

WATER DEPARTMENT

TOWN OF WINCHESTER

Annual Water Quality Report

We're pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

The **Winsted Water Department** routinely monitors for constituents in your drinking water according to Federal and State laws. This report shows the results of our monitoring for the period of January 1st to December 31st, 2017. There are 119 constituents that we are required to test for. These constituents fall into two categories: regulated, where enforceable standards or MCLs have been established, and unregulated, where only health advisory levels have been set. The table of "Testing Results" also identifies those constituents that were detected in **Crystal Lake and Rugg Brook Reservoir** water sources. As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

We ensure water quality through daily testing at our water treatment plant. Samples are also collected from our distribution system from various locations four times a month and sent to a state certified water quality laboratory.

If you have any questions about this report or concerning your water utility, please contact the **Winsted Water Department at (860) 379-4101, or the State Health Dept. at 860-509-7333**. We want our valued customers to be informed about their water. The time and place for meetings of the Water Commission are posted at the Town Hall.

Water Department
Town of Winchester
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Winsted, CT 06098



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Great Resources

Our water sources are Crystal Lake Reservoir and Rugg Brook Reservoir, which are surface water supplies. The Winsted Water department conducts an annual source water inspection. This is to help protect our sources from possible contaminants. Based on a combination of current reservoir and watershed area conditions, existing potential sources, and the level of source protection measures currently in place, the source water assessment for our watershed system indicates that it has an overall **Low** risk of contamination from any identified potential sources of contamination.

Since August of 1998, the Crystal Lake Water Treatment Plant has been producing high quality filtered water for distribution. The water leaving the plant is an exceptional product. We are very happy with the results and want you to be also.

Definitions

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Detect - Laboratory analysis indicates that the constituent is present, however it does not trigger an action level or exceed an MCL.

Parts per million (ppm) or Milligrams per liter (mg/l) - One part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - One part per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000.

PCi/L - Picocuries per liter (measure of Alpha/Beta particles)

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 treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level (MCL) - The MCL is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The MCLG is 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.

Turbidity (NTU) - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity has no health effects. However, turbidity can interfere with disinfection, and provide a medium for microbial growth.

MRDL - Maximum Residual Disinfectant Level - The highest level of a disinfectant allowed in drinking water.

MRDLG - Maximum Residual Disinfectant Level Goal - The level of a drinking water disinfectant below which there is no known or expected risk to health.

System Info

The Winsted Water Works system consists of Crystal Lake and Rugg Brook reservoirs, Crystal Lake Water Treatment Plant, a 1 million gallon storage tank, a 1.5 million gallon storage tank, and 40 miles of water main that serve 2600 consumers.

Last year Crystal Lake W.T.P. produced 353,845,728 gallons of water for an average daily use of 969,440 gallons. Our water is tested at the plant twice daily by certified operators. Water quality is also monitored 24 hours a day by our distribution instruments. Our water is also sampled weekly from chosen locations in the distribution system for testing by State of CT. certified lab, Spectrum Analytical Inc. The results received from these tests are used to compile this report.

Testing Results

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination	
Inorganic Contaminants							
Barium	N	.010	ppm	2	2	Erosion of natural deposits.	
Chloride	N	11.43	ppm	-	250	Surface runoff	
*Fluoride *Annual average; Range: .62 – .71	N	.65	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	
Sulfate	N	8.2	ppm	-	NA	Chemical additions used for filtration aids; no MCL established	
Sodium	N	11.85	ppm	-	28**	Chemical additions used for filtration aids	
* On October 1, 2016 the CT Department of Public Health lowered the required levels of flouride in drinking water. Prior to this date the level was 1 part per million (ppm). The new level is .70 (ppm)							
**Notification level – means the level of a contaminant that if exceeded shall require public notification by water system to consumers.							
Microbiological Contaminants							
Turbidity – Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium of microbial growth.							
Turbidity	N	.07	NTU	-	<1.0 NTU		
*Annual average; Range: .05 – .08							
Volatile Organic Contaminants							
TTHM [Total trihalomethanes] *Annual average; Range 25.5 - 99.9	N	59.5	ppb	0	80	By-product of drinking water chlorination	
HAA [Haloacetic acids] *Annnual average; Range 24.87 - 39.4	N	34.1	ppb	0	60	By-product of drinking water chlorination	
	Violation Y/N	Level Detected	Unit Measurement	MRDLG	MRDL	Potential Health Effects From Ingestion of Water	Likely Source of Contamination
Disinfectant Sodium Hypochlorite	N	1.15*	ppm	4	4	Eye/Nose irritation, stomach discomfort	Water additive used to control microbes
*Annual average; Range: 1.01 – 1.27							

