#### Issue 1/2012

## Nebraska Runal Water Association



## Nebraska Good Water News

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## Nebraska Good Water News

"Keeping Our Water Safe"

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"Nebraska Good Water News" is a quarterly publication of the NEBRASKA RURAL WATER ASSOCIATION, 3390 Ponderosa, Wahoo, Nebraska 68066. Phone 1-800-842-8039 or (402) 443-5216 or FAX (402) 443-5274. Copies are mailed to all member rural and municipal water operators, Federal and State Legislators, associates and individual members.

The NEBRASKA RURAL WATER ASSOCIATION is dedicated to the improvement and assistance of all public water systems in the State of Nebraska.

NOTICE: Nebraska Rural Water Association does not endorse any particular product or company in this publication. Membership and advertising should not be taken as an endorsement.

## Issue 1/2012

#### Board of Directors

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Mike Lucas, Wastewater Technician Charles Bausch, Training/GIS Specialist

#### Website: www.nerwa.org

#### On the cover:

The City of North Bend had an abandoned 120,000 gallon elevated storage tank located in its downtown business district. The City hired All Industrial Services to remove that tower in 2005. Caldwell Tanks built the City a new 300,000 gallon elevated storage tank in 2005 on the block were the water treatment facility sits. Rutjens Construction completed an expansion at the water treatment facility in 2005. The City's water has high levels of iron and manganese deposits and is treated by chlorination and aeration. The City has a contract with PeopleService to operate their water & sewer systems.

"This institution is an Equal Opportunity Provider and Employer."

#### How'd We Do and Letters From...



NERWA

Clerk/Treasurer June Moline Utilities Superintendent Nick Raver Police Chief Jerry Carlson Librarian Vera Kuhr

Village of Mead 312 South Vine Street

Post Office Box 46 Mead, Nebraska 68041-0046 Phone (402) 624-2495 Fax (402) 624-2024

Board of Trustees Ailene Raver, Chairman Jim Halbmaier, Trustee Steve Mayfield, Trustee Adam Miller, Trustee Richard Wielage, Trusteer

November 8, 2011

Nebraska Rural Water Association 3390 Ponderosa Drive Wahoo, NE 68066

The Village of Mead Board of Trustees wishes to express their appreciation for your services in answer to our water and wastewater concerns. A check is enclosed to your Equipment Fund. Thank you.

Sincerely,

aline Rave Ailene Raver

Chairperson, Board of Trustees

P.O. Box 81 • Hallam, Nebraska 68368-0081

December 1, 2011

Nebraska Rural Water Association Attn: Mr. Randy Hellbusch 3390 Ponderosa Drive Wahoo, NE 68066

Village of Hallam

Dear Randy Hellbusch,

The Village of Hallam Board of Trustees is very grateful for all of the assistance that you and the Nebraska Rural Water Association have provided to our town this year. We really appreciate your expertise and preparation of the Water and Rate Study for the Village of Hallam. Your knowledge and recommendations from this study were very valuable to demonstrate the actual cost of providing this service to our residents and business customers. As a result of the information that you provided, the Village Board implemented a base rate increase of \$2.00 to \$8.75 for the minimum charge of 3,000 gallons of water use and a \$0.25 increase on all water in excess of 3,000 gallons to \$3.00 per 1,000 gallons. We were also pleased to learn that our sewer charges were at or near the average rate and adequate for our current needs. Thanks ever so much!

> Sincerely, The Village of Hallam Board of Trustees

Jauree Ebbers Mark Mark Simonson

Lary Vocasek Gary Vocasek, Pro Tem

Village of Hallam

December 1, 2011

P.O. Box 81 • Hallam, Nebraska 68368-0081

Nebraska Rural Water Association Attn: Mr. Russ Topp 3390 Ponderosa Drive Wahoo, NE 68066

Dear Russ Topp,

The Village of Hallam Board of Trustees is very grateful for all of the assistance that you and the Nebraska Rural Water Association have provided to our town for so many years! Your expertise in all areas of our water distribution system has been so important to our ability to function as a water system provider. Your investment of time and selflessness with the numerous trips to Hallam to assist us with the maintenance issues of emptying the water tower prior to cleaning, providing a pressure relief valve, disinfection of the wells, repair of the chlorine and fluoride pumps are greatly appreciated! In addition to all of this, we are thankful that you have helped us with compliance regarding regulations of record management, the emergency plan, cross connection issues, sampling, testing and so much more. Thanks again for your generosity, thoughtfulness and support!

> Sincerely, The Village of Hallam Board of Trustees

Tom Suppa, Chair

Lary Vocasek Gary Vocasek, Pro Tem

aure Ebbers Lauree Ebbers

Mark Simonson

Wollenb

VILLAGE OF WILCOX P.O. Box 88 Wilcox, NE 68982

Fax: 308-478-5827

Phone: 308-478-5510

December 19, 2011

Nebraska Rural Water Association 3390 Ponderosa St. Wahoo, NE 68066

Dear NeRWA:

The Village Board and Staff would like to say "Thank You" for all the help you have given the Village of Wilcox over the years. You are always there when we call.

Please accept the enclosed donation to your equipment fund in appreciation for all the work you do.

Have a Merry Christmas and a Great New Year!

