Waterbury Bureau of Water

2018 Water Quality Report

The City of Waterbury, Bureau of Water, is pleased to provide you with important water quality information contained in this, our year 2018 Water Quality Report.

During 2018, as well as in years past, your tap water met, and was often better than all National Primary Drinking Water Regulations and the State of Connecticut, Department of Public Health standards.

The Bureau of Water is continually upgrading your entire water system from the source to the tap. Several improvements were made to the system during 2018. The list below highlights some of those improvements:

- Shepaug Reservoir rehabilitation and repair, including the Gatehouse was started.
- Upper Shepuag Timber Sale.
- Cleaning and Re-Lining of Water Main in Stillson Road and Woodtick Road: 3,639' of water-main was completed.
- New generators for four (4) pump stations have been installed.
- Two Storage Tanks were started for rehabilitation and repair.

INSIDE THIS REPORT

Where does my water come from?

The source of your water comes from surface reservoirs located in two separate and distinct watersheds in Litchfield County. The Shepaug and Cairns Reservoirs are located in the Shepaug Watershed and the Wigwam, Morris, and Pitch Reservoirs are located in the West Branch Watershed.

Before water is sent to you, it receives complete conventional treatment at the Harry P. Danaher Water Treatment Plant located in Thomaston, CT.

To ensure that our sources of supply remain protected, The Waterbury Bureau of Water conducts annual Watershed Sanitary Surveys as well as semi annual Water Quality and Pollution Source Assessments. This information is available by contacting the Bureau of Water at 203-574-8251. Additionally, the Department of Public Health (DPH) completed a water assessment of our sources of supply. That information may be found on the DPH website at www.dph.state.ct.us/BRS/Water/SWAP/swap.htm.

How can the public be involved?

If you are interested in learning more about the water department and water quality or participating in the decision-making process, there are a number of opportunities available.

Meetings of the Waterbury Board of Public Works are usually held on the fourth Tuesday of each month starting at 7:00 P.M. Meetings are held in the Cass Gilbert Room in City Hall on Grand Street. Matters from the public are heard at each meeting.

The Bureau of Water also provides speakers for civic groups and youth educational programs.

For further information regarding water quality and this report, youth educational programs, or speakers for civic groups, please contact the Water Department at 203-574-8251.

Treated Water Quality Table – 2018

PARAMETER

MICROBIALS	MCL	MCLG	Result	RANGE	SOURCE
TURBIDITY (NTU)	TT=5 NTU Max Distribution	0	0.18	0.10-0.29	SOIL RUNOFF Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
			Percentage		
	TT<=0.30 NTU 95% of the time T-Plant Eff.	0	100%	N/A	
TOTAL COLIFORM BACTERIA	PRESENCE OF COLIFORM BACTERIA IN >5% OF MONTHLY SAMPLES	0	0%	N/A	NATURALLY PRESENT IN THE ENVIRONMENT
TOTAL ORGANIC CARBON (MG/L)	TT	N/A	2.03	1.70-2.51	NATURALLY PRESENT IN THE ENVIRONMENT
INORGANIC COMPOUNDS	**A/L**	**90th Percentile**	**Highest Level Detected**		**SOURCE**
LEAD*1 (PPB) (2016)	15	9	29 56 Sites Tested (Number of sites above AL = 4)		CORROSION OF HOUSEHOLD PLUMBING SYSTEMS; EROSION OF NATURAL DEPOSITS
COPPER*1 (PPM) (2016)	1.30	0.20	*1.28* 56 Sites Tested (Number of sites above AL = 0)		CORROSION OF HOUSEHOLD PLUMBING SYSTEMS; EROSION OF NATURAL DEPOSITS
INORGANIC COMPOUNDS	**RANGE DETECTED**	**HIGHEST DETECTED**	**MCL**	**MCLG**	**SOURCE**
FLUORIDE (PPM)	0.68 – 0.85	0.85	4	4	WATER ADDITIVE WHICH PROMOTES STRONG TEETH
BARIUM (PPM)	0.001	0.010	2	2	DISCHARGE OF DRILLING WASTES; EROSION OF NATURAL DEPOSITS
NITRATE as NITROGEN (PPM)	0.002	0.062	10	10	RUNOFF FROM FERTILIZER USE; EROSION OF NATURAL DEPOSITS
SULFATE (PPM)	15.6	15.6			
SODIUM (PPM)	11.6	11.6	28		RUNOFF FROM WINTER ROAD TREATMENT
ORGANIC COMPOUNDS	**RANGE DETECTED**	**Average - TTHM**	**MCL**	**MCLG**	**SOURCE**
TOTAL TRIHALOMETHANES (TTHM) (PPB)	16 – 103	46.2	80	0	BY PRODUCT OF DRINKING WATER CHLORINATION
TOTAL HALOACETIC ACID (THAA) (PPB)	21 – 65	40.4	60	N/A	BY PRODUCT OF DRINKING WATER CHORINATION
RADIOCHEMICAL*1	**RANGE**	**HIGHEST**	**MCL**	**MCLG**	**SOURCE**
GROSS BETA (β) *1 (pCi/L)	1.21	1.21	4 (MREM/YR)*	0	DECAY OF NATURAL AND MAN MADE DEPOSITS
RADIUM 226 & 228*1	0.82	0.82	5 (PCi/L)	0	

* The State of Connecticut measures for the Radiochemical Gross Beta in Picocuries per Liter (pCi/L), the Federal measurement is in millirems per year (MREM/YR).

