

Wisconsin Rural Water Journal

Summer 2026

Duckweed in
Wastewater Lagoons

Safety in the
Workplace

Every Gallon
Requires Energy

Unpopular Facts
About Rates

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Address all letters to the editor, advertising inquiries and correspondence to:
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Dean Bergstrom,
WRWA President, Cumberland

Message from the President

Happy summer to everyone! I hope everyone is able to enjoy it so far. I know there has been some severe weather across the state in the past month and I hope you all survived it and you were able to get any help you needed. Remember that our circuit riders are always here to help you.

This will be my last president's message, as I will now move to Past President. The WRWA Board just recently met in the Wisconsin Dells for our board retreat and board reorganization. Hershel Marks from Boscobel was elected as your new president. I would like to thank Ramon Knutson for his 23 years serving on the board. Thank you Ramon! I would also like to welcome John McCue of Hayward to the board. John was elected at our annual meeting in Green Bay and he takes my spot as your district #4 representative. Welcome John!

One of the big topics that we discussed at the board retreat was the future of WRWA Water College. I would like to thank your National Director, Kevin Mraz for all his hard work with the Water College. We are getting closer to making this a reality. Stay tuned for more on this in the future. We also discussed the long range plan for WRWA and a succession plan for the future leadership. We had a full day of topics and discussion and a lot of great input towards the future of WRWA.

I would like to thank the board members for their hard work over the past years of my presidency. We have worked together for the same goals and it is great to hear all the input from the board. I would also like to thank Chris Groh, WRWA Executive Director for his leadership and also the WRWA Staff for all their hard work in making WRWA one of the top organizations in the country! Thank you all!

I hope you all continue to enjoy your summer and hopefully you get all your projects completed for the year. Try to get some time off when you are able, as everyone needs to take time off you get rejuvenated while the weather is beautiful.

Take care everyone and stay safe! *Dean*



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WRWA Mission:

Assisting, educating
and representing
our members in the
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Industries.



Chris Groh,
WRWA Executive Director

Message from the Executive Director

What is Technical Assistance?

Every couple of months I am asked to attend a meeting for some thing or other, and I am asked what we do. My first thought is "REALLY"; you work in this field, and you don't know what Wisconsin Rural does in the water and wastewater industry?? I really don't think I'm doing that bad a job of getting our name out there. But, after I calm down, I guess I realize that someone coming into this industry from a non-water industry may not have heard about us. This makes me wonder who the heck is coming into this industry and how they got hired, but I guess it can happen.

So here it goes...again. Rural Water renders Technical Assistance and Training in the water and wastewater industries. We have staff that goes out into rural Wisconsin (towns and villages up to 10,000 people), municipalities, sanitary districts, other than municipal (OTM) and non-Community Non Transient (NNs) systems across the state and helps these systems provide safe, treated, tested drinking water and clean, tested, safe to discharge into the environment, wastewater. We help get equipment, we help plan and carry out preventative maintenance, we deliver loaner equipment, we teach operators how to use their equipment, how to fix problems; we come out in emergencies, we do anything related to the water and wastewater system. If you are out of compliance, we come and fix it. If you are stuck on a problem, we fix it. If you need information or help with regulatory compliance, we fix it. If you need funding, we come out and help you get through the paperwork and make introductions to the funding agencies. Basically, anything you can think of, we do it.

How does this not get around? I don't know. My favorite thing I hear about is the old operator is leaving, and the first thing he/she tells the new operator is "if you have any troubles or need help, call Rural Water". I truly love that we are their first call. I would love it more if we were the first call for everyone in the industry. We're just about there, so I keep attending these meetings.

We are starting to push a program called "Rural Water TA", Which is going to focus on REAL technical assistance. If some other group calls and says they can help you with funding, training, administrative or operations, be cautious about going with them. We have been doing real technical assistance and training since 1981. No one does it better, no one else is free, and no one has our experience and contacts. Please let us be your first call. I'll be waiting!

Have a great Summer.

Chris



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NRWA



We get letters and emails!

We'd love to hear from you...

Dear NRWA:

This message is feedback in regard to the recent visit with Dan Wundrow of WRWA. Not only is he personable & friendly, he offers help by jumping right in to try to remedy any problems we share with him that we are encountering. He provides contact info of people that can help us and he is willing to tackle some of the hands-on work to try to help us fix problems.

Every member of the WRWA team that has come on-site has proven to possess a wealth of industry knowledge and been helpful to us in maintaining the best possible services to our city residents and we are very grateful that they provide this to Wisconsin communities. We are under 1,000 in population so our funding resources are limited, so them offering help is essential to all of us small cities/towns/villages.

We sincerely appreciate all of the services Wisconsin Rural Water Association offers us. The training is excellent and so beneficial to all water/sewer staff. I hope they always have the funding to be able to help all of us.

WRWA takes amazing pride in this industry and we do too. It is wonderful to have a great working partnership with WRWA!

Becky Mesko, Utility Clerk/Deputy Clerk-Treasurer
City of Mellen

I just wanted to drop a quick note expressing the support from the WRWA.

I Called Dan Wudrow earlier today, asking about some clarity on an issue about service line responsibility.

Not only did he call me back promptly, he also had documentation that solved the issue.

In my 36 years of being an operator, the WRWA has always been helpful each time I've asked for help.

Thank You All for the Wonderful jobs you do.

You are Very Much Appreciated.

Dan Odeen, Shelby Sanitary District #2

Good Afternoon,

I have been involved with the water and wastewater operation for the village of Dallas for a couple of years. Having these people to turn to when needed has been a huge plus for us. Their knowledge and the resources they provided for us was and still is very helpful. You have helped us save money with our hydrant repair and also showed us the correct way to do things with our whole system. It is vital to our smaller communities to continue to have this resource available for us!

Thank You,

Wayne Borgen, President, Village of Dallas

Please accept this donation towards the loaner equipment program. The Village Board is very appreciative of the assistance provided by Rural Water. A special thanks to Todd Weich for his assistance with a water break this past winter. He went above and beyond helping!

Sincerely,

Lisa Czech, Clerk/Treasurer, Village of Athens

To Whom it May Concern:

The Village of Gilman is in full support of Wisconsin Rural Water and all that they do for our Village. Our Public Works Director works hand in hand with Todd Weich on the water side with fixing and updating our hydrants, valves, reporting, as well as looking into best use practices.

We are thankful for the time and energy that Todd has spent assisting us here in Gilman. Todd has always been able to assist with reporting needs and cost-saving ideas. The Village of Gilman is thankful for his expertise and for all the work Rural Water does for small communities!

Thank you.

Sincerely yours,

Candice Grunseth, WCMC, Village Clerk/Treasurer
Village of Gilman

To Whom it may concern:

My name is Pete Denn Director of Public Works for the Village of Webster our population is around 700 residents. I recently took over as director starting December 1st, 2025.

Recently, myself and staff had the opportunity for WRWA Nathan Licht to come to our village and give training to the EPA Water program and WI DNR Water training. This form of training I feel is an important step in keeping our village and surrounding waters as safe as possible. The training that was given was spot on and very clear to understand as well as answering any questions we had.

The services that WRWA holds is a important role in helping the Village of Webster keeping our residents and community safe and moving forward towards the future. I can honestly say that without the help and knowledge from Nathan Licht as well as WRWA provides the village would not be able to run as efficiently as it currently is.

I know that I am new to this role as director, but I can say that having WRWA helping myself, my crew, and village residents is curtal part of our municipality. Thank you for taking the time in reading this, please do not hesitate to reach out to myself for any questions regarding Nathan Licht and or WRWA.

Sincerely,

Pete Denn, Director of Public Works, Village of Webster

To Whom it May Concern

I am writing this letter of support for Wisconsin Rural Water Association and all they do for the Village of Gilman. They come out to our community and give their time on water and sewer issues. My Public Works Director and I have personally worked with Dan Cooper the past 8 months on WPDES permitting, Intent to Apply for the DNR, Facility plan process, EPA ta grant, Site visits, Village Board meetings and community public hearing.

We are thankful for Dan and the time he gives to the Village! Dan has been nothing but great to work with and very accommodating attending meetings to help explain things to our Village Board. The Village of Gilman is thankful for their time and expertise!

Please feel free to contact the Village office with any questions or follow up on this letter of recommendation. You can email me at clerk@gilmanwi.gov or by calling 715-447-8650. Thank you.

Sincerely,

Candice A. Grunseth, WCMC, Village Clerk/Treasurer
Village of Gilman

Hello Everyone,

Just wanted to thank you for the training that I took part in the Wisconsin Dells on the 20th of May.

I find myself at more of your training opportunities vs other offerings these days. WRWA seems to have more trainings that are geared to what I need not to mention the no fee ones.

So, Thank You again, and I look forward to participating in your training classes in the future.

Jeffery Miller, City of Algoma

On behalf of the Village of Dresser, I would like to express my gratitude to WRWA, Specifically Nate Licht.

In November of 2025 I was having issues with bad water samples, and I had to perform an emergency chlorination for the water system. It was my first time having to do this, so I called Nate for some help. He came for a visit and walked me through step by step on how to set up the chlorine pump and how to figure out how much chlorine I needed to add. His professionalism, knowledge, and determination turned a stressful situation for me into a walk in the park.

WRWA is a great organization filled with people who want to help others and I know I wouldn't be as successful at my job without them.

Sincerely,

Jesse Vlasnik, Village of Dresser

To whom it may concern,

This letter is to show appreciation for Wisconsin Rural Water Associations efforts in doing what they can to keep our system up and running. We called upon Circuit Rider Todd Weich to assist un in locating a broken water main. Todd responded in a timely manner and did his magic in locating the break. This is only one example of how WRWA has helped us over the years. It is comforting feeling knowing they are always there to help!

Thank you WRWA!

Sincerely,

Mike Sanborn, Manager, Eagle River Light & Water Utility

Continued on page 6



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Continued from page 5

Good afternoon.

Hope this email finds you all well. Just wanted to reach out and let you know how helpful both Tony Roche and Dan Wundrow have been to the Village of Elk Mound Water and Wastewater Departments.

While the Wastewater staff was preparing to take a Disinfection Certification Exam, Tony drove up and went through the WDNR Study Guide with us and later reached out to see how things went. He is a wealth of knowledge. Dan stopped by one day to assist the Water Department in trying to find any possible money that we may be missing out on. He had a heavy grasp on areas that we could investigate. He had researched out PSC Report before stopping by and had great ideas for the utility moving forward.

The Village of Elk Mound is very thankful for the entire WRWA, but really want to express their gratitude for Tony and Dan. We look forward to working with WRWA in the future and value the partnership.

Mark Levra, Director of Public Works, Village of Elk Mound

Dear WRWA,

The Village of Brooklyn would like to express our appreciation for all the support you provide our small community, whether it is helping us find a water system leak that has not surfaced, helping new operators become certified, assisting in our emergency response plans, ordinance updates, public education, assisting in fixing a fire hydrant, assisting at the wastewater treatment plant with process troubleshooting, use of valve turner, weekly updates about topics in the industry, and many other services. We work under tight budgets and staff limitations, and WRWA is always there to help our community with a smile on their face.

The Village of Brooklyn is truly thankful to have this amazing resource just a phone call away.

Sincerely,

Leif Spilde, Village of Brooklyn,

Emergency Management Director, Public Works Director

Hello,

I would like to thank everyone employed at WRWA for helping me in getting familiar with how municipal water systems work and helping me get my water license through classes and one on one informational items involving drinking water, PFOS, Water distribution, groundwater and sewers. Chris Groh, Brenda Staudenmaier, and Dan Wundrow were very instrumental parts to the puzzle. Along with Renee Koback and all of her weekly e-mails that are chalked full of updates, times, dates of very important classes, meeting, state and federal decisions, etc. The list goes on and on. I don't know how we got along before WRWA was founded, But I know personally that Wisconsin is a safer and better educated place with WRWA heavily involved.

Thanks again WRWA for everything you've done, Everything you're doing and everything you plan on doing in the future. This is an excellent program. I look forward to our future here in Wisconsin with WRWA involved.

Keep up the good work.

Lenny Hasz

Dear Todd,

On behalf of the Village of Edgar, I would like to extend our sincere appreciation to you and the Wisconsin Rural Water Association for the outstanding assistance and support you have provided to our community.

