

# Drinking Water Report



*Ryan Nesbitt, a certified water treatment plant operator, performs a water quality test in the plant laboratory.*

## Safe Drinking Water is #1!!

As you will see from the tables on pages 4-5 of this report, Wausau Water Works supplied excellent drinking water throughout 2007.

Why do we prepare this report annually? We want our valued customers to be informed about their drinking water. The federal government also wants you to be informed about what substances are in your water, and requires all water utilities in the United States to provide this information to their customers on an annual basis. You should feel assured that the water you receive from your tap is safe for you and your family, because "Quality on Tap is our Commitment, Our Profession", and providing quality drinking water to you, our residents, is our **number one** priority!

## Wausau's Water and Sewer Rates Amongst Lowest in State

Wausau Water Works recently participated in a water and sewer rate survey conducted by Municipal Economics and Planning, a division of Ruckert/Mielke. The results of that survey ranked the average annual cost per household for water and sewer amongst participating communities in Wisconsin. The study looked at the combined rates, as well as the rates for the individual services.

In the sewer rate comparison category, Wausau Water Works ranked a low 290 out of 313 respondents at an annual cost of \$231.53 (based on a consumption of 24 units of 100 cubic feet per quarter). The highest community's sewer rates were \$1,133.50 annually.

In the water rate comparison category, Wausau ranked 201 out of 304 respondents at an annual cost of \$213.50. The highest community's water rates were \$1,340.00 annually.

In the combined sewer and water rate comparison, Wausau ranked 281 with an average annual cost of \$445.03 out of 305 responding communities. The highest combined rate was \$1,700.00 annually.

Wausau Water Works has both full water treatment and wastewater treatment facilities, which some of the communities who ranked lower than us do not have. Our staff is proud to be able to provide our residents with a quality product at an economical cost, and we work hard to keep our rates amongst the lowest for you, our customers.

## Construction Begins on Brokaw Booster Station

Construction of a booster station along 20<sup>th</sup> Avenue to serve the residents of the Village of Brokaw has begun. The station will pump water to mains that will be installed by the Village of Brokaw. Work on the booster station should be complete by mid-summer, and it is expected that Brokaw residents will start receiving Wausau water later this summer or early fall.



## Professor Faucet's Tips on Conservation

Water conservation continues to be a hot topic around the country. While we in Central Wisconsin, where water appears abundant, don't think much about conserving this natural resource, other parts of the state, where radon and other types of contamination are naturally occurring, aren't as lucky. But conservation practices can be three-fold. Not only do they help the environment, but they also help keep your costs down, which in turn helps to keep our pumping and treatment costs down as well.

### Tips that You can use around the home

- Don't over water your lawn. Only water every 3-5 days.
- Maintain a lawn height of 2-1/2 to 3 inches to help protect the roots from heat stress and reduce the loss of moisture to evaporation.
- Mulch around plants, bushes and trees to help the soil retain moisture, discourage the growth of weeds and provide essential nutrients.
- To prevent water loss from evaporation, don't water your lawn during the hottest part of the day or when it's windy.
- Only run the dishwasher and clothes washer when they are fully loaded.
- Defrost frozen food in the refrigerator or in the microwave instead of running water over it.
- When washing dishes by hand, use two basins - one for washing and one for rinsing rather than letting the water run.
- Use a broom, rather than a hose, to clean sidewalks and driveways.
- Repair dripping faucets and leaky toilets. Dripping faucets can waste about 2,000 gallons of water each year. Leaky toilets can waste as much as 200 gallons each day.
- Collect rain water and use it to water your garden.

### Interesting Droplets

- If all U.S. households installed water-saving features, water use would decrease by 30 percent, saving an estimated 5.4 billion gallons per day. This would result in dollar-volume savings of \$11.3 million per day or more than \$4 billion per year.
- The average household water use annually is 127,400 gallons.
- The average daily household water use is 350 gallons.

