Nebraska Good Water News

ISSUE 3/2022

Nebraska Rural Water Association

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Nebraska Good Water News

Issue 3/2022

"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 1-800-849-8039 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.

Board of Directors

Staff:

Website: www.nerwa.org

On the cover:

Valparaiso, Nebraska, water tower.

2022 TRAINING

Water Operator Training

August 17	Atkinson
October 12	McCook
November 16	Mullen
December 14	Wahoo

Wastewater Training

August 24	Bridgeport
October 5	Louisville
November 16	Duncan
December 14	Wahoo

Fall Conference

Gering
Gering Civic Center
September 13-15

We will be adding a few 1-day backflow classes across the state.
Watch for flyers and emails or check the website

THE FIELD STAFF WILL BE OUT OF STATE THE WEEK OF SEPTEMBER 26-30 FOR THE NATIONAL RURAL WATER CONVENTION

NEBRASKA RURAL WATER ASSOCIATION

Nebraska Rural Water Association - 3390 Ponderosa Drive - Wahoo, NE 68066

THE DAYS AND TIMES FOR THE FALL CONFERENCE HAVE BEEN CHANGED

There will still be a Pre-conference with lunch on Tuesday, September 13, followed by the Golf Tournament.

There will not be a trap shoot this year. It was not normally open and was becoming more difficult finding someone to open and work during those hours.

Wednesday will be a full day of sessions and include lunch. Registration will start at 7:00 with the first session at 8:30. The day will conclude with a Social hour and evening meal. Thursday will be a short day ending at noon. It will start with a breakfast at 6:30. Registration begins at 7:00. First session begins at 7:30.

Continuing Ed Hours: Water: 15 hours. Wastewater: 13 hours. Backflow: 6 hours. Well drillers: TBD
Tuesday: 5w, 5ww, 1bf. Wednesday: 6w, 6ww, 5bf, 2 wd. Thursday: 4w 2ww.

This Haunting Road Trip Through Nebraska Ghost Towns

Ghost towns dot the landscape in Nebraska like the random spots on a Dalmatian. From the Badlands to the lowlands and even just outside some of the bigger cities, through the years entire towns have dried up and disappeared from the Cornhusker State.

Here are a few of those towns you'll find hauntingly unforgettable. The locations are plotted on this Google Map.

Considered one of the creepiest road trips in Nebraska, this is one trip you can't miss. Let's get started.

Antioch

The road trip starts in the sandhills in a ghost town hiding in plain sight. Starting in Antioch – Antioch was once the Potash capital of the world. Shortly after WWI started the need for potash was so great that five potash plants sprang up here. The new employers needed workers and within several months a town of nearly 2,000 people had developed here. Two thousand people all at once. According to Wikipedia, before the war, Antioch had one school, a church and a store. But the war needs changed all that and this town was booming.

Where did they go? The town dried up shortly after the war ended, thanks to renewed trade arrangements with Germany. You can still see the remnants of the Potash reduction plants – and if you know where to look you can probably see evidence of the families that moved out of town a little less than 100 years ago.

Antioch

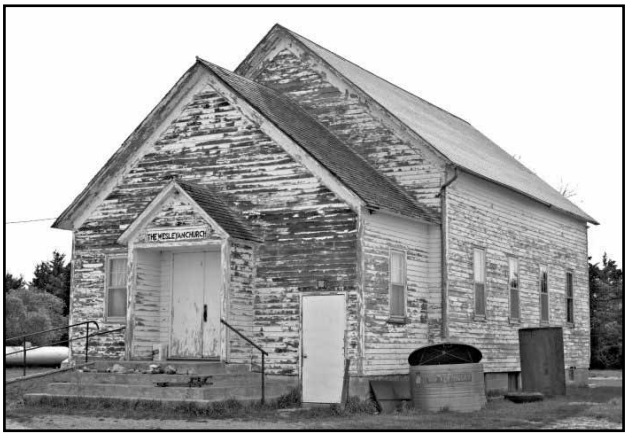
Brocksburg

The ghost town of Brocksburg is located along a section of rolling hills on Nebraska's popular Outlaw Trail Scenic Byway. Travel south along Nebraska 137, also called Highway 12, until just before you reach the Keya Paha River and turn right on the last dirt road before the river to discover a hidden treasure only steps off the highway. You'll find a lush landscape of mature trees hugging what remains of the family homesteads built here so long ago, then deserted sometime after. Several buildings are still standing, and most of them are shrouded by huge trees as if the trees have offered protection all these years. In her heyday, Brocksburg had a post office but it closed in 1957. The endearing relationship between the trees and the empty homes is almost overwhelming.

