



City of Meriden  
Connecticut

# 2014 Annual Water Quality Report



In 2014, water supplied by the Meriden Water Division met or surpassed all federal and state standards. See inside for the results of our tests on a wide range of contaminants.

This annual "consumer confidence report" also includes information on topics such as where our water comes from, what is being done to improve the water system, and how you can help preserve our water supply.

## Together We Can Safeguard

### Our Water Supply

**The Water Division is constantly checking water quality**

Through the federal Safe Drinking Water Act (SDWA), the U.S. Environmental Protection Agency (U.S. EPA) sets national limits for hundreds of substances in drinking water and also specifies various treatments that water systems must use to remove those substances. The Meriden Water Division continually monitors for these substances, using sophisticated equipment and advanced procedures.

**The public has a part to play too**

The SDWA requires that we provide you with detailed information on water quality each year. We are happy to do this, because customers who are informed are our best allies in supporting improvements necessary for the long-term health of our water system. And remember—our City Council meetings are open to the public. You are always welcome to attend and to voice your views on our drinking water. For information on meeting times and location, please contact the City Clerk at 203-630-4030. For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at 800-426-4791.

### Water Conservation Tips

Conservation is an important first step in preserving our water supply. Using these measures can also save you money by reducing your water and sewer bills. Here are a few suggestions.

**Conservation measures you can use inside your home**

- Fix leaking faucets, pipes, and toilets
- Install water-saving devices in faucets, toilets and appliances
- Replace high-water-use fixtures
- Wash only full loads of laundry
- Do not use the toilet for trash disposal
- Take shorter showers
- Do not let the water run while shaving or brushing teeth
- Run the dishwasher only when full

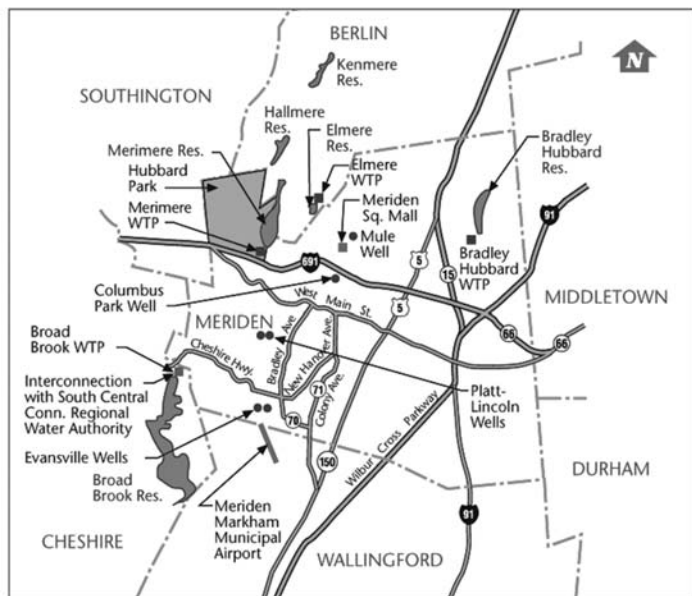
**You can conserve outdoors as well**

- Water the lawn and garden in the early morning or evening
- Use mulch around plants and shrubs
- Repair leaks in faucets and hoses
- Use water-saving nozzles and sprinkler heads
- Use water from a bucket to wash your car and save the hose for rinsing

## Meriden Water Division Answers Your Drinking Water Questions

**Q:** Where does my water come from?

**A:** Water supplied to you from the Meriden Water Division actually has several different sources. Each of these sources is shown on the map below. These sources include four reservoirs on the Meriden-Berlin town line, the Broad Brook Reservoir on the Meriden-Cheshire town line, the Bradley-Hubbard Reservoir in the northeast corner of Meriden, and six groundwater wells located throughout the City. Depending on system requirements, the City also purchases water from the South Central Connecticut Regional Water Authority. Water from the reservoirs is treated at one of Meriden's four water treatment plants. Water from each well is treated at each individual well field. After water is treated, it is distributed to city homes and businesses through a vast network of underground pipelines.



that accumulate over time. Capital improvement projects also can improve the water. We are currently working on a significant upgrade to the Broad Brook Water Treatment Plant, which is our largest surface water treatment plant.

**Q:** Why does the taste and odor of my water vary?

**A:** Water naturally varies in taste and odor at different times of the year and will vary due to different sources. Typically, taste and odor compounds in water sources are more common during the summer. Because Meriden utilizes different sources based on the need and time of the year, certain customers will notice the different tastes and odors as the sources and seasons change.

