2008 Annual Drinking Water Quality Report
City of Olean Water Filtration Plant
1332 River Street
Olean, NY 14760

City of Olean Water Division; Public Water Supply #0400345
Town of Olean Water District; Public Water Supply #0422400
Town of Portville Water District; Public Water Supply #0430089

Dear Water Customer,

To comply with New York State regulations, the City of Olean will produce an annual 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 our water met all New York State drinking water health standards. We are proud to report that our system did not violate any maximum contaminant level or any other water quality standard. This report provides an overview of last year's water quality. We have included 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 the water system in general, please feel free to contact one of the individuals listed below. We want you to be informed about your drinking water. If you want to learn more, you may attend any of the City of Olean Common Council meetings at the City of Olean Municipal Building. They are held at 7:30 pm on the second and fourth Tuesdays of the month with the exception of holidays.

CONTACT INFORMATION:

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Where Does our Water Come From?

The City of Olean water system utilizes four water sources. These are: Well Site M18 on Richmond Avenue; Well Sites M37 and 38 on the East River Road; and the water treatment plant on River Street, which draws water from the Olean Creek.

Well Site M18 supplies much of the pressure for the eastern part of our water system. This well site runs 24/7 and can produce upwards of 1.4 million gallons of water each day. The water is first treated through an air-stripper tower to remove volatile contaminants, then it is disinfected with chlorine, and finally fluoride is added before it is pumped out to the distribution system.

Well Sites M37 and 38 supply water to the southern and western parts of our system. One or two wells can be run, dependent on water demand. When both wells are running, this well site can produce around 1.6 million gallons of water per day. As with M18, this water is first treated through an air-stripper tower to remove volatile contaminants, then it is disinfected with chlorine, and finally fluoride is added prior to being pumped to the system.

The water plant on River Street is used to supplement water from the well sites. The process is much more involved and more costly. First, water is drawn from the Olean Creek and pumped a few hundred yards to the water plant. Chemicals are then added to help settle out particles in the water. After the larger particles settle out, chlorine is added to start disinfecting the water, and then the water is filtered through sand and anthracite. More chlorine is added after the filters (to adjust to a desired level), along with fluoride (for dental health) and caustic soda (to adjust pH levels for corrosion control). It is then stored in a large clearwell to allow for contact time (allowing time for the chlorine to disinfect the water) before it is pumped out to the system.

Storage tanks on Mount Herman and above Stardust Circle store extra water and maintain pressure in the system when any of the facilities are not running.

Source Water Assessment Summary

The State of New York maintains a program called the Source Water Assessment Program, in which the State evaluates each source of water used for public drinking water for possible and actual threats to its quality. The following list shows the potential sources of contamination for each well, the likelihood that the contaminants will reach the well, and an overall susceptibility rating for each contaminant. All well sites are listed together on this summary – the results were the same for each well on the report. The full report is available from the contacts on the first page of this report.

Contaminant Category	City of Olean Wells M18, M37, M38		City of Olean – Olean Creek	
	Sensitivity	Susceptibility	Sensitivity	Susceptibility
Halogenated Solvents	High	Very High	Medium	Medium
Petroleum Products	High	High	Medium	Medium
Herbicides/Pesticides	High	High	Medium	Medium
Other Industrial Organics	High	High	Medium	Medium
Metals	High	High	Medium	Medium
Nitrates	High	High	Medium	Medium
Protozoa	Medium	Medium	High	High
Enteric Bacteria	Medium	Medium	High	Medium – High
Enteric Viruses	Medium	Medium	High	Medium – High
Cations/Anions (Salts, Sulfate)	High	High	Medium	Medium
Sediments/Turbidity	N/A	N/A	High	Very High
DBP Precursors	N/A	N/A	Medium	Medium

Adapted from New York State Source Water Assessment Report for System #NY0400345, May 8, 2003

Educational Statements about Contaminants

In general, the sources of drinking water (both tap and bottled) 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 materials, and can pick up substances resulting from the presence of animals or from human activities.

As the State regulations require, we routinely test your water for numerous contaminants. These include but are not limited to: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants (refer to the end of this document for a complete listing of what was tested for and detected). 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.

It should be noted that all drinking water, including bottled 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 at 1-800-426-4791 or the Cattaraugus County Department of Health at 716-373-8050.

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 populous. 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 the health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by microbial pathogens are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Information about Lead in Drinking Water

As you can see from the table of detected contaminants, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below New York State requirements. It should be noted that the action level for lead was exceeded in two of the samples tested. We are required to present the following 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 the construction of your home's plumbing. The City of Olean 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 elevated lead levels in your home's 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 at 1-800-426-4791 or at http://www.epa.gov/safewater/lead

Information on Fluoride Addition

Our system is one of the many drinking water systems in New York State that provides drinking water with controlled, low level of fluoride 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 we monitor fluoride levels on a daily basis. During 2008 monitoring showed that fluoride levels in your water were in the optimal range 81% of the time. It should be noted that we suspended fluoride for about two weeks in February 2009 for maintenance and repair of the fluoride feed system for wells M37/38. None of the monitoring results showed fluoride levels that approach the 2.2 mg/L MCL for fluoride.