Brocksburg

Venus

Venus got its start as a post office in 1882. Soon after, someone opened a store in the front part of their house. This photo was taken of the store a few years ago. It's since collapsed into a pile of rubble.



Venus

Dobytown

Dobytown was named appropriately for the adobe-style earthen structures that were built here after the opening of Fort Kearny a few miles to the East. Dobytown is one of those places in Nebraska whose history is little-known. Ironically, all that remains today of Dobytown is earth. Dobytown arose after Fort Kearney opened in 1848 as an outpost of the U.S. Army. The outpost was far enough from the new town that much debauchery could be had in Dobytown and be far enough away from the post to avoid getting anyone in trouble. The two were separated by approximately four miles.

Dobytown

Minersville

In its prime, Minersville, named when a small band of coal was found and mining got underway here, was a booming area. There was a store, post office, saloon, church and blacksmith. At its height, this boomtown was home to 1,000 people. However, a traffic shaft cave-in and the low quality of the extracted coal led Minersville to decline over time. The post office officially shut its doors in 1923 as the town's population dwindled. Today...all that remains is the cemetery but no one has seen it in years.

St. Deroin

The ghost town of St. Deroin is located on the northern brim of Indian Cave State Park. St. Deroin was completely abandoned in 1920, but not before it enjoyed the fruits of being a thriving trading post. It was also the site of a popular ferry that carried people across the Missouri for decades. However, the river changed course and the ferry business dried up. Eventually the great Missouri flooded one time too many and the townsfolk got fed up and moved away, the last of them leaving in 1920. Now all that remains of St. Deroin are the school and the cemetery.

St. Deroin

Training Tidbits

By Pat Petersen, EPA Training Specialist

As crazy as it seems, we have blasted through another season of training. I say this because my actual program year ends July 31. What this means is now I will start planning for the 2023 training season. It will look similar to those in the past but if my grant funds would happen to grow a little bigger, I would have the opportunity to hold more Water Operator Training classes throughout the state. Let's hope this happens because I love doing what I do!

So before we get too far ahead of ourselves, here is a little rundown of what's to come for training opportunities. August will be a busy month. The 3rd and 4th we will have Midwest Fire from Burlington, Kansas in town to conduct our special trainings about Trench and Excavation Safety, and Confined Space Entry. I will be conducting a one-day training in Atkinson on August 17, and Buck will be providing a waste water training in Bridgeport on August 24.

September contains two conferences. First our fall conference will be held in Gering with the "Focus on Safety" Pre-Conference on Tuesday September 13, and the full conference on the 14th and 15th. A lot of my evaluations ask for safety presentations so that is what the pre-conference will emphasize. The Rest of the conference will look similar in some ways but we will see some new faces as well! The 2nd conference I reference would be the Water Pro National Conference that all NeRWA employees must attend. That conference will be held September 26-28 in Port Harbor, Maryland. If any operators would need anything, feel free to reach out to any of us but we will not be available for on-site issues. We can sure troubleshoot through a phone call.

October will contain one water training class and one waste water class. The water class will be in McCook on October 12 and the waste water class in Louisville on the 5th.

November 16 I will make a trip to beautiful Mullen, Nebraska for a one day water training class and Buck will be in Duncan on the same day. Bummer, I always like to go to that waste water class in Duncan.

Finally, by the time December rolls around, the trainers are ready for a break. December 14 will be a combined water and waste water class that should be great. We haven't quite finished all of the details for that one but stay tuned.

It's been a great program year for everyone here at NeRWA and we look to continue our great service to all of the operators throughout the state. We are still aware of the need for a few more backflow classes so keep your eyes peeled for anything that may arise. We are still hoping to have a few more!

So as we head into the heart of summer, always remember to "try" and take some time to enjoy your family and friends. It's worth every minute!

USDA WATER & WASTE WATER DISPOSAL LOAN AND GRANT PROGRAM

Improve Your Facility

About the Program

This program provides funding for clean and reliable drinking water systems, sanitary sewage disposal, sanitary solid waste disposal, and storm water drainage to households and businesses in eligible rural areas.

Funding

Long-term, low-interest loan funding is available. If funds are available, a grant may be combined with a loan if necessary to keep user costs reasonable.

