

Wise Water Words



Vol. 36 No. 1

Published for members of the Nebraska Section, American Water Works Association

Spring 1999

National award to be presented in June

Steve Kelley to receive George Warren Fuller Award

Steve Kelley, water superintendent, Beatrice Board of Public Works, was named the George Warren Fuller recipient at the 1998 fall conference for his 26 years of outstanding service to the water industry. The award, the highest honor given by AWWA, will be presented to Steve at the National AWWA Conference June 20-24 in Chicago.

A native of Beatrice, Steve graduated from Lincoln East High School in 1972 and joined the city

utility as a laborer. He advanced to crew leader and was promoted to superintendent in 1990. He supervises a staff of 10 and manages a budget of \$1.1 million. The utility serves 5,300 customers.

Steve joined AWWA in 1990, primarily “to get more water operators involved, especially on the board. I basically consider myself a small town operator even though we are a medium-sized city,” said Steve. “Operators from smaller towns call for advice and I can relate to them. I enjoy helping them.”

Steve served as Nebraska Section chair in 1996 and is past chair and a current board member of the Lower Big Blue Natural Resources District. A grade II and VI water operator, Steve is a member of the American Back-flow Prevention Association. He also holds a grade I wastewater operator certification.

His hobbies include golf, fishing, trapping and hunting, primarily black powder hunting for deer. Steve and his wife of 27 years, Pam, have a daughter, Natasha, 22, and a son, Joshua, 21.

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The next issue of **Wise Water Words** will be published the end of May. Deadline for reports from committee chairs and advertisements is May 1. Fax your reports to **Mari Matulka, 402.449.8166** or call **402.449.8154** or you may e-mail them to mari@radiks.net.



From left, back row: 1999 National AWWA President Stephen F. Gorden and Nebraska Section Director Dennis Hirschbrunner. Front row: Section Past President Terry O'Brien; Fuller Award Winner Steve Kelley, Beatrice, and 1999 Section President Rich Koenig, Nebraska Health and Human Services.

Chair's comments

The Nebraska Section AWWA welcomes you to 1999! The 1998 Joint Annual Fall Conference was a success with increased attendance for the AWWA program. I believe the major factor for the increased attendance was the outstanding program developed by the Fall Conference Committee, with superb topics and excellent speakers. Thanks to all involved for the great job! **Mark your calendar for the 1999 meeting. It will again be at the Ramada Inn, Kearney, November 4 and 5.**



Rich Koenig

1999 will have many challenges, not only for the Nebraska Section, but also for all water utilities throughout the State. Several water utilities already are addressing the Y2K issue. For those of us who are not computer literate, Y2K stands for the year 2000. Older computers and water system controls could possibly have problems when the New Year arrives. Several communities have started to draft emergency procedures for failure of equipment that is operated by some type of a computer/computer processor.

The Nebraska Section also will be developing several programs to assist small water systems. These programs are a result of the State Revolving Fund (SRF) established by the Reauthorization of the Safe Drinking Water Act. Your section will receive SRF money to implement these programs.

One such program is the mentoring program. Criteria and responsibilities have not yet been established, however the Small Systems Committee is developing a plan to implement the program. We need water systems and/or water operators to help systems in need of assistance. If you or your system is interested in providing this service, please contact **Bob Elston**, Small Systems Committee chair **402.443.5216**, or an officer or trustee of our section.

Involvement is key to any organization. We want and need every member to play an active role in the Nebraska Section AWWA. Your comments, as well as your participation on committees would be appreciated. If you have a

specific interest or comment please feel contact any officer, trustee or committee chair.

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Wise Water Words is published three times a year for members of the Nebraska Section of the American Water Works Association.

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Water Utility Council

by Jerry Obrist

The 96th Session of the Nebraska Legislative convened its 90-day session January 6, 1999. Proposed laws, committee meeting dates, daily agenda, roster of Senators can be viewed on the Unicameral's home page at <http://www.unicam.state.ne.us/index.htm>. If you have any questions, please call me at 402.441.7571.

Proposed Laws

LB 160 (*Brown, Brashear, Bromm, Coordsen, Raikes, Wehrbein*) and **LB 282** (*Stuhr, Bromm, Coordsen, Raikes, Wehrbein*) These two bills and others provide for a limitation of government liability for damages relating to Y2K.

It's anticipated the Legislature will pass some type of bill limiting Y2K liability for the State and its political subdivisions. **Referred to Judiciary Committee.**

LB 273 (*Jones, Baker Connealy, Coordsen, Dierks, Kremer, Matzke, Tyson, Wickersham*) Eliminates a portion of the water well registration fees currently paid in two parts: (1) standard \$30 fee paid to the Department of Water Resources, and (b) separate fee paid to Nebraska Health and Human Services to administer the Water Well Contractor's Licensing Act. This bill would eliminate the \$30 fee to the Department of Water Resources. **Referred to Natural Resources Committee. Hearing held January 21, 1999.**

LB 338 (*C Peterson, Bohlke, Bruning, Cudabeck, Jones, Kremer, Kristensen, Raikes, Schmitt*) Water Conservation and Banking Act which makes it possible for individual entities to create water banks as well as join with other entities under the Interlocal Cooperation Act. Two additional ways to account for water savings could be banked. They are: (1) modify the operation of existing hydro power projects, and (2) modify points of diversion or points of return. What is referred to in the original bill as "drain areas which could have excessive

levels," including management of surface water recharge. Amendments also would provide that a water banking program could not create a net depletion of stream flow which would negatively impact an existing surface water use. **Referred to Natural Resources Committee. Hearing held January 27, 1999.**

LB 567 (*Landis*) Allows cities or villages to condemn public utility properties within their zoning jurisdiction. Bill was introduced on behalf of the Lincoln Electric System. **Referred to Judiciary Committee.**

LB 640 (*Thompson*) Eliminates provisions passed by the 1998 Legislature mandating that cities like Papillion, consult with M.U.D. prior to proceeding with a water supply project. Last year's law provided that the consultant be independent from the city engineer and allow SIDs, served by city water, to reject any decision of the city place such issues on the ballot. **Referred to Urban Affairs Committee. Hearing March 2, 1999.**

LB 671 and **LB 672** (*Wickersham*) Provide for the lease of water rights by irrigation districts and other entities. Sets out criteria to be followed by the Department of Water Resources when applications for leasing of water rights appear before it. **Referred to Natural Resources Committee.**

LB 746 (*Beutler, Preister, Schmitt*) Amendments to the confined animal feeding operations statutes requiring DEQ to conduct a study to determine the possible environmental impacts of Class III and Class IV facilities on: (1) Groundwater and surface water quality in environmentally sensitive areas of the state including watersheds with sandy soils or shallow water tables, or (2) water rights granted to protect fish or wildlife. Study, to completed by September 1, 2000, would determine if Class III and IV facilities should be prohibited in such areas. **Referred to Natural Resources Committee.**

Director's report by Dennis Hirschbrunner

I just returned from the mid-year meeting of the National AWWA Board of Directors in San Antonio. The meeting was held January 23-25 with all section board members present. The agenda was very full as we started right away on Saturday.

The main agenda items were the review and approval of the budget report, use of surplus revenue and election of officers. The Saturday agenda was devoted exclusively to the revenue surplus generated in 1998. The surplus is in the range of \$1.4 million, a surprise to everyone including AWWA management and staff.

The discussion of what to do with the surplus centered around increasing section allotments, especially small sections who currently receive a maximum of \$8,000. Several section representatives made the case that the minimum section allotment should be raised from \$15 to \$20 thousand. This level of financial support would especially help the small section possibly afford hiring a full- or part-time staff person to help with section activities. This will be especially critical in the years to come when National AWWA directs more programs and activities to the local sections.

Since we could not reach a consensus as to the level of increased funding and the impact on future budgets, the issue was referred to the finance committee for further study and recommendation to be voted on at the June board meeting.

The key issues at the Sunday meeting were the election of officers and budget approval. We had a full slate of people running for the open positions. We elected the following:

- | | |
|-----------------|---|
| President Elect | Bob Willis , deputy chief engineer, Portland, OR Water Bureau |
| Vice President | Becky McClure , director of Governmental Affairs, West Virginia American Water Co. |
| | Hershel Guttman , principal, RV Anderson Consulting Engineers, Ontario, Canada |
| | Lyndon Stovall , general manager, Greenville SC Water System |
| | John Gaston , senior consultant, CH2M Hill, Oakland, CA |
| | Bill Nabak , general manager, Green Bay Water Utilities |

Director-at-Large **Yasser Abouasish**, superintendent of Operations, Minneapolis Water Works

The other main agenda item was the discussion and approval of the treasurer's report. The 1999 budget was approved at \$25 million for expenses and \$26 million in revenue. Also, at the Sunday luncheon, it was my pleasure to deliver a check for \$1,200 from the Nebraska Section for the Abel Wolman Foundation, and receive a recognition plaque from Water for People for our contribution to that organization.

The Monday meeting was dedicated to association and section liability issues. The Association solicited and received opinions and suggestions from a law firm specializing in non-profit organization liability. The liability issues go straight to the structure of AWWA as it relates to the sections. After much discussion and work group reports, the consensus was that the risks are manageable with the required level of due diligence and no organization structural changes are desired at this time.

I again thank the Nebraska Section for giving me the privilege to represent all of you on the AWWA Board.

Tests aim to keep high quality safe water

by Jane Roseland, Antelope news editor, University of Nebraska-Kearney; published December 10, 1998.

We depend on it to clean our bodies, to make our food and to sustain life. But is the water that comes from that tap safe? In October 1998, students at Central Community College in Hastings were urged to boil their water because of possible E coli bacteria contamination in their water.

However, tests conducted in that water system indicated that there, in fact, was no problem, and the college community was told the caution about boiling water was over.

The quality of water, either in Kearney or in students' hometowns, is something everyone should be concerned with, according to **Kirk Stocker**, Kearney's director of utilities. However, residents can take comfort to know that their water in Kearney is safe, Stocker said.

"The water quality hasn't changed in the last 15-20 years, but the rules have," he said.

One rule is the Safe Drinking Water Act (SDWA) of 1974. Its overall intent requires water systems that serve more than

Please turn to Page 5

Kearney water (continued)

25 people to test the water regularly and comply with any set limits, such as contaminant levels.

Some example contaminants are copper, which can cause gastrointestinal problems from short-term exposure and liver or kidney damage from long-term exposure; and lead, which can delay physical and/or mental development in children and cause kidney problems for adults, according to the U.S. Environmental Protection Agency's website.

These are only two of dozens of contaminants tested in the water. The SDWA, which has been revised several times, saw its most recent revision in 1994. Originally, water systems had to test for 13 possible contaminants in their water, but that number has increased to 83, according to **US Today**, October 21, 1998.

Kearney's water must be checked monthly for such contaminants. Stocker said his utility office is required to collect 32 random samples around the city each month. The samples are then sent to a state-certified lab for testing, and Stocker is then notified of any violations, such as high contaminant levels.

Often, he said, he receives notice of coliforms or organisms in the water that won't make people sick. However, coliforms are indicators of other bacteria in the water that can make consumers sick.

When coliforms are found, Stocker said the labs will check the sample to see if there's a particular bacteria, such as E coli, and take more samples of that area to locate the problem.

But since 1969, reports show that there have been no threatening problems with contaminants in Kearney's water. If the city did have unresolved problems with its water, it could lose its permit to serve water to residents, according to **Jack Daniel**, Nebraska Health and Human Services, Regulatory and Licensure Division.

Daniel said that if Kearney would find itself confronting a serious water problem, it would exhaust all means to fix it.

"You spend the necessary money and energies... to establish that standard firmly," Daniel said.

If Kearney was ever in serious violation of the SDWA or other standards, the utilities department would have to notify the public through legal notices, and alert the media within 72 hours after notification, Stocker said.

If anyone would like to know about Kearney's water system, contact Stocker at 308.233.3268. Any Kearney resident can review past lab results and water quality.

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1998 Annual Conference

A record of 180 people attended the Section Fall Conference in Kearney, November 4-5, 1998. There were 41 exhibitors.

WISA Awards

The Section presented two Water Service Industry Awards (WISA). Recipients were **Zoltan Kerekes**, director of Water Quality, Metropolitan Utilities District (M.U.D.), for 33 years of service to the water industry, and **Jerry Obrist**, chief engineer, Waterworks, Lincoln Water System, for 29 years of service.

Zoltan began his career with M.U.D. in 1965 as a water analyst, advancing to chemist in 1969 and supervisor of Laboratories in 1983. He was promoted to director of Water Quality in 1988.

A native of Szonbathley, Hungary, Zoltan attended medical school in Budapest before coming to the United States in October 1956, during the Hungarian Revolution. He earned a bachelor of science degree in chemistry from the University of Nebraska-Omaha in 1972. He is a grade II water operator.

Zoltan and his wife, Ruth, have a son, two daughters and two grandchildren.



AWARD RECIPIENTS: From left: Nebraska Section Trustee Scott Borman, City of Chadron; Water Utility Council Chair Jerry Obrist, Lincoln Water System, and Zoltan Kerekes, Metropolitan Utilities District; Section Chairperson-Elect Joel Christensen, Metropolitan Utilities District. Unavailable for photo: Marty Stange, Hastings Utilities, and Nick Johnson, JEO Engineers.

Jerry joined the City of Lincoln in 1969 as a lab technician in the wastewater system. He served as sanitary engineer from 1970 to 1976 when he advanced to chief engineer. He was promoted to chief engineer, Waterworks in 1982.

Jerry is past president of the Nebraska Section AWWA, the Nebraska Water Environment Federation, and the National Society of Professional Engineers. He was a Fuller Award Winner in 1992. He currently serves as a chair of the National AWWA Telecommunications Technical Advisory Workgroup and on the Board of Directors for the AWWA Research Foundation.

Jerry earned a bachelors degree in civil engineering in 1969 and a masters degree in civil engineering in 1970, both from UNL. He and his wife, Susan, have two sons and three daughters.

Water Operator Awards

The Nebraska Department of Health recognized three outstanding water operators: **D. Scott Borman**, utilities superintendent, City of Chadron; **Joel G. Christensen**, manager, Water Operations, M.U.D., and **Marty A. Stange**, civil environmental engineer, Hastings Utilities.

Lifetime Member Award

Nick Johnson, chairman of the board and project development director, JEO Engineers of Wahoo, received the AWWA Lifetime Member Award. Nick is past president of the Nebraska Section and was the 1990 Fuller Award Winner.



SCHOLARSHIP WINNERS: Holly Schrader and Jack Sheng, both graduate students at UNL received \$500 scholarships from the Nebraska Section.

