

*Annual Drinking Water Quality Report for 2007*  
*Village of Williamsville Water Department*  
*5565 Main Street*  
*(Public Water Supply ID# NY 1400541)*

## **INTRODUCTION**

To comply with State regulations, the Village of Williamsville Water Department will be annually issuing 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 health standards. We are proud to report that our system has never violated a maximum contaminant level or any other water quality standard. 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 the **Department of Public Works, Marc W. Shuttleworth, at (716) 632-5009**. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled Village Board meetings. The meetings are held the second and fourth Monday of each month in the Village Hall Auditorium at 7:30 PM.

## **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, 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. 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 is Lake Erie and the Niagara River and is delivered to the Village from the Erie County Water Authority (ECWA). Before the water is delivered to you, ECWA rigorously treats it to remove harmful contaminants. Two treatment plants handle that process; the Sturgeon Point Water Treatment Plant in the Town of Evans, New York and the Van de Water Treatment Plant on the upper Niagara River in Tonawanda, New York. These two plants serve more than one half million people in Western New York. In 2007 ECWA treated and delivered roughly 25 billion gallons of water to Western New York.

## **FACTS AND FIGURES**

The Village of Williamsville is a bulk purchaser of water from the Erie County Water Authority (ECWA). Our water system serves 5,573 people through 2,058 service connections. The Village purchased 241,480m gallons of treated water during 2007. Of the 241,480m gallons purchased, 191,168m gallons were sold at \$4.23 per 1000 gallons. The remaining unaccounted water was used during fire fighting, system testing, and hydrant flushing or lost through water main/service leaks. To keep costs at a minimum, the Village of Williamsville encourages customers to practice water conservation measures such as daily conscientious use of water, proper use of water conserving appliances, and retro-fitting plumbing fixtures.

## **ARE THERE CONTAMINANTS IN OUR DRINKING WATER?**

As the State regulations require, ECWA routinely tests your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds. 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 Erie County Health Department (716-858-7677).

## **IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?**

During 2007, our system was in compliance with applicable State drinking water operating, and monitoring requirements.

## **INFORMATION ON CRYPTOSPORIDIUM**

Cryptosporidium is a microbial pathogen found in surface water and groundwater under the influence of surface water. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Ingestion of Cryptosporidium may cause cryptosporidiosis, a gastrointestinal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their health care provider 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.

## **INFORMATION ON GIARDIA**

Giardia is a microbial pathogen present in varying concentrations in many surface waters and groundwater under the influence of surface water. Giardia is removed/inactivated through a combination of filtration and disinfection or by disinfection. Ingestion of Giardia may cause giardiasis, an intestinal illness. People exposed to Giardia may experience mild or severe diarrhea, or in some instances no symptoms at all. Fever is rarely present. Occasionally, some individuals will have chronic diarrhea over several weeks or a month, with significant weight loss. Giardiasis can be treated with anti-parasitic medication. Individuals with weakened immune systems should consult with their health care providers about what steps would best reduce their risks of becoming infected with Giardiasis. Individuals who think that they may have been exposed to Giardiasis should contact their health care providers immediately. The Giardia parasite is passed in the feces of an infected person or animal and may contaminate water or food. Person to person transmission may also occur in day care centers or other settings where handwashing practices are poor.

## **INFORMATION ON RADON**

Radon is a naturally-occurring radioactive gas found in soil and outdoor air that may also be found in drinking water and indoor air. Some people exposed to elevated radon levels over many years in drinking water may have an increased risk of getting cancer. The main risk is lung cancer from radon entering indoor air from soil under homes.

For additional information call your state radon program (1-800-458-1158) or call EPA's Radon Hotline (1-800-SOS-Radon).

## **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).

## **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 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, Then check the meter after 15 minutes, If it moved, you have a leak.

## **SYSTEM IMPROVEMENTS**

In 2007 the Village of Williamsville upgraded the existing waterline on North Long Street from Glen Avenue Extension northward to the Village line, increasing the size from a 6 inch line to an 8 inch line.