USE YOUR FUNDS TO FINANCE THE ACQUISTION, CONSTRUCTION, OR IMPROVEMENT OF:

01 Drinking water sourcing, treatment, storage, and distribution

02 Sewer collection, transmission, treatment, and disposal

03 Solid waste collection, disposal, and closure

04 Storm water collection, transmission, and disposal

05 Other related activities such as permits and legal fees

NRWA

USDA Rural Development

Scan the QR code to view more information and start your application.

Nebraska Rural Water Association

EARLY REGISTRATION

Western Nebraska Fall Pre-Conference and Conference

September 13-15, 2022
Gering Civic Center
1050 "M" Street
Gering, Nebraska

One name per form. Make sure to indicate all your licenses to insure proper credit hours. There will be a $25 charge for name changes and cancellations made after September 1; $50 for no shows at the conference.

Name _____

Certificate numbers: Water # _____ Grade 6# _____ WW # _____ Well Driller _____

System/Company Name_____

Address_____

City, State, Zip_____

Email Address: _____

DAYS ATTENDING	MEMBER	NON-MEMBER
FULL CONFERENCE WITH PRECONFERENCE— (all meals included)	_____ $225.00	_____ $250.00
FULL CONFERENCE (WED) (all meals included)	_____ $150.00	_____$175.00
PRECONFERENCE (TUES) (includes lunch)	_____ $90.00	_____$115.00
WEDNESDAY ONLY (includes Lunch & Banquet)	_____ $100.00	_____ $125.00
THURSDAY ONLY	_____ $75.00	_____ $100.00
GUEST BANQUET TICKETS— $25 x _____	TOTAL $_____	TOTAL $_____
GUEST LUNCH TICKETS—$20 x _____	TOTAL $_____	TOTAL $_____
GOLF TOURNAMENT ON TUESDAY AFTERNOON ____YES		

Meals are included with the conference registration. Extra meal tickets are available above. The venue needs a count for the evening meal. Please indicate if you will be staying for the Wed evening meal: Yes_____

PLEASE REGISTER ONLY ONCE. DO NOT SEND IN MORE THAN ONE REGISTRATION.

EARLY REGISTRATION ENDS
August 29.
FEE INCREASES $25 FOR REGISTRATIONS DATED OR POSTMARKED BETWEEN AUGUST 29 AND SEPT 7 .
NO REGISTRATIONS AFTER SEPT 7.
$50 increase at the door.

TOTAL DUE $_____
Late charge, if any $_____
Total $ _____

BILL ME _____
CHECK ENCLOSED _____
(Note: Certificates will not be mailed until payment is received in NeRWA office.)

To Register **(no phone registrations):**
Fax: 402-443-5274
Online: www.nerwa.org
Mail: Nebraska Rural Water Association
3390 Ponderosa Street
Wahoo, NE 68066

When making room reservations, mention you are with NeRWA
Monument Inn, 1130 "M" Street
308-436-1950

DATE REGISTRATION RECEIVED:_____

For NeRWA office use only: **Hours: Water _____ BF_____ Wastewater_____ WD_____**

*Payment received*_____ *Check #*_____ *Certificate mailed*_____

Nebraska Rural Water Association

Gering Civic Center
1050 M Street

Exhibitor Registration
Western Nebraska Fall Conference
September 13-15, 2022
Gering, Nebraska

Monument Inn Motel
1130 M Street
308-436-1950

Associate Member Registration _____$300	**Non-Member Registration_____$600**

REGISTRATION INCLUDES 2 PEOPLE INCLUDING MEALS

Name of Firm: _____

Rep(s): (1)_____(2)_____

Mailing Address _____

City, state, zip _____Phone: _____

Email _____

Additional reps—$75 each: _____

_____

Vendors who would like to attend but do not have a booth (meals are included): NeRWA

Members: Full conference-$200 _____ Non-Members-$250 _____

Members: Wed-$125_____ Thurs-$100_____ Non-Members: Wed-$150 _____ Thurs-$125 _____

Exhibition days are Wednesday and Thursday.
WE NEED A COUNT FOR THE CATERER, SO PLEASE INDICATE MEALS YOU ARE STAYING FOR. Breakfast on Thursday morning is complimentary for anyone attending the conference.