Over the past several months, the Village experienced ongoing issues with water loss within our system related to likely underground lateral leaks that were not surfacing and were extremely difficult to locate. Your willingness to come to Edgar and assist our staff with leak detection efforts was invaluable. Through your expertise, experience, and specialized equipment, you were able to help pinpoint the source of the leaks, allowing the Village to make necessary repairs and reduce significant water loss within the system.

For a small community like Edgar, access to the technical assistance, training, and resources provided through Wisconsin Rural Water Association is tremendously important. The support your organization provides to communities across Wisconsin truly makes a difference in helping municipalities maintain safe, reliable, and efficient utility systems. We greatly appreciate your professionalism, responsiveness, and continued willingness to assist our community whenever needed. Your efforts are a tremendous benefit not only to the Village of Edgar, but also to many small communities throughout the State of Wisconsin.

Please extend our appreciation to everyone at WRWA for the important work your organization does each day in supporting local water and wastewater systems. Thank you again for your continued assistance and dedication to rural communities.

Sincerely,

The Village of Edgar

Dear Renee,

I hope you are doing well. On behalf of the City of Menomonie Water Utility, I wanted to reach out and thank you for all the information and guidance you have provided us. Your assistance is always greatly appreciated and has been incredibly helpful to our efforts. We look forward to continuing our work together.

Best regards,

Jeremy Hoyt, Superintendent Water Utility

City of Menomonie Water Utility

Dear WRWA,

As a small water and wastewater system, we are very grateful for an organization like WRWA. Without the support that they give to all of us, we would struggle to support the communities we serve. The educational opportunities, the support from circuit riders, and the networking events they provide are critical for communities that have small staffs and large responsibilities.

Thank you,

Eric Carley, City of Omro Utilities

Hi Renee,

Matt Rettler did a great job reviewing our water and Wastewater utilities and giving us suggestions on reducing our energy consumption/rate reduction. He helped explain things so we could understand how we can accomplish this goal.

Thank you so much for his free services.

Randy Kerkman, Village of Bristol

To Whom It May Concern,

On behalf of the Village of Bloomington, I would like to express my sincere appreciation for the assistance provided by the Wisconsin Rural Water Association (WRWA) and its Circuit Rider Program.

The support we have received has been extremely valuable to our utility operations. Most recently, Annetta Rueden WRWA provided assistance in helping us investigate and locate a potential water leak within our system. Their technical knowledge and guidance were instrumental in helping us evaluate the issue and work toward a solution.

In addition, Annetta Rueden WRWA staff have assisted me with preparing and collecting required water samples, ensuring that sampling procedures were completed properly and that regulatory requirements were met. Their willingness to answer questions, provide guidance, and offer hands-on assistance has been a tremendous benefit to our community.

As a small utility, having access to knowledgeable professionals who can provide technical expertise and support is invaluable. The assistance provided by WRWA helps us maintain compliance, improve system operations, and continue providing safe and reliable water service to our residents.

I strongly support the continued funding of WRWA programs and appreciate the important role they play in assisting water and wastewater systems throughout Wisconsin.

Thank you for your continued commitment to serving communities like Bloomington.

Sincerely,

Keith W. Leitzinger, Public Works Director
Village of Bloomington

I am writing this letter for the very good help WRWA does for coming out and helping the Village of Albany the village engineer and the engineer for the developer that is working on getting started on a new housing development and the Village Fire Department. The village Fire Department needed some fire hydrants around town pressure checked for the fire department audit. The fire department and the village had a hard time finding someone, so I asked WRWA and they told me that they have the equipment and have been trained on how to do it. I was also called by the village engineer that the Wisconsin DNR and Wisconsin PSC had to have hydrant pressure test so that the new sub-division can get started.

I would like to thank Annetta Van Rueden who came in and worked with the two engineers and the fire department rep to get it done. I will also be sending one of the new employees to training at the WRWA training center in Plover, WI. Before I send them to get their water or sewer license in August or September. We have found that the training at WRWA is some of the best for new employees and older employees to stay up to date with credits.

I have been the Superintendent for Public Works for the last 20 plus years, and I have been in this industry for the same amount of time. Whenever you need help you know you can call WRWA and they are there to help you.

Thank you!

Lonnie Gill, Superintendent of Public Works, Village of Albany

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Duckweed

in WASTEWATER LAGOONS

Tony Roche,
WRWA Wastewater Trainer

Controlling duckweed can be challenging, but duckweed can help out your wastewater lagoon

Duckweed is a tiny, bright-green floating aquatic plant that rapidly covers nutrient-rich wastewater lagoons. While it acts as an efficient natural water filter by absorbing pollutants, an uncontrolled duckweed mat can deplete oxygen and hinder wastewater treatment.

Duckweed thrives in wastewater because it feeds on the high levels of nitrogen and phosphorus found in sewage. The plant grows using a small, hair-like root that pulls dissolved nutrients directly from the water column. When a colony of duckweed completely covers the surface of a lagoon, it essentially acts as a living blanket. This covering can help shade out algae and mitigate the wide pH swings that are often associated with algal blooms.

Controlling duckweed can be challenging, but duckweed can help out your wastewater lagoon. Duckweed can aid in nutrient removal as it absorbs large amounts of nitrogen and phosphorus. In addition to mitigating pH swings, duckweed can also help lower total suspended solids (TSS) that are often associated with algal blooms.

But...duckweed ain't all good. If left unmanaged, duckweed can quickly become a nuisance rather than a treatment tool. If a duckweed mat gets too thick, it not only blocks sunlight and inhibits the oxygen production associated with photosynthesis, but it also blocks the natural transfer of oxygen from the air into the water. Low Dissolved Oxygen (DO) prevents

beneficial bacteria from breaking down waste. Since duckweed does not process or destroy the nutrients it absorbs, if the duckweed is not removed before winter the duckweed will die and sink to the bottom of the pond where it will release all those nutrients back into the water.

A crucial part of duckweed management is physical removal. This is often very labor intensive. Some operators will rake duckweed by hand and let it dry out on the dykes of a lagoon. Some operators can get pretty creative when it comes to mechanical removal – some will use a system similar to cranberry harvesting to remove the duckweed. Our friends from Wyoming Rural Water have fabricated a screened pontoon system with a trash pump for moving, screening, and returning water back to the lagoon. If you have another method of removal please let me know...I would love to come visit you and check it out!

I hope you are all having a good summer. It goes by faster every year!

And two more things –

Mark your calendars — Sporting Clays Shoot at the Ashley Shooting Club on August 26th and Our Outdoor Expo on August 27th!

Until next time! *Tony*



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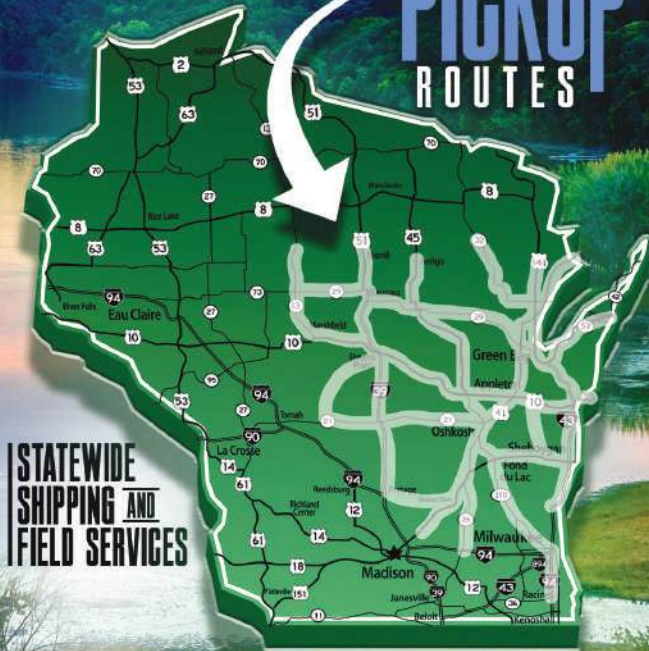
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New Operators

Let's Be Prepared

Kelly Thomas,
WRWA Technical Assistance Director

You are a new water operator for your community—congratulations! Now what?

Being a new operator can be a bit overwhelming. There are many responsibilities, rules, and regulations to learn. With assistance from WRWA, we can help get you on track and make your new position a little easier.

Every community water system is unique; however, they all require the same basic tools and information to operate smoothly during both normal operations and emergency situations.

I have developed a list of items you should have available, along with several requirements you will need to fulfill as an operator. If you need assistance obtaining or creating any of the items below, contact your WRWA Circuit Rider or DNR representative.

CONTACT INFORMATION

The following individuals and organizations can assist you with day-to-day operations or during an emergency:

- Backup Operator
- Supervisor
- Mayor
- DNR Representative
- Laboratory
- Plumbers
- Well Company
- Electrician
- WRWA Circuit Rider

WAIVER ASSESSMENTS

Every three years, the DNR requires water systems to investigate potential contaminants within the immediate recharge area of each well. This assessment form is pre-populated with potential contaminants identified in previous reports. Completing the assessment may qualify your system for waivers from certain contaminant sampling requirements during the following year.

Take advantage of the support available through WRWA, your DNR representative, fellow operators, and industry professionals.

MONITORING SCHEDULES

Your monitoring schedule outlines the drinking water samples that must be collected throughout the year. The schedule is based on your sampling history and the results of your waiver assessment. It is typically available for review in mid-January.

This is not a permanent document and may change throughout the year based on sampling results and regulatory requirements.

MONITORING SITE PLANS

The monitoring site plan identifies all DNR-approved drinking water sampling locations within your community. Each sampling location specifies the types of samples that may be collected there.

Deviation from the approved site plan is not permitted and may result in additional sampling requirements.

SANITARY SURVEYS

These inspections are conducted every three years for community water systems by your DNR representative to assess compliance with drinking water regulations and evaluate the overall condition of your water system.

The survey includes an assessment of:

- Water sources and system facilities
- Water quality
- Operations and maintenance practices
- Operator certification
- Financial resources
- Management practices
- Consumer Confidence Reports
- Public notification procedures
- Recordkeeping and documentation
- Regulatory compliance

EMERGENCY RESPONSE PLAN (ERP)

Every community water system is required to maintain an Emergency Response Plan (ERP) and have it readily available in the event of a drinking water emergency. The plan should be reviewed annually to ensure all information remains current and accurate.



At a minimum, the ERP should include:

- A list of local and state emergency contacts
- Procedures for establishing emergency communications
- Mutual aid agreements with neighboring communities or utilities
- Procedures for obtaining emergency water supplies
- Methods for communicating and sharing information with customers

As a new operator, the amount of information and responsibility can seem daunting at first. However, by becoming familiar with the resources available to you and maintaining the required plans, records, and schedules, you will build the knowledge and confidence needed to successfully manage your community's water system.

Remember, you are not expected to know everything on day one. Take advantage of the support available through WRWA, your DNR representative, fellow operators, and industry professionals. Being prepared, staying organized, and asking questions when needed will help ensure the continued delivery of safe, reliable drinking water to your community.

The work you do as an operator is essential, and your commitment to protecting public health makes a difference every day.

Stay safe, stay healthy. *Kelly*

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SAFETY IN THE WORKPLACE



Annie Von Rueden,
WRWA Water Circuit Rider

All operators must be aware of safety hazards in and around water distribution facilities.

Safety. When you are doing a job, be aware of your surroundings and what is happening around you. Most times when we are in a hurry, our thinking is not as clear as it can and should be. Which can be due to many factors such as ignorance, poor work habits, laziness, haste, or temper. Maybe your supervisor, Board member, President are pushing you with too many of their expectations. Do you really need to be in a hurry? Or are you in a hurry to get on to the next job?

If we slow down, most accidents could be and have been prevented. Safety is a very important operator's responsibility. Unfortunately, too many operators take safety for granted. The water operator as the responsibility to be sure that your workplace and facilities are a safe place to work and that everyone within that workplace follows safe and proper procedures.

All operators must be aware of safety hazards in and around water distribution facilities. Working in traffic and excavation for pipe installation or main break repairs can be extremely hazardous. If work conditions or facilities do not have adequate ventilation explosive conditions can develop. Most accidents result from carelessness or negligence.

