Annual Drinking Water Quality Report for 2008
Town of Tonawanda Water System
218 Aqua Lane, Tonawanda, NY 14150
(Public Water Supply ID #0004556)

INTRODUCTION

To comply with State regulations, the Town of Tonawanda Water System 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, as in years past, your tap water met all United States Environmental Protection Agency (USEPA) and New York State Department of Health (NYSDOH) drinking water health standards. Once again we are proud to report that our system has never violated a water quality standard, or operated under a variance of any kind. 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 concerns about your drinking water, please contact Mr. Daniel O'Leary, Chief Operator of the Town of Tonawanda Water Treatment Plant at (716) 877-4453. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled Town of Tonawanda Town Board public meetings. The meetings are held every other Monday at 7:30 pm in the Town of Tonawanda Municipal Building, 2919 Delaware Avenue, Kenmore, NY 14217.

The Town of Tonawanda Water System also provides water to the Village of Kenmore Water Department, who in turn, distributes and bills water to its customers within Village limits. Kenmore water users are encouraged to contact Mr. John Neiss, Kenmore Superintendent of Public Works at (716) 875-0527. Kenmore Village Board meetings are held the first and third Tuesday of every month.

All information provided in this report is applicable to all water users in the Town of Tonawanda and the Village of Kenmore. Questions regarding this report may also be directed to the Erie County Health Department at (716) 858-7677.

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**, such as viruses 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 agriculture, urban storm water runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts 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.

Our water source is drawn from the Niagara River through a seven-foot wide water intake connected to the Town of Tonawanda Water Treatment Plant, located at the foot of Sheridan Drive and River Road. During 2008, our system did not experience any restriction of our water source. This is a source of high quality and great stability. It is considered to be unlimited, and as such, we experience no source restrictions, loss of service or limitations. The water is treated by modern conventional water treatment techniques which include disinfection (chlorination), coagulation, flocculation, sedimentation, filtration, and fluoridation prior to distribution. During summer algal bloom months, activated carbon may be applied to enhance taste and odor aesthetic qualities. Water quality is continuously monitored and tested by utilizing the most modern computerized equipment and instrumentation.

Source Water Assessment

The New York State Department of Health recently completed a draft Source Water Assessment of the supply's raw water source under the state's Source Water Assessment Program (SWAP). The purpose of this program is to compile, organize, and evaluate information regarding possible and actual threats to the quality of public water supply (PWS) sources. It is important to note that source water assessment reports estimate the potential for untreated drinking water sources to be impacted by contamination. These reports do not address the safety or quality of treated finished potable tap water. The Great Lakes' watershed is exceptionally large and too big for a detailed evaluation in the SWAP. General drinking water concerns for public water supplies which use these sources include: storm generated turbidity, wastewater, toxic sediments, shipping related spills, and problems associate with exotic species (e.g. zebra mussels – intake clogging and taste and odor problems). The SWAP is based on the analysis of the contaminant inventory compiled for the drainage area deemed most likely to impact drinking water quality at this public water supply raw water intake. This assessment found a moderate susceptibility to contamination for this source of drinking water. The amount of agricultural lands in the assessment area results in elevated potential for microbials, disinfection byproduct precursors, and pesticides contamination. There is also a high density of sanitary wastewater discharges which results in elevated susceptibility for numerous contaminant categories. There is also a noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include: chemical bulk storage, landfills, Resource Conservation and Recovery Act sites and Toxics Release Inventory sites. If you have any questions about the state's Source Water Assessment Program, please contact Ms. Dolores Funke, P.E., Senior Public Health Engineer, Erie County Health Department at 858-6966.

FACTS AND FIGURES

Our water system serves over 78,000 residents in the Town of Tonawanda, the Village of Kenmore and numerous commercial businesses and industries through 25,000 service connections. During the period of January 1 to December 31 of 2008, 4.29 billion gallons of raw water were drawn from the Niagara River. The amount of water delivered to our customers was 2.86 billion gallons. Fire fighting, water main flushing, irrigation, routine maintenance and leaks accounted for 1.1 billion gallons of unmetered water. In 2008, the annual average water charge including the capital improvement fee per user was $280.18 in the Town of Tonawanda, excluding Kenmore. The Village of Kenmore purchased 598,705,000 gallons of water from the Town of Tonawanda Water System during 2008. The Village delivered 377,883,000 gallons of water for this period. The total unmetered water for the Village was 220,878,000 gallons, which was attributable to fire fighting, a water main flushing program and leaks. In 2008, water customers from the Village were charged $2.64 per 1000 gallons of water.

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, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. 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 Erie County Health Department at (716) 858-7677.

