

Annual Drinking Water Quality Report for 2010
WARRENSBURG WATER DISTRICT
WARRENSBURG, NEW YORK
(ID#5600112)

INTRODUCTION

To comply with State and Federal regulations, Warrensburg Water District, 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. 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 **Tom Belden, Deputy Water Superintendent, (518-623-4561)**. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled town board meetings.

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 materials, 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 source is 4 groundwater wells. The water from each well is disinfected with sodium hypochlorite prior to distribution. As a result of elevated lead, copper and iron levels two different phosphate sequestration agents were added to the water leaving the Swan Street well. There is also a 500,000-gallon storage tank, which serves as backup when there is a high demand on the water system.

FACTS AND FIGURES

Our water system serves 3600 people through 1300 service connections. The total water produced in 2010 was 158,482,000 gallons, plus or minus 1/2 million gallons lost on breaks or leaks. One million gallons was used for flushing and cleaning the storage tank. Water is billed by a flat rate. The fee schedule is on file in the Town Clerk's Office.

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, synthetic organic compounds, lead and copper, radiologicals, disinfection byproducts, and volatile 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 New York State Department of Health at (518) 793-3893.

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit Measurement	MCLG	Regulatory Limit (MCL or AL)	Likely Source of Contamination
INORGANIC COMPOUNDS							
Iron	Yes	10/21/10 5/27/10 4/29/10 4/29/10	465 54 - 432 1680(Swan St) 120 - 537	ug/l	N/A	300 (MCL)	Naturally occurring
Manganese	No	10/21/10 8/19/10 5/29/07 5/29/07	12 111 (Swan St) 66(Swan St)	ug/l	N/A	300 (MCL)	Naturally occurring
Fluoride	No	04/22/10 07/16/08	0.120(Swan St) 0.16(Horicon)	mg/l	N/A	2.2 (MCL)	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.
Zinc	No	3/11/09 7/31/09 10/21/09	0.046 (Swan) 0.056 (Swan) 0.09(Swan St)	mg/l	N/A	5 (MCL)	Naturally occurring
Chloride	No	3/11/09 7/31/09 10/21/09	34.2 (Swan St) 34.9 (Swan St) 31.9(Swan St)	mg/l	N/A	250 (MCL)	Naturally occurring or indicative of road salt contamination
Sodium ¹	No	3/11/09 7/31/09 10/21/09	24.5 (Swan St) 23.4 (Swan St) 20.3(Swan St)	mg/l	N/A	N/A	Naturally occurring; Road salt; Water softeners; Animal waste.
Silver	No	10/21/09	45.0 (Swan St)	ug/l	N/A	100 (MCL)	Naturally occurring, discharge from photographic and radiographic processing;
Barium	No	4/22/10 07/16/08 07/16/08	0.0064(Swan) 0.010(Horicon) 0.024(Library)	mg/l	2	2 (MCL)	Erosion of natural deposits
Sulfate	No	08/12/05 3/11/09 7/31/09 10/21/09	34(Horicon) 14(Library) 5.4 (Swan) 5.54 (Swan) 4.48 (Swan)	mg/l	N/A	250 (MCL)	Naturally Occurring
Nitrate	No	3/11/10	1.11 (Horicon) 3.17(Library) 0.341(Swan)	mg/l	10	10(MCL)	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Copper	Yes	6/2010 11-12/10	1.58 ² 0.098-3.76 ² 2.27 ² 0.021-2.96 ³	mg/l	1.3	1.3(AL)	Corrosion of household plumbing systems
Lead	No	6/2010 11-12/10	3 ² ND-27 ³ 4 ³ ND-13 ³	ug/l	0	15(AL)	Corrosion of household plumbing systems
RADIOLOGICAL COMPOUNDS							
Radium 228	No	10/10/07 08/23/07	1.9(Swan) 1.18(Swan)	pCi/l	0	5(MCL)	Erosion of natural deposits.
Gross Alpha	No	10/10/07	2.14(Swan)	pCi/l	0	15(MCL)	Erosion of natural deposits.
DISINFECTION BYPRODUCTS							
Total Trihalo-methanes	No	07/13/10	18	ug/l	n/a	80(MCL)	By-product of drinking water chlorination needed to kill harmful organisms. THMs are formed when source water contains large amounts of organic matter.

