



WALLINGFORD WATER DIVISION 2018 WATER QUALITY REPORT

Dear Consumer:

The Wallingford Water Division presents to you our Water Quality Report for 2018. As in previous years, the Division is pleased to report that the water provided to our 14,284 customers meets all applicable standards. A continual effort to maintain and upgrade our water delivery system enables the Division to provide reliable service to the community. We also want to encourage your help in protecting Connecticut's valuable water resources and would like to thank you for your previous efforts. Information is provided in the "What Can I Do To Help?" section of this report that will aid all of us in protecting our valuable drinking water supplies today and for future generations.

We encourage you to study this report in order to learn more about water you drink, its sources, and the programs we provide to maintain its quality. Please call our Water Quality Department at 203-949-2666 if you have any questions about the information provided.

The Water Division also encourages public participation and input into decisions that may affect the quality of our water. Meetings of our Public Utilities Commission (PUC) are usually held on the first and third Tuesdays of each month at the Electric Division's business office, located at 100 John Street or at the Water and Sewer Divisions' business office at 377 South Cherry Street. Announcements and agendas are available at the Town Clerk's Office in the Town Hall. Please call to confirm dates and location. Meetings are normally scheduled to start at 6:30 p.m. Minutes and agendas can be obtained at the Town's Electric Division, Public Library, and on the website (www.town.wallingford.ct.us).

The Division also offers a variety of programs for its customers and residents of the Town, including limited recreational use of Mackenzie Reservoir for fishing, water conservation education and tours of the Pistapaug Pond Water Treatment Plant. Information on conserving water is provided in customer bills and is also available on the Town's website. Please contact the Business Office at 203-949-2666 with further questions.

For further assistance call:
Water Quality Information - 203-949-2666
Water Operations - 203-949-2666
Water & Sewer Engineering Section - 203-949-2672

Billing Information - 203-949-2660
General Manager - 203-949-2670
Emergency Service After Hours - 203-265-5055

WHERE DOES MY WATER COME FROM?

The Wallingford Water Division provides potable water to approximately 85% of the Town's population including most of the industrial and commercial facilities. About 96% of the supply originates from four surface reservoirs in Wallingford, Durham, and Guilford with watersheds extending into Meriden and North Branford. The balance comes from three groundwater sources in the Quinnipiac River valley.

The land surrounding a reservoir that collects rainfall can be described as a watershed. Similarly, the earth beneath a well supply is called an aquifer.

PROTECTING YOUR SOURCE WATER

Sources from rivers, streams, lakes, ponds, springs, and wells are treated to supply drinking water to your tap or into a bottle. Pollution on the land can pose a threat to our aquifers and watersheds as well as to Long Island Sound. As water passes over the surface of the ground or through it, substances such as salts, metals, oils, bacteria, fertilizers and pesticides can contaminate it.



Source Water Assessments of the Town's supplies by the Drinking Water Section of the Connecticut Department of Public Health (DPH) include ratings of their potential for contamination, but do not necessarily imply poor water quality. These reports show that our reservoirs have low susceptibility, while our groundwater sources range from low to high. Updated assessment reports can be found on the DPH website:

www.dir.ct.gov/dph/Water/SWAP/Community/CT1480011.pdf

(Mailing address: State of Connecticut Department of Public Health, Drinking Water Division, 410 Capitol Avenue - MS#12 DWS, P.O. Box 340308, Hartford, CT 06134)

The Division takes source water protection seriously by monitoring its quality and all activities on the land surrounding reservoirs and wells, paying close attention to potential sources of contamination. Additionally, we work with the Town's Health and Planning and Zoning Departments to resolve any compliance issues.

WHAT CAN I DO TO HELP?

Even if you don't live on land that drains into a reservoir or an aquifer, rainfall from where you live does flow into some type of water body. Please consider the following:

- Limit the use of lawn chemicals, especially before heavy rains that can wash them into storm drains.
- Never use phosphorous-containing fertilizer. From December through March, it's against the law. It is generally not needed for established lawns.
- Pick up pet waste and dispose of it in the trash.
- Never pour used motor oil or antifreeze into a storm drain. Dispose of these fluids, and household hazardous waste, at HazWaste Central, 90 Sargent Drive, New Haven, Saturdays from mid-May through the end of October, 9 a.m. to 12 noon. Call 203-401-2712, or visit www.rwater.com/hazwaste for more information.
- If you have a septic tank, have it cleaned and inspected at least every three years; correct problems as soon as possible.
- Report muddy runoff from construction sites to our Water Quality office (203-949-2666) or to the Town's Planning & Zoning office (203-294-2090).

