

**Annual Drinking Water Quality Report for 2006**  
**City of Olean, New York 14760**  
**Public Water Supply ID# NY 0400345**

**INTRODUCTION**

To comply with State and Federal regulations, the City of Olean / DPW, will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to assist in the 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 standards. In the year 2006, we conducted tests for over 110 contaminants. We detected some of those contaminants, and found none of those contaminants at a level higher than the State allows. This report provides an overview of last year's water quality. Included are details about the source of your water, 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 Thomas Windus, Director of Public Works, at 376-5650 or Robert Thayer, Chief Water Plant Operator, at 376-5699. Questions concerning water main breaks, service line breaks, hydrants, etc. should be directed to John Haggerty, Water Distribution Supervisor, at 376-5697. Questions concerning meter readings should be addressed to Mark Whiteman, Senior Water Meter Specialist, at 376-5697. We want you to be informed about your drinking water. If you want to learn more, please attend any of the regularly scheduled Common Council meetings. The meetings are held on the 2<sup>nd</sup> and 4<sup>th</sup> Tuesday of every month.

**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 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.

Olean has two major sources of water. Most of our drinking water production comes from three wells that serve all of east Olean, portions of north Olean, south Olean, and most of west Olean. The water from the wells is pretreated through what are known as air strippers and then fluoride and chlorine are added.

The other major source of water for Olean is the Olean Creek watershed, which covers an area approximately 205 square miles. It is bounded from the south by Olean, to the east past Cuba between Jackson Hill and Beebe Hill, to the northeast by Farmersville and north by Lime Lake, and to the west by Boyce Hill in the Town of Franklinville. The primary tributaries for this area are Ischua Creek and Oil Creek, which come together to form Olean Creek, this water is treated through the City's filtration plant. Treatment at the water filter plant consists of chemicals added to the water to help settle out particles found in Olean Creek, filtration, pH control to reduce or prevent corrosion, chlorination, and fluoridation. All of our water is considered to be very good and of high quality.

**Source Water Assessment Summary**

Based on available information, the NYSDOH has completed a source water assessment for all of our water system. This assessment pertains to the groundwater (wells) and surface water (filter plant). Possible and actual threats to the drinking waters sources were evaluated. The source water assessment includes a susceptibility ratings 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 contamination of the source water. It does not mean that the water delivered to consumers is, or will become contaminated. See section "ARE THERE CONTAMINANTS IN MY DRINKING WATER?" for a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

**Source Water Maximum Susceptibility Values**

Contaminant Category	Highest Rating for System
Halogenated Solvents	Very High
Nitrates	Very High
Cations/Anions (Salts, Sulfate)	High
Herbicides/Pesticides	High
Metals	High
Other Industrial Organics	High
Petroleum Products	High
Enteric Bacteria	Medium
Enteric Viruses	Medium
Protozoa	Medium

## FACTS AND FIGURES

Our water system serves approximately 15,500 people through 6427 service connections. In 2006, the daily average water treated and pumped into the distribution system was 2,261,838 gallons. The highest single day of production was 4,696,500 gallons, and the total production for the year was 825,571,000 gallons. Unaccounted for municipal purpose water; water to flush mains; fight fires; and leakage in the water mains accounts for about 25% of the total amount produced. In 2006, water customers were charged \$51.52 for the first 1000 cu.ft of water, and \$4.15 for every 100 cu. ft. after that. The annual average charge for water is \$405.28 (this assumes that the average family in Olean uses 2200 cu. ft. of water every 3 months).

### 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, lead and copper, volatile organic compounds (VOC's), total trihalomethanes (TTHM's), haloacetic acids (HAA5's), Total Organic Carbon (TOC's), synthetic organic compounds (SOC's) and Radionuclides. The table presented in this report depicts which compounds were tested for and the concentration of the contaminant detected in your drinking water. None of the compounds we analyzed for were detected above the Maximum Contaminant Level (MCL) for that contaminant 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. A supplement containing all the results of our sampling is available in the office of the Department of Public Works, Room 206, Municipal Building.