From left: Nebraska Section Secretary Chip Haas, HDR Engineering; Section Trustee Tony Bilek, Raines and Associates; Schrader; Section Trustee Scott Borman, City of Chadron; Sheng; Section Student Activities Chair Dr. Jennifer Miller, UNL Civil Engineering; and Section Treasurer Chris Koenig, HGM Associates.

Safety Awards

The Section Safety Committee awarded the **Presidents Gold Performance Award** to the **City of Hastings** and **M.U.D.** for reducing disabling injuries by 75 percent during the past three years. **M.U.D.** also received the an **Award of Excellence** for attaining a disabling injury frequency rate of one-quarter of less and a severity rate of one-quarter or less than the water industry average for the previous year.

The **City of Norfolk** and **Hastings Utilities** received the **Award of Merit** for the second consecutive year. The award is presented for attaining a recordable incidence rate of one-half or less than the water industry average for the previous year.

Fourteen Nebraska public water supply systems received a **Certificate of Commendation** for completing 1997 without a recordable injury. They were:

City of Ashland	City of Hebron
Village of Bartley	Village of Madrid
City of Chappell	City of Oshkosh
City of Clarkson	City of Seward
City of Crawford	City of Syracuse
City of Crete	City of Tecumseh
City of Gothenburg	City of Wisner

Members of the 1999 Section Safety Committee are:

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TOPOPS CHALLENGE: Nebraska Health and Human Services took first place honors in the 1998 Top Ops Challenge. "We finally ended our string of embarrassment," said Team Member Howard Isaacs. Pictured above are: Dave Montag, Isaacs and Todd Falter of the Lincoln office. Tom Ditttrick, Grand Island office, was unavailable for the photo.

The second place team included: Steve Kelley, Beatrice Board of Public Works; Lori Jagger-Irvine, National AWWA Public Affairs; Tom Miller, Electric Pump, and Kevin Prior, Olsson Associates.

Taking third place was the team from the Metropolitan Utilities District: Zoltan Kerekes, Mike Koenig, Andy McFarland and Doug Whitfield.

The competition was coordinated by Dave Bloch, Automatic Systems; Chris Koenig, HGM Consultants, Council Bluffs, IA; Nick McElvain and John Miriovsky, Lincoln Water System.



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Personnel changes

Derril Marshall has been named general manager of the City of Fremont Department of Utilities, succeeding **Jon McCafferty**, who retired in October, 1998.

Derril joined the utility as a city engineer and most recently served as public works director.



JEO Engineers of Wahoo, has named **Jerry Hain** CEO/President, replacing Nick Johnson as CEO and Terry O'Brien as president. Hain was senior vice-president of the firm.

Nick will continue as chairman of the board and project development director. Terry will service as vice chairman of the board and operations director.



Governor Mike Johanns has named **Roger K. Patterson** to head the Nebraska Department of Water Resources.

Patterson earned his undergraduate and graduate degrees in Engineering from UNL. He joined the McCook Office of the Bureau of Reclamation in 1974, advancing to regional director in Billings, MT in 1986. He most recently served as regional director for the Mid-Pacific Region, Sacramento, CA.



Ron Bucher has been named assistant general manager of Administration for the Metropolitan Utilities District, succeeding **Jack L. Klein**, who plans to retire May 1 with 17 years of service.

Ron joined the utility in 1992 as an attorney. He has an undergraduate degree in business administration.

Y2K bug lives everywhere

by Ray Grosch, Wisconsin Section News, Summer 1998

Large companies such as banks, credit card companies, insurance companies, power utilities and government agencies are spending billions of dollars to fix the Y2K bug infested computer code that was written in the 1970s and 1980s. The actual problem is quite simple, however solutions to the problems often are not simple. The Y2K problem stems from the fact that early computer systems were quite limited in both processing memory and storage memory.

Programmers of early systems used a six-digit date code rather than an eight-digit code (DDMMYY rather than DDMMYYYY). This shortcut saved on processing and storage requirements, allowing applications to run faster and require less storage space.

The Y2K bug is resident in more than just mainframe computer systems. Process control data acquisition units and SCADA systems installed in the 1980s and early 1990s may be seriously affected.

Virtually every type of instrumentation device used in the water resource industry today has been redesigned over the past 15 years to use microprocessor-based technology. Programs that run on these microprocessors are subject to potential Y2K problems. Any device that has an internal clock used to time and date stamp events or data could be subject to failure on December 31, 1999. Examples of devices using microprocessors include:

1. Programmable logic controllers
2. Data acquisition units, data loggers
3. Automatic alarm dialing annunciators
4. Automatic samples
5. Telephone systems
6. Security systems

The time to address these potential Y2K problems at your facilities is now. Problems can be identified, fixed and tested before the end of the year. A simple plan for most treatment facilities will include:

1. Survey the facility for potential problem applications and equipment.
2. Obtain certification of Y2K compliance from the manufacturer of the device or the software manufacturer.
3. If a question about Y2K compliance remains, a test can be run by setting the device clock to December 31, 1999, and allowing the system to advance this mode for several days. Caution! Make sure you have a back-up copy of the program software before running this kind of test.

Manufacturers of embedded microprocessor devices are addressing this problem. In general products designed after 1990 may not have a problem, while products designed before 1990 are more likely to have a problem.

In many cases, it may be more cost-effective to replace devices or software rather than fixing it. This is especially true of older software applications used on process control and facility management applications. More recent software releases offer Y2K compliance and rich features, such as higher levels of compatibility and more robust operating systems.

Small Systems Committee

by Bob Elston, City of Plainview (402.582.4928)

Our colorimeter appears to be a popular piece of equipment. The day after the annual conference, it was being used by the Village of Bradshaw. As of February 13, six communities have used the equipment.

The committee is contemplating training in the area of Total Coliform Rule (TCR) violations and in conjunction with that, emergency chlorination or clean up chlorination. The TCR started getting more attention a few years ago when the standard changed from four colonies to a presence or absence situation. Systems started getting dinged with violations that previously would not have been noted. Now, with the switch from the membrane filter test method to co-alert, it appears the problem with TCR violations will escalate.

The committee feels operators will need equipment available to use in chlorination, and the knowledge to set-up and operate the equipment, for example, how to calibrate flows, determine application rates and test residuals in the system.

We are discussing ways to get this information to operators who need it. These may be by printed materials, video tape, or perhaps one or more of these methods in partnership with a proposed mentoring program.

As the number of TCR violations go up, it will be increasingly difficult for the support and regulatory organizations in the state to provide assistance to everyone. Operators will need to know how to handle problems on their own.

Student Activities Committee

by Bruce Dvorak, UNL Civil Engineering (402.472.1578)

The AWWA/WEF student chapters met January 27 in Lincoln to hear John Dempsey of HDR Engineering discuss the "Process to Create a Riverfront Gateway," (ASARCO Site Clean-Up). Sgt. Bozard of the U.S. Air Force also visited with students about job opportunities in bioenvironmental engineering.

On February 24, Dave Petrochhi, City of Omaha, will discuss the City of Omaha CSO and public awareness program.

Field trips are planned as follows:

March 6: Square D, Lincoln (plating field trip)

April 7: Holmes Lake Nonpoint Source Pollution,

led by Lyle Christensen, City of Lincoln

Mid-April: M.U.D. Platte River Treatment Plant



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Section training, meetings

Board meetings

March 17, 9:30 a.m., New World Inn, Columbus
May 21, Regional Officers Meeting, Rapid City
July 22, Columbus
September 16, Columbus
November 5, Ramada Inn, Kearney
Call **Rich Koenig**, 402.370.3114 for locations.

Video teleconferences

March 11

Tools and Techniques to Protect Water Quality in the

Distribution System—Expert operators and experienced technical managers will focus on main repair procedures and cross-connection hazards.
(See Education Committee report on page 11)

October 21

Enhanced Coagulation and Other Advanced Treatment Technologies to Comply with the Microbial/Disinfection By-Products Rule Cluster

Water Operator training

Sponsored by: Nebraska Section AWWA and the League of Nebraska Municipalities

March 23	Alliance
March 24	Sidney
March 25	North Platte
August 31	McCook
September 1	Lexington
September 2	Hebron
October 5	Valentine
October 6	Burwell
October 7	Norfolk
December 7	Grand Island
December 8	Fremont
December 9	Nebraska City

Safety Conferences (contact Rob Pierce, 402.476.2829)

May 11	Grand Island
May 13	Scottsbluff

Fall Conference

November 4-5 Ramada Inn, Kearney

Safe Drinking Water is Our Business

National AWWA training

Call 800.926.7337 for information/registration on these meetings.

Annual Conference and Exposition

June 20-24, 1999	Chicago, IL
June 11-15, 2000	Denver, CO

Customer Service Workshop

March 21-24	Dallas, TX
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Consumer Confidence Reports Seminars

April 6	Pittsburgh, PA
April 7	Lansing, MI
April 8	Milwaukee, WI
April 19	Baltimore, MD
April 20	Charlotte, NC
April 29	Atlanta, GA
April 30	Albuquerque, NM
May 20	Dallas, TX
May 21	Houston, TX

Distribution System Symposium

September 12-15	Reno, NV
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Financial Management Seminar

March 21-24	New Orleans, LA
May 12-14	Berkley, CA
August 25-27	Burlington, VT
November 3-5	Scottsdale, AZ

International Symposium on Waterborne Pathogens

August 29-September 1	Milwaukee, WI
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Joint Management (AWWA/WEF)

February 28-March 3	San Antonio, TX
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Particle Measurement and Characterization in Drinking Water Treatment Symposium

March 28-30	Nashville, TN
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Source Water Protection Seminars

March 4-5	Kansas City, MO
March 11-12	Indianapolis, IN
March 18-19	Farmington, CT
March 25-26	Denver, CO
April 8-9	Milwaukee, WI
April 15-16	Seattle, WA

Water Resources Conference

September 26-29	Norfolk, VA
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Information Management /Technology Conference

April 18-21	New Orleans, LA
-------------	-----------------

Engineering and Construction Conference

March 14-17	Orlando, FL
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Education Committee report

by Mike Wentink, Nebraska Health & Human Services
(308.535.8134)

The Nebraska Section will host the "Operations and Maintenance: Tools and Technology to Protect Water Quality in the Distribution System" teleconference, March 11, 11 a.m.-2:30 p.m. Downlinks will be at Ainsworth Community College, Gering Civic Center, Hastings Central Community College, Lincoln Water System's Ashland Plant, and Norfolk Lifelong Learning Center, NE Community College.

Registration for AWWA members is \$50; \$75 for non-members; \$30 for students. Lunch is included. Three hours of CEUs will be given for Grade I-IV certified water operators. To register, send check, payable to Nebraska Section AWWA, to Lonnie Rech, Lincoln Water System, 2021 N. 27th St., Lincoln, NE 68503.

We also will sponsor the October 21 teleconference, "Enhanced Coagulation and Other Advanced Treatment Technologies to Comply with Microbial/Disinfection By-Products Rule."

The committee plans to sponsor a seminar in 1999 on capacity development. That federal requirement is fast-approaching and such education may be beneficial for smaller systems. The program will cover technology, finance and management aspects of community water systems.

Manufacturers Association Council

by Tony Bilek, Raines & Associates (402.758.9020)

I am pleased to announce that the creation of a manufacturers and associate member council (MAC) was approved at the 1998 Fall Conference.

MAC provides representatives and associate members formal representation and involvement in our section programs, training, education, policy and other activities.

Manufacturers representatives and associate members include consultants, contractors and other technical service organizations, all of which can benefit by being involved in MAC. Objectives include:

- Provide input for conference program planning.
- Become active in education and training through manufacturers.
- Develop procedures for contracting vendors, exhibit materials and hotel accommodations for annual conference.
- Provide responsible representation for and involvement of associate members in AWWA.
- Support communication with and act as a liaison to other professional organizations who share similar goals and objectives of AWWA.

If you're interested in joining our group, please contact me, **402.758.9020** or **800.747.7246**.

Volunteer to Serve

The Nebraska Section encourages all members to actively get involved in the group by volunteering to serve on a Section committee. If you'd like to serve on any of the committees listed, please indicate your first three choices, copy this form, fill it out, and send to Rich Koenig, Nebraska Health and

Human Services, 304 N. 5th St., Ste. C, Norfolk, NE 68701-4093. Committee chairs will be notified of your interest. Please indicate your preference by listing #1 as your first choice, etc. Thank you.

_____ Cross Connection

_____ Education and Training

_____ Membership

_____ Publications

_____ Manufacturers Association Council

_____ Safety

_____ Small System

_____ Water for People

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Title _____

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Legionella: Potential landmark case

by David J. Hildebrand, AH Environmental Consultants, Inc., Virginia Section AWWA

A potential legal case is brewing in New Jersey that could have a significant impact on the water industry. The facts of the case are very simple. Several years ago, there was a Legionnaires disease outbreak at a hotel in central New Jersey. Three people became ill and one died.

There is a possibility the hotel may sue the water utility for failure to warn the hotel of the potential for Legionella contamination. The possibility is based on the fact that:

1. The Surface Water Treatment Rule (SWTR), finalized in 1989 specifically includes Legionella as one of the target microorganisms.
2. Implementation of the SWTR relies heavily on the Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources (Guidance Manual).
3. Many of the provisions included in the Guidance Manual have been adopted by primary agencies and water utilities, including the primary disinfection

Control Measures

Once Legionella become established in a system, their control may be difficult.

Available control measures include:

- Shock chlorination of the building plumbing including the hot water tanks.
- Flushing.
- Disinfection of individual shower heads and faucets.
- Periodically increasing the temperature of the water to more than 70 degrees C.
- Replacement of the black rubber washers and gaskets that support Legionella growth with Proteus 80 compound washers and gaskets that do not support such growth.

concept as defined by "CxT" and the concept of Ground Water Under Direct Influence.

4. The potential for recontamination or regrowth of Legionella in the recirculating hot water systems of buildings is clearly stated in the Guidance Manual.
5. Appendix B of the Guidance Manual provides information that can be used for the institutional control of Legionella.
6. At no time since the SWTR became final, did the water utility make a phone call, send a letter or in any way warn this and other institutions of the potential contamination from a known pathogen, yet this same water utility is spending money to reduce disinfection by-products, which are only suspected carcinogens.

Regardless of how this case eventually is resolved, it would be prudent for water utilities to:

- Review the information in the Guidance Manual that pertains to Legionella, its occurrence, monitoring and the control options.
- Identify their institutional customers who may have recirculating hot and/or cold water systems, and
- Give some consideration to notifying potentially-affected users.