Notes:

- 1 - Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.
- 2 - During 2010, we collected 54 lead and copper samples between January 1, 2010 and June 30, 2010 and an additional 40 samples between July 1, 2010 and December 31, 2010. The level presented represents the 90th percentile of the sites tested during each sampling round. 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 copper or lead values detected at your water system. In the first sampling round, the 90th percentile value was the 8th highest value, the 90th percentile value for the second sampling round was the fifth highest value.
- 3 - The levels presented represent the range of detected contaminants. During the June sampling round lead was detected above the Action Level at 3 sites and copper was detected above the Action Level at 11 sites. During the November-December sampling round lead was not detected above the Action Level; however, copper was detected above the Action Level at 6 residential dwellings.

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 Resident 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.

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.

N/A: Not applicable

WHAT DOES THIS INFORMATION MEAN?

During 2010, our water system was again in violation of the Maximum Contaminant Level for iron and the Action Level for Copper. Although this is not an emergency, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation.

Iron

There is no health effects associated with the iron or color. At 1,000 ug/l a substantial number of people will note the bitter astringent taste of iron. Also, at this concentration, it imparts a brownish color to laundered clothing and stains plumbing fixtures with a characteristic rust color. Staining can result at levels of 50 ug/l, lower than those detectable to taste buds. Therefore, the MCL of 300 ug/l represents a reasonable compromise as adverse aesthetic effects are minimized at this level. Many multivitamins may contain 3,000 or 4,000 micrograms of iron per capsule.

Lead and Copper

During 2009, the Warrensburg Water District began adding Aqua-Pure 150 (50-50 blend of polyphosphate and orthophosphate) to water from the Swan Street well. Aqua-Pure 150 is supposed to create a balance between sequestration and corrosion control to bring the lead and copper levels down below action level and to sequester (hold in solution) iron and manganese which were seen at high levels. However, based on the 2009 sample results, the treatment system did not appear to be working. We are now working with staff from the Department of Health on completing a formal corrosion control study of our water system. We began this study in January 2010 and removed the Swan Street well from service during January and February and collected numerous samples from the system to study water chemistry. The Swan Street well was placed back on-line in March 2010, however, Aqua-Pure 150 is currently not being added. We will continue to provide public notification regarding these violations quarterly until the problem is resolved.

We routinely sample water at consumers' taps for lead and copper. First draw samples were collected from 54 homes served by the Water District in June 2010 and another 40 samples were collected in December 2010. Copper was detected above the action level in 11 of the samples collected in June and in 6 of the 40 samples collected in December. The regulatory

action level is based on the 90th percentile of results meaning that if more than 10% of the samples exceed the action level, steps must be taken to address the problem. The regulatory limit for copper in drinking water is 1.3mg/l. The 90th percentile for samples collected in June 2010 was 1.58 mg/l and 2.57 mg/l in December 2010.

The regulatory action level is based on the 90th percentile of results meaning that if more than 10% of the samples exceed the action level, steps must be taken to address the problem. The regulatory limit for lead in drinking water is 15 ug/l. The 90th percentile for samples collected in June 2010 and December 2010 were below 15 ug/l.

INFORMATION ABOUT COPPER IN DRINKING WATER

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

INFORMATION ABOUT LEAD IN DRINKING WATER

If present, elevated levels of lead can cause serious health problems, especially for pregnant women 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. Warrensburg WD 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>.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2010, our system received the following monitoring and reporting violations from the New York State Department of Health.

- During 2010, we had an Iron MCL violation for the 1st and 2nd quarters.
- During 2010, we failed to collect the 3rd quarter Iron and Manganese samples from Swan Street Treatment Plant. Quarterly sampling was completed during the remaining 3 quarters and the sample results are included in the Table of Detected contaminants, present above.
- Systems serving greater than 1,000 people are required to have a Grade D designated operator in charge of their distribution system. During 2009, we did not have a Grade D certified water operator on staff and were in violation of Part 5-4 of the State Sanitary Code. We are working to resolve this violation during 2011.

SOURCE WATER ASSESSMENT

The NYS DOH 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 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, if any. The source water assessments provide resource managers with additional information for protecting source waters into the future.

The source water assessment has rated our water source as having an elevated susceptibility to microbials, nitrates, and industrial solvents and other industrial contaminants. These ratings are due primarily to close proximity of the wells to permitted discharge facilities (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government) and the residential land use and associated activities in the assessment area. In addition, the wells draw from an unconfined aquifer, which is a shallow aquifer that occurs immediately below the ground surface and has no overlying protective layer for protection from potential sources of

contamination. While the source water assessment rates our wells as being susceptible to microbials, 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 for microbial contamination.

The state health department will use this information to direct future source water protection activities. These may include water quality monitoring, resource management, planning and education programs.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

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 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 you 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. Simply turn off all taps and water using appliances, then check the meter after 15 minutes. If it moved, you have a leak.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community and our way of life. Please call our office if you have questions.