It should be noted that all drinking water, including bottled drinking water, might 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 Cattaraugus County Health Department at 373-8050.

<i>Table of Detected Contaminants</i>							
Contaminant	Violation Y/N	Date of Sample	Level Detected (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL,TT or AL)	Likely Source of Contamination
<i>Microbiological Contaminants</i>							
<b>Turbidity</b>	N	2/3/06	0.29	NTU's	n/a	TT=0.3	Soil runoff
<i>Inorganic Contaminants</i>							
<b>Barium</b> Filter Plant	N	5/24/06	44	µg/l	2000	MCL=2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
<b>Fluoride</b> Distribution system	N	10/9/06	1260	µg/l	n/a	MCL=2200	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
<b>Lead</b> 90 <sup>th</sup> . percentile	N	Sept. 2005	5.5 (<1.0-17)	µg/l µg/l	0	AL =15	Corrosion of household plumbing systems, erosion of natural deposits
<b>Copper</b> 90 <sup>th</sup> . percentile	N	Sept. 2005	380 (27-1000)	µg/l µg/l	1300	AL =1300	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
<b>Nitrate</b> Filter Plant M-18 M-37/38	N N N	7/20/06 7/20/06 7/20/06	310 1600 900	µg/l µg/l µg/l	10	MCL=10000	Runoff from fertilizer use; leaching from septic tanks, sewage; leaching from wood preservatives.
<i>Disinfection By-Products</i>							
<b>Total Trihalomethanes (TTHMs)</b> Filter plant Wells M-18, 37/38	N	RAA For 2006	25.62 16.27	µg/l µg/l	n/a	MCL=80	By- products of drinking water chlorination
<b>Haloacetic Acids (HAA5's)</b> Filter Plant Wells M-18, 37/38	N	RAA For 2006	11.06 6.71	µg/l	n/a	MCL=60	By- products of drinking water chlorination

*Table of Detected Contaminants*

Contaminant	Violation Y/N	Date of Sample	Level Detected (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL,TT or AL)	Likely Source of Contamination
<b>Radionuclides</b>							
<b>Beta/Photon emitters</b>				Mrem/yr	0	4 mrem/yr	Decay of natural and man-made deposits.
Filter plant	N	4/19/06	2.2				
M-18	N	4/19/06	ND				
M-37/38	N	4/19/06	ND				
<b>Gross alpha particle</b>				pCi/L	0	15 pCi/L	Erosion of natural deposits.
Filter Plant	N	4/19/06	ND				
M-18	N	4/19/06	ND				
M-37/38	N	4/19/06	ND				
<b>Combined radium 226/228</b>				pCi/L	0	5 pCi/L	Erosion of natural deposits.
Filter Plant	N	4/19/06	ND				
M-18	N	4/19/06	ND				
M-37/38	N	4/19/06	ND				
<b>Uranium</b>				µg/L	0	30 µg/L	Erosion of natural deposits.
Filter Plant	N	4/19/06	ND				
M-18	N	4/19/06	0.440				
M-37/38	N	4/19/06	0.882				

## NOTES:

**Turbidity**- is a measure of the cloudiness of the water. We test for it because it is a good indicator of the effectiveness of our filtration system. Our highest turbidity measurement for the year occurred on 2/3/06 (0.29 NTU's). State regulations require that turbidity must always be below 5 NTU's. The regulations require that 95% of the turbidity samples collected have a measurement below 0.3 NTU's. Although February was the month when we had the highest measurement, the level recorded was within the acceptable range allowed and did not constitute a treatment technique violation.

**Lead**- the level presented represents the 90<sup>th</sup> percentile of the 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 90<sup>th</sup> percentile is equal to or greater than 90% of the lead values detected in your water system. In this case, 30 samples were collected in 2005 and the 90<sup>th</sup> percentile value was the 27<sup>th</sup> sample at 5.5µg/l. The action level for lead is 15µg/l and was exceeded at only one of the sites tested.

