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Rural Water
Journal

Winter 2025

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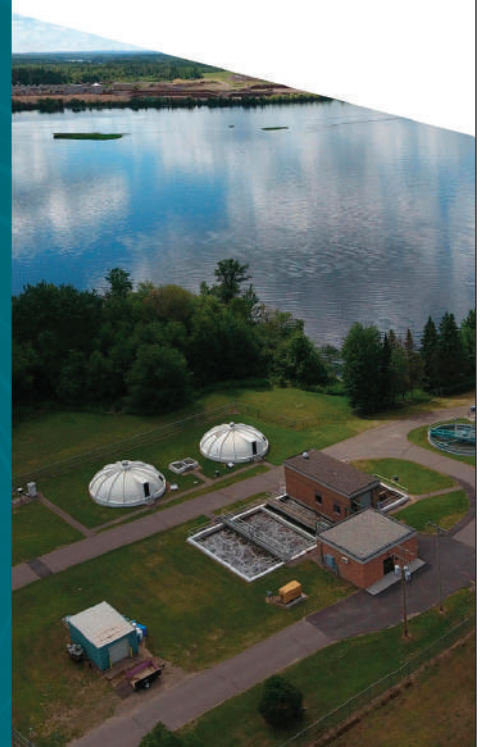
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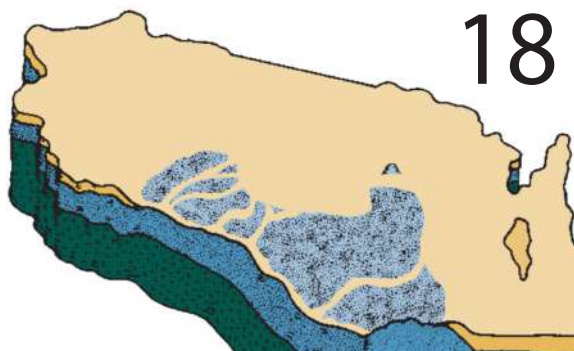
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Address all letters to the editor, advertising inquiries and correspondence to:
Wisconsin Rural Water Association, 350 Water Way, Plover, WI 54467.



Dean Bergstrom,
WRWA President, Cumberland

Message from the President

I hope everyone enjoyed the beautiful fall that we had, and now are adjusting to the winter life in Wisconsin. The 2025 WRWA technical conference will be in Green Bay this year from March 25th-28th. We are very excited to be moving back to Green Bay and having our conference in the RESCH Center. The exhibit hall will be bigger and better than ever with all exhibits in the same area. I hope you all can join us.

Another thing that we are very excited about is our new outdoor training facility, which is right next door to our main office in Plover. We are seeking donations for the facility. If anyone is willing to donate either financially, products or materials that can be used to make our facility better please contact the WRWA office, and talk to Chris Groh.

We would also ask if you received any assistance from our circuit riders, and are happy with the help you received, please send a letter via email to wrwa@wrwa.org. In those letters, please express who and how you were helped and please include it on the letterhead from your utility. These letters will be shared with our senators and representatives to help us maintain the funding for WRWA, which we receive from USDA and EPA.

I wish everyone a happy and healthy 2025 and look forward to seeing everyone in March!

Until next time, stay warm and stay safe! *Dean*

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our members in the
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Message from the Executive Director

Time to Shape the Future-Write a Letter

Chris Groh,
WRWA Executive Director

Every year at this time I ask for help for WRWA's annual trip to Washington DC. Our affiliate, National Rural Water Association takes us to DC, and we meet our representatives on Capitol Hill. We go in the hopes of gaining continued funding for USDA Rural Development, the Farm bill and continued funding for Rural Water. Most of our Congressmen are very welcoming and are generally pleased to see us and talk about water and wastewater issues from home. My job is to tell them how our programs are helping their constituents, and hopefully they understand that this is an important enough program to continue funding. We have had great success in the past with your help. If you ever had the chance to solve a problem with your system or needed help with some paperwork or compliance with DNR/EPA, you most likely had one of our Circuit Riders or Wastewater Techs in to help. If you're looking to save money, our Source-water program or our Energy Efficiency program offered big money savings for you. Generally, our only "charge" for the help is a thank you letter. Every year I take these "thank you's" to our representatives and show them that we have been spending our money to help their cities and towns to keep safe water going to the taps and clean water going to the streams. All things that promote public health and a clean environment. Please consider sending a thank you to our office and help us continue to serve you and your neighbors.

