

**Manchester Water Department (WSID #5022)**  
**Water Quality Confidence Report**  
**April 2013**

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*Our goal is to provide a safe and dependable supply of drinking water.*

Federal EPA regulations require that water departments throughout the country issue an annual Consumer Confidence Report to all water system customers. This report is designed to satisfy that requirement and to inform our customers about water quality, supply and service. This report is a snapshot of the quality of water that the Town of Manchester provided for January 1 through December 31, 2012. It also includes the date and results of any contaminants that were detected within the past five years, along with the date of detection and concentration.

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**MANCHESTER WATER DEPARTMENT OFFICIALS AND PUBLIC PARTICIPATION OPPORTUNITIES**

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Questions about this report or the Water Department may be directed to any of the local officials listed below. Manchester Water Department values an informed customer base and encourages water users to attend Board of Water Commissioners meetings.

**Board of Water Commissioners: Ivan Beattie - Chair, Doug Kilburn and Lambert "Chops" Zoller.**

**Owner: Town of Manchester**

**Official & Permitting**

John P. O'Keefe, Town Manager  
6039 Main Street  
Manchester Center, VT 05255  
802-362-1313 x 2  
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**Operator/Technical & Service Assistance**

David Sheldon, Water/Sewer Superintendent  
6039 Main Street  
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802-362-3339  
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**Billing & Collection**

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**WATER SOURCE INFORMATION**

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**The Source of your drinking water is:**

**Source Name: Batten Kill Well I**

**Vermont Source Type: Gravel Screened Well**

**EPA Source Type: Groundwater, non-purchased**

**Source Name: Batten Kill Well 2**

**Vermont Source Type: Gravel Screened Well**

**EPA Source Type: Groundwater, non-purchased**

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**PROTECTING MANCHESTER'S DRINKING WATER**

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On December 8, 1995 the Vermont Water Supply Division approved the Water Department's Source Protection Plan (SPP). The SPP delineates the sensitive Well Head Protection Area around the Batten Kill wells, and outlines strategies to ensure that the aquifer remains free of contamination. Obviously, this recharge area is of vital importance, and the Water Department encourages every citizen in the community to do their part to keep Manchester's water as clean and pure as possible. The SPP may be reviewed and/or copied at the Town Manager's Office.

To protect Manchester's valuable drinking water supply, it is imperative that none of the following hazardous wastes are ever discarded by flushing them down the drain, into a septic system or by dumping them on the ground.

Acids	Adhesives	Aerosols	Antifreeze	Automobile Batteries
Boric Acid	Brake Fluid	Charcoal Lighter Fluid	Cleaning Fluid	Degreasers
Dioxin	Disinfectants	Dry Gas	Dyes	Pesticides
Epoxies	Furniture Strippers	Gasoline/Diesel Fuels	Hair Removers	Herbicides
Inks	Insecticides	Insect Repellants	Lacquers	Lubricants
Motor Oil	Muriatic Acid	Nail Polish	Nail Polish Removers	Oven Cleaners
Paints	Paint Removers	Pentachlorophenol	Permanent Solutions	Photo Chemicals
Rat Poison	Rust Solvents	Solvents	Spot Removers	Turpentine
Varnish	Weed Killers	Wood Polishes	Wood Preservatives	Wood Stains

## SOURCES OF DRINKING WATER AND CONTAMINANTS

The sources of drinking water (both tap water and bottled water) include surface water (streams, lakes) and ground water (wells, springs). As water travels over the land's surface or through the ground, it dissolves naturally-occurring minerals. It also picks up substances resulting from the presence of animals and human activity. Some "contaminants" may be harmful. Others, such as iron and sulfur, are not harmful. Public water systems treat water to remove contaminants, if any are present.

In order to ensure that your water is safe to drink, we test it regularly according to regulations established by the U.S. Environmental Protection Agency and the State of Vermont. These regulations limit the amount of various contaminants:

- *Microbial Contaminants* (viruses and bacteria) may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- *Inorganic Contaminants* (salts and metals) can be naturally-occurring or result from the urban stormwater runoff, industrial or domestic wastewater discharges, or farming.
- *Pesticides and Herbicides* may come from agriculture, urban stormwater runoff, residential uses, and careless disposal of household chemicals.
- *Organic Contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also come from gas stations, urban stormwater run-off and septic systems.
- *Radioactive Contaminants*, which can be naturally occurring or the result of mining activity.

## WATER QUALITY DATA

The tables list all the drinking water contaminants detected during the 2012 calendar year, and the date and results of any contaminants detected within the past five years. The presence of these contaminants does not necessarily mean that the water poses a health risk.