As indicated in the Guidance Manual, no separate primary disinfection requirements were established for Legionella in the SWTR, since the primary disinfection requirements for the inactivation of viruses and Giardia were believed to be sufficient to inactivate Legionella. Subsequently, it has been found that Legionella:

1. Appear to be present in all surface waters to some extent.
2. May be sequestered in eucaryotic cells, such as protozoa, and evade treatment.



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Legionella (continued)

3. May contaminate distribution systems due to cross connections or during the installation and repair of water mains.
4. Have been associated with biofilm growth in distribution piping.
5. Have been found in public building plumbing systems served by groundwater.

Even low concentrations of Legionella entering buildings may colonize and regrow in hot water systems. Once they infiltrate a building's plumbing system, they are able to lodge in hot water heaters, shower heads, aerators, faucet spouts, hot water valve seats and other locations. Hot water temperatures between 30 and 54 degrees C provide ideal conditions for the regrowth of these organisms.

In one study, published in 1985, in one area of Chicago, 42 percent of the hot water systems in apartments and houses where the hot water temperature was below 60 degrees C were contaminated with Legionella as compared to only 7 percent positive in apartments and houses where the hot water temperature was above 60 degrees C. Within this area of the city, chlorine residual values were similar, which indicates the chlorine apparently has little effect.

All of the conditions necessary to encourage colonization are not fully known. However, large institutions such as hospitals, hotels and office buildings with recirculating hot water systems appear to be the most susceptible. This is a particular concern in health care institutions, such as hospitals, where many of the patients may have weakened resistance to infection.

It is certainly possible that the case in New Jersey may be decided in favor of the water utility. However, the history of the water industry has taught us that once an emerging pathogen has emerged, it rarely disappears quietly.

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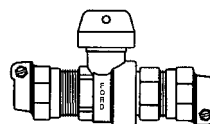
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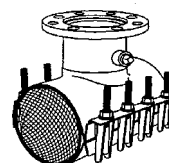
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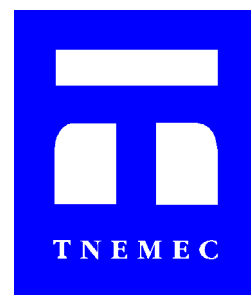
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Membership Committee

by Rich Robinson, Kirkham Michael (402.255.3840)

The Membership Committee is sponsoring a recruitment contest with prizes to be awarded at the Nebraska Section AWWA dinner, November 4, 1999, in Kearney. Here are the prize categories:

1. Top recruiter (*person who recruits the most new members*)—\$50
2. Drawing—two prizes of \$25 each

Drawing rules—The names of Nebraska Section members endorsing one or more new candidates between January 1-November 1, 1999 will be placed in a drawing. The number of new members a current member recruits determines the number of times his or her name is entered in the drawing. For example, if you sign up two new members, your name is entered twice in the drawing.

For an application form, with the current membership dues, call **Rich Robinson, 402.255.3840**.

Coupons

The Membership Committee has a coupon program to help new members offset the cost of first year membership dues. A coupon with a \$20 value toward an AWWA individual active membership (*or \$10 towards an operations membership*) is on this page. Contact **Rich Robinson**, chair of the Membership Committee or **Chris Koenig**, treasurer, **712.323.0530** for more coupons. Only one coupon per application and one coupon per person will be accepted.

Nebraska Section American Water Works Association

(or \$10 for operations membership)

Individual Membership Discount Coupon

This coupon, when attached to a completed application for membership in AWWA with payment of membership dues (*less the amount of this coupon*), entitles the bearer to a discount of \$20 (*\$10 for operations membership*) to be used towards the cost of that membership. To be valid, the following lines must be completed:

Name of applicant:

Name of recruiter:

Recruiter's membership no.

Mail coupon and application with payment to: Chris Koenig, HGM Associates, Inc., P.O. Box 919, Council Bluffs, IA 51502-0919.

Compliments of Nebraska Section AWWA

The coupon needs to be signed by a recruiter, attached to the completed application and payment and sent to **Chris Koenig**, Nebraska Section AWWA Treasurer, HGM Associates, Inc., P.O. Box 919, Council Bluffs, IA 51502-0919. Chris will remove the coupon from the application and add a check from the Nebraska Section for \$20 (*\$10 for operations membership*) before forwarding the application to national AWWA.

Only Nebraska Section members in good standing may sign a coupon. The recruiter should collect the application and payment (*minus the coupon amount*), attach the coupon and mail it for the applicant to Chris.

If the recruiter does not have a coupon handy, send the completed application with the payment (*minus the coupon amount*), to Chris with a note requesting that a coupon be filled out and recorded for the Section books. This note must be signed by the recruiter to be valid. If you have any questions, please call **Rich Robinson, 402.255.3840**.

New Members

The Nebraska Section AWWA reported 342 members as of January 1999 compared to 316 members in January 1998.

Here are our newest additions:

Adam, Tyler, Innowave, 10250 Regency Cir, Ste. 10, Omaha, NE 68114; 402.738.3865

Carnan, Garry D., Syracuse Water Commission, P.O. Box F, Syracuse, NE 68446-0137; 402.269.2173

Cary, George S., Innowave, 10250 Regency Cir, Ste. 10, Omaha, NE 68114; 402.738.3865

Feddern, Roger, SID 1, P.O. Box 1443, Norfolk, NE 68702; 402.371.6440

Frana, Leroy, Nebraska City Utilities, 100 Central Ave., Nebraska City, NE 68410-2530; 402.873.3353

Haney, Robert, Innowave, 10250 Regency Cir, Ste. 10, Omaha, NE 68114; 402.738.3865

Hunter, Dave, City of Holdrege, P.O. Box 436, Holdrege, NE 68949-0436; 308.995.86811

Jensen, Joe, City of Superior, P.O. Box 160, Superior, NE 68978-1732; 402.879.4711

Kauth, Joe A., City of Bloomfield, P.O. Box 157, Bloomfield, NE 68718; 402.373.4396

Lucas, Mike, Broken Bow Municipal Utility, P.O. Box 567, Broken Bow, NE 68822-0567; 308.872.6884

McDonald, Jon, Composite Structures, Inc., 2828 N. 23 St. E, Omaha, NE 68110-2726; 402.346.4344

Peet, Carole S., Cargill Inc., P.O. Box 300, Blair, NE 68008-2649; 402.533.4100

Sneller, Jeff, Woods Bros. Ind., 621 Westgate Blvd., Lincoln, NE 68528; 402.473.1236

Stewart, Brian, Union Pacific Railroad, 1416 Dodge St., Ste. 930, Omaha, NE 68179; 402.271.4888

Warnke, Steve, City of Long Pine, P.O. Box 398, Long Pine, NE 69217-0398; 402.273.4292

UNL Students: Reed C. Colton, Mark W. Duey, Julie Fisher, Matthew Giles, Cory J. Habernan, Charles Ikenberry, Steven Jillson, Marcia E. Kavey, Holly Schrader, Jack Sheng, Mark C. Stone, Dawit Zerihun.

Media tips for your utility

Be proactive—don't wait for a crisis to talk to the media. Begin building a relationship with your local broadcast and newspaper editors, environmental reporter, and city or county reporter. Introduce yourself, your key staff, and give them your direct office phone number, cell phone or pager number.

Be brave—give them your home phone number. If the media representative is new to the area or paper, offer a tour of your facilities and give him or her a background packet of information.

Preparing for an interview

Prepare talking points. The reporter is going to have an agenda. You should have one too. Come up with three things you want to get across to the readers or viewers (your customers). Never "wing" an interview.

Avoid jargon. You know what MGD, reverse osmosis and THMs are, however your customers don't. Speak in simple terms. Jargon does not impress the general public; it usually confuses or frustrates them. It may appear you're avoiding the answer if you're the only one who understands it.

Be careful of the macro discussion. Local media likes to tie into state and national issues. Don't let a reporter pin an industry issue on your utility. Share a positive story about how your utility is dealing with that concern.

During the interview

Even if the camera is turned off or the reporter's pen is put away, there is no such thing as "off the record."

Look squarely at the reporter.

Use inflection in your voice to emphasize important words or phrases. Use two or three short sentences to make your point. These are called "sound bites." If the reporter diverts to a subject you'd rather not talk about in great detail, revert back to your main point, i.e., "I understand, however, the bottom line is... Your water is safe to drink. Our water meets (or surpasses) all standards for safe drinking water."

Watch your body language. On camera, always keep your hands above your waist and avoid folding them across your body. Don't be afraid to "talk with your hands." An open pair of hands shows that you "care" and are sharing information. Never use a pointed finger to make a point. That gesture illustrates a "strong authority figure." Your customers want to

hear from someone who cares about them, not someone who dictates to them. And it's okay to smile once in while too.

Use the reporter's name when responding to a question. It makes the interview more personal.

Don't think of the interview as an assignment you wouldn't want to give your worst enemy, but as an opportunity to set the record straight, share a success story or calm your customers.



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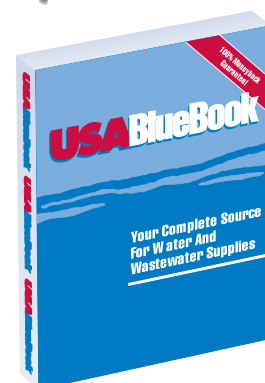
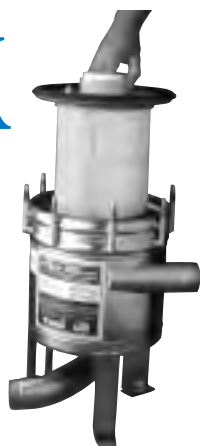
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Wise Water Words



Vol. 36 No. 2

Published for members of the Nebraska Section, American Water Works Association

Summer 1999

The Nebraska Section established the Colonel Theodore Leisen Memorial and Training Endowment Fund in 1993 to encourage water industry professionals to obtain additional training and encourage graduate students to choose the water industry as their field of work.

Workshops and seminars are listed on page 10 and the application form is on page 7. Take advantage of this financial opportunity and apply today! Deadline for applications is September 1.

In this issue

Water Utility Council 3

1999 Budget 8

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Manufacturers Council 11

Update on radon 12

Membership contest 14

The next issue of **Wise Water Words** will be published the first part of September. Deadline for reports from committee chairs and advertisements is August 10. Fax your reports to **Mari Matulka, 402.449.8166** or call **402.449.8154** or you may e-mail them to mari@radiks.net.

Gaps in science may hurt drinking water safety

Is EPA's water policy all wet?

by Daniel J. Murphy, Investor's Business Daily, May 12, 1999 (www.investors.com)

Chances are, the water from your kitchen tap is perfectly safe to drink. But these days, safety's always a concern. The Environmental Protection Agency's commitment to policies based on sound science may be flagging over one of the most basic health concerns—maintaining a safe drinking water supply.

A 1996 drinking water law was supposed to make sound science the top priority of regulators. Still, the way such high-profile contaminants as chloroform and arsenic are being treated suggests the EPA may be giving science short shrift.

Instead of the latest science, critics say the EPA is placing the demands of environmentalists first. If the EPA maintains this approach, it could fuel unfounded worries and unneeded spending to clean up problems that could be avoided. At the same time, research on legitimate drinking water problems could be delayed.

Thankfully, the U.S. enjoys one of the safest drinking water supplies in the world. But, recently, there have been some frightful episodes.

- A cryptosporidium outbreak in Milwaukee six years ago sickened hundreds of thousands and contributed to several deaths.

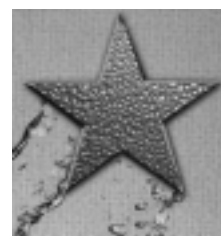
Please turn to Page 4

Catch a "rising star" in the 1999 Membership Drive

The brightest stars in the drinking water community are members of AWWA, just like you. Here's your chance to lead a rising star right to the main source for professional development, and reap a tidy return for yourself!

With every new member you recruit, one entry to win \$3,500 CASH! Plus, every recruiter wins great AWWA gifts. So recruit your colleagues and you'll be share "to catch a rising star," not to mention a few gifts along the way!

Make copies of the membership application on page 15. Only AWWA current members may participate (*campaign dates March 1-December 15, 1999*).



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(one grand prize entry for every member you recruit)

Recruit 1 Member

Win AWWA Letter Opener

Recruit 5 Members

Win AWWA CD/Calculator/Index/Clock

Recruit 10 Members

Win AWWA Stainless Steel Travel Mug

Recruit 20 Members

Win AWWA Executive-Line Attaché

Chair's comments

It is that time of the year. Water utilities are busy with construction, maintenance, and many other projects that warm temperatures allow. As with utilities, the Nebraska Section is busy planning for the future. **Joel Christensen**, Fall Conference Committee chair, formulated a program from the various topics submitted by the committee and the agenda is being finalized. Pertinent topics that will impact public water supplies have been selected. Plan to attend the 1999 fall conference November 4-5 in Kearney.

Board members attending the AWWA Regional Section Officers meeting May 21 in Spearfish, SD, included: **Scott Borman**, trustee; **Chris Koenig**, treasurer; **Rich Robinson**, Membership Committee chair; and myself.

Among the items on the agenda was a presentation by Rich about the Nebraska Section's membership recruitment plan. On behalf of the Nebraska Section, thank you Rich for developing and implementing an outstanding membership program.

A topic that was not given enough time was "Small Systems and the Safe Drinking Water Act." The 1996 Safe Drinking Water Act will have a major impact on very small water systems. Issues like system viability, the ground water rule, consumer confidence report, to name a few, will require some water systems to make some very difficult decisions. The Section, with your support, can help these systems make informed decisions.

Involvement in the Section by the membership always is an issue that surfaces at the various meetings sponsored by AWWA, both nationally and locally. The Nebraska Section does have a good cross section of participation on the board and committees. However, we always can use more assistance. Every member has something to offer. Anyone can be on a committee, a board member or even chair of the Section.

Terry O'Brien, Nominations chair, is looking for individuals to donate their time and expertise to the Section. If you're interested in volunteering for the various committees, please contact any board member or complete the

form on page 11 of this newsletter and send it to me. Involvement in the Section can be a very rewarding experience.



Rich Koenig

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Wise Water Words is published three times a year for members of the Nebraska Section of the American Water Works Association.

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Water Utility Council report

by Jerry Obrist

The 96th Session of the Nebraska Legislative adjourned its 90-day session May 27, 1999. The following is the status of the proposals we followed. If you have any questions, please call me at **402.441.7571**.

New law

LB 640 (*Thompson*) Eliminates provisions passed by the 1998 Legislature mandating that cities like Papillion, consult with M.U.D. prior to proceeding with a water supply project. Last year's law provided that the consultant be independent from the city engineer and allow SIDs, served by city water, to reject any decision of the city place such issues on the ballot. **Passed with emergency clause; effective April 28, 1999.**

Killed

LB 273 (*Jones, Baker Connealy, Coordsen, Dierks, Kremer, Matzke, Tyson, Wickersham*) Would have eliminated the \$30 fee to the Department of Water Resources collected for water well registrations.

