ConnecticutWater

Dear Valued Customer:

At Connecticut Water we know that water touches everything we care about. The most important thing we do each day is to provide clean, high-quality drinking water that you can trust. Our team of over 200 dedicated, trained professionals work to make sure you have reliable water service at your tap 365 days a year.

Our 2023 Annual Water Quality Report includes the results of more than 170,000 water samples (about 400 tests a day), which were tested at state certified laboratories for over 120 water quality parameters. *We are pleased to report that the water quality results in your system meet all state and federal drinking water standards.*

Within these pages are details about your drinking water: where it comes from, what is done to protect and treat it, and the results of our water quality tests.

We are also committed to the stewardship of water resources: we believe it is important to protect our water sources, land and the environment for current and future generations. Some of the ways we do that are:

- A comprehensive source-protection program including annual watershed inspections and clean-ups
- Ownership of over 6,000 acres of land maintained and protected as open space
- Active involvement by our team with local officials, reviewing and commenting on land development proposals or activities that could affect water quality at our sources of supply

Delivering high-quality drinking water to you is our highest priority. The data from these tests is regularly reviewed for changes or trends, and any customer water quality complaint is escalated for review by our water quality team. If you have any questions or comments about your drinking water or this report, please call our Customer Service staff at 1-800-286-5700 or send an e-mail to customerservice@ctwater.com.

Sincerely,

Craig J. Patla
President, Connecticut Water

2023 Water Quality Report – Reservoir Heights Water System

Public Water System ID# CT1462011

Connecticut Water is pleased to present a summary of the quality of the water provided to you during the past year. This report meets the requirements of the Federal Safe Drinking Water Act, to report annually the details of where your water comes from, what it contains, and the risks that our water testing and treatment are designed to prevent.

Federal law allows water providers to make the annual water quality reports available online. Paper copies can be mailed to customers upon request. We will notify customers through, bill inserts, news releases, our website and social media any time a new water quality report has been posted to our website. If you have any questions about this report, please call us at 1-800-286-5700 or e-mail customerservice@ctwater.com.

Water Source: The Reservoir Heights System serves Connecticut Water Company customers in the town of Vernon. Water for the Reservoir Heights System comes from the Town of Manchester Water Department's groundwater and reservoir sources. All reservoir water is treated at the Globe Hollow Water Treatment Plant in Manchester.

Sources of tap water and bottled water include reservoirs, ponds, wells, and springs. As water travels over the surface of the land or through the ground, it can dissolve naturally occurring minerals and in some cases, radioactive material, and pick up substances resulting from the presence of animals or from human activity, including:

- Viruses and bacteria, which may come from septic systems, livestock, or wildlife.

- Salts and metals, which can be natural or may result from storm water runoff and farming.

- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, or farming.

- Organic chemicals, which originate from industrial processes, gas stations, storm runoff, and septic systems.

- Radioactive substances, which can be naturally occurring.

To ensure safe tap water, the U.S. Environmental Protection Agency (EPA) prescribes limits on these substances in water provided by public water systems.

Source Water Assessment

The Source Water Assessment and Protection (SWAP) program determines how susceptible public water supplies are to potential contamination by microbial and/or chemical contaminates. The susceptibility ranking is assigned using information collected by the Department of Public Health (DPH) in 2003.

The below table summarizes the SWAP assessments for the system. These assessments are not an indication of water quality from our water sources. Complete SWAP reports can be found here: http://tinyurl.com/cwc-swapreport

Town	Water Supply Source	Type	Overall Susceptibility
Vernon	Manchester Reservoir System	Surface Water	Low

Protecting Water Sources

Source water is untreated water from streams, rivers, lakes, or underground aquifers that is used to supply public drinking water. Preventing drinking water contamination at the source makes good public health sense, good economic sense, and good environmental sense. Most contaminates enter rivers, lakes and reservoirs from storm water runoff of streets, parking lots, golf courses, athletic fields, construction sites, farms and residential neighborhoods. You can be aware of the challenges of keeping drinking water safe and take an active role in protecting drinking water.

There are lots of ways that you can get involved in drinking water protection activities to prevent the contamination of the ground water source:

• Restrict the use of lawn chemicals, especially before heavy rains.

• Dispose of pet or animal waste properly so that it does not wash into a nearby stream or storm drain.

• Inspect septic tanks every two years, and clean as needed. Make septic system repairs as soon as possible.

• Do not pour used motor oil on the ground or into storm drains. Contact your town for proper disposal of household chemicals.