MEALS ATTENDING: _____ Wed Lunch _____ Wed Banquet _____Thurs Breakfast

Outside space for trailer _____ Yes _____ No
Donating a door prize (giveaway) _____ Yes _____ No Item_____

FOR THOSE ATTENDING TRAINING SESSIONS: $80—all 3 days

YOU NEED TO COMPLETE THE FORM FOR EACH PERSON ATTENDING THE TRAINING SESSION.
PLEASE INDICATE THE LICENSES YOU NEED CEUs FOR.

Deadline for registering is September 6.
***Payment must** be included with registration.*
You will not be guaranteed a booth until payment is received.

Nebraska Rural Water Association
3390 Ponderosa Street
Wahoo, NE 68066

If you have questions, please contact our office:
800-842-8039 or 402-443-5216
info@nerwa.org

Total enclosed $ _____

Please indicate how many are participating in the Golf tournament _____

****

For NeRWA office use only: *Date Received:* _____ *Check#* _____

SUMMER THINGS TO DO

By Adam German, Wastewater Technician

It seems like we were just getting ready for spring duties and now here we are half way through our summer. Hopefully you were able to enjoy a safe Fourth of July and didn't spend too much time digging discharged fireworks out of your lagoon or wastewater facilities. Now things are going to get hot. Unfortunately, it looks like things are going to get dry as well. Hot and dry, not a good combo for this time of year. Keeping your wastewater facilities free of noxious weeds and rodents will have to be added to your already exhausting schedule. But hey, we're Nebraskans, we're used to it, it's nothing we can't handle! We will be watching the beginning of a winning Husker football season in no time at all.

This time of year, I spend quite a bit of time on the road making sure systems are able to get their annual influent samples completed. The NeRWA has four composite sampling machines available for our small systems to use if needed at no charge. These machines will pull a small sample from a lift station or manhole close to the influent side of your system every 15 minutes for an entire 24-hour period, making it a true composite sample. If you are reading this and wondering to yourself if you need this done or not, check your permit. Let me know if I can be of any assistance to you, I can certainly get a machine your way.

Even though the gas prices have sky rocketed, we are still out there, traveling the entire state. Don't hesitate to give any of us a call if you need anything. I usually have the sewer camera with me, and the sewer smoking machine is always available. We have been on several lagoons as of late, measuring sludge. Nothing like getting in a small boat with Buck and doing a little sludge judging on a lagoon. If you are thinking about measuring your lagoons, you will need to provide a boat. Preferably one without any holes. A trolling motor would be a huge bonus, but not required. We have been pulled around the lagoons with a long rope, so that's an option as well.

Like I mentioned earlier…it's gonna get hot. I know you are all extremely busy, don't over do it. Drink plenty of water. Stay hydrated. Stay cool. Most importantly, stay safe out there.

Sampling Techniques For Coliform Bacteria

By Mike Stanzel, Circuit Rider

Procedures for sampling coliform bacteria seems to be a subject that just never seems to goes away. For new water operators it is imperative to develop and follow a technique to insure an accurate lab result of the quality of water in your system. Seasoned operators must remember to never get in a hurry or short cut their technique for coliform sampling. Whether you are a new operator or have been in the business for a long time, if the technique is working, don't change! If the technique isn't working and you are experiencing positive samples, you may want to read on. I will try to explain a technique that works for me as well as many operators across the state.

1) Site selection, all routine sample sites must be approved by the NDEE. It is imperative to select sights that will reflect the true quality of the water you provide to your customers. Always avoid dead end water mains. The water can become stagnate in these areas. If you have a water main valve that is broken in the closed position you actually have two dead end mains. This condition may not be apparent so be aware. Always be sure you open valves after repairs and after exercising. Be very careful to check for any type of water filter. You may find them on the service line as it enters the building or under the sink. Try to select homes without old galvanized piping. Some of these pipes have a lot of deposits inside them that can be flushed into your sample. Never use a site that has any type of water treatment such as a water softener or a reverse osmosis unit.

2) The type of sample tap you use must be looked at very carefully. A smooth nosed sample tap plumbed in line, just as the water enters the building is a very good sample tap. A single cold water faucet is next best, but are hard to find. Try to avoid mixing and swivel faucets if at all possible. Never use faucets that can be extended. These faucets have a flexible hose on them that is impossible to get disinfected. Never use a yard hydrant. Avoid long neck faucets these are very difficult to disinfect. Avoid outside hose bibs, the seat on these hose bibs are actually 16 or more inches inside the home and are very difficult to disinfect properly. Sample stations may be an option for you. If you decide to invest in these stations I would make sure your coliform bacteria, sample site plan, has been approved by the NDEE, before installing them. Be aware that you will be sampling in the elements. You may want to get some type of small tent to get out of the wind or cold.

