



## Danbury Water Department 2020 Water Quality Report



*West Lake Reservoir – “old” intake structure  
originally built in 1905-07*

The City of Danbury Water Department is pleased to present you with this report. It is designed to provide you with details about your water such as: where it comes from, how it is treated, and what is contained. The report summarizes your water quality data for 2019 and discusses any contaminants that were detected. In addition, you'll read about some of our activities from the past year as well as our actions to continue to provide you with safe, quality drinking water in adequate quantities for all your needs.

City of Danbury Water Department  
155 Deer Hill Avenue  
Danbury, CT 06810  
203-796-4637

[www.danbury-ct.gov](http://www.danbury-ct.gov)

### **WATER CONSERVATION MEASURES**

Quality water is essential to life on Earth and must be protected from contamination as well as being conserved. Protecting it includes proper use and disposal of household chemicals and pharmaceuticals. Conserving water helps to insure an adequate supply for today and future generations. As an additional bonus, actively conserving water will save you money on your utility bill. Here are some tips for doing this:

- ◆ Fix Leaks- A leaking faucet or toilet can waste lots of water that you're paying for. Even just a drip can waste over 20 gallons a day or 4,000 gallons in a year.
- ◆ Check your 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 common to lose up to 100 gallons a day from one of these invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.
- ◆ When waiting for tap water to warm up, capture the wasted water in a pitcher and use it for watering plants.
- ◆ Do not waste water running the cold tap, waiting for a cold drink. Instead, store a pitcher of water in the refrigerator for drinking.
- ◆ Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get your money's worth, load it to capacity.
- ◆ Turn off the water faucet when brushing your teeth.
- ◆ Use a broom or leaf blower to clean leaves and other debris off sidewalks and driveways instead of a hose.
- ◆ Take shorter showers and shallower baths. Use lower flow shower heads.
- ◆ 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.
- ◆ Water outdoor plants only in the early morning or late evening to avoid excess evaporation from occurring.

More information regarding water conservation can be found at [www.wateruseitwisely.com](http://www.wateruseitwisely.com) and at [www.smarthomewatertguide.org](http://www.smarthomewatertguide.org)

### **CORONAVIRUS INFORMATION**

As we write this report in Spring 2020, we are in the middle of the outbreak of the Coronavirus Disease 2019 (COVID-19). The water industry has been interested and is learning about this virus with regard to the safety of the public water supply. We have learned that COVID-19 has not been detected in drinking water and that the risk to water supplies is low. The EPA has determined that the Coronavirus is particularly susceptible to the conventional treatment processes we use to treat your water including disinfection with chlorine. The bottom-line recommendation from EPA and the CDC is that Americans can continue to use and drink water from their taps as usual.

### **WATER SYSTEM IMPROVEMENTS**

The Danbury Water Department is continually looking to improve the water treatment plants, pump stations, and water distribution system. Each year the City's budget contains money for water system improvements. Upgrades to treatment processes, the piping network, fire hydrants, computer systems, and pumping stations is prioritized and performed yearly. For example, recent work to update emergency power systems included new electrical generators at the Margerie Pump Station and Harvest Hill Tank. Additionally, work on the Pleasant Acres PS pumps and WestConn PS controls was completed in 2019.



*The Margerie Pump Station and  
Electrical Generator*

## ARE THERE CONTAMINANTS?

As the State regulations require, we test your drinking water daily for numerous contaminants. These contaminants include: total coliform bacteria, E.coli bacteria, turbidity (a measure of water clarity), inorganic compounds (IOCs), nitrate (NO<sub>3</sub>), nitrite (NO<sub>2</sub>), 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 compounds that 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, although representative, is 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](http://www.epa.gov/safewater); the State of Connecticut Department of Public Health at 860-509-7333 or their web site: [www.ct.gov/dph](http://www.ct.gov/dph); or the Danbury Water Department at 203-797-4637.

Last year, as in past years, your tap water met all requirements of the EPA and State Health Department.

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 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.



*The Lower Kohanza Reservoir was the City's first, constructed in 1860*

## WHERE YOUR WATER COMES FROM

Danbury's primary sources of drinking water are our surface water reservoirs. We are fortunate to have multiple sources of high quality source and the ability to store over 3 billion gallons. Our main reservoirs are the West Lake, Margerie, and East Lake located in Danbury. Additional sources of supply include Padanaram, Upper and Lower Kohanza, and Boggs Pond Reservoirs, as well as Lake Kenosia and the Kenosia Well Field. Customers of the Danbury Water System use approximately 7 million gallons of water each day. This water is treated and produced at our West Lake and our Margerie Water Treatment Plants.