• Report muddy runoff from construction sites to your town's zoning or wetland officials.

Connecticut Water staff works closely with developers, local land use agencies and state agencies to minimize potential impacts from proposed land use activities within our source water protection areas. We also work with local and state officials to correct new or existing violations in our source water protection areas, as necessary.

Connecticut Water regularly inspects more than 5,600 properties within our public water supply watershed areas throughout the state. Our watershed inspectors protect your drinking water by inspecting properties and ensuring they meet the regulations set by the Connecticut DPH. They look for and report conditions such as failing septic systems, wastewater discharge, improper livestock manure management, soil erosion and sedimentation, leaking heating oil tanks, improper usage and storage of chemicals, road salt, pesticides and fertilizers, illegal dumping, or any other factors that could affect water quality.

Educational Information on Lead & Copper

We believe it is important to provide you with information about the sources of lead and copper in drinking water and the health effects associated with them.

What is Lead?

Major Sources in Drinking Water: Corrosion of household plumbing systems; erosion of natural deposits.

Health Effects Statement: Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Connecticut Water Company is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components in your home where they could potentially result in lead in your drinking water. If you are concerned about the potential for lead in your drinking water from in-home plumbing and fixtures*, 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*. This is important especially in cases where you may not have used your water over a period of several hours and it's been sitting in the pipes. You may also 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 (https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-hotline) or www.epa.gov/safewater/lead Where needed, we have a comprehensive corrosion control program, to reduce risk of lead leaching from our customers' service line or internal plumbing. This includes pH monitoring and adjustment. And, we fully comply with EPA requirements regarding sampling for lead in drinking water. We provide documentation to the Connecticut Department of Public Health to demonstrate our results.

What is Copper?

Major Sources in Drinking Water: Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Health Effects Statement: Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could, suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor. If you are concerned about elevated lead or copper levels, you may wish to have your water tested. Running your tap for 30 seconds to two minutes before use will significantly reduce the levels of lead and copper in the water. Additional information is available from the U.S. Environmental Protection Agency's Safe Drinking Water Hotline website https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-hotline.

For information on the levels of lead and copper detected in your drinking water system, please refer to the table in this water quality report.

Special Considerations: 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/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline website https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-hotline.

Water Quality Data – Reservoir Heights Water System

The results of the tests conducted on water samples throughout the distribution system for regulated compounds are summarized in the table below. The Safe Drinking Water Act allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. If levels were tested prior to 2023, the year is identified in the sample year column. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. The "Range of Detection" column represents the lowest and highest concentration detected throughout the monitoring period.

DISINFECTANT RESIDUAL								
Analyte	Unit	MRDL	MRDLG	Range of Detection		Sample Year	Met Drinking Water Standards	Typical Source
				Low	High			
Chlorine	ppm	4	4	0.12	0.8	2023	Yes	Water additive used to control microbes

INORGANIC CHEMICALS								
Analyte	Unit	MCL	MCLG	Range of Detection		Sample Year	Met Drinking Water Standards	Typical Source
				Low	High			
Barium	ppm	2	2	0.03	0.33	2023	Yes	Erosion of natural deposits
Chloride	ppm	250	NA	25	104	2023	Yes	Erosion of natural deposits
Chromium	ppb	100	100	ND	ND	2023	Yes	Erosion of natural deposits
Fluoride	ppm	4	4	0.31	1.25	2023	Yes	Water additive for dental health
Nickel	ppb	100	100	ND	ND	2023	Yes	Erosion of natural deposits
Nitrate	ppm	10	10	ND	2.8	2023	Yes	Runoff from fertilizer
Sodium	ppm	NL = >100	NA	16	47	2023	Yes	Erosion of natural deposits

Nitrate

Connecticut Water Company's Reservoir Heights System is in compliance with the EPA's standard of less than 10 ppm for nitrate in drinking water. However, you should know that a nitrate level in drinking water above 10 ppm is a health risk for infants less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you may want to ask for advice from your health care provider.

