

Issue 2/2010

Nebraska Rural Water Association



NEBRASKA GOOD WATER NEWS



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FLOW METERS ✓



PIPE FITTINGS ✓



SEWAGE PUMPS ✓



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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.

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Website: www.nerwa.org

On the cover:

The "Twin Flag Poles" were dedicated on June 14, 1974. Tobias was designated a National Bicentennial Community in September 1974. The ARBA flag presentation ceremony was held November 1st, 1974. The flag is now flying with the 13 star and 50 star flags. Tobias, Saline County, Nebraska has a present population of 140. Tower was erected in 1948.

How'd We Do and Letters From...



LIGHT AND WATER DEPARTMENT CITY OF FAIRBURY, NEBRASKA 68352 612 D STREET, P.O. BOX 554

SUPERINTENDENT
TELEPHONE (402) 729-3030

FAX
(402) 729-3906

BUSINESS OFFICE
TELEPHONE (402) 729-2148

Dear Nebraska Rural Water,

The staff and I at Fairbury Light and Water would once again like to thank you for assisting us on some recent sewer and water problems we have encountered here. Russ and Jim are always readily available and more than happy to assist. Please accept our donation to your equipment fund to help supply your staff with the most up to date technology to assist not only us, but other communities in Nebraska.

Thanks Again

Jeff Sweetser
Water Superintendent
Fairbury Light and Water



City of Neligh

202 Main Street P.O. Box 87
Neligh, NE 68756-0087
Ph. 402-887-4066 Fax 402-887-5343
E-mail address: neligh@frontiernet.net

Web Address: neligh.net or nelighpub.info

February 9, 2010

Nebraska Rural Water Association
3390 Ponderosa Street
Wahoo, NE 678066

RE: Membership Renewal

Dear Association:

Enclosed you will find a voluntary donation of \$250.00 for your services as an organization. The City of Neligh has reaped many benefits from your organization in rate study, budget projection format, use of equipment, and being the 'watch-dog' when it comes to legislation.

Thank you to the Rural Water Association for representing the communities of Nebraska.

Yours truly,

Jeri Anderson
Mayor
City of Neligh

Village of Denton

P.O. Box 132
Denton, NE 68339

Phone 797-2020

The Village of Bruning

January 15, 2010

Nebraska Rural Water Association
3390 Ponderosa Drive
Wahoo, NE 68066

Dear Nebraska Rural Water Association,

The Village of Denton would like to thank you for your assistance in the past. A special thanks to Russ Topp for his help with our problem valves and the new valve exerciser. Denton also thanks Jim Heyen for the help with our 24 hour composite and daily flow collection.

Please accept our donation to help fund the many services you provide to communities like ours.

Sincerely,

Lonnie Petzilka
Maintenance Supervisor

Please find enclosed a donation in the amount of \$300.00. We would like to donate this amount for all the hard work you do for us and our community. The Village of Bruning appreciates your quick support and suggestions. Thank you so much. Tom Houser and Sharon Holtzen



VILLAGE OF ARLINGTON
Washington County, Nebraska

Tom Brown
Chairman, Board of Trustees
245 North 2nd Street
P.O. Box 370
Arlington, NE 68802-0370
Phone/Fax (402) 478-4212
Email: arlington@futuretk.com

February 11, 2010

Nebraska Rural Water Association
3390 Ponderosa Drive
Wahoo, NE 68066

Dear NE Rural Water Assoc.,

On behalf of the Village of Arlington and the Arlington Village Board of Trustees, please accept the enclosed donation in the amount of \$250.00 to the NE Rural Water Association. We appreciate all of the assistance your organization has provided Arlington and other area municipalities in the form of information and equipment.

Sincerely,

Tom Brown
Village Board Chairman

January 19, 2010

Nebraska Rural Water Association
3390 Ponderosa
Wahoo, NE 68066

Dear Randy and the gang,

The Guide Rock Village Board of Trustees and employees would like to thank everyone at the NeRWA for their continued help through the years. Enclosed is a donation for your equipment fund. We appreciate the knowledge and information that you so willing provide on our "last minute" calls for help. Thanks so much.

Sincerely,

Charles Ohmstede
Board Chairman

VILLAGE OF GUIDE ROCK
120 W. DOUGLAS
P.O. BOX 41
GUIDE ROCK, NE 68942
PHONE AND FAX NO.
(402) 257-3945

Village of Diller

Box 157
Diller, NE 68342

February 14, 2010

Nebraska Rural Water Assoc
3390 Ponderosa
Wahoo NE 68066

Dear Sirs,

Thank you for your help with a problem sewer line that we were having in Diller, Nebraska. A resident had reported on two separate occasions that he was having sewer back-ups in his basement. By placing a camera in the line we were able to determine that tree roots were the problem, and take steps to correct the situation.

In appreciation of your assistance with the camera, the Village of Diller would like to donate \$125 to the Nebraska Rural Water Association.

Thanks again for your help.

Sincerely,

Leatha Christ
Village Clerk

February 10, 2010

Nebraska Rural Water Association
3390 Ponderosa Dr
Wahoo, NE 68066

Dear Rural Water Association:

On behalf of the Board of Trustees for the Village of Murray, we would like to thank you for your assistance in locating a water leak the town recently experienced.

Your office responded shortly after our call and Mike assisted our Village Maintenance in locating the leak. His help was invaluable and instrumental to Murray getting this leak fixed and back to normal operation within a reasonable time frame.

You have always provided professional and knowledgeable assistance to Murray in the past and we look forward to being able to rely on you in the future to assist us with our water and wastewater questions and issues.