### Water Use Statistics

Use	Gallons/Capita	% of Total Daily Use
Showers	11.6	16.8%
Washing Machines	15.0	21.7%
Dishwashers	1.0	1.4%
Toilets	18.5	26.7%
Baths	1.2	1.7%
Leaks	9.5	13.7%
Faucets	10.9	15.7%
Other Domestic Uses	1.6	2.2%

By installing more efficient water fixtures and regularly checking for leaks, households can reduce daily per capita water use by about 35% to about 45.2 gallons per day. Here's how it breaks down for households using conservation measures:

Use	Gallons/Capita	% of Total Daily Use
Showers	8.8	19.5%
Washing Machines	10.0	22.1%
Dishwashers	0.7	1.5%
Toilets	8.2	18.0%
Baths	1.2	2.7%
Leaks	4.0	8.8%
Faucets	10.8	23.9%
Other Domestic Uses	1.6	3.4%

Source: American Water Works Association - [www.drinktap.org](http://www.drinktap.org),  
Handbook of Water use and Conservation, Amy Vickers

## Questions About this Report?



If you have any questions regarding this water quality report, or concerns about your water, please contact Joseph L. Gehin, Director of Administration - Public Works and Utilities, at 715-261-6530 or Dick Boers, Drinking

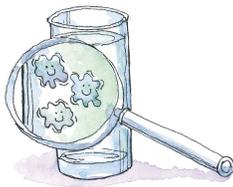
Water Superintendent, at 715-261-7286. If you would like to learn more, please attend any of our regularly scheduled commission meetings which are generally held the first Tuesday of each month, at 1:30 p.m., in City Hall. If you wish to have an item included on the agenda for Commission consideration, please contact Deb Geier at 715-261-6533 two weeks prior to the next scheduled meeting.

## Routine Water Quality Testing....

The Water Quality Test Results shown on pages 4-5 only lists substances which are required to be tested and are 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 result: 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 and 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 drinking 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**.

## Happy Retirement

Wausau Water Works would like to extend our best wishes to Brian Mais and Roger Polzin who both recently retired.

Brian Mais, who had almost 31 years of service, retired on April 11. At the time of his retirement, Brian served as a Meter Technician in the Drinking Water Division.

Roger Polzin retired on May 2 after almost 36 years of service to the City and Utility. At the time of his retirement he was employed in the capacity of Sewer Maintainer.

Wausau Water Works thanks Brian and Roger for their many years of service and extends our wishes for a happy retirement to both.

## New Faces New Places

We would like to extend a big welcome to Shannon Lane who joined Wausau Water Works Drinking Water Division on April 2, 2008. Shannon had previously been employed in the construction field and brings a wealth of experience with him to his new job.

Ken Rye was recently promoted to Sewer Maintainer Lead Worker. Congratulations to Ken on his new position!

## Gale Honored for Years of Service

Utility Commissioner, Ed Gale, was recognized at the May 13 Wausau Water Works Commission meeting for his years of dedicated service as a Commissioner for the utility. A certificate of Appreciation was signed by the current Commission and presented to Mr. Gale.

## New Members Appointed to Commission

George Million and Deb Hadley have been appointed as the newest members to the Wausau Water Works Commission. Mr. Million was welcomed at the February meeting while Ms. Hadley's appointment became effective with the May meeting. Mr. Million and Ms. Hadley join L.S. Rebman, Roger Otto and President Jim Tipple to make up the Wausau Water Works Commission.

The Commission meets the first Tuesday of the month at 1:30 p.m. All meetings are open to the public. If you wish to have an item included on the agenda for Commission consideration, please contact Deb Geier at 715-261-6533 two weeks prior to the next scheduled meeting.



