



NEWS AND INFORMATION

FOR PUBLIC WATER SUPPLIERS IN MINNESOTA

## Shady Sales of Treatment Equipment Continue

*MDH Responds to False Claims; Utilities Encouraged to Alert Residents*

The Summer 2010 *Waterline* contained an article about water utilities in the region fighting back against shady sales tactics used to sell water treatment equipment to homeowners. Chaska water superintendent Dean Hylland got a call from a resident about a company that tested her water and said it wasn't safe, while implying that the company was working with the city. Hylland turned the matter over to the police department, which contacted the company with a warning about its operations. The police also contacted FOX 9 News, which placed a report on its web site that Chaska police and the Minnesota Bureau of Criminal Apprehension "are warning residents of an alleged scam to sell expensive water filters using scare tactics."

St. Paul Regional Water Services (SPRWS) addressed the issue in its Consumer Confidence Reports, including this text: "This past year, we received many calls from concerned customers approached by companies attempting to sell them water-related products, such as softeners and filters. These sales companies offer a free test of city water. Many of our customers believe these sales people are from SPRWS. Saint Paul Regional Water Services is not affiliated with any private business soliciting customers or offering any products or services for sale. According to descriptions from our customers, these companies claim that some substances exceed allowable limits for drinking water. These claims are false. If our water exceeds the EPA [Environmental Protection Agency] or MDH standards for drinking water, we are required by law to inform the public."

Recently the Minnesota Department of Health (MDH) received a complaint stating that a representative of a company selling water treatment equipment contacted a resident in Washington County, claiming that he was operating under an MDH grant to provide free water testing in people's homes as part of a research project. The resident agreed to allow the testing. The representative performed a few simple tests and then inaccurately claimed that the total dissolved solids concentration exceeded federal drinking standards and likely indicated the presence of

harmful contaminants such as atrazine and arsenic. The homeowner was told that the water posed "significant health risks" but that he could protect himself by purchasing expensive treatment equipment at a reduced price since the company could apply some of the alleged MDH grant money toward the cost of the equipment.

The homeowner contacted the MDH, which has **not** issued grants for this type of testing nor for the installation of private water treatment systems. The homeowner acquired some evidence of the company's fraudulent claims; this information has been turned over to local and state authorities for consideration of further legal action. MDH also issued a press release, which generated publicity about the scams, in October 2010.

Utilities hearing of such tactics and false claims taking place in their area may want to contact local law enforcement and local media in addition to warning their customers. Utilities may also want to encourage residents considering the purchase of a home water treatment system to:

- Contact their local water system for more information regarding their water quality. Residents with private wells may contact their county public health agency, the Minnesota Department of Health, or the Minnesota Pollution Control Agency regarding water quality in their area.
- Compare water treatment systems and prices.
- Work with a reputable company. If contacted by a company that says it is working with the city or state, ask for a contact person at that agency.
- Make sure the device is certified to achieve the results being claimed.
- Verify that the installation is done by a licensed plumber.

Those who believe they have been provided false or misleading information or that they have been subjected to unfair or high-pressure tactics in the course of a sales visit, should be encouraged to contact the Minnesota Attorney General's office Consumer Complaints Division at 651-296-3353 or 800-657-3787 or online at <http://www.ag.state.mn.us/Consumer/Complaint.asp>.

## Rochester Looks to Save with Conservation

Conservation can cut both ways for utilities. Wanting to be environmentally and socially responsible, water systems provide tips to customers on how to conserve water and encourage them to use water wisely. However, declines in water usage also mean drops in revenues for utilities.

On the other hand, programs to promote wise use of water can yield dividends in the form of cost savings from infrastructure that can be delayed or not built at all. Rochester Public Utilities (RPU) is anticipating that declining revenues can be more than offset by reduced costs as a result of conservation.

In 2009, Progressive Consulting Engineers (PCE), Inc. of Brooklyn Center, Minnesota, completed a water conservation study for RPU along with an examination of alternative rate structures to meet requirements of the Minnesota Department of Natural Resources for water conservation. One of the recommendations RPU adopted was a \$50 rebate for residents who replaced their toilets with more water-efficient units. PCE calculated that RPU could save approximately 13 million gallons of water per year (48 gallons of water per day per household) if 2 percent of the utility's customers replaced inefficient toilets (3½ to 5 gallons per flush) with energy-efficient (1.28 gallons per flush) toilets each year.