**Copper**- the level presented represents the 90<sup>th</sup> percentile of the 30 sites tested. In this case, 30 samples were collected in 2005 and the 90<sup>th</sup> percentile value was the 27<sup>th</sup> sample at 380µg/l. The action level for copper is 1300 µg/l and was not exceeded at any of the sites tested.

**Nitrates**: As a precaution we always notify physicians and health care providers in this area if there is ever higher than normal levels of nitrates in the water supply. As you can see in the table above the City has not detected nitrate levels above the Federal limit.

## 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.

**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 (µg/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 per 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 is longer than 10 micrometers.

**RAA**: Running Annual Average.

**N/a**: Not applicable.

## WHAT DOES THIS INFORMATION MEAN?

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 one of the samples collected. Based on this precedence we are required to present the following information.

*"Infants and young children are typically more vulnerable to lead in drinking water than the general population. 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. If you are concerned about elevated lead levels in your home's water, you may wish to have your water test. Flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791)."*

Total trihalomethanes were detected below the MCL of 80µg/l. This MCL became effective in 2001 for surface water systems serving 10,000 or more persons.

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

During the year 2006 our system was in compliance with all applicable New York State and Federal drinking water requirements.

We constantly test for various contaminants in the water supply to comply with regulatory requirements. This past year we did not violate any monitoring or reporting requirements.

## **INFORMATION ON CRYPTOSPORIDIUM**

Cryptosporidium is a microbial pathogen found in surface water and groundwater under the influence of surface water. Cryptosporidium may cause cryptosporidiosis, a gastrointestinal infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water. 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.

Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. During 2005, as part of our routine, monthly samples were collected on our raw water supply (Olean Creek) and analyzed for Cryptosporidium Oocysts. There were no positive Cryptosporidium oocysts.

Starting in 2006 New York State Department of Health gave us permission to stop testing for Cryptosporidium, pending approval from USEPA. The next round of testing for Cryptosporidium, according to the Long Term 2 Enhanced Surface Water Treatment Rule, will not start until the year 2013.

## **INFORMATION ON GIARDIA**

Giardia is a microbial pathogen present in varying concentrations in many surface waters and groundwater under the influence of surface water. 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. 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.

During 2005, as part of our routine, monthly samples were collected from the Olean Creek and analyzed for Giardia cysts. Of the twelve (12) samples collected during the year we had 60/100L confirmed positive Giardia cysts in the month of March, 30/100L confirmed positive Giardia cysts in the month of September and 170/100L confirmed positive Giardia cysts in the month of October. The other nine (9) samples were negative.

Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Giardia is removed/inactivated through a combination of filtration and disinfection.

Starting in 2006 New York State Department of Health gave us permission to stop testing for Giardia, pending approval from USEPA. The next round of testing for Giardia, according to the Long Term 2 Enhanced Surface Water Treatment Rule, will not start until the year 2013.

## **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 the energy required to pump water;
- ❖ Saving water reduces 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 easy to conserve water. Conservation tips include:

- ❖ Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. To conserve water, only run the dishwasher when it is fully loaded.
- ❖ Turn off the tap when brushing your teeth.
- ❖ Check every faucet in your home for leaks. Even a slow drip can waste 15 to 20 gallons a day. You can save almost 6,000 gallons per year by fixing even a small drip.
- ❖ 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. Read your meter, turn off all taps and water using appliances, and then check the meter after 15 minutes. If it moved, you have a leak.

## **SYSTEM IMPROVEMENTS**

We ask that all our customers help us protect our water sources by keeping an eye on our water shed, and calling authorities to report anything that looks suspicious or abnormal for this area. Water is vital to our community and to our way of life.

Thank you for allowing us to continue to provide your family with quality drinking water. Please call our office if you have questions.

***The City of Olean is an Equal Opportunity Provider and Employer. Discrimination is prohibited by Federal Law. Complaint of discrimination may be filed with: USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue SW, Washington, DC 20250-9410. Phone 800-795-3272 (voice) or 202-720-6382 (TDD).***