LB 746 (*Beutler, Preister, Schmitt*) Would have required DEQ to conduct a study to determine the possible environmental impacts of Class III and Class IV facilities on: (1) Groundwater and surface water quality in environmentally sensitive areas of the state including watersheds with sandy soils or shallow water tables, or (2) water rights granted to protect fish or wildlife.

Held in committee (carry over to 2000)

LB 160 (*Brown, Brashear, Bromm, Coordsen, Raikes, Wehrbein*) and **LB 282** (*Stuhr, Bromm, Coordsen, Raikes, Wehrbein*)

These two bills and others provide for a limitation of government liability for damages relating to Y2K. It's anticipated the Legislature will pass some type of bill limiting Y2K liability for the State and its political subdivisions. **Judiciary Committee.**

LB 338 (*C Peterson, Bohlke, Bruning, Cudabeck, Jones, Kremer, Kristensen, Raikes, Schmitt*) Water Conservation and Banking Act which makes it possible for individual entities to create water banks as well as join with other entities under the Interlocal Cooperation Act. Two additional ways to account for water savings could be banked. They are: (1) modify the operation of existing hydro power projects, and (2) modify points of diversion or points of return. What is referred to in the original bill as "drain areas which could have excessive levels," including management of surface water recharge.

Amendments also would provide that a water banking program could not create a net depletion of stream flow which would negatively impact an existing surface water use. **Natural Resources Committee.**

LB 567 (*Landis*) Allows cities or villages to condemn public utility properties within their zoning jurisdiction. Bill was introduced on behalf of the Lincoln Electric System. **Judiciary Committee.**

LB 671 and LB 672 (*Wickersham*) Provide for the lease of water rights by irrigation districts and other entities. Sets out criteria to be followed by the Department of Water Resources when applications for leasing of water rights appear before it. **Natural Resources Committee.**

Annual Conference Exhibitors

The annual joint conference of the Nebraska Chapters of AWWA, APWA and WEF will be held November 2-5, 1999, at the Ramada Inn, Kearney, NE.

Exhibitors should register early as spaces will fill fast.

Vendors who participated in the past will receive contracts in June.

New exhibitors—call Tony Bilek, Raines & Associates, 402.758.9020



Tony Bilek

Director's report by Dennis Hirschbrunner

At this writing, we are rapidly approaching the AWWA Annual Conference June 20-24 in Chicago. The board of directors will begin the conference with a workshop, Saturday, June 19.

The primary agenda item for the workshop will be the section allotment formula. This is particularly important to the Nebraska Section since it could lead to a significant increase in the amount of money returned to the Section. As I indicated in my last column, the sections are being asked to assume more activities and responsibilities by national which will require more resources.

Other than the preparation for the annual convention, the activities of your national directors have been uneventful. A number of the section officers attended the regional meeting in South Dakota, unfortunately I was not able to attend due to prior commitments.

The Fall Conference planning is well under way and it looks like we will have another outstanding convention. EPA and the Safe Drinking Water rules and regulations continue to require constant monitoring and input which the Water Utility Council is ably accomplishing. Other than these normal activities, things are pretty quiet.

I hope many of you will attend the annual conference in Chicago. The agenda is packed and contains something for everyone. If you can't make it to Chicago, I look forward to seeing you November 4-5 in Kearney.

Is EPA's water policy all wet?

(continued from page 1)

- Contaminated water in Washington, D.C., four years ago led officials to urge residents to boil drinking water.
- Foul water was blamed for a flare-up of E coli in Wyoming last summer.

In late March, the Natural Resources Defense Council released a study finding that one-third of the 103 brands of bottled water it tested contained at least one sample that had more bacteria than government standards allow.

Since most people think bottled water is cleaner than tap water, the broadcast networks flooded the airwaves with stories about the study. Even so, the NRDC labeled most bottled water safe and of high quality.

Outside the media spotlight, in March 1998, the EPA said it would set goals for chloroform levels in tap water. At the urging of scientists, the agency set the safe level at 300 parts per billion.

Soon after the announcement, though, news leaked that the EPA might back off that level before it made a final decision at the end of last year. Environmental groups led by the NRDC, wanted the goal to be zero, despite the 1996 Safe Drinking Water Act's call to base regulations on the best science.

"Basically, all we did is say, 'Look, a lot of scientists disagree with you'," said **Erik Olson**, the NRDC's water quality expert. "I don't think that's a political strategy."

Scientists set chloroform limits at an exposure level that's 1,000 times lower than the amount that's known to cause human health problems.

The scary-sounding compounds makes up about 80 percent of the family of byproducts that are left in drinking water after it's chlorinated.

Still, the benefit of disinfecting water greatly outweighs the costs of not doing so. Earlier this decade, a cholera outbreak in Peru that killed thousands underscored the folly of not treating drinking water.

As it seemed possible the EPA would retreat from scientific standard for chloroform, the Society of Toxicology weighed in.

In an August 1998 letter, the society's then-president, **Steve Cohen**, gently reminded EPA chief **Carol Browner**: "Integration of sound scientific process is in the best health and economic interests of our nation. We believe that it would be unfortunate for (the) EPA to back away from this scientific approach."

But back away is precisely what the agency did. In December, the agency ignored the latest scientific evidence and agreed with the NRDC and other green groups, setting the chloroform goal at zero.

Is EPA's water policy all wet?

(continued from page 4)

Few in the scientific community fault scientists at the EPA. Agency regulators, though, haven't gotten a pass.

"My feeling is that this (rule) is really rather a piece of sophistry," said **Jay Goodman**, who's now the Society of Toxicology's president.

In fact, several close to the controversy say the EPA conceded the validity of the science. Yet it chose to side with green activists.

The agency never consulted its Science Advisory Board in devising the rule, though it appeared to have the time to do so. After issuing the rule, though, agency regulators said they intended to meet with the board.

"We think the agency followed political science rather than real science," said **Keith Christman**, director of disinfection and government affairs with the Chlorine Chemistry Council, an industry group. An industry lawsuit against the EPA is expected to be heard later this year.


Attempts to get comment from EPA officials were unsuccessful.

While chloroform in drinking water remains today's challenge, tomorrow's controversy swirls around arsenic. This naturally occurring element appears in minuscule amounts in drinking water throughout the U.S. It does appear in higher—but still barely detectable—amounts in the western states.

In late March, the prestigious National Research Council raised new alarms about arsenic in drinking water. It reported links to higher incidences of bladder

Please turn to Page 6

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Safety report

by Rob Pierce, *League of Nebraska*

Municipalities (402.476.2829)

Last month, 63 people attended two workshops in Grand Island and Scottsbluff on trenching and shoring safety.

The course was taught by **Bob Hessler** of Safety Line Consultants, Scottsbluff, and **Joe Stevens** of Ultra Shore Products, Denver.

The next two workshops will be held June 29 in Lincoln, at the Theresa St. wastewater treatment plant, 2400 Theresa St., and August 25 in North Platte at the Stockman Inn.

Cost is \$50. Water operators, grades I-IV, receive 5 continuing education hours for recertification. Wastewater operators receive 6 hours. Call me to register.

The Safety Committee also bought AWWA's video, "Five S's of Excavation Safety." To borrow the video from the Nebraska Section Library, call **Lonnie Rech, 402. 473.5923**.

Personnel changes

◆ **John Conley**, manager of Engineering, Metropolitan Utilities District, retired June 1 with 39 years of service.

Jerry Gohr has been promoted to assistant general manager of Operations. He has 30 years with M.U.D. and previously served as manager of Gas Acquisition and Supply.

◆ **Joining JEO Engineers—Dale Bowder**, manager, Architect Department, and **Dale Sall**, branch manager, Hastings Office.

◆ **Dale E. Miller** has been named senior vice president at Kirkham Michael Consulting Engineers. **Rich Robinson** was promoted to vice president. Miller is manager and Robinson is assistant manager of the firm's Omaha office.

Joining KM—Roger L. Coffey, senior project manager, and **J. Christopher Johnson**, project manager/engineer.

Is EPA's water policy all wet? *(continued from page 5)*

and other cancers and concluded that more research needed to be done to uncover arsenic's health effects at low concentrations.

While there are a lot of data on the health effects of ingesting chloroform, there aren't as many on arsenic. The EPA must propose an arsenic rule by January 1, 2000, and finalize it a year later.

Fred Hicks of the American Water Works Research Foundation, says the industry has generated \$6 million in arsenic research funding. "Our problem is we're not sure how much of its own internal funds (the) EPA is committing to the program," he said.

Congress asked EPA to do more research in 1996, setting aside \$4.8 million in the 1997 budget. (The White House requested nothing that year.) But the EPA didn't produce a plan for researching arsenic until February 1998.

Congress has repeatedly given the agency more money than the White House has desired. For 1998, the administration sought \$3.2 million. Congress approved \$3.7 million.

For 1999, Clinton requested a mere \$2.7 million, while the GOP-controlled Congress funneled \$4.3 million to the task.

A House Commerce Committee sources says that committee chairman Rep. **Tom Bliley**, R-Va., had to call attention to the issue in the first place.

The EPA was a year late in submitting its research plan, and then it asked to have its research budget cut.

"A lot of the deadlines were based on what (the) EPA felt like (it) could do," said **Alan Robertson**, director of regulatory affairs with the American Water Works Association. "In reality what they've done is negotiate regulatory deadlines that don't necessarily allow enough time to do the research."

The inevitable result is delay. Meanwhile, combating arsenic and other waterborne contaminants could lag as activities, the courts, lawmakers and the EPA scuffle over science and policy.

That's not a good sign for those wanting safer drinking water, says **Rory Conolly**, senior scientist at the Chemical Industry Institute of Toxicology. He said there's evidence "that some (byproducts from chlorination) potentially produce a carcinogenic effect (at very low levels of exposure)."

Others point to potential threats from microbes like E coli.

Last year, the EPA put out a list of contaminants due for more scrutiny by regulators beginning in 2001. The list contains 50 chemicals and 10 microbes.

Still, the AWWA's Robertson says appropriate ways to do research on microbes in drinking water haven't yet been developed.

"There's really not a plan to break this cycle of the research lagging behind the regulatory deadlines," he said.

Nebraska Section American Water Works Association Leisen Memorial Education and Training Grant Application

Please type or print legibly in black ink.

PERSONAL AND EMPLOYMENT BACKGROUND

Name: _____ Home phone: _____
Home address: _____ Office phone: _____

Years in water industry: _____
Current position: _____ Years in current position: _____
(Attach a copy of your job description)
AWWA membership number: _____ Type of membership: _____
Employer: _____
Address of employer: _____
Is your employer a member of AWWA? _____ If yes, indicate membership number: _____ Type of membership: _____
Your activities in the Nebraska Section AWWA (committees, positions held, etc.): _____

Membership in other professional organizations and your activities:

Other significant contributions to your community, etc.:

TRAINING GRANT INFORMATION

Use of grant funds: _____ Amount requested: _____
Dates of workshop, courses: _____ Employer contribution: _____
Location of training: _____

Please indicate in the space below the value to you of the proposed training for your current position and/or other water industry-related positions.

Unless self-employed, please attach a letter of support from your employer.
I declare that all information supplied on this application is true and accurate.

Applicant's signature: _____ Date: _____
Send completed application by September 1 to: Chip Haas, HDR Engineering, 8401 Indian Hills Dr., Omaha, NE 68114-4049; phone: 402.399.1333; fax: 402.399.4918; e-mail: chaas@hdrinc.com
Please make copies of this order form as needed

Nebraska Section 1999 budget

INCOME

	1999 Budget	1999 Actual
Section allotment	\$ 4,000.00	\$ 4,000.00
Association allotment	4,000.00	4,000.00
Multi-section allotment	400.00	280.50
Annual meeting	7,500.00	0
Director's allotment	650.00	781.46
Interest from accounts	2,200.00	0
Education seminar	500.00	0
Safety seminar	300.00	0
Cross connection workshop	300.00	250.00
Teleconferences	6,000.00	3,030.00
Advertising income	5,000.00	3,460.00
Water for People	2,000.00	0
SRF Education Funds	10,000.00	0
Miscellaneous	400.00	0
Total Income	\$43,250.00	\$15,801.96

EXPENSES

Safety committee	2,500.00	332.50
Cross connection workshop	\$ 1,500.00	0
Education and training		
LONM/NSAWWA Seminars	1,000.00	0
Public Information Committee	100.00	0
Teleconferences	8,00.00	223.59
Small systems committee	500.00	0
Director's board meeting	800.00	674.86
Publications		
Wise Water Words	6,000.00	2,333.11
Membership Directory	0	0
Advertising	100.00	0
Student activity	600.00	0
Membership	500.00	0
Secretary/treasurer	200.00	109.80
Awards (<i>Fuller</i>)	300.00	0
Abel Wolman	1,200.00	600.00
Research Foundation	500.00	0
Regional officers' meeting	2,000.00	0
Director's spouse (<i>meeting expenses</i>)	300.00	0
Annual meeting	2,050.00	0
Scholarship awards	1,000.00	1,000.00
Publicity 100.00	0	
Water for People	2,500.00	0
Water Utility Council (<i>travel, etc.</i>)	1,000.00	0
Miscellaneous	100.00	107.74
Total Expenses	\$31,250.00	\$4,981.60
Net Income	12,000.00	10,820.36

Student Activities Committee

by Dr. Jennifer Miller, UNL Civil Engineering (402.472.1578)

The AWWA/WEF student chapters met February 24 to hear **Dave Petrochhi**, City of Omaha, talk about the City of Omaha's combined sewer overflow program. Fifteen people attended a field trip to Lincoln Plating, March 6. Lincoln Plating treats metal containing waste for recovery of the metals.

At the final meeting of the semester, April 7, **Lyle Christensen** spoke about the Salt Creek study and the City of Lincoln wastewater discharges. New officers are:

President	Charles Ikenberry
Vice-President	Rafael Rodriguez
Publicity	Julie Fisher
Social	Steve Jillson
Secretary	Cory Haberman

No activities are planned for summer, however the student group will be active again next fall. We welcome suggestions for possible speakers or field trips.



