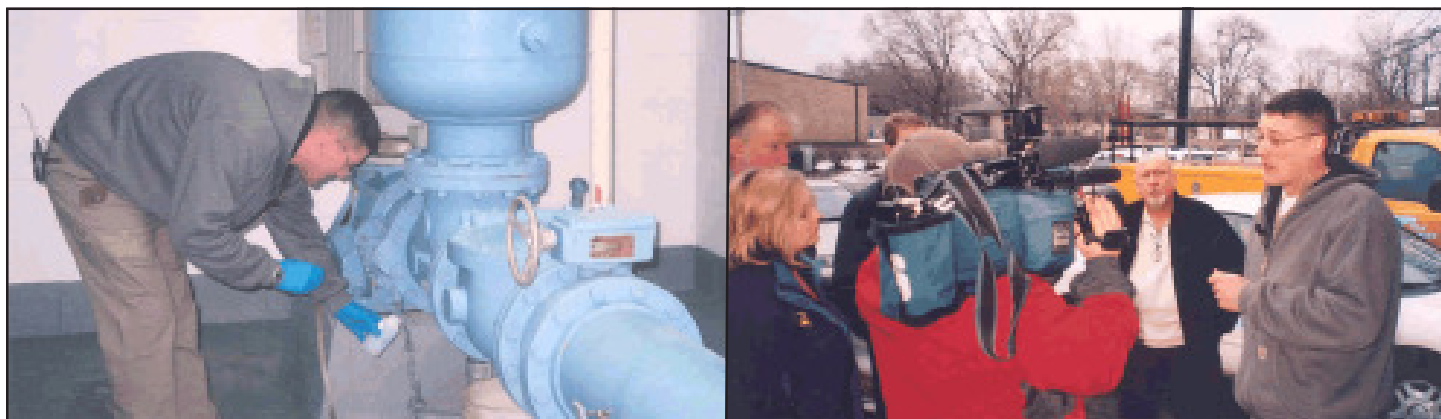




NEWS AND INFORMATION

FOR PUBLIC WATER SUPPLIERS IN MINNESOTA

Perfluorochemicals Monitoring Begins with Sampling in Brooklyn Center



On February 11, Minnesota Department of Health (MDH) District Engineer Ike Bradlich took the first samples (left) for the joint monitoring being done between MDH and the Minnesota Pollution Control Agency to determine if perfluorochemicals (PFCs) have gotten into water supplies through the use of Class B firefighting foams. Bradlich took the initial samples at four wells in Brooklyn Center in the presence of Channel 12 of Brooklyn Center-Brooklyn Park and was interviewed by Lisa Furgison (far left, in foreground of the picture to the right). He explained the sample precautions he took to avoid contaminating the samples, including avoiding any products that may contain PFCs, such as food products packaged in wrappers treated with PFCs, including microwave popcorn. Bradlich also wore well-laundered clothing that had been washed at least six times since being purchased. The sampling in Brooklyn Center indicated no detections of PFCs. Soon after MDH engineers began sampling other water systems. The monitoring results for all systems are at <http://health.state.mn.us/divs/eh/hazardous/topics/pfcs/classbresults.html>.

Upcoming Water Operator Certification Exam Dates

June 12, Deerwood

July 22, Spring Grove

September 25, St. Cloud

September 30, Zumbrota

October 7, North Mankato

October 21, Collegeville

November 18, Waite Park

December 3, Bemidji

See calendar on back page for more information

Contaminant Indicators Tracked

The Minnesota Department of Health Section of Drinking Water Protection (DWP) is involved in developing environmental health indicators for drinking water contaminants. The indicators for water are based on DWP monitoring results for nitrate, disinfection by-products, lead, and arsenic. The drinking water indicators are among many environmental health indicators that are being developed in the state and country. The goal is to regularly track changes in these indicators, such as decreased levels of nitrate in drinking water over time, and to combine and compare data from states. When completed, the indicator data will be posted to the MDH tracking web site at <http://www.health.state.mn.us/tracking>. In time, the public will be able to compare the Minnesota data to the data from 17 states that are receiving U. S. Centers for Disease Control funding for indicator work (<http://www.cdc.gov/nceh/tracking>).

