



# WAUSAU WATER WORKS

FOR YOU!

Volume 12, No. 2

Summer 2009

## Water Quality Report



### Governor Doyle Holds Press Conference in Wausau

Governor Doyle held a press conference at Wausau's Water Treatment Plant on Thursday, May 28, 2009 to announce the stimulus funding that the State of Wisconsin will be receiving under President Obama's Clean Water Act, which includes dollars for water and wastewater infrastructure. The Governor was joined by Representative Donna Seidel (Wausau) and DNR Secretary Matthew Frank. The Governor also addressed budget concerns for the upcoming year, and on a lighter note talked about his Wausau roots. The dignitaries also took some time to talk with City staff and other attendees about the stimulus funds and other issues. See page 7 for more photos.

### Safe Drinking Water is Wausau's Number One Concern

As you will see from the tables on pages 4-5 of this report, Wausau Water Works supplied excellent drinking water to our customers throughout 2008.



Why do we prepare this report? We want you, our valued customers, to be informed about your drinking water. The federal government also wants you to be informed about the substances that 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 providing quality tap water 24/7 is our *number one* priority!

### 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 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 about Wausau Water Works, please feel free to 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.

Meeting agendas and minutes of prior meetings are also posted on the City's website at [www.ci.wausau.wi.us](http://www.ci.wausau.wi.us).



## Professor Faucet's Tips on Cross Connections

**What is a cross connection and why are they problems?** A cross connection is a connection between a drinking water pipe and a polluted source. Here's a common example. You're going to spray weed killer on your lawn. You hook up your hose to the sprayer that contains the weed killer. If the water pressure drops at the same time you turn on the hose, the chemical in the sprayer may be sucked back into the drinking water pipes through the hose. This would seriously pollute the drinking water system.

**How can I prevent this from happening?** The problem can be prevented by using an attachment on your outside faucet called a backflow prevention device. This is a way for consumers to help protect their water system. Newer hose bibs should already have a back flow prevention device as part of the fixture.

**Are there other ways to create cross connections?** Yes, cross connections can occur from a number of situations. For instance, a hose in a laundry tub, outdoor pool, or wash bucket can be a source of cross connection.

**New Regulations on the way.** The DNR is in the process of changing rules regarding cross connections, and what utilities must look for. Many businesses, especially industrial customers, have numerous points where contamination can occur. The new regulations will require local water utilities to track potential contamination sources. In the next three years, we will be contacting all non-residential customers to determine what the potential is for

their facility. Inspections and data tracking will be a part of making sure our drinking water is protected. Residential customers will not be exempt. Inspections will be done at the time of meter exchanges. Home-owners must be certain any devices or fixtures they install are cross-connection compliant.

Wausau, like many other communities, have distribution systems that are so complex that tracking down cross connections is a never ending job. Removing cross connections is vital, however, if drinking water quality is to be protected.

## Utility Receives New TV Truck



The sewer collection crew recently took delivery of a new sewer inspection vehicle. The truck is equipped with a tractor driven camera which can be inserted into sewer mains to inspect for deficiencies, blockages, roots or other problem areas. The camera then records the data which is later used by staff to help schedule preventative maintenance.



## Private Well Permits

Property owners who have a private well are required to have a permit from the water utility, in part because a well can be a potential cross connection. Please contact our office at 261-6530 if you need to obtain or renew a well permit, or have questions on well abandonment.

## Happy Retirement

Wausau Water Works would like to extend our best wishes to Bruce Johnson who retired on May 11, 2009. At the time of his retirement, Bruce had 31 years of service to the City and Utility. Most people will remember Bruce for his helpfulness in finding causes for high water usages. Bruce worked as a Meter Technician/Relief Plant Operator. Happy retirement Bruce!

## New Faces New Places

Chad Marten recently joined the drinking water staff as a Water Distribution Maintainer-Operator. Chad, who has a background in plumbing, has brought some valuable experience to the utility.

Congratulations are also extended to Harold Ferge who was recently promoted to the position of Water Distribution Maintainer-Operator/Relief Plant Operator.