"We showed that it made economic sense to do that," said Naeem Qureshi of PCE, adding that by implementing just the toilet replacement program, RPU could save approximately \$17,000 a year in capital costs and could defer drilling a 1,000 gallon-per-minute well (which, along with the well house, would cost around \$750,000 in 2009 dollars). "If a new well can be postponed by a year, the savings in interest, at 3 percent, would be \$22,500."

PCE and RPU pursued other strategies in promoting conservation, including a household water audit to show how much water is used and how much can be saved, and educational materials for customers and their children. RPU is also contributing to the cost of a local wetlands and environmental science center that will emphasize two main issues: water and energy resources. "For RPU, education is the best incentive for conservation," maintained Doug Rovang, senior civil engineer for RPU.

"Water conservation is now being emphasized by a number of utilities and can result in a substantial savings for the utility and the consumer," wrote Qureshi and Jeny Shah of PCE in a report on the RPU conservation efforts. "Water conservation promotes a reduction of water usage, which also results in reduced wastewater flows and less electric usage. This is significant as about 3 percent of the nation's electricity consumption is for water and wastewater services."

## Revised Total Coliform Rule

The Revised Total Coliform Rule (RTCR) will be important because it applies to all public water systems. The Total Coliform Rule is the only regulation ensuring the integrity of the distribution system and requiring routine monitoring for the presence of microbial contamination in the distribution system.

The proposed revisions shift the regulatory focus to assessment of potential problems in the distribution system and fixing those problems, as appropriate. The U. S. Environmental Protection Agency is proposing:

- Removing the Maximum Contaminant Level Goal (MCLG) and Maximum Contaminant Level (MCL) of zero for total coliforms and the associated public notice for total coliforms,
- Setting triggers for assessment and corrections that parallel the previous MCL for total coliforms,
- Maintaining a zero MCLG and MCL for *E. coli*, and
- Introducing a tiered approach for assessment and corrections.

The final rule may be published in the *Federal Register* as early as Spring 2012. Information on the RTCR, along with a link to the rule at <http://www.epa.gov>, will be posted once it's available.

The Minnesota Department of Health will keep water systems informed as rule implementation progresses.

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## Waterworks Quiz

1. Which of the following well types is most protected from surface contamination?
  - a. artesian well
  - b. infiltration gallery
  - c. rock well
  - d. shallow well
2. The possible corrosive action of a filtered water upon metals can be detected by the:
  - a. determination of total chloride.
  - b. orthotolidine test.
  - c. oxygen-consumed test.
  - d. measuring pH and pH<sub>s</sub>.
3. Which of the following must be checked when doing maintenance on pneumatic controllers?
  - a. air supply availability
  - b. limit switch setting
  - c. pulse sensor clearance
  - d. purge water

Answers on page 5

## Waterline

Published quarterly by the Drinking Water Protection Section, Minnesota Department of Health

**Editor:** Stew Thornley

**Staff:** Karla Peterson, Jeanette Boothe, Noel Hansen

Past issues of the *Waterline* are available at <http://www.health.state.mn.us/water/newsletters.htm>

## Drinking Water Institute Held in Eden Prairie



*Water Works! A Drinking Water Institute for Educators* was held at the Eden Prairie Water Plant in August. Twenty-two Minnesota science teachers attended the three-day Institute, learning about drinking water and about ways to develop inquiry-based activities that can be incorporated into their existing science curriculum. Following the three days of training, the teachers developed action plans on how to use water education in their classrooms and reported back at a follow-up session in the fall. More than 200 teachers have attended the Drinking Water Institute since it began in 2001. *Water Works!* is sponsored by the Minnesota Department of Health (MDH) and the Minnesota Section of American Water Works Association and is conducted through a partnership with Hamline University's Center for Global Environmental Education. The 2011 Institute will be held from Monday, August 8 to Wednesday, August 10 in Duluth. More information is available on the MDH website at <http://www.health.state.mn.us/water/institute/index.htm>.

### Publication on Dealing with Droughts Now Available On-Line

*When Every Drop Counts: Protecting Public Health During Drought Conditions* is a 54-page document intended to help public health officials and others prepare for droughts.

Developed by the National Center for Environmental Health of the Centers for Disease Control and Prevention (CDC), the guide provides information about how drought affects public health, recommends steps to mitigate the health effects of drought, and identifies future needs for research and other drought-related activities.

*When Every Drop Counts* is available on the CDC website at <http://www.cdc.gov/nceh/ehs/Publications/Drought.htm>.