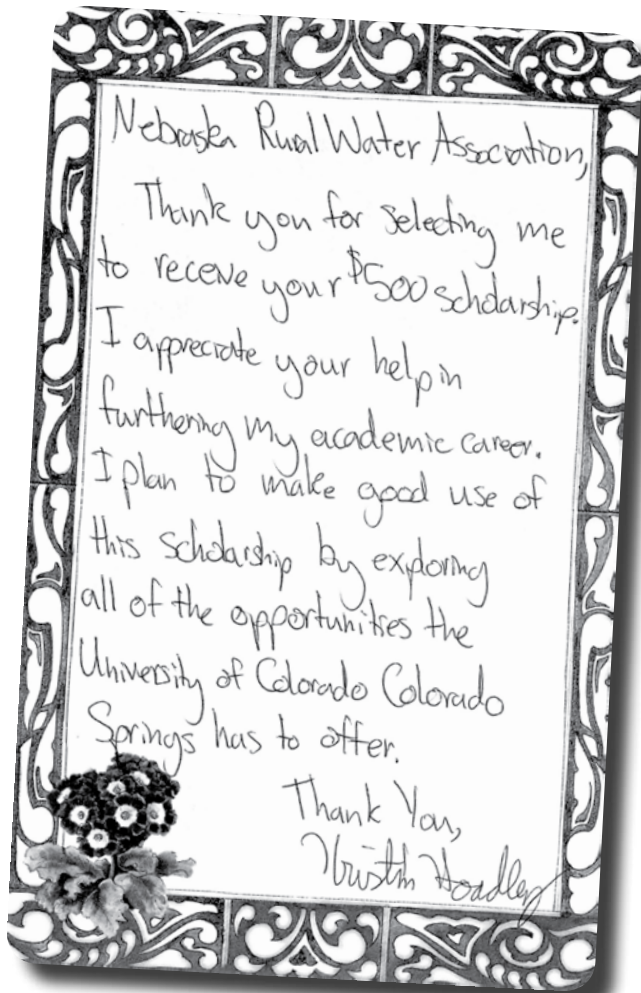
Sincerely,

VILLAGE OF MURRAY BOARD OF TRUSTEES

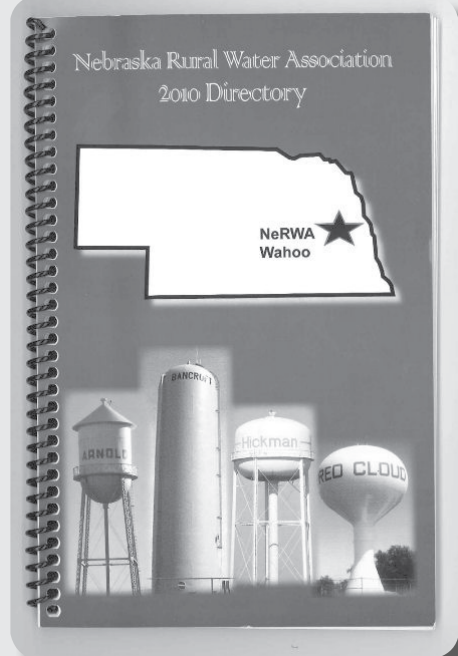
Eileen A. Murdoch
Clerk/Treasurer

VILLAGE OF MURRAY
P. O. BOX 79
MURRAY, NE 68409
Phone: 402-235-2119

Shelley Lesac
Chairperson



NeRWA's 2010 Membership Directory is now available. All those attending the annual conference received one. We are mailing them out to those who did not attend the conference. If you did not receive one and would like one, please contact our office at 800-842-8039 or email Carol at carol@nerwa.org.



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Water Operator Training

June 4	Sutton
June 9	South Sioux City
July 6	Chadron
July 7	Thedford
July 8	Albion
August 10	O'Neill
August 11	Madison
October 26	Henderson
October 27	Fairbury
October 28	Plattsmouth
November 9	Grant
December 8	Bancroft
December 9	Wahoo
December 14	Falls City

Backflow Re-Certification Training

September 14	Falls City
September 15	York
October 12	Wayne
October 13	Papillion
November 9	Wahoo
November 16	Cairo
November 17	Bloomfield
December 7	Mitchell
December 8	Imperial
December 9	Cambridge
December 14	Wahoo

Wastewater Training

June 23	Wahoo
October 7	Wahoo
October 14	Hickman
November 16	Bridgeport
November 18	Creighton
December 7	Wahoo

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

2010 TRAINING

Grade 6 Backflow Prevention Cross-Connection Control Course - 5 Day

October 18-22 Wahoo

September 8 Confined Space Entry Wahoo

September 9 Trenching & Excavation Safety Wahoo

August 31-Sept. 2 **Fall Conference**
 Gering Civic Center
 Gering, Nebraska

October 5 **UTILITY EXPO**
 Christensen Field
 Fremont, Nebraska



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Association News and Updates – Spring 2010

By Salli Kemerling, Office Manager

The NeRWA Annual Conference was held March 22, 23, and 24 in Columbus. We received a lot of feedback from attendees during and after the conference. Quite a few people mentioned that they enjoyed the food and meals. Overall, most of the comments about the conference were positive. We will continue to work hard to make the conference even better next year. As always, feel free to share your ideas and opinions with us.

HD Supply sponsored the Monday evening social hour for the seventh year in a row and many thanks to them. Numerous exhibitors made donations to offset conference expenses – Bartlett and West, Engineering America, Municipal Supply, Sargent Drilling, Utility Service Co., Maguire Iron, Miller and Associates, Technical Maintenance, and Ford Meter. The generosity of these exhibitors helps NeRWA keep the conference more affordable for small systems.

There were 44 conference sessions to choose from with topics good for water, wastewater and backflow CEU's. Hopefully you found some new subjects to enjoy and had the chance to refresh your memory about familiar topics too. Many thanks to all of the speakers who shared their knowledge with us.