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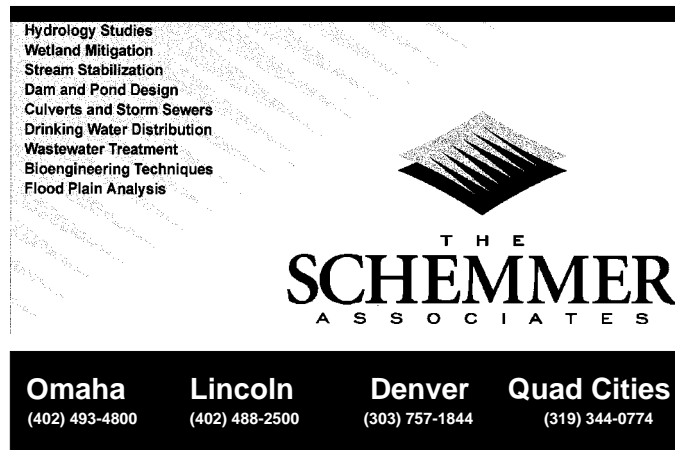
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Board meetings

July 22 Columbus
September 16 Columbus
November 5 Ramada Inn, Kearney
Call **Rich Koenig**, 402.370.3114, for locations.

Video teleconferences

October 21 (tentative sites: Ainsworth, Gering, Hastings,
Ashland: *Lincoln Water System*, Norfolk)

Enhanced Coagulation and Other Advanced Treatment Technologies to Comply with the Microbial/Disinfection Byproducts Rule Cluster

Backflow Recertification Seminars

Sponsored by: *Nebraska Section AWWA*

September 27 Neligh
September 28 Ogallala
September 29 Grand Island
September 30 Beatrice

Trenching and Shoring Safety workshops

Sponsored by: *Nebraska Section AWWA and
the League of Nebraska Municipalities*

June 29 Lincoln
August 25 North Platte

Water Operator training

Sponsored by: *Nebraska Section AWWA and
the League of Nebraska Municipalities*

August 31 McCook
September 1 Lexington
September 2 Hebron
October 5 Valentine
October 6 Burwell
October 7 Norfolk
December 7 Grand Island
December 8 Fremont
December 9 Nebraska City

Fall Conference

November 4-5 Ramada Inn, Kearney

National AWWA training

Call 800.926.7337 for information/registration.

Annual Conference and Exposition

June 20-24, 1999 Chicago, IL
June 11-15, 2000 Denver, CO

Distribution System Symposium

September 12-15 Reno, NV

Financial Management Seminar

August 25-27 Burlington, VT
November 3-5 Scottsdale, AZ

Inorganics Workshop

February 27-29, 2000 Albuquerque, NM

International Symposium on Waterborne Pathogens

August 29-September 1 Milwaukee, WI

Management and Supervision Seminar

September 13-14 Northbrook, IL

Water Resources Conference

September 26-29 Norfolk, VA

Technology transfer workshop

EPA will hold a three-day national drinking water and wastewater treatment technology transfer workshop, August 2-4, 1999, at the Marriott Downtown Hotel, 200 W. 12 St., Kansas City.

The program includes the following:

- Alternative disinfection technologies and strategies for inactivating cryptosporidium, giardia and protozoan cysts.
- Update on membrane filtration technology with emphasis on small systems.
- Management of water treatment plant residuals for small communities.
- Risk and control of disinfection byproducts (DPBs).
- Corrosion control in distribution systems.
- Capacity and sustainable development.
- Radon removal technologies for small communities.
- Simultaneous compliance.
- Evaluation of particle counters.
- Watershed management.
- Optimizing water plant treatment performance using comprehensive correction program.
- Water quality standards for wastewater reuse in small communities.
- Y2K issues for drinking water and wastewater treatment.
- Nitrogen removal in constructed wetlands.
- Developments in ultra-violet disinfection.

The workshop registration fee is \$25, payable to the Missouri Water Environment Association. For more information, call **Dr. Rao Surampalli**, EPA, Kansas City, 913.551.7453; fax: 913.551.7765.

A block of rooms has been reserved for the workshop. The rate is \$88 for single, \$108 for double room (*prices do not include tax*). Deadline for these rates is July 15. You are responsible for making your own hotel reservations. Call 800.228.9290 and mention the workshop when making your reservation.

Safe Drinking Water is Our Business

Education Committee report

by Mike Wentink, Nebraska Health & Human Services
(308.535.8134)

As part of the 1996 revisions to the Safe Drinking Water Act, the EPA published guidelines for water operator certification with state drinking water programs.

Those guidelines suggest criteria to determine public water system classification, certification qualifications and renewal requirements. The Education Committee does not expect much change to the current water certification program currently administered by the State of Nebraska, other than assignment of continuing education hours being certification grade specific.

The Nebraska Section plans to host the "Enhanced Coagulation and Other Advanced Treatment Technologies to Comply with the Microbial/Disinfection Byproducts Rule Cluster" teleconference, October 21. Tentative downlinks would be at Ainsworth Community College, Gering Civic Center, Hastings Central Community College, Lincoln Water System's Ashland Plant, and Norfolk Lifelong Learning Center, NE Community College. Continuing education hours will be granted for grades I-III.

Check out page 10 for locations of the **backflow recertification seminars** scheduled in September. Continuing education hours will be granted for grades I-IV and grade VI.

Manufacturers Association Council

by Tony Bilek, Raines & Associates (402.758.9020)

I am pleased to announce that the creation of a manufacturers and associate member council (MAC) was approved at the 1998 Fall Conference.

MAC provides representatives and associate members formal representation and involvement in our section programs, training, education, policy and other activities.

Manufacturers representatives and associate members include consultants, contractors and other technical service organizations, all of which can benefit by being involved in MAC. Objectives include:

- Provide input for conference program planning.
- Become active in education and training through manufacturers.
- Develop procedures for contracting vendors, exhibit materials and hotel accommodations for annual conference.
- Provide responsible representation for and involvement of associate members in AWWA.
- Support communication with and act as a liaison to other professional organizations who share similar goals and objectives of AWWA.

If you're interested in joining our group, please contact me, **402.758.9020** or **800.747.7246**.

Volunteer to Serve

The Nebraska Section encourages all members to actively get involved in the group by volunteering to serve on a Section committee. If you'd like to serve on any of the committees listed, please indicate your first three choices, copy this form, fill it out, and send to Rich Koenig, Nebraska Health and

Human Services, 304 N. 5th St., Ste. C, Norfolk, NE 68701-4093. Committee chairs will be notified of your interest. Please indicate your preference by listing #1 as your first choice, etc. Thank you.

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_____ Membership

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Update on radon

by Ed Hallock, Chesapeake Section AWWA

EPA has been contemplating setting a standard for radon since the early 1980s. However, the actual setting of the standard has been delayed due to discussions over the small contribution of drinking water to the overall risks of radon from other sources and the most cost-effective methods to protect public health.

It's well known that high levels of radon in drinking water can increase health risk due to cancer and many drinking water systems will need to install treatment to comply with a radon regulation that is slated for proposal in August, 1999, and to be finalized by August 2000. Many water systems may opt to comply with a higher

Best available technologies for treatment of radionuclides

	BAT	% Removed
Radon	Air Stripping	99
Radium 226 & Radium 228	Reverse Osmosis	98
	Ion Exchange	85-95
	Lime Softening	75-85
Uranium	Reverse Osmosis	99
	Anion Exchange	99
	Lime Softening	<85
	Coagulation/Filtration	<75
Beta and and photo emitters	Reverse Osmosis	95-98
	Ion Exchange	85-95

Lime softening usually is not applicable to small systems due to space and process requirements. When comparing the applicability of Ion Exchange and Reverse Osmosis, one technique usually proves to be more effective or cost effective than the other, depending on many factors, such as available space, waste handling capacity, life-cycle cost, quality of raw water, pre-treatment requirements, and the required degree of removal.

Radon *(continued)*

alternative maximum contaminant level by participating in a multimedia mitigation program.

AWWA and its members want to be proactive in regard to the radon standard. Considering that thousands of water systems may need to install treatment, that there is a long lead time from treatment design to treatment installation, that there will be air quality permitting delays in some areas, and that there may be initial, inadequate laboratory analytical capacity, water systems will need to begin advanced planning as to the compliance strategy. AWWA is recommending that drinking water systems with groundwater sources begin monitoring for radon now.

AWWA also recommends that groundwater-based systems obtain samples for radon quarterly for at least one year. This should be done at each entry point to the distribution system because a compliance determination is expected to be based on the average of four quarterly samples at each entry point to the distribution system.

To assure data of the highest quality that can be grandparented under the radon regulation, water systems should select a laboratory certified for other radionuclide analysis and should specify that Section 7500-Rn of Standard Methods for the Examination of Water and Wastewater be used in the analysis. In addition, the shorter the time between sample collection and analysis, the more accurate the analysis. A sample holding time of less than two days is perfect.

Radon monitoring results are required to be included in the annual consumer confidence reports.

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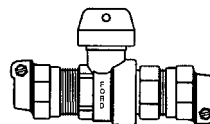
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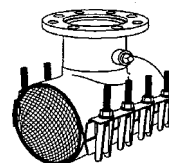


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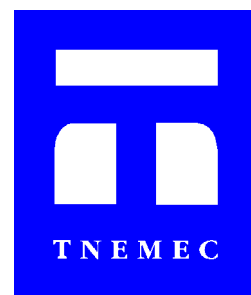
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Membership Committee

by Rich Robinson, Kirkham Michael (402.255.3840)

The Membership Committee is sponsoring a recruitment contest with prizes to be awarded at the Nebraska Section AWWA dinner, November 4, 1999, in Kearney. Here are the prize categories:

1. Top recruiter (*person who recruits the most new members*)—\$50
2. Drawing—two prizes of \$25 each

Drawing rules—The names of Nebraska Section members endorsing one or more new candidates between January 1-November 1, 1999 will be placed in a drawing. The number of new members a current member recruits determines the number of times his or her name is entered in the drawing. For example, if you sign up two new members, your name is entered twice in the drawing.

Coupons

The Membership Committee has a coupon program to help new members offset the cost of first year membership dues. A coupon with a \$20 value toward an

AWWA individual active membership (*or \$10 towards an operations membership*) is on this page. Contact **Rich Robinson**, chair of the Membership Committee or **Chris Koenig**, treasurer, **712.323.0530** for more coupons. Only one coupon per application and one coupon per person will be accepted.

The coupon needs to be signed by a recruiter, attached to the completed application (make copies of application on page 15) and payment and sent to **Chris Koenig**, Nebraska Section AWWA Treasurer, HGM Associates, Inc., P.O. Box 919, Council Bluffs, IA 51502-0919. Chris will remove the coupon from the application and add a check from the Nebraska Section for \$20 (*\$10 for operations membership*) before forwarding the application to national AWWA.

Only Nebraska Section members in good standing may sign a coupon. The recruiter should collect the application and payment (*minus the coupon amount*), attach the coupon and mail it for the applicant to Chris.

If the recruiter does not have a coupon handy, send the completed application with the payment (*minus the coupon amount*), to Chris with a note requesting that a coupon be filled out and recorded for the Section books. This note must be signed by the recruiter to be valid. If you have any questions, please call **Rich Robinson**, **402.255.3840**.

New Members

The Nebraska Section AWWA reported 350 members as of May 1999 compared to 316 members in January 1998. Here are our newest additions:

Adams, Alison, Hwy. 275, Valley, NE 68064

Armstrong, Dick, ETDS, 200 N. River Rd., Gibbon, NE 68840; 308.468.5891

Carr, Brian, 501 Chateau Dr., #3, Bellevue, NE 68005; 402.293.1124

Gottula, Christopher, R.R. 3, P.O. Box 126, Pawnee City, NE 68420

Lafler, James, Lincoln Water System, 2021 N. 27 St., Lincoln, NE 68503-1025; 402.441.7571

McCracken, Gary, Sargent Irrigation Co., P.O. Box 627, Broken Bow, NE 68822-0627; 308.872.6451

Nebraska Section American Water Works Association

(or \$10 for operations membership)

Individual Membership Discount Coupon

This coupon, when attached to a completed application for membership in AWWA with payment of membership dues (*less the amount of this coupon*), entitles the bearer to a discount of \$20 (*\$10 for operations membership*) to be used towards the cost of that membership. To be valid, the following lines must be completed:

Name of applicant:

Name of recruiter:

Recruiter's membership no.

Mail coupon and application with payment to: Chris Koenig, HGM Associates, Inc., P.O. Box 919, Council Bluffs, IA 51502-0919.

Compliments of Nebraska Section AWWA

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- ☐ Mr.
☐ Mrs.
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☐ Dr.

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Exact Street Address		(P.O. Box or Mail Stop)	
City	State or Province	Zip or Postal Code	
Title			
Company Name			
Home Phone	Business Phone	Business Fax	
Applicant's Signature			Date
Signature of AWWA Member Endorsing Application (Optional)			Endorsing Member Number
Is your company a current member of AWWA? _____ If not, please provide your company's main address if different from above:			
Company Name		Main Business Address	
City	State/Province	Zip or Postal Code	

ANNUAL DUES: **\$90-Active** **\$40-Operations/Administrative** **\$28-Student** **\$140-International**
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ANNUAL DUES \$ _____
Section Assessment* _____
Multi-Section Option† _____
TOTAL DUE \$ _____

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PREPAYMENT OF ONE YEAR'S DUES REQUIRED
No action can be taken on this application until payment is received.

Dues amount guaranteed through December 31, 1998

*Section Assessment - AWWA has 43 local sections. Your section is determined by your address. However, some sections require additional annual fees to better serve their local members. **Section assessments are mandatory for applicants with addresses as shown:**

Please find your Section Assessment fee in the table at right and enter the total on the line reading "Section Assessment."

ADDRESS	ACTIVE (02)	OPERATIONS (06)
Connecticut, Florida	\$10	
Georgia	\$25	
Idaho (western), Oregon, Washington	\$ 9	
Illinois	\$ 7.20	\$ 3
Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	\$45	\$18
Minnesota, South Carolina, Texas	\$10	\$10
Pennsylvania	\$15	\$ 5
New York	\$15	\$ 8

ALL APPLICANTS SHOULD COMPLETE THIS SECTION:

Circle the descriptions below that best describe you. The information is used in audits of AWWA readership. Circle only ONE in each group.