### EQB Prepares State Water Plan

The Environmental Quality Board (EQB) is finishing the 2010 Minnesota Water Plan. The plan was prepared in cooperation with the public and EQB member agencies with a long-term vision toward protecting the state's water resources. The report is available on the EQB website at <http://www.eqb.state.mn.us>.

### MDH/MDA Pesticide and Pesticide Degradate Reconnaissance Monitoring Project

In February 2010 the Minnesota Department of Health in conjunction with the Minnesota Department of Agriculture conducted a reconnaissance study, surveying community public water supply wells throughout Minnesota for the presence of 89 pesticides and pesticide degradates. A total of 83 wells were sampled for the quality of source water prior to any applicable treatment and distribution to ultimate users. Analyses were performed by the Minnesota Department of Agriculture's analytical lab. Sampling showed that water from the community public water supply wells in the study posed no risk to public health. A small number of pesticide and pesticide degradates were detected in some wells, but all detections were well below established health reference values. The results of this study demonstrate the benefits of periodic reconnaissance to determine if community public water supply wells are affected by pesticide use in Minnesota.

### Reminder to All Water Operators

When submitting water samples for analyses, remember to do the following:

- Write the Date Collected, Time Collected, and Collector's Name on the lab form.
- Write the Sample Point on lab forms for bacteriological and fluoride samples.
- Attach the label to each bottle (do not attach labels to the lab form).
- Include lab forms with submitted samples.
- Do not use a rollerball or gel pen; the ink may run.

If you have questions, call the Minnesota Department of Health contact on the back of the sample instruction form.

## Bloomington Deals with Cross-Connections

The city of Bloomington had to deal with a pair of cross-connection violations by a plumbing contractor, one of which resulted in ethylene glycol entering a potable water supply, at a community college in the summer of 2009.

The first incident occurred June 23 when a St. Paul contractor was attempting to re-pressurize a cooling tower system, which uses ethylene glycol, from 20 pounds per square inch (psi) to 35 psi by adding water from the potable water supply in the building. The worker attached one end of a garden hose to a faucet with no backflow protection device and attached the other end to a gate valve assembly on the pressurized cooling tower. The valve assembly is located on the lowest elevation of the cooling tower system and is used for draining the system.

The worker chose this method even though the area near the highest elevation of the cooling tower has a hard-plumbed line to the tower that has the required reduced pressure zone (RPZ) backflow prevention device.

“Backflow occurred,” said Lynn Moore, Environmental Health manager for the city of Bloomington, explaining that ethylene glycol was sucked into the water system. The point of entry was a commercial kitchen, where workers quickly noticed the distinct pink tint of ethylene glycol in the water.

Bloomington’s Environmental Health Division came to the building, closed the kitchen, and had signs posted at drinking fountains and faucets with a warning not to use the water. Jon Eaton from Bloomington’s water utility laboratory was called in to take samples to determine whether the city’s water supply had been affected. Eaton was joined by Minnesota Department of Health (MDH) engineer Ike Bradlich, who collected six water samples to be analyzed by the MDH lab. By this time, college staff had begun flushing the plumbing in the student center.

“The contamination event was confirmed as a temporary cross-connection between the chilling loop and the premise plumbing,” said Bradlich. “Approximately 15 to 20 gallons of ethylene glycol backflowed into the potable water system. The plumbing contractor responsible for the cross-connection was not using a backflow prevention device.”

Late the next morning, Bradlich notified the college and the city that the samples he had taken indicated no contamination and that the water was safe to use. The college, which had ordered 150 box lunches the day before (far fewer than if school had been in session), reopened the kitchen and cafeteria.

Bloomington issued an administrative penalty order (APO) of \$1,000 to the contractor. “We issue APOs for not complying with city ordinances,” said Moore. “This was a trained contractor that held licenses and has experience, training, and licensure in this specific area, so you would think that prevention of backflow would be the number-one thing they should be concerned with when they’re on-site.