On Tuesday evening, Operator of the Year Awards were presented to Gary Eckmann, Cedar Knox Rural Water; Joe Zeleny, Village of Morse Bluff; Terry Ueding, City of Lyons. Congratulations to them for this accomplishment! The winner of the Water Contest was announced as the City of Papillion and a plaque was presented to Rich Heydenreich. Their water is eligible for the National Best Water Taste Test in Washington DC during the Water Rally.

The raffle prizes were won by: Browning shotgun – Bill Hoesche, Nestle Purina in Wilber; Black powder rifle – Jason Bohac, Brainard ; LCD TV – Anthony Whited, Ord; Craftsman tool set – Lonnie Petrzilka, Denton; hunting knife – Dave Houghtelling, Cambridge; Craftsman 2-pc toolbox set – Rollin Davis, Ord; Wii game console – Kevin Holcomb, Loup City. And the lucky winner of the Arctic Cat 4-wheeler was Tom

Henry, Scribner.

Next year's conference will again be held in Columbus on March 21, 22, and 23. We hope that you will join us!

With the Spring Conference wrapped up, we now look ahead to the Fall Conference in Gering from August 31 through September 2 and the Utility Expo in Fremont on October 5 at Christensen Field. Watch in our next magazine for more complete details and agendas on these events.

Remember that there is a lot of information on our website. It's very user-friendly. Here are some of the ways to utilize it:

- Training for upcoming year
- Information on conferences and Expo
- Online registration
- Membership information
- Links to state and national websites
- Download forms such as backflow brochures, cross connection survey, backflow test forms
- Job postings across the state
- Special events

If you have any questions or need any assistance with our website, just call our office and we will be glad to help you.

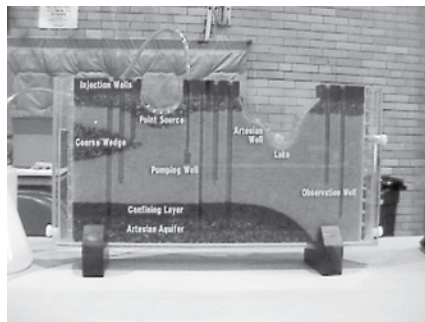
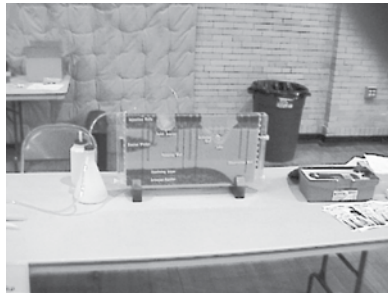




Earth Day, ECO Fairs and Safe Drinking Water Through Wellhead Protection

By Mike Lucas

On April 21st, 456 fifth grade students attended the annual ECO Fair event at the Fremont City Auditorium. The young citizen environmentalists circulated through the numerous displays in groups of from 2 or 3 up to 6 and 7 learning about everything



from the benefits of recycling and proper trash disposal to endangered species in Nebraska.

The Nebraska Rural Water Association participated again this year as it has in the past. NeRWA

has groundwater modeling displays that provide visual representations of the geological structure of various types of aquifers. Contaminants (water with food coloring added for dramatic effect)



were added to a lake or point sources such as improperly abandoned wells and simulated spills. The future hydrologists were able to witness the "bad stuff" percolate down to the aquifer. Then as they operated



a simulated well they observed the plumes of pollution migrate to the well screen, up the well and through a clear tube (city water main) to their drinking water glass (gross!!!). Pumping the

well was an extremely popular activity for the many observers requiring the groundwater aquifer to be recharged frequently (with buckets) to resupply the artesian well to the lake and keep the city well from pumping air and of course avoiding loss of system pressure, backflow situations, disinfection and reporting requirements etc.



A good time was had by all. Those involved in organizing the event certainly deserve a lot of credit and a great big Thank You for their caring and unselfish efforts for today and for the future!

The NeRWA road show is scheduled to reappear in Falls City on April 30 and is available for an event near you.

Contact Salli at the Nebraska Rural Water Association (402)443-5216 or (800)842-8039.





How To Calculate and Report Fluoride Usage

By Russ Topp, Circuit Rider

As many of you are probably aware, the State Legislators have passed a bill that requires public water supplies over 1,000 in population to fluoridate their water supply unless it was voted out by the people. There were several systems across Nebraska that will now have to fluoridate their water supply and the deadline is quickly approaching. I have gotten a few calls recently from water operators concerning fluoridation. Some operators are asking how to calculate the dosage and what reporting requirements they will have to comply with. A couple of years ago I wrote an article on this subject but I think it might be a good time for a refresher.

Andy Kahle is the manager of this rule and he has developed a reporting form for water operators to use. Water systems are required to track daily fluoride usage. Usually a day tank is used on a small balance beam-type scale at the point of entry. The operator must weigh the fluoride tank every day and record each day's use in the appropriate column. The amount of water treated must be recorded in its column and a simple calculation to determine in ppm the amount of fluoride that has been added to the water. For Fluorosilicic Acid the equation is (pounds of chemical added x percent purity (0.23) x percent fluoride ion (0.79)) ÷ (8.34 x million gallons of water treated). This form must be filled out each month and either mailed or e-mailed to Andy by the 10th of the following month. The Operator must also collect a monthly sample to be sent to the state lab for analysis. This sample usually comes with your monthly coliform sample. The optimal fluoride level is 1.0 ppm. Sample results should be between 0.8 ppm and 1.5 ppm with 0.8 ppm to 1.3 ppm being optimal. If you have samples over 2.0 ppm you could be issued a secondary violation, and if samples are over 4.0 ppm you could be subject to an MCL violation.