La Crescent Plant Knocks Down Radium

A decision by the U. S. Environmental Protection Agency (EPA) in 1997 left a number of Minnesota public water systems in a state of limbo. Six years before, the EPA had proposed revisions to the radionuclide rule, the most significant being a loosening of the maximum contaminant level (MCL) for radium 226 and radium 228, which are naturally occurring minerals that are commonly found in Minnesota groundwater



that is drawn from deeper bedrock aquifers. The MCL for radium at that time was 5 picoCuries/liter (pCi/L), but the proposed revision would have raised the MCL to 20 pCi/L.

EPA indicated to the Minnesota Department of Health (MDH) that during the time frame between when the rule revision was proposed in July of 1991 and when it became final, MDH should not require any corrective actions from Minnesota water systems that complied with the proposed MCL of 20 pCi/L.

However, in December of 1997 the EPA announced that the MCL for radium would be finalized in 2000 and would likely stay at 5 pCi/L. The decision affected 13 community water systems in the state, which had radium levels under 20 but above 5 pCi/L.

Among the systems was La Crescent, a city of 5,100 on the bluffs of the Mississippi River in southeastern Minnesota, directly across the river from La Crosse, Wisconsin. With three wells, ranging in depth from 550 to 707 feet, drawing water from the Eau Claire-Mount Simon aquifer, the city had radium levels from 7 to 9 pCi/L.

“We were fine,” said Mike Albrecht, the utility maintenance supervisor and a native of La Crescent who has worked for the city since 1973. Then came the EPA announcement that the MCL of 5 pCi/l would be enforced.

La Crescent entered into a compliance agreement with MDH and began exploring its options. A search for a radium-free source resulted in a test well being drilled into a

shallow alluvial aquifer. Although the water contained no radium, it had nitrate and volatile organic chemicals. Other alternatives, deemed too expensive or impractical, included treating river water and buying water from another city.

La Crescent also tried a pilot treatment plant using electro dialysis reversal before finally settling on a new plant that would use preformed hydrous manganese oxides (HMOs) with multi-media gravity filters. An added advantage of the treatment process was that, in addition to reducing radium levels, the plant would cut down the iron problems.

“We had some iron issues with our deep wells,” said Albrecht, who added that they tried to deal with rust problems by flushing the system but that it was a “constant battle.” In the 1990s, they began adding a polyphosphate to the water, which Albrecht said helped a lot. In addition to the polyphosphate, the treatment at the time consisted of the addition of chlorine and fluoride.

Construction on a treatment plant began in 2007, and two of the wells have been connected to it (the third remains as an emergency backup well although it could be connected to



The two gravity filters and pipes in the new water treatment plant in La Crescent.



Mike Albrecht in the new La Crescent water treatment plant.

the plant in the future). TonkaZorb 3% (the preformed HMO) is added to the incoming water, which is then split before going through one of the two filters, each of which has a capacity of 500 gallons per minute. Albrecht said that the TonkaZorb helps iron and manganese adhere to the radium, which is then removed simultaneously with the iron and manganese.

The treated water goes into a 50,000 gallon clearwell beneath the plant and then into the distribution system, which has two pressure zones. The low-pressure zone has the 800,000-gallon Stoney Point Reservoir for storage. In the last 20 years development on the bluffs led to the construction of the 500,000-gallon Crescent Hills Reservoir to serve the high-pressure zone.

Delays because of weather and other issues pushed the completion back by a few months, but the treatment facility went on-line in September 2008. Samples taken in December by MDH engineer Paul Halvorson indicated that the plant was working well. Radium levels are now under the detection limit of 1 pCi/L. In addition, iron, which had been at 0.5 parts per million (ppm), is down to 0.1 ppm.