It is not just an accident. It is the long road of recovery and pain for the injured as well. It can take months/years to heal. Not fun. Plan or make sure to be a part of an active safety program. You may have the responsibility of training new operators, and safe procedures must be stressed. Ask yourself the question. Think for a second. Could that have been prevented? *Annie*

OTM-NN Small Water System "Sampling Requirements 2026"

Good morning,

Today I would like to mention utilizing the WI-DNR web site and checking your water systems sample requirements. You do not want to miss any important sampling that your water system is required to take. Checking your water system's sample requirements is key to staying in compliance with the WI-DNR regulations.

First off, Let's start by checking your water systems Sampling Requirements through the WI-DNR website at (dnr.wisconsin.gov). Once you've reached your water systems sampling requirements you can check for all your monthly, quarterly or yearly sampling requirements. Most of the time your system requirements do not change unless you have a missed sample or they add additional sampling. Missing forms or sampling paperwork can also be found on the WI-DNR website.

Most of your sampling requirements will include monthly and quarterly Bacteriological sampling, lead + copper sampling, WQP, IOC, SOC, VOC, Nitrate and PFOA/PHOS sampling information. Once you have figured out all your sampling information, please reach out to a WI-STATE-Certified laboratory and order bottles to complete your sample requirements in the compliance period. I know sometimes it may seem overwhelming but if you have any questions on checking your sample requirements, please give us a call. This is just one handy tool small water system operators should get into the routine of checking. The WI-DNR website offers a variety of helpful links for all water operators.

Please don't hesitate to call if you are experiencing any form of technical assistance or WI-DNR compliance issue. We are always happy to assist.

Thank you and have a wonderful day!

George Taylor,
Small Water System Circuit Rider
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4/1/2026 – 6/30/2026

UTILITY NAME	ORDER ISSUED	OVERALL% INCREASE
Pewaukee (V) Water	4/1	71.97%
Madison Water	4/2	9.89%
Wheeler (V) Municipal Water	4/7	37.38%
Haugen (V) Water	4/27	82.46%
Mcfarland Water & Sewer	5/8	42.46%
Fairchild Municipal Water	6/3	61.47%
Glenbeulah Municipal Water	6/3	61.64%
Slinger Utilities	6/4	60.37%
Lodi Municipal Light & Water	6/5	31.33%
Whitehall Municipal Water	6/22	32.99%

PSC CONSTRUCTION AUTHORIZATIONS ISSUED

4/1/2026 – 6/30/2026

UTILITY NAME	ORDER ISSUED	CONSTRUCTION COST
Delavan Water & Sewage Commission	4/27	\$4,000,000
Superior Water Light & Power Company	5/5	\$4,915,688
La Crosse Water - North Project	5/11	\$3,270,000
La Crosse Water - South Project	5/11	\$6,338,000
Columbus Water & Light Department	5/27	\$1,513,650
Vesper Muni Water & Sewer	5/27	\$2,076,834
Kenosha Water	6/1	\$4,580,000
Wisconsin Dells Municipal Water	6/5	\$3,701,229
Somers (V) Water	6/22	\$4,610,000
Menomonee Falls (V) Water	6/30	\$13,582,698



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Full page	\$575	\$1,970	\$770	\$2,670
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Quarter page	\$270	\$860	\$400	\$1,400
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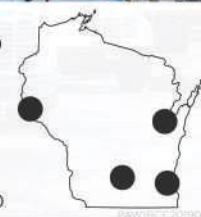


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From Compliance to Commerce:

Empowering Wastewater Entities Through DIY Water Quality Trading with SNAPPlus

Dan Cooper,
WRWA EPA Wastewater Technical Assistance/Trainer

As an EPA Wastewater Technical Assistance Trainer, I've seen countless facility managers hesitate at the starting line.

The Stagnation of Trade

Water quality trading (WQT) offers a cost-effective path to meeting Total Maximum Daily Load (TMDL) requirements—point sources pay non-point sources to reduce pollutant loads beyond compliance. Yet adoption remains low. The barrier isn't demand; it's modeling complexity. Establishing baselines, quantifying reductions, and verifying credits require sophisticated hydrological expertise.

As an EPA Wastewater Technical Assistance Trainer, I've seen countless facility managers hesitate at the starting line. Reliance on third-party consultants creates bottlenecks: high costs, extended timelines, and lost local watershed context. My question became simple: Can we close the gap ourselves?

The Case for SNAPPlus

My answer led to SNAPPlus (Simple Nutrient Assessment Package Plus), an agricultural modeling tool for calculating nitrogen and phosphorus loads across landscapes using soil types, crop rotations, management practices, and climate data.

Though designed for conservation planning, its mechanics align with the needs of non-point source credit generation—the supply side wastewater utilities must engage. Upon inspection, I realized SNAPPlus inputs are readily available through state programs, and outputs meet most trading registry standards.

The Green Light: A Strategic Shift

After weighing risks against market stagnation, WRWA made a pivotal decision: giving me the green light to learn SNAPPlus.

This directive integrates SNAPPlus into our core curriculum for EPA trainers and facility operators. The rationale rests on three pillars:

Pillar	Benefit
Cost Reduction	Internalizing modeling eliminates consultant fees, making WQT viable for smaller municipalities
Speed & Agility	Facilities can rapidly assess “what-if” scenarios and accelerate deal-making
Technical Integrity	Operators who understand their numbers can defend trades during audits and public comment periods

We are moving away from the “black box” mentality toward a culture where every credit is understood and defended by the entity holding it.

Implementing the DIY Approach

My training sessions now include:

- Data Acquisition: Gathering soil surveys, land use maps, and climate data for SNAPPlus runs
- Baseline Establishment: Running counterfactual scenarios to isolate actual reductions
- Credit Verification Protocols: Aligning SNAPPlus outputs with regional trading program rules

The Impact

Beyond economics, this approach creates direct feedback between dischargers and agriculture. When a WWTF manager sees how a cover crop reduces phosphorus loads, a financial transaction becomes collaborative conservation. This fosters innovation—facilities can tailor solutions without waiting for generic consulting firms.

Path Forward

Adopting SNAPPlus is more than adding software—it's a declaration of independence. The expertise to fix our watersheds exists within those managing them. For entities considering WQT: do not let modeling complexity hold you back. With tools like SNAPPlus and commitment to learning, you can build defensible, economically sound trading programs.

The green light has been given; let's get to work.

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~ Crane Engineering ~
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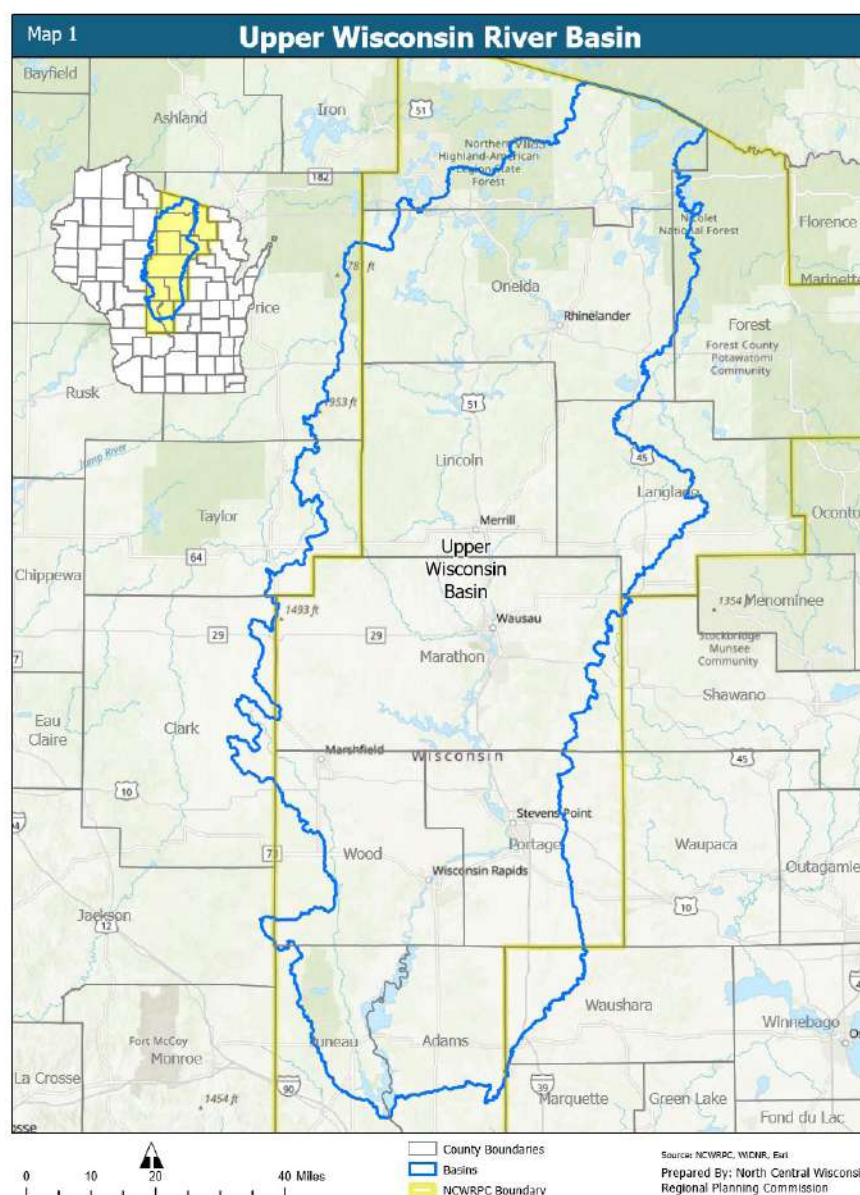
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Upper WI River Basing Protection and Planning Workshops

Andrew Aslesen,
WRWA Source Water Specialist

These workshops stem from an effort spearheaded by the River Alliance of Wisconsin (RAW) and include multiple partner organizations to look at managing water resources on a watershed basis.



We are pleased to announce that WRWA will be hosting two workshops this fall focused on planning and protecting the Upper Wisconsin River Basin. The first workshop will be held at the WRWA Technology Center in Plover on September 24th, and the second workshop will be held on October 7th at the Forest County Potawatomi executive building in Crandon. The agenda for each workshop is different with the primary focus on various aspects of planning and protecting water resources. Speakers include a range of folks from local governments, NGOs and

groups that all play a role in managing water resources in the basin. We are fortunate enough to be able to offer these workshops free of charge due to a small grant from a group interested in looking at better ways to manage and protect water in the basin. If you work for a municipality or utility within the upper WI River basin, I would encourage you to consider attending one or both of these workshops. Keep reading to learn a bit more about inspiration for putting on these workshops.

These workshops stem from an effort spearheaded by the River Alliance of Wisconsin (RAW) and include multiple partner organizations to look at managing water resources on a watershed basis. The idea of managing water resources at a watershed scale isn't new. Water resource managers and government agencies have been interested in this concept for many years. The premise behind a basin wide approach is that clean water is crucial for human and animal health, ecosystem vitality, and economic stability and that the current water management systems and policies, from pollution discharge permits to water withdrawal demands, don't always provide adequate access to clean water. These workshops are a small part of an innovative project in the Upper Wisconsin River Basin to explore the idea of a comprehensive water management strategy for the Basin that encompasses all facets of water, including, but not limited to, quality, quantity, point and non-point sources, access and availability. We hope that these workshops will be the starting point for discussions that engage municipalities, wastewater treatment plants, drinking water utilities, industry, producer-led basin groups, grassroots groups, non-governmental organizations, and tribal governments. The included map of the Upper Wisconsin River Basin shows the area we are primarily focused on. While these workshops are targeted at the basin, operators, municipal employees and interested groups from outside the basin are welcome to attend as well. For a full agenda for each workshop see the training calendar on the WRWA website, which can also be accessed using the QR code below. You can also feel free to reach out to me with any questions you might have. Andrew Aslesen, WRWA Source Water Specialist at Aaslesen@wrwa.org (715-321-3451), or our training specialist Brenda Staudenmaier brenda@wrwa.org (608-338-6634). *Andrew*

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The Burden of the Lead Status Unknown Service Line

Nathan Licht,
WRWA EPA Water Technician/Trainer

If your water system still has unknowns—whether they are on the private side or the street side—you need to start the discovery process today.

Hello water operators, I need you to hold onto that free vendor hat you're wearing! We are diving back into everyone's favorite topic: the Lead and Copper Rule Revisions (LCRR). Before you flip the page, I want to thank all the water systems I've visited recently for your patience—and for not shooting the messenger. Since you made it through the Service Line Replacement Plan discussion, it's time for a less technical conversation, but one that is just as important. Today, we are tackling the dreaded unknown service line and why leaving it as "unknown" can create a burden for many systems.

