WAUSAU WATER WORKS
FOR YOU!

Volume 15, No. 3 Summer 2012

Water Quality Report

Let's Raise Our Glasses to Toast Water Quality Excellence!

Wausau Water Works is proud to present this year's Water Quality Report, and even more proud to announce that our test results for 2011 met all the requirements for safe, excellent water quality. A complete list of the results of these tests are shown on pages 4-5 of this report.

We are often asked "why do you prepare this report?" Because we want you, our valued customers, to be informed about your drinking water, and know that the product you are drinking is safe and of the highest quality. The federal government also wants you to be informed about your drinking water, and requires all water utilities in the United States to provide this information to their customers on an annual basis. So let's raise our glasses (of water, of course) and toast to another year of water quality excellence!

Ultra Violet Disinfection System Upgraded

Among the recent upgrades at the Wastewater Treatment Facility was the installation of a new ultra violet disinfection system (shown above). Under our discharge permit, the wastewater plant is required to provide this additional disinfection between the months of May and September before discharging to the Wisconsin River. The old unit, which was installed with the 1991 upgrade, had become unreliable and was inefficient. Recent installation of updated blowers and micro-turbines have also netted the utility with an increase in energy savings.

Energy is a large part of the budget for the wastewater plant and being able to reduce these costs benefits everyone.

Out of Sight, Not Out of Mind

With the slowdown in new developments over the last few years, our attention has switched from extending new sanitary sewer and watermains to maintaining our existing infrastructure. This year, we are replacing water and sewer mains in 12th and Prospect Avenues, Ruder, Plato and Jefferson Streets. We are also replacing sanitary sewers in Washington Street. Reasons for replacing the water mains are due to leaking pipes and constricting pipe sizes. Sanitary sewers are being replaced due to collapsed pipes and failure of the pipe structure. The above replacements are coordinated with street projects.

We also continue to maintain our sanitary sewer pipes using a practice called cured-in-place-pipe. This process involves sliding a "sock" into the pipe, expanding the "sock" using hot water and allowing the "sock" to cure. The end result is a new pipe inside the existing pipe. A cutter is then sent inside the pipe to cut out the lateral connections.

Recently, new technology has been developed to allow this same procedure to be used on pressure pipe such as watermains. The "sock" material is the same as the sanitary sewer, but the inside of the fabric is treated to protect the drinking water. The contractor first digs entry pits over the watermain. The pipe is cleaned and a robot is inserted into the pipe to record the x, y and z coordinates for each water lateral. The "sock" is inserted and expanded. The robot is inserted again to drill out the laterals. The watermain is cleaned and flushed and then safe tested before it is put back into operation. The pits are then backfilled and patched. This operation limits the impact to streets or existing landscaping if the pipe is in an easement. We will be using this technique on Sunset Drive and through an easement from Sunset Drive to 14th Avenue.

So even though these pipes are out of sight, they are not out of mind. We strive to keep our existing mains in good working order to reduce leaks and breaks in our watermains or blockages in the sanitary sewers.

Do Not to Flush!

With today's hectic schedules we all enjoy the modern conveniences such as anti-bacterial wipes, diaper wipes, disposable diapers, etc. Unfortunately, our Wastewater Treatment Plant has seen an increase in these types of products. These items are notorious for plugging up pumps and can get caught on roots or other debris in laterals and sewer mains causing back-ups to occur. Maintenance costs to remove these products and repair equipment is also increasing. These items do not break down like toilet paper does.

NEVER FLUSH DIAPERS, WIPES OF ANY TYPE, FEMININE HYGIENE PRODUCTS, RAGS, PAPER TOWELS, OR ANYTHING THAT IS NOT INTENDED FOR THE TOILET. DISPOSE OF THESE PRODUCTS IN YOUR GARBAGE CAN.

Our sewer collection crew also has seen an increase in rags and wipes in our sewer mains. When backups occur as a result of these types of items, it is often at the expense of the property owner. Grease is another issue that causes homeowners problems. Grease should be wiped from pans and disposed of in the garbage prior to washing dishes. Using soaps that claim to eliminate grease, only breaks it down for a short period of time where it again congeals further down the line, clinging to other debris such as rags or roots.

Remember, use your toilet only for its' intended purpose.

Before You Dig Call 811-Diggers Hotline

Living in Wisconsin, we all know that summers are when we tend to enjoy being outdoors and it's the time of year that triggers construction projects to build those decks, install fences and plant trees. Homeowners should always remember to call Diggers Hotline at 811 before doing any type of digging. It's very important to identify where any buried pipes or wires are located prior to digging that first shovel full of dirt.