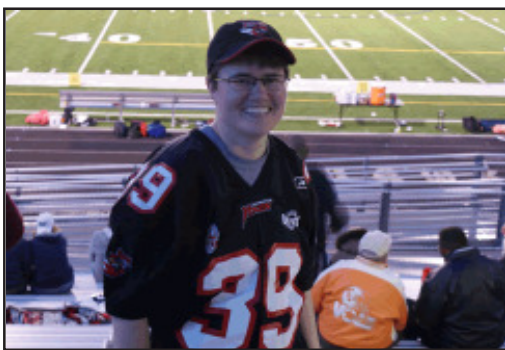
The city raised water rates to offset the total project cost, which, including pipelines from two of the wells into the plant, was approximately \$4 million.

At the same time La Crescent was building a new water treatment plant, the city was getting out of the wastewater business. With their wastewater plant due for an upgrade, La Crescent decided instead to send their sewage under the river to La Crosse, which had added capacity in anticipation of the continued growth of its brewery. However, the glory years of brewing did not return, so La Crosse was able to take La Crescent's wastewater, and a directionally bored sewage line was constructed under the river, connecting the two cities. La Crescent paid for the piping up to the Wisconsin state line and now pays La Crosse to process its wastewater.



The storage tanks of City Brewing Company, which hold beer, are decorated to make them the "World's Largest Six-Pack." However, the brewing business in La Crosse, Wisconsin, has declined in recent years, enabling the city to receive wastewater from LaCrescent, Minnesota, across the river.

Weekend Warrior Jodi Wallin



Jodi Wallin's colleagues at St. Paul Regional Water Services (SPRWS) are never surprised to see her show up in a cast or on crutches. Jodi started as a public information specialist in 2002 soon after she had arthroscopic surgery to repair a meniscus tear in her right knee, suffered during her first season with the Minnesota Vixen football team. A defensive back and receiver, Jodi has since broken an arm and a foot, and she sustained another injury that kept her out of the recent home opener for the Vixen. Growing up in Pequot Lakes, Minnesota, Jodi played touch football with boys through sixth grade. In high school, she played varsity softball, basketball, and track and continued playing softball at Brainerd Community College and Trinity College in Deerfield, Illinois. She then graduated from St. Cloud State University in 1997 with a bachelor's degree in

mass communication print journalism and a minor in history. Jodi worked for several newspapers throughout Minnesota and as a marketing and communication specialist for St. Paul Companies before joining SPRWS.

She says she liked playing football as a kid, "but there was no place to do that, and it made me mad that the only reason there was no place to play was that I was a girl." She tried out for the Vixen in 2002 and made the team, although she admits that she quickly learned that playing touch football was different than the intricacies of tackle football. "There was a lot to learn that I didn't know," she says. "There was a steep learning curve for me, and there was a steep learning curve for most of the women."



Water the Theme of Winona Frozen River Film Festival



The Fourth Annual Frozen River Film Festival was held at Winona State University last winter. The theme of the festival on Saturday, January 24 was water and included films such as *Flow: For the Love of Water*. Displays on water at the festival included, at left, one by the Minnesota Department of Health, where attendees had the chance to try out the new Urban Water Cycle module developed by MDH and the Minnesota Section of American Water Works Association in conjunction with the Hamline University Center for Global Environmental Education. At right, Winona water superintendent Bob Keiper (a week short of retirement) staffed a table as visitors to the festival took a taste test, comparing Winona water to various types of bottled water.

Long Term 2 Enhanced Surface Water Treatment Rule

The Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) aims to reduce the risk of disease caused by *Cryptosporidium* and other microbial pathogens. It requires source water monitoring at public water systems that use surface water or groundwater under the direct influence of surface water.

Four of the large-size surface water systems have already completed the required two-year long source water monitoring for *Cryptosporidium*, *E. coli*, and turbidity. Systems that serve between 10,000 and 49,999 people will complete the monitoring in March 2010.

The LT2ESWTR requires the small-size systems serving fewer than 10,000 people to conduct one year of bi-weekly *E. coli* monitoring, which began in October 2008. Results from this screening monitoring will determine if a system will be required to conduct the two-year long *Cryptosporidium* monitoring to determine a Bin Classification and the needs for additional treatment for *Cryptosporidium*.

Contact Lih-in Rezanian at 651-201-4661 with LT2ESWTR questions. More information is available at <http://www.epa.gov/safewater/disinfection/lt2/compliance.html>.