That burden becomes especially important when you look at the replacement timeline. Water systems have a 10-year period, beginning in 2027 and ending in 2037, to replace all lead service lines and galvanized service lines requiring replacement. For systems with these classifications, the next step is fairly straightforward: develop and carry out a replacement plan. The challenge is different for systems that have not identified any lead service lines but still have many unknowns in their inventory.

Systems need to understand that unknown service lines create three major challenges. First, they must be included in the 10-year replacement plan because they are generally treated the same

as lead service lines. Second, systems must continue to provide public notice to customers, just as they would for lead or galvanized requiring replacement (GRR) service lines. Finally, systems still need to determine whether each unknown is lead or non-lead.

Unfortunately, when systems were required to create a service line inventory, many with limited or no records simply marked lines as unknown and moved on. I have also heard operators nearing retirement say, "I'll be retired before this is finished, so I'm not making it a priority." That short-term thinking may create significant challenges for the next generation of operators.

If you are a system that has unknown service lines, I urge you to begin investigating those unknowns so that you can classify them as lead or non-lead before November 2027. I completely understand how difficult this is for smaller systems. I know firsthand that many of you lack the equipment, the manpower, and the budget to hire outside help. But I cannot stress enough how important it is that your boards, commissions, or committees understand the LCRR deadlines all systems face.



Let me explain exactly what an unknown service line does with your replacement plan—and the financial trap it creates. If you leave unknowns in your replacement plan, you still must verify the material. If you dig one up and discover it is actually non-lead, you simply do not get “credit” toward your baseline calculation pool. In short, you just spent time and money digging up a safe pipe, but it does absolutely nothing to lower your annual replacement quota. Your workload under the service line replacement plan stays the same. You also must look at the positive though, the goal is to remove lead and discover what materials are in your system. In this instance you have turned an unknown into a verified non-lead which is still a win.

I hope most of you are still reading this article, because I promise I’m about to wrap this up. If your water system still has unknowns—whether they are on the private side or the street side—you need to start the discovery process today. Fortunately, gathering information on the private side is much easier. Here are a few simple ways we can tackle it:

- Send out customer surveys with simple instructions to help residents check their own pipes.
- Update your field records by taking photos and noting pipe materials whenever your crew completes a routine meter change-out or a cross-connection inspection.
- Dig deep into old files by hunting through village hall attics or old filing cabinets for historical installation records.

The street side is where I fear systems will hit their biggest hurdle. In the great state of Wisconsin, physically digging up the line—or “potholing”—is pretty much the only option unless you happen to have flawless historical records. As of right now, predictive modeling or statistical analysis is not an acceptable way to verify a line with the state. I am keeping my fingers crossed that Wisconsin regulators will eventually allow some sort of statistical methodology or predictive modeling. It would go a long way to easing the immense time and financial cost of physical excavation for all systems.

I know lead and copper is not a fun topic for most water systems, but I encourage you to continue following the Wisconsin Rural Water Association (WRWA) Journal for more information as I continue to break down the ins and outs of the LCRR and LCRI in future articles. If you have questions or need additional FREE assistance, please reach out to our state’s wonderful Lead and Copper Field Specialists, the engineering team at Jacobs Engineering, or me directly. We are all in this together, and we are here to help you keep our water safe!

Nathan

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Every Gallon Requires Energy: How Wisconsin Water Utilities Can Reduce Consumption

Matt Rettler,
WRWA Energy Efficiency Circuit Rider

Water conservation programs benefit both utilities and customers by lowering operating costs and extending the life of infrastructure.

Water is often viewed as an abundant and inexpensive resource in Wisconsin. Surrounded by the Great Lakes and blessed with significant groundwater reserves, communities across the state enjoy reliable access to clean drinking water. Yet every gallon pumped from a well, treated to meet health standards, and delivered to homes and businesses requires energy. From operating pumps and treatment equipment to maintaining pressure throughout distribution systems, water utilities are among the largest municipal energy users. As energy costs rise and utilities seek to reduce greenhouse gas emissions, improving energy efficiency has become both an economic and environmental priority. For Wisconsin water utilities, reducing energy consumption does not require sacrificing service quality. In fact, many of the most effective strategies improve reliability, reduce operating costs, and extend the life of infrastructure. By investing in modern equipment, optimizing operations, and promoting water conservation, utilities can significantly lower the energy required to deliver safe drinking water.

Understanding the Water-Energy Connection

The relationship between water and energy is often called the “water-energy nexus.” Energy is required at nearly every stage of the water supply process. Groundwater systems must pump water from wells, sometimes hundreds of feet below the surface. Surface water systems require intake pumps, filtration, disinfection, and distribution equipment. Once treated, water must be moved through miles of pipes and maintained at sufficient pressure for customers and fire protection. The more water a utility pumps and treats, the more energy it consumes. Consequently, reducing water demand can directly reduce electricity usage. Likewise, improving the efficiency of pumps and treatment systems can lower the amount of energy required per gallon delivered.

Upgrade Aging Pumping Equipment

One of the most effective ways for Wisconsin utilities to reduce energy consumption is by modernizing pumps and motors. Many municipal

systems still rely on equipment that is decades old. While these pumps may continue to function, they often operate far below modern efficiency standards. High-efficiency motors and properly sized pumps can significantly reduce electricity consumption. Utilities should regularly assess pump performance and replace units that operate inefficiently or are oversized for current demand. Energy audits can help identify pumps that consume excessive power and provide guidance on replacement priorities. Variable frequency drives (VFDs) offer another major opportunity. Rather than operating at a constant speed, VFDs allow pumps to adjust output based on real-time demand. During periods of lower water use, pumps can run at reduced speeds, lowering energy consumption and reducing wear on equipment.

Reduce Water Loss Through Leak Detection

Water that never reaches customers still requires energy to pump and treat. Across the country, aging infrastructure can lose substantial amounts of water through leaks, broken mains, and service line failures. Every gallon lost represents wasted energy and revenue. Wisconsin utilities can reduce these losses through proactive leak detection programs. Acoustic monitoring equipment, pressure management systems, and advanced metering technologies help identify leaks before they become major failures. Regular water audits can quantify non-revenue water and establish benchmarks for improvement. Even modest reductions in water loss can generate meaningful energy savings. A utility that reduces leakage by just a few percentage points may avoid pumping millions of gallons annually.

Optimize Treatment Plant Operations

Treatment facilities often contain multiple energy-intensive processes, including filtration, chemical feed systems, and disinfection equipment. Utilities can lower energy use by carefully evaluating operational practices and identifying opportunities for optimization. Automated control systems can adjust treatment processes based on actual water quality

conditions rather than fixed settings. Improved monitoring allows operators to match equipment operation with demand, reducing unnecessary runtime. Scheduled maintenance also plays an important role. Dirty filters, worn pumps, and malfunctioning valves can increase energy consumption while reducing system performance. Utilities should consider conducting comprehensive energy assessments to identify operational improvements that require little or no capital investment. In many cases, simple changes in scheduling and equipment management can produce measurable savings.

Manage System Pressure More Efficiently

Maintaining water pressure is essential, but excessive pressure increases energy consumption and can accelerate pipe deterioration. High pressures place additional stress on infrastructure, leading to leaks and water main breaks. Pressure management programs use monitoring systems and pressure-reducing valves to maintain appropriate service levels while minimizing energy waste. Smart controls can adjust pressure based on demand patterns, ensuring customers receive reliable service without unnecessary pumping costs. For communities with significant elevation changes, pressure zone optimization can further improve efficiency and reduce operating expenses.

Expand Advanced Metering and Data Analytics

Modern metering technologies provide valuable information that can help utilities manage both water and energy use more effectively. Advanced Metering Infrastructure (AMI) systems provide near real-time consumption data, allowing utilities to identify unusual demand patterns, customer leaks, and system inefficiencies. Data analytics can reveal opportunities to adjust pumping schedules, reduce peak electricity demand, and improve asset management decisions. Utilities can also use customer consumption data to encourage conservation and identify high-usage trends that contribute to increased energy costs. As digital technologies become more affordable, data-driven decision making is becoming an increasingly important tool for utility efficiency.

Promote Water Conservation

The simplest way to reduce energy use is often to reduce the volume of water that must be pumped and treated. Water conservation programs benefit both utilities and customers by lowering operating costs and extending the life of infrastructure. Wisconsin utilities can encourage conservation through public education campaigns, seasonal watering guidelines, leak repair initiatives, and incentive programs for efficient fixtures and appliances. Commercial and industrial customers may also benefit from water efficiency audits that identify opportunities to reduce consumption. While conservation efforts may modestly reduce water sales, they can also defer expensive infrastructure expansions and lower long-term operating costs.

Building a More Efficient Future

Wisconsin water utilities face growing pressure to manage costs, improve resilience, and reduce environmental impacts. Because energy is embedded in every gallon delivered, improving energy efficiency offers a practical path toward achieving all three goals. By upgrading pumps, reducing leaks, optimizing treatment processes, managing pressure, leveraging data, promoting conservation, and exploring renewable energy, utilities can significantly lower energy consumption while continuing to provide safe and reliable water service. As infrastructure ages and energy costs continue to evolve, investments in efficiency will become increasingly important to the long-term sustainability of Wisconsin's water systems.

Every gallon saved is energy saved—and every efficiency improvement strengthens the ability of Wisconsin utilities to serve future generations.

Matt

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EFFECTIVE STRATEGIES for Water Systems to Conserve Water



Todd Weich,
WRWA Water Circuit Rider

Advances in digital technology have also made smart metering a powerful tool for conservation.

As communities around the world grapple with increasing water scarcity, conservation has become a critical priority for modern water systems. Climate change, population growth, and aging infrastructure are placing unprecedented pressure on water supplies, making it essential for utilities to adopt strategies that minimize waste and enhance sustainability. A well-managed water system not only safeguards resources but also ensures long-term reliability for the populations it serves. The following approaches highlight some of the most effective methods water systems can use to conserve water at scale.

One of the most significant sources of preventable water loss occurs within the distribution network itself. Leaks from aging pipes, faulty valves, and damaged storage facilities can cause thousands of gallons of treated water to be lost before it ever reaches the users. Many utilities lose between 10 and 30 percent of their water through such “non-revenue” losses. To combat this, water systems are increasingly relying on proactive leak detection, pipe replacement, and pressure management. Using acoustic monitoring or digital leak detection equipment allow Circuit Riders to identify hidden leaks early, while pressure-regulating valves help reduce stress on pipes and prevent future breaks.

Advances in digital technology have also made smart metering a powerful tool for conservation. Smart water meters provide real-time consumption

data, enabling utilities and customers to spot unusual usage patterns that may indicate leaks or inefficiencies. These systems improve billing accuracy and help utilities make informed decisions about infrastructure upgrades and water allocation. By empowering consumers to understand and adjust their own water habits, smart metering contributes to both immediate and long-term reductions in demand.

Water reuse technologies offer another promising avenue for conservation. Instead of relying exclusively on freshwater sources, many communities now treat and repurpose wastewater for non-potable applications such as landscape irrigation and industrial cooling. This approach reduces the burden on drinking water supplies while also promoting a more circular and resilient water system.

Demand management is also critical in shaping long-term conservation habits. Water utilities often implement public education campaigns, seasonal watering restrictions, or tiered pricing structures to encourage more responsible consumption. These programs help raise awareness about water scarcity and empower communities to play an active role in conservation efforts. Even simple actions—such as fixing household leaks or reducing outdoor watering—can collectively lead to substantial savings when embraced at scale.

Rainwater harvesting, which involves collecting rainwater from rooftops or public buildings for non-potable use, offers a practical supplement to traditional water supplies. This method reduces stormwater runoff and provides an eco-friendly source of water for irrigation, landscaping, or even industrial processes. Many municipalities are beginning to integrate rainwater systems into public projects or offer incentives for homeowners who install collection systems on their property.

Finally, improving the efficiency of storage and distribution systems helps prevent unnecessary water loss. Covered reservoirs reduce evaporation, well-maintained tanks prevent contamination and overflow, and modern pumping systems reduce waste associated with outdated equipment. Together, these measures strengthen the reliability and sustainability of the water network.

