

ANNUAL  
**WATER**  
QUALITY  
**REPORT**

*Water testing performed in 2009*



VILLAGE OF  
CROTON-ON-HUDSON

PWS ID#: 5903425

## Maintaining High Standards

Once again we are proud to present our annual water quality report. This report covers all testing performed between January 1, 2009, and December 31, 2009. The events of the past few years have presented many of us with challenges we could not have imagined. Yet in spite of this, we have maintained our high standards in an effort to continue delivering the best quality drinking water possible. There may be other hurdles in the future, but know that we will always stand behind you and the drinking water we work diligently to provide.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions, we are always available to assist you.

## Important Health Information



Some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immunocompromised 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 at (800) 426-4791.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. The Village of Croton-on-Hudson is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Facts and Figures

The water system supplies approximately 7,700 people, primarily in residences but also in businesses and industries, through approximately 2,500 service connections. During 2009, the total amount of water withdrawn from the aquifer was approximately 348 million gallons. The daily average volume of water treated and pumped into the distribution system was 1.0 million gallons per day. Approximately 95 percent of the total water produced was billed directly to consumers. The balance, or unaccounted for water, was used for firefighting, hydrant use, distribution system leaks, and unauthorized use. In 2009, village water customers were charged \$5.754 per thousand gallons. Consumers that used in excess of 2,244,000 gallons per year were charged \$6.4478 per thousand gallons.

## Substances That Might Be in Drinking Water

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 activities. Contaminants that may be present in source water include: **microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants.**

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. In order to ensure that tap water is safe to drink, the State and the U.S. EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the U.S. FDA's regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

## Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. The Village Board of Trustees meets on the first and third Monday of each month at 8:00 p.m. at the Stanley H. Kellerhouse Municipal Building, One Van Wyck Street, Croton-on-Hudson, NY 10520.

## How Is My Water Treated?

Groundwater pumped from the sand and gravel aquifer is treated with chlorine at the water treatment plant for disinfection purposes. We carefully monitor the amount of chlorine, adding the quantity necessary to protect the safety of our water without compromising taste or other water-quality parameters.

## Where Does My Water Come From?

The Village of Croton-on-Hudson's main water source is a well system located in the Croton River Valley downstream from the New Croton Dam. Water is pumped directly from the well field into the distribution system, which consists of a network of water mains, four storage tanks (reservoirs), control valves, booster pump stations, hydrants, and other water-related infrastructure. The Village's total distribution system storage capacity is 2.3 million gallons. Most residents receive water from the municipal water system; the remainder use private wells, which are not covered by this report. In 2009, there were no restrictions placed on our water source.



## Questions?

For more information about this report, or for any questions relating to your drinking water, please call Thomas G. Brann, Water Foreman, at (914) 271-3775 or Westchester County Department of Health at (914) 813-5000 or [www.westchestergov.com/health](http://www.westchestergov.com/health).



## Source Water Assessment

The New York State Department of Health (NYS DOH) has completed a Source Water Assessment for this 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. See the section "Sampling Results" for a list of the contaminants that have been detected, if any. The source water assessments provide resource managers with additional information for protecting source waters into the future.

The Source Water Assessment has rated our three wells as having a medium-high susceptibility to microbials. These ratings are due primarily to the fact that the wells are high-yielding wells, drawing from a possible unconfined aquifer, which is a shallow aquifer that occurs immediately below the ground surface and has no overlying protective layer to prevent contamination from potential sources. While the Source Water Assessment rates our wells as being susceptible to microbials, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State's drinking water standards for microbial contamination.

A copy of the Source Water Assessment can be obtained for a fee by contacting the Village Engineering Department at (914) 271-4783.

## System Improvements

The Village is pursuing the development of an additional well for future demand.

Chazen Engineering has been retained to complete a report on the water system which will include options and recommendations for treatment methods for complying with the new EPA Ground Water Disinfection Rule, connection of well #5, power supply for well #5, instrumentation and controls, and additional water treatment options. The report will include an updated survey of the well field, including the additional property that was acquired by the Village in 2004 for wellhead protection and water supply purposes.