3) Flushing the service line is next. Before you begin to flush the service line be sure to unscrew the aerator making sure all gaskets have been removed from the faucet. Flush the service line thoroughly before collecting your sample. While flushing I will normally turn the water on and off a couple times very fast. I am hoping if any deposits are going to become dislodged it will happen then and not while I'm filling the sample bottle. The water should be flushed long enough to be collecting water that comes from the main. Usually five minutes is adequate, but the length of the service line dictates how long you must let the water flush. You can avoid in-house plumbing problems by installing a smooth nosed sample tap just after the water enters the building.

4) Disinfect the sample tap. The best technique I have found to disinfect a sample tap is to fill a sandwich baggy (fold over type) half full with Clorox, place it around the neck of the faucet, twist the baggy tight around the faucet and wash up on the baggy. This will displace the water in the faucet with Clorox. I will continue this for four to five minutes. Carefully remove the baggy. At this point you have everything disinfected, do not touch the faucet or move the neck. Run the faucet at a good pencil lead sized stream, be sure the water stream doesn't lip up around the faucet. Let the water run for a couple of minutes before filling the bottle.

5) Fill the sample bottle. Hold the bottle relatively close to the faucet. Unscrew the lid holding it in the downward position, fill the bottle to the 500 millimeter line and put the lid right back on. Do not put the lid in your pocket, do not put your thumb in the lid, do not sneeze, do not cough or even breath heavily while you have the lid off of the sample bottle. Some operators go as far as to make sure the furnace isn't going to start while they are collecting the sample. If for any reason you suspect the sample bottle may have been compromised pitch it in the garbage and call the lab for a replacement.

6) Fill out the lab slip completely and accurately, attach shipping label and put the sample in the mail then hold your breath until the results return.

If you would like me to come out and guide you through the sampling process please give me a call 402-672-9084.

A successful goose hunt with the family.

Photo credit: Courtesy of Randy Hellbusch

A Day in the Life of a Circuit Rider: Randy Hellbusch

By Angela Godwin

Angela Godwin is a writer and editor specializing in water and wastewater topics. She is currently the director of editorial services for Rogue Monkey Media.

Randy Hellbusch is an early riser, and it's a darn good thing! As Circuit Rider #1 for the Nebraska Rural Water Association, he often starts his day with the birds. "If the community I'm going to is two hours away and they start their day at eight, I'll probably leave home around six o'clock," he said. Often coupled with evening board meetings, his days are long ones indeed. But Randy doesn't mind. "That's part of the enjoyment of the job. It's somewhere different and with different people every day," he said cheerfully.

Locating service lines is one of the many tasks Randy undertakes as a Circuit Rider.

Photo credit: Courtesy of Randy Hellbusch

Fresh out of high school, Randy worked at a lumberyard in Friend, Nebraska. One of his customers, an elderly gentleman who owned a plumbing business, needed a little extra help. "So, I started helping him do some plumbing work after hours and on weekends," Randy recalled. Eventually, the gentleman retired and Randy took over. That was when he first dipped his toe into the water business.

Then one day, on his way out of a home he'd been working in, he was approached by a city councilman. "Hey, we've got a big problem," he told Randy urgently. "Our water superintendent just up and left us. We need you to take that over." And, just like that, Randy jumped into water with both feet.

"I LEARNED EARLY ON THAT PEOPLE REALLY DON'T CARE HOW MUCH YOU KNOW UNTIL THEY KNOW HOW MUCH YOU CARE."

"I ended up working for the city of Friend for six or eight years, running the water and sewer system and the whole gamut of utilities — parks, streets and everything like that," he said. Then, when he saw the opening for a Circuit Rider, Randy seized the opportunity to help rural water systems all over the state. He applied for the job and got it.

For the past 30 years, Randy has dedicated his life to assisting water utilities in small communities across Nebraska. Most of the systems he works with serve a population of 1,000 or less — some as small as 150. "They appreciate the help," he said, "especially when you get to know them a little bit. You can't just go in there, claiming to be an expert and telling them what to do. You have to listen. I learned early on that people really don't care how much you know until they know how much you care." That philosophy has guided him

throughout his career.