BUSINESS AND INDUSTRY

- A. Public Water Supply Utility—Municipally Owned
B. Public Water Supply Utility—Investor Owned
C. Governmental—Federal, State, Local
D. Consultant
E. Contractor
F. Private Industrial Systems or Water Wholesaler
G. Manufacturer of Equipment & Supplies including Representatives
H. Distributors of Equipment & Supplies including Representatives
I. Educational Institutions, Faculty and Students, Libraries, and Other Related Organizations
J. Fully Retired
K. Research Labs
L. Unreported

CHECK FIELD(S) SERVED:

- 5 ☐ Water Supply Only 7 ☐ Wastewater Only
9 ☐ Both 3 ☐ Other

JOB TITLE

- A. Executive-Gen'l Mgr., Commissioner, Board Member, City Mgr., Mayor, President, Vice-President, Owner, Partner, Director, etc.
B. Management-Division Head, Section Head, Mgr., Chief Engineer, Comptroller, etc.
C. Engineering/non-managerial-Civil Engr., Mech. Engr. Envir. Engr., Planning Mgr., Field Engr., Systems Designer, etc.
D. Scientific/non-managerial-Chemist, Biologist, Biophysicist, Researcher, Analyst, etc.
E. Purchasing-Purchasing Agent, Procurement Specialist, Buyer, etc.
F. Operations-Foreman, Operator, Maintenance, Crewman, Service Rep., etc.
G. Marketing & Sales/non-managerial-Mkt. Analyst, Mkt. Rep., Salesman, Sales Rep., etc.
H. Other (describe) _____

Completion of this information is optional.

AWWA maintains profile data for use in developing additional programs and services to meet the diverse needs of our members.

Birth Date _____ / _____ / _____

Race/Ethnic Identification: (check one)

- ☐ 1 American Indian/Alaskan Native
☐ 2 Asian/Pacific-Islander
☐ 3 African American
☐ 4 Hispanic
☐ 5 White (Non-Hispanic)
☐ 6 Other

Gender: (check one)

- ☐ F Female ☐ M Male

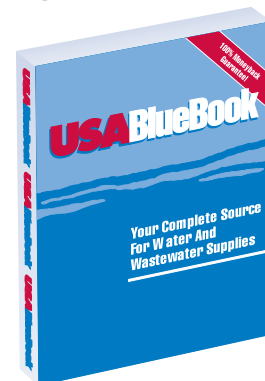
† **MULTI-SECTION MEMBERSHIP OPTION** In addition to your own section membership, you may also join other AWWA section(s). This allows you to receive information on events and activities from other local sections. Please circle your choice of multi-sections and enter the fee(s) in the line reading "Multi-Section Option".

CIRCLE MULTI-SECTION CHOICES

AKA ALASKA	\$14	KAN KANSAS	\$14	PAC PACIFIC NORTHWEST (OR, WA & WESTERN ID)	\$23
ALA ALABAMA-MISSISSIPPI	\$14	KNT KENTUCKY-TENNESSEE	\$14	PEN PENNSYLVANIA	\$14
ARI ARIZONA	\$14	MEX MEXICO	\$14	PRT PUERTO RICO	\$14
ATC ACWWA (NB, NF, NS, PE)	\$14	MIC MICHIGAN	\$14	QUE QUEBEC	\$14
BRC BRITISH COLUMBIA (BC, YT)	\$14	MIN MINNESOTA	\$24	RMT ROCKY MOUNTAIN (CO, NM, WY)	\$14
CAL CALIFORNIA-NEVADA	\$14	MOU MISSOURI	\$14	SCR SOUTH CAROLINA	\$24
CHS CHESAPEAKE (DE, DC, MD)	\$14	MTN MONTANA	\$14	SDK SOUTH DAKOTA	\$14
CON CONNECTICUT	\$24	NEB NEBRASKA	\$14	SOW SOUTHWEST (AR, LA, OK)	\$14
FLA FLORIDA	\$14	NEW NEWWA (MA, ME, NH, RI, VT)	\$59	TEX TEXAS	\$24
GEO GEORGIA	\$39	NEJ NEW JERSEY	\$14	VIR VIRGINIA	\$14
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INT INTERMOUNTAIN (UT & EASTERN ID)	\$14	OHO OHIO	\$14		
IWA IOWA	\$14	ONT ONTARIO (ON)	\$14		

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Brief notes

Plan to test your knowledge of the water industry at the Fall Conference, November 4 at 3:30 p.m., in the Top OPS Challenge!

The Top OPS Challenge, now in its fifth year, has been one of the highlights of the annual Fall Conference. Based on the JEOPARDY game format, the challenge will include questions about general water knowledge, maintenance and regulations.

Operators, engineers and suppliers are urged to form teams. Limit of eight teams. No entry fee. Lots of prizes for winners. To register, call **Chris Koenig**, HGM Associates, (712) 323-0530.

In this issue

Fall conference agenda 3

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Plant optimization 7

Sodium hypochlorite 9

The next issue of **Wise Water Words** will be published in mid-February, 2000. Deadline for reports from committee chairs and advertisements is February 1. Fax your reports to **Mari Matulka**, 402.449.8166 or call 402.449.8154 or you may e-mail them to mari@radiks.net.

Fall conference, November 4

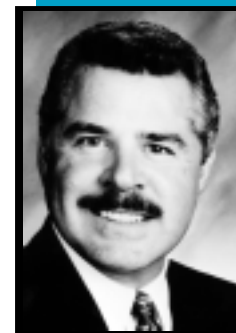
AWWA treasurer to speak at joint luncheon

Marlay Price, treasurer of National AWWA, will be the featured speaker at the fall conference joint AWWA-NWEA luncheon, November 4, 1999, Ramada Inn, Kearney.

Price, who joined AWWA in 1993, is water resources marketing director for Gannett Fleming, Inc. He holds a double major from the University of Cincinnati in business management and economics, plus a masters degree in business administration from the University of Dayton.

Price's service to AWWA includes: chair of the Manufacturers Advisory Committee (MAC); director-at-large, representing associate members on the Board of Directors from 1985-1988; member of the Finance, Public Information, Strategic Planning, Business Planning, Space Needs, Implementation for the 21st Century, Pension Membership Benefits, and Dues Committees. A Fuller Awardee, he also chaired the Ohio Section's membership committee and holds every recruiting award—Diamond Pin, Ambassador, Silver and Gold, and Platinum Presidential Awards.

Price's civic participation has included service on various local boards for the Aullwood Audubon Center, the Children's Medical Center, the Dayton Art Institute, and the James M. Cox Arboretum. He also is active in the Dayton Chamber of Commerce.



Marlay Price

Nominations Committee *by Terry O'Brien*

The Nominating Committee proposes the following slate of officers for election at the Fall Conference business meeting. Nominations also will be taken from the membership.

Chair	Joel Christensen , Metropolitan Utilities District, Omaha
Chair-Elect	Charles Haas , HDR Engineering, Inc.
Vice Chair & Treasurer	Chris Koenig , HGM Associates, Inc., Council Bluffs
Secretary	Dennis Watts , Norfolk Utilities, City of Norfolk
Trustee & Past Chair	Rich Koenig , Nebraska Health & Human Services, Norfolk
Trustee	Larry Andreasen , City of Fremont
Trustee	Tony Bilek , Raines & Associates, Omaha
Trustee	Scott Borman , City of Chadron
Director	Dennis Hirschbrunner , HDR Engineering, Inc.

Chair's comments

It seems like summer arrived with a bang. High temperatures usually indicate water use will rise to accommodate the needs of our customers. Typically this is true for all public water suppliers, unless your system happens to have its source water supply become flooded.

The Nebraska Section AWWA mentoring program got a jump-start when the Village of Santee lost its source water wells in July due to a flood. Our mentoring program allowed several water operators the opportunity to share their expertise in various areas to a water system that was desperately in need of assistance. **Steve Dolesh, Bob Elston, David Jundt, Gene Schroeder, Leon Wakely and Dennis Watts** and their water systems provided the necessary expertise to maintain the integrity of the Santee water system. This is what the mentoring program is truly all about, water operators helping water operators.

The crisis in Santee also demonstrates that preparing for an unexpected emergency is not just for the problems associated with Y2K. The Fall Annual Conference November 4-5 will have a topic which addresses this issue.

Speaking of the Fall Conference, the agenda (*see page 3*) is top notch with something for all individuals involved in the water industry. A big thank you to the Fall Conference Committee Chair **Joel Christensen** for developing this program. Together, by participating in the conference, we can make this the best conference ever.

As my term as Chair of the Nebraska Section expires in November, it seems the year went by very quickly. Serving as the chair has been an experience I will never forget. At times it seemed overwhelming and other times it was a pleasure to represent Nebraska's water professionals on the state and national levels. Thank you for your confidence and support during my term as chair.

Section establishes mentor program Volunteers needed

The contract for the SRF Set-a-Side Funds went into effect July 1. In addition to providing materials for small systems the Nebraska Section's education and small systems committees are teaming up to establish a mentoring program to help water systems. We are looking for volunteers to serve as mentors. For more information,

Wise Water Words is published three times a year for members of the Nebraska Section of the American Water Works Association.
Editor: **Mari Matulka**, APR, 402.449.8154
Fax: 402.449.8166; e-mail: mari@radiks.net

call **Bob Elston**, (402) 582-4928; e-mail: plains@plvwelco.net or **Mike Wentink**, (308) 535-8134.



Rich Koenig

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Kent Prior, Awards
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Rich Robinson, Membership
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Terry O'Brien, Nominations
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(308) 387-4623

Dr. Mohamed Dahab, Research
(402) 472-5018

Rob Pierce, Safety
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Bob Elston, Small Systems
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Jennifer Miller, Student Activities
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John Olsson, Water for People
(402) 474-6311

Jerry Obrist, Water Utility Council
(402) 441-5930

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1999 annual conference agenda—Ramada Inn, Kearney

Ramada Inn: 800.248.4460 (conference room rate: \$51 single; \$61 double)

Thursday, November 4

7:30 A.M. Registration

Session A Contingency Planning: Is it just for Y2K?

8:30-10 A.M. **Dennis Watts**, City of Norfolk
Pat Pope, Nebraska Public Power District
General Francis Laden, Nebraska
Emergency Management System

Session B Engineering for Efficiency

8:30-9:15 A.M. How much color is too much color?
The effectiveness of iron and manganese
sequestering in Fremont

Warren Sund, City of Fremont
Eric Cox, HDR Engineering, Inc.

9:15-10 A.M. Energy Cost Management in Norfolk
Alan Ely, Black & Veatch

10 A.M. *Break and Exhibits*

Session A System Maintenance

10:30-11 A.M. Hydrant Maintenance
Tony White, Mueller

11-11:30 A.M. Valve Maintenance
Mike Hauge, **John Nangel**, Pratt

11:30 A.M.-noon Maintenance Programs
Jim Lafler, **Nick McElvain**,
Lincoln Water System

Session B Global Trends

10:30 A.M.-noon Joint session with Nebraska Water
Environment Association
Duane Schlicht, U.S. Filter
Jerry Radek, Metropolitan Utilities District
Jim Suttle, HDR Engineering, Inc.
Chuck Tharp, Environmental Dynamics, Inc.

NOON-1:30 P.M. Joint AWWA and NWEA Lunch

Marlay Price, National AWWA treasurer

1:30-2:30 P.M. Section business meeting
Election of officers

2:30-3 P.M. Committee meetings

3 P.M. *Break and Exhibits*

3:30-5 P.M. Top-Ops Competition

6-7 P.M. Top OPS Finals – Social Hour

7 P.M. Banquet and award presentations

Friday, November 5

7:15-8:30 A.M. Water Operator Breakfast

Session A Well Registration

8:30-9:30 A.M. **Susan France**
Nebraska Department of Water Resources
Tom Christopherson
Nebraska Health and Human Services

Session B Disinfection Strategies

8:30-9 A.M. Small System Emergency Chlorination
Randy Hellbusch, Nebraska Rural Water
9-9:30 A.M. On-site Sodium Hypochlorite Generators
Dennis Fishbeck, Exceltee International

9:30 A.M. *Break and Exhibits*

10-10:30 A.M. **Small System Support and Resources**
Bob Elston, City of Plainview
Mike Wentink
Nebraska Health and Human Services

10:30-noon **Regulatory Update**
Jack Daniel and staff
Nebraska Health and Human Services

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Director's report by Dennis Hirschbrunner

Since my last report, I attended the National AWWA Conference in Chicago, June 19-24. The conference for me began on Saturday, June 19, with a pre-board of directors' meeting.



Dennis Hirschbrunner

The main topic of discussion was funding allotment from national to the sections. The issue was raised at the last directors meeting in San Antonio due to revenue surplus generated in 1998. The issue to raise the minimum section allotment was assigned to the budget committee with a recommendation to the board.

The report made at the pre-board meeting June 19 presented three options. We spent the afternoon reviewing the options and held a vote at the Sunday board meeting. Beginning in the Year 2000, the minimum section allotment for all sections will be \$15,000. This represents a \$7,000 per year increase for the Nebraska Section.

The other highlight of the board meeting was the presentation of candidates for president-elect of AWWA. We have three very qualified candidates: **Billy Turner** of Columbus, GA; **Ron Schwartswalder**, Cleveland, OH, and **Elisa Speranza**, Boston, MA. The board will vote on these candidates at the mid-year meeting.

Besides board meetings, I attended several technical sessions and spent time on the exhibit floor. The conference also was the culmination of Rod Holme's presidency and the inauguration of Steve Gorden's term as president. If you remember, Steve represented national AWWA at our fall conference last year.

Since returning from the conference, I attended the section board meeting July 22 in Columbus. At that meeting, we formed an ad hoc committee to evaluate the benefits and needs for a part-time or full-time staff person to help with the day-to-day activities of the section. Stay tuned for the report and recommendation.

The other area that needs our attention is the continued development of the new Safe Drinking Water Act regulations by EPA, particularly in the areas of radon and arsenic. See **Jerry Obrist's** report in the next column and contact him if you have comments on these issues.

Looking forward to seeing all of you in Kearney, November 4-5.

Water Utility Council report

by Jerry Obrist

The following major activities of the Water Utility Council continue with the EPA and Nebraska Department of Health and Human Services Regulation and Licensure (NDHHSRL) with regard to the implementation of the Safe Drinking Water Act.

Consumer Confidence Report - The NDHHSRL has worked with other water associations in Nebraska to develop a format for the first consumer confidence report. Community water systems must publish and distribute an annual water quality report with the first one due October 19, 1999.

Capacity Development (for new systems) - Requires all new community and non-transient non-community (NTNC) water systems beginning operation after October 1, 1999, to meet technical, managerial and financial capacity requirements.

Capacity Development (for existing systems) - Requires the State of Nebraska to develop strategies for existing systems. This is effective October 1, 2000.

Unregulated Contaminant Monitoring - Requires community and NTNC systems to monitor for contaminants not regulated (having no MCLs). This becomes effective August, 2000.

Operator Certification - Becomes effective February, 2001 and requires:

1. States to classify community and NTNC water systems based on indicators of potential health risk.
2. A designated certified operator be available for each operating shift.
3. Operators to take and pass an exam whose questions have been validated.
4. Minimum on-the-job experience for each level of certification.
5. Continuing education requirements applicable to grade level.
6. All operating personnel making process control/system integrity decisions about water quality or quantity must be certified.

