



## Danbury Water Department 2023 Water Quality Report



*West Lake Reservoir – “old” intake structure*

The City of Danbury Water Department is pleased to present you with the Annual Water Quality Report. It includes details about your drinking water such as: where it comes from, how it is treated, and what it contains. The report summarizes the water quality data for 2022 and talks about some of the improvements we've made and our actions to continue to provide you with safe, quality drinking water in adequate quantities for all your needs.

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

### **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 water, and the ability to store over 3 billion gallons. Our main reservoirs are the West Lake, Margerie, and East Lake Reservoirs 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. Pictures of the West Lake Plant and reservoir are included in this report

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 State's assessment report can be found on the Department of Public Health's website: [www.ct.gov/dph](http://www.ct.gov/dph) and selecting drinking water then source water protection. 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).

### **HELP PROTECT WATER SUPPLIES FROM POLLUTION**

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-cutting your property. Keeping as much natural vegetation as possible can prevent pollution. 5. Disposing of old medicines (prescription drugs) properly and never flush them down the toilet. Flushed medicines can get into lakes, rivers, and streams where they can cause damage to the environment and harm aquatic organisms. Go to [www.nemo.uconn.edu](http://www.nemo.uconn.edu) or [www.ct.gov](http://www.ct.gov) for more information.

### **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 annually.

In 2022 work was completed on the new emergency power generator at the West Lake Water Treatment Plant. Additionally, valves and controls at the WestConn Pump Station and the West Lake High Service Pump Station were upgraded, ensuring that water sent to western Danbury will flow without issue for years to come. Planning is underway for a full update to the West Lake Water Treatment Plant, as well as new computers and upgrades to the electronic controls of the Margerie Water Plant. In April 2023, Danbury voters approved a \$115 million drinking water upgrade bond. This money will be used to pay for improvements to the City's water treatment plants, Kenosia well field, distribution piping system, water storage tanks, and regulatory compliance.

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

## ARE THERE CONTAMINANTS IN WATER?

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 West Lake Water Treatment Plant produces approximately 4 million gallons of water per day.*

## DO I NEED TO TAKE PRECAUTIONS?

Although drinking water is highly regulated by 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).

## 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.

## DANBURY ALERT

Residents are encouraged to sign up for "Danbury Alerts" which is a key way for City Officials to get time sensitive community messages (such as water main breaks or hydrant flushing) to you via your choice of email, text, or phone call. Please visit the City's website at: [Danbury-ct.gov](http://Danbury-ct.gov) for more information and to sign up

## WATER METER UPGRADES

EXCITING NEWS! Beginning in July the Public Utilities Department will begin a project to transition our meter reading system to an Advanced Meter Infrastructure. There will be some minor required changes to your water meter. Additional information and notification will be provided soon.

## WATER CONSERVATION MEASURES

Fresh clean water is essential to life on Earth and must be protected from contamination and be conserved. Protecting it requires proper handling, use and disposal of hazardous chemicals and proper use and disposal of pharmaceuticals. Conserving water helps to insure an adequate supply for today and future generations. As an additional bonus, by actively conserving water you will be saving money on your utility bill since you are charged based on usage. Here are some water conservation tips:

- ♦ 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, turn on only as needed.
- ♦ 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.epa.gov/watersense/start-saving](http://www.epa.gov/watersense/start-saving) and at [www.smarthomewaterguide.org](http://www.smarthomewaterguide.org)

## City of Danbury Water Department (a department of Public Utilities)

Find us on the web at.....

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

Click on Government, then Departments. You will find Public Utilities under Public Works



*The West Lake Reservoir is Danbury's largest, holding around 1.3 billion gallons when full.*

## INFORMATION ON PFAS IN WATER

Perfluoroalkyl and polyfluoroalkyl (referred to as PFAS) compounds are man-made substances that have been used in firefighting foams, industrial applications, and in a large number of consumer products including: cookware, food packaging, water and stain resistant fabrics, and paper products for decades.