**WATER QUALITY TEST RESULTS**

Substance	Unit Measurement	MCLG	MCL	Level Detected	Violation Y/N	Likely Source of Substance
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**Disinfection Byproducts**

<b>HAA5</b>	ppb	60	60	4 average Range 3-4	<b>NO</b> 	Disinfection By-product
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**Inorganic Contaminants**

<b>Arsenic</b> (Last sample date 8/25/2005)	ppb	N/A	10	1 Range 1-1	<b>NO</b> 	Erosion of natural deposits.
<b>Barium</b> (Last sample date 8/26/2005)	ppm	2	2	.005 Range .004-.005	<b>NO</b> 	Erosion of natural deposits.
<b>Copper</b> (Last sample date 9/7/2005)	ppm	1.3	AL=1.3	0.1370 Range .0064-.1740	<b>NO</b> 	Corrosion of household plumbing systems.
<b>Fluoride</b>	ppm	4	4	1.2 average Range 1.1-1.4	<b>NO</b> 	Erosion of natural deposits; water additive which promotes strong teeth.
<b>Lead</b> (Last sample date 9/13/2005)	ppb	0	AL=15	15.3 Range .00-55.40	<b>NO</b> * 	Corrosion of service lines and household plumbing systems.
<b>Nitrate (N03-N)</b>	ppm	10	10	.45 average Range .24-.65	<b>NO</b> 	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
<b>Sodium</b> (Last sample date 8/26/2005)	ppm	N/A	N/A	12.60 Range 10.30-12.60	<b>NO</b> 	Naturally occurring, contained in corrosion control additive

\* 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 90<sup>th</sup> percentile of all compliance samples collected. If you want information on the number of sites or the actions taken to reduce these levels, please contact Wausau Water Works at 261-6530.

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 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 on the Drinking Water Report. If testing is done less frequently, the results shown on the Drinking Water Report are from the past five years.

Substance	Unit Measurement	MCLG	MCL	Level Detected	Violation Y/N	Likely Source of Substance
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**Unregulated Contaminants**

<b>Chloroform</b>	ppb	N/A	N/A	1.60 average Range 1.40-1.80	<b>NO</b> 	By-product of drinking water chlorination.
<b>Sulfate</b>  (Last sample date 8/25/2005)	ppm	N/A	N/A	14.10  Range 12.50-14.10	<b>NO</b> 	Naturally occurring.

**Volatile Organic Contaminants**

<b>Dichloro-methane</b>	ppb	0	5	.5  Range .5	<b>NO</b> 	Discharge from pharmaceutical and chemical factories.
<b>P-Dichloro-benzene</b>	ppb	75	75	1.7  Range 1.7	<b>NO</b> 	Discharge from industrial chemical factories.
<b>TTHM (Total Trihalo-methane)</b>	ppb	0	80	1.6  Range 1.4-1.8	<b>NO</b> 	By-product of drinking water chlorination.

**Definition of Terms:** The information provided in the tables on pages 4 and 5 contain many terms and abbreviations that may be unfamiliar. To help you better understand, we've provided the following definitions.

- 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 Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.
- PPB** **Parts Per Billion** or Micrograms 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 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.
- TCR** **Total Coliform Rule.**
- ND** **None detected.**

MCLs are set at very stringent levels. 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.

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

## Important Info

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. Additional information is available from the **Safe Drinking Water Hotline (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.

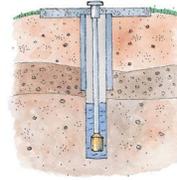


Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants 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)**.

You may also contact our office at 715-261-6530 if you have 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.

## 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.

Over 200 miles of water mains deliver the water from the Treatment Plant to more than 15,000 homes and business served by Wausau Water Works.

## Thousands of Water Quality Tests Conducted

The substances shown on the tables on pages 4 and 5 indicate the 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.



## Northwoods Mist - A Unique Gift

Are you planning a family reunion or wedding this summer? Looking for something unique to give to your friends or family? **Northwoods Mist**, Wausau's very own bottled water, is cool and refreshing, and a perfect gift to include in welcome packages, for students heading to college, or just for people on the go.

**Northwoods Mist** is available either by the single bottle, or by the case, at Wausau City Hall.

## Summer Hours

City Hall has switched to their summer hours, effective Memorial Day through Labor Day. Offices will be open from 8 a.m. to 4:30 p.m., Monday through Friday. After hours emergencies should be directed to our answering service at 715-848-7549.

## Drips and Drops

- A person can live about a month without food, but only about a week without water.
- A person must consume 2 liters of water daily to live healthily.
- More than 2 billion people on earth do not have a safe supply of water.
- It takes about 1500 gallons of water to process one barrel of beer.