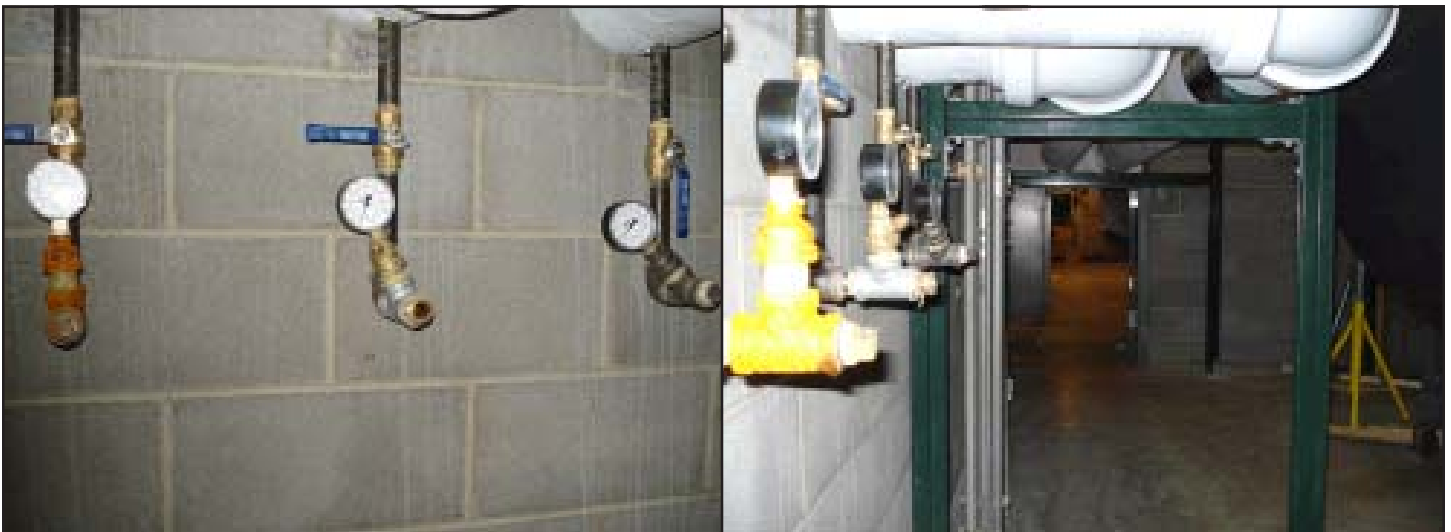
“This was a very serious violation that could have poisoned somebody. What are they doing connecting a garden hose and connecting it essentially to a utility faucet with clearly no backflow prevention when there is a hard-plumbed line with an RPZ for the purpose of filling that tower?”

Moore hoped that the APO would cause the company to review its procedures and perform its work in the required manner in the future, but two weeks later, the same company violated plumbing requirements again.

“One of the college’s building engineers called Environmental Health after seeing the same mechanical contractor out there again, this time working on the boiler system,” said Moore. “The engineer saw a garden hose connected to the hot water heater for the commercial kitchen, and they were pulling water off of the hot water heater to fill the boiler, also at the lowest point again. Ironically, the boiler’s lowest draining point is right next to the cooling tower’s lowest draining point. The same violation is happening in the same room again, just a different system.”

In a report to Moore, Bloomington Environmental Health’s incident report said that the city inspector and the college’s maintenance foreman found a garden hose connecting the bottom drain of the water heater for the cafeteria kitchen with the boiler. They disconnected the hose from the water

**Continued on next page**



**Left: The lowest outlets of the cooling tower from the first incident, June 23, 2009. Right: The lowest point of the boiler from the second incident, two weeks after the first one, in July 2009.**

heater and installed a backflow preventer on the water heater outlet. A Bloomington mechanical inspector concurred that no proper backflow-prevention device was used. City inspectors notified the college's director of dining services and requested that they not use hot water until after the MDH laboratory analyzed samples, which were taken from the water heater, the hot-water faucet in the cafeteria kitchen, and sink in the dishwashing room and determined to be free of contamination.



atmospheric vacuum breaker devices do not meet the plumbing code requirements for connecting a closed boiler system to a potable water system.” An RPZ backflow device is required by Minnesota Rules 4715.2160.

In addition to another APO of \$1,000, Bloomington sought reimbursement of the approximately \$2,000 in water laboratory costs it incurred to ensure the safety of the city's water supply. The city also reported the incidents to the Minnesota Department of Labor and Industry (DLI), which

The contractor's representative said he had someone monitoring the pressure gauges at the pumps in the lower mechanical room while he was running the hoses and monitoring the pressures up in the room where the hoses were connected to make sure there would be no backflow. “We were in constant communication as to what the pressure was at the lowest point of the heating system and at the highest point of the heating system.”

