



WATER QUALITY REPORT

SPRING 2019

Important Information Contained Inside:

- Where your water comes from - page 1
- How the water is treated and protected - page 2
- What substances were found in your drinking water - page 3
- Water conservation ideas - page 4
- Interesting facts about water - page 4
- How you reach us to ask a question or report a problem or emergency - page 4

City of Danbury Water Department
155 Deer Hill Avenue **203-797-4637**

Superintendent's Message

We are proud to bring you Danbury's 2019 Water Quality Report. We trust you will find it helpful and informative about the water you drink and use every day. This past year has seen a change from a relatively dry 3 year period, to an over flowing system as a result of above average rainfall since Spring 2018. Even though our reservoir levels are good to start 2019, we encourage you to always use water wisely, conserving where you can. You'll find water conservation ideas later in the report.

The water we provide to you continues to be of high quality, meeting all the State and Federal requirements for drinking water. The water treatment process is monitored closely by trained and certified plant operators. Our distribution crew stands by 24 hours a day for

maintenance and repairs. Our maintenance staff works hard to fix and maintain vehicles and equipment. Our office staff strives to provide excellent customer service.

Our watershed is routinely monitored, and inspections are done to prevent actions or activities that could affect water quality.

Please call our office at 203-797-4637 if you have comments, questions or concerns. Questions about your bill, issues with water quality, and questions about this report are all handled here.

We are happy to be your water provider and thank you for being a customer.

David M. Day, P.E.
Superintendent of Public Utilities

Where Your Water Comes From

The water you drink originates from precipitation (rain and snowfall), which drains and collects in our reservoirs. The main bodies of water we use are the West Lake, East Lake, and the Margerie Reservoirs. Other smaller water bodies including: the Padanaram Reservoir, Upper and Lower Kohanza Reservoirs, Boggs Pond, and Lake Kenosia are used as needed to supplement our supply during dry periods.

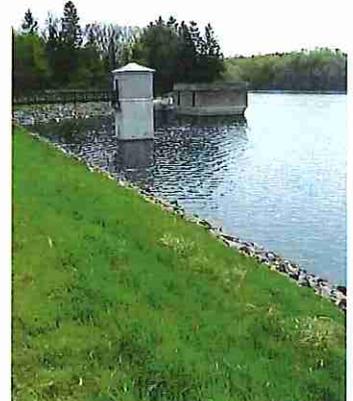
The City of Danbury also maintains a series of wells at the Kenosia Town Park that can be used in years of prolonged drought.

The State of Connecticut Department of Public Health (DPH) in cooperation with the Department of Energy and Environmental Protection (DEEP) completed a survey of all source waters in the State. This Source Water Assessment was done for our West Lake and Margerie Reservoir Systems. This assessment is intended to provide Danbury Water Department consumers with information about where their drinking water comes from, the susceptibility of the reservoir to contamination, and the potential risk factors present in the watershed.

The initial assessment indicated that the overall susceptibility rating of our Margerie Reservoir was low (on a rating scale of low, moderate, or high). The State identified the potential risk factors for Margerie as the potential contaminant sources present in the watershed.

The initial assessment of our West Lake Reservoir rated overall susceptibility as moderate. Potential risk factors for West Lake were the potential contaminant sources present in the watershed, and the fact that less than 20% of the watershed area is owned by the water company. Development within our watersheds is regulated by the local zoning ordinance which provides additional restrictions on development to protect our water supplies.

The detailed Source Water Assessment Report is available by calling the State Department of Public Health at 860-509-7333 or by visiting their web site at: www.ct.gov/drinkingwater and searching for source water.



How We Ensure Your Water Quality

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

- **Protection**

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.

- **Distribution**

Clean, potable water is distributed to homes and businesses by a 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.

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• Danbury Water customers own their service lines from their building/home to the City's water main and are responsible for repair and/or replacement if ever needed.
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- **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 coagulate and remove impurities. Settling or floating of the impurities is done and then filtering out microscopic particles through sand or carbon further purifies the clean 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.

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.

What We're Doing to Improve the Water System

The Water Department is always looking to improve the service we provide and to fulfill our motto of always providing an adequate supply of high quality water. Each year money is allocated in the City's budget for equipment and instrumentation upgrades to the water system. These upgrades improve our treatment processes, monitoring capability, and distribution system. This past year several new electrical generator projects were started that will better allow all our facilities to fully function normally

when the power goes out. In addition, engineering and planning work has begun on the change out of the West Lake Water Plant filtration media (sand) which is set to be completed in 2019.

With State approval to use the Kenosia well field year round in place, engineering work has begun to update the well system and treatment processes. This project will result in an increase the City's available water by routinely using water from these wells to supplement our reservoir supply.



Reservoir water is made drinkable by modern treatment processes at one of our two water plants: West Lake and Margerie.



The City of Danbury Water Department is at work 24 hours a day, 365 days a year to treat the water, verify its quality, and make sure it gets safely to your home.



Danbury Water customers own their service lines and are responsible for repairs and/or replacement

Detected Contaminants Table - Year 2018 Testing



The table below lists the substances in Danbury municipal drinking water that were found by testing in the year 2018 or the latest required test year as noted. During the year, the water we produce and supply was tested for dozens of substances, most of which were not detected. The chart below contains only those substances that were found by laboratory testing of the water. For most “contaminants” in the table, except for fluoride and pH, the lower the detected level the better the result is. Exceeding an “MCL” would require the utility to notify the public and correct the problem. All test results were within allowed levels.