PFAS compounds, of which there are thousands, are known to be very long lasting in nature with scientific studies showing that some may be linked to adverse health effects in humans and animals. The United States Environmental Protection Agency (USEPA) is continuing to study this issue and has begun the initial steps to mandate compliance with strict limits on PFAS in drinking water. The State of Connecticut Department of Public Health (CTDPH) has already set action levels for four of the most commonly found of these substances. Action levels are levels for which the CTDPH recommends a course of action be taken to reduce health risks.

Detectable levels of the compound PFOS (Perfluorooctanesulfonic Acid) and PFOA (Perfluorooctanoic Acid) have been found in recent

tests Danbury's drinking water. The levels found fall below the CTDPH action levels. Please see the 2022 Water Quality Data Tables in this report for more information.

Additional information on PFAS can be found on the USEPA website at: [www.epa.gov/pfas](http://www.epa.gov/pfas) or at the CTDPH website:

<https://portal.ct.gov/DPH/Drinking-Water/DWS/Per- and-Polyfluoroalkyl-Substances>

## LEAD SERVICE LINE INVENTORY

Water utilities nationwide have recently been required by the USEPA to prepare an inventory of the existing material in use for all water service lines to people's homes and businesses (this is the pipe leading from our water main to your property). These water pipes normally come into the basement of the property near the water meter in your home or business.

In the near future, you will be requested by our public outreach to scan a QR code or go to a website to enter information needed to get this completed.

The City assures its residents that Danbury water is tested daily for quality and safety and regularly as required for lead. Effective corrosion control treatment methods are used to reduce the possibility of lead in City water. Regular testing has shown levels consistently below the EPA action threshold for lead.

Residents' participation in developing this inventory is greatly appreciated and necessary in order to achieve the goal of eliminating any and all lead lines.

## SODIUM LEVEL NOTIFICATION

The sodium level in Danbury water is tested each year. The level in 2022 was 43.5 mg/L (mg/L-milligrams per Liter) 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 43.5 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**

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.

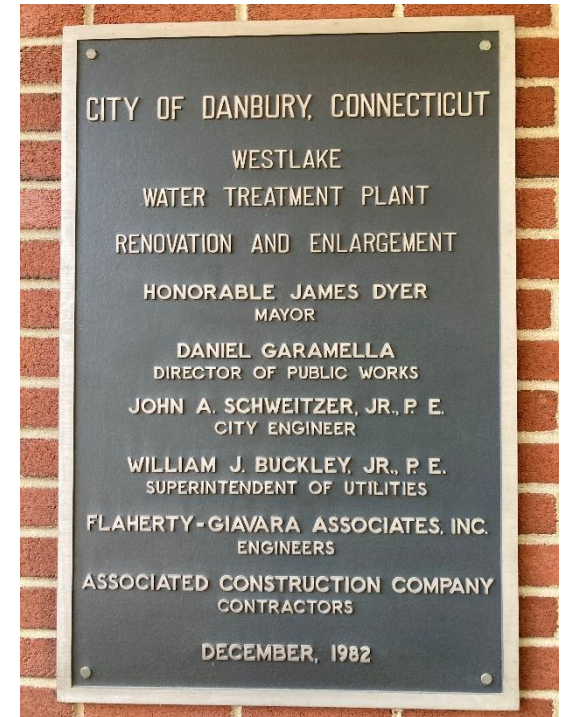
City of Danbury Ordinances require that "the cost of installing and maintaining all service connections to City water mains be at the expense of the property owner". The repair and maintenance of the entire water service line, from the water main in the road to the building being served, are therefore 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 to 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 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. This is 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 Plant was originally constructed in the 1930s, and upgraded in 1982. A full update is in the planning stages with the passage of the 2023 Water Bond*

## SMART WATERING AND IRRIGATION

Properties with automatic irrigation systems often use large volumes of water that is not only wasteful but is not necessary for healthy lawns and gardens. Connecticut's severe drought of 2016 and recent drought of 2022 showed that avoiding water waste must be practiced at all times and not just during periods of extreme drought. For this reason the Danbury Water Department recommends that all properties with automatic irrigation sprinkler systems use a "Twice-Weekly Sprinkler Irrigation Schedule" and that the times of use be set for Sunday & Wednesday OR Saturday & Tuesday from 12 AM to 10 AM or 6 PM to Midnight. Never water when it is raining. Never water from 10 AM to 6 PM as the water evaporation loss is high due to midday heat.

