



# ANNUAL WATER QUALITY REPORT

Reporting Year 2023

此份有关你的食水报告，  
内有重要资料和讯息，请找  
他人替你翻译及解释清楚。

이 안내는 매우 중요합니다.  
본인을 위해 번역인을 사용하십시오.

Este informe contiene información muy  
importante sobre su agua potable. Tradúzcalo  
o hable con alguien que lo entienda bien.

Cé rapport contient des information importantes  
concernant votre eau potable. Veuillez  
traduire, ou parlez avec quelqu'un qui peut le  
comprendre.



**Presented By**



**Norwich  
Public Utilities**



PWS ID#: CT1040011



## Our Commitment

NPU is pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2023. Included are details about your sources of water, what it contains, and how it compares to standards set by regulatory agencies. Our goal is to provide you with a safe and dependable supply of drinking water. We are committed to ensuring the quality of your water and providing you with this information.

## Important Health Information

Sources of lead in drinking water include corrosion of household plumbing systems and erosion of natural deposits. Infants and children who drink water containing lead in excess of the action level can experience delays in their physical or mental development. Children can show slight deficits in attention span and learning abilities. Adults who drink this water over many years can develop kidney problems or high blood pressure.

Sources of copper in drinking water include corrosion of household plumbing systems, erosion of natural deposits, and leaching from wood preservatives. 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 can experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years can suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. Environmental Protection Agency (EPA)/Centers for Disease Control and Prevention (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 at (800) 426-4791.



## Water Conservation Tips

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use four to six gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per 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 not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- 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.

## Community Participation

The Norwich Public Utilities (NPU) Board of Commissioners meets the fourth Tuesday of every month at 6:00 p.m. These meetings are open to the public and, unless otherwise noted, take place at 16 South Golden Street. For more information about these meetings, visit [norwichpublicutilities.com](http://norwichpublicutilities.com).

## Source Water Assessment

Assessments of the two reservoirs were completed by the Department of Public Health, Drinking Water Section, in 2003. The assessment found that NPU's public drinking water sources have a low susceptibility to potential sources of contamination. The assessment report can be found on the Department of Public Health Drinking Water Section's website at [www.dir.ct.gov/dph/Water/SWAP/Community/CT1040011.pdf](http://www.dir.ct.gov/dph/Water/SWAP/Community/CT1040011.pdf).

## QUESTIONS?

For more information about this report or questions relating to your drinking water, please call the Water Integrity Manager at (860) 887-2555 or email [communitymatters@npumail.com](mailto:communitymatters@npumail.com).



## Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.



## Protecting Our Public Resource

We continually monitor our reservoirs and surrounding lands to prevent potential contamination of our water supplies. Testing is performed by the following certified laboratories:

NPU Stony Brook Laboratory (PH-0196)

NPU Deep River Laboratory (PH-0449)

NPU Falls Avenue Laboratory (PH-0453)

Complete Environmental Testing (PH-0116)

Analytical Consulting Technology (PH-0518)

Eurofins Eaton Analytical (PH-0535)

Microbac (PH-0465)

Source water is untreated water from streams, rivers, lakes, or aquifers that is used to supply public drinking water. Preventing drinking water contamination at the source is the safest and most practical approach from a public health, economic, and environmental perspective. The public should take an active role in protecting public water sources by properly disposing of household chemicals, helping clean up watersheds that are the source of our community's water, and attending public meetings to ensure that our need for safe drinking water is considered in making decisions about land use. Contact us for more information on our source water protection. You may also find information at [www.epa.gov/sourcewaterprotection](http://www.epa.gov/sourcewaterprotection).



## Where Does My Water Come From?

NPU customers enjoy a safe water supply from two reservoirs located in Colchester and Montville. We also have a groundwater well and an interconnection with another water supplier, which serve as reserve supplies in case of an emergency. Combined, our treatment facilities provide roughly 1.9 billion gallons of clean drinking water every year, or approximately 5.3 million gallons a day.

Our distribution system is carefully maintained and tested, using chlorine for disinfection to ensure the water coming out of your faucet is of the same high quality as when it leaves our plant. This includes the regular flushing of our system to remove sediment and keep the water clear.

## Additional Monitoring

On September 27, 2023, NPU experienced a break in a water main adjacent to its Deep River Water Treatment Plant. To keep water available to all our residential and commercial water customers, NPU drew a limited amount of water from our Norwichtown Well. Our most recent testing of the Norwichtown Well indicated the presence of per- and polyfluoroalkyl substances (PFAS), widely used, long-lasting chemicals that break down slowly over time. Two of the ten compounds tested for and regulated by the Department of Public Health were slightly above the action levels; these test results can be found on our website.

## Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our source and sent to a mixing tank where polyaluminum chloride and soda ash are added. The addition of these substances causes particles, called floc, to adhere to one another, making them heavy enough to settle into a basin from which sediment is removed. Chlorine is added for disinfection. The water is then filtered through layers of sand, where smaller suspended particles are removed and clear water emerges.

Chlorine is added again as a precaution against any bacteria that may still be present. We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste. Finally, soda ash (to adjust the final pH and alkalinity), fluoride (to prevent tooth decay), and a corrosion inhibitor (to protect distribution system pipes) are added before the water is pumped to underground reservoirs, water towers, and your home or business.

## Test Results

Our water is monitored for many substances on a very strict sampling schedule. The water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES											
				Deep River Treatment Plant		Stony Brook Treatment Plant		Distribution System			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2023	[4]	[4]	NA	NA	NA	NA	0.72	0.01–1.42	No	Water additive used to control microbes
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2023	60	NA	NA	NA	NA	NA	23.7	14.7–45.0	No	By-product of drinking water disinfection
Nitrate (ppm)	2023	10	10	0.30	ND–0.80	0.13	ND–1.2	NA	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm)	2023	1	1	0.006	ND–0.13	0.01	ND–0.17	NA	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Organic Carbon [TOC] (ppm)	2023	TT	NA	1.56	1.36–2.10	1.42	1.22–1.70	NA	NA	No	Naturally present in the environment
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2023	80 <sup>1</sup>	NA	NA	NA	NA	NA	50.4	18.3–107.30	No	By-product of drinking water disinfection
Turbidity <sup>2</sup> (NTU)	2023	TT	NA	0.31	0.05–0.31	0.08	0.06–0.36	NA	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2023	TT = 95% of samples meet the limit	NA	100	NA	100	NA	NA	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	RANGE LOW-HIGH	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2023	1.3	1.3	0.09	0.0045–0.12	0/60	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2023	15	0	1.34	ND–2.7	0/60	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES											
				Deep River Treatment Plant		Stony Brook Treatment Plant		Distribution System			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2023	250	NA	16.3	NA	12.1	NA	NA	NA	No	Runoff/leaching from natural deposits
Color (units)	2023	15	NA	1	ND–2	1	ND–2	NA	NA	No	Naturally occurring organic materials
Fluoride (ppm)	2023	2.0	NA	0.69	0.56–0.82	0.62	0.55–0.85	NA	NA	No	Water additive which promotes strong teeth
Odor (TON)	2023	3	NA	ND	ND–1	ND	ND–1	NA	NA	No	Naturally occurring organic materials
pH (units)	2023	6.5–8.5	NA	7.7	7.3–8.6	7.67	7.0–8.5	NA	NA	No	NA

## UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Deep River Treatment Plant		Stony Brook Treatment Plant		Distribution System		TYPICAL SOURCE
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	
Perfluorobutanesulfonic Acid [PFBS] (ppt)	2023	NA	NA	ND	NA	NA	NA	Synthetic industrial chemical
Perfluorobutanesulfonic Acid [PFBS] (ppt)	2023	6	ND-6	NA	NA	NA	NA	Synthetic industrial chemical
Perfluorohexanesulfonic Acid [PFHxS] (ppt)	2023	ND	NA	ND	NA	NA	NA	Synthetic industrial chemical
Perfluorononanoic Acid [PFNA] (ppt)	2023	NA	NA	ND	NA	NA	NA	Synthetic industrial chemical
Perfluorononanoic Acid [PFNA] (ppt)	2023	4.3	ND-4.3	NA	NA	NA	NA	Synthetic industrial chemical
Perfluorooctanesulfonate Acid [PFOS] (ppt)	2023	6	ND-6	ND	NA	NA	NA	Synthetic industrial chemical
Perfluorooctanoic Acid [PFOA] (ppt)	2023	ND	NA	ND	NA	NA	NA	Synthetic industrial chemical
Sodium (ppm)	2023	16.5	NA	15.3	NA	NA	NA	Stormwater runoff containing road salt; Erosion of natural deposits

<sup>1</sup> Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system and may have an increased risk of getting cancer.

<sup>2</sup> Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

## Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but we 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 two 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 (800) 426-4791 or [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).



## Definitions

**90th %ile:** The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

**AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**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 contaminants.

**NA:** Not applicable.

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**ppt (parts per trillion):** One part substance per trillion parts water (or nanograms per liter).

**SMCL (Secondary Maximum Contaminant Level):** These standards are developed to protect aesthetic qualities of drinking water and are not health based.

**TON (Threshold Odor Number):** A measure of odor in water.

**TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.