In conclusion, conserving water within a municipal or regional water system requires a combination of technological innovation, infrastructure improvements, and active community engagement. By addressing leaks, embracing smart technologies, promoting efficient fixtures, expanding water reuse, and optimizing system operations, utilities can significantly reduce water waste. These strategies not only preserve valuable resources but also ensure that clean, reliable water remains available for future generations. If water systems continue to evolve and adopt forward-thinking conservation practices, they will play a crucial role in building more resilient and sustainable communities worldwide.

As always, feel free to contact your WRWA Municipal Circuit Rider regarding water loss. *Todd*

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**Please reach out to one of the
contacts below to learn more.**

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Wisconsin Rural Water Association

cgroh@wrwa.org

715.340.2055

Gary Larimore, President & CEO

Rural Water Financing Agency

g.larimore@krwa.org

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Unpopular Facts About Rates

Dan Wundrow,
WRWA Circuit Rider

The technical work matters enormously, but a well-run system that can't pay its bills isn't truly well-run. Sustainable rates are a component of a sustainable system.

Over the past month, my family and I took a road trip out west. During the trip, as with any family, we end up playing silly road trip games. The one game my kids and wife played was a simple game of looking at that water tower. We got to see many different water towers, different shapes, colors, and heights, some very old ones, and some cool painted towers. As silly as the game sounds, it was a good way to keep my kids busy and looking out the window rather than on their phones. Plus, it sparked some interesting conversation from them. One question that stuck in my mind, and that I spent a lot of time thinking about, was the old water towers. Please keep in mind that with several hours of driving and them taking mini road trip naps, I had a lot of time to think.

This will be a very unpopular opinion, well, just an unpopular fact. The American Society of Civil Engineers has consistently graded the nation's drinking water infrastructure a C- or worse. Many systems across the United States have been running mains laid in the mid-20th century and

some earlier. Some of those pipes have a 50-75-year lifespan, and the time is ticking. Here's the very unpopular opinion and fact. The rate increases aren't just inevitable; they're your responsibility to advocate for.

Every year, the cost of electricity, chemicals, parts, and qualified labor climbs. If your rates have been flat for the past five years or have been declining, your system is falling quite far behind. Without available funding, many systems are forced to defer minor projects to major ones or capital improvements to save money. Still, unfortunately, this will end up costing the system more money in the long run. You're borrowing money against future interest rates and inflation rates.

With that said, take some time to look at the Wisconsin PSC and see what the rate of return is for your system. Systems in the negative should consider raising their water rates or, at a minimum, advocating for a rate increase. While you are there, take time to look at other systems of similar sizes. If you can't seem to find the rate of return, please call one of the

other Water Circuit Riders or me. We can help you find that, or I will have a printout at registration at the Outdoor Expo with the most recent return rates for each water system.

I understand that some of us got into the field by accident, and some chose it, but we all treat water, maintain infrastructure, and keep our communities safe. We did not get into this field to sell rate hikes to hostile boards. Let's face it, in most small communities, there's a cultural hesitancy. Nobody wants to be seen as the person who made grandma's water bill go up. Silence has consequences. When you don't make the case, the decision gets made by people who don't understand the system. Then, a rate increase is imposed at the worst possible time, typically due to an emergency. This is when you come to a meeting and see a mob of angry customers. While advocating may feel like someone else's lane, you have the technical credibility to help guide your community leaders.

Advocating for a rate increase doesn't mean going to war with your governing body. Remember, they are people elected by the masses. They are doing what everyone asked them to do. This means you're doing your job by translating technical and financial realities into language that decision-makers can understand. What do you need to bring to the table? Bring data, not just opinions, framing it as stewardship, not spending, educating your board before we need something, and using outside credibility when needed.

What data should you bring? Use your asset inventory, lead and copper inventory, PSC annual water reports, and any data that will help tell the story. Remember, keep it objective. If your feelings are picked up, they will see it as no big deal. If you have an asset management plan, you have a significant advantage. If you're using any GIS mapping platform, use it to tell the story as well.

Framing it as stewardship, and not spending, the conversation shouldn't be "we need more money." It should be "here's what it costs to deliver safe, reliable water to this community for the next 20 years, and here's what rates need to be to fund that." That's a different conversation entirely.

Educating your board before you need something. For those with kids, think about it this way. When your kids ask for money because of a last-minute school field trip. The red flags go up fast. The same applies to a board member when you ask for money at the last minute. Each month, quarter, and annually, explain how the water system is working. A board member who is educated on the system's health and understands the difference between operating expenses and capital replacement is far more likely to support a rate adjustment.

Use outside credibility when needed. Give us a call, and we can be that person for you. We are a free resource and a person who has seen many different systems. We can explain the good, the bad, and the ugly. You don't have to do this alone.

You will also have to prepare for questions that are asked almost every time rate increases are discussed. "But our customers can't afford it." This

question deserves a direct response, because it's raised constantly, and it's not wrong, but it's used in the wrong direction. Low-income households are a legitimate concern and a sensitive subject, but the answer isn't to underfund your system. This defers the pain and amplifies it later.

What's the better response to this topic? Simple rate design. Many water systems are still on flat-rate or uniform volumetric structures that don't distinguish between a family struggling to pay bills and a commercial or industrial company making tons of money each year while using thousands of gallons of water a month. If affordability is your concern, advocate for smart rate design rather than frozen rates.

The quiet cost of doing nothing ends with a room full of very upset people, most of whom are friends, neighbors, and sometimes family members. You will end up spending the next few hours hearing comments, "my bill keeps going up," "Where's the money going," "you people just want more of our taxes," and "must be nice to get that big of a raise." What those angry customers don't know is that an emergency repair was needed, or the PSC stepped in and set the rate increase for you. The once manageable 3% increase that should have been applied each year is now a 115% increase.

Water customers aren't just paying for water. They're paying for the entire life cycle of a system that keeps their taps running and their kids safe. That has a real cost. Your job is to make sure the people in charge of setting rates understand what the cost is and what happens when it goes underfunded.

As operators, we talk a lot about serving our communities. This is part of that service. The technical work matters enormously, but a well-run system that can't pay its bills isn't truly well-run. Sustainable rates are a component of a sustainable system. The next time a rate discussion comes up, and you feel the pull to stay quiet and let it pass, remember you're the person in the room who knows what that infrastructure costs. You have an obligation to say so. I know that is an unpopular subject, but I hope that you found this helpful, and I look forward to seeing you at the Outdoor Expo. *Dan*

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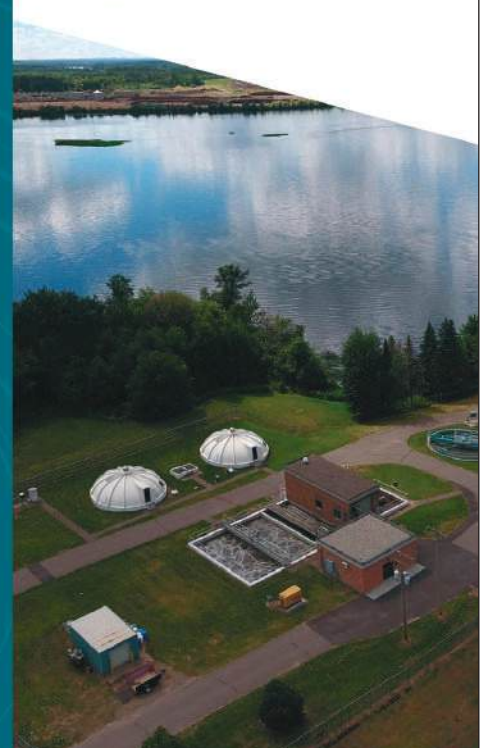
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9am – 10am	Using Industry Standard GIS for Managing Your Utility. Jon Schwichtenberg, CBS Squared Inc. (WRWA Gold Member)
10am – 11am	Building your utility's resilience against the present and future impacts of climate change. Ezra Meyer, Wisconsin DNR
11am – 12pm	Above Grade Pumping & Lift Stations 101. Seth Atchley, William Reid (WRWA Gold Member) ~ Smith and Loveless.
12pm – 1pm	Working Lunch
1pm – 2pm	Best practices to keep your pumps running longer, Joshua Voigt, Flygt A Xylem (WRWA Associate Member)

Technology Center Classroom

8am – 9am	In's and Out's of LCRI Service Line Requirements. Rahim Ansari, Jacobs Engineering Group
9am – 10am	D.I.Y Cross-Connection Control Surveying & Backflow Blitz Jeopardy. Gary McLaren, HydroCorp (WRWA Gold Member) & Rich Davison, Soderholm (WRWA Associate Member)
10am – 11am	PFAS Pilot Studies for Drinking Water Treatment. Brad Stuczynski & Andrew Rockweiler, MSA Professional Services (WRWA Gold Member) & Jim Goose, Water Surplus (WRWA Corporate Member)
11am – 12pm	Instrumentation & Water Analytical. Benjamin Martin, ABB. (WRWA Associate Member)
12:20pm – 1pm	Emergency Response Lessons from recent flooding in New London, Manawa, & Shiocton.
1pm – 2pm	Casing Guard – Well Casing Repair. Philip Judkins, Water Well Solutions (WRWA Gold Member)

Technology Center Lab Room

Enter through the garage door near the coffee & donut table.

8am – 9am	How Reliable Communication is a Must. Kevin Hanks, Commstar Radio and lot
9am – 10am	Fixed-Film Retrofits for Lagoon Wastewater Treatment Systems Across Diverse Climates & Scales. Lauren Takitch, Entex Technologies, Inc
10am – 11am	Best Practices of Data Collection with GNSS Receivers. Jay Riester, Seiler Geospatial (WRWA Corporate Member)
11am – 12pm	Cost Saving Strategies for Rural Water and Wastewater Treatment Facilities, Joe Kottwitz, Focus on Energy (WRWA Corporate Member)
12:00pm – 1pm	Working Lunch
1pm – 2pm	Peristaltic Pump Repair. Michael Pontrelli, Stenner Pump Company

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KLM Engineering, Inc. ~ 9:30 – 10:00
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FOR IMMEDIATE RELEASE

Preemptive Storm Line Rehab at McMahon Stadium Avoids Failure with UV-GRP Lining

Installation through a mid-line catch basin and deep manhole conditions highlights how UV-cured GRP lining can address complex access challenges while minimizing disruption.

By Suzan Chin-Taylor, MSc

Overview

At McMahon Stadium in Calgary, Alberta, a proactive approach to underground infrastructure rehabilitation helped facility managers avoid a potentially disruptive and costly failure. Faced with aging stormwater infrastructure exceeding 60 years in service, project stakeholders elected to rehabilitate a structurally compromised 750 mm reinforced concrete storm line using ultraviolet (UV)-cured glass-reinforced plastic (GRP) lining technology.

The project, executed by Stray Cat Industrial Services in coordination with TerraBurst, demonstrates how trenchless methods can extend asset life, reduce risk, and minimize operational disruption, particularly in high-traffic, high-visibility environments.

Background / Problem

The storm line in question runs beneath private property adjacent to McMahon Stadium, ultimately connecting into the municipal system. While not yet collapsed, the pipeline exhibited clear signs of structural deterioration.

“Most of the line was still perfectly circular,” said Quinn Kernaghan, Superintendent at Stray Cat Industrial Services. “But there were multiple fractures around the circumference. It was at the point where, within five to ten years, it would probably collapse, if not sooner, because of the heavy loads from vehicles parking above.”

The issue came to light during adjacent work performed by TerraBurst, which had already completed a dig-and-replace operation on a collapsed sanitary line nearby. Recognizing the condition of the storm line, the team recommended a proactive trenchless rehabilitation before failure could occur, particularly given the risk of disruption during stadium events.

At approximately 98 meters (321 feet) in length, the pipeline was structurally viable for lining, making trenchless rehabilitation a practical and cost-effective alternative to excavation.



Continued on page 36



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Prep and Environmental Concerns / Challenges

Several environmental and logistical considerations influenced the project approach.

One key factor was the management of styrene emissions, commonly associated with traditional cured-in-place pipe (CIPP) processes. UV-cured GRP liners offer reduced styrene exposure compared to steam- or hot water-cured systems, making them more suitable for stormwater applications.

“Most areas want to keep styrene out of their storm drains,” Kernaghan explained. “The minimal amount present in UV liners versus something like a steam cure is likely why they went with UV.”

Access conditions also introduced challenges. While the pipeline had manhole access at both ends, a mid-line catch basin required the liner to be installed continuously through an intermediate structure. Additionally, the downstream manhole featured a 20-foot vertical drop, necessitating custom scaffolding to be constructed to safely support personnel and equipment.