Source: [www.lenntech.com](http://www.lenntech.com)

## 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 production, 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 production, 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 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.

## Lead Pipes Affect Water Quality

The City of Wausau has many older homes that were constructed when lead plumbing materials were commonly used. Lead pipes are sometimes found in homes built before about 1930, most homes built before about 1965 have lead service lines between the house and the water main, and lead solder was used with copper pipes up to 1984. Even today lead can be found in some new brass fixtures.

Lead is not found in our groundwater or water in the City distribution mains but is absorbed from lead service lines and lead plumbing materials. We recommend that residents with homes built before 1984 flush their water line before using water for cooking or drinking. It takes time for the water to absorb lead so the idea is to use water that has not been in contact with lead plumbing materials for more than a few hours.

Adequately flushing the water line can require running 1 to 2 gallons of water to draw fresh water from the water main. It would not be necessary to run as much water if the home does not have a lead service line or if water has recently been used elsewhere in the house, to flush a toilet or wash clothes for example.

The utility continues to monitor the corrosion potential of our drinking water to minimize the amount of lead absorbed from household plumbing.

Please contact Wausau Water Works at 261-6530 if you have questions regarding lead in drinking water, lead plumbing or flushing requirements.



## Final Reads Can Now Be Scheduled Online 24/7

Are you selling your home, moving into a new home, renting an apartment or have a tenant moving in or out of a property? These requests can now be



handled 24 hours a day, 7 days a week through our website at <http://www.ci.wausau.wi.us>. Click on the Government Link, Departments and Services, then scroll to the bottom and click on Wausau Water Works, then Information Page. You will see a link to the Final Bill Request Screen. Simply click on the option that best fits you - buyer, seller, tenant or landlord and complete the required information and submit. Landlords are required to include their landlord number to verify that the information is coming from the property owner. A reply email will be sent to verify that the request has been received.

## Flushing Facts

*Some people say you should put a brick in your toilet to save water. How does that save water and is it a good idea?*

Toilet flushing uses a lot of water, and putting something in the toilet tank that takes up space means less water will be used each time the tank refills after a flush, but putting a brick in your toilet tank is NOT a good idea. A brick tends to crumble and might damage the toilet's flushing mechanism.

Toilet tanks can develop leaks. To check, put a few drops of food coloring in the tank, wait about 15 minutes, and look in the bowl. If the food coloring shows up there, the tank is leaking and should be fixed. Toilets should be checked for leaks at least annually.

# Wausau Water Works to Celebrate 125<sup>th</sup> Anniversary

1885 marked the year that Wausau Water Works came into existence, and 2010 will mark our 125<sup>th</sup> Anniversary. To commemorate that milestone, the next several issues of this newsletter will feature highlights from the past. If you have something to share such as an old photo, we'd be happy to consider it for a future newsletter.

The photo at right shows Wm. L. Leistikow, Superintendent; Paul Schmidt, City Tapper; and Herbert A. Giese, Mayor, posing with a pipe that was made in 1885 and resurrected in 1942. According to the caption on the picture, "This 6-inch bell and spigot cast iron pipe was made in the year 1885 and laid in that same year by the City of Wausau to supply water to the old B. Heinemann Lumber Company properties. This company ceased operations in 1930 and in 1942, the City decided to reclaim the abandoned main. The pipe was found to be in A-1 condition and in every way suitable for relaying to other sections of the City - to continue its useful life in the service of the people of Wausau."



It's unknown whether this section of water main is still in service, but we do have active water mains that date back to the late 1800s and early 1900s. Currently, Wausau Water Works has just over 230 miles of water mains in service ranging in size from 2 inch up to 30 inch in diameter.

Dlaim ntawv tshaabxv nuav muaj lug  
tseemceeb heev nyob rua huv hws has txug  
cov dlej mej haus. Kuas it tub paab txhais  
rua koj, los nrug ib tug kws paub lug thiam.  
Este informe contiene informacion  
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