Additional water distribution system improvements being planned are the replacement of old valves, water mains, and installation of new hydrants. The Village is also working with Westchester County to update and verify the location of all fire hydrants in the GIS database. The information will be used in the County's 911 emergency response system.

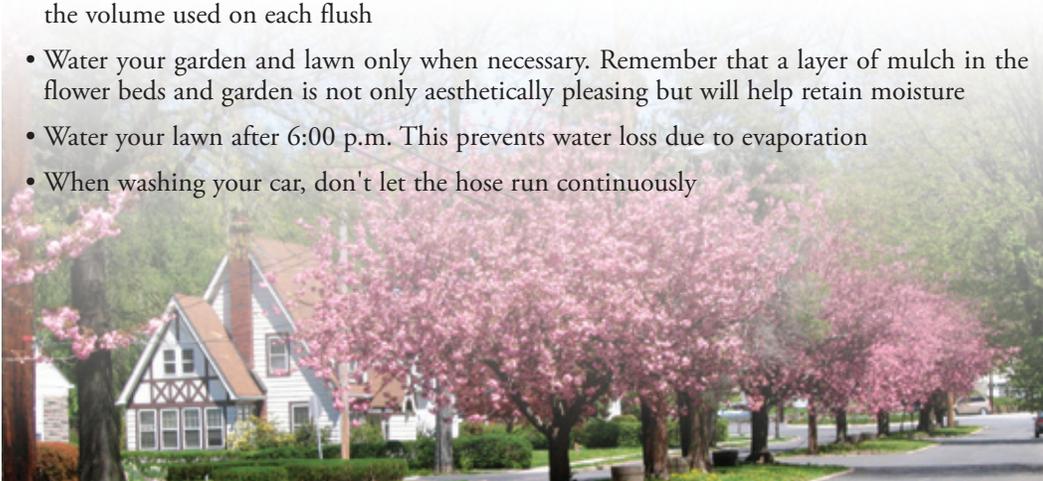


## Water Conservation Tips

Water conservation measures are an important first step in protecting our water supply. Such measures not only save the supply of our source water, but can also save you money by reducing your water bill. Here are a few suggestions.

Conservation measures you can use inside your home and business:

- Use water-saving, flow-restricting shower heads and low flow faucets (aerators)
- Repair dripping faucets
- Replace your toilet with a low flush model or place toilet tank dams in your tank to reduce the volume used on each flush
- Water your garden and lawn only when necessary. Remember that a layer of mulch in the flower beds and garden is not only aesthetically pleasing but will help retain moisture
- Water your lawn after 6:00 p.m. This prevents water loss due to evaporation
- When washing your car, don't let the hose run continuously



## Non-detected Substances

As required by state regulations, we routinely test our drinking water for numerous contaminants. In 2009 and previous years, the following substances were tested for and were not detected: Alachlor, Aldicarb, Aldicarb Sulfoxide, Aldicarb Sulfone, Arsenic, Atrazine, Carbofuran, Chlordane, Dibromochloropropane, 2,4-D, Endrin, Ethylene Dibromide, Heptachlor, Heptachlor Epoxide, Lindane, Methoxychlor, PCBs, Pentachlorophenol, Toxaphene, 2,4,5-TP (Silvex), Aldrin, Benzo(a)pyrene, Butachlor, Carbaryl, Dalapon, Di-(2-ethylhexyl)adipate, Di-(2-ethylhexyl)phthalate, Dicamba, Dieldrin, Dinoseb, Endothall, Glyphosate, Hexachlorobenzene, Hexachlorocyclopentadiene, 3-Hydroxycarbofuran, Methomyl, Metolachlor, Metribuzin, Oxamyl(vydate), Picloram, Propachlor, Simazine, 2,3,7,8-TCDD (Dioxin), Cyanide, Cadmium, Chromium, Mercury, Selenium, Antimony, Beryllium, Organohalide, Toxaphene, Microextractables, Benzene, Bromobenzene, Bromomethane, n-Butylbenzene, Bromochloromethane, sec-Butylbenzene, tert-Butylbenzene, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloromethane, 2-Chlorotoluene, 4-Chlorotoluene, Dibromomethane, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, cis-1,2-Dichloroethene, 1,2-Dichloropropane, 2,2-Dichloropropane, 1,1-Dichloropropene, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, hexachlorobutadiene, isopropylbenzene, p-isopropyltoluene, methylene chloride, n-propylbenzene, styrene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, tetrachloroethene, toluene, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, trichlorofluoromethane, 1,2,3-trichloropropane, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, p/m-xylene, o-xylene, vinyl chloride, methyl tert butyl ether, Iron, Silver, trans-1,2-Dichloroethene, monochloroacetic acid, monobromoacetic acid, dibromoacetic acid, nitrite, fluoride, nickel, ethylbenzene, Odor, Thallium.

## Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water.

The state allows us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

### REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	DATE SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	6/7/07	2	2	0.32	0.21–0.32	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloride (ppm)	06/05/2009	250	NA	70.2	50.8–70.2	No	Naturally occurring or indicative of road salt contamination
Chlorine Residual (ppm)	01/01/2009 – 12/31/2009	[4]	NA	0.6	0.2–0.6	No	By-product of drinking water chlorination
Combined Radium [226 and 228] (pCi/L)	06/02/2004	5	0	0.9	NA	No	Erosion of natural deposits
Gross Alpha Activity [including radium 226 but excluding radon and uranium] (pCi/L)	06/02/2004	15	0	0.8	NA	No	Erosion of natural deposits
Gross Beta <sup>1</sup> (pCi/L)	6/2/04	50	0	3.4	NA	No	Erosion of natural deposits
Iron (ppb)	06/05/2009	300	NA	7	ND–7	No	Naturally occurring
Manganese (ppb)	06/05/2009	300	NA	47	ND–47	No	Naturally occurring; Indicative of landfill contamination
Nitrate (ppm)	04/14/2009	10	10	0.60	0.29–0.60	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium <sup>3</sup> (ppm)	06/05/2009	(see footnote)	NA	38.1	31.4–38.1	No	Naturally occurring; Road salt; Water softeners; Animal waste
Sulfate (ppm)	06/05/2009	250	NA	13.3	12.3–13.3	No	Naturally occurring
Thallium (ppb)	09/17/2007	2	0.5	1.5	NA	No	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories
Total Trihalomethanes [TTHMs] (ppb) <sup>2</sup>	08/12/2009	80	NA	11.5	10.4–15.3	No	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter
Zinc (ppm)	06/05/2009	5	NA	0.006	ND–0.006	No	Naturally occurring; Mining waste

Tap water samples were collected for lead and copper analyses from sample sites throughout the community<sup>4</sup>

SUBSTANCE (UNIT OF MEASURE)	DATE SAMPLED	MCL		AMOUNT DETECTED (90TH%TILE)		SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
		AL	MCLG	RANGE	LOW-HIGH			
Copper (ppm)	12/23/2009	1.3	1.3	1.27	ND–1.77	4/40	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	12/23/2009	15	0	9.3	ND–38.1	2/40	No	Corrosion of household plumbing systems; Erosion of natural deposits

<sup>1</sup>The state considers 50 pCi/L to be the level of concern of beta particles.

<sup>2</sup>The trihalomethanes detected were bromodichloromethane, chloroform, and dibromochloromethane.

<sup>3</sup>Water that contains more than 20 ppm of sodium should not be used for drinking by people on severely restricted sodium diets. Water that contains more than 270 ppm of sodium should not be used for drinking by people on moderately restricted sodium diets.

<sup>4</sup>The level presented represents the 90th percentile of the total sites tested. A percentile is a value on a scale of 100 that indicates the percent of the distribution that is equal to or below it. The 90th percentile is equal to or greater than 90 percent of the lead and copper values detected.

## Definitions

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

**MCL (Maximum Contaminant Level):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as possible.

**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.

**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.

**MRDLG (Maximum Residual Disinfectant 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.

**NA:** Not applicable.

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).