

*Annual Drinking Water Quality Report for 2010*  
*Village of Cattaraugus*  
*14 Main Street, Cattaraugus, New York, 14719*  
*Public Water Supply ID# NY0400335*

## **INTRODUCTION**

To comply with State regulations, the Village of Cattaraugus, 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 any maximum contaminant levels 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 Jason Opferbeck, DPW Superintendent at (716) 257-5114. 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 on the second Monday of each month at 7:00 PM at the Village Hall, 14 Main Street, Cattaraugus, NY 14719.

## **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.

Water for the Village of Cattaraugus is being provided by three groundwater sources and two natural springs. Cobo well is located south of the Village and west of Route 353. It is 44 feet deep in a gravel aquifer and can produce up to 250 gallons per minute. A second and smaller auxiliary well, located at the Cobo Well site can produce up to 100 gallons per minute. Blackmar well is also located south of the Village, but is east of Route 353. It is 140 feet deep in a sand and gravel aquifer. It can produce up to 230 gallons per minute. Disinfection at the well sites is by liquid chlorine. This occurs prior to pumping of the water into the distribution system. The addition of polyphosphates at the Blackmar well house can be done to prevent naturally occurring iron from precipitating into the distribution system. In December of 2001 the Village re-connected to two previously utilized spring sites in the Town of New Albion. The wells were then designated as auxiliary sources, to be used when needed. However, the wells are routinely used during the summer months. The springs are located south of the Village in the Town of New Albion at an elevation that allows water to be distributed through the system via gravity. The Mayo Road Springs are located on the western side of Mayo Road approximately 3 miles south of the Village of Cattaraugus. The Kelley Summit Springs are located on the eastern side of New York State Route 353 approximately 3½ miles south of the Village of Cattaraugus. The water passes through two slow sand filtration systems; one that serves the Mayo Road Springs and one that serves the Kelley Summit Springs. Water is chlorinated using liquid chlorine at the filter sites. The production capacity of the springs is 200 gallons per minute. Our water system serves approximately 1,185 people through 500 service connections.

The NYS DOH has completed a source water assessment for our water system, based on available information. 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 and springs. 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.

As mentioned before, our water sources are springs and wells. Based on available information, the source water assessment has rated the susceptibility to contamination for our springs as medium to protozoan and pesticide contamination. These ratings are due to the pasture and row crop land covers in the assessment areas. However, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State’s drinking water standards.

A copy of these assessments, including a map of the assessment areas, 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: coliform bacteria, inorganic compounds, nitrate, 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 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 Cattaraugus County Health Department at (716) 373-8050.

**Table of Detected Contaminants**

<i>Contaminant</i>	<i>Violation Yes/No</i>	<i>Date of Sample</i>	<i>Level Detected (Range)</i>	<i>Unit Measurement</i>	<i>MCLG</i>	<i>Regulatory Limit (MCL, TT or AL)</i>	<i>Likely Source of Contamination</i>
<b>Disinfectant</b>							
<b>Chlorine Residual</b>	N	2010	Avg. = .41 (.09 – 1.20)	mg/l	N/A	MRDL=4	Water additive used to control microbes.
<b>Microbiological Contaminants</b>							
<b>Total Organic Carbon</b> •Mayo Road Springs	N	2010	Avg. = .3 (ND – 1.2)	mg/l	N/A	TT	Naturally present in the environment
<b>Turbidity – Filtered<sup>1</sup></b>	N	12/1/10	3.07	NTU	n/a	TT = 1.0	Soil runoff
<b>Turbidity – Filtered<sup>1</sup></b>	N	12/10	99% <1.0	NTU	n/a	TT = 95% of samples <1.0 NTU	Soil runoff
<b>Distribution Turbidity<sup>2</sup></b>	N	2010	100% <.1 NTU	NTU	N/A	TT=<5NTU	Soil runoff
<b>Inorganic Contaminants</b>							
<b>Arsenic</b> •Blackmar Well	N	8/6/08	7	ug/l	10	N=N/A	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.