Ground Water Rule - Requires:

1. More detailed sanitary surveys.
2. Hydrogeologic sensitivity assessments for systems that don't disinfect.
3. Source water monitoring for fecal indicators.
4. Treatment if alternate source is not available and significant deficiency(s) cannot be corrected.

Water Utility Council *(continued from page 4)*

It's important that wells are properly located, constructed, maintained and operated, and that the water system have a good cross-connection control program to ensure that safe water is delivered to its customers.

Disinfection, if required, would have considerable economic impact on small systems in Nebraska. Please keep in touch with the NDHHSRL on the development status of this rule. The final rule is due November, 2000.

Interim Enhanced Surface Water Rule - Requires:

1. Systems using ground water or GWUDI to meet 0.3 NTU turbidity standard.
2. Monitoring of individual filters for turbidity.
3. Possible profiling or benchmarking.

Systems serving more than 10,000 must comply by December, 2001; smaller systems, December, 2003.

Disinfectants and Disinfection By-products I - Requires all community and NTNC public water suppliers who treat water with a chemical disinfectant to meet lower THM and HAA5 standards.

Surface water systems serving more than 10,000 must comply by December, 2001; all other surface water systems and ground water systems by December, 2003.

Arsenic - Requires all community and NTNC systems to meet a new standard. MCL is expected to be lowered to 2 to 20 ppb. This could have a major impact on many water utilities in Nebraska using groundwater.

Proposed rule is expected January 1, 2000; final rule, January 1, 2001.

Please turn to Page 6

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Brief notes

◆ Congratulations to **D.R. Correl**, Wallace, NE, recipient of an outstanding water operator award from the League of Nebraska Municipalities.

Other recipients included: **Rick Bittenham**, North Platte, and **Tim Lineweber**, Beatrice.

◆ **HDR Engineering** recently earned the Bronze Quill Award of Excellence for Annual Reports from the International Association of Business Communicators—Omaha for the content, writing and design of the 1997 report.

The **Metropolitan Utilities District** received second place for its 1998 report. The M.U.D. report is posted on the web site: <http://www.mudomaha.com>.

◆ **Bob Stubbe** has been promoted to Manager of Engineering and Construction at M.U.D. A grade I water operator, he was promoted to superintendent of the Water Distribution in 1986, and superintendent of the Construction Division in 1988.

Ron Reisner has been named superintendent of the District's construction division.

◆ Promotions to vice president at Leo A. Daly, Inc. include: **E. Taylor Armstrong**, **Patrick D. Edwards**, **Richard F. LaRosa**, **Robert L. Luhrs**, **Jerry L. Norris** and **Alexander M. Ward**.

James A. Hedgpeth will serve as director of operations for the Omaha office.

Coming September 1
Check out our
updated web site:
<http://www.awwaneb.org>

Water Utility Council *(continued from page 5)*

Radon - Applies to all CWS and NTNCs with final rule due August, 2000. Requires:

1. MCL and Alternative MCL (AMCL) for radon.
2. Requirements for a state multimedia mitigation program. If EPA approves the multimedia mitigation program, systems can comply with AMCL, not MCL.

Benefit Cost Analysis - The Radon Rule has been selected as the first rule to apply the Benefit Cost Analysis in setting a MCL. The Radon Rule also presents a first case in which a sensitive subpopulation is a critical issue in the benefit cost analysis (i.e., smokers — recognize that smokers have a large hearing on the benefit results in this rule).

Of particular concern is the proposed MCL and the process in evaluating the Radon Rule. We need to evaluate the rule carefully.

As utilities, we need to ensure EPA obtains the "sound science" before setting MCLs. Adequate scientific studies need to be completed before MCLs are set. Statutory deadlines need to be adjusted to realistic time frames to utilize the scientific studies.

On-line learning

With the Safe Drinking Water Act requirements increasing the need for operator training, AWWA is developing a on-line learning program to give water operators access to education and training via the Internet 24 hours a day, seven days per week.

Participants will be able to register and pay on-line, download files for study off-line or compete interactive lessons on-line, take tests and receive CEUs. You'll also be able to return to completed course material for refresher purposes at any time.

Courses will be available for basic, intermediate and advanced topics. Initial courses will focus on basic treatment and distribution operator knowledge. Cost will vary, depending on the length of the course. Generally, a 3-4 contact hour module will range \$50-\$60.

Internet-based training allows for training on demand, without an operator having to leave the plant, a great advantage, particularly for small system operators. Internet-based training will not replace seminars and other AWWA training

events, but will provide additional training opportunities.

For more information, contact **Jay Fermaglich** at jfermagl@awwa.org or call (303) 347-6205.

Safety report

by Rob Pierce, League of Nebraska Municipalities (402.476.2829)

The trenching and shoring safety workshops have been well attended with one more workshop August 25, in North Platte remaining. Approximately 91 people attended the workshops at the Grand Island, Scottsbluff and Lincoln sites.

Bob Hessler of Safety Line Consultants, Scottsbluff, and **Joe Stevens** of Ultra Shore Products, Denver, have done an excellent job of presenting this program, which has resulted in many positive comments from participants.

The Safety Committee also bought AWWA's video, "Five S's of Excavation Safety." To borrow the video from the Nebraska Section Library, call **Lonnie Rech**, 402. 473.5923.

Systematic approach to plant optimization

by David J. Hildebrand and Edward N. Antoun

AH Environmental Consultants, Inc., Virginia Section AWWA

With the promulgation of the Interim Enhanced Surface Water Treatment Rule and Stage 1 of the Disinfectants/Disinfection By-Products Rule, the water industry has accelerated the move towards optimizing treatment processes that began in earnest with the Partnership for Safe Drinking Water.

For a number of water utilities, this presents operators with a bewildering array of sometimes conflicting goals and choices. For example: The pretreatment conditions required to optimize the removal of natural organic material may have a negative impact on particle removal, and increasing the disinfectant dose and/or contact time to optimize primary disinfection will likely result in an increase in Trihalomethanes (THMs) and other disinfection by-products.

As a result, there is a need to recognize that treatment strategies must consider all of the goals or Maximum Contaminant Levels (MCLs) and not focus on single goals or MCLs as has been done in the past.

A change in water chemistry or type of physical treatment which affects any one requirement will likely impact many of the others.

One of the more effective methods of meeting the new goals or requirements is through a systems type of approach recognizing that all unit processes are inter-related and have to be evaluated as such.

The first step of such an approach is to define the parameter(s) or condition(s) to optimize: NOM removal, particle/microbial removal, disinfection, etc.

The second step is to identify the treatment changes required to achieve this goal. In the case of NOM removal, this would include:

1. An evaluation of the Specific UV Absorbance (SUVA) to help identify the type of NOM present in the raw water and the practical removal limits.
2. The addition of a coagulant dose that is, as a minimum, sufficient to achieve charge neutralization.
3. If possible, reduce the pH of coagulation to a range that is favorable for NOM removal.

The next step, one that is critical if problems are to be avoided, is to identify any constraints or other processes that might be negatively impacted by these changes. For example:

- One utility increased the alum dose beyond the available alkalinity. This resulted in unreacted alum passing through the

Please turn to Page 8

Section training

Board meetings

September 16	9:30 a.m., City Council Chambers, Columbus <i>Jack Daniel to discuss radon rule</i>
November 5	Ramada Inn, Kearney

Video teleconferences

November 9, 11-2:30 p.m. CST (Ashland: *Lincoln Water System*, Gering, Hastings, Norfolk)

The New Disinfection By-Product and Surface Water Treatment Rules: Operational Issues and Treatment Strategies

The teleconference will cover:

- Impacts on utilities of the Stage 1 Disinfectants/Disinfection By-Products Rule Interim Enhanced Surface Water Treatment Rules.
- Potential issues involved in integrating compliance with these two rules.
- How to comply with these rules without triggering compliance violations of other rules
- Tools and techniques available to water utility operators for compliance and how to implement these tools and techniques individually and in combination.
- What operators across the country are doing to help their utilities comply with the rules.

For more information call **Mike Wentink**, 308.535.8134.

Backflow Recertification Seminars

Sponsored by the Nebraska Section AWWA

September 27	Neligh
September 28	Ogallala
September 29	Grand Island
September 30	Beatrice

Water Operator training

Sponsored by the Nebraska Section AWWA and League of Nebraska Municipalities

October 5	Valentine
October 6	Burwell
October 7	Norfolk
December 7	Grand Island
December 8	Fremont
December 9	Nebraska City

Fall Conference

November 4-5	Ramada Inn, Kearney
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Systematic approach to plant optimization

(continued from page 7)

plant and post precipitation occurring after the final pH adjustment.

- Another utility that installed ozone without biofiltration experienced uncontrolled bacterial regrowth in the distribution system within four months of starting up the new facilities.
- The City of Milwaukee's switch from a conventional coagulant to a polyaluminum chloride/polymer blend to reduce the corrosivity of the water in response to the Lead and Copper Rule set the stage for the particle breakthrough at the treatment plant and the subsequent outbreak of *Cryptosporidium*.

The final step is to address these potential constraints and/or negative impacts. For example:

- The addition of a small quantity of caustic to the rapid mix was sufficient to alleviate the post precipitation in the first utility.
- Faced with constraints that prevented the use of biofiltration, the second utility eliminated the regrowth problem by reducing the ozone dose, flushing the distribution system using the "unidirectional" technique to remove the biofilm, and increasing the residual disinfectant leaving the treatment plant.

As more water utilities embark on this journey to optimize treatment, it is important to approach this goal logically and systematically to avoid creating other problems along the way.

National AWWA training

Call 800.926.7337 for information and registration.

Annual Conference and Exposition

June 11-15, 2000 Denver, CO

Distribution System Symposium

September 12-15 Reno, NV

Effective Compensation Management in Water Utilities: A Human Resources Issues Seminar

October 7-8 Chicago, IL

Filter Surveillance Workshop

November 16-17 Springfield, IL

Financial Management Seminar

November 3-5 Scottsdale, AZ

Infrastructure Conference

March 15-20, 2000 Baltimore, MD

Inorganics Workshop

February 27-29, 2000 Albuquerque, NM

Management and Supervision Seminar

September 13-14 Northbrook, IL

Water Resources Conference

September 26-29 Norfolk, VA

Water Reuse 2000 Conference

January 31-February 3 San Antonio, TX

Water Quality Technology Conference

October 31-November 3 Tampa, FL

Sodium hypochlorite conversion

by Stephen Simpson, P.E., Missouri Section AWWA

Chlorine gas is a hazardous chemical, both for plant operations staff and for the environment. Chlorine gas is supplied in pressurized containers, so there is a degree of physical hazard in addition to the health hazard.

In addition, chlorine gas is heavier than air, so it does not disperse easily in the event of a leak. Safety features such as chlorine detectors, emergency ventilation systems and automatic shut off valves typically are provided where gaseous chlorine is used, but the risk of injury or environmental damage from an accidental release of chlorine gas cannot be entirely eliminated.

Recognizing these hazards, chlorine gas was addressed in the OSHA Process Safety Management Regulation (finalized February 24, 1992), and in the EPA Chemical Accident Prevention Regulation (finalized June 20, 1996). These regulations require formal identification of hazards, documentation procedures and mitigation measures.

The time and cost for compliance with these regulations is significant, particularly for small systems. In addition to the initial studies and plan development, reviews, audits, training, coordination, documentation and administration effort are required on a continuous basis to maintain compliance.

Facilities modifications or upgrades also may be required based on the hazards analyses, such as building modifications and/or chlorine scrubbers for leak containment and treatment.

Public safety concerns with chlorine gas use also may be significant, depending on the utility, particularly those with plants located geographically close to residential neighborhoods or populous commercial districts.

These circumstances increase the likelihood of public harm if a release were to occur. Even without an actual incident, the presence of hazardous chemicals and emergency evacuation plans can be a source of negative publicity.

Due to the increasing regulations associated with chlorine gas and safety concerns, many utilities are reconsidering the form of chlorine they use for disinfection. Addition of chlorine gas (Cl_2), liquid sodium hypochlorite (NaOCl), or calcium hypochlorite to drinking water results in the production of hypochlorous acid (HOCl) as a disinfectant.

Because all of these chemicals produce HOCl , they will provide equivalent levels of disinfection when the dosage of elemental chlorine and the pH of the water being treated is the same.

However, there is significant variation in operating cost between these options. Chlorine gas is the least expensive option, generally followed by sodium hypochlorite, with calcium hypochlorite the highest cost.

Please turn to Page 8

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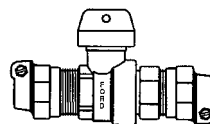
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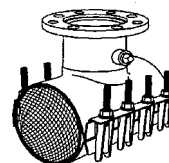
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Sodium hypochlorite conversion

(continued from page 9)

For small systems, the cost differences between chemicals may not be significant. However, for larger systems, the cost difference can be substantial. As a result, most utilities considering changing chlorine form are considering sodium hypochlorite, either purchased or generated onsite. Utilities considering converting to a sodium hypochlorite should carefully evaluate a number of issues.

The strength of hypochlorite is commonly expressed in terms of its available chlorine content as "trade percent." Liquid sodium hypochlorite is available in solution strengths up to 15 percent available chlorine. A 12.5 percent solution contains one pound of available chlorine per gallon of solution. The pH of the solutions range from 11 to 13.

One of the differences between using sodium hypochlorite instead of liquid chlorine for disinfection is the tendency to increase rather than decrease the pH of the treated water. Sodium hypochlorite reacts with water to form sodium hydroxide, a strong base, where liquid chlorine reacts to form hydrochloric acid.

In general, a higher pH would require a larger CT value to meet disinfection requirements. A higher pH also would contribute to increased formation of THMs in the finished water.

Furthermore, the enhanced coagulation requirement of the pending Disinfectant/Disinfection By-Product Rule will likely require increased coagulant dosages for coagulation if the pH level increases.

However, these differences would not occur at many plants because the pH is controlled by alkaline addition (such as lime). The primary effect of switching from liquid chlorine to sodium hypochlorite in this situation would be a decrease in the lime dosage.

Replacing one mole of chlorine gas (Cl_2) with one mole of sodium hypochlorite (NaOCl) replaces the need for one mole of hydrated lime ($\text{Ca}(\text{OH})_2$). In weight terms, one pound of sodium hypochlorite replaces 0.95 pounds of chlorine gas and 0.99 pounds of hydrated lime.

Another concern with using sodium hypochlorite is that it is somewhat unstable at high concentrations, causing the solution strength to decrease over time. The rate of degradation increases at higher temperatures, with exposure to light and at lower pH levels.