This year I do have two additional favors to ask.

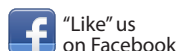
We are developing our "Expo Park" into a training ground for operators and exposing them to new technology and old tried and true training. We have developed several acres at our state office and we are asking for donations of technology, money and ideas. I will be sending a letter to our membership to ask for anything that you would like to donate. We never ask for anything that you cannot afford, but we want you all to feel like you are part of our growth.

The second favor is cheaper than a donation, but even more important. I'm asking you to take some of your time and ask yourself a question: What if there were no Wisconsin Rural Water Association? I think this is something some of you have been thinking about over the years. Where would you go for help? Who would pay for it? How would you deal with DNR? Where would the money, expertise, training and money come from?

I think you all know the answer? So please take a minute and discuss this with your workmates, Village Presidents, Clerks, Mayors and Customers. We don't need a novel, but your congressman is very interested in YOUR opinion. Your help with this support could be the most important thing you can do for your town, and your customers. It's your chance to shape the future of the industry that we all love.

Please have a safe, warm Winter, and the Merriest of Christmases.

Chris



Chris Groh-Executive Director for WRWA accepts a \$2000 donation from Western Wisconsin Waterworks Professionals from Nate Waegge and Derek Nofsinger

The WWWP (Western Wisconsin Waterworks Professionals)

was created between 1997-1998 with the intent to provide water operators of Wisconsin another way to earn credits towards their licenses by attending a quarterly meeting.

A typical meeting has 3 speakers and includes lunch with the registration fee.

These meetings allow us the chance to interact with vendors as well as help develop relationships with other operators. The organization also makes yearly donations to the WRWA sportsman's raffle, as well as providing scholarship opportunities for local students looking to pursue a career in trade schools. We are always looking to expand the organization so feel free to come join us for a meeting and get a few credits.



We get letters and emails!

We'd love to hear from you...

I am writing to let you know how much we appreciate the help we receive from WRWA especially Brooke Klingbeil. Her experience and lab knowledge has been extremely helpful. She has been a great, great help in getting our phosphorus level down and keeping it under control.

We hope to continue benefitting from her expertise.

Yours truly,

Bobbi Hundt & Larry Wuensch
St. Joseph Sanitary District 1

I just want to send this email telling you guys how much help Brooke Klingbeil has been to our small community! She has been reviewing our past permits for Wastewater and sat in on our meeting with the DNR. She is knowledgeable and very easy to engage with. I don't feel stupid calling or emailing her my questions as she is always willing to look into things. I don't know where we would be at right now in the DNR publication process without Brooke's help. I have had a rough few years and this past year there has been more and more work with trying to get grants and save money for our small village. Without Brooke's assistance throughout the whole process, I really don't know where we would be! I really appreciate all of her time on the permit process and trying to get us up to date with our ordinances.

THANK YOU, BROOKE, and THANK YOU WRWA for allowing her to help small communities! We appreciate each person from WRWA that has helped us!

Take care,

Candice Grunseth, WCMC, Village Clerk
Village of Gilman

My name is Kate Krachey, Utility Clerk for the Town of Bridgeport, Crawford County. At the beginning of the year, I took over for the Utility Clerk and noticed that our water usage was much higher than we were billing out. I was told to reach out to WRWA to get some help. When I called, I was directed to a person right away that came out and checked our meters to see if they were the issue. When he couldn't find anything wrong with the meters, he gave us the name of someone to check for leaks. This person found the leak right away. It has been wonderful to now see our billing usage match our water usage. Thank you for your wonderful help in getting this situation resolved so quickly.

The township appreciates you.

Thanks again.

