

💧 WATER CONSERVATION MEASURES CAN SAVE YOU MONEY 💧

With increases in population comes an increasing need for clean drinking water. Water is a limited natural resource that could become scarce if we don't conserve and protect it. Also, saving water will save you money, because your water bill is based on the amount of water that you use. Here are some ways you can conserve:

1. Fix leaky toilets. The most common place for unknown and unseen leaks to occur is the toilet. Several drops of food coloring placed in the tank of the toilet (behind the bowl) can detect a leak. If the colored water leaks into the bowl after several minutes without flushing then you have a toilet leak that should be repaired.
2. Repair faucet drips. Even a small drip can waste 20 gallons a day or thousands of gallons a year. Replacing worn washers or entire faucets can save you money in the long run.
2. Run only full loads in the clothes washing machine and in the dishwasher. By running full loads you do fewer loads, which means less water.
3. Turn water on and off while brushing teeth instead of leaving running the whole time. There is no need to keep water pouring down the drain. Just wet your brush and fill a glass.
4. Take a shorter shower. Long hot showers can waste 5 gallons every unneeded minute. Limit showers to the time it takes you to soap up, wash down, and rinse off.
5. Install low-flow toilets and faucet and shower-head flow restrictors. Your local hardware or plumbing store stocks inexpensive water saving devices.
6. Use a broom to clean walks and driveways, not a water-wasting hose.
7. Do your summer plant watering in the early morning or in the evening. Cooler temperatures will cause less evaporation and watering will be more effective.

For more information on water saving ideas please visit these websites: www.wateruseitwisely.com or www.home-water-works.org

DANBURY WATER DEPARTMENT



2016 ANNUAL WATER QUALITY REPORT



The purpose of this report is to inform you about the water that we provide to you. It contains important information about where your water comes from, how it is treated, what was detected in it by laboratory testing, and what we're doing to improve its quality and the service we provide.

Este informe contiene informacion importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda

Danbury Water Dept. (203) 797-4637

WATER QUALITY DATA TABLES

The tables below list all of the substances that we detected in Danbury drinking water in the year 2015 or the last required test date. During the year, the water we produced and supplied was tested for dozens of different substances, most of which were not detected. The chart below contains only those substances that were detected, and excludes substances that were not found. For tests completed in 2015, all regulatory MCLs have been met.

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 microbial contaminants are available from the EPA's Safe Drinking Water Hotline at 800-426-4791. All drinking water, including bottled water, may reasonably be 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 Safe Drinking Water Hotline number listed above.

Regulated Contaminants - substances that EPA has set strict limits (MCLs) on due to potential health concerns

Contaminant (units)	Your Water	MCL	MCLG	Range Detected	Sample Date	Limit Exceeded	Typical sources in drinking water
Alpha emitters (pCi/L)*	1.53	15	0	-0.36 – 1.53	2013*	No	Erosion of natural deposits
Barium (ppm)	0.022	2	2	0.015 – 0.022	2015	No	Erosion of natural deposits, discharge from metal refineries
Chlorine (ppm)	1.01	MRDL=4	MRDLG=4	0.68 – 1.01	2015	No	Water treatment chemical
Copper (ppm)*	0.28	AL=1.3	1.3	0.017 – 0.45	2014*	No	Corrosion of household plumbing, erosion of natural deposits
Fluoride (ppm)	1.12	4	4	0.84 – 1.12	2015	No	Water additive which promotes strong teeth
HAA5, Haloacetic Acids (ppb)	30.6	60	0	8.8 - 30.6	2015	No	By-product of drinking water chlorination
Lead (ppb)*	1.4	AL=15	0	ND – 3.5	2014*	No	Corrosion of household plumbing, erosion of natural deposits
Total Organic Carbon (removal ratio)	1.01	TT=1.0	NA	1.01 – 1.17	2015	No	Naturally present in the environment
TTHMs, Total Trihalomethanes (ppb)	52.9	80	0	27.6 – 52.9	2015	No	By-product of drinking water chlorination
Turbidity- Filter Plant Monthly Percent Meeting Limit (%)	100	TT=95	NA	100	2015	No	Soil runoff, natural organic and inorganic matter
Turbidity (NTU)	0.28	TT	NA	0.07 – 0.28	2015	No	Soil runoff, natural organic and inorganic matter

