



## 2011 WATER QUALITY REPORT

### INTRODUCTION

The Village of Menomonee Falls Water Utility is pleased to present the annual Drinking Water Quality Report to you, our ground water service area customers. This report informs the public about the source from which quality water is provided to our customers in 2011. In this report, we provide you with details of the Village's water source, any compounds or contaminants that have been detected in the water distribution system, and how the levels of these substances compare to the standards set by governmental regulatory agencies.

The Utility is dedicated to providing our customers with accurate information pertaining to the quality of the water supply. The Village of Menomonee Falls Water Utility and its employees are committed to protecting the public health and bringing water that is safe to drink for our customers. We are pleased to report that the water quality test results met all federal and state requirements for the year 2011.

### SOURCE OF YOUR MENOMONEE FALLS WATER

Well Stations #8 and #9 serve the ground water service area. Water from these two wells is pumped into an underground storage reservoir located at Well Station #9. By mixing the water from these two wells, the Utility is able to decrease the hardness of the water.

### ADDITIONAL INFORMATION

All drinking water may reasonably be expected to contain at least small amounts of some contaminants. However, the presence of these contaminants does not necessarily indicate that the water poses a health risk.

Some people may be more vulnerable to contaminants in drinking water than others in the general population. Persons with compromised or weakened immune systems, such as those with cancer undergoing chemotherapy, organ transplant patients, people with HIV/AIDS, some elderly individuals, 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 reduce the risk of infection caused by cryptosporidium and other microbiological contaminants can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at **1-800-426-4791**.

### EDUCATIONAL INFORMATION

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 the 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 from human activity.

Contaminants that may be present in source water include: (1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural live stock operations and wildlife; (2) inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming; (3) pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses; (4) organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes

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and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems; and (5) 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. FDA regulations establish limits for contaminants in bottled water, which shall provide the same protection for public health. Ninety-five percent of Wisconsin communities take their water from underground water supplies (groundwater) through wells.

### WHAT'S IN YOUR WATER?

Your water may contain extremely small amounts of inorganic, mineral-type compounds such as copper, fluoride, lead, nitrate, and nitrite; volatile organic compounds such as trihalomethanes; compounds that emit radiation such as beta emitters; and particles which create turbidity (water cloudiness). The compliance levels of each of these substances detected in the year 2011 are shown on the reverse side.

### MONITORING AND REPORTING VIOLATIONS

Monitoring and reporting violations result when a water system fails to collect and/or report results for State required drinking water sampling. "Sample location" refers to the distribution system, or an entry point or well number from which a sample is required to be taken. If a water system tests annually, or more frequently, the results from the most recent year are shown on the CCR.

More than 99 percent of Wisconsin's public water supplies meet those standards for regulated chemicals. The state also monitors for chemicals not regulated by the federal government and issues health advisories if needed.

### LEAD AND COPPER

The Menomonee Falls Water Utility is required to test the drinking water in a number of homes for lead and copper. These minerals are able to enter the drinking water by way of corrosion of home plumbing systems. The Menomonee Falls Water Utility has been optimizing the control of corrosion by adding phosphate to drinking water treatments. The level of copper in the drinking water increases as corrosion levels increase and as the length of time the water remains in contact with the plumbing increases. If corrosive water remains motionless in the plumbing system for six hours or more, copper levels may exceed the maximum level. The action levels set for lead and copper are shown on the reverse side.

The Utility would like to take this opportunity to express its thanks again to the residents that participated in the collection of these samples.

Additional information is available from the US EPA's safe drinking water hotline at **1-800-426-4791**.

If you have any questions relating to this report, or any other concerns you would like addressed, please feel free to call the Menomonee Falls Utilities office, Monday through Friday, between the hours of 8:00 a.m. and 4:30 p.m. Our staff will be happy to answer any questions you may have.

