In 2007, 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.



2007 Annual Water **Quality Report**



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 ap-
- pliances.
- 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

The Water Division is constantly

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

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

Water Conservation Tips

limits set by state and federal regulation.

C-Does our water contain fluoride?

provide the safest drinking water possible.

than six hours.

tooth decay. Levels of fluoride are consistently within

 $\mathsf{F}^{-\mathsf{F}}$ Inoride is added to your water to help prevent

seconds) if it has been standing in the pipes for more

tap water, run the water until it is cold (about 30 to 60

fixtures. Older homes are more likely to have fixtures

that contain lead. To minimize exposure to lead in your

that lead can leach from common household plumbing

Even though we use a corrosion inhibitor, it is possible

sion control. The addition of this chemical helps to were consistently within the range desired for corro-

Regularly monitored levels of the corrosion inhibitor

lead and copper corrosion in the distribution system. phate-based corrosion inhibitor that aids in reducing

checking water quality

sophisticated equipment and advanced procedures.

Our Water Supply

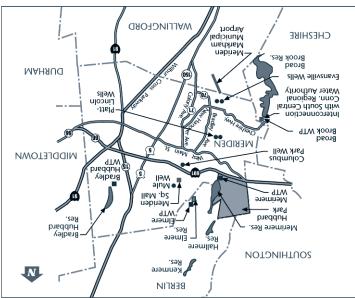
plants. The Meriden Water Division adds a phos-Together We Can Safeguard

Questions Answers Your Drinking Water Meriden Water Division

Broad Brook Reservoir on the Meriden-Cheshire town clude four reservoirs on the Meriden-Berlin town line, the sources is shown on the map below. These sources insion actually has several different sources. Each of these -M-Water supplied to you from the Meriden Water Divi--Where does my water come from?

network of underground nesses through a vast to city homes and busitreated, it is distributed field. After water is Ilew leubivibni hose te from each well is treated treatment plants. Water of Meriden's four water ervoirs is treated at one ity. Water from the res-Regional Water Author-Central Connecticut water from the South the City also purchases , system requirements, the City. Depending on wells located throughout and six groundwater east corner of Meriden, Reservoir in the northline, the Bradley-Hubbard

.səniləqiq



 ${\sf Q}$ -What is being done to improve the system?

through maintenance and capital improvement projects. hance both the quality and taste of your water. We do this $\mathsf{A}^{-\mathsf{T}}$ he Meriden Water Division is constantly trying to en-

Routine maintenance such as water main flushing is

The finished water is kept in Cleanwells, which function as holding reservoirs, before being released to the distribution system and Meriden residents. sand removes particles. still present in the water. The clarified water then flows through Rapid Sand Filters. The of the tank and disposed of. trom the bottom gue flocs (now called "Residuals") out of the top of the process, flocs sink to the bottom of a settling tank and clarified water flows piant, taw water taw water flows into the Rapid Mix Tank, where chemicals are added chemicals are added and mixed thoroughly. petties and Sedimentation At the In the Flocculation Tanks, a gentle mixing motion forces tiny particles in the water to adhere to each other in clusters or "flocs." treatment plant. s transported to the water Water from Meriden Reservoirs How we treat your reservoir water

vater at our treatment

tests we run on finished

detected in the frequent

A-Lead has not been

lead in my water?

concerns.

sons change. Taste and odor changes do not pose any health

notice the different tastes and odors as the sources and sea-

based on the need and time of the year, certain customers will

during the summer. Because Meriden utilizes different sources

taste and odor compounds in water sources are more common

of the year and will vary due to different sources. Typically, $\mathsf{M}^-\mathsf{M}_{\mathsf{ster}}$ naturally varies in taste and odor at different times

-Why does the taste and odor of my water vary?

projects to improve our infrastructure and storage systems.

prove the water. We continue to undertake capital improvement

cumulate over time. Capital improvement projects also can im-

performed to clean the pipes of iron and other deposits that ac-

Could there be

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.

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.