There is no charge to the homeowner to put in a locate request. Water, sewer, storm sewer, cable, electric, gas and telephone utilities then locate their buried services. You do need to plan accordingly however, and allow 3 business days after the day you call Diggers Hotline for the utilities to do the locates. Although we try to accommodate earlier requests, they cannot be guaranteed as our other work and emergencies may need to take precedence. During peak times from spring to fall, utilities get many, many requests for locates.

Although bury depths vary depending on the type of utility, water and sewer pipes are normally below the frost line, anywhere from 5 to 7 feet deep. Please be aware that only mains in the street and the utility side of laterals (to the shutoff valve in the boulevard area) are located by our staff. Laterals in the yards, and into the homes were privately installed, and the utility does not maintain records of their locations.

811
Know what's below.
Call before you dig.

Routine Water Quality Testing….

The Water Quality Test Results shown on pages 4-5 only lists substances which were detected. **We run numerous tests for substances which are not detected.** We also run routine tests to help us evaluate water characteristics such as pH, alkalinity, hardness, etc. A summary of those results is shown below.

pH - Typical result: 8.5. Ideal range: 7 to 8.5. Measure of acidity—low values may indicate corrosive water.

Alkalinity - Typical result: 70 to 80 mg/l. Measure of water's ability to neutralize acids—is related to pH and hardness.

Hardness - Typical results: 80 to 100 mg/l or 4-1/2 to 6 grains/gallon. Wausau's water is moderately soft. Hard water is beneficial to health, but high levels can decrease soap's cleaning ability and cause scaling inside of pipes.

Iron - Typical result: less than 0.05 mg/l. Natural levels in our well water can be high, but it is removed by our treatment plant - not a health concern, but it can cause taste and odor problems as well as staining of laundry when bleach is used.

Manganese - Typical result: less than 0.04 mg/l. Like iron, a naturally occurring mineral that is removed at the treatment plant.

What these tests indicate is that we have high quality, good tasting water available right at our taps!

Did You Know?

All drinking water, including bottled water, may be reasonably expected to contain naturally dissolved elements/minerals. It's important to remember that the presence of these constituents does not necessarily pose a health risk, and generally are required for a balanced diet. All sources of drinking water are subject to potential contamination by constituents that are naturally occurring, or are manmade. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. All drinking water, including bottled water, may reasonably be 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 Environmental Protection Agency's Safe Drinking Water Hotline at **1-800-426-4791.**

Important Info

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 about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the **Safe Drinking Water Hotline (800-426-4791).**

Infants and young children are typically more vulnerable to lead in drinking water than the general population. As a result of materials used in your home's plumbing, it is possible that lead levels at your home may be higher than at other homes in the community. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested, or you can flush your tap for 30 seconds to 2 minutes before using tap water. Again, additional information is available from the Safe Drinking Water Hotline at **1-800-426-4791**. Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced.

You may also contact our office at 715-261-6530 if you have any questions regarding your water quality, or to obtain information on lead testing in your home. Our office hours are 8:00 a.m. to 4:30 p.m. Monday through Friday.

Sewer Backup Insurance

Property owners are urged to contact their homeowner's insurance agent to add sewer backup insurance as a rider to their policies, especially if you have an improved basement. **Sewer backups can occur for a variety of reasons, but that does not mean there is liability on the part of the Utility.**

Talk with your agent to be sure your valuables are fully protected, and ***never*** store valuable items on the floor of your basement.

WAUSAU WATER WORKS FOR YOU!

WATER QUALITY TEST RESULTS

Substance	Unit Measurement	MCLG	MCL	Level Detected	Violation Y/N	Likely Source Of Substance
Disinfection Byproducts						
HAA5 (Last sample date 09/09/2011)	ppb	60	60	14 (Range 10-14)	NO	By-product of drinking water chlorination
TTHM (Last sample date 09/09/2011)	ppb	0	80	8.0 (Range 7.7-8.0)	NO	By-product of drinking water chlorination
Inorganic Contaminants						
Arsenic (Last sample date 09/09/2011)	ppb	N/A	10	2	NO	Erosion of natural deposits.
Barium (Last sample date 09/09/2011)	ppm	2	2	.005	NO	Erosion of natural deposits
Copper (Last sample date 09/23/2011)	ppm	1.3	AL=1.3	0.886 (0 of 50 results were above the action level)	NO	Corrosion of household plumbing systems
Cyanide (Last sample date 09/09/2011)	ppb	200	200	12	NO	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (Last sample date 11/15/2011)	ppm	4	4	1.1 (Range 1.0-1.1)	NO	Erosion of natural deposits; water additive which promotes strong teeth
Lead (Last sample date 09/23/2011)	ppb	0	AL=15	13.60 (5 of 50 results were above the action level)	NO *	Corrosion of service lines and household plumbing systems
Nickel (Last sample date 09/09/2011)	ppb		100	1.3000 (Range 1.1000-1.3000)	NO	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products
Nitrate N03-N) (Last sample date 09/09/2011)	ppm	10	10	4.60 (Range 2.30-4.60)	NO	Runoff from fertilizer use: leaching from septic tanks, sewage; erosion of natural deposits

* Systems exceeding a lead and/or copper action level must take actions to reduce lead and/or copper in the drinking water. The lead and copper values represent the 90th percentile of all compliance samples collected. If you want more information on the number of sites or the actions taken to reduce these levels, please contact Wausau Water Works at 715-261-6530.