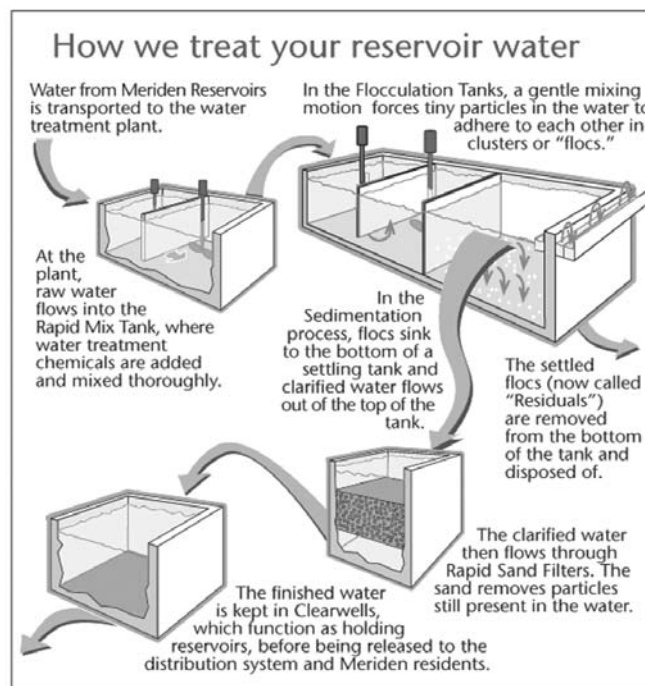
**Q:** Could there be lead in my water?

**A:** Lead was not detected in samples from our drinking water plants above state and federal regulated levels. The Meriden Water Division adds a phosphate-based corrosion inhibitor that aids in reducing lead and copper corrosion in the distribution system. Regularly monitored levels of the corrosion inhibitor were consistently within the range desired for corrosion control. The addition of this chemical helps to provide the safest drinking water possible.

Even though we use a corrosion inhibitor, lead can leach from common household plumbing fixtures, which is the likely cause of low levels of lead detected within our distribution system. Older homes are more likely to have fixtures that contain lead. To minimize exposure to lead in your tap water, run the water until it is cold (about 30 to 60 seconds) if it has been standing in the pipes for more than six hours.

**Q:** Does our water contain fluoride?

**A:** Fluoride is added to your water to help prevent tooth decay. Levels of fluoride are consistently within limits set by state and federal regulation.



**Q:** What is being done to improve the system?

**A:** The Meriden Water Division is constantly trying to enhance both the quality and taste of your water.

Routine maintenance such as water main flushing is performed to clean the pipes of iron and other deposits

# What's In My Water? – Meriden Water-Quality Analysis

Contaminant	Date Tested	Units	MCL	MCLG	Max Detected Level	Range Detected	Major Sources	Violation
<b>Inorganic Contaminants</b>								
Copper	2014	mg/l	AL=1.3	1.3	0.267	ND – 0.267	Corrosion of household plumbing systems; erosion of natural deposits	No
Fluoride	2014	mg/l	4.0	4.0	1.43	0.06 – 1.43	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories	No
Nitrate	2014	mg/l	10	10	3.24	ND – 3.24	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	No
Barium	2014	mg/l	2	2	0.341	0.004 – 0.341	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No
Chlorine	2014	mg/l	4	4	1.89	0.17 – 1.89	Water additive used to control microbes	No
Sodium	2014	mg/l	AL=28 <sup>(1)</sup>	NR	103.0	7.90 – 103.0	Stormwater runoff containing road salt	No <sup>(1)</sup>
Iron	2014	mg/l	NR	0.3 <sup>(2)</sup>	0.029	ND – 0.029	Naturally occurring	No
Manganese	2014	mg/l	NR	0.05 <sup>(2)</sup>	0.079	ND – 0.079	Naturally occurring	No
Sulfate	2014	mg/l	NR	250 <sup>(2)</sup>	34.7	4.4 – 34.7	Naturally occurring	No
Chloride	2014	mg/l	NR	250 <sup>(2)</sup>	212.0	4.5 – 212	Water additive used to control microbes	No
Asbestos	2010 <sup>(3)</sup>	mfl	7	7	<0.145	<0.145	Decay of asbestos cement in water mains; erosion of natural deposits	No
<b>Radioactive Contaminants</b>								
Radium (combined)	2014 <sup>(4)</sup>	pci/l	5	0	1.7	ND – 1.7	Erosion of natural deposits	No
<b>Microorganisms</b>								
Turbidity (point of entry)	2014	NTU % > 0.3	1 <sup>(5)</sup> 5% <sup>(5)</sup>	NR NR	0.25 0%	0.02 – 0.25 0%	Soil runoff	No
Total Coliforms	2014	%	5%	0	0%	0%	Bacteria naturally present in the environment	No
<b>Volatile Organic Contaminants</b>								
Total THM	2014	ug/l	80 <sup>(6)</sup>	NR	66	30 – 66	Byproduct of drinking water disinfection	No
Total HAAS	2014	ug/l	60 <sup>(6)</sup>	NR	40	16 – 40	Byproduct of drinking water disinfection	No
<b>Unregulated Contaminants</b>								
1, 1 -dichloroethane	2014	ug/l	NR	NR	0.08	ND - 0.08	Manufacturing of chemicals such as vinyl chloride	N/A
1, 4 -dioxane	2014	ug/l	NR	NR	0.49	ND - 0.49	Solvent used in the manufacture of resins, oils, and waxes	N/A
Vanadium	2014	ug/l	NR	NR	1.5	ND - 1.5	Erosion of natural deposits	N/A
Molybdenum	2014	ug/l	NR	NR	1.2	ND - 1.2	Naturally occurring	N/A
Strontium	2014	ug/l	NR	NR	310	19 - 310	Naturally occurring	N/A
Chromium	2014	ug/l	NR	NR	0.2	ND - 0.2	Naturally occurring	N/A
Chromium-6	2014	ug/l	NR	NR	0.24	ND - 0.24	Erosion of natural deposits	N/A
Chlorate	2014	ug/l	NR	NR	600	ND - 600	Byproduct of drinking water disinfection	N/A