**Terms and abbreviations** - To help you better understand these terms we have provided the following definitions:

- **Maximum Contamination Level Goal (MCLG):** 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.
- **Maximum Contamination Level (MCL):** 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.
- **Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of disinfectants in controlling microbial contaminants.
- **Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. Addition of a disinfectant may help control microbial contaminants.
- **Action level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **90<sup>th</sup> Percentile:** Ninety percent of the samples are below the action level. (Nine of ten sites sampled were at or below this level.)
- **Treatment Technique (TT):** A process aimed to reduce the level of a contaminant in drinking water.
- **Parts per million (ppm) or Milligrams per liter (mg/l):** (one penny in ten thousand dollars).
- **Parts per billion (ppb) or Micrograms per liter (µg/l):** (one penny in ten million dollars).
- **Picocuries per liter (pCi/L):** A measure of radioactivity in water.
- **Nephelometric Turbidity Units (NTU):** NTU is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **N/A:** Not applicable

### Public Notice - Uncorrected Significant Deficiencies:

The system is required to inform the public of any significant deficiencies identified during a sanitary survey conducted by the Water Supply Division that have not yet been corrected. There is one significant deficiency listed in the sanitary survey, which the Town is in the process of addressing. This item is not included as a deficiency in the Permit to Operate.

Date Identified	Deficiency	Facility
08/03/2011	Capability for Continuous Disinfection Required	

- This deficiency relates to the Town's back-up well (Well #2), which is rarely used. The Town completed a project to resolve this deficiency in March 2013. The Town now has the capability to provide continuous disinfection for both wells.

## LEVEL OF DETECTED CONTAMINANTS

Contaminant Detected	Level Detected (Units)	MCL	MCLG	Sample Date	Violation Y or No	Typical Source
Bromodichloromethane	1.4 ppb	80	0	5/14/09	N	Produced as a by-product of chlorination
Bromoform	<0.5 ppb	80	0	5/14/09	N	Produced as a by-product of chlorination
Dibromochloromethane	1.2 ppb	80	60	5/14/09	N	Produced as a by-product of chlorination
Chloroform	1.6 ppb	80	70	5/14/09	N	Produced as a by-product of chlorination
Gross Alpha	2.27 pCi/L	15	N/A	5/2/12	N	Erosion of natural deposits
Nitrate	0.8 ppm	10	10	3/7/12	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radium 226	<0.15 pCi/L	5	0	6/18/09	N	Erosion of natural deposits
Radium 228	1.21 pCi/L	5	0	5/14/09	N	Erosion of natural deposits
Combined Radium (226 & 228)	1.21 pCi/L	5	0	5/14/09	N	Erosion of natural deposits
Total Haloacetic Acids (HAA5)	<17 ppb	60	N/A	12/13/12	N	By-product of drinking water disinfection
Total Trihalomethanes	4.5 ppb	80	N/A	12/13/12	N	By-product of drinking water disinfection

## LEAD AND COPPER ACTION LEVELS

Contaminant Detected	Range	90 <sup>th</sup> Percentile	Sample Date	Action Level	# of Sites Exceeding the Action Level	Total # of Sites Sampled	Typical Source
Copper	0.027-0.14 ppm	0.108	7/21/11	1.3 ppm	0	20	Corrosion of household plumbing systems; erosion of natural deposits
Lead	<1-6 ppb	4	7/21/11	15 ppb	0	20	Corrosion of household plumbing systems; erosion of natural deposits

## VIOLATION(S) THAT OCCURRED DURING THE YEAR

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. The below table lists any drinking water violations we incurred during 2012. A failure to perform required monitoring means we cannot be sure of the quality of our water during that time.

Type	Category	Analyte	Compliance Period
MONITORING, ROUTINE (DBP), MAJOR	Failure to Monitor	Disinfection Byproducts	07/01/2012-09/30/2012

## ADDITIONAL INFORMATION

The Town is required to sample for Disinfection By-Products once every three years. The 2012 sample was scheduled to be taken between July 1, 2012 and September 30, 2012. Due to an oversight, the sample was not taken during the scheduled monitoring period. In December 2012 this oversight was identified by the Water Department staff and a sample was taken immediately.

The Water Department Superintendent notified the State of this oversight and provided results of the December 2012 sampling, which were well below the maximum levels as shown above as Total Haloacetic Acids and Total Trihalomethanes. The Town will be taking a follow up sample between July 1, 2013 and September 30, 2013.

## HEALTH INFORMATION REGARDING DRINKING WATER

Some people may be more vulnerable to contaminants in drinking water than 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 of infections. These people should seek advice from their healthcare providers about drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from EPA's Safe Drinking Water Hotline (1-800-426-4791).

Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some 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 Safe Drinking Water Hotline (1-800-426-4791).

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. MANCHESTER WATER DEPARTMENT 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 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking 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 or at <http://www.epa.gov/safewater/lead>.



Consultant Chris Cole reviews plans for Cemetery Avenue project.

*Photo by Lee Krohn*