Health Effects

Inadequately treated water may contain disease-causing organisms measured as turbidity. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Some people may be more vulnerable to contaminants 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 about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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.

Infants and children who drink water containing **lead** in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink water containing lead in excess of the action level over many years could develop kidney problems or high blood pressure.

Water Conservation

It's very easy to waste water indoors and out. By using only what you need, you'll be saving on your water bills and helping to preserve our precious water supply. Here are a few tips to help conserve water.

- Install a shower flow controller. Reduces flow without diminishing spray.
- Fix leaky faucets quickly. One drip per second wastes 6,000 gallons a year.
- Water your lawn in the morning or evening when there is less evaporation.
- Refrigerate a bottle of water instead of running water until it is cold enough to drink.
- Run only full loads in the washing machine and dishwasher. This also saves energy.
- Water lawn only when it needs it. Step on grass. If grass springs up, it doesn't need watering.
- Put mulch around plants. Mulch slows evaporation.
- Select plants, trees, and grass varieties that need less water.

We hope you find these tips useful in helping to conserve a precious resource: Water. The web site www.watersmart.org is a great source for more useful tips on water conservation.

How can I help protect my drinking water supply?

Drinking water protection is a shared responsibility involving water suppliers, local and state governments, business, and individuals. We all have an important role to play, and as private citizens we have many opportunities.

EPA is encouraging states and communities to undertake source water protection programs, which apply the principles of wellhead protection to surface water as well as ground water supplies of drinking water. Now, we understand that if we place greater emphasis on protecting our sources of drinking water, the need for treatment can be reduced.

The general components of a source water protection program include:

Delineation- identifying the area of land that water passes through to reach the drinking water intake

Contaminant Source Inventory- mapping the locations of potential sources of drinking water contamination

Determine the susceptibility- of the public water system to contaminant sources or activities within the source water protection area

Notify and involve the public- about threats identified in the contaminant source inventory and what they mean to their public water systems

Source Water Protection Area Management- using regulatory controls, such as zoning or health ordinances, or non regulatory controls, such as technical assistance to businesses and public education, to keep contaminants out of drinking water supplies

Contingency Planning- plan special actions in case a sudden event (for instance, a flood or spill) occurs that threatens the drinking water supply

Community Involvement

Source water protection works by involving all members of the community. Citizens can voice their support for controlling how land is used near drinking water intakes. Citizens can also educate their neighbors about the danger that household chemicals pose to drinking water supplies. Many communities sponsor household hazardous waste disposal days to promote proper handling of waste paints and thinners, pesticides, used oil, and other hazardous materials. Your state or local environmental agency should have information about such programs in your community.

The Water Quality Association web site www.wqa.org contains very useful information on this subject and was used in making this report.

Violation

Winsted Water Works recently violated drinking water monitoring and reporting requirements. We are required to monitor the quality of our water supply to insure that it meets current drinking water standards. Failure to conduct monitoring and / or report results of such monitoring to the St Dept. of Public health constitutes a violation. Although this incident was not an emergency, our customers have the right to know what occurred and what was done to correct the situation.

We are required to monitor your drinking waer for specific contaminants. We did not monitor or test or did not complete all of the monitoring for testing for the requirements listed below, and therefore cannot be sure of the quality of our drinking water during that time:

Surface Water Color and Turbidity (Monitoring Period January 1, 2017 - March 31, 2017)

During the period of Jan 1, 2017-March 31, 2017, Winsted Water did not have a certified independent lab monitor (test) for surface(raw) water color and turbidity. These two parameters are tested for daily at the Water Treatment Plant. Although this posed no health risk to the public, Winsted Water regrets the error. Winsted Water has implemented various crosschecks to prevent this from occurring again.