Also, impurities such as iron, copper, nickel and cobalt will contribute to the degradation of the solution. In addition to the loss of solution strength, another concern is the formation of chlorate ions (ClO_3^-). Chlorate ions are a disinfection by-product that are formed with degradation of NaOCl solutions, but are not formed when chlorine gas is used for disinfection.

The proposed Disinfectant/Disinfection By-Product Rule does not include an MCL for chlorate ions, however the Information Collection Rule required monitoring to generate data for use in setting a future limit.

The degradation of sodium hypochlorite can be controlled by proper storage of the liquid. The solution strength affects degradation rate, with higher solution strengths having higher degradation rates.

Therefore, the trade-off between storage volume and degradation potential should be considered. Preventing exposure to sunlight or high temperatures also will assist in controlling degradation. The amount of degradation can be minimized operationally by simply using a shipment within a relatively short period of time.

Converting from gaseous chlorine to liquid sodium hypochlorite will require new storage and feed systems. To store and feed liquid sodium hypochlorite, bulk storage tanks are required, and metering pumps generally are required, unless facilities can be located to allow gravity feed. The use of day tanks also should be considered for improved monitoring and control.

Bulk storage tanks typically are sized to store two to four weeks supply of sodium hypochlorite at average production rates. Storage quantities should accommodate a full chemical shipment, if possible, to minimize cost.

Other issues that should be considered include secondary containment, protection of the stored solution from freezing (if tanks are to be located outdoors) and instrument for level monitoring.

Metering pumps typically are sized for maximum dosage needed at maximum plant production rates, and should include provisions for firm capacity (i.e. an online standby unit). Metering pump design should address the range of dosage and flows needed, typically through provision of stroke rate control adjustment.

As utilities seek to comply with additional regulations by OSHA and EPA, and continue to address safety concerns, many are considering alternatives to gaseous chlorine.

The primary advantages of chlorine gas are the cost-effectiveness and simplicity of these systems. The primary advantages of sodium hypochlorite are a lower cost than other alternative chlorine forms, and increased material handling safety as compared to gas chlorine.

Conversion to sodium hypochlorite should be carefully evaluated due to the inherent cost, handling and treatment differences from chlorine gas.

Groundwater Guardian workshop

The Annual Fall Symposium and National Groundwater Guardian Conference will be held November 15-17 at the Omni Hotel, CNN Center, Atlanta, GA. Speakers include **Peter Dykstra**, CNN, and **Carol Browner**, EPA administrator.

The conference will address research and strategies as they relate to groundwater risks. For details, call 800.858.4844 or e-mail: info@groundwater.org.

Manufacturers Association Council

by Tony Bilek, Raines & Associates (402.758.9020)

Objectives and purpose of the Nebraska MAC will be decided by the volunteers who serve on the council. Council members/volunteers will be continually recruited. Additional information about Nebraska MAC will be available at the fall conference. A council meeting will be held Thursday, November 4, 2:30 p.m., Ramada Inn, Kearney.

Please call 402.758.9020 with questions regarding how you and your organization can benefit from being an active member of the Nebraska MAC.

MAC members fall under the umbrella of organization memberships, along with consultant and technical service members.

Membership fees and benefit information are available from AWWA, 800.926.7337 or on-line at www.awwa.org, or through the Nebraska Membership Committee. Contact **Rich Robinson**, 402.255.3840.



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Nebraska Section 1999 budget (as of July 20, 1999)

INCOME

	1999 Budget	1999 Actual
Section allotment	\$ 4,000.00	\$ 4,000.00
Association allotment	4,000.00	4,000.00
Multi-section allotment	400.00	348.50
Annual meeting	7,500.00	0
Director's allotment	650.00	781.46
Interest from accounts	2,200.00	1,045.77
Education seminar	500.00	0
Safety seminar	300.00	0
Cross connection workshop	300.00	250.00
Teleconferences	6,000.00	3,385.76
Advertising income	5,000.00	3,460.00
Water for People	2,000.00	0
SRF Education Funds	10,000.00	0
Miscellaneous	400.00	0
Total Income	\$43,250.00	\$17,291.49

EXPENSES

Safety committee	2,500.00	332.50
Cross connection workshop	\$ 1,500.00	0
Education and training		
LONM/NSAWWA Seminars	1,000.00	0
Public Information Committee	100.00	0
Teleconferences	8,000.00	560.86
Small systems committee	500.00	0
Director's board meeting	800.00	674.86
Publications		
Wise Water Words	6,000.00	4,202.73
Membership Directory	0	0
Advertising	100.00	0
Student activity	600.00	0
Membership	500.00	40.00
Secretary/treasurer	200.00	109.80
Awards (<i>Fuller</i>)	300.00	0
Abel Wolman	1,200.00	600.00
Research Foundation	500.00	500.00
Regional officers' meeting	2,000.00	691.47
Director's spouse (<i>meeting expenses</i>)	300.00	0
Annual meeting	2,050.00	0
Scholarship awards	1,000.00	1,000.00
Publicity 100.00	0	
Water for People	2,500.00	0
Water Utility Council (<i>travel, etc.</i>)	1,000.00	0
Miscellaneous	100.00	160.49
Total Expenses	\$31,250.00	\$8,472.71
Net Income	12,000.00	8,818.78

Advertisement rates for newsletter

Price is for one issue only. Include \$50 setup fee. Black and Pantone 293 Blue are only colors of ink printed. Your ad also will appear in the publication when it is posted on our web site: www.awwaneb.com

Size	Black/White or Blue/White	Black/Blue
Business card size	\$ 65	\$125
1/4 page	110	170
1/2 page	180	240
full page	250	350

Advertisement rates for 2000-2001 directory

Include \$50 setup fee. No setup fee charged if the same copy and artwork is run in the newsletter. Black is the only color of ink printed. Your ad also will appear in the publication when it is posted on our web site: www.awwaneb.com

Size	Black/White
Business card size	\$195
1/4 page	330
1/2 page	540
full page	750

Ad order form for 2000 publications

An ad in the 2000-2001 membership directory and newsletters in 2000 gives you a link on our web site to your company's home page.

- ☐ 2000-2001 Membership Directory (deadline for copy, etc. November 10, 1999)
- ☐ Wise Water Words, Spring issue, 2000 (deadline for copy, etc. January 15, 2000)
- ☐ Wise Water Words, Summer issue, 2000 (deadline for copy, etc. April 1, 2000)
- ☐ Wise Water Words, Fall/Winter issue, 2000 (deadline for copy, etc. August 1, 2000)

Size	Black ink only or Blue ink only (please specify)	Black/Blue
Business card size:	_____	_____
1/4 page	_____	_____
1/3 page	_____	_____
1/2 page	_____	_____
full page	_____	_____

- ☐ Use same copy, artwork and design for publications I marked above.

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Membership Committee

by Rich Robinson, Kirkham Michael (402.255.3840)

The Membership Committee is sponsoring a recruitment contest with prizes to be awarded at the Nebraska Section AWWA dinner, November 4, 1999, in Kearney. Here are the prize categories:

1. Top recruiter (*person who recruits the most new members*)—\$50
2. Drawing—two prizes of \$25 each

Drawing rules—The names of Nebraska Section members endorsing one or more new candidates between January 1-November 1, 1999 will be placed in a drawing. The number of new members a current member recruits determines the number of times his or her name is entered in the drawing. For example, if you sign up two new members, your name is entered twice in the drawing.

\$20 (*individual membership*)

or

\$10 (*operations membership*)

This coupon, when attached to a completed application for membership in AWWA with payment of membership dues (*less the amount of this coupon*), entitles the bearer to a discount of \$20 (*\$10 for operations membership*) to be used towards the cost of that membership. To be valid, the following lines must be completed:

Name of applicant:

Name of recruiter:

Recruiter's membership no.

Mail coupon and application with payment to: Chris Koenig, HGM Associates, Inc., P.O. Box 919, Council Bluffs, IA 51502-0919.

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Coupons

The Membership Committee has a coupon program to help new members offset the cost of first year membership dues. A coupon with a \$20 value toward an AWWA individual active membership (*or \$10 towards an operations membership*) is on this page. Contact **Rich Robinson**, chair of the Membership Committee or **Chris Koenig**, treasurer, **712.323.0530** for more coupons. Only one coupon per application and one coupon per person will be accepted.

The coupon needs to be signed by a recruiter, attached to the completed application (make copies of application on page 15) and payment and sent to **Chris Koenig**, Nebraska Section AWWA Treasurer, HGM Associates, Inc., P.O. Box 919, Council Bluffs, IA 51502-0919. Chris will remove the coupon from the application and add a check from the Nebraska Section for \$20 (*\$10 for operations membership*) before forwarding the application to national AWWA.

Only Nebraska Section members in good standing may sign a coupon. The recruiter should collect the application and payment (*minus the coupon amount*), attach the coupon and mail it for the applicant to Chris.

If the recruiter does not have a coupon handy, send the completed application with the payment (*minus the coupon amount*), to Chris with a note requesting that a coupon be filled out and recorded for the Section books. This note must be signed by the recruiter to be valid. If you have any questions, please call **Rich Robinson, 402.255.3840**.

New Members

The Nebraska Section AWWA reported 344 members as of July 1999 compared to 316 members in January 1998. Welcome to our newest members:

Bucher, Ronald E., Metropolitan Utilities District, 1723 Harney St., Omaha, NE 68102-1907; 402.449.8157; e-mail: ron_bucher@mudnebr.com

Grazier, Elizabeth, U.S. Filter, 14707 Custer Rd., Omaha, NE 68138-3831; 402.896.6173

Stefero, Karen, U.S. Army Corps of Engineers, 215 N. 17 St., Omaha, NE 68102; 402.221.3230

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Have you ever been a member of AWWA? _____

When? _____ Member # _____

Section 1: Personal Information

Preferred mailing address:

☐ Mr. ☐ Ms.

☐ Business

☐ Mrs.

☐ Home

☐ Dr.

Name: _____

Street address: _____

Address: _____

P.O. Box or mail stop: _____

City, state, zip: _____

Business phone: (_____) _____ Business fax: (_____) _____

e-mail address: _____

Company: _____

Title: _____

Is your company a current member of AWWA?

☐ No

☐ Yes

Member # (if known) _____

Please furnish company mailing address if different from above:

Company address: _____

City, state, zip: _____

Applicant's signature: _____

Date: _____

Signature of endorsing member (optional): _____

Endorsing member number: _____

Section 2: Dues and Section Assessments

☐ Active - \$95 (02)

☐ Student - \$30 (14)

☐ Operations/Administrative - \$45 (06) (will not receive Journal AWWA)

☐ International - \$140 (03)

Section 3: Payment

Dues are valid through December 31, 1999. No action on this application can be taken until payment is received. Dues are not transferrable or refundable. Dues are not deductible as charitable contributions for income tax purposes. Dues may be considered ordinary and necessary business deductions.

Annual Dues \$ _____

Line 1 (enter amount from annual dues in Section 2)

Multi-Section Option \$ _____

Line 2 (enter amount from annual dues in Section 4)

Total (U.S. funds) \$ _____

Line 3 (add above amounts and enter total here)

Payment method

☐ Check enclosed, payable to AWWA. Canadian funds—add 35%

☐ Send invoice

☐ Mastercard

☐ Visa

☐ Diner's Club

☐ American Express

Card Number: _____ Expiration Date: _____

Signature: _____ (Credit card company will add Canadian exchange amount.)

Section 4: Multi-Section Option

In addition to your section membership, you also may join other AWWA section(s). This allows you to receive information on events and activities from other sections of your choice. If you would like multi-section information and fees, call 800.926.7337, and then indicate your multi-section choice(s) and fee(s) in the space below.

If you decide to join other AWWA sections, enter the total multi-section fee in line 3 of Payment Section 3.

Section 5: Circulation Figures

All applicants must complete this section. For auditing purposes, please circle one description in each of the 3 groups below that best describes you.

Business and Industry

- A. Public Water Supply—Municipally Owned
- B. Public Water Supply—Investor Owned
- C. Government—Federal, State, Local
- D. Consultant
- E. Contractor
- F. Private Industrial Systems or Water Wholesaler
- G. Manufacturer of Equipment & Supplies, including Representatives
- H. Distributors of Equipment & Supplies, including Representatives
- I. Educational Institutions, Faculty and Students, Libraries and Other Related Organizations
- J. Fully Retired
- K. Research Lab
- L. Unreported

Field Served

- 5 Water Supply Only
- 7 Wastewater Only
- 9 Both
- 3 Other

Job Title

- A. Executive—General Manager, Commissioner, Board Member, City Manager, Mayor, President, Vice-President, Owner, Partner, Director, etc.
- B. Management—Division Head, Section Head, Manager, Chief Engineer, Comptroller, etc.
- C. Engineering/Non-managerial—Civil Engineer, Mechanical Engineer, Environmental Engineer, Planning Manager, Field Engineer, System Designer, etc.
- D. Scientific/Non-managerial—Chemist, Biologist, Biophysicist, Researcher, Analyst, etc.
- E. Purchasing—Purchasing Agent, Procurement Specialist, Buyer, etc.
- F. Operations—Foreman, Operator, Maintenance, Crewman, Service Representative, etc.
- G. Marketing & Sales/Non-managerial—Market Analyst, Marketing Representative, Salesperson, Sales Representative, etc.
- H. Other: _____

Interests

Please help us serve you better by marking all appropriate areas of professional interest.

- ☐ Backflow
- ☐ Career Development
- ☐ Computer/Information Systems
- ☐ Conservation/Efficiency
- ☐ Customer Service
- ☐ Disinfection
- ☐ Distribution System
- ☐ Emergency Planning
- ☐ Filtration
- ☐ Ground Water
- ☐ Hazardous Waste Management
- ☐ Laboratory/Testing Sample
- ☐ Maintenance/Operations
- ☐ Membrane Treatment
- ☐ Personnel Management
- ☐ Public Information/Relations
- ☐ Regulatory/Legislative
- ☐ Water Resources Mgmt./Plan.
- ☐ Rates/Cost of Service
- ☐ Safety
- ☐ Surface Water
- ☐ Water Reuse
- ☐ Youth Education
- ☐ Other: _____

Optional

AWWA maintains profile data for use in developing additional programs and services to meet the diverse needs of our members.

Birth Date: _____

Race/Ethnic Identification (Circle one)

- 1. American Indian/Alaskan Native
- 2. Asian/Pacific-Islander
- 3. African-American
- 4. Hispanic
- 5. White (Non-Hispanic)
- 6. Other

Gender (Circle One)

- Female
- Male

Mail to: AWWA Membership
6666 W. Quincy Ave.
Denver, CO 80235
800.926.737
303.794.7711

or fax to: 303.347.0804

Signature required: _____

Date: _____

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