Substance	Unit Measurement	MCLG	MCL	Level Detected	Violation Y/N	Likely Source Of Substance
Inorganic Contaminants (continued)						
Nitrite (N02-N) (Last sample date 09/09/2011)	ppm	1	1	.310 (Range .210-.310)	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (Last sample date 09/09/2011)	ppm	N/A	N/A	18 (Range 13-18)	NO	Naturally occurring, contained in corrosion control additive
Radioactive Contaminants						
Radium (226 + 228) (Last sample date 7/15/2009)	pCi/l	0	5	1.5 (Range 1.4-1.5)	NO	Erosion of natural deposits
Unregulated Contaminants						
Bromodichloro-methane (Last sample date 09/09/2011)	ppb	N/A	N/A	.32 (Range .25-.32)	NO	By-product of drinking water chlorination
Chloroform (Last sample date 09/09/2011)	ppb	N/A	N/A	7.70 (Range 7.40-7.70)	NO	By-product of drinking water chlorination
Sulfate (Last sample date 09/09/2011)	ppm	N/A	N/A	75 (Range 49-75)	NO	Naturally occurring

Data presented in these tables represent the most current test results. Some tests are performed on a 3 year cycle.

SEE PAGE 6 FOR DEFINITION OF TERMS

The tables on these two pages display the number of contaminants that were required to be tested in the last five years. The Drinking Water Report may contain up to 5 years worth of water quality results. If a system tests annually, or more frequently, the results from the most recent year are shown on the Drinking Water Report. If testing is done less frequently, the results shown on the Drinking Water Report are from the past 5 years.

DEFINITION OF TERMS

AL - Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
PPM - Parts Per Million or milli-grams per liter (mg/l) - one part per millions corresponds to one minute in two years or a single penny in $10,000.
PPB - Parts Per Billion or Micro-grams per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
pCi/l - Picocuries per liter - a measure of radioactivity.
MCL - Maximum Contaminant Level - the "Maximum Allowed" (MCL) is 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 "goal" (MCLG) is a 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.
TCR - Total Coliform Rule.
ND - None Detected.

MCLs are set at a very stringent level. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

How to Avoid a Water System Cross Connection

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 backwards: backsiphonage and backpressure.

Backsiphonage may occur due to loss of pressure in the municipal water system during a fire fighting emergency, a watermain 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,

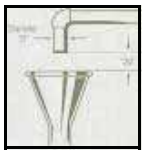
Insights to Protect Your Drinking Water

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

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 an one inch "air gap" separation



In the Bathroom
Hand Held Shower Fixture

The hand held shower fixture is Compliant if:

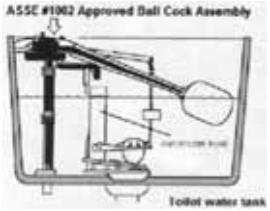
- When shower head is hanging freely, it is at least 1" above top of the flood level rim of the receptor (tub)
- Complies with ASSE #1014
- Has the ASME code 112.18.1 stamped on the handle

1" minimum AIR GAP above Tub from fixture outlet

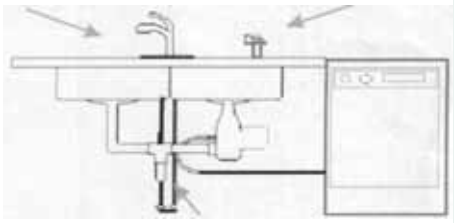
In the Bathroom—Toilet Tanks

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

- Look for 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 between $12 to $22 at home improvement stores.
- Verify overflow tube is one inch below critical level (CL) marking on device.



In the Kitchen



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

Source—Wisconsin Municipal Environment Group—Water Division

Land Donated for Kayak Ramp

Wausau Water Works has donated a section of land in front of the of the Meter/Distribution Shop for a parking area to be used as part of the new handicap accessible kayak ramp that is being built by the Marathon County Park Department.

This parking area will also enhance the River Walk Trail system along this section.

