



WATERLINE



NEWS AND INFORMATION
FOR PUBLIC WATER SUPPLIERS IN MINNESOTA

AWWA Conference in Duluth

Lyle Stai of Willmar Among Those Honored



Lyle Stai, the department foreman for Willmar Municipal Utilities, received the Minnesota American Water Works Association (AWWA) Meritorious Service Award during the Minnesota Section annual conference in Duluth in September. To see some of the other award recipients, turn to page 5.

Subdividing Systems Will Not Eliminate Community Designation

Housing subdivisions, condominiums, and townhouses with 15 or more service connections or living units intended for year-round residence are considered community water supplies and subject to applicable U. S. Environmental Protection Agency (EPA) and MDH drinking-water rules.

Subdividing the water system serving these types of residential facilities in such a manner that 14 or fewer units are served will not eliminate the community water supply designation as long as the total project or development has 15 or more connections/units and is under the same ownership or cooperative association. The only exception would be if each single family dwelling is served by its own well.

Questions may be directed to Dick Clark at 651-201-4667.

Paper Versions of Waterline to End in 2007

Beginning with the Summer 2007 issue, a web-only version of the *Waterline* will be published. The *Waterline* will contain the same information about upcoming training and regulatory updates as well as other news and feature stories although it will no longer be available in a paper format.

A new issue will be produced and posted to the Minnesota Department of Health (MDH) web site quarterly, and e-mail will be used to notify people when it has been posted on the MDH website. Many operators and others are already receiving a notice when current issues are put on the website. Others may register to get these notices by going to <http://www.health.state.mn.us/divs/eh/water/newsletters.htm> and clicking on the link to subscribe (next to the red envelope beneath the description of the *Waterline*).

Upcoming Water Operator Certification Exam Dates

November 30, Detroit Lakes

December 28, St. Cloud

March 8, St. Cloud

March 23, Rochester

April, Southwest Minnesota

April 20, Brooklyn Center

April 27, Grand Rapids

June 8, Deerwood

See calendar on back page for more information

Dean Huschle: Water Operator, Rock Star Photographer



CD. Dean has been the photographer for a number of other groups, including Dr. Hook, Blue Oyster Cult, and KISS.

Dean was born in Hawaii but has spent most of his life in the Northfield area. He has been active in the Jaycees and has served as the president of the Minnesota JCI Senate. He also fills his time with hunting and fishing, music, winemaking, and interests in the U. S. space program, not to mention his annual yard decorating for Halloween (shown at right). Dean and his wife, Cindy, have two sons, Adam and Nicholas.



Chloramination: Considerations for Public Water Suppliers and Their Customers

By David Rindal

In their efforts to comply with the Stage 2 Disinfection Byproducts (DBP) Rule, public water systems (PWSs) may consider switching to an alternative disinfectant for primary or residual disinfection. A shift from free chlorine (in the form of HOCl/OCl⁻) to monochloramine (NH₂Cl) as a disinfectant presents numerous benefits, including lower DBP formation, longer persistence of chloramine over free chlorine residual concentrations, and distribution system biofilm control. One potential issue associated with chloramines use, in addition to the nitrification episodes, taste and odor issues, and loss of disinfectant residual that may result from lack of proper control, is its effects on various consumer groups.

Chloramines, like chlorine, can be toxic to dialysis patients. Chloramines bind to iron in red blood cell hemoglobin, causing reduced cell capacity to carry oxygen. Chloramines, unlike chlorine, do not dissipate rapidly from water. Therefore, they must be removed before water is used in dialysis machines. Human and animal consumption of chloraminated water is safe because the digestive process neutralizes chloramines. Like chlorine, chloramines are safe for everyday uses like drinking, bathing, and cooking for people and most animals.

However, as with chlorine, chloramines must be removed or neutralized for aquatic animals. Chloraminated water passes through gills, directly entering the fish, amphibian, and reptile bloodstream. Chloramine residuals in fish habitat should be kept below 0.1 milligram per liter (total chlorine). Monitoring the effectiveness of removal may be done with test kits obtained from pet stores, pool supply stores, chemical supply houses, or other sources. The customer should be sure to find a kit that analyzes "total chlorine," or at least "combined chlorine," not "free chlorine."