Helinda Terse Sincerely,

Melinda Ferree Village Clerk

Water Ope	rator Training
April 18	Pierce
April 19	South Sioux City
June 15	Sutton
October 16	Axtell
October 17	North Platte
November 8	Red Cloud
December 18	Geneva
December 20	Wahoo

Wastewa	ter Training
January 18	Aurora/NDEQ
February 15	Albion/NDEQ
March 14	Omaha/NDEQ
April 18 April 24	Falls City/NDEQ McCook/NDEQ
May 15 May 16	Arnold/NDEQ Bridgeport/ NDEQ
June 20	Hickman/NDEQ
July 17 July 18	Ainsworth/NDEQ Laurel/NDEQ

Grade 6 Backflow Prev Connection Control C	
January 23-27	Wahoo
April 16-20	Wahoo
October 22-26	Wahoo
Wastewater Certifica	ation Course
Wastewater Certifica January 31-Feb. 3	ation Course Wahoo
January 31-Feb. 3	Wahoo
January 31-Feb. 3 April 10-13	Wahoo Wahoo

	<u>Continuing</u> on Training
January 12	Alliance
January 18	Ainsworth
February 14 February 16	Nebraska City Norfolk-Nucor Steel
April 10	Hastings
April 12	Wymore
May 8	O'Neill
May 10	Callaway
September 6	Ord
September 25	Falls City
September 27	York
October 10	South Sioux City
November 14	Gordon
November 27	Wahoo
December 11	Mitchell
December 12	Imperial
December 13	Cambridge
December 19	Wahoo



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Nebraska Rural Water Association 3390 Ponderosa Wahoo, NE 68066 www.nerwa.org

September 26	Trenching & Shoring	Wahoo
September 27	Confined Space Entry	Wahoo
Hea	nnual Conference March 19-21 artland Event Center and Island, Nebraska	
	Western Conference Sept. 18-20 Gering Civic Center Gering, Nebraska	] : !

NeRWA is an Equal Opportunity Provider & Employer.



#### **Preparation is the Key**

By Barney Whatley, Capacity Development Specialist

As we begin the New Year, all systems that are considering water improvement projects should have completed and submitted the annual needs survey. This survey serves two purposes and is a very important document. First, the project costs that are included on all the submitted surveys are totaled, and this figure is used as the amount of funding systems within the state need to maintain the infrastructure for providing safe drinking water to their customers. The percentage of the national needs for water infrastructure that this amount represents helps to determine the amount of funding the state will receive when congress determines the total available funds for water infrastructure projects. Considering that grant funds are becoming harder and harder to get, the amount of low interest loan funds available to systems is determined by the needs survey.

Second, low interest funding, including USDA funding, CDBG funding and SRF funding are only available to systems who are on the intended use plan, and the only way to get on that plan is to submit the needs survey. There are some exceptions for emergencies, but replacement of worn out or obsolete infrastructure and controls is seldom considered to be an emergency. Any system that is seriously considering any water improvement project in the foreseeable future should make it a priority to fill out and submit the needs survey annually.

As the Water and Wastewater Advisory Committee (WWAC) reviews the surveys that are submitted to them, they rank the projects using an assortment of criteria, including cost, health consequences, regulatory requirements and others. Following the ranking of the projects, the committee then looks at the available funding sources and determines the best fit of funding with the highest ranking projects. This is done with consideration for both the best solution for the systems and the wisest use of the available funds.

Once these decisions have been made, the funds are offered to the top ranking systems. Systems that are not ready to proceed with their projects are often delayed in getting funding, and sometimes other systems are offered the funds set aside for the higher ranked system. One thing a system can do to improve their chances of getting a project funded is to be ready to proceed with the project.

To this end, it is a good idea for a system to proceed with some of the initial phases of the project that are not tied to a set timeline. A system needing a new well could locate possible well sites and procure easements or options on the property ahead of time, allowing them to be able to proceed more quickly. Water samples from sources near the proposed well site could be tested for nitrates and arsenic prior to other testing, especially if these contaminants are playing a role in the need for a new well. Any steps a system can take prior to being offered funding that will reduce the timeline of the project without costing large amounts of money may increase the chances of the project being funded if higher priority projects are not prepared to proceed in a timely manner. Preparation for your project can be a key element in getting it funded.





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#### **The True Value of Water**

By Randy Hellbusch, Circuit Rider

You have probably heard it said many times that water is our most precious natural resource. Yet the drinking water industry has long experienced difficulties in conveying to consumers the value of the service provided. Water itself is basically free. Anyone can take a bucket to a stream or river and dip out all they want. But are they willing to drink it? Maybe if people were forced to do this for a short period of time they would be more agreeable to paying the true cost of clean, safe water.

Clean, safe drinking water delivered right to the tap of the consumer comes at a price. Often times though it does not come at the price that it actually costs the system to produce. Most consumers pay much less for water than they do for other utilities such as electricity, natural gas, etc. The electric and gas companies keep up with the rising costs of producing and delivering their product and pass those costs on to their consumers. I am fairly confident that there is no one out there that is paying the same for electricity or gas that they were five years ago. Yet there are many water systems out there that haven't increased rates for five years or longer. To the consumer this sends the message that water must not be worth much. It gives the appearance that water is less valuable than other utilities. Consumers say to themselves, "My water doesn't increase like the rest of my utilities do so it must not take much to produce and deliver it." The effect of underpricing a product is to understate its value. Many water systems' rates do not reflect the true cost of delivering clean, safe water. Many water systems are subsidized with funds other than revenue from the water sales alone. This practice is often more acceptable politically than actually raising the rates to cover the true cost of operation. This often catches up with a system when the source of subsidization suddenly isn't there anymore or the water system needs major improvements but no money has ever been put aside for upgrades. Then what? In the words of Emeril Lagassi: "BAM!"