*1 The State of Connecticut, Department of Public Health, requires us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Key:

MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal
NTU = Nephelometric Turbidity Units
pCi/L = Picocuries per Liter (a measure of radioactivity)
MREM/YR = Millirems per year (a measure of radiation absorbed by the body)
PPM = Parts per Million, or milligrams per liter (mg/l)
PPB = Parts per Billion, or micrograms per liter (ug/l)
TT = Treatment Technique
N/A = Not Applicable
N/R = Not Regulated
A/L = Action Level

DEFINITIONS OF TERMS USED:
MCL = Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's, 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 health risk. MCLG's allow for a margin of safety.
TT = Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL = Action Level: The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.

Unregulated Contaminants Monitoring Rule

The following list contains results from the sampling of "Unregulated Contaminants". Unregulated contaminants are those that do not yet have a drinking water standard set by the United States Environmental Protection Agency (USEPA). The purpose for monitoring these contaminants is to help USEPA decide whether the contaminants should have a standard. The Unregulated Contaminant Monitoring Rule (UCME3) includes assessment monitoring for 21 chemical contaminants using six EPA-approved analytical methods and four equivalent consensus methods. Public Water Systems subject to Assessment Monitoring sampled during a 12-month period between 2013 and 2015.

Analyte	Range (ug/L)
Chromium (total)	0.21-0.28 ug/L
Strontium	30.3-41.8 ug/L
Vanadium	ND
Chromium-6	0.08 ug/L
Chlorate	80-136 ug/L

Under the current cycle of the Unregulated Contaminant Monitoring Rule (UCMR3) chemicals are being studied at levels that are significantly below those in prior UCMR cycles. Importantly, UCMR3 minimum reporting levels (MRL's) were established base on the capacity of the analytical method, not based on a level established as "significant" or "harmful". In fact, the UCMR3 MRL's are often below current "health reference levels" (to the extent that HRLs have been established).

You can find more information regarding unregulated contaminants at the following sites:
http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/data.cfm#ucmr2013.
http://www.drinktap.org/home/water-information/water-quality/ucmr3.aspx.

ADDITIONAL EDUCATIONAL INFORMATION

Drinking water including bottled water may reasonably be 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 (1-800-426-4791) or the State of Connecticut, Department of Public Health (860-509-7333).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer, 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/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 (1-800-426-4791).

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 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 activity.

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 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 byproducts of industrial process and petroleum production, and can also, come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Lead & Copper in Drinking Water:
Major sources of copper in drinking water are: 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 could experience gastrointestinal distress. Some people, who drink water containing copper in excess of the action level over many years could, suffer liver of kidney damage. People with Wilson's Disease should consult their personal doctor.

Major sources of lead in drinking water are corrosion of household plumbing systems and erosion of deposits. Infants and children who drink water-containing lead in excess of the action level could experience

delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink water-containing lead in excess of the action level over many years could develop kidney problems or high blood pressure. **Further information can be found on our web-site at www.waterburyct.org and follow the links to the Water Department or at www.ct.gov/dph and follow the links for the Drinking Water Section.**

Total Trihalomethanes (TTHMs): Some people who drink water containing TTHMs in excess of the MCL over many years may experience problems with their kidneys, liver or central nervous systems, and may have an increased chance of getting cancer.

Total Organic Carbon (TOC): Total Organic Carbon has no health effects. However, total organic carbon provides a medium for the formation of disinfection-by-products such as total trihalomethanes (TTHMs') (see above).

Source Water Protection:

- Connecticut prohibits discharge of potential disease carrying wastewaters into public drinking water supply sources.
- Filtration and disinfection of all surface supplies is mandatory.
- Land areas (watersheds) that drain into public water sources must be inspected annually for pollution.
- State and local regulators govern land use and development on watershed lands.

Strict regulations govern the sale and use of water company owned land, which is critical to the protection of public water supply resources.

How Can You Help Protect Water Supplies:

- Do not dump! Dispose of trash, waste motor oil, and household hazardous wastes properly. Check with City Hall or The Bureau of Water about proper disposal of these wastes.

- Use Pesticides and Fertilizers Wisely! Follow the directions, apply only what is needed, and do not over use. When in doubt, consult an expert.

- Report any Polluting Activities! If you see illegal dumping, waste discharges, chemical spills, etc., please report them to the Connecticut Department of Energy and Environmental Protection (CTDEEP) at 860-424-3338, the local police, health department or the Bureau of Water.

Water Conservation - What You Can Do to Save Water:

- Check for leaky toilets. (Put a drop of food coloring in the tank and let it sit. If the bowl turns color, then you have a leak).
- Consider replacing your five-gallon per flush toilet with an efficient 1.6-gallon per flush unit. This will permanently cut your water consumption by 25%.
- Fix leaking fixtures as soon as possible. A leaking faucet or toilet can dribble away thousands of gallons of water a year.
- Run only full loads in dishwashers and washing machines. Rinse all handwashed dishes at once.
- Turn off the water while brushing your teeth or shaving.

What about Outside:

- Plant less grass - shrubs and ground covers require less water and maintenance, and provide year round greenery. Choose shrubs and trees adapted to our New England climate.

- Water only when necessary. The most effective time is early in the morning - never on windy, rainy, or very hot days. Use water with an efficient, slow soaking irrigation system. Do not water the driveway or sidewalk.

The State of Connecticut, Department of Public Health (DPH) has recently completed an assessment of our drinking water sources. The completed assessment report is available for access on the Drinking Water Section's web site - www.ct.gov/dph **and follow the links for the Drinking Water Section.**