## **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. If you have any questions about this report or concerning your drinking water, please contact Marc W. Shuttleworth, Department of Public Works at (716) 632-5009. The Village of Williamsville remains dedicated to the goal of providing a high quality product and reliable cost-effective service to it's customers at a reasonable rate.



# ERIE COUNTY WATER AUTHORITY

## 2007 WATER QUALITY MONITORING REPORT ANNUAL WATER QUALITY REPORT SUPPLEMENT



### DETECTED CONTAMINANTS

Metals, Inorganics, Physical Tests	Violation Yes/No	MCL	MCLG	Level Detected	Sources in Drinking Water
Arsenic	No	10 ug/liter	NE	0.62 - 0.72 ug/liter; Average = 0.67	Erosion of natural deposits; orchard runoff; glass and electronic production waste
Asbestos	No	7 MFL	7 MFL	ND - 0.2 MFL; Average = ND	Erosion of natural deposits; decay of asbestos cement water mains
Barium	No	2 mg/liter	NE	0.021 mg/liter	Erosion of natural deposits; drilling and metal wastes
Chloride	No	250 mg/liter	NE	18 - 26 mg/liter; Average = 19	Naturally occurring in source water
Chlorine	No	MRL = 4.0 mg/liter	MRLG = 4 mg/liter	<0.20 to 2.2 mg/liter; Average = 0.76	Added for disinfection
Fluoride	No	2.2 mg/liter	2.2 mg/liter	0.04 - 1.27 mg/liter; Average = 0.77	Added for disinfection
Lead <sup>1</sup>	No	15 ug/liter	0 ug/liter	ND-38 ug/liter; 90th percentile 4 ug/liter; 1 of 97 above AL	Home plumbing corrosion; natural erosion
Nitrate	No	10 mg/liter	10 mg/liter	0.21 to 0.24 mg/liter; Average = 0.22	Runoff from fertilizer use
pH	No	NR	NE	6.8-8.8 SU; Average = 8.0	Naturally occurring; adjusted for corrosion control
Turbidity <sup>2</sup>	No	TT	NE	0.42 NTU highest detected; 97.3% was lowest monthly % < 0.30 NTU	Soil runoff

1 Lead is not present in the drinking water that is treated and delivered to your home. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. The Erie County Water Authority 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 (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

2 Turbidity is a measure of the cloudiness of water. ECMA monitors turbidity because it is a good indicator of the effectiveness of our filtration system. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for bacterial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

On 8/09/07 the Van de Water Treatment Plant encountered a treatment upset which caused the combined effluent turbidity to exceed 0.3 ntu for a period of time. Corrective actions were taken throughout the day and into 8/10/07 until the plant turbidities were below the 0.3 ntu MCL. At no time did the plant readings exceed the maximum allowable treatment technique MCL. The combined filter turbidities were < 0.3 ntu 97.3% of the time for the month of August 2007.

Organic Compounds	Violation Yes/No	MCL (ug/liter)	MCLG (ug/liter)	Level Detected (ug/liter)	Sources in Drinking Water
Total Trihalomethanes	No	RAA-60	NE	13.96 ug/liter; RAA = 41.0	By-product of water disinfection (chlorination)
Total Haloacetic Acids	No	RAA-60	NE	5 - 54 ug/liter; RAA = 19.9	By-product of water disinfection (chlorination)
Chloroethane <sup>3</sup>	No	5	NE	ND - 0.58 ug/liter; Average ND	Used in organic chemistry as an extractant and in industry as a solvent
1,2-Dichloroethane <sup>3</sup>	No	NR	NE	ND - 0.61 ug/liter; Average ND	Discharge from industrial chemical factories
MIB and Geosmin	No	NR	NE	ND-4.5 ug/liter; Average < 2 (ND)	Taste and odor compounds from algae decomposition

3 Low levels of these compounds were detected in a sample taken 12/19/07 at the Sturgeon Point Treatment Plant. The low levels detected are not a violation of the MCL. Follow-up testing did not detect these compounds in the water. Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.

