

***Annual Drinking Water Quality Report for 2007***  
***Village of Caledonia***  
***3095 Main Street Caledonia, NY 14423***  
***Public Water Supply ID# 2501013***

**INTRODUCTION**

To comply with State regulations, the Village of Caledonia, 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 did not violate 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 **Christopher Buckley, Water Treatment Plant Operator, (585) 538-2253** or **Livingston County Environmental Health Department, (585) 243-7280**. 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 1<sup>st</sup> and 3<sup>rd</sup> Tuesday of every month at the Village of Caledonia Village Office located at 3095 Main Street Caledonia, NY.

**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 system serves 2,327 residents through 880 service connections. This includes the Town of Caledonia District #1 (PWS ID# 2530004) and the Caledonia Manufactured Home Park. Our water source consists of groundwater drawn from 2 wells, which are located at the intersection of East Avenue and Park Place. Both wells are tested for bacteria and nitrate. Well #1 represents the primary source for the village supply and is 17.5 feet in depth. Well #2, 35 feet in depth, is utilized as a back up source of water during periods of high demand. Our system also has a metered connection with Monroe County Water Authority that can be utilized in an emergency situation. The water is disinfected with a hypochlorite solution as well as sequestered for iron, manganese, and calcium. Volatile Organic Contaminants are removed from the supply through the use of an air stripper<sup>1</sup>. Fluoride is then added to the water for the promotion of healthy teeth and gums prior to distribution. We are pleased to report that the drinking water in the Village of Caledonia met all federal and state requirements. In 2007 the Village of Caledonia treated and pumped a total of 89,303,000 gallons of water. That is a monthly average of 7,442,000 gallons and a daily average of 248,000 gallons. Approximately 15,000,000 gallons was lost due to maintenance, fires, unmetered water, and leaks.

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<sup>1</sup> A packed-tower aerator consisting of cylindrical tank filled with a packing material made of plastic or other material. Water is distributed over the packing at the top of the tank and air is forced in at the bottom using a blower.

The NYSDOH 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 geology 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 section “Are there contaminants in our 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.

As mentioned before, our water is derived from 2 wells. The source water assessment has rated these wells as having a high susceptibility to microbial, nitrate, industrial solvent, and other industrial contaminants. While no significant sources of contamination have been identified in the assessment area, the wells draw from an unconfined aquifer with high hydraulic conductivity. In other words, groundwater and contaminants can move through the water table relatively quickly. Please note that, while the source water assessment rates our wells as being susceptible to the contaminants listed above, our water is disinfected and treated to ensure that the finished water is safe for human consumption. Furthermore, intensive water quality monitoring and source water protection activities, such as the Village of Caledonia’s Well Head Protection Program, will continue to ensure that the water delivered into your home meets the New York State drinking water standards.

The Livingston County Department of Health and the NYSDOH will use this information to assist in the direction of future source water protection activities. These may include additional water quality monitoring, resource management, planning, and education programs. A copy of the assessment, including a map of the assessment area, can be obtained by contacting us, as noted below.

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

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: Volatile Organic Contaminants, Synthetic Organic Contaminants, Inorganic Contaminants, Nitrate, Fluoride, Total Trihalomethanes, Halo-acetic Acids, Radioactive Contaminants, and Coliform Bacteria. The table presented below depicts which compounds were detected in your drinking water. Total Trihalomethanes, and Halo-acetic Acids were sampled for in Town of Caledonia District #1. 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.

The Caledonia public water supply has recently been investigated for being ground water under the direct influence of surface water (GWUDI). On September 11, 2006 micro particulate analysis testing was performed on the Village of Caledonia’s raw (pre-treated) water. Based on the MPA, the well water supply appears to be directly influenced by surface water. The results showed the presence of green algae, pollen, plant debris, and nematodes, which indicates a likely surface water connection to the wells. Surface water may contain varying amounts of cryptosporidium and giardia. Cryptosporidium and giardia cysts were ***not*** seen in the lab sample results. In accordance with Part 5-1, NYSDOH and EPA, water supplies that are under the direct influence of surface water must install filtration equipment as soon as possible.

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 Livingston County Health Department at (585) 243-7280.

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, inorganic compounds, volatile organic compounds, and synthetic organic compounds. None of these compounds were detected in your drinking water.

**Table of Detected Contaminants**

Contaminant	Violation Yes/No	Date of Sample	Level Detected	Range of Detections	Unit Measurement	MCL G	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Nitrate	No	1/2007 – 12/2007	3.5 (average)	1.8 – 4.7 (see health effects)	mg/l	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage, Erosion of natural deposits.
Fluoride	No	1/2007-12/2007	1.00	1.00	mg/l	N/A	2.2	Erosion of natural deposits; water additive that promotes strong teeth, discharge from fertilizer and aluminum factories.
Chloride	No	5/2006	120	N/A	mg/l	N/A	250	Naturally occurring or indicative of road salt contamination.
Sodium	No	4/2006	52	N/A	mg/l	N/A	(See health effects)	Naturally occurring, road salt, water softeners and animal waste.
Sulfate	No	6/1999	108	N/A	mg/l	N/A	250	Naturally occurring.
Lead	No	8/2/05	*2.2	ND – 2.6	ug/l	0	AL = 15	Corrosion of household plumbing and erosion of natural deposits.
Copper	No	8/2/05	*0.21	0.051 – 0.30	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems and erosion of natural deposits, leaching from wood preservatives.
Total Trihalomethanes (TTHMs)	No	8/22/06	33.4	N/A	ug/l	N/A	80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Halo-Acetic Acids	No	8/22/06	5.2	N/A	ug/L	N/A	60	By-product of drinking water chlorination
Radioactive Contaminants								
Radium – 226	No	4/16/02	0.2 (± 0.2)	N/A	pCi/L	0	5.0	Decay of natural deposits and man made emissions
Radium – 228	No	4/16/02	0.7 (± 0.9)	N/A	pCi/L	0	5.0	
Gross Alpha	No	6/21/05	0.4 (± 1.6)	N/A	pCi/L	0	15.0	