## 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 water or sewer emergencies should be directed to our answering service at 715-848-7549.

## 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 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 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 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

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.

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 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 always mean there is automatically liability on the part of the Utility.

We also recommend that you have adequate coverage. Talk with your agent to be sure your valuables are fully protected.



## 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> (Last sample date 09/10/2008)	ppb	60	60	13 (Range 4-13)	NO 	Disinfection by-product
<b>TTHM</b> (Last sample date 09/11/2008)	ppb	0	80	15.8 (Range 15.2-15.8)	NO 	Disinfection by-product

## Inorganic Contaminants

<b>Antimony Total</b> (Last sample date 09/11/2008)	ppb	6	6	.2 (Range ND-.2)	NO 	Discharge from petroleum refineries; fire retardants; ceramics, electronics, solder
<b>Barium</b> (Last sample date 09/11/2008)	ppm	2	2	.004	NO 	Erosion of natural deposits
<b>Cadmium</b> (Last sample date 09/11/2008)	ppb	5	5	.3 (Range .2-.3)	NO 	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
<b>Copper</b> (Last sample date 09/15/2008)	ppm	1.3	AL=1.3	0.078 (0 of 30 results were above the action level)	NO 	Corrosion of household plumbing systems
<b>Cyanide</b> (Last sample date 09/11/2008)	ppb	200	200	19 (Range 19)	NO 	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
<b>Fluoride</b> (Last sample date 12/02/2008)	ppm	4	4	1.3 (Range 1.2-1.3)	NO 	Erosion of natural deposits; water additive which promotes strong teeth
<b>Lead</b> (Last sample date 09/15/2008)	ppb	0	AL=15	9.18 (2 of 30 results were above the action level)	NO * 	Corrosion of service lines and household plumbing systems
<b>Nickel</b> (Last sample date 09/11/2008)	ppb		100	1.5000 (Range 1.5000)	NO 	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products

\* 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
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### Inorganic Contaminants (continued)

<b>Nitrate (N03-N)</b> (Last sample date 09/11/2008)	ppm	10	10	.78 (Range .43-.78)	NO 	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Nitrite (N02-N)</b> (Last sample date 09/11/2008)	ppm	1	1	.009 (Range .007-.009)	NO 	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Sodium</b> (Last sample date 09/11/2008)	ppm	N/A	N/A	13 (Range 10-13)	NO 	Naturally occurring, contained in corrosion control additive

### Synthetic Organic Contaminants (including Pesticides and Herbicides)

<b>DI (2-ethylhexyl) Phthalate</b> (Last sample date 09/25/2008)	ppb	0	6	.6 (Range ND-.6)	NO 	Discharge from rubber and chemical factories
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### Unregulated Contaminants

<b>Bromodichloromethane</b> (Last sample date 09/10/2008)	ppb	N/A	N/A	1.60 (Range 1.20-2.10)	NO 	N/A
<b>Bromomethane</b> (Last sample date 09/10/2008)	ppb	N/A	N/A	.30 (Range ND-1.19)	NO 	N/A
<b>Chloroform</b> (Last sample date 09/10/2008)	ppb	N/A	N/A	14 (Range 14)	NO 	By-product of drinking water chlorination
<b>Dibromochloromethane</b> (Last sample date 09/10/2008)	ppb	N/A	N/A	.19 (Range ND-.19)	NO 	N/A
<b>Sulfate</b> (Last sample date 09/10/2008)	ppm	N/A	N/A	15 (Range 11-15)	NO 	Naturally occurring

### Volatile Organic Contaminants

<b>Dichloromethane</b> (Last sample date 09/10/2008)	ppb	0	5	.1 (Range ND-.5)	NO 	Discharge from pharmaceutical and chemical factories
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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 contact 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.

## What Do These Terms Mean?

**MCL, ppm, ppb?** What do the terms in the table on pages 4-5 mean?

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 millions corresponds to one minute in two years or a single penny in \$10,000.

