

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

Contaminant	Date Tested	Units	MCL	MCLG	Maximum Detected Level	Range Detected	Major Sources	Violation
Inorganic Contaminants								
Copper	2011	mg/l	AL=1.3	1.3	0.23	0.002 – 0.23	Corrosion of household plumbing systems; erosion of natural deposits	No
Fluoride	2011	mg/l	4.0	4.0	1.36	0.12 – 1.36	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories	No
Nitrate	2011	mg/l	10	10	3.9	<0.05 – 3.9	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	No
Barium	2011	mg/l	2	2	0.388	0.004 – 0.388	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No
Chlorine	2011	mg/l	4	4	1.73	0.03 – 1.73	Water additive used to control microbes	No
Sodium	2011	mg/l	AL=28 ⁽¹⁾	NR	113	8.11 – 113	Stormwater runoff containing road salt	No ⁽¹⁾
Iron	2011	mg/l	NR	0.3 ⁽²⁾	0.02	ND – 0.02	Naturally occurring	No
Manganese	2011	mg/l	NR	0.05 ⁽²⁾	0.061	ND – 0.061	Naturally occurring	No
Sulfate	2011	mg/l	NR	250 ⁽²⁾	44	5.3 – 44	Naturally occurring	No
Chloride	2011	mg/l	NR	250 ⁽²⁾	240	3.9 – 240	Water additive used to control microbes	No
Asbestos	2010 ⁽³⁾	mfl	7	7	<0.145	<0.145	Decay of asbestos cement in water mains; erosion of natural deposits	No
Radioactive Contaminants								
Alpha particles	2011	pci/l	15	0	4.39	<3.0 – 4.39	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation	No
Radium (combined)	2011	pci/l	5	0	3.08	<1.0 – 3.08	Erosion of natural deposits	No
Uranium	2011	ug/l	30	0	1.1	<1.0 – 1.1	Erosion of natural deposits	No
Microorganisms								
Turbidity (point of entry)	2011	NTU	1 ⁽⁴⁾	NR	0.29	0.03 – 0.29	Soil Runoff	No
		% > 0.3	5% ⁽⁴⁾	NR	0%	0%		
Total Coliforms	2011	%	5%	0	0%	0%	Bacteria naturally present in the environment	No
Volatile Organic Contaminants								
Carbon Tetrachloride	2011	ug/l	5	0	0.97	<0.5 – 0.97	Discharge from chemical plants and other industrial activities	No
Total TTHM	2011	ug/l	80 ⁽⁵⁾	NR	33	29 – 33	Byproduct of drinking water disinfection	No
Total HAA5	2011	ug/l	60 ⁽⁵⁾	NR	24	20 – 24	Byproduct of drinking water disinfection	No

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) 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.

(5) As of January 1, 2002, these standards refer to running annual averages. Data from the last three quarters of 2010 is included in figuring these averages.

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
TTHM = total trihalomethanes
HAA5 = five haloacetic acids

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 2011, 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 2011, levels ranged from 0.31 mg/l to 1.57 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.