

WHERE YOUR WATER COMES FROM

The City of Danbury has two main reservoirs that are used for water supply: the West Lake and Margerie Reservoirs. The water in these reservoirs originates from precipitation (rain and snowfall) that drains and collects in them. The reservoir water is treated at one of our two water treatment plants located near the water supply. Other smaller water bodies used to supplement our supply in dry periods include our secondary sources: East Lake, Padanaram, Upper Kohanza, and Lower Kohanza Reservoirs, Boggs Pond, and Lake Kenosia. The City also maintains several wells near Lake Kenosia for use during periods of prolonged drought.

Danbury is fortunate to have multiple sources of high quality water totaling over 3 billion gallons of storage. Customers of the Danbury Water System use approximately 7 million gallons of water each day. With full reservoirs, the City has about 400 days worth of available supply.

The State of Connecticut Department of Public Health Drinking Water Section completed an assessment of the State's drinking water sources to evaluate the susceptibility of the water to contamination. Danbury's reservoirs (West Lake and Margerie Reservoirs) were included in the study and the assessment report can be found on the Department of Public Health's website: www.ct.gov/dph. The assessment found that the Margerie Reservoir has a LOW susceptibility to potential sources of contamination. The assessment rating of the West Lake Reservoir was determined to be MODERATE. Additional source water assessment information can be found at the Environmental Protection Agency's website: www.epa.gov/drink.

SODIUM LEVEL NOTIFICATION

The sodium level in Danbury water is tested each year. The highest level detected in 2017 was 45.9 mg/L which is above the State notification level (NL) of 28 mg/L. Sodium sensitive individuals such as those experiencing hypertension, or kidney or congestive heart failure, or on a sodium-restricted diet, should inform their physician that their water contains 45.9 mg/L of sodium. For comparison purposes, most sodas contain around 150 mg/L, and low-fat milk contains over 400 mg/L of sodium.



Danbury Water Department 2018 Water Quality Report



(Photo credit S.Napolitano)

The Padanaram Reservoir

The Danbury Water Department is happy to present you with this latest version of our annual report. It is meant to provide you with important information about your water such as: where it comes from, how it is treated, what is contained, and how it compares to State and EPA standards. The report summarizes your water quality from 2017 and discusses any contaminants that were detected. If you ever have any questions about your water please call us at the phone number below. Please share this report with family, friends, or neighbors who may not have received it. We are committed to providing you with safe, quality drinking water in adequate quantities for all your needs.

City of Danbury Water Department
155 Deer Hill Avenue
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203-797-4637
www.danbury-ct.gov

HOW DO WE ENSURE WATER QUALITY?

Our core mission is to provide our customers with adequate quantities of high quality water for residential, commercial and industrial use, as well as fire fighting capability. In order to make certain of this multiple measures are taken, some of which are described below:

• Monitoring and Testing

Water quality is continuously verified by daily testing in our state certified water quality laboratory and by 24 hour/day process instrument monitoring. Our water plants are staffed with trained and certified operators around the clock, 365 days a year. Approximately 27,000 water quality analyses are performed on your water each year by our contracted testing lab and our in-house laboratory.

• Distribution

Potable water is distributed to homes and businesses by a system of 200 miles of pipes, 9 storage tanks, and 14 pumping stations. In the spring of each year, the Water Department performs a system-wide hydrant/pipe-flushing program which removes accumulated sediment. To accomplish this, approximately half of the City's 2000 fire hydrant are flushed each year. This helps maintain water quality as it's pumped or fed by gravity to your tap. The Water Department's Transmission and Distribution crew is at work to continually update and repair the piping system, fire hydrants, and shut-off valves. They're on standby 24 hours a day, 7 days a week, to quickly respond to emergencies and to repair broken water mains.

City of Danbury Ordinances mandate the ownership of service lines to the owners of the property they serve. Repairs to these lines are therefore the responsibility of the property owner, not the City.

• Security and Inspection

All activity on and around our reservoirs is monitored. Permits are required for construction, and activities that threaten contamination of our water supply are prohibited. Please help us by calling the Public Utilities Office at 797-4637 if you observe any actions that you feel could contaminate our drinking water. The City has an active Watershed Monitoring Program that identifies and reports potential problems. Since September 2001, we have increased the inspection and monitoring of our water supplies and facilities. We have increased the

testing of the drinking water to assure a quality product reaches your tap. An extensive assessment of all our facilities was completed and implementation of the recommended measures is ongoing to make them even more secure. If you observe any unusual activities around our reservoirs or facilities please report them to the Danbury Police at 911, or the Water Department's 24 hour/emergency number at 203-797-4615.