Suddenly the system needs a major rate increase. Now you have a major public outcry. "Why wasn't someone aware that our water system was losing money? Doesn't anyone keep track of this kind of stuff?" The water utility that thought they were doing their customers a favor by never raising rates now has a lynch mob on their hands. It is much easier for the average consumer to budget for a small increase every year or so than to suddenly see their bill double from what they were used to paying. The water industry can learn a valuable lesson just looking around them and seeing what other utilities are doing. When your cell phone contract is up, do you expect the next contract to be the same price? Good luck with that. How often does your cable or satellite TV bill increase? Ask yourself what is actually more valuable, the cell phone and TV or clean, safe drinking water?





#### 2012 NeRWA Conference, March 19-21, 2012

By Charles Bausch, Training / GIS Specialist

Out with 2011 and in with 2012! That means the NeRWA Conference is right around the corner. This year's conference theme is "Quality Education for Quality Water". There are some changes you should come and see this year at the conference.

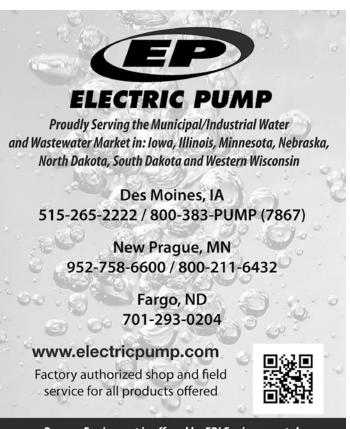
The first and the biggest change is the conference is no longer in Columbus at the New World Inn. We have moved the conference to Grand Island at the Heartland Event Center. The Heartland Event Center will give us the space we need to grow with larger classroom space and larger space for our exhibitors. The second change is we are combining our Utility EXPO and our Annual Conference into one event. We feel this will better serve our attendees and our exhibitors to come to one show instead of two. This means our Annual Conference will now have hands-on sessions, as well as, classroom sessions. This will provide a nice change in pace to the conference. Attendees will no longer have to just sit all day in sessions. Now we will be able to throw in hands-on sessions to help get the blood flowing.

The complete conference agenda will be in this issue of the "Nebraska Good Water News" and once again we will offer over 40 sessions of continuing education. The conference format will stay the same. Monday will be a general session with information from DHHS, USDA, and DEQ on funding and issues in Nebraska. Tuesday and Wednesday will be concurrent one hour sessions, including hands-on sessions.

The host hotel will be the **Midtown Holiday Inn;** a booking link is on our website <u>www.nerwa.org</u>. Monday night "fun night" will also be held at the Midtown Holiday Inn after the meal we have at the Heartland Event Center. Conference meals will be catered by the renowned Chances R restaurant of York. We will also have two other hotels for overflow if the Midtown Holiday Inn gets completely booked. They are the *Best Western Inn and Suites* and the *Super* 8 *Motel*. Both of these hotels are within walking distance from the Midtown Holiday Inn. Make sure to get your rooms booked early as these blocks will fill up fast.

New venue, new hotel and a combination of our EXPO and Annual Conference will mean a new experience for all Attendees and Exhibitors. Get your registration in early and your rooms booked.

We look forward to seeing you at the Heartland Event Center for the 2012 NeRWA Conference.



**Process Equipment is offered by EPI Environmental.** Please see the website at www.epi-environmental.com

#### Nebraska Rural Water Association

**Annual Conference Pre-Registration** 

#### March 19-21, 2012 Heartland Event Center Grand Island, Nebraska

Name (1 person per form)	
Water System/Company Name	Pre-Registration
Address	Deadline is
City, State, Zip	March 7,2012
License numbers MUST on this form to receive the correct CEUs.	· · · · · · · · · · · · · · · · · · ·

License numbers MUST on this form to receive the correct CEUs.

License #:	Water:	BF_	WW	OSWW	WD
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**REGISTRATION INCLUDES TRAINING MATERIALS, MEALS AND BREAKS.** Registration fees received after March 7 and on-site will increase. Monday is free for all utility/rural water board members. Board Members can attend Tuesday & Wednesday for the price of meal tickets.

I am a Board Member attending Monday (no charge)\_

Tues \_\_\_\_\_ Wed \_\_\_\_\_ (Cost of meals only—check meals below)

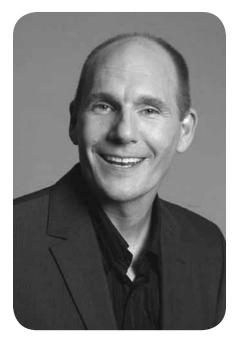
I am the Voting Delegate\_\_\_\_\_

DAYS ATTENDING	Member	Member after March 7	Non-Member	Non-Member after March 7
FULL CONFERENCE (all meals)	\$375.00	450.00	\$475.00	\$550.00
MONDAY (evening meal)	\$100.00	125.00	\$125.00	\$150.00
TUESDAY (lunch & evening meal)	\$175.00	\$200.00	\$200.00	\$225.00
WEDNESDAY (breakfast & lunch)	\$125.00	\$150.00	\$150.00	\$175.00

All meals are included for each registration. Please indicate below if you will be staying for the evening meals. You will not be charged for them if you are registered—it's for a more accurate count. Guests need to purchase a ticket for every meal. The breakfast on Wednesday is complimentary for all registered for the conference.