The State of Connecticut Department of Public Health (CTDPH) Drinking Water Section completed an assessment of the Danbury Water Department source waters (West Lake and Margerie Reservoirs). The study was done to evaluate the susceptibility of the reservoirs to contamination. The updated

assessment report can be found on the Department of Public Health's website: [www.ct.gov/dph](http://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](http://www.epa.gov/drink).

## HISTORY OF THE CITY'S PUBLIC WATER SUPPLY

The City's first reservoir dates back to 1860 when the Lower Kohanza Dam and Reservoir were constructed. Later that decade in 1866, a second reservoir, Upper Kohanza was built. The original water system consisted of about 50,000 feet of pipe, 25 valves, and 65 fire hydrants. The Padanaram Reservoir was added to the system to increase supply, but as the City grew more water was needed.

The West Lake Reservoir, the City's largest, was constructed between 1905 and 1907 on 150 acres of land acquired from Samuel Gregory. Twin stone gate houses were constructed at the site of the future West Lake Treatment Plant (one of these gate houses still remains today). In 1929 the Margerie swamp located in New Fairfield and Danbury was purchased for future water supply.

In the mid 1930's the West Lake and Margerie Water Treatment Plants were constructed and put in service. The plants were updated in the early 1980s and again in 1998 when an entirely new Margerie Plant was built. The plants are operating effectively today.

## SODIUM LEVEL NOTIFICATION

The sodium level in Danbury water is tested each year. The level in 2019 was 43.7 mg/L which is above the State notification level (NL) of 28 mg/L. If you are on a sodium-restricted diet, please inform your physician that your water contains 43.7 mg/L of sodium. For comparison purposes, most regular sodas contain around 150 mg/L, and low-fat milk contains over 400 mg/L of sodium.

## 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 for fire fighting. In order to make certain of this many 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**

City of Danbury Ordinances mandate ownership of water 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.

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. Approximately half of the City's 2100 fire hydrant are flushed each year. This helps maintain the water's 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 24/7 to quickly respond to emergencies and to repair broken water mains.

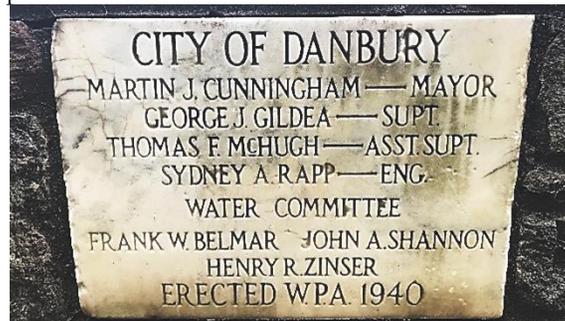
- **Security and Inspection**

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 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.



*The West Lake Reservoir was built in the early 1900s with other structures such as this stonewall built in later 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 your 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 or cooking or for 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.

Danbury's water supply and system is tested regularly for lead and historically the levels are low and are well below the "action level" set by the US EPA. If you're concerned about the levels of lead in your water you may wish to have it tested. Information about lead and copper testing is available at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead) or from us at 203-797-4637.

### **DO I NEED TO TAKE PRECAUTIONS?**

Although our drinking water met 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).

City of Danbury Water Department

Find us on the Web at.....

[www.danbury-ct.gov](http://www.danbury-ct.gov)

Go to: "Government" – "Departments" –  
"Public Works" – "Public Utilities"