Kate Krachey, Utility Clerk

The Village of New Auburn had one of the greatest experiences with the Wisconsin Rural Water Association (WRWA) in late 2023 through mid-2024. We are a small community with approximately 570 residents after our recent annexation, and as many communities can also echo, with limited budgets. Due to some unknown circumstances that occurred prior to the arrival of the current staff with the Village, both Public Works staff members left employment with the Village. This trend continued with the retirement of the long-standing part-time staff member in the office and the resignation of my predecessor.

Prior to my arrival the Village Board were able to retain the services of two bright individuals for the vacated Public Works positions. Both individuals had zero municipal experience, and thereby, no water or wastewater utility experience. Thereby, neither of them had the respective required training, experience or certificates to manage the Village's utilities. The Village was also able to retain an experienced Clerk and new Treasurer with appropriate financial, accountant and public service minded individuals to guide the development and growth of the Village as a whole.

WRWA staff worked closely with all the Village's new staff and retained consultant to ensure the Village did not have any preventable violation of the Wisconsin Department of Natural Resources (WDNR) regulations. Furthermore, if we had a violation, the WRWA was there to assist us with the reporting requirements and steps to ensure to alleviate and correct the situation. In addition, WRWA provided low-cost training opportunities throughout the State with locations near our community for reduced travel burdens. Other small communities that I have worked for have relied heavily upon WRWA for similar situations and training needs.

It is these services that are paramount for all small communities in the State of Wisconsin and would be an unfillable void if they were not here to assist us all when needed or required.

Sincerely,

Bradley J. Hanson, Village Administrator - Clerk-Deputy
Treasurer, Village of New Auburn

Hi, I recently attended the Winter operations training with two of my operators at the WRWA Technology center. We all enjoyed the class, and my operators felt it was very knowledgeable. We appreciate all that your organization does for this industry and hope you continue to host these sessions as time goes on.

Thank You,

Erik Schutzius, Utility Superintendent, Village of Bellevue

Dear Jesse,

I wanted to extend my heartfelt thanks for all the help you provided with the GPS mapping of our water and sewer system. Your expertise and willingness to assist made a huge difference in moving this project forward smoothly. Your guidance in navigating the technical aspects saved us so much time and ensured we have a reliable and accurate map.

I truly appreciate your support and collaboration. Thanks again for going above and beyond to help us out!

Warm regards,

Ryan James, Operator, Gresham Utilities

I just wanted to send this email thanking Tony Roche, Wastewater Technician from Wisconsin Rural Water Association for helping me with the transition to the HACH TNT843 phosphorous test method.

I reached out to Tony, and he was able to make it to our facility in a timely manner. Tony was very personable and great to work with. Fast forward a few weeks he was able to make another trip to assist with other issues I was having, once again resolving those issues. I have reached out via phone multiple times and Tony has had great response time. Tony does a great job of making contact time to time just checking in to see how operations are going and to see if I have any questions. As a newly lead operator it is a great feeling to know I have someone to count on if I have technical questions.

I just wanted to say thanks again for all your hard work and dedication, it was very appreciated.

Thanks,

Dylan Varo, Lead operator

Prairie du Chien WWTF

I am writing on behalf of the Gays Mills Village Board and our Public Works Department regarding your recent request for letters of support for the Wisconsin Rural Water Association.

In July of 2024 our Director of Public Works choose employment elsewhere. A current employee stepped up and needed immediate assistance for Wastewater. Tony Roche, WRWA Wastewater Technician, was able to provide assistance to us with multiple site visits to our wastewater treatment plant along with assistance by phone and email. Tony has helped with recommendations on purchasing equipment, lab supplies, and also has provided instructions on performing wastewater testing and sampling.

The Village appreciates the service and continued support that is provided by Wisconsin Rural Water Association in order to operate our Wastewater Treatment Plant efficiently.