Chloramination may affect commercial and residential water customers in other ways. Manufacturers that require ultrapure water may find that the switch to chloramines requires an upgrade of their current treatment systems. Chloramines may also enhance the decay of the rubber parts of household plumbing and water heaters. Also, swimming pool and spa water disinfection may require adjustment and testing during any conversion period. Pool chemicals may need more frequent observation during a PWS's transition to chloramination.

Seventh Drinking Water Institute Held Twenty Teachers Attend 3-Day Workshop



Erica Kublicka-Hyland, Wade Nelson, and Cara Rieckenborg work on a group experiment during the 2006 *WaterWorks!* Drinking Water Institute, which was held at the new Minneapolis Water Works ultrafiltration plant. More than 20 teachers attended the three-day Institute, where they learned about drinking water and ways to incorporate it into their science curriculum. This was the seventh Institute to be held. The Institutes are co-sponsored by Minnesota American Water Works Association and the Minnesota Department of Health and conducted with the participation of the Hamline University Center for Global Environmental Education. The 2007 Institute will be held June 18-20 at the Outdoor Learning Center outside of Ely, Minnesota. More information on the Institutes is available at <http://mnawwa.org/education/youtheducationprogram.html>.

Spring 2007 Schools

The 2007 Metro Waterworks Operators School will be held from Wednesday, April 18 through Friday, April 20 at a new location, the Earle Brown Heritage Center in Brooklyn Center. Participants in the school will receive 16 credit hours for their attendance. The registration for the school will be \$145 (\$180 at the door or after April 6). The Earle Brown Heritage Center does not have lodging on-site (other than a bed and breakfast that is not available for individual bookings). However, there are a number of hotels in the area, many of which provide shuttle service to the Heritage Center. A list of nearby hotels is available at <http://mnawwa.org/section/metroschoolhotels.html>. An agenda for the school will appear in the Spring 2007 *Waterline*.

Other spring schools include:

- Southeast School, March 21-23, Ramada Hotel and Conference Center, Rochester
- Southwest School, April (exact date and location to be announced)
- Northeast School, April 25-27, Ruttger's Sugar Lake Lodge near Grand Rapids
- Central School, June 6-8 at Ruttger's Bay Lake Lodge near Deerwood

MRWA Conference

The 2007 Minnesota Rural Water Association (MRWA) Technical Conference will be held at the St. Cloud Civic Center from Tuesday, March 6 through Thursday, March 8.

For more information, contact the MRWA office at 218-685-5197 or via e-mail at mrwa@mrwa.com.

2007 Teleconference

The American Water Works Association has set Thursday, March 8 as the date for its next teleconference. The downlink locations serving the Minnesota Section will be the Minnesota Department of Health (Snelling Office Park) in St. Paul, Memorial Union Hall on the campus of the University of North Dakota in Grand Forks, and Lake Superior College in Duluth. Participants will receive 4 contact hours.

No teleconference is scheduled for November in 2007.

Additional information is available at <http://www.awwa.org/Education/teleconf/teleconfsites.cfm>.

A registration form for the Metro and Southeast schools as well as the March 8 teleconference is below. Information on all district schools is at <http://mnawwa.org/section/districtschools.html>.

REGISTRATION FORM FOR TELECONFERENCE AND SPRING 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. Questions regarding registration, contact Jeanette Boothe at 651-201-4697.

To receive an exam application and/or study guide, contact Noel Hansen at 651-201-4690 or Mark Sloan at 651-201-4652.

AWWA Teleconference, March 8, 2007. Check the location you wish to attend:

___ Lake Superior College, Duluth. Fee: \$65 (\$85 after February 26 or at the door)

___ Minnesota Department of Health, Snelling Office Park, St. Paul. Fee: \$65 (\$85 after February 26 or at the door)

___ University of North Dakota, Grand Forks, North Dakota. Fee: \$65 until February 26 (no late registrations accepted for this site)

Southeast School, March 21-23, 2007. Ramada Hotel and Conference Center, Rochester. Fee: \$125 (\$135 at the door).

Metro School, April 18-20, 2007. Earle Brown Heritage Center, Brooklyn Center. Fee: \$145 (\$180 after April 6 or 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 64975, St. Paul, Minnesota 55164-0975.