• Water Treatment

Various treatment processes used in the water industry are designed to remove potentially harmful contaminants. Reservoir water is treated at our two water treatment facilities: the West Lake and Margerie Water Treatment Plants. The first step in treatment is chemical addition of aluminum sulfate to the water in order to remove a majority of the impurities. Removal is accomplished by settling or floating of the impurities in tanks at the treatment plants, followed by filtering out microscopic particles through sand or carbon. Disinfection of the water is done to kill disease-producing organisms that may be present, accomplished by chemical treatment with liquid chlorine to the filtered water. Final treatment includes fluoride addition to prevent tooth decay, phosphate addition to reduce pipeline corrosion, and caustic soda addition to adjust the pH to neutral.



(Photo credit S.Napolitano)

The Margerie Water Treatment Plant can produce over 5 million gallons of drinking water daily

ARE THERE CONTAMINANTS?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform bacteria, E.coli bacteria, turbidity (a measure of water clarity), inorganic compounds (IOCs), nitrate (NO₃),

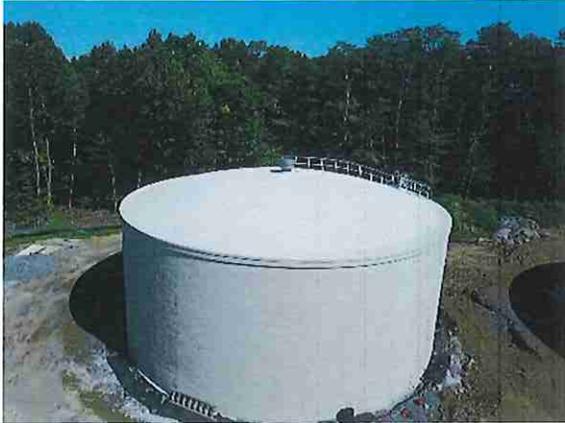
nitrite (NO₂), lead, copper, volatile organic compounds (VOCs), total trihalomethanes (THMs), and synthetic organic compounds (SOCs) including pesticides and herbicides. The Water Quality Data Tables presented in this report depict only the substances that were detected in your drinking water. Some contaminants are tested for less than once per year because the concentrations of these contaminants do not change frequently, therefore some data may be more than one year old.

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 at 800-426-4791 or their web site: www.epa.gov/safewater; the State of Connecticut Department of Public Health at 860-509-7333 or their web site: www.ct.gov/dph; or the Danbury Water Department at 203-797-4637.

Last year, as in past years, your tap water met all required maximum contaminant levels (MCLs) for EPA and State health standards.

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.

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



(Photo credit C.Gardner)

The WestConn Water Storage Tank.

WATER SYSTEM IMPROVEMENTS

At the Water Department we are continually looking to improve the water treatment plants, pump stations, and distribution system. Each year the City's budget contains money for water system improvements. Upgrades to treatment processes, the piping network, computer systems, and pumping stations are done. In 2017 our new WestConn Tank was completed and is pictured above. The new tank is designed to resist corrosion and made to last for decades.

INFORMATION ABOUT LEAD

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with privately owned service lines and household plumbing. The City of Danbury is responsible for providing you with high quality drinking water but cannot control the variety of materials used in plumbing components. When water has been sitting unused for several hours you can minimize your potential exposure to lead by flushing your tap for 30 seconds to two minutes before using water for drinking, cooking, or making baby formula. Cleaning your faucet screens regularly can remove material, some of which might be lead, from contact with your water. Also, always use COLD water for cooking or drinking. Hot water can have a higher level of minerals including lead and copper than the cold water we provide.

If you're concerned about the levels of lead in your

water you may wish to have it tested by a certified laboratory. Information about lead and copper testing is available at www.epa.gov/safewater/lead or by calling us at 203-797-4637.

DO I NEED TO TAKE PRECAUTIONS?

Although our drinking water meets state and federal water quality regulations, some people may be more vulnerable to contaminants and/or 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).

WATER CONSERVATION MEASURES

Drinking tap water instead of bottled water can help the environment. Millions of barrels of oil are required to produce plastic water bottles, and billions of pounds of CO₂ are added to the atmosphere.

Quality tap water is not only good for you, but it is also much cheaper than bottled water. Danbury's municipal water is ranked as one of the lowest cost in the entire state. Bottled water can cost you over a thousand dollars each year, whereas the same amount of Danbury's tap water costs you less than one dollar.

Leaking faucets, toilets, showerheads, or other devices can waste water and your money. Below are some tips you can follow to help you prevent wasted water:

- Your toilet uses the most water in your house. Check it for leaks by putting food coloring in the tank; let it sit for several minutes to an hour, then check to see if the water in the bowl turns color. If it does, you have a leak. A leaking toilet can leak away over 50 gallons a day.
- Take a short shower instead of a bath. A low-flow shower head can save as much as 25 gallons of water.