Radioactive Parameters	Violation Yes/No	MCL	MCLG	Level Detected	Sources in Drinking Water
Gross Alpha	No	15.0 pCi/liter	0 pCi/liter	ND-1.7 pCi/liter	Erosion of natural deposits
Gross Beta	No	50 <sup>+</sup> pCi/liter	0 pCi/liter	ND-2.2 pCi/liter	Decay of natural and man-made deposits
Combined Radium 226/Radium 228	No	5.0 pCi/liter	0 pCi/liter	ND	Erosion of natural deposits
Radon-222	No	NR	300 pCi/liter	3 pCi/liter	Natural radioactive gas
Total Uranium	No	30 ug/liter	0 ug/liter	ND-0.48 ug/liter	Erosion of natural deposits

<sup>+</sup> New York State Department of Health considers 50 pCi/liter to be the level of concern for beta particles.

Microbiological Parameters	Violation Yes/No	MCL	MCLG	Level Detected	Sources in Drinking Water
Total Coliform Bacteria	No <sup>4</sup>	Any positive sample	0	0.47% = highest percentage of monthly positives	Naturally present in environment
E. coli Bacteria	No <sup>5</sup>	Any positive sample	0	2 <sup>6</sup>	Human and animal fecal waste

- 4 A violation occurs when more than 5% of the total coliform samples collected per month are positive.
- 5 A violation occurs when a total coliform positive sample is positive for E. coli and a repeat total coliform sample is positive or when a total coliform positive sample is negative for E. coli but a repeat total coliform sample is positive and the sample is also positive for E. coli.
- 6 A water sample taken on 1/16/07 at the Dodge Rd Elementary School was suspected of being positive for E. coli. Follow-up sampling and testing was performed and the results were negative for both total coliform & E. coli. No MCL violation occurred.
- 7 On 4/04/07 the Erie County Water Authority was issued a reporting violation for failing to report a suspected positive E. coli result within the required time frame. The organism was detected in a water sample taken 3/31/07 at the Van de Water Treatment Plant. Follow-up sampling and testing were performed and the results were negative for both total coliform & E. coli. No MCL violation occurred.

GIARDIA AND CRYPTOSPORIDIUM	Violation Yes/No	Number of Samples Testing Positive		Number of Samples Tested
		Giardia	Cryptosporidium	
Source Water	No	5	1	24
Treated Drinking Water	No	0	0	24

*Cryptosporidium* is a microscopic pathogen found in surface waters throughout the United States, as a result of animal waste runoff. It can cause abdominal infection, diarrhea, nausea, and abdominal cramps if ingested. Our filtration process effectively removes *Cryptosporidium*. *Cryptosporidium* was not detected in any treated water samples taken in 2007.

*Giardia* is a microbial pathogen present in varying concentrations in many surface waters. In 2007 *Giardia* was detected in 5 of 24 raw source water samples but was not detected in any treated drinking water samples. *Giardia* is removed/inactivated through a combination of filtration and disinfection or by disinfection alone.

Contaminants that may be present in source water before we treat it include:

- \*Agricultural Contaminants, such as vines and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- \*Inorganic Contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- \*Pesticides and Herbicides, which may come from a variety of sources such as urban storm water runoff, agricultural and residential uses.
- \*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 storm water runoff, and septic systems.
- \*Radioactive Contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