ORGANIC CHEMICALS								
Analyte	Unit	MCL	MCLG	Range of Detection		Sample Year	Met Drinking Water Standards	Typical Source
				Low	High			
1,1 Dichloroethylene	ppb	7	7	ND	0.5	2022	Yes	Discharge from industrial chemical factories
Trichloroethylene	ppb	5	0	ND	0.59	2023	Yes	Discharge from metal degreasing sites
1,1,1 Trichloroethane	ppb	200	0	ND	ND	2022	Yes	Discharge from metal degreasing sites

RADIONUCLIDES								
Analyte	Unit	MCL	MCLG	Range of Detection		Sample Year	Met Drinking Water Standards	Typical Source
				Low	High			
Alpha emitters	pCi/L	15	0	ND	1.1	2020-2023	Yes	Erosion of natural deposits
Combined Radium	pCi/L	5	0	ND	1.9	2020-2023	Yes	Erosion of natural deposits
Uranium	ppb	30	0	ND	1	2020-2023	Yes	Erosion of natural deposits
Beta emitters	pCi/L	50*	0	ND	1.8	2020-2023	Yes	Erosion of natural deposits
Strontium-90	pCi/L	8	0	ND	0.2	2020-2023	Yes	Erosion of natural deposits
Tritium	pCi/L	20,000	0	ND	350	2020-2023	Yes	Erosion of natural deposits

Beta Emitters
  * EPA considers 50 pCi/L to be the level of concern for beta particles.

MICROBIOLOGICAL							
Analyte	MCL	MCLG	Detected in Water System		Sample Year	Met Drinking Water Standards	Typical Source
Total Coliforms	TT > 1 **		Absent		2023	Yes	Naturally present in environment
E. coli	See below †	0	Absent		2023	Yes	
Turbidity	TT >5 NTU	0	ND	2.1	2023	Yes	Soil runoff
Total Organic Carbon	TT (compliance ratio ≥1)	0	Compliance Ratio = 1.6		2023	Yes	Naturally present in environment

** Total Coliform
    This report reflects compliance with the Revised Total Coliform Rule (RTCR) issued April 1, 2016. The RTCR requires water systems to continue to monitor for coliform contamination, and replaced the monthly MCL for total coliform with a TT for total coliform. The TT dictates that when coliform contamination exceeds a specified frequency, water systems must conduct an assessment of the system to identify and correct any potential routes of contamination in order to remain in compliance with Drinking Water Standards.

† E. coli
    Any routine sample that shows the presence of total coliform triggers repeat samples that must be analyzed for total coliform and *E. coli*. If *E. coli* is found in any repeat sample, the system is considered to be in violation of the MCL.

Turbidity

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

LEAD AND COPPER									
Analyte	Unit	MCL	MCLG	Range of Detection		90th %ile value	Sample Year	Met Drinking Water Standards	Typical Source
				Low	High				
Lead	ppb	AL = 15	0	ND	ND	ND	2023	Yes	Corrosion of household plumbing systems
								(0 samples > AL)	
Copper	ppm	AL = 1.3	1.3	0.125	0.242	0.23	2023	Yes	Corrosion of household plumbing systems

Educational Information about Lead and Copper

The table above provides information on the levels of lead and copper detected in your drinking water system. For general information on lead and copper, please refer to the Educational Information on Lead & Copper section of this CCR.

DISINFECTION BYPRODUCTS									
Analyte	Unit	MCL	MCLG	Range of Detection		LRAA	Sample Year	Met Drinking Water Standards	Typical Source
				Low	High				
Total Trihalomethanes	ppb	80	NA	68.2	68.2	68.2	2023	Yes	By-product of drinking water disinfection
Haloacetic Acids	ppb	60	NA	14.8	14.8	14.8	2023	Yes	By-product of drinking water disinfection

UNREGULATED CONTAMINANT MONITORING RULE 4 (UCMR 4)		
Contaminant	Range	Likely Source of Contamination
Manganese (ppb)	ND - 28	Erosion of natural deposits
HAA5 Group (ppb)	1.1 - 35.5	By-product of drinking water disinfection
HAA6Br Group (ppb)	2.12 - 8.02	By-product of drinking water disinfection
HAA9 Group (ppb)	3.12 - 41.62	By-product of drinking water disinfection

UNREGULATED CONTAMINANT MONITORING RULE 4 (UCMR 4)

UCMR 4 parameters have no standards and are being evaluated for potential future regulation. EPA continually evaluates its drinking water standards to protect public health. As required by the 1996 Safe Drinking Water Act amendments, once every five years EPA issues a new list of no more than 30 unregulated contaminants to be monitored by public water systems. This monitoring provides a basis for potential future regulatory actions to protect public health.

Manchester Water conducted the required sampling and analysis between 2018 -2020 under the UCMR 4. The table above shows which of the unregulated contaminants were detected and the ranges of detection.