The best way to insure the fluoride pumps are set to the 1.0 ppm level is to perform your own fluoride test. Most of you either have or have used a chlorine pocket colorimeter. Lab equipment companies make a fluoride tester that looks much the same as the chlorine tester. Most of these test kits use the SPADNS reagents. If you purchase one of these test kits and would like me

to stop by and show you how to operate it, just give me a call.

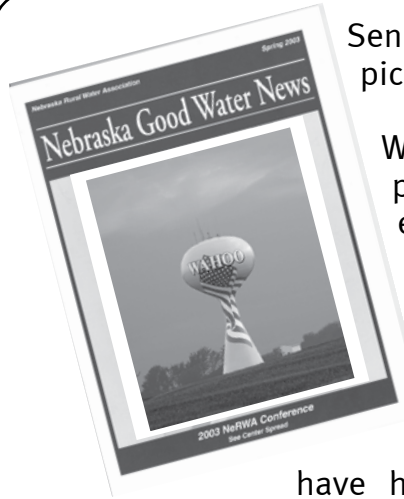
The other way is to calculate your fluoride levels. This is not nearly as precise as using a test kit. First you must know your natural fluoride in your ground water. Most ground water in Nebraska is between 0.1 ppm and 0.4 ppm.

Here is an example of how to calculate the dose for your chemical feed pump to inject Fluorosilicic Acid.

- Remember 1.0 ppm is the optimum level.
- The natural level in our well is 0.3 ppm.
- $1\text{ ppm} - 0.3\text{ ppm} = 0.7\text{ ppm}$. This means we need to set our pump to inject 0.7 ppm.
- In this example our well pumps 600 gallons per minute.
- We have a 5 gallon per day feed pump.
- The equation for fluoride dosing is: million gallons per day (MGD) x Dose ÷ (percent strength x actual fluoride Ion)
- Normally Fluorosilicic Acid is 23% strength and the fluoride Ion is 79%. Be sure to check the label on your chemical tank.
- Normally the denominator will be 0.23×0.79 or 0.1817
- Remember our well pumps 600 gpm so 600×1440 (minutes in a day) = 864,000 gallons.
- Move the decimal point 6 places to the left this equals 0.864 MGD.
- Remember the dose is 0.7 ppm
- $0.864\text{ MGD} \times 0.7\text{ ppm} = 0.6048$
- $0.6048 \div 0.1817 = 3.32$ gallons per day
- $3.32 \div 5\text{ GPD pump} = 66\%$
- Set the pump at 66%
- This should give you 1.0 ppm total fluoride.
- Remember the chemical pump must be plugged into you chemical feed outlet.

After all that, the tester looks a lot simpler to use, doesn't it?

Let me know if you need some help with your fluoride reporting.



Send us your pictures!!!

We would like to put the water towers of Nebraska on our cover. We want to feature a different tower on each issue.

So far we have had Cass County RWD1, Louisville, Bloomfield, Litchfield, Columbus, Logan East RW, Papio-MO Dakota County, Wahoo, Hickman, Arnold and Beaver Lake.

Let us add your name to our list and see how long it gets. Either send a photo to our office or e-mail a picture to our website.



SCHOLARSHIP WINNERS

Nine scholarship applications were received this year. The Scholarship Committee selected the following as the winning recipients:



Sara Kay Maresh,
Raymond Central High School
Daughter of Floyd Maresh,
Clerk in Valparaiso

Taylor Ferree, Wilcox-Hildreth Public High School
Daughter of Melinda Ferree, Clerk in Wilcox

The alternates are:

Emily Hemphill, Utica Centennial High School
Daughter of Rick Hemphill, Operator in Utica

Chelsey Hansen, Syracuse-Dunbar-Avoca Public High School
Daughter of John Hansen, Utilities Supervisor in Beaver Lake



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Another Conference Here and Gone

By Charles Bausch, Training Specialist

Another Spring Conference has come and gone. After all the planning that goes into the conference it really flies by fast. This year was one of our largest conference turn outs for both vendors and attendees! I would like to thank all the vendors that donated to the NeRWA Conference this year. The money went to purchase some spectacular prizes. I would also like to thank all the water operators that provided feedback for us about the conference. The feedback and suggestions play a very important role in the planning of next year's conference.

This year's conference theme was "Applying the Knowledge We Learn Today to Solve the Problems of Tomorrow." This theme was expressed in the new classes we offered this year from Smart Metering Technology and Pipe Replacement Strategies to Industry Trends in Wastewater Screening. You can always contact me if you have a project coming up and would like more information on a certain class that was offered at the Conference. I can send out the class presenters' information to you. As always, my goal is to bring the water operators of Nebraska the latest technology and information that will help them operate their system more effectively and more efficiently.

With another conference in the rearview mirror I'll turn my focus on this summer's training schedule and our Fall Conference and Utility Expo. This year's Fall Conference will be in Gering, Nebraska with the pre-conference beginning on August 31 and the regular conference on September 1 and 2. Our Utility Expo will be in Fremont again this year on October 5. If you have never been to the Utility Expo I would encourage you to attend. The Utility Expo is a great way to get some hands-on training. So stay tuned for conference agendas! We also have a very busy training schedule so check our website and see if we will be coming close to you with a water training event. I will also be out and about making contacts for onsite assistance so if you run into problems with your water system give me a call and I'll be glad to come out and assist you.

THANK YOU to all the Staff and Board at NeRWA, vendors, attendees, and speakers for making the 2010 NeRWA Conference a **HUGE** success.



WATER WORKS BRASS AND PIPELINE PRODUCTS



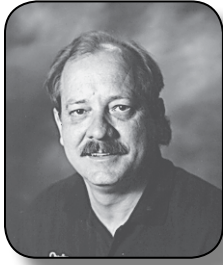
The Ford Meter Box Company, Inc.