Extra	meals	Your	Guest				
avai	lable	Tickets	Tickets	Cost	Total		Registration \$
Mon even	ning			\$25	\$		Tickets \$
Tues lunc	h			\$15	\$		Total \$
Tues Ban	nquet			\$30	\$		
Wed lunch	h			\$15	\$	NeRWA	member: Bill Payment enclosed
Name of	f guest					Non-mem	bers—Payment must accompany registration
To Regis	800-842	2-8039 (					When making room reservations, mention you are with NeRWA
Fax: . Mail:	Nebras 3390 P	ka Rura onderos	a Street		tion		Midtown Holiday Inn 2503 S Locust St 308-384-1330
Online:		erwa.org		· <u> </u>	<u> </u>	DATE R	REGISTRATION RECEIVED:
ſ				CANCE	LATION	POLICY: Full refu	nd before March 9.
For NeR	WA offic	e use o	only:		Pay	nent received	Check #
Hours:	Water	BF_	Was	stewater <u></u>	0	WWWD	Certificate mailed

#### **Tuesday Night Conference Entertainment**



#### David Crowe

"David Crowe pumps out enough comic adrenaline to drop a circus elephant."

~Tom Griswold (The Bob and Tom Show)

"I laughed so hard the candle on the table burned my forehead." ~Brad from Indiana

Crowe's brand of stand-up comedy reads like the beginning of the Dickens classic, <u>A Tale of Two Cities</u>. "It was the smartest of shows. It was the dumbest of shows. It was witty and bright. It was brash and physical. It was Dick Cavett. It was Jim Carrey. It was horrifying. It was hilarious."

"Crowe delivers a brilliant combination of saucy intellectualism and physical buffoonery. The result is a totally original style of brain bending jocularity.

~Jacqueline Houston, BBC

This unique combination of talents has brought him continued acclaim. He is the only comedian in history to win both the Seattle and San Francisco International Comedy Competitions. He is a regular guest on the nationally syndicated "Bob and Tom Radio Show", making the coveted "Best of Bob and Tom" album four times in the last five years.

His show hits on many levels making it perfect for everything from private functions to huge corporate events. He has entertained in large and small venues for clients such as Boeing, Microsoft and Uniguard Insurance, just to name a few. He was also selected to perform before President Clinton and 2,500 supporters at the Paramount Theater in Seattle.

#### **Annual Conference Lodging Information**

#### **HOLIDAY INN**

(1 mile from Heartland Event Center) Grand Island-Midtown 2503 S Locust St. Hotel front desk: 308-384-1330 Hotel fax: 308-382-4615

#### **BEST WESTERN**

(1 mile from Heartland Event Center) 2707 S Locust St. Hotel phone: 308-381-8855 Hotel fax: 308-381-8856

#### **SUPER 8 GRAND ISLAND**

(1 mile from Heartland Event Center) 2603 L Locust St. Hotel phone: 308-384-4380 Hotel fax: 308-384-5015

Mention you are with the Nebraska Rural Water Association room block.

#### Annual Conference Agenda March 19-21, 2012

Monda	-	Bosselman Conference
March <sup>•</sup>	19	Center
1:00	2:00	Water System Regulatory Update - Jack Daniel, DHHS. 1W
.50 bre	eak	
2:30	3:00	ER Grant Information and Implementation-Mike Wentink, DHHS5W
3:00	4:00	SRF Drinking Water and Clean Water Update, Security Grant Update, and Source Water and 319 Grant Update. 1W,1WW
.50 bre	eak	
4:30	5:30	Nitrate Issues in Hastings Project and Solution-Marty Stange. 1W
5:30	6:00	Dealing with Customers, Board Members and State Officials5W,.5WW

Tuesday March 20	·	Session A - Hands on Area	Session B - Classroom 1	Session C - Classroom 2	Session D - Classroom 3
9:00	10:00	Service Line Repair and Installation-Bob Hennig, Municipal Pipe Services. 1W	Small System Roundtable- NeRWA Board. 1W,1WW	Rural System Roundtable- NeRWA Board. 1W	Backflow- Rich Koenig, DHHS. 1W,1BF,1WW
.50 brea	k		I	I	
10:30	11:30	Service Line Repair and Installation-Bob Hennig, Municipal Pipe Services. 1W	Pump Repair and Troubleshooting-Billy Czapla, Pumping Solutions Inc. 1W,1WW,1WD	Managing Water Quality in a Storage System-John Snodgrass, Utility Service Co. 1W	Backflow- Rich Koenig, DHHS 1BF,1WW, 1W
1 hour	lunch				
12:30	1:30	Main Repair and Installation 1W, 1WW	Metering Pumps and Controls, Billy Czapla- Pumping Solutions Inc. 1W,1WW,1WD	Rate Studies and NeRWA Rate Book-Randy Hellbusch, NeRWA. 1W, 1WW	Backflow-Bob Jedlicka, Mack McClain Associates. 1W,1BF