## 2022 Water Quality Data Tables

The tables below list the drinking water contaminants that were detected in the 2022 calendar year, unless otherwise noted. Many substances tested for, were not detected, and as required, 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. Results reported from previous years is included in some cases 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 test 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	Primary sources in drinking water
<i>Barium (ppm)</i>	0.01	0.01 – 0.02	2	2	2022	No	<i>Erosion of natural deposits, discharge metal Refineries</i>
<i>Chlorine (ppm)</i>	0.75	0.66 – 0.75	4 (MRDL)	4 (MRDLG)	2022	No	<i>Water treatment chemical for disinfection</i>
<i>Copper (ppm)</i>	0.33**	0.003 – 0.46	1.3 (AL)	1.3	2020	No	<i>Corrosion of plumbing, erosion natural deposits</i>
<i>Fluoride (ppm)</i>	0.78	0.64 – 0.78	4	4	2022	No	<i>Water additive which promotes strong teeth</i>
<i>HAA5, Haloacetic Acids (ppb)</i>	34.1***	6.5 – 34.1	60	0	2022	No	<i>By-product of drinking water chlorination</i>
<i>Lead (ppb)</i>	3**	ND – 12	15 (AL)	0	2020	No	<i>Corrosion of plumbing, erosion natural deposits</i>
<i>*Total Organic Carbon - TOC removal ratio</i>	1.33	1.33 – 1.76	1.0 (TT)	NA	2022	No	<i>Naturally present in the environment</i>
<i>TTHMs, Total Trihalomethanes (ppb)</i>	46.6***	18.5 – 46.6	80	0	2022	No	<i>By-product of drinking water chlorination</i>
<i>*Turbidity- Filter Plant Monthly Percent Meeting Limit (%)</i>	99 % compliance	99 - 100	95 (TT)	NA	2022	No	<i>Soil runoff, natural organic and inorganic matter</i>
<i>Turbidity (NTU)</i>	0.34	0.05 – 0.34	1 (TT)	NA	2022	No	<i>Soil runoff, natural organic and inorganic matter</i>

**SECONDARY OR NON-REGULATED CONTAMINANTS** (substances that do not have strict maximum limits)

Contaminant (units)	Your Water (highest level)	Range Low - High	Recommended limit	Sample Date	Limit Exceeded?	Primary sources in drinking water
<i>Chloride (ppm)</i>	64.5	51.2 – 64.5	250	2022	No	<i>Erosion of natural deposits, urban storm runoff</i>
<i>Hardness (ppm)</i>	106	86 – 106	250	2022	No	<i>Erosion of natural minerals</i>
<i>pH (standard units)</i>	7.8	6.9 – 7.8	6.5 - 8.5	2022	No	<i>Water treatment chemicals</i>
<i>Perfluorooctanoic Acid (PFOA) (ppt)</i>	3.28	3.11 – 3.28	16	2022	No	<i>Industrial or manufacturing chemical runoff.</i>
<i>Perfluorooctanesulfonic Acid (PFOS) (ppt)</i>	2.43	1.16 – 2.43	10	2022	No	<i>Industrial or manufacturing chemical runoff.</i>
<i>Sodium (ppm)</i>	43.5	32.2 – 43.5	28 (NL)	2022	Yes	<i>Erosion of natural deposits, urban storm runoff</i>
<i>Sulfate (ppm)</i>	33.0	29.3 – 33.0	NA	2022	No	<i>Erosion of natural deposits, urban storm runoff</i>

**Important Drinking Water Definitions:**

**MCLG=Maximum Contaminant Level Goal:** The level of a contaminant in 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. Addition of a disinfectant is necessary for control of microbial contaminants.

**Data Table Key: Unit Descriptions:**

**ppm** = parts per million, or milligrams per liter

**ppb** = parts per billion, or micrograms per liter

**ppt** = parts per trillion, or nanograms per liter

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

**NA** = Not Applicable, **ND** = Not Detected

\*For TOC Removal Ratio and Turbidity %, a higher number (over MCL) is better than lower

\*\*Copper & Lead levels shown are 90% results; 90% of samples tested below this value

\*\*\*Value shown is the highest running average calculated quarterly at each sample location