## 2019 Water Quality Data Tables

The tables below list the drinking water contaminants that were detected in the 2019 calendar year. Many substances were tested for, were not detected, and 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 results below are from testing done in 2019. Results reported from other years is allowed because the concentrations of these contaminants do not typically change year to year and/or 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
Barium (ppm)	0.019	0.012 - 0.019	2	2	2019	No	Erosion of natural deposits, discharge metal refineries
Chlorine (ppm)	0.81	0.69 - 0.81	4 (MRDL)	4 (MRDLG)	2019	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
Di(2-Ethylhexyl) Phthalate (ppb)	1.5	0.0 - 1.5	6.0	0	2019	No	Discharge from rubber or chemical factory
Fluoride (ppm)	0.79	0.63 - 0.79	4	4	2019	No	Water additive which promotes strong teeth
HAA5, Haloacetic Acids (ppb)	22.5	4.6 - 22.5	60	0	2019	No	By-product of drinking water chlorination
Lead (ppb)	4.0	ND - 7.0	15 (AL)	0	2017	No	Corrosion of plumbing, erosion natural deposits
Nitrate [as Nitrogen] (ppm)	0.181	0.049 - 0.181	10	10	2019	No	Runoff of fertilizer use; leaching from septic tanks
Sodium (ppm)	43.7	34.1 - 43.7	28 (NL)	NA	2019	Yes	Erosion of natural deposits, urban storm runoff
Total Organic Carbon (TOC removal ratio)	1.15	1.15 - 1.45	1.0 (TT)	NA	2019	No	Naturally present in the environment
TTHMs, Total Trihalomethanes (ppb)	56.2	18.5 - 56.2	80	0	2019	No	By-product of drinking water chlorination
Turbidity- Filter Plant Monthly Percent Meeting Limit (%)	96.0	96.0 - 100	95 (TT)	NA	2019	No	Soil runoff, natural organic and inorganic matter
Turbidity (NTU)	0.42	0.05 - 0.42	1 (TT)	NA	2019	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)	67.7	49.7 - 67.7	250	2019	No	Erosion of natural deposits, urban storm runoff
Hardness (ppm)	100	78 - 100	250	2019	No	Erosion of natural minerals
Manganese (ppm)	0.10	ND - 0.10	0.05 (AL=0.3)	2019	Yes/No	Naturally present in soil and rocks
pH (standard units)	7.6	6.9 - 7.6	6.5 - 8.5	2019	No	Water treatment chemicals
Sulfate (ppm)	31.4	30.9 - 31.4	NA	2019	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

#### 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.

## VIOLATION NOTICES

In 2019 the Danbury Water Dept. violated two drinking water regulations related to the testing of your drinking water. In one instance 3 samples (out of 8 total) were not tested for Total Haloacetic Acids by our contract laboratory soon enough after their collection, and were “out of holding time”. Repeat samples were collected and the results came out within the required levels. In the second instance, the reservoir water from West Lake and Margerie was not tested for the 6 required Pesticides and Herbicides in 2019. This annual requirement was mistakenly missed, but samples dating back to the ‘90s in addition to samples from early 2020 show these chemicals were not detected in the reservoir water. The notices below are required per the State of CTDPH.

### PUBLIC NOTIFICATION

Important Information About Your Drinking Water

#### MONITORING AND/OR REPORTING VIOLATION

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

Date: May 1, 2020

PWSID: CT0340011

To: The Customers/Residents of the Danbury Water Dept.

From: David M. Day, P.E., Superintendent

Our public water system recently violated drinking water monitoring and/or reporting requirements. As a supplier of public drinking water, we are required to monitor the water quality of our water supply to insure that it meets the current drinking water standards. Failure to conduct monitoring and/or report results of such monitoring to the State Department of Public Health Drinking Water Section constitutes a violation. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we did to correct this situation.

We are required to monitor drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. We did not complete the monitoring or did not report the results for the requirement(s) listed below:

Total Haloacetic Acids (WSF ID: 00600; Monitoring Period July.1, 2019 –Sept. 30, 2019

#### What is being done?

The following areas have been affected: 3 sample locations were not tested within the required holding time of the test method. The 3 affected samples were “Boehringer” – Old Ridgebury Rd. area, “Stadley Rough” area and “Mill Plain” Rd. area.

The following steps are being taken to correct this violation: Re-sampling and testing of the 3 samples was done in early Oct. 2019. All test resulted in acceptable results.

We expect to return to compliance or resolve the situation by Spring/Summer 2020 when this notice is posted and CTDPH receives a copy.

If you have any questions please contact David Scalzo at 203-796-1536 x253 or by mail at 155 Deer Hill Avenue, Danbury, CT 06810

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

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We are required to monitor drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. We did not complete the monitoring or did not report the results for the requirement(s) listed below:

Surface Water Pesticides (WSF ID: 2101; Monitoring Period Jan.1, 2019 –Dec.31, 2019

Surface Water Pesticides (WSF ID: 2106; Monitoring Period Jan.1, 2019 –Dec.31, 2019

#### What is being done?

The following areas have been affected: Reservoir water prior to treatment at West Lake and Margerie Plants affected.

The following steps are being taken to correct this violation: Testing was performed in 2018 and 2020 with acceptable results. Computer program being used to track required tests.

We expect to return to compliance or resolve the situation by Spring/Summer 2020 when this notice is posted and CTDPH receives a copy.

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