<http://www.fordmeterbox.com>

260-563-3171





Keeping Up With Rising Costs

By Randy Hellbusch, Circuit Rider

Are you paying the same for your cell phone as you did five years ago? What about cable or satellite TV? I could go on and on with necessities such as groceries, clothing, etc. I won't even mention gasoline! Yet, when I visit many systems I find that they haven't had an increase in water or sewer rates in 5 years or more. Inflation is something that we face in all aspects of our life. The water and wastewater industry is no different. In fact, in most cases the cost of properly running a water/wastewater system has had a much greater increase than the rate of inflation over the past few years. The cost of providing our citizens with clean safe water that meets all EPA regulations is an ongoing challenge. Not only are the costs of regulations increasing, so is the cost of repairs and maintenance. Have you had

any major well work done recently? What about tower painting or repair? Compare those costs to the last time it was done and I will guarantee you it isn't the same as it was several years ago.

Unfortunately, it isn't until after major repairs or maintenance items have been completed that most systems decide it is time to look at rates. By then, it usually requires a major increase and then the public outcry ensues. At many Council/Board meetings I hear someone in the audience question why someone didn't see this coming and prepare for it over time? The majority of customers understand that costs go up and will accept a small increase year to year.

Decision makers do not like to address the issue of rate increases and this is understandable. But unfortunately it is inevitable that rates are going to have to increase at some time. The decision that needs to be made is whether to be pro-active and have the money to do the necessary upkeep of the system or wait until there is a major repair and try to start generating the revenue at that time.

What several systems are starting to implement is an automatic increase at certain times. This is a good way to at least keep up with the rising costs of running a system under normal circumstances. It is a good tool for a system that is not anticipating any major capital expenditures or added debt in the near future. It guarantees increased revenue over the next 3-5 years or so. Yet, decision makers don't have to revisit the rate issue on an annual basis. It also doesn't mean that the rate can't be revisited if an unexpected expense arises. I have attached an example of an ordinance that shows a small annual increase. If NeRWA can assist you with this or any other aspect of your water or wastewater system, please give us a call.

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Minneapolis, MN	612-331-9100
Sioux Falls, SD	605-368-5793
Slater, IA	515-685-2250
Superior, WI	715-392-5121
Washburn, ND	701-462-8588
Willow Springs, IL	708-467-0125

3100 East Hennepin Avenue
 Minneapolis, MN 55413
 Phone: 612-331-9100
 Fax: 612-617-8696



ORDINANCE NO. 2003-324

AN ORDINANCE OF THE VILLAGE OF _____, NEBRASKA TO ESTABLISH REVISED WATER RATES FOR THE _____ MUNICIPAL WATER SYSTEM; TO PROVIDE FOR THE REPEAL OF CONFLICTING ORDINANCES OR PARTS THEREOF; TO PROVIDE FOR AN EFFECTIVE DATE; TO PROVIDE THAT THE PROVISIONS OF THIS ORDINANCE SHALL BE MADE A PART OF THE CODE OF THE VILLAGE OF _____, AND THAT THE SECTIONS MAY BE RENUMBERED; TO PROVIDE FOR THE PUBLICATION OF THIS ORDINANCE IN PAMPHLET FORM AND THAT THIS ORDINANCE SHALL TAKE EFFECT ON JULY 1, 2003, AFTER PASSAGE, PUBLICATION, POSTING, AND PROCLAMATION AS OTHERWISE PROVIDED.

BE IT ORDAINED BY THE CHAIRMAN AND VILLAGE BOARD OF THE VILLAGE OF _____, NEBRASKA:

Section 1. That Chapter 3, Article 1, Section 111, Subparagraph A of the Code of the Village of _____ is hereby amended to read as follows:

1-111. WATER SERVICE RATES; BILLING AND COLLECTING; FUTURE RATE REVISIONS.

A. The rates charged by the Village of _____ for municipal water services on a monthly rate basis shall be as follows:

1. Time period of July 1, 2003 through June 30, 2004:

<u>CLASSIFICATION</u>	<u>MONTHLY RATE</u>
Residential and Commercial	\$14.00 per month service charge plus \$1.00 per 1,000 gallons or fraction thereof of usage.

2. Time period of July 1, 2004 through June 30, 2005:

<u>CLASSIFICATION</u>	<u>MONTHLY RATE</u>
Residential and Commercial	\$15.00 per month service charge plus \$1.00 per 1,000 gallons or fraction thereof of usage.

3. Time period of July 1, 2005 through June 30, 2006:

<u>CLASSIFICATION</u>	<u>MONTHLY RATE</u>
Residential and Commercial	\$16.00 per month service charge plus \$1.00 per 1,000 gallons or fraction thereof of usage.

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Meet Ken Widhalm

ARRA Circuit Rider

My name is Kenneth (Ken) Widhalm. My wife, Coletta, and I live in Dodge, NE. We have 5 children and 6 grandchildren.

I like hunting and fishing whenever it works out. My wife and I both like camping.

I was a 40 year member of the Dodge Volunteer Fire Department and a 37 year member of the Dodge Rescue Squad until I retired in 2005.

I was formerly employed as Superintendent of Utilities from March 1971 to September 2002 for North Bend, NE. Then I went to work for PeopleService Inc. through September of 2008. I have had approximately 37 years in the water/wastewater field. I have had many experiences that I could share.

I have retired a couple times but I am willing to try something new and interesting so here I am as the new ARRA Circuit Rider for NeRWA. I started the first of April, 2010. It has been an enjoyable position so far. The hardest part has been learning how to use my computer but it is coming along with help.