Randy presents his findings from a rate study.
Photo credit: Courtesy of Randy Hellbusch

The bulk of Randy's time is spent helping communities and rural water districts with their rate studies. "It's challenging sometimes, visiting with decision makers and board members that would sooner put in a new playground than fix their water lines because people can see that. But it takes a lot of money to run these systems and you need to make sure you have a balanced rate to promote conservation but still bring in the revenue you need."

Educating communities about the financial side of managing water and wastewater is something Randy finds rewarding. "A lot of our town boards are made up of volunteers and there's no reason for them to really understand the workings of the utilities," he said. "Sometimes, a town subsidizes its water or wastewater with general obligation funds or something along those lines, and I can explain that if you're doing that, your library, your streets, or something else is going to suffer. These utilities have to stand on their own for the entire community to keep benefiting from them and stay viable."

Randy embraces the opportunity to educate boards and utility staff so everyone is on the same page. "It just makes everything run smoother. And, if you can accomplish that, you feel pretty good about it."

Randy is one of three Circuit Riders in Nebraska. While each has his own area of expertise, they all cover the state equally as needs arise. Randy is just as likely to assist with tasks like leak detection and valve exercising as performing rate studies. Locating valves is particularly enjoyable, he noted. "I'm heading out to a small town next week where they have no idea where any of their valves are," he said. "Several years ago, they resurfaced their streets and just went right over the top of them." Using line locators and metal detectors, Randy will help the utility locate the valves, make sure they're operable, and get them mapped. "It's actually kind of fun; I'm really looking forward to it!"

As a water guy, Randy has witnessed many changes over the years. "When I started, around 40% of the water systems in Nebraska didn't even have water meters. Everyone just paid the same rate," he said. "But that's changed drastically. Now around 90% of the systems are metered."

Technology advancements have impacted rural water systems, too. GPS mapping, variable frequency drive motors, and radio-read meters have changed the rural water landscape. "Nowadays a lot of systems read their meters right from the office. You don't have to go out; you don't have to write anything down," he remarked. Outside of business hours, you can find Randy in the great outdoors. "I love to go hunting and fishing, especially now that my grandsons are getting old enough to go along with us. They really enjoy it," he said happily.

Looking back over his career, Randy is proud of the work that he and his fellow Circuit Riders have been able to do. "I think we've helped a lot of systems," he said. "Very seldom, if ever, has a system in Nebraska defaulted on a loan; violations are very low. I know we are not the only reason for that, but I think we've played a role and that feels good."

The importance of water operators in protecting the public health of their communities sometimes goes unnoticed, Randy noted. "People don't really understand how much work you put into making sure their water safe and the sewage is treated before it goes into the receiving streams," he said. "But to know you're helping the environment and protecting public health is probably the biggest reward for me."

Originally published in the national Rural Water Magazine, Vol. 44, No. 2, June 2022. Reprinted with permission from NRWA and Rogue Monkey Media.

Randy demonstrates how to repair a chemical feed pump.
Photo credit: Courtesy of Randy Hellbusch

Flushing and Flow Testing/ Color Coding Fire Hydrants

By Scott Finke, Circuit Rider

Over the summer and into the fall is a great time to flush your fire hydrants and flow test them. Hydrant flushing should be done at least once a year or more. Water main flushing is an important preventative maintenance activity that:

* Verifies proper operation of the hydrant
* Evaluates the available flow to the hydrant
* Allows utilities to deliver the highest quality water possible to the customer
* Removes mineral and sediment build up from the water mains

The process of water main flushing is one of the most critical practices carried out by drinking water systems. During the flushing of a hydrant, operators can assess the water pressure and available flow rate for firefighting purposes. It's imperative that each hydrant is operating as firefighters rely on them for fire-ground operations.

Over time, water settles, ages, and is affected by biofilm (a thin layer of microorganisms) that grows on the inside of the distribution piping. Each of these factors affects the quality and taste of the water, so it is important to flush the water out of the mains and hydrants regularly. Flushing can remove water from areas of the distribution system that have low flow or that have stagnant water in the mains. Flushing the hydrants will improve the color, odor and taste of the water if it has been problematic. Unidirectional flushing at the minimum required velocity will improve the carrying capacity of the mains.