PFAS			
Contaminant	Range	CT DPH AL	Common Uses
PFOA (ppt)	1.7 - 6.1	16	Non-stick and stain-resistant coatings Food packaging Chemically inert coatings Fire-fighting foam Industrial processes
PFOS (ppt)	1.9 - 5.8	10	
PFNA (ppt)	ND	12	
PFHxS (ppt)	ND - 2.1	49	
PFHpA (ppt)	ND - 1.7	NA	
PFHBS (ppt)	0.6 - 3	760	
PFHxA (ppt)	0.7 - 3.1	240	
PFDA (ppt)	ND	NA	
PFPeA (ppt)	1.1 - 3.4	NA	

 PFAS is an abbreviated term for per-and polyfluoroalkyl substances. In June of 2022, Connecticut DPH established Action Levels (AL) for 4 of the PFAS chemicals as listed above. Although monitoring is not required at this time by either the EPA or the DPH, Connecticut Water has evaluated all active sources for the presence of these compounds and has voluntarily communicated the results to our customers where these compounds have been detected. There is nothing that you need to do at this time. Your drinking water continues to meet, or be better than, all federal and state regulatory standards.

TERMS AND ABBREVIATIONS
AL = Action Level: The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
LRAA = Locational Running Annual Average: The average of sample analytical results for samples taken at a particular monitoring location during the previous 4 calendar quarters. The LRAA is used for direct comparison to the MCL.
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.
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.
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.
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 contamination.
NA = Not Applicable
ND = Not Detected
NL = Notification Level: There is no MCL for sodium. However, the Connecticut Department of Public Health requires that customers be notified if sodium levels exceed 100 ppm.
NTU = Nephelometric Turbidity Unit: A measure of water clarity.
ppm = parts per million, or milligrams per liter (mg/L) This is equivalent to one second in 11.5 days.
ppb = parts per billion, or micrograms per liter (μg/L) This is equivalent to one second in 32 years.
ppt = parts per trillion, or nanograms per liter (ng/L) This is equivalent to one second in 32,000 years.
pCi/L = picocuries per liter (a measure of radioactivity)
TT = Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
90th %ile = 90th percentile value: The calculated value that is equal to or greater than 90 percent of the individual sample concentrations for the water system. The 90th percentile value is used for direct comparison to the AL.

Information About Your Water Service and Quality

Connecticut Water values consumer engagement on decisions that may affect water quality. Connecticut Water is committed to notifying customers prior to making treatment, water main replacements, or other water system changes, that would affect water quality. The notices are delivered by mail and/or via an automated phone, text, or email system and provide a contact phone number or email address for consumers to learn about the planned improvement. Connecticut Water is committed to delivering a reliable supply of high-quality water to its customers and communities. We welcome customer feedback at any time on the quality of our water and our service. The easiest way to reach us is through phone calls or emails to our customer service team at 800.286.5700 or CustomerService@ctwater.com.
There are other opportunities for customers to engage and learn about the water system, including:

- The Connecticut Water Customer Advisory Council meets regularly to discuss matters related to water service and customer service. Representatives for the customer advisory council must be customers of Connecticut Water. Appointments to the council are made by local town/city government. Any customer interested in being on the council should contact their community's chief executive officer.
- Rate proceedings before the Connecticut Public Utilities Regulatory Authority. During the extensive rate review process conducted by PURA there is an opportunity for customer and public comments. All customers are notified of these opportunities by letter that includes time, date and location of the meetings, as required by the Connecticut General Statutes.
- We also retain an independent research firm to survey our customers annually. The survey includes question about water quality and include space for comments. Our customer service, service delivery and water quality teams review the survey results and comments.

We are here to serve you and welcome your feedback.

WHAT WE TEST FOR

Per the Safe Drinking Water Act (SDWA), Connecticut Water is required to test for the following:

INORGANIC CONSTITUENTS

- Antimony
- Arsenic
- Barium
- Beryllium
- Cadmium
- Chloride
- Chromium
- Cyanide
- Fluoride
- Mercury
- Nickel
- Nitrate
- Nitrite
- Selenium
- Silver
- Sodium
- Sulfate
- Thallium