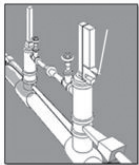
I have had the opportunity to meet several new people out in the State and hope to meet a lot more of you. I enjoy talking about the different services that NeRWA

can provide to possibly help you with a task or problem. Also, I have been introducing the NeWARN system, which many of you are aware of and some of you have joined. It's a good deal. Check it out.

There is some grant money available from USDA. If your system is in need of this financial help, call and we can help see if you qualify for the grant money and help get the ball rolling if you are.

Here at NeRWA we have several avenues of assistance, all you have to do is give us a call and we will do our best to serve your system to the best of our knowledge.

Hope to see as many of you as I can.




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Discharge Monitoring Reports A Different Perspective

By Jim Heyen, Wastewater Technician

Recently I had the opportunity to teach a few classes with Dawn Martin from the Nebraska Department of Environmental Quality on Discharge Monitoring Reports (DMRs). I am sure those of you in attendance were glad to hear from someone other than me! So I asked her to be a guest writer for my article this month. The power is in her presentation!

DISCHARGE MONITORING REPORTS

By Dawn Martin, NDEQ

Usually, articles of this sort provide a checklist of procedures and a guide to the proper way to fill out the forms.

Boring!

Instead, since we have identified several common mistakes made in filling out and submitting DMRs, I'd like to follow the opposite course and very specifically lay out what NOT to do. Since I can't reach off the page and tap you on the forehead, I'll begin by saying **Attention Operators!**

First, submit only one (1) set of original signed DMRs. It is no longer necessary to submit multiple copies. Mail your one set to: NDEQ Wastewater Section/DMR, P.O. Box 98922, Lincoln, NE 68509-8922.

Next, do not use "N.D." For results listed below the detection limit, be sure to put in a "less than" sign and the detection limit. The detection limit is normally found in the lab bench sheets. Example: < **0.02** The letters N.D. are not an acceptable code.

If you want an accurate record of your hard work, **write clearly**. Errors can be made if values are difficult to read.

Be sure to **fill in all the blanks**. Missing values are considered a violation and dashes do not count.

While you are filling in all those blanks with your clearly written numbers, **do not use commas**. Even though you learned to put them in at school, they may cause confusion and errors in the values entered on DMRs.

As long as you are going to all the work of filling in all those blanks with clearly written non-commaed numbers or NODI codes, you might as well **use the most current DMR forms** that are burnt onto the DMR disc you received. If an updated disc (modifications, corrections, or reissued permits) has been sent, be sure to get rid of the old DMR disc or forms.

Of course you know that **"No Discharge" can only be used with Effluent Outfalls**, but there are some operators out there who don't. Influent and monitoring wells should always have values or an appropriate NODI code (eg: MCN) to submit on the DMRs.

Speaking of NODI codes, **use the code "OTH" for Total Toxic Organics**. Use OTHER (OTH) and write an explanation stating whether all the limits were below the detection limits or not.

You will probably not need to worry about **"ANC" = Analysis Not Conducted**, will you? This NODI code is only used if there has been an **ERROR** – human or otherwise. We know you don't make errors. Those other operators who do **MUST** submit a written explanation with it.

And keep in mind **MCN = Monitoring is Conditional/Not Required This Monitoring Period**. Monitoring requirements follow the **PERMIT YEAR**, not the calendar year and the timing may change when the permit is reissued. When in doubt, always check the permit.

The information submitted on the DMR is entered into a national database maintained by the Environmental Protection Agency (EPA). The Nebraska Department of Environmental Quality (NDEQ) and EPA look at this information to determine compliance with NPDES permits and any possible enforcement actions. Therefore, it is **vital** to properly complete the DMRs.

Now that we have THAT out of the way, I'd like to say "thank you" for not being one of those other operators who are less than perfect when filling out their DMRs. Things are going to be SO much easier now!

Dawn A. Martin
Your NDEQ ICIS (DMR) Coordinator



The 2009 CCR Process in a Nutshell

By Doug Buresh, ARRA Circuit Rider

The 2009 Consumer Confidence Report (CCR) is different from past years, the biggest difference being that each system has to download and create their own. Also known as the Annual Water Quality Report, the CCR is due to Nebraska Health and Human Services by July 1st. It would be wise not to put off creating this report. Consider this article a reminder to all you operators to “git-er-done” to avoid a violation for late reports.

The first step is reviewing the instructions sent to you by NDHHS in early March. You will need to download your 2009 CCR from the Nebraska Drinking Water watch website listed with the instruction packet, and on the Drinking Water Watch business card attached to your Certification of Distribution. This card is for you to keep as a reference. The Drinking Water Watch site is a secure site, so the “https” has to be at the beginning of the web address.

Once on the Drinking Water Watch page you will not need to enter any information on the initial page, simply go to the series of gray bars at the bottom of the page and click on the one that says “Review Consumer Confidence Data.” The next page will be titled the Drinking Water Branch page. Enter either your water system “NE” number in the first field or go to the second field and choose the name of your water system from the drop down menu. Select the report format that is compatible with your computer, either PDF or RTF (further information on each of these formats is discussed in your CCR information packet) and click on the “Generate Report.” It is recommended that you save this file to your computer for future reference. You can now print your report. Follow the instructions on page 1 of your downloaded CCR report, as well as, the instructions in the packet to ensure a complete final report. Printing your report may also cause some confusion, especially when using the RTF version. Please follow the instructions on page 6 of your information packet under the “RTF Version” section.

All of the information within your CCR is generated

by the EPA. It is important to check the listed results and sample/collection dates for accuracy. There have been instances where the results listed have not been the most current available, etc. Compare the results listed on your downloaded report to your actual sample records, and if the listed results don’t match your records, you will need to correct them. If the collection/sample date is blank, this means it was taken during 2009. Go ahead and fill in these dates while cross-checking your results. Also make sure any violations listed are from 2009. ONLY 2009 violations need to be addressed. There has been a glitch where violations from prior years have been included in some reports. These “old violations” should not be included in your final 2009 CCR.

