

*Annual Drinking Water Quality Report for 2014*  
*Village of Cassadaga*  
*22 Mill Street, PO Box 286*  
*Cassadaga, NY 14718*  
*Public Water Supply ID# NY 0600356*

## **INTRODUCTION**

To comply with State regulations, the Village of Cassadaga annually issues 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 and we are proud to report that our system did not violate a maximum contaminant level. We did detect methane in our water, but it is an unregulated contaminant. See below for more information about methane in our water. 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.

During the month of February 2014, the village completed significant upgrades to their water system. This included developing a new water well supply (Well #5). This new well is much deeper and taps a different underground water aquifer than the two older wells. When the new well was placed into service in 2014, customers began noticing a lot of air in the water that caused it to look milky after filling a glass or pitcher, but it clears up after sitting. Testing indicated that the air was from methane gas. When the Village learned of the test results on October 31, the new well was immediately turned off and the older wells placed back into service. The two older wells do not contain methane. In addition, village crews immediately began flushing the distribution system to replace the water containing methane with water from the older wells.

Methane can be easily remove from water, but it requires a specialized treatment system. The Village is currently investigating options and costs for installing methane treatment. We hired Chatfield Engineers PC in February who have dealt with methane before. They have begun collecting data and samples so they will be able to give us suggestions and recommendations on how to alleviate this problem. Until treatment is installed and tested, the new well will not be used.

If you have any questions about this report or concerns about your drinking water, please contact Tom Fetter, Water Operator, at 716-595-3844 or the Village Offices at 716-595-3007. 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 in the Community Room on the 1<sup>st</sup> and 3<sup>rd</sup> Wednesday of every month at 7:00 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 system serves approximately 650 people through 377 service connections. Our water system also serves the Lily Dale population and the Job Corps Center. Our water source consists of three groundwater wells. As mentioned previously, the new well (Well #5) is currently not in use. Well #4 is the primary

production well meeting the water demands of the village. Well #1 is used to supplement the production of Well #4 during drought, high water demand periods or other emergency situations. Chlorine is added to our water before it is pumped into the distribution system. A sequestering agent, called Calcquest, is also being added to the water to reduce discoloration (brown water) caused by iron and manganese in the water reacting with chlorine.

The NYS DOH has completed a source water assessment for Wells #4 and #1, 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 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. While some inorganic contaminants were detected in our water, 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 from natural sources. The presence of contaminants does not necessarily indicate that the water poses a health risk. See section “Are there contaminants in our drinking water?” for a list of the contaminants that have been detected.

The source water assessment has rated our two older wells as having a medium susceptibility to microbials, nitrates, industrial solvents, and other industrial contaminants. These ratings are due primarily to the close proximity of permitted discharge facilities (septic systems that discharge wastewater into the environment and are regulated by the state and/or federal government) to the wells and the associated activity in the assessment area. The wells draw from a confined aquifer. A copy of the assessment can be obtained by contacting us as noted above.

## 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, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, 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 Chautauqua County Department of Health and Human Services at 716-753-4481.

**TABLE OF DETECTED CONTAMINANTS**

Contaminant	Violation	Date of Sample	Level Detected	Unit Measure -ment	Regulatory Limit MCL/AL	MCLG	Likely Source of Contamination
<b>INORGANIC CONTAMINANTS</b>							
Barium Well #1	No	9/18/12	0.061	mg/l	2 (MCL)	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Barium Well #4	No	9/18/12	0.291	mg/l	2(MCL)	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Iron Well #1	No	1/16/07	0.098	mg/l	0.3	N/A	Naturally occurring.

Manganese Well #1	No	1/16/07	0.02	mg/l	0.3	N/A	Naturally occurring. Can be indicative of landfill contamination
Iron Well #4	No	1/16/07	0.18	mg/l	0.3	N/A	Naturally occurring.
Manganese Well #4	No	1/16/07	0.10	mg/l	0.03 <sup>2</sup>	N/A	Naturally occurring. Can be indicative of landfill contamination
Copper(2)	No	5/19/14 9/16/14 9/18/14	0.441; Range 0.0046- 1.28	mg/l	1.3 (AL) <sup>1</sup>	1.3	Corrosion of household plumbing systems, Erosion of natural deposits;
Lead(1)	No	5/19/14 9/16/14 9/18/14	2.0; Range ND-3.0	ug/l	15 (AL) <sup>1</sup>	0	Corrosion of household plumbing systems; Erosion of natural deposits.
Sulfate	No	11/28/01	15.9	mg/l	250 (MCL)	N/A	Naturally occurring.
Nitrate Well #1	No	5/15/14	1.07	mg/l	10.0 (MCL)	0	Runoff from fertilizer use; Leaching from septic tanks, sewage. Erosion of natural deposits.
Nitrate Well #4	No	5/15/14	0.90	mg/l	10.0 (MCL)	0	Runoff from fertilizer use; Leaching from septic tanks, sewage. Erosion of natural deposits.