TREATMENT

All water entering the distribution system from our surface water supplies is treated at our modern water treatment plant.

Placed in operation in 1993, this facility is rated to treat up to 12 million gallons per day. This plant employs a clarification process and mixed media filters to remove finely suspended particles and microbial contaminants

from the source water. After filtering the water, the pH is adjusted and a corrosion inhibitor, fluoride and a disinfectant are added.

Groundwater supplies are also treated with fluoride, corrosion inhibitors, and chlorine. Well #2 has an air stripping tower for removal of volatile organic compounds and manganese is removed from Well #3 by a greensand filtration system.

DISTRIBUTION

Following treatment, the water moves through a 200-mile network of pipes to customers' homes and businesses. These pipes range in size from 1½ inches to 30 inches in diameter. Within this distribution system there are six water storage tanks that help to provide needed water pressure, daily storage, and fire protection. To move water into these water tanks, the Division operates and maintains four pump stations.

In an effort to ensure water quality within this pipe network, the Water Division regularly monitors numerous sites within the distribution system and conducts inspections of customer premises for cross-connections that could potentially introduce contaminants into our drinking water.

The Division has a staff of Engineers, Water Quality Inspectors and State Certified Operators who help to ensure that our water supplies remain safe to drink.

Water Quality Monitoring

Sources of drinking water (both tap 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 materials and in some cases, radioactive material, and can pick up substances resulting from the presence of animal or human activity. Treatment processes, such as filtration and chlorination, minimize the levels of dissolved minerals and other foreign materials.

Contaminants that may be present in source water include: *microbial contaminants*, such as viruses and bacteria, which may come from septic systems, agricultural livestock operations, and wildlife; *inorganic contaminants*, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, domestic wastewater discharges, mining, and farming; *pesticides and herbicides*, from a variety of sources such as agriculture, urban storm water runoff, and residential uses; *organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and can come from gas stations, urban storm water runoff and septic systems; and *radioactive contaminants*, which can be naturally occurring or the result of mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) and the Connecticut Department of Public Health (DPH) promulgate regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Each year the Wallingford Water Division performs nearly 50,000 water quality analyses for approximately 125 different contaminants in order to verify the safety and quality of our drinking water. These analyses are performed around the clock, 365 days a year, and include samples collected from our water sources, treatment facilities, and water within our distribution system. In all respects our water is safe to drink and meets or exceeds the standards required. Our modern water treatment plants and vigilant maintenance of our distribution system help us to assure the high quality of water today and in the future.

In addition to the required testing, we take a proactive approach to assuring a safe drinking water supply for the future. We do this by monitoring for a variety of contaminants in addition to those currently regulated by state and federal governments. Other programs administered by the Wallingford Water Division to protect water quality include annual watershed inspections, aquifer inspections and a vigorous cross connection inspection and testing program.

Finished Water Quality Results

The data in the tables below are the results of sampling for the calendar year 2018 Water Quality Monitoring Program; only detected contaminants are shown. The top portion contains the results from testing required by the CT DPH and/or the EPA; the lower comprises findings acquired from additional monitoring by the Division.

Analytical results are for samples collected from our surface water treatment plant, groundwater wells, and distribution system, as applicable. Maximum detected and range of values are displayed unless otherwise indicated.

Additional Health Information

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, can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA and the Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk from infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. The presence of contaminants does not necessarily indicate that the 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 (800-426-4791).

Radon is a radioactive gas that is found in nearly all soils. It typically moves up through the ground to the air above and into homes through foundations. Drinking water from a groundwater source can add radon to the air within a home. According to the EPA, "Compared to radon entering the home through the soil, radon in drinking water will be a small source of risk."

Most of the water we provide comes from reservoirs, which contain little or no radon. Test results from our well supplies ranged from ND-504 picocuries per liter in 2018.

At various times the sodium content in our water has exceeded the Connecticut Public Health Code Standard of 28 milligrams per liter. When this occurs, customers are notified of this condition. The areas affected by the elevated sodium are those served by Well #1; 2018 testing indicated a level of 51.6 milligrams per liter. For comparison purposes, whole milk has a sodium content of 530 milligrams per liter. We use this well on a limited basis. Approximately 1.3% of the supply came from Well #1 during 2018.

Copper is an essential nutrient, but some people who drink water containing copper in excess of the Action Level (see Definitions) 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 doctors regarding copper levels in drinking water. Copper in drinking water comes from corrosion of household plumbing systems, erosion of natural deposits and leaching from wood preservatives.