As in the past, you will need to fill in the Operator name and contact phone number on page 3, which is technically the first page of your CCR. Distribution of the 2009 CCR is the same as past years; the method of distribution is dependent on the population of your system. Follow the directions on page 8 of the information packet from NDHHS for the breakdown of the distribution/population requirements. There is also the availability of a “Word Template” for your CCR. This template is what NDHHS used to be able to produce the CCR, but with the new web-based version of SDWIS and the computer programming used by the EPA to merge the information, NDHHS can no longer mass produce these reports. If you are interested in the template, contact Becky Schuerman and it will be e-mailed to you. The template will allow you to plug in your system’s specific information, contaminant results, and any violations making for a much more compact document like those of prior years.

If you have any further questions as to creating and distributing your 2009 CCR, please don’t hesitate to call Becky Schuerman, NDHHS CCR/PN Rules Manager at 402-471-6571, or ask any of the NeRWA Circuit Riders if they’re stopping by your area. We are all here to help and are very willing to do so.



Leak Detection and Leak Locating; What's The Difference?

By Mike Stanzel, Deputy Circuit Rider

This month we have been extremely busy with requests for leak detection and leak locating. So it only seems appropriate to write about the difference and the importance of the two.

First of all, let's see if I can explain the difference. Generally what we describe as "Leak Locating" is when we get called to help pinpoint a leak that has found its way to the surface and is either coming up in an area that is not coinciding with the water main or the crew has dug up the area where water was bubbling up and found that the water is coming from elsewhere. In situations like these we usually can use our correlator to pinpoint the leak. Although our equipment is new and modern our success rate of pinpointing the exact location is about 90%. Nothing is foolproof but we can generally get you within a couple feet of the leak and there have been several times we have located within a couple of inches. The main benefit of this is you can save a lot of time and money not having to rip out excess concrete, driveways, sidewalks, etc. The exception to this rule is if you have plastic mains, chances are we won't be able to locate the leak as plastic water mains will not carry sound.

Leak detection is performed when an operator calls us when there is unexplained water loss. For systems with water meters the monthly billing should be compared to the amount the wells pumped and if it is more than a 15% loss chances are good you have a waterline leaking

somewhere. Same scenario if you don't have meters. If the well is pumping more and more compared to weeks, and months and even years past, chances are good there is a leak.

I have heard countless times from operators, "We don't have a leak; it would be bubbling up if we did." This is the BIGGEST misconception we face. We have found at least a dozen leaks in the past month that have not surfaced even a drop of water. You should see the look on the operator's face when we tell them there is a leak.

"So where's the water going?" This is always their next question. On several leaks we found there were vacant lots where the house had been torn down for years. At the time the house was demolished the water had been disconnected at the curb stop and the old galvanized line to the main is still live. In the old days water and sewer were generally laid in the same trench so the old clay or Orangeburg sewer pipe had deteriorated enough to let the seeping water in and flow right down the drain. In other cases we have found several fire hydrants that were spraying water out the weep holes due to a faulty valve seat. This can occur in very old hydrants, as well as, new hydrants. One hydrant was dated 2007 and was spraying approximately 25 GPM.

In closing, if you think you might have a leak or you would like your Town or Village surveyed, please give us a call. You might be surprised what we might find.

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Just a reminder..... Fall Conference

The Fall Conference is August 31 through September 2 at the Gering Civic Center in Gering.

The pre-conference is August 31. The golf tournament and trap shoot start off the regular conference. Watch for upcoming information.

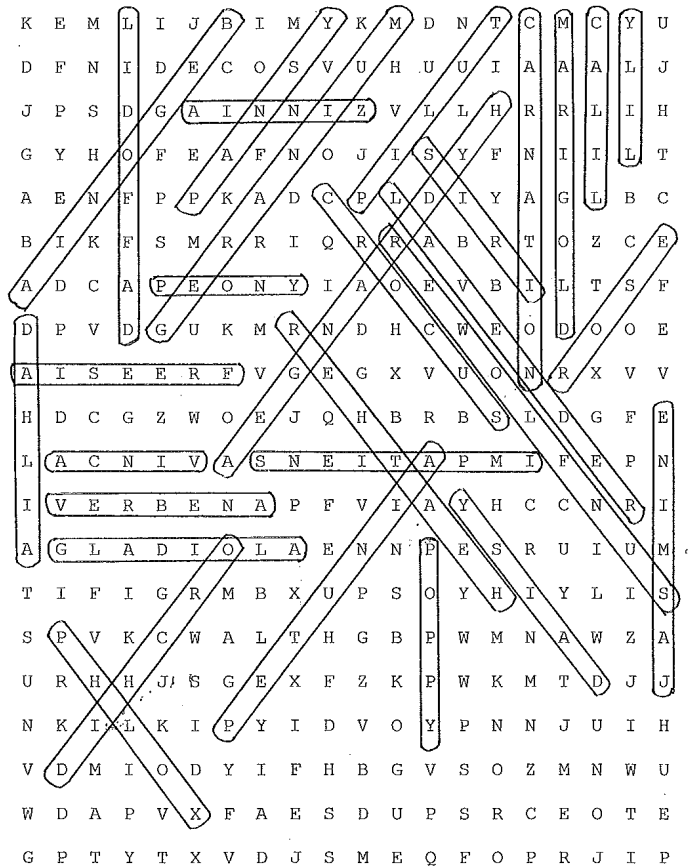


The Expo is October 5 at Christensen Field in Fremont.

Plan to attend to see new equipment, exciting demos, and interesting training sessions. Watch the mail for periodic updates.