Secondary and Non-Regulated Contaminants - substances that do not have a strict limit (MCL) because of lesser or no health concerns

Contaminant (units)	Your Water	Recommended limit	Range Detected	Sample Date	Limit Exceeded	Typical sources in drinking water
Chloride (ppm)	74	250	66 – 74	2015	No	Erosion of natural deposits, urban storm runoff
Hardness (ppm)	96	250	82 – 96	2015	No	Erosion of natural minerals
pH (standard units)	7.5	6.5 - 8.5	6.8 – 7.5	2015	No	Water treatment chemicals
Sodium (ppm)	42	NL=28	39 - 42	2015	Yes	Erosion of natural deposits, urban storm runoff
Sulfate (ppm)	37	NA	29 – 37	2015	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

ND = not detected

* = Alpha emitters and lead & copper are only required every 3 years due to a history of low results

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: This highest level of a regulated contaminant that is allowed in drinking 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 exceedance.

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.

NTU Nephelometric Turbidity Units (a measure of the clarity of water)

◆ HOW WE ENSURE WATER QUALITY ◆

The Danbury Water Department considers the quality of your drinking water its most important task. In order to make certain of quality, many measures are taken. Some are described below:

- **Security and Protection**

Activity on and around our reservoirs is regulated and 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.

Increased inspections and monitoring of our water supplies and facilities continues to be done as well as increased testing of the drinking water to assure a quality product reaches your tap. An extensive assessment of all our facilities was done and we are implementing the recommended measures to make them more secure. Please report any unusual activities to the Danbury Police (911) or the Water Department at 797-4615.

- **Distribution**

Every day, 7 million gallons of clean, potable water is distributed to Danbury's homes and businesses by our system of pipes, storage tanks, and pumping stations. In the spring of each year, the Water Department performs a system-wide pipe-flushing program, which removes accumulated sediment. This helps maintain high quality water as it is pumped or fed by gravity to your tap. A Water Department crew that is on standby 24 hours a day does repairs to broken water mains. **Service lines to individual homes are owned by the property owners, and repairs to these lines are the owner's responsibility. Service lines run from the house all the way to the water main.**

- **Treatment**

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 impurities. Settling or floating of the impurities is done followed by

filtering out microscopic particles through sand or carbon, further purifying the water produced. Disinfection, the process used to kill disease-producing organisms, is done by careful addition of chlorine to the filtered water. Final treatment includes fluoride addition to prevent tooth decay, phosphate addition to reduce corrosion, and caustic soda addition to adjust the pH to neutral.

- **Monitoring**

We continually verify our water's quality by daily testing in our state certified laboratory, and by 24 hour a day instrument monitoring. Our water plants are staffed with trained operators around the clock, 365 days a year. The City's Laboratory personnel, along with independent private laboratories perform about 27,000 water tests annually.



Our Transmission and Distribution Crew is skilled at installing and repairing water mains, hydrants and valves

◆ SODIUM LEVEL NOTIFICATION ◆

Each year, Danbury water is tested for dozens of different substances including sodium. In recent years the sodium level in our water has been just above the 28 mg/L state notification level (NL). In 2015 a level of 42 mg/L of sodium was

detected in one of the tests of your water. This exceeds the NL and we're required to inform you of this. If you've been placed on a sodium-restricted diet, please inform your physician that your water contains 42 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.

◆ WHAT WE'RE DOING TO IMPROVE ◆

The goal and mission statement of the Danbury Water Department is to provide an adequate quantity of quality drinking water to all our customers. In order to achieve this goal we are continually looking to improve our system. During 2015 we hired a company to perform an entire system-wide leak detection survey of the water system. Although several small leaks were found, it was determined that overall we have a very good water piping system with few leaks for a system of our size. We are currently finalizing plans to build a new water storage tank near the WestConn west side property to replace an older tank at the same site. The new tank will resist corrosion and is made to last decades into the future. Also, a complete upgrade of our water plant computer system is set to be completed this summer 2016.