- Don't let the faucet run while brushing teeth and shaving. This can save gallons.
- Store a jug of water in the refrigerator for a cold drink instead of letting the faucet run until it gets cold.
- Water lawns and plants in the early morning or evening hours to avoid excess evaporation.
- Apply mulch around plants to reduce evaporation. Plant shrubs and ground covers that require less water and less maintenance.
- Use a broom instead of a hose to clean debris off your driveway or sidewalk.
- Wait for your dishwasher and washing machine to be full before running them.

More information regarding water conservation can be found at www.wateruseitwisely.com and at www.smarthomewaterguide.org



(Photo credit S.Napolitano)

The West Lake Reservoir is the City's largest, holding around 1.3 billion gallons when full

City of Danbury Water Department
203-797-4637
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Find the Water Dept. on the City's web site under: Government-Departments-Public Works-Public Utilities

2017 WATER QUALITY DATA TABLES

The tables below list the drinking water contaminants that were detected for the 2017 calendar year. Many substances were tested for and were not detected. They are not included in the table. Overall your water was tested for approximately 100 different contaminants. The presence of contaminants in water does not necessarily indicate that water poses a health risk. Unless otherwise noted, the data below is from testing done in 2017. Tests reported from other years is allowed because the concentrations of these contaminants do not typically change year to year and have been historically low. "Your Water" contains the highest (or worst case) test result detected during the year.

REGULATED CONTAMINANTS (substances that EPA has set strict limits (MCL) on due to potential health concerns)

Contaminant (units)	Your Water (highest level)	Range Low - High	MCL	MCLG	Test Year	Limit Exceeded	Typical sources in drinking water
Alpha emitters (pCi/L)	0.327	-0.401 – 0.327	15	0	2016*	No	Erosion of natural deposits from water sources
Barium (ppm)	0.021	0.018 – 0.021	2	2	2017	No	Erosion natural deposits, metal refinery discharge
Chlorine (ppm)	0.83	0.78 – 0.83	4 (MRDL)	4 (MRDLG)	2017	No	Water treatment chemical for disinfection
Copper (ppm)	0.42	0.006 – 0.50	1.3 (AL)	1.3	2017	No	Corrosion of plumbing, erosion natural deposits
Combined Radium (pCi/L)	0.310	0.298 – 0.310	5	0	2016*	No	Erosion of natural deposits from water sources
Fluoride (ppm)	0.82	0.60 – 0.82	4	4	2017	No	Water additive which promotes strong teeth
HAA5, Haloacetic Acids (ppb)	37.6	4.9 – 37.6	60	0	2017	No	By-product of drinking water chlorination
Lead (ppb)	4	ND – 7	15 (AL)	0	2017	No	Corrosion of plumbing, erosion natural deposits
Sodium (ppm)	45.9	42.6 – 45.9	28 (NL)	NA	2017	Yes	Erosion of natural deposits, urban storm runoff
Total Organic Carbon (TOC removal ratio)	1.60	1.60 – 2.02	1.0 (TT)	NA	2017	No	Naturally present in the environment
TTHMs, Trihalomethanes (ppb)	57.9	38.2 – 57.9	80	0	2017	No	By-product of drinking water chlorination
Turbidity- Filter Plant Monthly Percent Meeting Limit (%)	100	100	95 (TT)	NA	2017	No	Soil runoff, natural organic and inorganic matter
Turbidity (NTU)	0.26	0.07 – 0.26	1 (TT)	NA	2017	No	Soil runoff, natural organic and inorganic matter

SECONDARY OR NON-REGULATED CONTAMINANTS (substances that do not have strict limits (MCL) because of a lack of health concerns)

Contaminant (units)	Your Water (highest level)	Range Low - High	Recommended limit	Sample Date	Limit Exceeded	Typical sources in drinking water
Chloride (ppm)	78.4	75.4 – 78.4	250	2017	No	Erosion of natural deposits, urban storm runoff
Hardness (ppm)	114	90 – 114	250	2017	No	Erosion of natural minerals
pH (standard units)	7.4	6.8 – 7.4	6.5 - 8.5	2017	No	Water treatment chemicals
Sulfate (ppm)	35.4	31.7 – 35.4	NA	2017	No	Erosion of natural deposits, urban storm runoff

Data Table Key: Unit Descriptions:

ppm = parts per million, or milligrams per liter

ppb = parts per billion, or micrograms per liter

pCi/L = picocuries per liter (a measure of radioactivity)

NA = not applicable

Important Drinking Water Definitions:

MCLG Maximum Contaminant Level Goal: 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.

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

TT Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

NL Notification Level: The level at which a water utility must notify its customers of an exceedence.

AL Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water systems must follow.

MRDLG Maximum Residual Disinfectant Level Goal: 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 contaminants.

MRDL Maximum Residual Disinfectant Level: 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.

* Tests of these contaminants from previous years are allowed because levels are historically low and do not typically change year to year.