The presence of the intermediate catch basin added another layer of complexity, requiring a solution capable of maintaining liner integrity and pressure control through an open structure during installation.

Installation Process

The rehabilitation utilized a UV-cured GRP liner from Reline America, specifically the Alphaliner 500 series, with an approximate wall thickness of 7 mm. The liner was selected for its structural performance and suitability for installations requiring continuity through intermediate structures such as manholes and catch basins.

Preparation

Pre-installation work included cleaning and inspection, along with removal of an intruding service connection. “We had to grind back an intruding tap connection to make it flush,” Kernaghan said. “Other than that, it was mostly flushing and standard prep.”

Given dry weather conditions, flow management was simplified. The upstream line was temporarily plugged, eliminating the need for bypass pumping.

Liner Installation

A glide foil was first installed to protect the liner during insertion. The liner was then pulled into place using a six-ton winch system. However, the site topography required a deliberate and carefully controlled installation process. The downstream access point was located on a steep grade with constrained working conditions, necessitating additional coordination during liner insertion and positioning. Once in place, the liner was inflated to approximately 3.5 psi in preparation for UV curing.

Navigating the Catch Basin

A key technical challenge was lining through the mid-line catch basin. In this case, the crew utilized a containment sleeve system from Reline America to maintain internal pressure during curing.

“Reline America has a really nice feature with their containment sleeves,” Kernaghan explains, . “the installation leveraged Reline America’s integrated containment sleeve system to address the intermediate catch basin condition. When we’re lining through something like a catch basin, it makes it much easier compared to other systems.”

The sleeve provided confinement during inflation and UV curing, maintaining internal pressure as the liner traversed the open structure. Following cure, the contained section was removed to reinstate the catch basin opening, with the cured liner forming a new, continuous channel through the structure.

This method enabled a continuous installation while preserving the hydraulic function of the catch basin—an approach not always feasible with traditional systems.

UV Curing and Quality Control

The UV curing process took approximately one hour and 40 minutes, though it included an interruption due to a slipped end cap. “We were about an hour into the cure when a can slipped,” Kernaghan said. “We stopped, fixed it, and restarted. That’s one of the advantages of UV—you can pause and correct issues without losing the liner.”

Real-time monitoring systems tracked internal pressure, temperature, and curing progress. “I could see the pressure dropping and the blower increasing output almost immediately,” he added. “That’s how we knew something was wrong before it became a failure.”

Crew and Timeline

The project utilized a seven-person crew, combining Stray Cat personnel with TerraBurst labor. Due to delays, the installation extended into a second day, with final reinstatements completed through confined-space entry.

Outcome

The completed liner restored structural integrity to the aging pipeline while avoiding the cost and disruption of excavation. “It saved them a lot of money from digging that section,” Kernaghan said. “A dig like that could run \$80,000 to \$100,000 or more, especially with a pipe that size.”

In addition to cost savings, the project minimized surface disruption. With the stadium closed for only a short duration, the trenchless approach reduced impacts to operations and surrounding infrastructure. “There was very little disruption,” Kernaghan noted. “We’re there for a day or two, compared to weeks or months for a dig-and-replace project.” Hydraulic performance was also improved. The smooth interior surface of the GRP liner enhances flow efficiency and reduces debris accumulation, offsetting any minor reduction in pipe diameter.

Final Thoughts

For contractors and asset owners evaluating rehabilitation strategies, the project underscores the importance of selecting the appropriate technology for site-specific conditions.

“Keep an open mind on what product you’re using,” Kernaghan advised. “Look for the best product for the job rather than trying to force one solution into every situation.” He also addressed common misconceptions surrounding GRP liners.

“A lot of people think GRP is heavier, but because of the fiberglass reinforcement, you can achieve the same structural strength with a thinner liner,” he said. “That helps maintain capacity while still improving performance.”

Ultimately, the McMahon Stadium project highlights how proactive rehabilitation—combined with thoughtful technology selection—can extend infrastructure life, reduce lifecycle costs, and maintain service continuity in demanding environments.

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High resolution photos to accompany this article may be downloaded here:

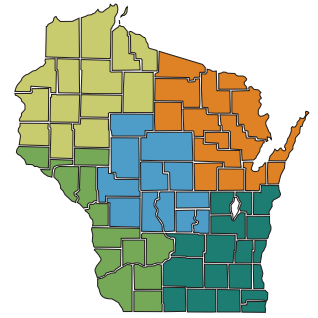
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About Reline America

Reline America is a leading provider of UV-GRP pipeline rehabilitation technology, offering a cost-effective and environmentally friendly alternative to traditional pipeline repair methods. Reline America offers everything needed for pipeline rehabilitation under one roof—design, engineering, manufacturing, training and 24/7 support from its ISO 9001-2015 certified facility in Saltville, VA. Customized equipment and liners, factory certified installers, coupled with a proprietary Quality Tracker System™, make Reline America’s ALPHALINER® UV GRP liners easier to install. The results are simple to see: greater efficiency and productivity, minimal risk-management concerns, less community disruption and exceptional ROI. Visit www.relineamerica.com to learn more.

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UP THE CREEK

Ken Blomberg,
WRWA past Executive Director

Summer is my least favorite season. Following the glorious attributes of spring, summer rolls in with heat and humidity like an unwelcome relative from down south.

"Boy, I could move here in a blink and enjoy this cool weather" he'd say as we sweltered in the shade on the deck sipping cold beers.

"Cool?" I'd reply. "It's 85 in the shade and no breeze whatsoever."

"Yep, just the cold wave we dream of down in Florida."

I'm not a fan of temperatures over 75. Give me the 60s and a stiff breeze from the northwest and I'm as content as a dog rolling in wet grass.

Years ago, while working for Rural Water, I remember saving promised on-site technical assistance calls to communities along the shores of either of our Great Lakes for hot summer days. Or, if one of our traveling training sessions needed scheduling during July or August, I'd make sure Manitowoc, Sturgeon Bay or Ashland was in my sights. You see, the natural air conditioning effect of the big lakes brought summer heat to tolerable levels.

On a recent drive to Bayfield to attend an author event where I showcased books I have written since retirement, I watched my truck thermometer drop over 10 degrees the closer I got to Lake Superior and the city of Ashland. One degree per mile while dropping in

elevation and getting closer to the big lake. Superior is the largest freshwater lake on the surface of the Earth and Wisconsin gets to touch it on its northern border.

Did you know Lake Superior is the largest of the Great Lakes in North America, shared by the United States and Canada? It is located on the border between Minnesota, Wisconsin and Michigan states in the United States and Ontario province in Canada. According to Curiosidades, "with a surface area of approximately 82,100 km², it is the largest freshwater lake in the world by surface area. It is known for its cold and deep waters, and biodiversity, as well as being an important resource for navigation, fishing and tourism in the region."

"A funny fact about Lake Superior is that it has more water than the other four Great Lakes combined. Despite being the largest on surface, it is also the deepest, with a maximum depth of 406 meters. If emptied, its volume of water would be enough to sink all of North America under 30 centimeters of water."

I also remember, many years ago, Rural Water co-sponsored a wastewater operators meeting with the WWOC on Madeline Island. A ferry ride took us to the then Island operator's open arms who hosted our group on that memorable day. Probably over thirty years ago, but it feels like yesterday.

I must be getting old!

ANNOUNCING BOOK RELEASE

My fourth book, **COUNTRY JOURNAL - & OLD MAN'S MUSINGS** was released late last year.

In a review by Dan Small, host of Outdoor Wisconsin and contributing editor of Wisconsin Outdoor News, he noted; "In this series of short musings, reminiscent of Aldo Leopold's A Sand County Almanac, Blomberg, with his senses as keen as those of his beloved bird dogs, shares the lessons he has learned from a lifetime of observing the seasonal changes of the natural world."

Country Journal and Old Man's Musings: Publisher - Ten16Press, Waukesha, Wisconsin, 5.5 x 8.5, Paperback, 140 pages, \$14.99 Available from Ten 16 Press, www.ten16press.com, 140 pages, paper, \$14.99.

Also available through Amazon, Barnes and Noble, and can be ordered through Ingram at most independent book stores.

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Electrocoagulation:

An Emerging Tool for Wastewater, Nutrient, and PFAS Treatment

Brenda Staudenmaier,
WRWA Training Specialist

Electrode replacement is a routine part of electrocoagulation operation, as the electrodes are consumed during treatment.

Wastewater utilities are facing increasing pressure from multiple directions, including tightening regulations, aging infrastructure, nutrient limits, emerging contaminants, and rising operating costs. In response, interest has grown in alternative treatment technologies that can supplement or replace conventional processes.

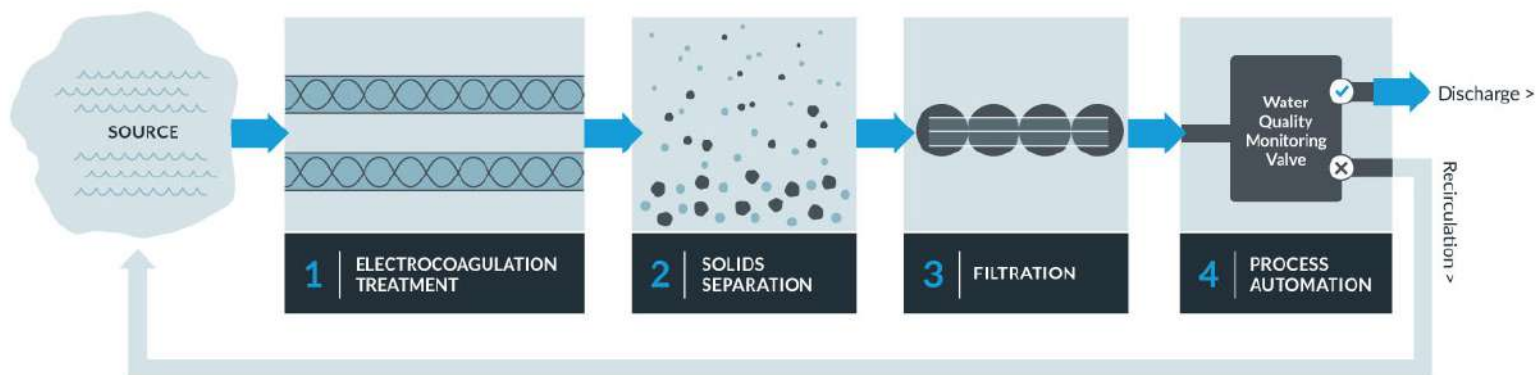
One technology receiving renewed attention is electrocoagulation (EC). Although it has existed for decades, EC remains relatively uncommon in municipal wastewater treatment when compared to activated sludge systems, sequencing batch reactors (SBRs), chemical coagulation, and membrane technologies. However, proponents suggest it may offer advantages in areas such as nutrient removal, metals treatment, lagoon upgrades, industrial wastewater applications, and even PFAS treatment.

To better understand the technology and its potential applications, the

Wisconsin Rural Water Association contacted several electrocoagulation vendors. Responses from Powell Water Systems and WaterTectonics revealed both shared perspectives and differing views on where EC fits within the broader treatment landscape.

What Is Electrocoagulation?

Electrocoagulation is a treatment process that uses electrical current and sacrificial metal electrodes—typically iron or aluminum—to generate coagulants directly within the water being treated. Unlike conventional coagulation, which requires the addition of chemicals such as alum or ferric chloride, EC produces metal ions through the controlled dissolution of electrode plates. These ions react with contaminants to form floc particles, which can then be removed through clarification, settling, filtration, dissolved air flotation, or membrane processes.



Both vendors emphasized that electrode consumption is not a drawback but rather the fundamental mechanism of treatment. As TJ Mothersbaugh of WaterTectonics explained, the process is designed to release iron or aluminum into the water to serve as the coagulant. Scott Powell of Powell Water Systems similarly noted that metal consumption is inherent to electrocoagulation. The resulting coagulants are capable of removing suspended solids, phosphorus, heavy metals, arsenic, pathogens, and a range of other contaminants.

Adoption in Wisconsin

Neither company identified existing municipal electrocoagulation installations in Wisconsin. WaterTectonics suggested that regulatory drivers often determine where EC technologies gain traction, noting that regions with more stringent nutrient, metals, or industrial discharge limits—particularly in western states—have seen greater adoption.