<sup>2</sup>*Volatile Organic Contaminants Analyzed in the Graney Road Tank after Painting was Completed*

Contaminant	Violation Yes/No	Date of Sample	Level Detected	Range of Detections	Unit Measurement	MCL G	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Average of Total POCs	No	9/13/07 10/09/07 11/19/07	4.6 29.25 1.40	1.4-9.25	ug/l	N/A	MCL=5.0	Tank Painting

**Notes**

1 The level presented represents the 90<sup>th</sup> percentile of 10 sites tested for lead and copper. 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 and copper values detected at your water system. The action levels for lead and copper were not exceeded in any of the samples collected.

2 The State required testing for over 50 volatile organic compounds after the Graney Road Tank interior painting project was completed. Although some of the contaminants analyzed were slightly above the MCL, The New York State Sanitary Code 5-1.51(d)(j) allows a higher MCL for a period of up to 60 days following application of a paint or lining to a potable water structure.

## **Definitions:**

**\*90<sup>th</sup> Percentile Value:** The values reported for lead and copper represent the 90<sup>th</sup> percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or greater than 90% of the lead and copper values detected at your water system.

**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.

**Not Applicable:** (N/A)

**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):** A measure of the radioactivity in water.

## **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.

### Nitrate

As you can see by the table, our system had no violations, but we have learned through our testing that some contaminants have been detected; however, these contaminants were detected below New York State requirements. Although nitrate was detected below the MCL, it was detected at 5.0mg/L, which is one-half of the MCL. Therefore, we are required to present the following information on nitrate in drinking water:

**“Nitrate in drinking water at levels above 10 mg/l is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause a blood condition called methemoglobinemia (blue baby syndrome), which is characterized by a reduced ability of the blood to carry oxygen. The Livingston County Department of Health advises that the water containing more than 10mg/L of nitrates should not be used for drinking water or food preparation for pregnant or nursing women and infants. It is recommended that bottled water certified by the New York State Department of Health be used for drinking and food preparation purposes. If you are caring for an infant, you should ask for advice from your health care provider.”**

Nitrate samples are collected two times a month in order to closely monitor fluctuating nitrate levels. Nitrates are water-soluble and can readily move through the soil into groundwater. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. Nitrates are formed from the organic nitrogen contained in fertilizers, manure, leachate from septic systems/sewage and erosion of natural deposits through a series of biological processes. Nitrates are naturally present in a number of foods, particularly vegetables. They are also used as preservatives in meats such as bacon. The major use of nitrates is in lawn, garden and agricultural fertilizers.

### **Sodium Health Effects**

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

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

During 2007, our system was in violation of a drinking water standard due to our wells being designated ground water under the direct influence of surface water. In order to comply with minimum treatment requirements we have to either install filtration or seek a new source. The Village of Caledonia is currently exploring adding filtration or purchasing water from the Monroe County Water Authority.

## **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.
- ◆ Watering lawns less frequently and preferably in early morning or late evening.
- ◆ Use swimming pool covers to minimize evaporation.
- ◆ 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.

## **SYSTEM IMPROVEMENTS AND UPGRADES**

During 2007 the Village of Caledonia Water Department continued its efforts in upgrading and maintaining our water system to the highest standards possible. Our operators continued the valve turning and hydrant maintenance program throughout 2007. This program consists of exercising every main line valve and hydrant in the distribution system each year. Hydrant flushing and leak location also was completed in the spring and fall. Along with the water system maintenance, the Water Department had the interior of the Graney Road Storage Tank painted. In 2008 the Water Department will make upgrades to the Jersey Street water main.

## CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. 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. **This report was prepared by Christopher Buckley, (State of New York Department of Health Public Water System Operator Certification # NY0036450) and Livingston County Environmental Health Department utilizing the testing results provided by New York State Department of Health and Life Science Laboratories.**

**IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER**  
**The Village of Caledonia public water supply Does Not Meet Treatment Requirements**

Area affected: The Village of Caledonia PWS, NY2501013  
The Town of Caledonia PWS, Caledonia Dist 1, NY2530004

Our water system recently violated a drinking water standard. Although this situation does not require that you take immediate action, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation.

On November 7, 2006 the New York State Department of Health ordered us to filter our water supply in addition to disinfecting. We are required to install this filtration because our well water supply has been designated as being under the direct influence of surface water. However, we have not yet installed a filtration system.

**What should I do?**

You do not need to boil your water. However, if you have specific health concerns, consult your doctor. A home filter will not necessarily solve the problem, because not all home filters protect against parasites. Call NSF International at 1(800) NSF-8010 or the Water Quality Association at 1(800) 749-0234 for information on appropriate filters.

People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1 (800) 426-4791.

**What does this mean?**

This is not a situation requiring that you take immediate action. If it had been you would have been notified immediately. We do not know of any cases of contamination. However, until improvements are made, there is an increased chance that disease-causing organisms could contaminate the water supply.

*Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms, however, are not only caused by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.*

**What happened? What is being done?**

Filtration is the best method for removing these organisms. At this time, the Village of Caledonia is exploring the options for installing filtration or purchasing water from the Monroe County Water Authority.

We anticipate resolving the problem **within a year**. Until filtration is installed, you will receive a notice similar to this every three months. For more information, please contact Christopher Buckley, at (585) 538-2253

This notice is being sent to you by the Village of Caledonia  
State Water System ID#: NY2501013.  
Date distributed: May 16, 2008