◆ HELP PROTECT OUR RESERVOIRS ◆

Please protect our water supplies from pollution caused by runoff from storm events. You can prevent pollution by: 1. Not dumping oil or chemicals into storm drains or your lawn. Store waste materials safely, dispose of them at Danbury's Household Hazardous Waste Collection Day at the Public Works Complex each September for Danbury residents. 2. Making sure your septic system is properly maintained. Pump the tanks regularly – at least once every two years. Do not put chemicals into your septic system. 3. Not using excessive amounts of fertilizers or pesticides on your lawn. These chemicals can drain into surface or ground waters. 4. Encouraging the growth of buffer vegetation at the edges of streams and ponds. Never clear cut your property. Keeping as much natural vegetation as possible can prevent pollution. Go to www.nemo.uconn.edu for more info.

💧 **WHERE YOUR WATER COMES FROM** 💧

Danbury drinking water originates mostly from our two main reservoirs, Margerie and West Lake which are piped to our two water treatment plants. The source water in these reservoirs comes from precipitation (rain and snowfall) that drains, collects, and is stored in them. The reservoir water is turned into drinkable water by modern water treatment methods. Danbury's secondary reservoirs are used to supplement our supply in dry periods and include East Lake, Padanaram, Upper Kohanza, and Lower Kohanza Reservoirs, Boggs Pond, and Lake Kenosia. All together the City has over 3 billion gallons of water in storage when the reservoirs are full. Additionally, we maintain several wells near Lake Kenosia that can be used during prolonged dry periods.

As water travels over the surface of the land or through the ground it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animal or human activity. Since this drainage can end up in the City's water supply, it is the responsibility of everyone living in the watershed to protect against pollution.

Contaminants that might be expected in untreated water include: biological contaminants such as viruses, parasites and bacteria including Giardia and Cryptosporidium; inorganic contaminants such as salts and metals; pesticides and herbicides; organic chemicals from industrial or petroleum use such as MTBE; and/or radioactive materials such as radon.

Various treatment processes used in the water industry are designed to remove potentially harmful contaminants. In order to ensure that tap water is safe to drink the Environmental Protection Agency (EPA) prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

An assessment our West Lake and Margerie Reservoirs was completed by the Department of

Public Health, Drinking Water Section. 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 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

💧 **INFORMATION ABOUT DANBURY MUNICIPAL WATER SYSTEM AND LEAD IN GENERAL** 💧

In response to recent media reports about lead in drinking water across the country, especially Flint Michigan, we offer the following:

Danbury water historically is in compliance with EPA requirements relating to lead. Repeated tests done since the 1990s show levels well below the "action level" set by the USEPA.

Danbury water is tested regularly for lead as required by the State of Connecticut Dept. of Public Health (CTDPH) and the United States Environmental Protection Agency (USEPA). The water is tested daily to make sure our pH and corrosion inhibitor levels are optimized to minimize pipe and plumbing corrosion.

Your water comes from our municipal water supply which is treated to prevent contaminants such as lead from being present. We, like most water utilities, carefully add a corrosion inhibiting chemical (phosphate) to the water at low levels during the water treatment process. This treatment prevents lead that may be present in customer owned plumbing and service lines from getting into the water.

The main source of lead in drinking water is not the reservoirs, treatment plants, or water mains. Lead comes mainly from customer owned lead service lines that were used in the early 1900s up until the 1930s, and from lead solder used to join copper pipes prior to the mid-1980s. Lead can leach into drinking water from these types of

services or from household plumbing that contain lead when they are in contact with an untreated or acidic water source. Danbury water is treated and not acidic. In addition, lead is generally not a problem in newer construction.

If a customer has any concerns and wants to take extra precautions, there are several steps that everyone can take to minimize their risks from lead in water. Flushing your tap for 30 seconds to a minute or more until it is noticeably colder, regularly cleaning the screens in your faucet aerators, and only using cold water for drinking, cooking, and making baby formula are simple things that can be done. Ultimately, another alternative to address concerns a customer may have is to have water tested by a certified lab.

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 service lines and home plumbing. The Danbury Water Dept. 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 the 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 or at www.epa.gov/safewater

As always, we take our job as your water supplier very seriously. If we can be of any further service, please feel free to call us.

City of Danbury Water Dept.

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