<i>Contaminant</i>	<i>Violation Yes/No</i>	<i>Date of Sample</i>	<i>Level Detected (Range)</i>	<i>Unit Measurement</i>	<i>MCLG</i>	<i>Regulatory Limit (MCL, TT or AL)</i>	<i>Likely Source of Contamination</i>
<b>Barium</b> •Kelly Summit Springs •Mayo Road Springs •Blackmar Well •Cobo Well	N N N N	3/3/10 3/3/10 8/6/08 8/6/08	130 130 130 500	ug/l	2000	MCL=2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
<b>Chromium</b> •Mayo Road Springs •Cobo Well	N N	3/3/10 8/6/08	2.2 4.6	ug/l	100	MCL=100	Discharge from steel and pulp mills; Erosion of natural deposits.
<b>Copper<sup>3</sup></b>	N	9/29/09	140 (26-270)	ug/l	1300	AL=1300	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
<b>Fluoride</b> •Kelly Summit Springs •Mayo Road Springs •Blackmar Well •Cobo Well	N N N N	3/3/10 3/3/10 8/6/08 8/6/08	130 130 190 220	ug/l	N/A	MCL=2200	Erosion of natural deposits.
<b>Lead<sup>4</sup></b>	N	9/29/09	3.4 (ND-19)	ug/l	0	AL=15	Corrosion of household plumbing; erosion of natural deposits.
<b>Nickel</b> •Blackmar Well •Cobo Well	N N	8/6/08 8/6/08	2.8 1.9	ug/l	0	None set	Erosion of natural deposits.
<b>Nitrate</b> •Mayo Road Springs	N	10/26/10	4.67	mg/l	10	MCL=10	Runoff from fertilizer use; leaching from septic tanks, Sewage; erosion of natural deposits.
<b>Synthetic Organic Contaminants including Pesticides and Herbicides</b>							
Bis(2-ethylhexyl) phthalate •Blackmar Well	N	2010	Avg. = .9 (ND – 1.7)	ug/l	0	MCL = 6	Used in plastic products such as polyvinyl chloride, plastic toys, vinyl upholstery, adhesives and coatings. Compound likely to be released to the environment during production and waste disposal of these products. Also used in inks, pesticides, cosmetics and vacuum pump oil.
<b>Volatile Organic Contaminants</b>							
Dichloromethane •Blackmar Well	N	2010	Avg. = 2.4 (.8 – 4.0)	ug/l	0	MCL=5	Discharge from pharmaceutical and chemical factories.
<b>Disinfection By-Products</b>							
<b>Total Haloacetic Acids</b>	N	8/4/10	12 (9 - 12) <i>Range includes Stage 1 &amp; Stage 2</i>	ug/l	60	MCL=60	By-product of drinking water disinfection needed to kill harmful organisms.
<b>Total Trihalomethanes (TTHM)</b>	N	8/4/10	12 (6-12) <i>Range includes Stage 1 &amp; Stage 2</i>	ug/l	N/A	MCL=80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.

<i>Contaminant</i>	<i>Violation Yes/No</i>	<i>Date of Sample</i>	<i>Level Detected (Range)</i>	<i>Unit Measurement</i>	<i>MCLG</i>	<i>Regulatory Limit (MCL, TT or AL)</i>	<i>Likely Source of Contamination</i>
<b>Radiological Contaminants</b>							
<b>Gross Beta</b> •Kelly Summit Springs •Mayo Road Springs	N N	2006 2006	Avg = .88 (<1.0-1.5) Avg. = 1.33 (1.0-1.5)	pCi/L	0	MCL=50 <sup>5</sup>	Decay of natural deposits and man-made emissions.
<b>Gross Alpha</b> •Kelly Summit Springs •Mayo Road Springs •Cobo Well •Blackmar Well	N N N N	2006 2006 2008 2008	Avg. = .25 (.3-.5) Avg. = .3 (<.4-.7) Avg. = 1.1 (.55 –1.86) Avg. = 1.45 (.29 – 3.05)	pCi/L	0	MCL=15	Erosion of natural deposits.
<b>Radium 226</b> •Kelly Summit Springs •Mayo Road Springs •Cobo Well •Blackmar Well	N N N N	2006 2006 2008 2008	Avg. = .05 (<.03-.1) Avg. = .06 (.03-.15) Avg. = .33 (.08 - .52) Avg. = .25 (.07 - .52)	pCi/L	0	MCL=5	Erosion of natural deposits.
<b>Radium 228</b> •Cobo Well •Blackmar Well	N N	2008 2008	Avg. =.74 (.16 – 1.9) Avg. = .29 (.05 - .58)	pCi/L	0	MCL=5	Erosion of natural deposits.

**Notes**

- 1 – Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of our filtration system. State regulations require that turbidity must always be below 5.0 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 1.0 NTU. The levels recorded were within the acceptable range allowed and did not constitute a treatment technique violation.
- 2 – All of our monthly distribution turbidity measurements were <.1 NTU. This value is below the turbidity standard of 5 NTU assigned to our system.
- 3 - The level presented represents the 90<sup>th</sup> percentile of the 10 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 copper values detected at your water system. In this case, ten samples were collected at your water system and the 90<sup>th</sup> percentile value was the second highest value, 140 ug/l. The action level for copper was not exceeded at any of the sites tested.
- 4 - The 90<sup>th</sup> percentile level for lead was 3.4 ug/l. One of the ten sites exceeded the action level of 15 ug/l.
- 5 - The State considers 50 pCi/L to be the level of concern for beta particles.

**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).

**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 current federal drinking water requirements.

Although arsenic was detected below the MCL, it was detected at 7 ug/l from the Blackmar well, which is greater than one-half of the MCL. Therefore, we are required to present the following information on arsenic in drinking water. "NYS and EPA have promulgated a drinking water arsenic standard of 10 micrograms per liter. While your drinking water meets the standard for arsenic, it does contain low levels of arsenic. The standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effect of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems."

It should be noted that the action level for lead was exceeded at one site. Therefore, we are also required to provide 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 your home's plumbing. The Village of Cattaraugus 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>."

## **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.

- ◆ 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. 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.