#### **Tentative Hours:**

Monday: 4 water, 1.5 wastewater Tuesday: 6 water, 6 wastewater, 5 backflow, 3 well driller Wednesday: 4 water, 4 wastewater, 4 well driller

There are 4 on-site wastewater sessions on Wednesday

#### Annual Conference Agenda March 19-21, 2012

2:00	3:00	Main Repair and	Lagoon Cleaning and	Water Meters and	Backflow-
		Installation 1W, 1WW	Land Application Options- Scott Wienands, Nutri- Ject Systems Inc. 1WW	Automatic Meter Reading Systems-Brad Cutler, Sensus. 1W	Barney Whatley, NeRWA. 1BF, 1WW, 1W
.50 bre	ak			l	1
3:30	4:30	Line Locating-Travis Beran, Subsurface Solutions. 1W,1WW	Wastewater Recordkeeping-Dawn Martin and Reuel Anderson, NDEQ. 1WW	Asset Management, Water Security and DHHS Training Q&A Session- Scott Sprague, Kris Luebbe, Mike Wentink, DHHS. 1W	Backflow Quiz Bowl. 1BF
.25 bre	ak			I	,
4:45	5:45	Line Locating-Travis Beran Subsurface Solutions 1W,1WW	Opportunities with VFD's and SCADA Controls- Lincoln Williams, HOA Solutions Inc. 1W,1WW,1WD	Dealing with Contaminants in Your Water and Waste Disposal-Jeff Shomburg, and Bryan Ford, Bartlett and West Engineering. 1W,1WD,1WW	Chlorine Pumps and Repairs- USA Bluebook. 1W,1WW
Wedne March	-	Session A - Hands on Area		Session C - Classrooms 3 & 4	
7:30	8:30	Breakfast and NeRWA Boar		۳ <del>۵</del>	
8:30	9:30	Trenching and Shoring Hands-on Training. 1W,1WW,1WD,1OS	CIPP 101 Pipe/Infrastructure Rehabilitation-Brian McCrary, Insituform Technologies USA Inc. 1W,1WW,1WD	Regulation Question and Answer Session-DHHS Field Area Reps. 1W	
.25 bre	ak				
9:45	10:45	Trenching and Shoring Hands on Training. Repeat. 1W,1WW,1WD,1OS	Advancements in Instrumentation and Methodology for Water and Wastewater Analysis- Eric Lehmann, Hach Company. 1W,1WW	Sanitary Problems in Water Storage-Clyde H. Zelch, Tomcat Consultants/T.A.P Co. 1W	
.25 bre	ak				
11:00	12:00	Confined Space Training, Hands-on Training. 1W, 1WW, 1WD, 1OS	Screening and Grit Removal Options and Repair and Maintenance. 1WW	Fire Hydrant Maintenance and Repair-Andy Kohler, Clow Valve. 1W	
1 hour	lunch		L		
1:00	2:00	Confined Space Training, Hands-on Training. Repeat. 1W,1WW, 1WD, 1OS	Lagoon Basics-Mike Lucas, NeRWA. 1WW	Stainless Steel in Sustainable Water Storage Systems-Jim Maguire, American Structures. 1W	

#### Spouse Program Annual Conference Tuesday, March 20, 2012

Join us for some fun scrapbooking. This program is for anyone interested in keeping memories in a scrapbook. Keep it for yourself or give it as a gift.

Bring 5-6 photos and 3 other items to scrapbook 2-3 pages. Possible themes:

*"Travel" Bring pictures from a recent trip, plane ticket, admission ticket to an event or show, small shell from a beach, or token from a trip.* 

"Holiday" Bring holiday and family photos. scraps of wrapping paper, ribbon or used holiday cards.

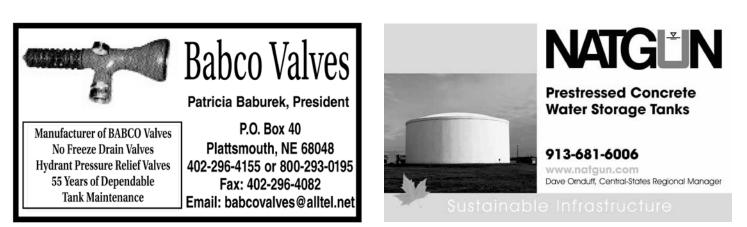
Or just bring any photos or items you want to start a scrapbook.

This will be a great time to start a new one or finish up an existing one. Use this as time for new ideas and inspiration to get some pages in your scrapbook.

If you or your spouse or guest is interested, please call or have them call the NeRWA office—800-842-8039 or 402-443-5216. You do not need to pre-register, but it will help us prepare materials. There has not been a spouse program at the conference for a few years. We hope to see some familiar faces from the past and also some new ones.



## 





#### The Importance of Tracking Water Produced or Pumped

By Russ Topp, Circuit Rider

By the time you read this article we will be in the heart of winter here in Nebraska. So far this fall we have had relatively mild weather. I hope it continues.