Sincerely,

Jeffrey S. Nettlesheim, P.E.  
Director of Utilities

Randal L. Hager  
Utilities Superintendent

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## Ground Water Analysis

Term	Definition
AL	Action level: The concentration of a contaminant, which, if exceeded, triggers treatment, or other requirements that a water system must follow.
MCL	Maximum Contaminant Level: 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 technology.
MCLG	Maximum Contaminant Level Goal: 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.
MFL	Million fibers per liter.
mrem/year	Millions per year (a measure of radiation absorbed by the body).
NTU	Nephelometric Turbidity Units.
pCi/l	Picocuries per liter (a measure of radioactivity).
ppm	Parts per million, or milligrams per liter (mg/l). One ppm corresponds to one minute in two years or a single penny in \$10,000.
ppb	Parts per billion, or micrograms per liter (ug/l). One ppb corresponds to one minute in 2,000 years or single penny in \$10,000,000.
ppt	Parts per trillion, or nanograms per liter. One ppt corresponds to one minute in 2,000,000 years or a single penny in \$10,000,000,000.
ppq	Parts per quadrillion, or picograms per liter. One ppq water. Turbidity in excess of 5NTU is just noticeable to the average person.
TCR	Total Coliform Rule
TT	Treatment Technique: a required process intended to reduce the level of a contaminant in drinking water.

### Disinfection Byproducts

Contaminant (Units)	MCL	MCLG	Level Found	Range	Sample Date (If Prior to 2011)	Violation	Typical Source of Contaminant
HAA5 (ppb)	60	60	1	1	8/23/2010	No	
TTHM (ppb)	80	0	6.0	6.0	8/23/2010	No	By-product of drinking water chlorination

### Inorganic Contaminants

Contaminant (Units)	MCL	MCLG	Level Found	Range	Sample Date (If Prior to 2011)	Violation	Typical Source of Contaminant
Arsenic (ppb)	10	n/a	3	3		No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	.044	.044		No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beryllium Total (ppb)	4	4	.03	.03		No	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries
Copper (ppm)	AL=1.3	1.3	.428	0 of 10 results were above the action level.		No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Fluoride (ppm)	4	4	1.1	1.1		No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Lead (ppb)	AL=15	0	1.50	0 of 10 results were above the action level.		No	Corrosion of household plumbing systems; Erosion of natural deposits
Nickel (ppb)	100		.6200	.6200		No	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products.
Sodium (ppm)	n/a	n/a	26.30	26.30		No	n/a

### Radioactive Contaminants

Contaminant (Units)	MCL	MCLG	Level Found	Range	Sample Date (If Prior to 2011)	Violation	Typical Source of Contaminant
Combined Uranium (ug/l)	30	0	0.4	0.4	6/12/2008	No	Erosion of natural deposits

**Unregulated Contaminants**

Contaminant (Units)	MCL	MCLG	Level Found	Range	Sample Date (If Prior to 2011)	Violation	Typical Source of Contaminant
Bromodichloromethane (ppb)	n/a	n/a	1.70	1.70	8/23/2010	No	n/a
Bromoform (ppb)	n/a	n/a	.96	.96	8/23/2010	No	n/a
Chloroform (ppb)	n/a	n/a	.89	.89	8/23/2010	No	n/a
Dibromochloromethane (ppb)	n/a	n/a	2.40	2.40	8/23/2010	No	n/a

**Volatile Organic Contaminants**

Contaminant (Units)	MCL	MCLG	Level Found	Range	Sample Date (If Prior to 2011)	Violation	Typical Source of Contaminant
Toluene (ppm)	1	1	.0002	.0002		No	Discharge from petroleum factories

**Cross Connection Control Program**

Wisconsin DNR – NR Code # 810-15 requires municipal water suppliers have a cross connection control program in place. The program includes providing public education materials as well as conducting a cross connection survey for every residential service a minimum of once every ten years or on a schedule matching meter replacements. A cross connection survey is to be conducted for every industrial, commercial and public authority service a minimum of once every two years. In order to comply with the Public Service Commission and the Wisconsin DNR, it will be necessary at the time of your next water meter replacement to perform a cross connection survey of the property.

**Did you know...**

Your water can become contaminated if connections to your plumbing system are not properly protected!

The purpose of the local Cross-Connection Control Program, as required by State Plumbing Code and Regulations, is to ensure that everyone in the community has safe, clean drinking water.