Albany Arsenic Plant Will Also Enhance Aesthetic Qualities of Water

Albany Public Works Supervisor Joe Mergen has been with the city since 1987. The treatment of water then consisted of the addition of chlorine and fluoride to four wells. Because of lead and copper issues, the utility began adding sodium silicate in the 1990s. However, Mergen knew that more sophisticated treatment would be needed in the coming years.



Joe Mergen at the construction site for the new water plant.

Because of naturally occurring arsenic in the ground, the city was producing water with arsenic levels of approximately 14 parts per billion (ppb). Although this was well below the maximum contaminant level (MCL) of 50 ppb then in effect, it was becoming apparent that the standard would be greatly tightened by the 21st century.

When the new MCL for arsenic was set at 10 ppb in 2001 (with an implementation date of 2006), Albany looked for other sources of water. Working with Bonestroo, Rosene, Anderlik & Associates of Roseville, Minnesota, the city attempted to find wells that would produce water with lower arsenic levels. Unsuccessful in those efforts, they determined that a new plant would be necessary.

With the four existing wells spread throughout the city, the cost of connecting these wells to a new plant would have been prohibitive. Instead, the city purchased five acres on the northwest edge of Albany for the new plant and three wells that have been drilled adjacent to it.

The plant, designed for 2 million gallons per day (MGD) with the capability to expand it to 3 MGD, is a iron-and-manganese facility that will also remove arsenic. "It's a pretty straightforward aeration, detention, filtration process," said project manager Miles Jensen of Bonestroo. "The oxidized iron has got a charge, and the arsenic will preferentially attach to oxidized iron."

Jensen said they may need to feed ferric chloride to co-precipitate the arsenic. Since iron enhances arsenic removal, the issue will be whether there is enough iron in the raw water. "Some plants, depending on how much iron they have, can remove arsenic with little additional treatment, but sometimes you have to add more iron," Jensen explained.

While arsenic was the motivating factor for the new plant, the removal of iron and manganese, which cause aesthetic problems, will be an added benefit. "It's going to remove all three of them is what it's going to do," said Mergen. "We will get considerably better water."

To cover the \$6 million project cost, the city received a grant, a below-market-rate loan from the Minnesota Public Facilities Authority, and an interest-free loan from Stearns Electric. In addition, the city will raise the water rates by 20 percent for two consecutive years. City clerk/administrator Tom Schneider said the city council considered a city-wide assessment but finally settled on a rate increase as the way to cover the costs.

Three of the existing wells will be sealed. The fourth will be used by the municipal golf course, which now uses city water. Although the golf course is not the biggest user of water in the city (that designation belongs to the Kraft food plant, which accounts for nearly 40 percent of the total usage), the demand from the golf course is seasonal. "This will bring the peak demand down," said Mergen of the golf course no longer using city water. "When you can shave those peaks off, that helps."

It is anticipated that the new plant will produce water with arsenic levels at 5 ppb, well below the revised MCL, which went into effect in early 2006. The city is operating under a compliance agreement with the Minnesota Department of Health until its new plant opens in April of 2007.

Words to Live By

There are two kinds of failures: the man who will do nothing he is told, and the man who will do nothing else.

—Perle Thompson

Fat, drunk, and stupid is no way to go through life.

—Dean Wormer

I don't vote. It just encourages them.

—Maine woman

The remedy to free-speech controversies is more free speech.

—former University of Minnesota president Nils Hasselmo

I feel sorry for someone who has to win at everything.

—Snoopy

Kudos

St. Paul Regional Water Services was one of 16 U. S. water systems recognized for excellence in management by the Association of Metropolitan Water Agencies.

MDH engineer Karla Peterson recently spoke to a group of seventh-graders on drinking water, adding a little information on radon. She received a note of thanks from each student, including one that was particularly heartwarming:

Thank you for educating us about the poison we drink every day.

Without you, I would've gone on happily drinking poison. Now I'm scared to drink water or go in my basement. Thanks a lot!

Shahin Rezania Appointed Head of Minneapolis Water Treatment and Distribution

Shahin Rezania has been appointed the new director of Water Treatment and Distribution Services for the city of Minneapolis, succeeding Adam Kramer, who retired in May of 2005 after 39 years with the city. Rezania had been the interim director following Kramer's retirement. Prior to that, he was the manager of the capital improvement projects, which included the installation of an ultrafiltration membrane plant on the utility's Columbia Heights site.