Flow testing of fire hydrants is a simple test with a fire hydrant flow gauge. The hydrant flow gauge will measure pressure and flow of the hydrant gpm. If you are in need of one, give us a call and we can get one out to you. They are pretty simple to use. This way you know how much your fire hydrant will flow, and then you can color code the bonnet and caps on your hydrants. Here is the color coding for fire hydrants:

Class	Flow	Color of Bonnets and Caps
AA	1500 gpm or greater	Blue
A	1000 gpm or greater	Green
B	500 – 1000 gpm	Orange
C	Less than 500 gpm	Red

This is a good table to learn and make sure your firefighters know the chart if you color code your hydrants. Again, if you need a hydrant flow gauge, please give us a call at 402-443-5216 and somebody will be able to help you.

THE FIELD STAFF WILL BE OUT OF STATE THE WEEK OF SEPTEMBER 26-30 FOR THE NATIONAL RURAL WATER CONVENTION

Nebraska's Oldest Wastewater Plant?

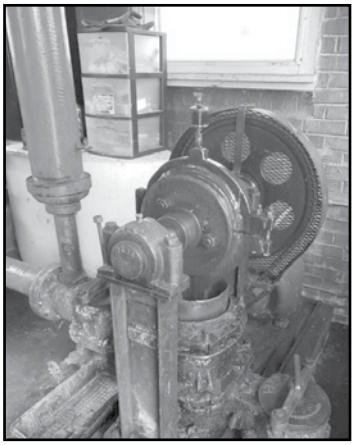
By Charles Buckley, Wastewater Technician

This year I ran across what I believe is the oldest wastewater plant in Nebraska - Newcastle. When I say this, I mean it is literally operating as it was originally built. Sure, they have had to replace some parts and pipes, but it is operational with the original structures and pump. I was in awe when I first laid my eyes on this beauty. Ok, what is beautiful about anything dealing with wastewater, but when you're in this business, you tend to take an interest in everything about wastewater. I went on the internet to see if I could find something on the oldest operational wastewater plant. In my search I only found the years of operation and the history of treatment. So back to Newcastle's plant. The plant was built in 1936-1937. Jim, the operator, said when he first took over in 1984, he got a hold of the company that manufactured the plant and they still had the information on the plant from 1936. Wow that's great record keeping!

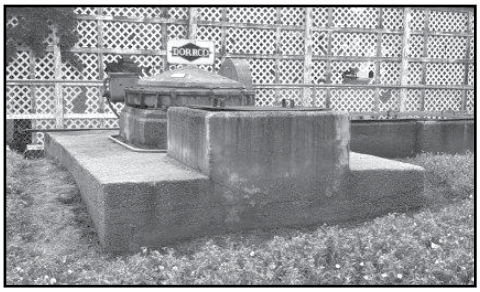
So, I have posted some pictures of the plant. The sewage comes into the primary clarifier. Then on to the trickling filter that has the original rock media for organism growth, and last off to the final clarifier. The plant is also equipped with a holding pit for solids. I would call this an anerobic digester. The plant has the capability to return sludge to the primary clarifier and to the digester by changing a few valves. Jim said when he sees the liquid coming from the digester turn gray that it's time to send the solids to the reed bed. The digester has a holding time of four to five months.

Look at that beautiful pump - and she's still going! Alright they did have one major upgrade. They had to add a UV system. There is also a torch used to burn off methane from the digester, it is no longer in operation probably due to the colder elements.

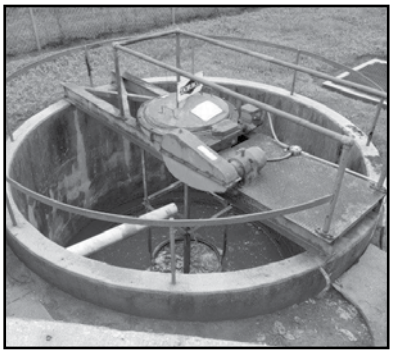
Jim is about to turn over the keys to the new operator, Daryl. So, if you ever want to check out this beauty stop by or give them a call. Hey, if you know of an older operational plant in Nebraska let me know so I can share the information with the other operators.