This annual "consumer confidence report" also

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

Inorganic Contaminants Copper Fluoride	2007	mg/l			-			
		mg/l						
Fluoride	2007		AL=1.3	1.3	0.024	0.001-0.024	Corrosion of household plumbing systems; erosion of natural deposits	No
	2007	mg/l	4.0	4.0	1.21	0.42-1.21	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories	No
Nitrate	2007	mg/l	10	10	3.6	<0.05-3.6	Runoff from fertilizer use; leaching from sept tanks, sewage; erosion of natural deposits	ic No
Barium	2007	mg/l	2	2	0.168	0.006-0.168	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No
Chlorine	2007	mg/l	4	4	2.3	0.05-2.3	Water additive used to control microbes	No
Sodium	2007	mg/l	AL = 28 ⁽¹⁾	NR	137	4.21-137	Stormwater runoff containing road salt	No (1)
Antimony	2007	mg/l	0.006	0.006	0.004	<0.003-0.004	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	No
Iron	2007	mg/l	NR	0.3 (2)	0.012	0-0.012	Naturally occurring	No
Manganese	2007	mg/l	NR	0.05 (2)	0.476	0-0.476	Naturally occurring	No
Sulfate	2007	mg/l	NR	250 (2)	40	6.6-40	Naturally occurring	No
Chloride	2007	mg/l	NR	250 (2)	190	4.2-190	Water additive used to control microbes	No
Asbestos	2000 (3)	mfl	7	7	0.53	ND – 0.53	Decay of asbestos cement in water mains; erosion of natural deposits	No
Radioactive Contaminants								
Alpha emitters	2005 (4)	pci/l	15	0	6.8	ND – 6.8	Erosion of natural deposits of certain mineral that are radioactive and may emit a form of radiation known as alpha radiation	ls No
Radium (combined)	2005 (4)	pci/l	5	0	1.3	ND – 1.3	Erosion of natural deposits	No
Uranium	2005 (4)	pci/l	30	0	3.5	ND – 3.5	Erosion of natural deposits	No
Microorganisms								
Turbidity (point of entry)	2007	NTU % > 0.3 NTU	1 ⁽⁵⁾ 5% ⁽⁵⁾	NR NR	0.941 3.6%	0.03-0.941 0-3.6%	Soil Runoff	No
Volatile Organic Contamina	nts							
Total TTHM	2007	ug/l	80 (6)	NR	38	28-38	Byproduct of drinking water disinfection	No
Total HAAS	2007	ug/l	60 ⁽⁶⁾	NR	32	20-32	Byproduct of drinking water disinfection	No
Tetrachloroethylene	2007	ug/l	5	0	1.8	<0.5-1.8	Discharge from factories and dry cleaners	No
Dibromochloromethane	2007	ug/l	NR	60	4.8	<0.5-4.8	Byproduct of drinking water disinfection	No
Bromodichloromethane	2007	ug/l	NR	0	9.8	<0.5-9.8	Byproduct of drinking water disinfection	No
Bromoform	2007	ug/l	NR	0	0.95	<0.5-0.95	Byproduct of drinking water disinfection	No
Chloroform	2007	ug/l	NR	70	28	<0.5-28	Byproduct of drinking water disinfection	No
Dichloroacetic acid	2007	ug/l	NR	0	21	<1.0-21	Byproduct of drinking water disinfection	No
Trichloroacetic acid	2007	ug/l	NR	20	24	<1.0-24	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 To Table

- ⁽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⁾ As of January 1, 2002, these standards refer to running annual averages. Data from the last three guarters of 2006 is included in figuring these averages.

Kev 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 = parts per billion, or micrograms per liter TT = Treatment Technique pci/l = Picocuries per liter mfl = Million fibers per liter cfu/mL = bacterial colonies per milliliter n/a = not applicable TTHM = trihalomethanes HAAS = haloacetic acids

Understanding Contaminants

o 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:

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 2007, the Meriden Water Division's drinking water met or surpassed all federal and state drinking water standards.

Unregulated Contaminants

Meriden Water Division tested for Cryptosporidium in 2007 and the results are available as required.

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).

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 occuring 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.

The Meriden Water Division also utilizes a phosphatebased corrosion inhibior as part of a lead and copper control program. The Division regularly monitors orthophosphate total levels; during 2007, levels ranged from 0.7 mg/l to 1.74 mg/l.

Health Matters

he 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.

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.