Historically, Wisconsin utilities have relied on conventional biological treatment systems, chemical phosphorus removal, and lagoon upgrades to meet permit requirements. However, tightening nutrient limits, increasing attention to PFAS, and ongoing infrastructure challenges may create opportunities for alternative technologies such as EC in the future.

Lagoon Applications

Both companies identified lagoon systems as a promising application for electrocoagulation. Wisconsin has hundreds of lagoons, many of which were constructed decades ago and are now facing upgrades to meet evolving permit requirements. Electrocoagulation may provide additional treatment capability where traditional lagoon processes fall short.

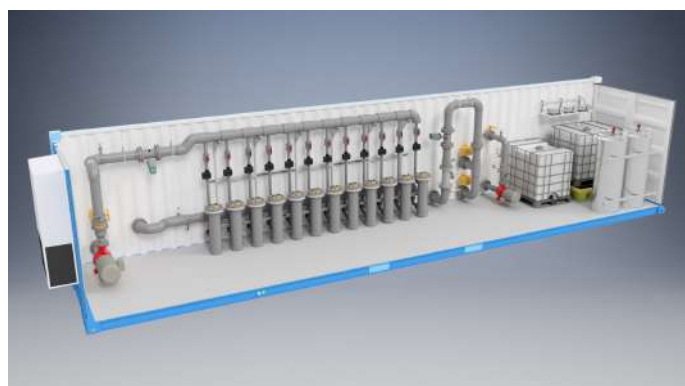
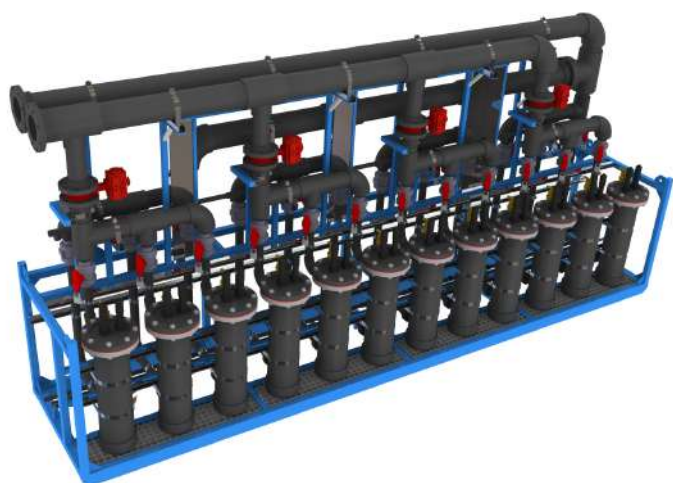
Powell Water Systems has taken this concept further with its Powell Water Micro Algae System (PWMAS), which integrates algae cultivation with electrocoagulation. In this system, greenhouse-grown microalgae are continuously introduced into lagoons, where they convert carbon dioxide into oxygen and sugars through photosynthesis. This process can significantly increase dissolved oxygen levels while reducing reliance on mechanical aeration.

Because aeration is often the largest energy expense for lagoon systems, Powell estimates that algae-assisted oxygenation can reduce blower-related energy consumption by up to 90 percent, while also helping to control odors. The sugars produced by the algae provide an additional food source for beneficial bacteria, supporting biological treatment. Following this stage, electrocoagulation and ultrafiltration are used to polish the effluent prior to discharge or reuse.

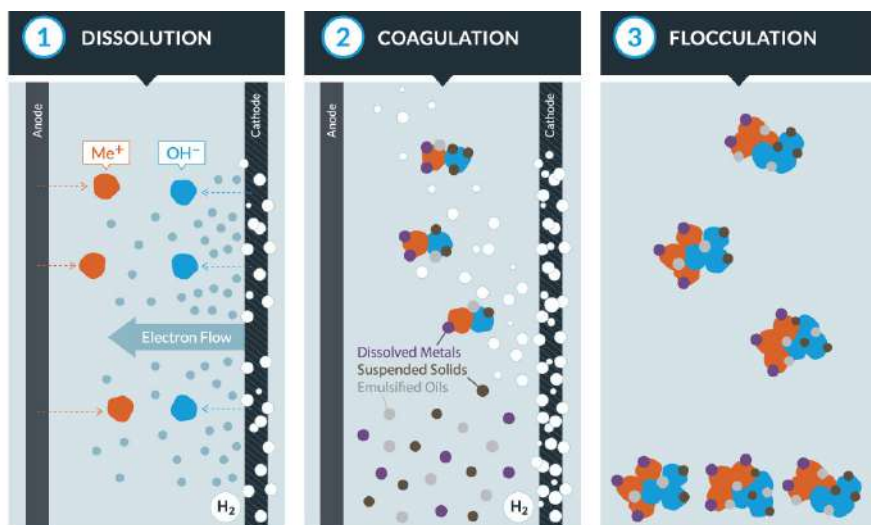
Maintenance and Operation

Electrode replacement is a routine part of electrocoagulation operation, as the electrodes are consumed during treatment. Powell reports typical consumption rates of approximately 0.2 pounds of iron or 0.1 pounds of aluminum per 1,000 gallons treated, with systems replacing anywhere from zero to six electrodes per day depending on size and loading.

WaterTectonics emphasizes ease of maintenance, noting that its electrodes weigh less than 50 pounds and can typically be replaced in under five minutes per 50-gallon-per-minute treatment cell. Another operational consideration is scaling and fouling of electrode surfaces, which can reduce treatment efficiency over time.



Continued on page 44



To address this, both companies use automatic polarity reversal to minimize scale buildup and keep electrode surfaces clean. WaterTectonics also incorporates turbulent flow reactor designs, while Powell notes that acid clean-in-place systems can be used when additional cleaning is necessary. Despite these measures, electrode cleanliness remains one of the primary operational challenges associated with EC systems.

Sludge Production

Electrocoagulation is often cited for producing less sludge than conventional chemical coagulation. Powell referenced a 1993 EPA Emerging Technology Report indicating that EC generated approximately 83 percent less sludge volume than alum treatment, while also improving filtration rates.

The floc produced through electrocoagulation is typically described as hydrophobic, meaning it repels water and may be easier to dewater than chemically generated sludge. WaterTectonics notes that solids separation occurs after the EC process rather than within the reactors themselves, with clarification systems commonly used for removal. As with any coagulation process, EC does not eliminate residuals handling but instead alters the volume and characteristics of the sludge produced.

PFAS Considerations

PFAS treatment remains a major challenge for water and wastewater utilities. Conventional technologies such as granular activated carbon, ion exchange, and reverse osmosis remove PFAS from water but transfer the contaminants to another waste stream.

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Electrocoagulation may offer an additional option. Both vendors reported that EC can remove PFAS from water, although WaterTectonics emphasized that the compounds are typically transferred to the sludge rather than destroyed. As a result, overall effectiveness depends heavily on site-specific conditions and residual management strategies.

Powell reported reductions in PFOA concentrations and indicated that combining iron electrodes with hydrogen peroxide may achieve treated water concentrations below proposed regulatory limits while maintaining relatively low PFAS levels in solids. Utilities considering EC for PFAS treatment should carefully evaluate independent pilot studies, regulatory acceptance, and long-term residual handling requirements.

Operational Complexity

Both companies described electrocoagulation as relatively straightforward to operate compared to many advanced treatment systems. WaterTectonics likens it to managing a chemical feed system, with the primary challenge being operator training during implementation. Powell similarly emphasizes system simplicity and reduced operator attention compared to some biological processes.

Supporters of EC often highlight its compact footprint, reduced chemical handling, and ability to address multiple contaminants simultaneously as key advantages.

Looking Ahead

Electrocoagulation remains a niche technology in municipal wastewater treatment, but interest is increasing as utilities confront more complex regulatory and operational challenges. Potential applications include phosphorus and metals removal, arsenic treatment, industrial wastewater treatment, lagoon upgrades, pathogen reduction, PFAS removal, and water reuse.

While vendor-reported results are promising, broader adoption will likely depend on additional full-scale installations, independent evaluations, regulatory acceptance, and long-term performance data. For Wisconsin communities facing aging lagoon systems, stricter nutrient limits, or emerging contaminant concerns, electrocoagulation may be a valuable option to consider within the broader treatment toolbox.

Lewis, S. (2024, March 5). Tiny specialized bugs may help with the expensive and rising tide of toilet flushes in rural Colorado. Colorado Public Radio. <https://www.cpr.org/2024/03/05/rural-colorado-growth-wastewater-treatment-infrastructure/>

Author's Note: Information presented in this article was provided through correspondence with Powell Water Systems and WaterTectonics. Utilities should conduct independent engineering evaluations, pilot testing, and regulatory review before selecting any treatment technology.

~Brenda

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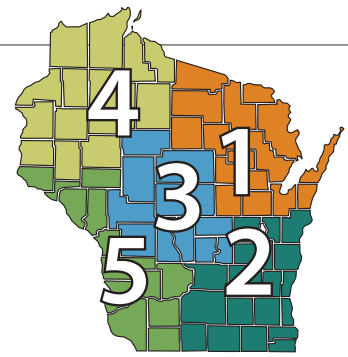
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**Community Water & Sewer
Curtiss
Dorchester
Edgar
Elroy
Friendship
Gilman
Granton
Green Lake
**Green Lake Conference Center
Green Lake Sanitary District
Greenwood
Hancock
Hatfield Sanitary District 1
Hatley
Hewitt

Hixton
Hustler
Junction City
Kendall
Kronenwetter
Little Green Lake Protection &
Rehab. District
Loyal
Lyndon Station
Maine
Marathon
Markesan
*Marshfield
Mauston
Medford
Melrose
Merrillan
Milan Sanitary District
Milladore
Montello
Mosinee
Necedah
Neillsville
Nekoosa
Neshkoro
New Lisbon
Northfield Sanitary District #1
Norwalk
Oakdale
**Ocean Spray Cranberries,
Inc. - Tomah
Owen
**Pineland Park Enterprises LTD
Pittsville
Plainfield
Plover
Port Edwards
Princeton
Redgranite
Rib Lake
Rib Mountain Sanitary District
Rome
Rosholt Sewer Commission
Rothschild
Schofield
Silver Lake Sanitary District
Sparta
Spencer
Stetsonville
*Stevens Point
Stratford
**Superior Fresh LLC
Taylor
Thorp
Tomah
Union Center
Unity
**Upper Room Properties
Vesper
Volk Field
Warrens
*Wausau
Wautoma
Westboro Sanitary District #1
Westfield
*Weston
Whiting
Wilton
Withee
Wonewoc

DISTRICT 4 (Northwest)

Almena
Amery
Ashland
Baldwin
Balsam Lake
Barron

Bayfield
Bell Sanitary District #1
Birchwood
Bloomer
Boyceville
Boyd
Bruce
Butternut
Cable Sanitary District #1
Cadott
Cameron
Catawba-Kennan Joint
Sewage Commission
Centuria
Chetek
*Chippewa Falls
Clayton
Clear Lake
Clover Sanitary District #1
Colfax
Cornell
Cumberland
Dallas
Deer Park WWTP
Downsville Sanitary District
Dresser
Drummond Sanitary District #1
Elk Mound
Emerald – Greenwood
Sanitary District #1
Exeland
Fifield Sanitary District #1
Frederic
Glen Flora
Glenwood City
Glidden Sanitary District
Grandview Sanitary District #1
Grantsburg
Hammond
Hawkins
Hayward
Hudson
Hurley
Iron River Sanitary District #1
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Knight
Lac Courte Oreilles Public
Works Department
Ladysmith
Lake Hallie
Lake Holcombe Sanitary
District #1
Luck
Madeline Sanitary District
Manitou Falls Sanitary District #1
Mason
Mellen
*Menomonie
Mercer Sanitary District #1
Milltown
Minong
Montreal
New Auburn
New Richmond
**Northwood School District
Ogema Sanitary District No. 1
Osceola
Park Falls
Phillips
**Pleasant Valley Properties of
WI, LLC
Poplar Wastewater
Port Wing Sanitary District
Prentice