It is always a good idea to record the water produced or water pumped at each of your wells on a daily basis, but it's extremely important during freezing weather. We get called several times each winter from water systems losing a substantial amount of water. It is much easier to determine what kind of leak we are looking for if we have the daily pumping records. For example, if you are losing around 45,000 gallons a day that figures out to be about 30 gallons per minute. Usually this will be a service line break. Often you will see this after a cold spell and then a warm up. Typically you will find an abandoned or vacant house that had not been properly winterized. The pipes freeze and then after the weather warms up, it starts to flow. I once found a leak in a vacant home that had over 3 million gallons of water through the meter. The basement was full of water, as well as, a cistern just behind the house. I have reviewed records in the past and you could tell exactly the date a line broke. On one occasion you could see two different service line breaks and on the day they broke! Of course a larger water loss would most likely be a water main break. Typically, main breaks surface but we have found a lot of breaks that went to a storm drain or the



sanitary sewer. Don't forget to check the wells that are on emergency use. These wells have live water lines in them and if you lose the heat and the lines freeze you're in for a big water leak.

That brings up another important point, wastewater records. The inflow to the wastewater plant, lagoon or even a lift station can tell if the water has made its way to the sanitary sewer. If all else fails you can start popping manhole covers and see where there is an unusual amount of clear water. This narrows down the search.

As you can see daily records are invaluable when it comes time to finding a water leak.

On January 4, 2014, waterworks brass will change forever. The No-Lead Law affects you. The Ford Meter Box Company is ready for 2014 and can help you make the transition to no-lead brass.

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Issue 1/2012



#### **Wastewater Video Inspections**

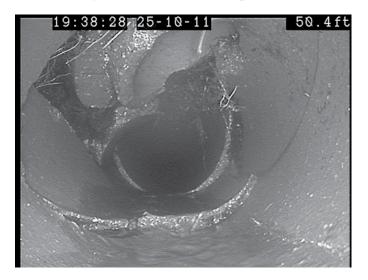
By Mike Lucas, Wastewater Technician

One of the services that the Nebraska Rural Water Association is able to provide is video inspections of the wastewater collection systems across the state. Many of you have taken advantage of this opportunity to inspect specific locations where frequent backups have occurred. Through your donations to NeRWA's equipment fund this service is still available at no cost. I often times have the camera with me in my travels anticipating the frequent requests for assistance. The images produced during the video inspection are available to you as a movie or as a snapshot. We can burn them to a disc or download them directly to your computer. Date, time and footage are recorded.

Through the vigilance and dedication of one system operator we recently worked through a noon hour and were able to save the system \$10,800.00 in construction change order costs by inspecting a drain line crossing beneath a road and determining that it did not need to be replaced. That operator certainly earned his wages that day!



It is often helpful if the sewer main has been cleaned prior to the video inspection. In the one photo you can see a large root blockage from what is believed to be two taps immediately across from each other. Efforts had been made to clear the line but they were experiencing difficulty in retrieving their jetter so I was asked to camera the line to see what they were dealing with. In this case due to restricted flow, sludge had settled out and built up in the line creating a challenge for us to have visibility. If water is backed up or during high flow situations visibility can also be difficult or impossible. Follow-up inspections after cleaning can also be very helpful. The second



picture shows a line where the integrity of the main has been completely destroyed due to a tap. When it was first inspected the main was completely blocked with roots. It was only after extensive jetting and root cutting that we were able to determine the damage to the main.

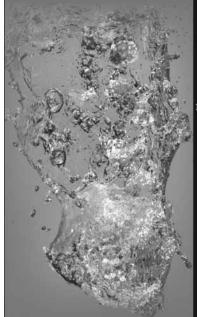
One particularly astute operator with a focus on serving the system's customer/owners coordinates and schedules several service lines for me to inspect on two days a year. These are lines where the customer has had problems or is just concerned about the condition of his service line. In several instances new construction is planned and a determination of whether or not to install a new service line and/or tap prudently needs to be made. These inspections may also help to provide evidence if past problems might potentially have been due to private service line issues as opposed to those of the city main. I

continued on page 17

am available to video inspect service lines if access is available and only upon the request of the system.

We are all challenged to responsibly adhere to a regular inspection/maintenance program. One proactive Utility Superintendent recently told me that they visually inspect the flow in every manhole monthly. Many systems have a schedule to jet clean all of their mains in a set number of years. Waiting for a phone call from an irate customer and then responding is no longer acceptable. Litigation due to sewer collection system backups has increased in numbers and has taken new approaches. At the time of this writing it is my understanding that a case to determine liability for sewer backup damage is before the State Supreme Court. Updates and further discussion of these cases and the potential impact on your systems will be included in our wastewater classes in 2012. I hope to see you there.

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Issue 1/2012



#### **Got Coliform?**

By Mike Stanzel, Deputy Circuit Rider

If you do, you're not alone. This past fall and into winter there seems to be an increasing number of systems that are having coliform issues. We have even been assisting systems that haven't had a violation in 25 years.

So where are they coming from and why? Well, that is the million dollar question. Starting November 1<sup>st</sup> the state lab discontinued the membrane filter test and is strictly using the colilert method. This test from what I understand is a very sensitive test and very susceptible to indicating positive results.

In assisting various systems, we have found several things that could be a contributing factor to receiving positives. One operator climbed his tower and discovered that the vent screen used was a ¼ inch steel mesh screen that was not small enough to prevent the Asian Beetle, (aka) "Biting Lady Bug," from entering the tank. He stated that there were literally hundreds of bugs floating on the surface even after overflowing the tower. To correct this issue he installed a stainless steel wire window screen to prevent entry.