Contaminant (units)	Your Water (Highest Level)	Range of Detected Levels	Year Tested	Highest Level Allowed (MCL)	Ideal Goals (MCLG)	Major sources in drinking water
Alpha emitters (pCi/L)	0.327	-0.97 - 0.327	2016	15	0	Erosion of natural deposits
Barium (ppm)	0.017	0.014 - 0.017	2018	2	2	Discharge of metallic wastes, erosion of natural deposits
Chloride (ppm)	71.6	58.9 - 71.69	2018	n/a	n/a	Erosion of natural deposits, urban storm runoff
Chlorine (ppm)	0.74	0.70 - 0.74	2018	4	4	Water treatment chemical used for disinfection
Copper (ppm)	0.42*	0.006 - 0.50	2017	AL=1.3	1.3	Corrosion of household plumbing, erosion of natural deposits
Combined Radium (pCi/L)	0.310	0.298 - 0.310	2016	4	4	Erosion of natural deposits from water sources
Fluoride (ppm)	0.84	0.63 - 0.84	2018	4	4	Water additive which promotes strong teeth
HAA's - Haloacetic Acids (ppb)	29.8	5.2 - 29.8	2018	60	0	By-product of drinking water chlorination
Hardness (ppm)	116	88 - 116	2018	n/a	n/a	Erosion of natural deposits
Lead (ppb)	4*	ND - 7	2017	AL=15	0	Corrosion of household plumbing, erosion of natural deposits
Nitrate [as Nitrogen] (ppm)	0.083	0.052 - 0.083	2018	10	10	Runoff from fertilizer use; leaching from septic tanks
pH (standard units)	7.5	6.9 - 7.5	2018	6.5 - 8.5	n/a	Water treatment chemicals
Sodium (ppm)	43.3	34.3 - 43.3	2018	NL=28	n/a	Erosion of natural deposits, urban storm runoff
Sulfate (ppm)	29.8	29.0 - 29.8	2018	n/a	n/a	Erosion of natural deposits, urban storm runoff
TTHMs - Total Trihalomethanes (ppb)	57.7	30.1 - 57.7	2018	80	0	By-product of drinking water chlorination
Turbidity (NTU)	0.47	0.09 - 0.47	2018	TT	n/a	Soil runoff
Turbidity - Lowest Monthly % Meeting Limits (%)	99	99 - 100	2018	95	n/a	Soil runoff

KEY TO ABBREVIATIONS USED IN THE ABOVE CHART:

* = 90th percentile result shown as required. The level at which 90% of all sample results are below.

MCL = Maximum Contaminant Level. 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. The EPA sets these values.

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. The EPA sets these values.

AL = Action Level - The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow. The EPA sets these values.

NL = Notification Level - The level at which the public must be notified if exceeded. The EPA sets these values.

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

n/a = Not applicable, Not established

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

ppm = parts per million (also equivalent to mg/L, milligrams per liter)

ppb = parts per billion (also equivalent to ug/L, micrograms per liter)

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

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 Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791.



Water Conservation Ideas

Water conservation is important not only because it preserves a precious natural resource, but also saves you money. Your water bill is directly related to how much water you use, so using it wisely will lower your bill.

Here are some ideas for saving water:

- Use a modern efficient dishwasher for cleaning dishes instead of washing by hand. Only run full dishwasher loads. Hand washing can use 20 gallons of water while a modern dishwasher uses only 4 gallons.
- Fix leaky faucets. A faucet that drips as little as one drop per second can waste more than 3000 gallons in a year.
- Look and listen for running toilets and fix them promptly. A faulty toilet can waste 200 gallons each day.
- Take showers instead of baths. A five minute shower uses only 10 - 20 gallons while a bath can use up to 70 gallons.
- Use a broom or blower instead of a hose to clean outdoor decks, walkways and driveways.
- More than half of a home's water is used in the bathroom. Never let the water run while brushing teeth.
- Store a pitcher of water in the refrigerator for a cold drink instead of running the tap for minutes waiting for it to cool.

Information About Lead in Water

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 household plumbing which is owned by the property owner. The Danbury Water Department 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 at <http://www.epa.gov/safewater/lead>.

Danbury's water supply and system is tested regularly for lead and historically the levels are low. If you are interested in more information feel free to contact us.



The Margerie Water Treatment Plant is the City's most modern treatment plant and is capable of producing 5.5 million gallons of potable water per day.

**City of Danbury
Water Department**
155 Deer Hill Avenue
Danbury, CT 06810

Phone:
(203) 797-4637

Office Hours:
Monday-Friday
7:00 am - 3:30 pm

**After Hours Phone
(emergencies):**
(203) 797-4615

Fax:
(203) 796-1590

**St. of CT Dept. of
Public Health:**
(860) 509-7333

"Cool" Water Facts

- There is no "new" water. Whether the source of water is a stream, lake, well, or spring, we are using the same water that the dinosaurs used millions of years ago.
- Only about 1% of all water on Earth can be used for drinking. About 97% is salt water (Oceans) or otherwise undrinkable, and the other 2% is frozen in the ice caps or glaciers.
- Groundwater can take a human lifetime just to travel just one mile.
- An average person can live a month without food, but only a week without water.
- Water expands by 9% when it freezes, and ice is lighter than water which is why it floats.
- Fluoridation of drinking water was declared one of the top 10 public health achievements of the 20th century by the Center for Disease Control and Prevention (CDC).
- It takes 7 ½ years for the average home in the USA to use the same amount of water flowing over Niagara Falls in one second (about 750,000 gallons).
- Water makes up about two-thirds (66%) of the human body.

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 Safe Drinking Water Hotline (800-426-4791).

*Este informe contiene información muy importante.
Traducir o hable con un amigo quien lo entienda bien.*