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. The Water Division is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for thirty 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 (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

CONTAMINANTS (Required Monitoring)	MAXIMUM DETECTED VALUE	RANGE OF DETECTED VALUES	MCLG	MCL	VIOLATION	MAJOR SOURCES
TOTAL COLIFORM BACTERIA	2.3%	0 - 2.3%	0	>5%	NO	Naturally present in the environment.
CHLORINE	2.08 ppm	0.06 - 2.08 ppm	4 ppm MRDLG	4 ppm MRDL	NO	Water additive used to control microbes.
TURBIDITY	0.22 NTU ¹	0.11 - 0.22 NTU	NA	TT	NO	Soil runoff - turbidity is a measure of water clarity indicating filter performance. TT=95% of samples ≤ 0.3 NTU.
FLUORIDE	0.93 ppm	0.55 - 0.93 ppm	4 ppm	4 ppm	NO	Water additive which promotes strong teeth.
HALOACETIC ACIDS	51.8 ppb LRAA	15.4 - 48.9 ppb	NA	60 ppb	NO	A by-product of drinking water disinfection.
TOTAL TRIHALOMETHANES	71.9 ppb LRAA	37.6 - 103.0 ppb	NA	80 ppb	NO	A by-product of drinking water disinfection.
NITRATE [As Nitrogen]	2.72 ppm	0.04 - 2.72 ppm	10 ppm	10 ppm	NO	Runoff from fertilizer use, leaching from septic tanks, sewage, and erosion of natural deposits.
ARSENIC	0.0006 ppm	ND - 0.0006 ppm	0	0.01 ppm	NO	Erosion of natural deposits.
BARIUM	0.344 ppm	0.068 - 0.344 ppm	2	2	NO	Erosion of natural deposits.
CHLORIDE	121 ppm	28.6 - 121 ppm	NA	250 ppm	NO	Erosion of natural deposits.
LEAD [2016 results]	See note 2 below	ND - 1.0 ppb	0	AL=15 ppb	NO	Corrosion of household plumbing systems. Action level: 90% of samples must be below this level.
COPPER [2016 results]	See note 3 below	0.02 - 0.62 ppm	1.3 ppm	AL=1.3 ppm	NO	Corrosion of household plumbing systems. Action level: 90% of samples must be below this level.
SODIUM	51.6 ppm	17.3 - 51.6 ppm	NA	NA	NA ⁴	Naturally occurring or stormwater runoff.
ORTHOPHOSPHATE	0.30 ppm	0.07 - 0.30 ppm	NA	NA	NO	Added to reduce corrosion of pipes and plumbing systems.
SULFATE	19.5 ppm	11.0 - 19.5 ppm	NE	NE	NO	Erosion of natural deposits.
ADDITIONAL MONITORING	MAXIMUM DETECTED VALUE	RANGE OF DETECTED VALUES	MCLG	MCL		MAJOR SOURCES
1,4 DIOXANE	2.0 ppb	ND - 2.0 ppb	NR	NR	NO	Synthetic industrial chemical used as a stabilizer and solvent for products such as paint, cosmetics, dyes and toiletries; see www.epa.gov for more information.

Definitions

Abbreviations Used in Water Quality Table

AL – Action Level - The concentration of a contaminant that, if exceeded, triggers treatment, or other requirements that a water system must follow.

CU – Color Units

LRAA – Locational Running Annual Average – The average of results from a sampling point during the previous four calendar quarters.

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 that is allowed in drinking water.

MRDLG – Maximum Residual Disinfectant Level Goal - The level of a disinfectant in drinking water below which there is no known or expected risk to health

NA – Not applicable

ND – Non-detected

NE – Not established

NR – Not regulated

NTU – Nephelometric Turbidity Unit -A measure of the suspended material in water

pCi/l – Picocuries per liter

ppb – Parts per billion

ppm – Parts per million

RAA – Running Annual Average – The average of the current and prior three quarterly averages

TT – Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water

Notes:

¹ Turbidity: As of January 1, 2002, turbidity may never exceed 1 NTU, and must not exceed 0.3 NTU in 95% of daily samples in any month.

² Lead: In the last sampling event in 2016, 90% of the sites were ND and none of them exceeded the AL.

³ Copper: In the last sampling event in 2016, 90% of the sites were ≤ 0.14 ppm and none of them exceeded the AL.

⁴ Although sodium does not have a MCL, the State requires that the water supplier provide notification to customers if levels exceed 28.0 ppm. Notice was previously provided in a quarterly bill insert.