Original Pump House



Digester



Primary Clarifier

Methane Torch

Final Clarifier

Trikling Filter

The Water Cycle

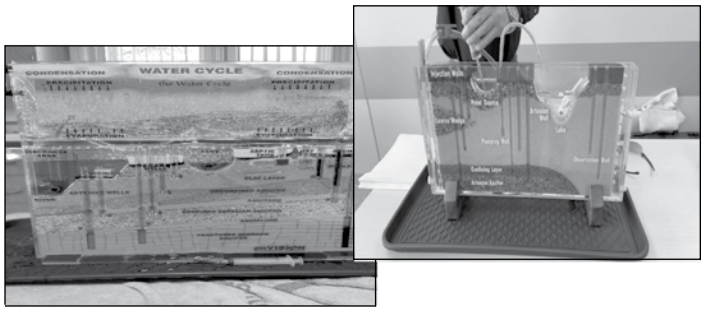
By David Schroeter, Source Water Specialist

Nebraska Rural Water has a couple of different cut away water models that we used recently showing how the water cycle works. Rain, water recharge, evaporation, and run off. These models are built very well and show the different layers of sand and gravel in the aquifers.

These are working models and that means we add water and can simulate a pumping scenario to show how the water actually moves through the sand and gravel and then up through a working pump. The models also have lakes and streams plus they contain wells, septic tanks, and underground storage tanks. With all these features it is then possible to add colored dye, as contaminants, and show how those contaminants can enter our drinking water and make the water unsafe to drink. It is quite interesting to watch as the tainted water moves towards the cone of depression created by the pump.

Where do these contaminants come from in the real world? They are all around us. Fertilizers, nitrates, chemicals from manufacturing, feedlots, leaking underground and above ground storage tanks, household chemicals, and the list goes on and on. By being able to show students and adults the effect that a small amount of contaminant can travel a long way is a small step in cleaning up our environment. The working cut-away model on a tabletop in a classroom is a good way to visualize looking down into the earth and see what is going on.

If you would like me to bring a water model to your community or school for a specific demo I would be more than happy to set it up.
David@nerwa.org
402-607-9082



A Trenching Class was held on Wednesday, August 3rd, at the NeRWA office.

NEW WEB PAGE

As most of you probably know by now, we have a new website. It is still a work in progress, so be patient. If you are having issues finding everything, call our office and we will walk you through it. It still has the same information, just in a different format.

GUIDELINES FOR CONTINUING ED HOURS

This article addresses training for water and wastewater classes and both conferences.

All water and backflow licenses need to be renewed by December 31, 2023. The current license period is January 1, 2022-2023. A wastewater license is renewed 2 years after the date your license was issued. NeRWA offers water and wastewater classes at no charge.

The hours required for renewal for each license are listed below:

1 Water – 2-year renewal period requiring 10 continuing ed hours. The end of the renewal period is always December 31 of odd numbered years. An easy tip is to get 5 hours per year. Start early in the year to get your hours. THE LAST 3 MONTHS OF THE RENEWAL YEAR GET VERY BUSY. Register early! We have people trying to register for classes in October thru December close to the date of the class. November and December classes are usually full 2 to 3 months before the classes.

2. Wastewater – A 2-year renewal period with 20 continuing ed hours.

3. Backflow (Grade 6) – 2-year renewal period requiring 10 continuing ed hours. The end of the renewal period is always December 31 of odd numbered years. An easy tip is to get 5 hours per year. Backflow hours can be obtained at our annual conference in March and the fall conference in Gering. They both offer at least 5 backflow hours.

When you attend any class, you get a certificate. Keep that certificate in a place where you can easily find it. Sometimes you will have to send a certificate to the state department as proof of attendance. If you lose the first certificate, you can request a second one. After that, each certificate will cost $20.

Flyers for all training classes (unless they are full way in advance) are either mailed or emailed to all our members. The classes are listed in our quarterly magazine which is also mailed to our members. We publish a training calendar each year that is mailed to all operators we have listed. This calendar is available on our website also. A tip for all operators – bookmark our website or save it in your favorites. This way you can keep updated on class dates, addresses, and the agenda. Agendas are posted about a month before the class. Cancellations, and if a class is full, will also be noted there.

All classes need to be paid before the class. If you send in a registration, include payment. If you register online, pay online. If we do not receive payment at the time of the online registration, an invoice will be sent. If payment is not received before the class, you will not be guaranteed a spot in that class.

INSTRUCTIONS TO PAY ONLINE:

Click the Pay Here link. Then click the Send link. At this screen, enter amount and what the payment is for. Follow instructions for payment.

A Confined Space class was held on Thursday, August 4th, at the NeRWA office.

Nebraska Good Water News

Nebraska Rural Water Association - 3390 Ponderosa Drive - Wahoo, NE 68066

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