VOLATILE ORGANIC COMPOUNDS

- 1,1,1,2-Tetrachloroethane
- 1,1,1-Trichloroethane
- 1,1,2,2-Tetrachloroethane
- 1,1,2-Trichloroethane
- 1,1-Dichloroethane
- 1,1-Dichloroethylene
- 1,1-Dichloropropene
- 1,2,3-Trichloropropane
- 1,2,4-Trichlorobenzene
- 1,2,4-Trimethylbenzene
- 1,2-Dichlorobenzene
- 1,2-Dichloroethane
- 1,2-Dichloropropane
- 1,3,5-Trimethylbenzene
- 1,3-Dichlorobenzene
- 1,3-Dichloropropane
- 1,3-Dichloropropene
- 1,4-Dichlorobenzene
- 2,2-Dichloropropane
- Benzene
- Bromobenzene
- Bromodichloromethane
- Bromoform
- Bromomethane
- Carbon Tetrachloride
- Chlorobenzene
- Chloroethane
- Chloroform
- Chloromethane
- Cis-1,2-Dichloroethylene
- Dibromochloromethane
- Dibromomethane
- Dichloromethane
- Ethylbenzene
- Methyl tert-butyl ether
- M-Xylene
- Naphthalene
- N-Butylbenzene
- N-Propylbenzene
- O-Chlorotoluene
- O-Xylene
- P-Chlorotoluene
- P-Xylene
- Styrene
- Tetrachloroethylene
- Toluene
- Trans,1-2Dichloroethylene
- Trichloroethylene
- Vinyl Chloride

SYNTHETIC ORGANIC COMPOUNDS

- 1,2-Dibromo-3-Chloropropane
- 2,4,5-TP
- 2,4-D
- 3-Hydroxycarbofuran
- Aldicarb
- Aldicarb Sulfone
- Aldicarb Sulfoxide
- Aldrin
- Atrazine
- Benzo(a)pyrene
- BHC-Gamma
- Butachlor
- Carbaryl
- Carbofuran
- Chlordane
- Dalapon
- Di(2-ethylhexyl) adipate
- Di(2-ethylhexyl) phthalate
- Dicamba
- Dieldrin
- Dinoseb
- Diquat
- Endrin
- Ethylene Dibromide
- Glyphosate
- Heptachlor
- Heptachlor Epoxide
- Hexachlorobenzene
- Hexachlorocyclopentadiene
- Lasso
- Methomyl
- Methoxychlor
- Metolachlor
- Metribuzin
- Oxamyl
- Pentachlorophenol
- Picloram
- Propachlor
- Simazine
- Total PCB
- Toxaphene

PFAS (Per- and Polyfluoroalkyl substances)

- PFOA
- PFHxS
- PFOS
- PFHpA
- PFNA
- PFBS

If a chemical is found to be in any of the samples that we collect, the detected level will be reported in the water quality tables in the previous section(s) along with the detected range and the typical way that the chemical may be introduced to a drinking water supply. If results are not indicated in the data tables, that is because the chemical was not detected in the water during the most recent sampling event.

WATER CONSERVATION

Conserving water helps ensure that we have an adequate supply of water for public health and safety and reduces demands on the state's water resources. A typical household uses 15,000 gallons of water per quarter, or 60,000 gallons a year. YOU can play a role in conserving water by being conscious about the amount of water your household is using.

**Here are some ways to conserve.
Find more on our social media handles:**

[Facebook] [Twitter] [LinkedIn] [Instagram] [YouTube] YouTube

REPAIR leaky toilets

Check for leaks by putting food coloring in the tank; if the food coloring seeps into the bowl without flushing, there is a leak.

Water Savings:
73,000 gallons/year

CONSIDER a low flow toilet

Modern toilets use just 1.6 gallons per flush, versus older models using 3.5 gallons per flush.

Water Savings:
15,000 gallons/year

RUN full loads in the washer & dishwasher

Go ahead and fill 'er up! Full loads of laundry and dishes save water AND energy.

Water Savings:
3,400 gallons/year

COVER UP - your pool

Pool covers not only keep out leaves and debris, they reduce up to 95% of evaporation.

Water Savings:
20,000+ gallons/year

WATER EARLY, not often

Lawns develop short root systems when watered every day. Water just once or twice a week in the morning to maximize root health and avoid water loss from evaporation

Water Savings: 6,750 gallons per watering day avoided for .25 acre lawn

TURN OFF the tap

Running water during toothbrushing, shaving and washing dishes all adds up; turn off the tap when you don't need the water

Water Savings: 3,000 gallons/year just through toothbrushing

Connecticut Water is committed to preserving our environment for current and future generations.

Protection of **OPEN SPACE AND WATERSHED LANDS**

WATER CONSERVATION education and programs

INFRASTRUCTURE INVESTMENTS to reduce system water loss

SUSTAINABLE DESIGN of buildings and facilities