Summary of the LT2ESWTR Implementation Activities Timeline

Surface Water Systems Serving Population:	Begin Source Water Monitoring	End Source Water Monitoring	Bin Classification by:	Further Action/ Requirement
>99,999	October 1, 2006	September 30, 2008	April 1, 2009 2 systems in Bin 1	None
50,000-99,999	April 1, 2007	March 31, 2009	October 1, 2009 2 systems in Bin 1	None
10,000-49,999	April 1, 2008	March 31, 2010	October 1, 2010 On-going	TBD
<10,000 - <i>E. coli</i>	October 1, 2008	September 30, 2009	Results may trigger <i>Crypto</i> monitoring	TBD
< 10,000 - <i>Crypto</i>	April 1, 2010	September 30, 2012	October 1, 2012 Bin - TBD	TBD

Center for Emerging Drinking Water Contaminants Proposed

A Center for Emerging Drinking Water Contaminants is being proposed as a result of last fall's approval by Minnesota voters of the Clean Water, Wildlife, Cultural Heritage, and Natural Areas Amendment to the state constitution.

The purpose of the Center will be to understand and interpret occurrences and health risks from exposures to contaminants that are poorly understood or for which new health risk information is emerging. The Center will expand upon and enhance what the Minnesota Department of Health (MDH) can accomplish in researching and assessing risks from emerging contaminants, substances that have not yet been studied or detected in Minnesota drinking water and for which no Minnesota drinking water standards have been established.

MDH will identify potential emerging contaminants for study, develop research on candidate contaminants, and communicate what is learned about emerging contaminants. The work of identifying emerging contaminants will include developing and maintaining collaborative relationships with other state agencies, academic and industry researchers, nonprofit environmental groups, organizations associated with drinking water, and federal programs.

Once MDH becomes aware of an emerging issue in drinking water, the department will have many options to study the scope and impact of emerging contaminants. Environmental studies may be necessary to determine whether a contaminant is present in drinking water. Exposure studies may be necessary to measure whether Minnesotans are exposed to a contaminant. Research on the toxicity of the contaminant may be necessary to evaluate risks from exposures. Risk management research might range from cumulative risk assessments to alternatives assessment.

MDH anticipates that research on exposures and health impacts will result in new risk assessments for emerging contaminants. MDH will develop new water level standards and advice based on current scientific research on the toxicology and epidemiology available for emerging contaminants. This work will also involve public education to communicate the results and to share details of the work.

Information about environmental levels, human exposure, toxicology, and resulting health risks will become available as research is conducted.

Federal Stimulus Plan: Effects on Minnesota Drinking Water Systems

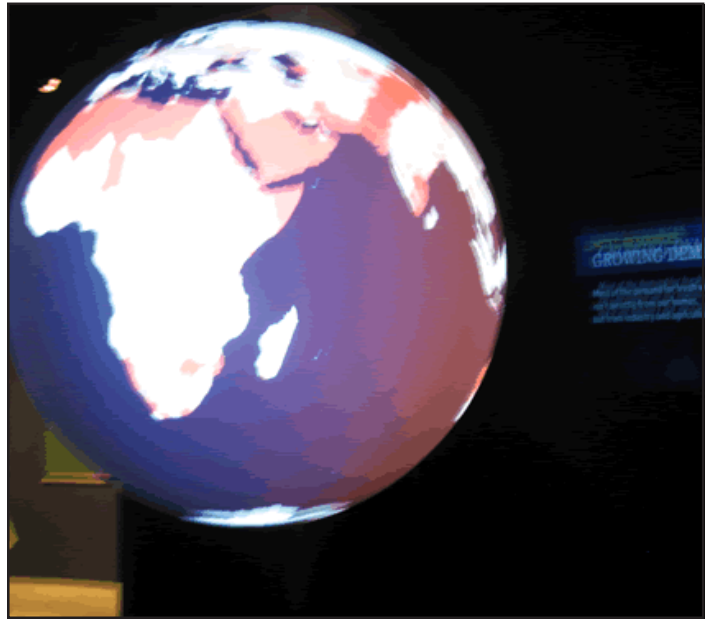
The American Recovery and Reinvestment Act, commonly called the Federal Stimulus Plan, will be providing money for public water system infrastructure projects. The money will be distributed through the Minnesota Drinking Water Revolving Fund program. The Drinking Water Revolving Fund provides below market rate loans for public water system improvements. The program's basic requirements and procedures will apply along with additional requirements and features that pertain to this additional money.