But Moore said, “That's not how that should be done. We thought it was pretty blatant. We don't know that backflow happened, but it had the potential to happen. Hose bibs and

enforces the plumbing codes in the state.

“It's unconscionable,” said Moore of the incidents. “The college looks to us to regulate the contractors who get their permits from us. And that's our licensed kitchen. It demonstrates very poor business practices by the contractors. And then to think that after we fined them, a few short weeks later, they were doing almost the exact same thing all over again.”

**Footnote:** The company that performed the work has closed, and the Minnesota DLI has said that the company's owner can no longer do plumbing work in Minnesota.

### Universal Truths

I think part of a best friend's job should be to immediately clear your computer history if you die.

There is great need for a sarcasm font.

MapQuest really needs to start its directions on #5. I'm pretty sure I know how to get out of my neighborhood.

Obituaries would be a lot more interesting if they told you how the person died.

Can we all just agree to ignore whatever comes after Blu-ray? I don't want to have to restart my collection . . . again.

I keep some people's phone numbers in my phone just so I know not to answer when they call.

I would rather try to carry 10 over-loaded plastic bags in each hand than take 2 trips to bring my groceries in.

. . . and

*You do not need a parachute to skydive. You only need a parachute to skydive twice.  
A bus is a vehicle that runs twice as fast when you are running after it as when you are in it.*

### Answers to Waterworks Quiz

1. a      2. d      3. a

## 94th Annual Minnesota AWWA Conference



The 94th annual Minnesota American Water Works Association Conference was held in Duluth. In the above-left photo, the Clearwater Hot Club provides entertainment during the banquet. Above-right, outgoing chair Pete Moulton (on the right) receives a plaque of appreciation from incoming chair Bert Tracy.



In the photos above, Moulton presents Scott Anderson with his plaque as the 2009 recipient of the Leonard N. Thompson Award, and Dave Brown presents the Volunteer of the Year award to Jeanette Boothe. Below, Doug Rovang accepts his awards as the recipient of both the Leonard N. Thompson and George Warren Fuller awards in 2010.

### Spring 2011 Schools

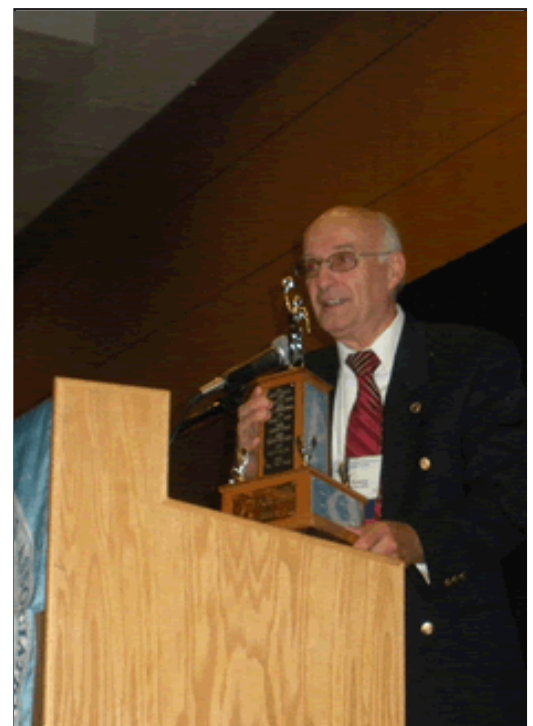
The 2011 Metro Waterworks Operators School will be held from Tuesday, April 5 through Thursday, April 7 at the Ramada Mall of America in Bloomington. Participants in the school will receive 16 credit hours for their attendance. The registration for the school will be \$175 (\$210 at the door or after March 24). An agenda for the school will appear in the Spring 2011 *Waterline*.

Other spring schools:

- Southeast School, March 9-11, Ramada Hotel and Conference Center, Rochester
- Southwest School, April 13, Redwood Area Community Center, Redwood Falls
- Northeast School, May 18-20, Superior Shores Resort, Two Harbors
- Central School, June 8-10, Ruttger's Bay Lake Lodge near Deerwood

A registration form for the Metro, Southeast, and Southwest schools is on page 7.

Information on all district schools is at [http://health.state.mn.us/divs/eh/water/wateroperator/trng/wat\\_op\\_sched.html](http://health.state.mn.us/divs/eh/water/wateroperator/trng/wat_op_sched.html)



## REGISTRATION FORM FOR UPCOMING SCHOOLS

You may combine fees on one check if more than one person is attending a school; however, please make a copy of this form for each person. For questions regarding registration, contact Jeanette Boothe at 651-201-4697.