Deferred Payment Agreements Available

Residents with past due water and sewer bills may request deferred payment agreements to help pay off balances prior to being transferred to the property tax bills. Inquiries regarding deferred payments agreements may be made by calling Wausau Water Works at 715-261-6530. Please ask for either Deb or Terry.

Proof of income and monthly expenses may be required to help set up equitable payment agreements.

Welcome Aboard!

Wausau Water Works would like to welcome Jason Cummings as the newest member of the Water Distribution Crew. Jason previously worked for the City of Montrose, Colorado water utility so he comes to Wausau with great experience. Welcome aboard Jason!

Did You Know??

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 human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- 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 productions, mining or farming.
- Pesticides and herbicides, which may come from a variety of sources, such as agriculture, urban storm water runoff and residential users.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum productions, and can also come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring, or be the result of oil and gas production and mining operations.

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.

Number of Contaminants Required to be tested: The table below displays the number of contaminants that were required to be tested in the last five years. The Water Quality Report may contain up to five years worth of water quality results. If a water system tests annually, or more frequently, the results from the most recent year are shown in the tables on pages 4-5. If testing is done less frequently, the results shown are from the past five years.

Contaminant Group	No. of Contaminants
Disinfection By-products	2
Inorganic Contaminants	17
Microbiological Contaminants	3
Radioactive Contaminants	3
Synthetic Organic Contaminants including Pesticides and Herbicides	27
Unregulated Contaminants	34
Volatile Organic Contaminants	20

Where Does Our Water Come From?

Wausau's drinking water comes from six municipal wells, all of which are located near the Wisconsin River. These wells range in depth from 95 feet to 160 feet and pump anywhere from 900 to 3000 gallons per minute.

From the wells, the water travels to our Water Treatment Plant where it undergoes treatment to remove iron and manganese prior to distribution to your home or business. Approximately 250 miles of mains deliver the water from the Treatment Plant to approximately 16,000 homes and businesses served by Wausau Water Works.

Thousands of Water Quality Tests Conducted Annually

The substances shown on the tables on pages 4 and 5 indicate contaminants that are detected in our drinking water. Other items that are tested, but are indicated as non-detects (meaning their amounts are so low, if at all present, that they are not detected during testing) include: Antimony, Beryllium, Cadmium, Chromium, Mercury, Selenium, Thallium, Aldicarb, Atrazine, Pentachlorophenol, Toxaphine, Benzene, Styrene, Vinyl Chloride, and Xylene, just to name a few.

Thousands of water quality tests are performed annually to ensure that you are receiving the best possible quality of drinking water. Additional tests, including inorganic substances, disinfection byproducts, radioactive substances, unregulated contaminants, microbiological, volatile organic and synthetic organic substances which include pesticides and herbicides, are conducted on a three to five year cycle.

Private Well Permits

Property owners in the City of Wausau are required to have a permit for wells on their property. Wells that do not meet code requirements or that are not operational must be properly abandoned.

The procedure for obtaining a permit has changed in response to changes in the Wisconsin Administrative Code. To obtain or renew a well permit the property owner must submit an application form, an inspection report from a licensed well driller or pump installer certifying that the well is in compliance, a passing bacteria test, and a $15 fee.

Wells that are not in use must be properly abandoned by a licensed well driller or pump installer. DO NOT attempt to fill a well yourself as it is very expensive to remove unapproved materials from the well casing.

Please contact Wausau Water Works at 715-261-7262 if you need an application for a well permit or information on well abandonment.

Utility Commission Meets Monthly

The Wausau Water Works Commission typically meets the first Tuesday of each month at 1:30 p.m. in City Hall. (some exceptions do apply).

If you'd like to learn more about Wausau Water Works, please feel free to attend any of our regularly scheduled Commission meetings. If you wish to have an item placed on the agenda for Commission consideration, please contact Deb Geier at 715-261-6533 two weeks prior to the next scheduled meeting.

Meeting agendas and minutes of prior meetings are available on the City of Wausau website at www.ci.wausau.wi.us .

Questions About This Water Report?

If you have questions regarding this water quality report, or concerns about your water, please contact Brad Marquardt, Director of Public Works and Utilities at 715-261-6745 or Dick Boers, Drinking Water Superintendent at 715-261-7286.

If you'd like to learn more about Wausau Water Works visit our website at www.ci.wausau.wi.us/Departments/WausauWaterWorks.aspx .

Quality On Tap!
Our Commitment Our Profession

Dlaim ntawv tshaabxu nuav muaj lug teemceeb heev nyob rua hnv hws has txug cov dlej mej haus. Kuas it tub paab txhais rua koj, los nrug ib tug kws paub lug thaam.

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

IMPORTANT WATER QUALITY
INFORMATION ENCLOSED

407 Grant Street - Wausau, WI 54403-4783

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