Radisson
Red Cliff North
Rice Lake
*River Falls
Roberts
Saxon Sanitary District #1
Sheldon
Shell Lake
Siren
Solon Springs WWTF
Somerset
Spoonerville
St. Croix Falls
Stanley
Star Prairie
Stone Lake Sanitary District
**Stresau Lab Inc
*Superior Water Light & Power
Superior, Village of
**T.A.P. Investments
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Turtle Lake
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Arena
Argyle
Augusta
Avoca
Bagley
Bangor
Baraboo
Barneveld
Bay City
Belmont
Benton
Blair
Blanchardville
Bloomington
Blue River
Boscobel
Bridgeport Sanitary District
Campbell
Cassville
Cazenovia
Chaseburg
Cobb
Cochrane
Coon Valley
Cuba City
Darlington
**Dell Creek Estates
Dickeyville
Dodge Sanitary District #1
Dodgeville
Durand
Eastman
Eleva
Ellsworth
Elmwood
Ettrick
Fairchild
Fall Creek
Farmington Sanitary District
Fennimore
Fountain City
Galesville
Gays Mills
Genoa

Gratiot
Hazel Green
Highland
Hillpoint Sanitary District
Hillsboro
Hollandale
Holmen
Independence
Ironton
Kieler Sanitary District #1
*La Crosse
La Farge
La Valle
Lake Delton
Lancaster
Lincoln Sanitary District #1
Linden
Linden Sanitary District No. 1
Edmund
Livingston
Loganville
Lone Rock
Maiden Rock
**Marell Mobile Home Courts
Merrimac
Mineral Point
Mondovi
Montfort
Mount Hope
Mount Sterling
Muscodia
Nelson
North Freedom
*Onalaska
Ontario
Osseo
Patch Grove
Pepin
Pigeon Falls
**Pinewood Court Inc.
Plain
*Platteville
Potosi-Tennyson
Prairie du Chien
Prairie du Sac
Prescott
Readstown
Reedsburg
Rewey
Richland Center
Ridgeway
Rock Springs
Rockland
Sauk City
Seneca Sanitary District #1
Sextonville
Shelby Sanitary District #2
Shullsburg
Soldiers Grove
South Wayne
Spring Green
Spring Valley
St. Joseph Sanitary District #1
Stoddard
Strum
Trempealeau
Viola
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Wauzeka
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RURAL AMERICA RELIES ON RURAL DEVELOPMENT



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USDA RURAL DEVELOPMENT WATER PROGRAMS ENSURE AFFORDABILITY

AFFORDABILITY FOR RURAL COMMUNITIES

Affordability is the key factor for small and rural communities in their decisions to upgrade and enhance water services for their customers.

Skyrocketing construction costs, disrupted supply chains, and ever increasing regulatory requirements are just a few of the roadblocks rural America faces when financing critical water infrastructure.

Rural Development's Water and Waste Disposal Loan and Grant Program is a lifeline for rural America, funding clean and reliable water systems nationwide.

America has 49,397 community water systems, most of which are small. Small and rural communities lack economies of scale. Passing the costs of unfunded mandates onto customers is not feasible without assistance from USDA Rural Development.

91%
of America's
water systems are small

Grant costs can cover up to 75% of total development costs for the most vulnerable communities, which is necessary to provide affordable rates. For the majority of small and rural communities, a grant/loan mix is critical to keep projects affordable. USDA RD needs an adequate amount of baseline grant funding to maintain their mission to serve rural America.

Today's Congressional policies and funding decisions are jeopardizing the ability of every community in rural America to keep water and wastewater services affordable. Budget cuts will leave USDA WEP unable to accomplish its mission. WEP is instrumental in helping rural America maintain affordable and sustainable water access for all rural people.

USDA RURAL DEVELOPMENT WATER & ENVIRONMENTAL PROGRAMS (WEP)

For many underserved communities, USDA Rural Development is the lender of first opportunity. RD exclusively serves small and rural communities. Without this program, many rural Americans will lose access to affordable safe and clean water.

In 2023, WEP excelled in their mission to serve rural America:

72% of WEP funded projects benefited communities with populations of 2,500 or less.

45% of WEP funded projects benefited communities with populations of 1,000 or less.

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Scan the QR Code to learn more about how you can help keep Rural America Strong!



RURAL AMERICA RELIES ON RURAL DEVELOPMENT



NATIONAL
RURAL WATER
ASSOCIATION

USDA RURAL DEVELOPMENT WATER PROGRAMS DRIVE ECONOMIC OPPORTUNITY

ECONOMIC VITALITY FOR RURAL COMMUNITIES

Critical infrastructure, including adequate water service, is a basic requirement for a healthy economy, encourages employment opportunities and makes a community a desired place to live and work. The nearly 45,000 water systems in rural America are anchor institutions in their communities.

In many rural communities water infrastructure is past its useful life. Without adequate water and sanitation services, businesses move out of our rural communities, forcing the next generation to leave to find better opportunities. Those left behind are robbed of hope for a prosperous future.

Rural America's economy is driven by entrepreneurship, and made of a diverse range of operations through over 700,000 businesses. Rural areas produce most of the food we consume, provide lumber and other forest products used to build our homes and furniture, and supply the energy we consume daily.

Rural economies
are deeply
connected to
their urban
counterparts

USDA RD WEP not only provides essential services to the families that live in rural America, but also all business activities. These include small businesses, farming, manufacturing, emergency services, and more. In rural America, nearly 85% of all business establishments are small. These small businesses are critical to local economies, employing 54% of workers in their communities. Rural communities need access to funding through USDA RD WEP to thrive.

Today's Congressional policies and funding decisions are jeopardizing the economic vitality of every community in rural America. Budget cuts will leave USDA WEP unable to accomplish its mission. WEP is instrumental in helping rural America increase economic opportunities for all rural people.

PROMOTION BY THE NATIONAL RURAL WATER ASSOCIATION

USDA RURAL DEVELOPMENT WATER & ENVIRONMENTAL PROGRAMS (WEP)

In 2023, USDA RD WEP funded over \$1.7 billion in projects to small and rural communities.

The average median household income for communities that received WEP funding was \$37,029, half of the national average household income of \$74,580.

In 2023, 308 WEP projects addressed health and sanitary challenges and 28,326 new connections provided drinking water to residents for the first time, resulting in over 400,000 individuals and households benefiting from this funding.

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RURAL AMERICA RELIES ON RURAL DEVELOPMENT



USDA RURAL DEVELOPMENT WATER PROGRAMS PROTECT PUBLIC HEALTH

PUBLIC HEALTH FOR RURAL COMMUNITIES

Water is a vital resource and is required for all aspects of daily life, including drinking, cooking, washing, and flushing. In order to protect public health, all Americans should have access to this resource through reliable infrastructure.

Rural America's 46.1 million residents deserve safe drinking water and clean wastewater treatment just as much as urban or metropolitan residents.

While access to basic water infrastructure may be taken for granted by many American citizens, it still is not a reality for approximately 146,000 rural households.

Over the last 70 years, through billions of dollars in financial assistance through USDA RD, the U.S. has made great advancements in the standard of living in rural America. Millions now have access to safe drinking water that their parents did not have. Thousands of rural communities now have modern wastewater systems, eliminating millions of failed septic tanks, cesspools, straight pipes, and worse.

For the 27,500 public elementary and secondary schools, approximately 9.8 million students, and 1,810 hospitals in rural America, public health would be immediately jeopardized without safe drinking water and clean wastewater treatment.

Even for established water and wastewater systems, new regulations such as EPA's recent PFAS and Lead and Copper Rules results in costly operational and infrastructure upgrades. USDA RD WEP ensures rural America and its communities have access to funding when they are faced with making these upgrades to remain in compliance.

Today's Congressional policies and funding decisions are jeopardizing the public health of every community in rural America. Budget cuts will leave USDA WEP unable to accomplish its mission. WEP is instrumental in helping rural America ensure public health is protected for all rural people.

USDA RURAL DEVELOPMENT WATER & ENVIRONMENTAL PROGRAMS (WEP)

Since 1972, USDA RD WEP has been the consistent source of support for rural communities to complete necessary upgrades to their water and wastewater facilities.

During 2023, WEP obligated more than \$1.6 billion in loans and grants, with 73.5% of projects addressing a health and sanitary issue.

The projects funded support more than 1.1 million rural residents, including approximately 28,326 new service connections.

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RURAL AMERICA RELIES ON RURAL DEVELOPMENT



NATIONAL
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ASSOCIATION



USDA RURAL DEVELOPMENT WATER PROGRAMS CREATE SUSTAINABILITY

SUSTAINABILITY FOR RURAL COMMUNITIES

Small and rural communities rely on access to affordable loan and grant opportunities through USDA Rural Development to make repairs, upgrades, and to build new critical infrastructure for their communities.

While affordable financing is a vital component for these communities, it is not the complete solution. After these projects are completed, the need for training for water and wastewater operators does not go away. Technical assistance ensures the government's and public's investment is secured. For small and rural communities to remain sustainable, they need ongoing training and technical assistance.

Last year, Circuit Riders directly helped to protect the health and safety of 30,721,691 people - 42% of rural America.

1 in 5

Americans Live in a Rural Community

Technical assistance for small and rural communities includes providing training, energy audits, certification, financial management, environmental compliance, governance, and on-site technical assistance necessary to ensure that water and wastewater facilities operate at the highest possible level. Through the grants provided through USDA WEP, these services are provided at no cost through technical assistance providers like NRWA and its State Affiliates. The loss of funding for this essential technical assistance will jeopardize the sustainability of rural water systems and their communities. System managers will be forced to choose between not addressing ongoing operational and management issues or contracting for these services at steep costs.

Today's Congressional policies and funding decisions are jeopardizing the sustainability of every community in rural America. Budget cuts will leave USDA WEP unable to accomplish its mission. WEP is instrumental in helping rural America ensure their communities are sustainable now and into the future.

PROMOTION BY THE NATIONAL RURAL WATER ASSOCIATION

USDA RURAL DEVELOPMENT WATER & ENVIRONMENTAL PROGRAMS (WEP)

State Rural Water Associations in partnership with USDA RD WEP provide the following technical assistance to rural communities:

Circuit Rider Program

Disaster Recovery Circuit Rider Program

Wastewater Technical Assistance and Training Program

NRWA Apprenticeship Program

Manufactured Housing Program

Energy Efficiency Program

Decentralized Wastewater Technical Assistance and Training Program

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Office Closed for Christmas Day	December 25, 2026
Office Closed for New Years Day	January 1, 2027
WRWA Annual Conference (La Crosse)	March 23 - 26, 2027

WRWA Office Hours:

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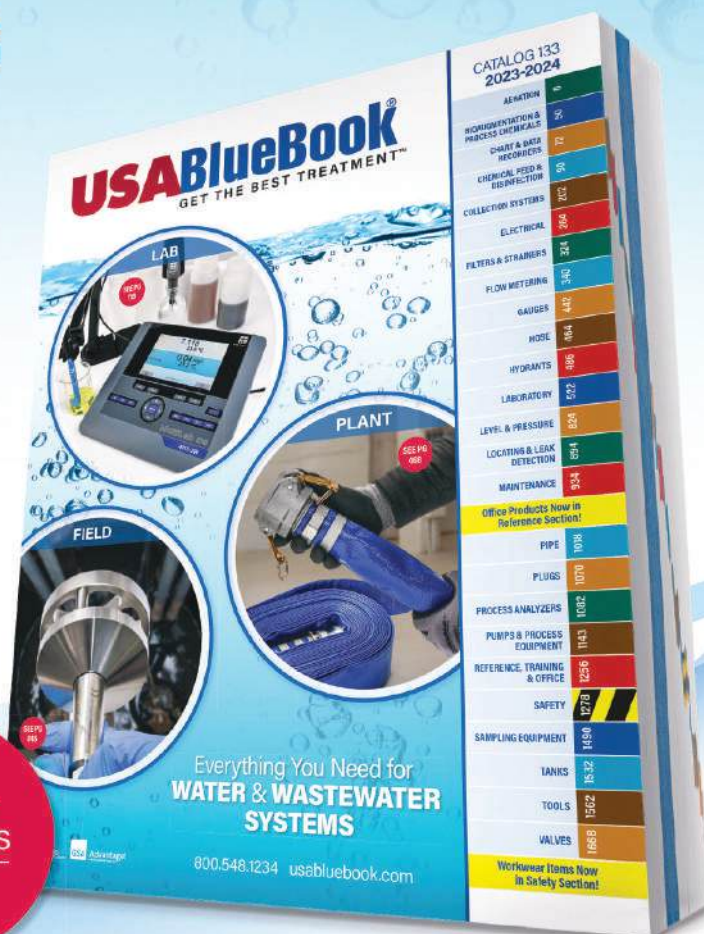
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