

$\mu$  = Running Annual Avg.

### Inorganic Contaminants

Contaminant	Violation	Date of Sample	Level Detected Maximum	Unit Measured	MCLG	Limit MCL	Likely Source of Contaminant
Barium	No	11/20/2012	19.9	mg/L	2	2	Discharge of drilling waste discharge from metal refineries, erosion of natural deposits.
Chloride	No	9/4/2012	55	mg/L	n/a	250	Road salt naturally occurring
Nitrate	No	11/20/2012	0.29	mg/L	10	10	Runoff from fertilizer leaching from septic tanks
Sodium	No	9/4/2012	23.2	mg/L	n/a	see Note 1	Road salt naturally occurring
Asbestos	No	1/14/2004	0.2	MFL See note 2	7	7	Decay of asbestos-cement pipe. Erosion of natural deposits.

1 = Water containing more than 20mg/L of sodium should not be used for drinking by people on severely restricted sodium diet. Water containing more than 270 mg/L of sodium should not be used for drinking by people on moderately restricted diet.

2 = Million Fibers per Liter: a measure of the presence of asbestos fibers longer than 10 micrometers.

### Corrosion Control

Contaminant	Violation	Date of Sample	Level Detected Maximum	Unit Measured	MCLG	Limit AL	Likely Source of Contaminant
Lead	No	2011	0.005 0.003 (3)	mg/L	0	0.015	Corrosion of Household plumbing system
Copper	No	2011	0.658 0.306 (3)	mg/L	0	1.3	Corrosion of Household plumbing system

3 = Represents the 90<sup>th</sup> 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 value for lead & copper was not exceeded at any sites.

## **NON-DETECTED CONTAMINANTS**

The contaminants listed below were required to be tested for, in our drinking water. The results showed that **none** of these contaminants were detected in our water. These Non-detected contaminants are: Arsenic, Beryllium, Cadmium, Chromium, Antimony, Thallium, Selenium, Mercury, Fluoride, Cyanide, 1 1 1 2-Tetrachloroethane, 1 1 1-Trichloroethane, Bromobenzene, 1 1 2 2-Tetrachloroethane, 1 1 2-Trichloroethane, 1 1-Dichloroethane, 1 1-Dichloroethene, 1 1-Dichloropropene, Chlorobenzene, 1 2 3-Trichlorobenzene, 1 2 3-Trichloropropene, 1 2 4-Trichlorobenzene, 1 2 4-Trimethylbenzene, 1 2-Dichloroethane, Benzene, 1 2-Dichlorobenzene, 1 2-Dichloropropene, 1 3-Dichloropropene, 1 4-Dichlorobenzene, 2 2-Dichloropropene, Chloroethane, Bromochloromethane, Bromomethane, n-Butylbenzene, cis-1 2-Dichloroethene, cis-1 3-Dichloropropene, Tetrachloroethene, Carbon Tetrachloride, Chloromethane, Dibromomethane, Ethylbenzene, Butachlor, Dichlorodifluoromethane, Hexachlorobutadiene, Toluene, Isopropylbenzene, p-Isopropyltoluene, Diquat, Methylene, m-Xylene & p-Xylene, Methyl tert-butyl ether, o-Xylene, Vinyl chloride, trans-1 2-Dichloroethene, trans-1 3-Dichloropropene, Trichloroethene, tert-Butylbenzene, Trichlorofluoromethane, Styrene, Picloram, Total Xylenes, sec-Butylbenzene, 1 3 5-Trimethylbenzene, N-Proylbenzene, 1 3-Dichlorobenzene, Metolachlor, 2-Chlorotoluene, Endothall, 4-Chlorotoluene, 1 2-Dichloroethane, 1 2-Dibromo-3-chloropropane, Lindane, Heptachlor, Aldrin, Chlordane, Total PCB's, 2 4-D, Heptachlor epoxide, Dieldrin, Endrin, Methoxychlor, Toxaphene, Pentachlorophenol, 2 4 5-TP (Silvex), Aldicarb sulfoxide, Bis(2-Ethylhexyl)adipate, Alachlor, Metribuzin, Bis(2-Ethylhexyl)phthalate, Benzo(a)pyrene, 3-Hydroxycarbofuran, Dalapon, Dicamba, Dinoseb, Hexachlorocyclopentadiene, Hexachlorobenzene, Aldicarb sulfone, Oxamyl, Methomyl, Aldicarb, Carbonfuran, Carbaryl, Glyphosate, Propachlor, Simazine, and Atrazine, Nickel.

## **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. Immune-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).

## **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.

## **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 firefighting 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 and you can save almost 6,000 gallons per year.
- ◆ Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, and then check the meter after 15 minutes. If it moved, you have a leak.

## **CLOSING**

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office if you have questions.