Rezania has been a professional engineer with the city of Minneapolis since 1991. For the previous six years he had been an assistant professor in the Civil Engineering Department at the University of North Dakota in Grand Forks, which is where he received his bachelor's and master's degrees in the early 1980s. He obtained his Ph.D. from the University of New Hampshire in 1985, conducting his research on the water treatment plant, which is operated by the university, at the City of Durham.



MDH Public Water Supply Profile: Mari Mevissen

Mari Mevissen is the new compliance officer in Drinking Water Protection at the Minnesota Department of Health. She spent much of her childhood in Santa Fe, New Mexico, before going to high school and college in the Chicago area. She moved to Minnesota in 1975 and has been at the Health Department 26 years. She has also handled payroll accounts for acting and singing talent for radio and television commercials, apprenticed as a gold and silversmith, and worked as a personal care attendant for a person with quadriplegia. Mari has two stepsons, Paul, 32, and Dan, 27.

Minnesota AWWA Holds 90th Annual Conference



Outgoing Minnesota AWWA chair John Lapointe (left) presents the section's Leonard N. Thompson Award to Cliff McLain of Moorhead Public Service. In the photo to the right, Ed Sorenson (on the right) receives the George Warren Fuller Award from AWWA president Terry Rolan. Below, Lapointe and Rolan flank chair-elect Karla Peterson and trustee-at-large Pat Shea



Waterline

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Editor: Stew Thornley

Staff: Dick Clark, Jeanette Boothe, Noel Hansen

To request this document in another format, call 651-201-4700; TDD 651-201-5797 or toll-free through the Minnesota Relay Service, 1-800-627-3529 (ask for 651-201-5000).

CALENDAR

Water Operator Training

Minnesota Section, American Water Works Association

*November 28-30, Northwest Water Operators School, Holiday Inn, Detroit Lakes. Contact Stew Thornley, 651-201-4655.

*March 21-23, Southeast Water Operators School, Ramada Hotel and Conference Center, Rochester. Contact Paul Halvorson, 507-292-5193.

*April, Southwest Water Operators School. Contact Mark Sweers, 507-389-5561.

*April 18-20, Metro Water Operators School, Earle Brown Heritage Center, Brooklyn Center. Contact Jeanette Boothe, 651-201-4697, or Stew Thornley, 651-201-4655.

*April 25-27, Northeast Water Operators School, Ruttger's Sugar Lake Lodge, Grand Rapids. Contact Jeanette Boothe, 651-201-4697, or Stew Thornley, 651-201-4655.

*June 6-8, Central Water Operators School, Ruttger's Bay Lake Lodge, Deerwood, Contact Lyle Stai, 320-212-8590.

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

December 6, Operation & Maintenance, Biwabik

December 13, Operation & Maintenance, Waite Park

*March 6-8, Technical Conference, St. Cloud

April 11, Operation & Maintenance, Elbow Lake

June 19, Operation & Maintenance, Wahkon

MRWA Class D and E Training

December 5, Rochester (Class E)

January 23, Deephaven (Class E)

February 21, Willmar (Class E)

March 7, St. Cloud (Class D)

March 20, Little Falls (Class E)

April 3, St. Paul (Class D)

St. Cloud Technical College, Contact Bill Spain, 320-308-5952

A & B Exam Review

*December 27-28

American Water Works Association Teleconference

March 8, St. Paul, Duluth, and Grand Forks, North Dakota. Contact Stew Thornley, 651-201-4655.

***Schools/meetings marked with an asterisk include a water certification exam. To be eligible to take a certification exam, applicants must have hands-on operations experience at a drinking water system.**

For an up-to-date list of events, see the training calendar on the MDH web site at:
http://www.health.state.mn.us/divs/eh/water/wateroperator/trng/wat_op_sched.html

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

Past issues of the *Waterline* are available at:
<http://www.health.state.mn.us/divs/eh/water/com/waterline/index.html>



Environmental Health Division

625 North Robert Street

P. O. Box 64975

St. Paul, Minnesota 55164-0975

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