#### STAGE 2 DISINFECTION BYPRODUCTS (Bard Rd)

Haloacetic Acids	No	8/28/14	2.22	ug/l	60 (MCL)	N/A	By-products of drinking water chlorination.
Trihalomethanes	No	8/28/14	2.73	ug/l	80 (MCL)	N/A	By-products of drinking water chlorination. TTHM's are formed when source water contains large amounts of organic matter.

#### RADIOLOGICALS

Radium 228 Well #5	No	5/15/14	1.09	Pci/L	5 (MCL)	N/A	Erosion of natural deposits.
Radium 226 Well #5	No	5/15/14	0.66	Pci/L	5 (MCL)	N/A	Erosion of natural deposits.
Gross Alpha Well #5	No	5/15/14	3.07	Pci/L	15(MCL)	0	Erosion of natural deposits.
Gross Beta(3) Well #5	No	5/15/14	1.77	Pci/L	8 (MCL)	0	Decay of natural deposits and man-made emissions.

#### DISINFECTANTS

Chlorine Residual Entry Point #1	No	Daily (2014)	Avg.=0.92 Range ND-2.20	mg/l	4 (MCL)	N/A	Water additive used to control microbes
Chlorine Residual Entry Point #4	No	Daily (2014)	Avg.=1.45 Range 0.10-2.20	mg/l	4 (MCL)	N/A	Water additive used to control microbes
Chlorine Residual Entry Point #5	No	Daily (2014)	Avg.=0.65 Range 0.06-2.20	mg/l	4 (MCL)	N/A	Water additive used to control microbes

#### OTHER CONTAMINANTS

Methane	N/A	10/31/14	Present <sup>4</sup>		N/A	N/A	Naturally occurring. Can be associated with oil & gas well drilling.
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#### Notes:

1- The level presented represents the average of the two 90th percentiles calculated from 20 sites tested within the 1<sup>st</sup> 6 months and then again within the 2<sup>nd</sup> 6 months. 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 90th percentile is equal to or greater than 90% of the Lead values detected at your water system. In this case a total of 40 samples were collected at your water system, 20 during the month of May and 20 samples taken in the month of September. The two 90th percentiles were calculated for each sample set and then reported as an average. That value was found to be 2.0 ug/l. The action level for Lead was not exceeded at any of the sites tested.

2- The level presented represents the average of the two 90th percentiles calculated from 20 sites tested within the 1<sup>st</sup> 6 months and then again within the 2<sup>nd</sup> 6 months. The two 90th percentiles were calculated for each sample set and then reported as an average. That value was found to be 0.441mg/l. The action level for Copper was not exceeded at any of the sites tested.

3- The NYSDOH considers 50 pCi/l to be the level of concern for beta particles.

4- Because methane gas quickly dissipates when it hits the air, it is very difficult to measure exactly how much is in the water; therefore it is being reported as present or absent.

### **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 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 (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Non-Detects (ND):** Laboratory analysis indicates that the constituent is not present.

**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.

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

During 2014, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements. As stated prior, a problem was discovered with our newest well, Well #5, late in the 2014 calendar year. Customers began to notice a lot of air in the water that caused it to look milky after filling a glass or pitcher, but cleared up after sitting. Testing indicated that the air was from methane gas. As soon as the Village learned of the test results, the new well was turned off. Currently, the village is supplying water from the two older wells which do not contain methane. The Village is pursuing treatment options to remove methane from the water with help and guidance from the Chautauqua County Department of Health and Human Services.

Drinking water that contains methane does not pose a risk to human health. The risk associated with methane in drinking water is that it may cause an explosive hazard if enough gas builds up inside a room where a water tap is running. Fortunately, the amount of methane present in the Village's water well was low enough that it did not cause any explosions. Because drinking water containing methane does not create a health risk or any long- or short-term illness, it is not required to be tested by the New York State Health Department or EPA.

## **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 FOR NON-ENGLISH SPEAKING RESIDENTS**

### **Spanish**

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

## **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.

## **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. A rate adjustments increase of \$.25 per thousand gallons will be effective June 1<sup>st</sup> 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 at 595-3007 or contact Thomas Fetter at 595-3844. Trustee Jeff Frick and Mike Lehnen have been appointed as trustees in charge of water this year.

We plan on replacing the water lines on Mill Street in the next couple of years when we can save enough money. We apologize for the delay, but the methane has to be corrected first. We will continue to replace water meters as needed and ask for your cooperation in this matter.

This past winter was very harsh and caused many residents to have frozen water lines and water line breaks. We suggest that you keep your water dripping during frigid winter temperatures to prevent frozen lines.

The Water Rates for the upcoming will continue to be billed with a structure of a \$95.00 debt service per Dwelling Unit and a water usage rate of \$4.00 per thousand gallons. Partial payments will be accepted by the Village Clerk with total to be paid within 60 days; henceforth after that date a Shut Off notice will be issued. Any unpaid water bills in arrears over nine months as of April 1<sup>st</sup> shall be included in the annual tax levy. Billings are June 1<sup>st</sup> and December 1<sup>st</sup>.

In order to keep our tax rate below the tax cap, we have decided to cut Beach Hours from 1PM-7PM, no swimming lessons will be held this year.

This institution is an equal opportunity provider, and employer