**Public Health & Safety...**

To avoid contamination, backflow preventers are required by state plumbing codes wherever there is an actual or potential hazard for a cross-connection. The Wisconsin Department of Natural Resources requires all public water suppliers to maintain an on-going Cross Connection Control Program involving public education, onsite inspections, and possible corrective actions by building owners if required.

## What is a Cross-Connection?

A cross-connection is an actual or potential connection between the safe drinking water (potable) supply and a source of contamination or pollution. State plumbing codes require approved backflow prevention methods to be installed at every point of potable water connection and use. Cross-Connections must be properly protected or eliminated.

### How does contamination occur?

When you turn on your faucet, you expect the water to be as safe as when it left the treatment plant. However, certain hydraulic conditions left unprotected within your plumbing system may allow hazardous substances to contaminate your own drinking water or even the public water supply. Water normally flows in one direction. However, under certain conditions, water can actually flow backwards; this is known as Backflow. There are two situations that can cause water to flow backward: back siphonage and backpressure.

### Backsiphonage

May occur due to a loss of pressure in the municipal water system during a fire fighting emergency, a water main break or system repair. This creates a siphon in your plumbing system which can draw water out of a sink or bucket and back into your water or the public water system.

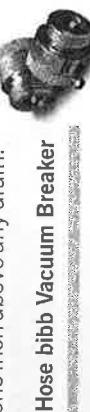
### Backpressure

May be created when a source of pressure (such as a boiler) creates a pressure greater than the pressure supplied from the public water system. This may cause contaminated water to be pushed into your plumbing system through an unprotected cross-connection.

## Insights to protect your drinking water

### Do...

- Keep the ends of hoses clear of all possible contaminants.
- Make sure dishwashers are installed with a proper "air gap" device.
- Verify and install a simple hose bibb vacuum breaker on all threaded faucets around your home.
- Make sure water treatment devices such as water softeners have the proper "air gap", which is a minimum of one inch above any drain.



Hose bibb Vacuum Breaker

### Don't...

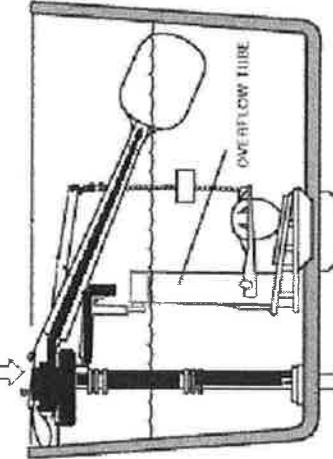
- Submerge hoses in buckets, pools, tubs, sinks or ponds.
- Use spray attachments without a backflow prevention device.
- Connect waste pipes from water softeners or other treatment systems directly to the sewer or submerged drain pipe. Always be sure there is a one inch "air gap" separation.

## In the Bathroom - Toilet Tanks

There are many unapproved toilet tank fill valve products sold at common retailers which do not meet the state plumbing code requirements for backflow prevention.

- Look for the **ASSE #1002** Standard symbol on the device and packaging
- Replace any unapproved devices with an **ASSE #1002** approved anti siphon ball-cock assembly. Average cost is typically \$12 to \$22 at home improvement stores
- Verify overflow tube is one inch below critical level (CL) marking on the device

ASSE #1002 Approved Ball Cock Assembly

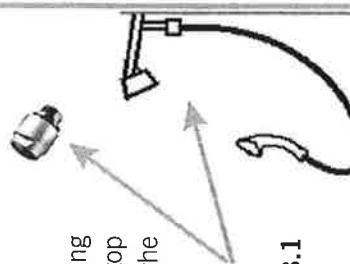


Toilet water tank

## In the Bathroom - Hand Held Shower Fixture

The hand held shower fixture is compliant if:

- When shower head is hanging freely, it is at least 1" above top of the flood level rim of the receptor (tub)
- Complies with **ASSE#1014**
- Has the **ASME code 112.18.1** stamped on the handle



1" Minimum AIR GAP Above  
Tub From Fixture Outlet

Bath Tub

Hoses and water treatment devices may create a potential backflow hazard if not properly isolated with backflow prevention methods.