**PPM - 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 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.

## 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.

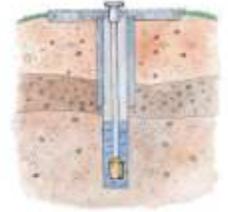
## City Unveils New Improved Website

Next time you're out surfing the web, take a little time to log onto [www.ci.wausau.wi.us](http://www.ci.wausau.wi.us) to check out the City's cool new website. It's chock-full of all kinds of interesting things, including a calendar of events, options for making e-payments, meeting agendas, garbage pickup schedules, bus schedules, and much more. Take time to also check out the Wausau Water Works section where you can schedule final readings online, or read current and past newsletters.



## 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 close to 16,000 homes and businesses served by Wausau Water Works.

## Flushing Facts...

A leaky toilet can waste about 200 gallons of water a day. If a toilet was installed prior to 1992, it's likely that it's an inefficient model that uses between 3.5 and 7 gallons per flush versus the current standard of 1.6 gallons and the hyper-efficient toilets that flush at 1.28 gallons or less per usage.

(Source: *Water & Wastewater News*, June 2007)

**Horror Story is Printed on Toilet Paper in Japan.....** In a country where ghosts are traditionally believed to hide in the bathroom, a Japanese company is advertising a new literary experience - a horror story printed on toilet paper. Each roll carries several copies of a new nine-chapter novella written by Koji Suzuki. "Drop", set in a public restroom, takes up about three feet of a roll and can be read in just a few minutes.

(Source: [www.alaskastar.com](http://www.alaskastar.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 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.

## 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 waterline 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.

Wausau Water Works continues to monitor the corrosion potential of our drinking water to minimize the amount of lead absorbed from household plumbing.

Call 261-6530 if you have questions regarding lead in your drinking water.

## Photos From Governor Doyle's Press Conference

*(Continued from Page 1)*



*Utilities Director Joe Gehin spoke briefly about the history of Wausau Water Works prior to his introduction of Governor Doyle.*



*DNR Secretary Matthew Frank visited with staff from Becher Hoppe and the City after the press conference.*



*City staff enjoyed the opportunity to visit with Governor Doyle.*

# Technology Gives Plants a Voice

Carrots might not scream when pulled from the ground, but new technology is giving vegetables a voice in how they are raised. Micro-chipped plants can now send text messages to a farmer's cell phone and ask for water.



"It's akin to a clip on earring, very thin and smaller than a postage stamp, and is affixed to the plant leaf," said Richard Stoner, President of AgriHouse, a company marketing the technology.

"The farmer would just need their regular cell phone service and the plant would send a text message when it needed water."

For areas that receive regular and plentiful rainfall, such detailed crop monitoring might not be useful or

economical. But in western states, where much of the water comes from underground aquifers, conserving water, and more importantly, conserving the electricity that pumps it to the surface and across fields, could save farmers hundreds of thousands of dollars each year.

Water in the open spaces of the west is valuable, but it's virtually worth its weight in gold in space. The original cell phone for plants was developed years ago by scientists working with NASA on future manned missions to the moon and Mars.

"You need plants on future space missions," said Hans-Dieter Seelig, a scientist at the University of Colorado at Boulder who worked on the original NASA project. "They take out waste carbon dioxide, produce breathable oxygen, and the astronauts can use them as food." said Seelig.



During their research, NASA scientists concluded that astronauts wouldn't be able to take anywhere near enough food and supplies for an estimated two-year mission to Mars.

To reduce the amount of time and supplies necessary to grow crops, scientists clipped sensors, wired to a central computer, to plants so astronauts would know exactly when and how much water to give them. During the initial NASA tests the scientists were able to reduce the amount of water necessary to grow plants by 10 percent to 40 percent.

Sustainability in space might keep astronauts alive, and on Earth, it's likely to save farmers time and money.

*(Source: <http://dsc.discovery.com/news/2009/05/29/plants-cell-phone.html>)*

Dlaim ntawv tshabxuu 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 habble con alguien que lo entienda.

**IMPORTANT WATER QUALITY INFORMATION ENCLOSED**