To request an exam application, contact Noel Hansen at 651-201-4690 or Mark Sloan at 651-201-4652.

Northwest School, November 30-December 2, 2010. Holiday Inn, Detroit Lakes. Fee: \$130 (\$140 after November 19 or at the door).

Southeast School, March 9-11, 2011. Ramada Hotel and Conference Center, Rochester. Fee: \$135 (\$145 after February 28 or at the door).

Metro School, April 5-7, 2011. Ramada Mall of America, Bloomington. Fee: \$175 (\$210 after March 24 or at the door).

Southwest School, April 13, 2011. Redwood Area Community Center, Redwood Falls. Fee: \$30 (\$35 at the door).

Name \_\_\_\_\_ Employer \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zip \_\_\_\_\_ Day Phone \_\_\_\_\_

E-mail Address \_\_\_\_\_

**Please enclose the appropriate fee.** Make check payable to *Minnesota AWWA*. Mail this form and fee to Drinking Water Protection Section, Minnesota Department of Health, P. O. Box 64494, St. Paul, Minnesota 55164-0494.

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### When Collecting Samples, Please Remember . . .

- ALWAYS write the DATE and the TIME(s) on the lab form of when you collected the sample(s) and choose a.m. or p.m.
- The information on the sample bottle label must match the information on the lab form (date, time, location) or the sample(s) may be rejected by the lab.
- Read sampling instructions prior to collecting the sample(s) to become familiar with the sampling procedures.
- If you are collecting a sample from the distribution system, you must write the name of the place or the address from where you collected the sample (*Holiday Gas Station* or *69 4<sup>th</sup> Street*) for one sample or one set (same location). Write the address on the top line only once (systems have been writing the same address on multiple lines; this is not necessary).
- If your system chlorinates and you are collecting a Total Coliform sample, record the chlorine residual on the lab form in the proper area.
- After collecting the sample(s), immediately pack them up and get them in the mail; some samples will be rejected by the lab if they're received too late.
- You are responsible for making sure your samples arrive at the lab, are analyzed, and are reported to MDH. Don't assume that just because the sample was mailed, the lab received it.
- Pay attention to your annual monitoring schedule, which is sent by MDH in late December each year. Your sampling dates are listed on that schedule.
- If you have any questions about sampling or sampling kits, call one of the numbers listed on the reverse side of your annual monitoring schedule or 651-201-4668.



**Environmental Health Division**

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## CALENDAR

### Minnesota Section, American Water Works Association

\*November 30-December 2, Northwest Water Operators School, Holiday Inn, Detroit Lakes, Contact Jeanette Boothe, 651-201-4697.

\*March 9-11, Southeast Water Operators School, Ramada Hotel and Conference Center, Rochester. Contact Dennis DuChene, 507-384-0559.

\*April 5-7, Metro Water Operators School, Ramada Mall of America, Bloomington. Contact Jeanette Boothe, 651-201-4697, or Stew Thornley, 651-201-4655.

\*April 13, Southwest Water Operators School, Redwood Area Community Center, Redwood Falls. Contact Jeff Larson, 507-537-7005.

\*May 18-20, Northeast Water Operators School, Superior Shores Resort, Two Harbors. Contact Mark Proulx, 952-240-2023.

\*June 8-10, Central Water Operators School, Ruttger's Bay Lake Lodge, Deerwood, Contact Lisa Vollbrecht, 320-255-7225.

**Information for all district schools, including agendas, is at**  
<http://health.state.mn.us/divs/eh/water/wateroperator/trng/schoolagendas.html>

### Minnesota Rural Water Association, Contact Kyle Kedrowski, 800-367-6792

December 1, Operation & Maintenance, Glenville

December 8, Operation & Maintenance, Biwabik

January 11, Cross Control and Backflow Protection, Owatonna

January 12, Cross Control and Backflow Protection, St. Cloud

January 13, Cross Control and Backflow Protection, Bemidji

\*March 1-3, Technical Conference, St. Cloud

April 20, Operation & Maintenance, Elbow Lake

April 27, Operation & Maintenance, Lake Benton

May 4, Hands-on Specialized Treatment Training, LeCenter

\*May 11, Operation & Maintenance, Spicer

\*June 15, Operation & Maintenance, Wahkon

***Class E Training***  
January 27, St. Paul

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

**\*Includes a water certification exam.**