In order to ensure that tap water is safe to drink, USEPA prescribes regulations which limit the amount of certain regulated contaminants in drinking water provided by public water systems. FDA regulations establish limits for contaminants in bottled water. The presence of contaminants does not necessarily indicate that the water poses a health risk. To determine the health hazards associated with contaminants in drinking water, very stringent **Maximum Contaminant Levels** or **MCLs** have been set by USEPA. A MCL defines the highest level of a contaminant that is allowed in drinking water.
This report is based upon tests conducted in 2008 or from the most recent year in accordance with regulations. The data from the tests are presented in the Table of Detected Contaminants. Terms used in the Table and other parts of this report are defined here.

Keys to the Table:

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.
Maximum Residual Disinfectant Level (MRDL): 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.
Maximum Residual Disinfectant Level Goal (MRDLG): 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.
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.
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).
Nanograms per liter (ng/l): Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion – ppt).
Picograms per liter (pg/l): Corresponds to one part of liquid to one quadrillion parts of liquid (parts per quadrillion – ppq).
Picocuries per liter (pCi/L): A measure of the radioactivity in water.
Millirems per year (mrem/yr): A measure of radiation absorbed by the body.
Million Fibers per Liter (MFL): A measure of the presence of asbestos fibers that are longer than 10 micrometers.
> = greater than
< = less than
NE = Not Established
N/A = Not Available

ND = None Detected
CONT.= Continuous, on-Line Monitoring
URMFS= Ultimate Reduced Monitoring Frequency Status (a monitoring frequency established by the USEPA based on favorable historical data indicating that a specific contaminant has either not been found or that such levels are so low that there is no need to monitor at greater frequencies)

2008 TABLE OF DETECTED CONTAMINANTS

Contaminant	Violation (Yes/No)	Date of Sample	Level Detected (Max Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
DISINFECTION BY-PRODUCTS:							
Total Trihalomethanes (TTHMs-chloroform, bromodichloromethane, dibromochloromethane, and bromoform)	No	01/08 04/08 07/08 10/08	14 – 31	ug/l	N/A	MCL = 80	By-product of drinking water chlorination
Total Haloacetic Acids (Dibromomoacetic, Monobromoacetic Dichloroacetic, Monochloroacetic, and Trichloroacetic	No	01/08 04/08 07/08 10/08	10 – 21	ug/l	N/A	MCL = 60	By-product of drinking water chlorination
TURBIDITY:	No	CONT. * 01/01/08 08/19/08	0.03 to 0.06	NTU	N/A	TT = 95% of monthly samples must be <0.3 NTU. None may exceed 1 NTU.	Soil runoff. Turbidity is a measure of cloudiness of water. We monitor it because it is a good indicator of our filtration system.

pH:	No	Cont. 01/06/08 12/04/08	7.1 to 7.85	pH Units	N/A		A measurement of the degree of acidity or alkalinity of the water. It is one of several factors that control corrosion of pipes and plumbing fixtures
INORGANIC:							
Sodium	No	06/08	11.9	mg/l	**	N/A	see asterisk (*), below.
Nitrate	No	06/08	0.17	mg/l	10.0	10.0	Runoff from fertilizer use; leeching from septic tanks, sewage; erosion of natural deposits.
Fluoride	No	CONT. *** 02/26/08 09/22/08	0.13 1.10	mg/l	N/A	2.2	Erosion of natural deposits; a water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Chloride	No	06/08	21.3	mg/l	250	250	Naturally occurring

Lead	NO	06/06	0.004 ^	mg/l	0	AL:0.015	Corrosion of galvanized pipes. Erosion of natural deposits
Copper	NO	06/06	<0.25 ^^	mg/l	1.3	AL: 1.3	Corrosion of galvanized pipes. Erosion of natural deposits
RADIOACTIVE:							
Gross Alpha Radium 226 Uranium Uranium	No	3/08 5/08 8/08 11/08 Composite	0.52 0.03 <0.51 <0.34	pCi/L pCi/L ug/L pCi/L	0	15.0 5.0 30.0 ‡‡	Decay of natural deposits and man-made emissions.
Gross Beta Radium 228	No	3/08 5/08 8/08 11/08 Composite	1.58 0.35	pCi/L pci/L	0	50.0 5.0	Decay of natural and /or manmade radioactivity materials.
Combined Radium 226 and 228	No	3/08 5/08 8/08 11/08 Composite	0.38	pCi/L	0	5.0	Erosion of natural deposits.

* Continuous on-line monitoring. Highest 1-day average of 0.05 NTU occurred on date(s) listed.

** Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.

*** Monitored 3 times daily. Highest single recorded analysis was 1.10 mg/l on the date(s) indicated.

‡‡ NYSDOH determines beta concentration in pCi/liter. EPA considers 50 pci/l to be the level of concern for Beta/photon emitters.

^ The level presented represents the 90th percentile of 30 sites tested. This level is equal to or greater than 90% of the samples tested. The Action Level for lead was not exceeded.

^^ The level presented represents the 90th percentile of 30 sites tested. The Action Level for copper was not exceeded.

Your water was also analyzed for federal and state regulated and unregulated Synthetic Organic Chemicals (SOCs), including pesticides, and PCBs, and for regulated Principle Organic Contaminants (POCs). Additionally, your water was tested for coliform bacteria daily. None of these contaminants were detected.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

INFORMATION ON LEAD IN DRINKING WATER

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 Town of Tonawanda 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 http://www.epa.gov/safewater/lead.

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 the 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.

As part of the USEPA's Long Term Enhanced Surface Treatment Rule (LT2 ESWTR) regulation, a two years monthly sampling plan was implemented for monitoring Cryptosporidium oocysts. In that period from April 2007 through March 2009, 24 consecutive monthly samples were taken from the Niagara River and analyzed for Cryptosporidium oocysts. None were detected. As part of LT2 regulation each facility is placed into one of four treatment category (bin) classifications according to the results found. Since no oocysts were found, our water facility was classified and placed in the lowest bin (one)for which no further treatment is needed.

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 hand washing practices are poor.

During EPA's LT2 regulation monitoring for Cryptosporidium oocysts, Giardia cyst were also analyzed from the same samples and time period. No live Giardia cysts were detected; only one empty cyst was detected.

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).

INFORMATION ON FLUORIDE ADDITION

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride added for consumer dental health protection. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal range from 0.8 to 1.2 mg/l (parts per million). To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that the Town of Tonawanda Water System which also supplies water to the village of Kenmore monitor fluoride levels on a daily basis. During 2008, monitoring showed fluoride levels in your water were in the optimal range 94 % of the time. The time that the fluoride was not at optimal range was when the fluoride system was off for preventative maintenance. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride.

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our water supply sources are adequate in the Town of Tonawanda, the wasteful use of this valuable resource is not an environmentally sound practice. Saving water saves energy and some of the cost associated with both of these necessities of life. Saving water also 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. By taking the following few simple steps, you can help preserve this natural resource and reduce your water bill:

- Use water-saving flow-restricting shower heads, faucets, toilet-flushing devices and other water saving appliances;
- Do full loads of wash – dishes as well as clothes;
- Use garbage disposals sparingly. They waste water;
- Repair all leaks. A dripping faucet may waste 20 gallons of water daily. Fix it and you can save almost 6,000 gallons per year. Leaking toilets can also waste up to 100 gallons per day. Place a few drops of food coloring in the flush tank. If color appears in the bowl a few minutes later without flushing, there's a leak. 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.
- Avoid running water in the sink. Shut off water while brushing teeth, shampooing or shaving;
- Wash vehicles using hoses with shut-off nozzles, and use a bucket;
- Water your lawn only when necessary, early in the morning or late in the evening to minimize evaporation. Don't overwater. The typical lawn needs no more than one inch of water per week. Don't waste water on paved areas;
- Don't cut grass too short. Longer grass has better roots, is healthier and makes better use of water;
- Mow no more than 1/3 of the grass blade height per cut. Leave cuttings on the lawn. They improve the turf, water absorption and add a natural fertilizer.

SYSTEM IMPROVEMENTS

The Town of Tonawanda Water System maintains a vigorous and aggressive program to provide potable water to its consumers at a reasonable cost. This program includes modifications and upgrades to the system in a timely and cost-effective manner. Capital improvements to the Town of Tonawanda Water System in 2009 are planned: 2 water line replacements projects will take place this year. They are Burnside Dr. from Brompton Rd. to Blackcreek Rd. and Edgewood Ave. from Englewood Ave. to Decatur Rd. Several other water line improvements projects are planned in the Water District for 2010.

In 2008, the Village of Kenmore improved water infrastructure by implementing total reconstruction and water line replacements on McKinley Ave. and Wardman Rd. between Colvin Blvd. and the Village Line. Projects planned in 2009 are total reconstruction and water line replacements on Lincoln Blvd. between Elmwood Ave. and Delaware Ave.

Your water systems are operated by a staff of professionals dedicated to their task. Please be assured that every effort is being made to deliver a sufficient amount of water of a safe, sanitary quality to the consumers of the Town of Tonawanda and the Village of Kenmore.

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.