Another operator also climbed his stand pipe and discovered that there were 5 small bolt holes where the bolts had rusted out thus allowing wasps to enter the tank and nest. We know this because after overflowing the tower, we saw the dead insects trapped behind the screen on the overflow pipe.

Another system that has a ground level storage tank had several positive results. Upon inspection of the tank, we discovered the hatch seal had deteriorated and was not providing a tight seal. We suspected that possibly spiders or insects had gotten in looking for a place for the winter.

Another possible factor is a closed valve in the distribution system, causing a dead end main or preventing a system from being looped. This can allow water to become stagnant, and if a pressure

fluctuation occurs, it can draw the stagnant water into the system near your sample points.

To help prevent coliform violations it can be a good practice to overflow your tower monthly, do some extra flushing in your system, re-evaluate your sample techniques and disinfect your tap several times prior to sampling. Also, make sure you are using fresh Clorox or alcohol when disinfecting your tap as these both can lose their strength and effectiveness over time, especially in small quantities.

Now is also the time to inspect your chlorinator. If the pump did not properly get cleaned out by running fresh water through it, it could possibly be corroded up and will need to be repaired before using it in an emergency situation. Additionally, be sure to check your residual tester and make sure the reagents are not expired.

If you would like assistance with evaluating your system in preventing future violations, please give us a call.

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#### **NEBRASKA RURAL WATER ASSOCIATION**

#### 3390 Ponderosa Street Wahoo, NE 68066

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High School Data				
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YOUR CLASS RANK	NU	IMBER OF STUDE	ENTS IN CLASS	
YOUR GRADE POINT AVERA	GE			
(Transcrip	t must be submitted with app	lication if applyin	g for the first time.)	
LIST BELOW ANY ACADEM RECEIVED DATING BACK TO		S OR OTHER SI	PECIAL RECOGNITION	YOU HAVE
	T YEAR OF HIGHER EDUCATI			
	REDIT HOURS COMPLETED_			
	T HOURS REQUIRED TO GRA			
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Parent Signature	Date

#### **Official Rules**

This grant of Five Hundred Dollars (\$500) will be made to a student to defray the cost of tuition, books, or room and board at an accredited institution of higher learning approved by the Nebraska Rural Water Association (NeRWA). Disbursement of the money will be made upon presentation of winner's college or university invoice as proof of full-time enrollment. The scholarship money will be paid directly to the student, two hundred fifty dollars (\$250) per semester. The scholarship will be awarded to children or stepchildren of member utility system employees. In order to be eligible for scholarship, applicants must complete the application form in its entirety by filling in all blanks. If item is not applicable please place a N/A in the blank. Upon completion return it to the NeRWA Scholarship responsibilities in community and school activities as well as grade point average. Applicants will be evaluated on a comparative basis at the sole discretion of the committee. Decisions will be final. Application material and decisions of the committee shall be confidential. Acceptance of scholarship constitutes permission to use recipient's name and/or likeness for purpose of promotion.











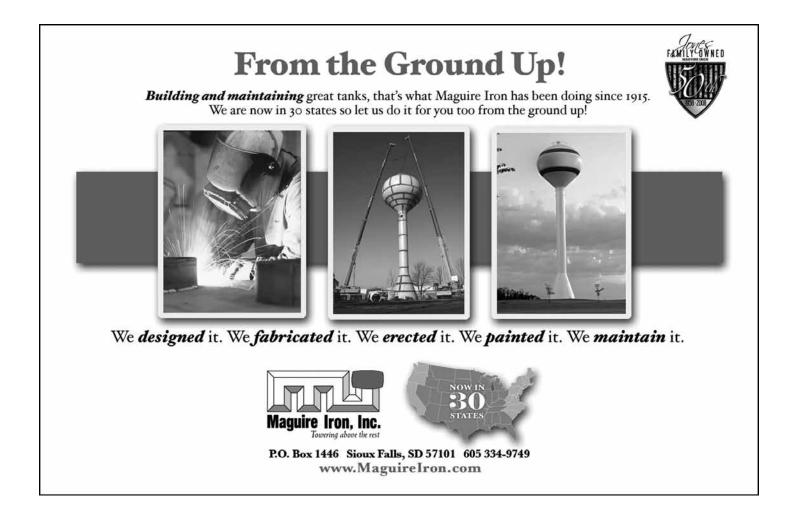
The Nebraska Rural Water Association is pleased to announce they will be presenting two \$500 scholarships for higher education purposes for the school year 2011-2012 fall and spring semesters.

The scholarship is available to children and stepchildren of member public water system employees. Employees of the Nebraska Rural Water Association Board of Directors and staff are not eligible. Interested persons should complete and submit the application inserted in this quarterly.

Applications are due March 2, 2012. Winners of the Scholarships will be announced at the Grand Island Conference in March 2012. Send all information to:

#### NeRWA 3390 Ponderosa Street Wahoo, NE 68066

If you have any questions, please give our office a call – 800.842.8039 or 402.443.5216.



#### Think about it...

Wouldn't it be nice if whenever we messed up our life we could simply press 'Ctrl Alt Delete' and start all over? Amen, Amen!

Don't argue with an idiot; people watching may not be able to tell the difference.

Why is it our children can't read a bible in school, but they can in prison???

How come we choose from just two people to run for president and over 50 for Miss America?

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#### "Ouestions and Answers for Water Works Men – Vol. 1"

Water Works Engineering; The Journal of the Water Works Profession Since 1877

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#### **CHLORINE**

What is chlorine? Chlorine is an element in the form of a heavy green gas at ordinary temperature and pressure.