Water Usage Information

Our water system serves approximately 16,000 people in the City of Olean, Town of Olean, and Town of Portville through over 7,000 service connections. The total water produced in 2008 was 931,734,900 gallons, with an average daily production of 2,545,733 gallons and a highest single day of production of 4,749,202 gallons on June 6, 2008. The total amount of water delivered to customers equaled 628,151,472 gallons. This leaves an unaccounted for total of 303,583,428 gallons, or 32.6%. ***Unaccounted for water includes water used to fight fires, flush mains, leaks in the system, used by City facilities, and inaccurate water meters in need of replacement.***

Water Rate Breakdown (as of June 1, 2008)

Water Used:	first 1000 ft^3	next 4000 ft^3	next 5000 ft^3	next 20,000 ft^3
Residential:	$5.70	$4.70	$4.20	$3.70
Commercial:	$5.70	$5.20	$4.70	$3.70

Breaking down production from the different sources, we find that Well Site M18 produced 284 million gallons; Well Site M37/38 produced 421 million gallons; and the Filtration Plant produced 227 million gallons.

Information on detected contaminants not required to be tested for:

We tested for the following contaminants in 2008 for internal information only. The State of New York does not require that we test for these contaminants. These are the results:

2008 City of Olean – Other detected contaminants				
Contaminant	**Date of Test**	**Range Detected**	**MCL**	**Source of Contaminant**
Sodium	5/22/2008	12.1 to 28.0 mg/L; Avg. = 19.9 mg/L	See *NOTE*	Naturally occurring; By-product of Treatment Chemicals
Magnesium	5/22/2008	5.0 to 10.6 mg/L; Avg. = 8.9 mg/L	N/A	Naturally occurring
Manganese	5/22/2008	ND to 24 ug/L Avg. = 8 ug/L	300 ug/L	Naturally occurring
Silica (Soluble)	5/22/2008	4.1 to 11 mg/L Avg. = 8.7 mg/L	N/A	Naturally occurring

***NOTE*: Water containing more than 20 mg/L of sodium should not be used for drinking by persons with severely restricted sodium diets.**

Report on NON-detected Contaminants

The City of Olean is responsible for frequently monitoring and testing the drinking water to ensure that a safe quality product is being delivered to our consumers. We routinely monitor for other contaminants in our drinking water, including: inorganic contaminants (annually), synthetic organic contaminants (annually), volatile organic contaminants (water plant annually, wells every other month). We also sample at least 17 times per month for coliform bacteria (fifteen in the City of Olean, one in the Town of Portville, and one in the Town of Olean.) Any detected contaminants are listed in the Table of Detected Contaminants; non-detected contaminants are not listed

Test Results as per Stage 2 Disinfection By-Products (DBP) Rule

In 2008 we began testing for disinfection by-products under the Stage 2 DBP rule set forth by the EPA. This initial distribution system evaluation (IDSE) is meant to assess our distribution system and find areas that may contain high levels of disinfection by-products. The results for the individual locations being evaluated are in the table below.

Location	**October 2008**		**December 2008**	
	HAA5	**TTHM**	**HAA5**	**TTHM**
1332 River Street	13 ug/L	33 ug/L	7.2 ug/L	13 ug/L
1641 East State Rd	ND	2.4 ug/L	0.23 ug/L	1.6 ug/L
629 East State Rd	ND	0.49 ug/L	0.20 ug/L	0.25 ug/L
1471 East State Rd	2.8 ug/L	11 ug/L	0.79 ug/L	5.1 ug/L
174 South 19th Street	16 ug/L	36 ug/L	8.1 ug/L	20 ug/L
1220 Queen Street	0.47 ug/L	5.7 ug/L	0.68 ug/L	1.0 ug/L
759 South Union Street	9.4 ug/L	37 ug/L	11 ug/L	29 ug/L
515 Main Street (Dialysis Center)	13 ug/L	4.1 ug/L	1.0 ug/L	4.8 ug/L

After the initial assessment we will re-evaluate these along with the Stage 1 DBP sites being monitored currently to make sure we are monitoring locations with the highest readings in the system. These are not being used for compliance, so no MCL is given. We have filed for Very Small System Waivers for the Towns of Olean and Portville so no separate monitoring programs will be required for those districts.

Why Save Water and How to Avoid Wasting It?

Although our system has an adequate amount of water to meet present and future demand, 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;
- Saving water lessens the strain on the water system during a dry spell of 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 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 toilet. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you can save more than 30,000 gallons a year.
- Use you 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 then you have a leak.

Definitions for Following Section on Detected Contaminants

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 possible.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water which below 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 that is 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 (A.L.): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Non-detects (ND): Laboratory analysis did not find the constituent at a level above their detection limit.

Nephelometric Units (NTU): A measure of the cloudiness 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): Measure of radioactivity in a liquid.