More information is available at <http://health.state.mn.us/divs/eh/water/dwrf/stimulus.html>.

Water on Display at the Science Museum



The Science Museum of Minnesota had a special exhibition on drinking water that ended in late April. Visitors entered the exhibit through a wall of fog (above), which contained words for water in various languages, and then wandered through a re-creation of a water-carved slot canyon to find a 68-inch globe (below) that displayed satellite images of Earth.



MDH Releases Annual Report

The Minnesota Department of Health (MDH) released its annual report on the state of drinking water in Minnesota.

The report indicates that drinking water in Minnesota is in good shape; topics discussed in the Emerging Issues section include the impacts of the federal stimulus plan, the MDH sampling related to perfluorochemicals in Class B firefighting foam, and the proposed Center for Emerging Contaminants.

The report is on the MDH website at:

<http://www.health.state.mn.us/divs/eh/water/com/dwar/report08.html>

Past reports, back to 1995, are also available at this site.

CALENDAR

Minnesota Section, American Water Works Association

*June 10-12, Central Water Operators School, Ruttger's Bay Lake Lodge, Deerwood, Contact Lisa Vollbrecht, 320-255-7225.

*October 7, Southwest Water Operators School, Best Western, North Mankato. Contact Mark Sweers, 507-389-5561.

*October 21, Central Water Operators School, St. John's University, Collegeville, Contact Lisa Vollbrecht, 320-255-7225.

*December 1-3, Northwest Water Operators School, Hampton Inn & Suites, Bemidji, Contact Jeanette Boothe, 651-201-4697, or Stew Thornley, 651-201-4655.

***Includes a water certification exam. To be eligible to take a certification exam, applicants must have hands-on operations experience at a drinking water system.**

Water Operator Training

Minnesota Rural Water Association

Contact Kyle Kedrowski, 800-367-6792.

June 16, Operation & Maintenance, Wahkon

*July 22, Operation & Maintenance, Spring Grove

August 12, Operation & Maintenance, Warren

August 19-20, Operators Field Day, Waconia

*September 23-25, Water Certification Refresher Course & Exam, St. Cloud

*September 30, Operation & Maintenance, Zumbrota

October 21, Hands-on Specialized Treatment Training, Chaska

October 27, Water Rates for Your System, St. Cloud

October 27, Winterizing Your Water System, Grand Rapids

October 28, Winterizing Your Water System, St. Cloud

November 10, Financing Your Community Projects, Hutchinson

November 17, Cross Connection & Backflow Prevention, Site TBA

*November 18, Operation & Maintenance, Waite Park

December 9, Operation & Maintenance, Biwabik

MRWA Class D and E Training

June 9, Hastings (Class E)

June 23, Aitkin (Class E)

September 15, St. Paul (Class D)

September 29, St. Peter (Class D)

Note: Class D workshops are eight hours, and Class E workshops are four hours. The morning session of a Class D workshop is the same as a stand-alone four-hour workshop for Class E operators; thus, Class E operators may attend either the stand-alone four-hour workshop or the morning session of the Class D workshop.

Safe Water for All Minnesota People

Contact Mary Klein, 218-235-2162.

St. Cloud Technical College

Contact Keith Redmond or Bill Spain, 320-308-5952.

For an up-to-date list of events, see the training calendar on the MDH web site at:

http://health.state.mn.us/water/wateroperator/trng/wat_op_sched.html

MDH Drinking Water Protection: <http://www.health.state.mn.us/water>



Environmental Health Division

625 North Robert Street

P. O. Box 64975

St. Paul, Minnesota 55164-0975

ADDRESS SERVICE REQUESTED

Presort Standard
US Postage
PAID
Permit No. 171
St. Paul, MN