We are pleased to report that during the past year, the water delivered to your home or business complied with, or did better than, all state and federal drinking water requirements. Each year we analyze thousands of water samples for bacteria, turbidity, inorganic contaminants, lead and copper, nitrate, volatile organic contaminants, total trihalomethanes, and synthetic organic contaminants. For your information, we have listed in the table on the left the substances that were detected in our drinking water during the year. Although all of the substances listed are under the Maximum Contaminant Level (MCL) set by U.S. EPA, we believe it is important that you know exactly what was detected and how much of the substance was present in the water.

#### Notes:

- (1) Although sodium does not have a MCL, the State requires that the water supplier provide notification to customers of levels exceeding 28.0 ppm. Therefore, if levels of sodium were recorded from a supply source in your area you were previously provided notification of the event. Elevated levels of sodium encountered are believed to be caused by road salt.
- (2) The EPA has established these National Secondary Drinking Water Regulations (NSDWRs) for contaminants that may cause cosmetic or aesthetic effects in drinking water. These standards are recommendations, not requirements, but the City of Meriden strives to comply with them.
- (3) Asbestos is not tested for every year; the most recent results available are given.
- (4) Radioactive contaminants are not tested for every year; the most recent results available are given.
- (5) 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.
- (6) These standards refer to locational running averages. Data from 2014 and the last three quarters of 2013 are included in figuring these averages.
- (7) The EPA established the Unregulated Contaminant Monitoring Rule to monitor and collect data for contaminants suspected to be present in drinking water, but that do not have health-based standards set under the Safe Drinking Water Act.

#### Key To Table

- AL = Action Level
- MCL = Maximum Contaminant Level
- MCLG = Maximum Contaminant Level Goal
- NTU = Nephelometric Turbidity Units
- ND = non-detectable
- NR = Not Regulated
- mg/l = milligrams per liter
- ug/l = micrograms per liter
- pci/l = Picocuries per liter
- mfl = Million fibers per liter
- n/a = not applicable

## Understanding Contaminants

To ensure that tap water is safe to drink, 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 both tap and bottled drinking water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water from these sources travels over the surface of the land or through the ground, it can acquire naturally occurring minerals (which in some cases could be radioactive) and substances resulting from the presence of animals or from a wide variety of human and industrial activities. Substances that may be present in source water include:

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from such things as urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, or mining. This category of contaminants also includes the pesticides and herbicides used primarily in agriculture.

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

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

Volatile Organic (and Synthetic) Contaminants, which are typically by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, and septic systems.

As the table above demonstrates, the Meriden Water Division removes these contaminants prior to distribution. Meriden water meets or surpasses all state and federal drinking water requirements

#### Regulated Contaminants

Meriden Water Division tests for a large number of contaminants, though only detected contaminants are noted. Every regulated contaminant that we detected in the water is listed in the water-quality table above. In 2014, the Meriden Water Division's drinking water met or surpassed all federal and state drinking water standards.

#### Unregulated Contaminants

The Meriden Water Division also utilizes a phosphate-based corrosion inhibitor as part of a lead and copper control program. The Division regularly monitors ortho-phosphate total levels; during 2014, levels ranged from 0.15 mg/l to 1.93 mg/l.

## Health Matters

The presence of contaminants in drinking water does not necessarily indicate that the water poses a potential health threat.

A few contaminants, like copper, are in fact essential nutrients at appropriate, very low concentrations. However, some people who drink water that contains copper in excess of the EPA's Action Level could experience gastrointestinal distress over a relatively short period of time. Over many years, ingesting water that contains copper in excess of the Action Level could lead to liver or kidney damage. People with Wilson's disease should consult their personal doctor about their water consumption.

Lead is also a concern. 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.

Some people may be more vulnerable to contaminants in drinking water than is 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/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800-426-4791).

## Source Water Assessment

Source Water Assessment Reports were completed by the Department of Public Health, Drinking Water Division for the Meriden Water Division. The assessment report can be found on the DPH's website: <http://www.dir.ct.gov/dph/Water/SWAP/community/CT0800011.pdf>. The assessment found that the public drinking water sources have susceptibility to potential sources of contamination, low for the reservoir sources, and ranging from moderate to high for the groundwater sources.