The Village of Guide Rock will be accepting applications for the maintenance position until **June 4, 2010**. Job functions include (but not limited to) monitoring and reporting of the village water and wastewater systems, street construction, mowing and heavy equipment operation. Applications are available at the village office – **120 West Douglas Avenue/PO Box 41, Guide Rock NE 68970**.

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Capital Planning

By Barney Whatley, Capacity Development Specialist

With the economy still in a slump and government spending at an all time high, something is going to have to give. Current spending levels cannot be maintained for any length of time without producing a severe backlash in the future. Many water systems are currently being funded for infrastructure repair and replacement projects with abnormal amounts of grant or loan forgiveness. Not only is it likely that this practice will need to end in the near future, but one of the results of the current deficit in federal spending could be a reduced amount of grant funding available and even higher interest rates on loans.



It is likely that water systems will be required to pay more of the cost for system improvements in the future and rely less on government loans and grants. There are two ways a system can accomplish this task, by letting current users pay for replacing the system they are wearing out, or letting future users pay for the system they will be using. The system can also use a combination of these methods by allowing for current users to build up a down payment and having future users pay the rest. A water tower can be expected to last for 30 years or more, and if the system starts setting aside reserves when the tower is new, they will have a substantial amount of the revenue needed on hand when it comes time to replace it. Private sector utilities, such as phone and cable TV understand this principle and set their user rates accordingly. It is time for all municipal utilities to realize that infrastructure wears out and it is not the responsibility of the federal or state government to replace it when that happens.



In addition to infrastructure wearing out, systems also need to plan for new regulations and other factors that could require new system equipment. New contaminants being regulated by the EPA or a slowly increasing amount of a currently regulated contaminant could require a system to install a new treatment plant to continue to supply safe drinking water to their customers. When an existing water system is required to install a treatment plant, they will soon discover that the operation and maintenance of the treatment plant is another new cost they will need to fund. If water rates have been set in the past with an eye toward looming regulatory issues, the burden will be lessened when the treatment plant is built. Otherwise, a water rate increase of 100% or more may be required to build and operate the necessary treatment plant.

It is important for utilities to realize that the unending source of governmental money to build, repair and replace system infrastructure can not last forever. It will someday be the responsibility of all utilities to pay their own way. Full cost pricing of the utility, whether it be water, sewer, gas, electric, etc., will allow for depreciation of system equipment and infrastructure and will start funding replacement of these items before they actually need to be replaced. It may be a tough decision to make now, but it will help keep the system from making much tougher decisions in the future.

Water Works for Men

The following is from a book donated by Dale Casper of Hildreth. It is a manual that was published in 1946 containing information regarding "water works". Ladies, note the title, "Questions & Answers for Water Works Men." The chapters include: Rainfall and Run-off, Ground Water, Bacteria, Bacteriological Exams, Algae, Iron and Manganese in Water, Minerals Salts in Water, Chlorine, Laboratory Control of Water Treatment Plants, Water Treatment, and Water Softening Back-siphonage and Cross connections. We will be running some of the information from the book in the next few issues of the "Good Water News".

GROUND WATER

What is the source of fresh ground water found in beds of sand or gravel?

All the fresh water found in the earth was originally derived from rainfall, and all fresh water replenishment to ground water storage is from rainfall. Only the rain which falls on the catchment area tributary to a bed of sand or gravel can be considered as available to that particular area.

How can the watershed area be determined?

The watershed area of shallow supplies is usually found in the immediate vicinity. A clew to the size and location of the area can often be found in the surface topography. For instance, in mountainous country, each little valley forms a separate watershed area and the catchment area for the shallow ground water supply is usually within that valley.

In other places in order to determine the catchment area, it is necessary to make an approximation of the topography of the ground water surface. In many cases, this will be found to be a flattened out likeness of the surface topography. The valleys will not be as deep or the hills as pronounced.

To map ground water table topography, it is necessary to sink test wells or dig pits to the water surface in various parts of the area, establish the elevation of the ground water at each point and plot it on a base map. Contours can then be drawn following the same procedure as used in making topographical maps of the ground surface.

Is the ground water table a flat surface?

No. On a small island, of symmetrical profile and of uniform sand and gravel, the ground water table would take the form of a hillock with the highest point in the center of the island, and sloping downward toward each of the shores. Where the surface topography is more complicated, a more involved set of ground water contours will be found.

In certain types of country where the ground water table is fairly flat and extends over wide areas, the quantity of ground water available at a particular location will depend upon the thickness of the saturated strata at that point, the depth of the well or wells and the area that can be made tributary to the well or wells by pumping operations.

QUESTIONS & ANSWERS

for

WATER WORKS MEN

Vol. I

A reproduction of the "Water Works School" which appeared in *Water Works Engineering*. These Questions and Answers represent the joint work of twenty-two of the nation's leading water works engineers.

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Foreword

Many water works superintendents and managers, as well as filter plant operators, have not had opportunity to attend one of the water works short courses which are usually conducted under the auspices of state universities or state boards of health.

These short courses have proven particularly valuable to those privileged to attend them, for they have presented the latest advances in water works techniques; in addition, they have proven highly effective as refresher courses to even the best qualified of water works men.

In order to bring to the entire water works field such valuable information as is presented in the best of short courses, a group of twenty-two outstanding water works engineers, superintendents and filter plant operators were invited to conduct a short course in the pages of **WATER WORKS ENGINEERING**.

This short course has been appearing in the pages of this journal for the past three years under the heading "Water Works School."

So useful has it proven to those water works men who have studied it, that it is now being made available to all, in book form. This volume represents the first part of the course; a subsequent volume covers the second part, and brings the course up to date.

Water works men will find herein a very practical, useful compilation of water works information.

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