How is chlorine obtained commercially? Chlorine is such an active element that it never exists in nature in a free form. It is produced by the electrolytic decomposition of sodium chloride. Caustic soda and hydrogen are the important by-products of the operation.

In what form is chlorine marketed for water supply treatment and what are the common trade names of the products and the percentage of chlorine present in each? The greatest tonnage of chlorine used for sanitation purposes is marketed in the liquid form by compression and cooling of the gas. It contains more than 99.5 per cent chlorine. Chloride of lime is a loose combination of chlorine with hydrated lime. It contains between 30 and 33 per cent free chlorine. Hypochlorite of lime, containing about 70 per cent free chlorine, is marketed under trade names such as HTH, Hoodchlor and Perchloron.

What are the usual containers in which chlorine gas is shipped? Liquified chlorine gas is shipped in steel cylinders equipped with fusible plugs to guard against explosion and with valves and delivery tubes arranged so that either gas or liquid may be withdrawn from the container.

What is the weight of the chlorine in each of the more usual size containers, the weight of the container itself, and the pressure of the chlorine gas in the container? The common containers respectively hold 100, 150 and 2,000 pounds of chlorine each. The empty containers weigh approximately 70, 120 and 1,300 pounds respectively. Sometimes tare weights are stamped on the containers. Suppliers will furnish tare weights with each



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shipment if requested to do so. Chlorine is furnished to a few large users in 30,000-pound tank cars. At ordinary temperatures, the pressure of the chlorine gas in the container is about ninety psi.

To what extent does the pressure of chlorine in a cylinder change with the change in the temperature? At minus 22 degrees F the pressure is 0 and at 212 degrees F, or the temperature of boiling water, the pressure is about 600 psi.

Would there be danger of a chlorine cylinder exploding if the building in which it was stored burned down? Under these circumstances, the fusible plugs would melt and release the chlorine before the contents of the cylinder reached a temperature which would produce a pressure sufficient to rupture the container. The released gas, though heavier than air, would be swept upward by the fire and diffused in the atmosphere.

Are there regulations governing the manufacture and shipment of chlorine cylinders designed to minimize the possibility of the chlorine in the cylinders escaping? Regulations have been established by the Interstate Commerce Commission which are too long and complicated to repeat here. The composition of the steel, the nature of the welding, valving and handling are covered in these regulations.



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What is the price difference in chlorine furnished in small cylinders and in ton containers? In carload lots, the price in ton containers is approximately forty-five per cent of that in 150-pound cylinders.

What procedure should be followed in case a cylinder develops a leak? Combinations of circumstances require different treatments, of course. First of all, the workman should be supplied with an oxygen mask so that he can work comfortably in an atmosphere containing a high concentration of chlorine. If the leak is due to a small hole, rather than to a crack in the cylinder, a slow taper pin may be driven into the opening and the leak stopped. If the leak is through a small crack, such treatment would increase it and might result in the rupture of the cylinder. Particularly in the case of a leaky valve, the difficulty may be corrected by connecting the leaking tank to an empty one in such a way that the liquid chlorine is drawn out of the leaking tank. The operation is facilitated by running cold water over the receiving tank or cooling it in some other fashion. In order to empty the leaking cylinder completely, gas must be drawn from the receiving tank to a chlorinator or vented to the atmosphere.

What special provision should be made in rooms for the storage or use of liquid chlorine? Since chlorine is heavier than air, it should not be stored or used in rooms below ground level. Rooms and buildings in which it is stored and used should be provided with special chlorine resistant ventilating fans taking suction at floor level.

How much chlorine per day may be supplied from 100, 150 and 2,000 pound containers? As chlorine evaporates, the liquid becomes chilled and the rate of evaporation is reduced. At 70 degrees F, a 100 or 150-pound container will deliver thirty-five pounds of chlorine per day and a 2,000 pound or ton container can, with certainty, be counted upon for about 420 pounds per day. These quantities may be increased by applying heat to the cylinders but this must be done with the greatest caution. A free flame should *never* be used. If the cylinders are immersed in a bath of hot water, its temperature should never exceed 150 degrees F. Above this temperature, the fusible plugs may soften and release the chlorine. In no case should heat be applied to the cylinder with the valve closed.

Since it is inconvenient, and rather unsatisfactory to manifold several cylinders together, a chlorine evaporator is indicated where greater amounts of chlorine are required than can be delivered by one or two cylinders. Thermostatically controlled evaporators are on the market which will deliver almost any amount of gaseous chlorine. When evaporators are used, all small cylinders are tilted with the valve end down and the large cylinders are connected to the evaporator from the lower valve.

## Nebraska Good Water News

Nebraska Rural Water Association - 3390 Ponderosa Drive - Wahoo, NE 68066 Home | Office | Membership Info | Training | Annual Conference | Fall Conference | EXPO



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	<u>Cell #</u>	<u>Email</u>	
Charles Bausch Randy Hellbusch Mike Lucas Mike Stanzel Russ Topp Barney Whatley Salli Kemerling Carol Jasa	402-480-2982 402-443-8535 402-443-6157 402-672-9084 402-480-4196 402-480-4297 402-277-0839	charle randy@ lucas@ mike@ russ@ barney Salli@ Carol@	



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