**Compounds or Elements Tested For But Not Detected**

2-Chlorotoluene	1,1,2-Trichloroethane	DCPA Monoacid degradate	Nitrite
4-Chlorotoluene	1,2,3-Trichloropropane	Dalapon	Nitrobenzene
2,4-D	1,1,2-Trichlorofluoroethane	Di(2-ethylhexyl) adipate	Oxanyl (Vydate)
4,4'-DDE	1,2,4-Trimethylbenzene	Di(2-ethylhexyl) phthalate	PCB 1016
DCPA monoacid degradate	1,3,5-Trimethylbenzene	Dibromomethane	PCB 1221
DCPA monoacid degradate	Acetochlor	Dicamba	PCB 1232
1,2-Dibromo-3-Chloropropane	Akkacarb	Dieldrin	PCB 1242
1,2-Dibromooethane	Akkarb Sulfone	Dinoseb	PCB 1248
1,2-Dichlorobenzene	Akkarb Sulfoxide	Diquat	PCB 1254
1,3-Dichlorobenzene	Akin	EPTC	PCB 1260
1,4-Dichlorobenzene	Atronyl	Endosulf	Pentachlorophenol
1,1-Dichloroethane	Atrazine	Endrin	Perchlorate
1,1-Dichloroethylene	Benzene	Ethylbenzene	Phosphate
cis-1,2-Dichloroethylene	Benz(a)pyrene	Free Ammonia	Picloram
trans-1,2-Dichloroethylene	Beryllium	Glyphosate	Propachlor
1,2-Dichloropropane	Bromobenzene	Hepachlor	Propoxur
1,3-Dichloropropane	Bromochloromethane	Hepachlor Epoxide	n-Propylbenzene
2,2-Dichloropropane	Bromomethane	Hexachlorobenzene	Selenium
1,1-Dichloropropene	Butachlor	Hexachlorobutadiene	Silver
cis-1,3-Dichloropropene	n-Butylbenzene	Hexachlorocyclopentadiene	Sinazine
trans-1,3-Dichloropropene	sec-Butylbenzene	Isopropylbenzene	Syname
2,4-Dinitrotoluene	t-Butylbenzene	p-Isopropyltoluene	Tebacil
2,6-Dinitrotoluene	Cadmium	Lindane	Tetrachloroethylene
3-Hydroxycarbofuran	Carbaryl	Manganese	Thallium
1-Naphthol	Carbaryl	Mercury	Toluene
2,3,7,8-TCDD (Dioxin)	Carbon Tetrachloride	Methiocarb	Toxaphene
2,4,5-TP (Silvex)	Chloroethane	Methomyl	Trichloroethylene
1,1,1,2-Tetrachloroethane	Chlorobenzene	Methoxychlor	Trichlorofluoromethane
1,1,1,2-Tetrachloroethane	Chloroethane	Methyl t-butyl ether (MTBE)	Vinyl Chloride
1,2,3-Trichlorobenzene	Chromium	Methylene Chloride	Xylenes
1,2,4-Trichlorobenzene	Copper	Melolachlor	Zinc
1,1,1-Trichloroethane	Cyanide	Methibuzin	
1,1,2-Trichloroethane	DCPA Diacid degradate	Molinate	
1,1,2-Trichloroethane	Dialcylchloromethane	Naphthalene	

**ABBREVIATIONS AND TERMS:**

- AL = Action Level: the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
  - CFU/100 ml = Colony Forming Units per 100 milliliters
  - MCL= Maximum Contaminant Level: the highest level of a contaminant allowed in drinking water.
  - MCLG = Maximum Contaminant Level Goal: the level of a contaminant in drinking water below which there is no known or expected risk.
  - MFL = Million Rbers/fiber (Asbestos)
  - mg/liter = milligrams per liter (parts per million)
  - 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 contamination
  - ND = Not Detected: absent or present at less than testing method detection limit
  - ng/liter = nanograms per liter = parts per trillion
  - NE = Not Established
  - NR = Not Regulated
  - NTU = Nephelometric Turbidity Units
  - pcf/liter = picocuries per liter
  - RAA = Running Annual Average
  - SU = Standard Units (pH measurement)
  - TT = Treatment Technique: a required process intended to reduce the level of a contaminant in drinking water.
  - ug/liter = micrograms per liter (parts per billion)
  - Variations and Exemptions= State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
  - < = Less Than
  - ≤ = Less Than or Equal To
- Results are from 2007 analyses or from the most recent year that tests were conducted in accordance with regulatory requirements. Some tests are not required to be performed on an annual basis. Information can be obtained upon request from the ECWA Water Quality Laboratory (770) 855-8570 or on the Internet at [www.ecwa.org](http://www.ecwa.org).