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

Locational Running Annual Average (LRAA): This is a calculation of the average of all readings in the year preceding the date of sampling. It is site-specific and is not affected by other location readings.

Running Annual Average (RAA): This is a calculation of the average of all the readings in the year preceding the date of sampling. This is NOT site specific and averages all results for a particular parameter.

City of Olean, NY Table of Detected Contaminants - 2008						
Parameter Tested For	Violation? Yes/No	Sample Date (or date of highest reading)	Level of Detection and (Range)	MCL (Regulatory Limit)	MCLG (Ideal Goal)	Likely Source of Contamination
Barium	No	5/22/2008	High = 45 ug/L (24 – 45 ug/L)	2000 ug/L	N/A	Erosion of natural deposits; drilling and metal wastes
Chloride	No	5/22/2008	High = 51.2 mg/L (35.0 – 51.2 mg/L)	250 mg/L	N/A	Naturally occurring in source water
EFFLUENT Chlorine	No	2/18/2008	HIGH Avg. = 1.08 mg/L (0.46 – 2.24 mg/L)	MRDL = 4.0 mg/L	MRDLG = 4 mg/L	Added for disinfection
SYSTEM Chlorine	No	4/18/2008	Avg. = 0.78 mg/L (<0.20 – 1.35 mg/L)	MRDL = 4.0 mg/L	MRDLG = 4 mg/L	Added for disinfection
Copper (2)	No	9/12/2008	90th percentile = 0.39 mg/L (0.0077 to 0.62 mg/L)	Action Level = 1.3 mg/L	0 mg/L	Naturally occurring in source water; corrosion of plumbing components
SYSTEM Fluoride	No	3/20/2008	Avg. = 0.95 mg/L (0.18 – 1.33 mg/L)	2.2 mg/L	1.0 mg/L	Naturally occurring in source water; also added for dental health
Nitrate	No	5/22/2008	High = 1.5 mg/L (0.38 – 1.5 mg/L)	10 mg/L	10 mg/L	Runoff from fertilizer use
Sulfate	No	5/22/2008	High = 23.5 mg/L (11.3 – 23.5 mg/L)	250.0 mg/L	N/A	Naturally occurring in source water
Lead (2)	No	9/10/2008	90th percentile = 4.5 ug/L (ND to 44 ug/L)	Action Level = 15 ug/L	0 ug/L	Naturally occurring in source water; corrosion of plumbing components
Filtered Water Turbidity (1)	No	2/13/2008	High = 0.29 NTU 100% of samples <0.30 NTU	95% of samples <0.30 NTU	N/A	Soil Runoff
Distribution Turbidity (1)	No	3/20/2008	Avg. = 0.13 NTU (0.06 – 0.84 NTU)	5 NTU as a monthly average	N/A	Deposits in Distribution System; Precipitation of minerals in water
Filtered Water Total Organic Carbon	No	8/20/2008	0.82 mg/L ND – 1.6 mg/L	TT	N/A	Decaying Organic Matter and other synthetic sources
Total Trihalomethanes	No	8/20/2008	High RAA = 45.54 ug/L (0.22 – 66 ug/L)	RAA < 80 ug/L	0 ug/L	By product of water disinfection
Total Haloacetic Acids	No	10/14/2008	High RAA = 12.51 ug/L (ND – 28 ug/L)	RAA < 60 ug/L	0 ug/L	By product of water disinfection
Trichloroethene	No	11/13/2008	0.28 ug/L Single Detection	5 ug/L	0 ug/L	Industrial Contamination
Total Coliform	No	8/8/2008	1 Positive Sample in Month of August	Any Positive Sample	0 positive samples	Naturally occurring in source surface water.
Alpha Particle (3)	No	4/27/2005	Avg. = 0.73 pCi/L (ND – 2.0 pCi/L)	15 pCi/L	0	Decay of natural and manmade deposits
Beta Particle (3)	No	1/18/2006	Avg. = 1.42 pCi/L (0.43 – 2.20 pCi/L)	50 pCi/L (4)	0	Decay of natural and manmade deposits
Uranium (3)	No	1/18/06	Avg. = 0.47 mg/L (ND – 1.17 mg/L)	30 ug/L	0	Erosion of natural deposits
Radium 226/228 (3)	No	1/12/2005	Avg. = 0.31 pCi/L (0.023 – 0.59 pCi/L)	5 pCi/L	0	Decay of natural and manmade deposits

NOTES:

(1) Turbidity is a measure of the cloudiness of the water and is a good indicator of the effectiveness of our filtration system.

(2) For lead and copper, we are required to take 30 samples from the system. From the test results we look at the 90th percentile reading and use that as an indicator of meeting the ACTION LIMIT (A.L.) 2 samples had lead results over the action limit; no copper samples exceeded the action limit. The 90th percentiles of both lead and copper samples were below the action limit.

(3) The State allows us to monitor 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.

(4) The State considers 50 pCi/L to be the level of concern for beta particles