Sincerely,

Harry Heisz, Village of President,
Village of Gays Mills

I'd like to thank WRWA and Wastewater Technician Jesse Hass for working with me at the Bowler WWTP to research and design a mechanical process to remove the excessive duckweed and floating rags and debris from the Primary Lagoon at the WWTP. The excessive amount of duckweed that grows each summer has been a problem for years. The issues with duckweed are most problematic in the spring after the ice melts and the decaying duckweed releases its nutrients back into the ponds, causing final Effluent limit exceedences for BOD, TSS, Phosphorus, and Ammonia. The goal is to fine tune a conveyor system to remove not only the duckweed, but the floating rags and synthetics that have entered the lagoon system over the years due to a limited Influent screening process. With that said, we will continue to design the duckweed removal process, creating the least labor intensive and most efficient way to remove the excessive duckweed each year. A sealed 4" X 250' drain tile is used to corral the duckweed so it can be dewatered and loaded onto a conveyor for disposal.

WRWA assistance is greatly appreciated in small Villages and Cities with "1 man" operations.

Thanks,

Aaron Gutt, Water / Wastewater O.I.C.

Bowler Wastewater Treatment Plant

Continued on page 6

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NRWA

I would like to send out a huge thank you to Todd Weich.

He came to Omro on Oct 24 and helped me track down a service leak. We were having a hard time pinpointing where the leak was, and Todd changed his schedule to come down and help me. We had an area that we thought the leak was and by using Todds tools, we actually found the leak in a totally different location. This saved us a lot of time, money, and wasted resources.

I would like to thank everyone at WRWA for everything they do to help support smaller municipalities.

Thank you,
Eric Carley, City of Omro Utilities

Brooke,

Thank you for helping the Village of Bay City with my land spreading plan the WPDES permit application.

Your help was greatly appreciated.

Chris Zener, Director of Public Works, Village of Bay City

Jesse,

I wanted to thank you for all the help on my Sludge Management Report. After you gave me that first template to use, I thought it was done. Well, as we know it wasn't. Thank you for devoting so much time to help me get this thing done and have it look professional. We both know if I would have done it myself it wouldn't have looked half as good. I hope helping me and having it as a template for other WWTP's will cut down the time for other people to write their report.

Dale Peterson, Wastewater Operator
Village of Amherst

To Whom it may concern,

I am a water/wastewater operator for the Village of Black Creek. I have 3 years of experience in the wastewater field. Being fairly new to this, Jesse, and the whole crew at WI Rural Water, have been more than helpful to me. Black Creek is planning a wastewater plant upgrade. Jesse has helped me prepare for this upgrade and has given me questions to ask from our engineers. We have also discussed together different operation choices for the new plant.

In closing I think WI Rural Water is valuable to the water and wastewater operators in our state.

Scott Sassman, Village of Black Creek

Hi Renee,

I would like to express my appreciation to Matt Rettler and the entire WRWA organization for all the help and training that is offered along with the loaner equipment program. Florence is a small community that could never have accomplished the task such as the most recent Energy assessment that Matt had conducted or be able to purchase equipment that is offered for us to use in order for us to be able to do our jobs safely and efficiently. The top-notch training that is offered to us is second to none in our opinion. So again, Florence would like to thank you all for the great things that WRWA offers to communities like ours!

Thank you,
Roger Secrist, Utility Manager, Florence Utilities

Annie from WRWA came and helped the Village of Albany on 11/25/2024 to find a water leak she is very good at pinpointing the leak for the village and it save a lot of time then trying to find on my own or try to call a company that has to call that is from Milwaukee. That is very expensive, and I have to work around their time they can fit me in. I can call WRWA, and they try to get someone down here as so as possible to try to help. Wisconsin Rural Water Association also helped me with paperwork that I needed for a loan from the USDA.

Lonnie Gill, Village of Albany

I just want to say thank you to my circuit rider, Dan Wundrow for answering my calls and helping with valve box lowering as well as bringing me the Data Loggers every summer.

I would like to also give a big thanks to Tony Roche for helping me with my Discharge permit application.

The WRWA team is a life saver to new and inexperienced operators.

Thank You,
Ryan Ellis, OIC- Mellen Municipal Utilities

I am writing to express our appreciation for all you do, not just for Three lakes, but for all your members.

If not for your organization, small districts, like ours, would struggle to survive. From your support staff in Plover helping with administrative questions, and keeping us up to date on pending legislation, and rule changes. Your technical Conference, as well as the Outdoor Expo, create a chance for members to meet vendors we otherwise might not, as well as touching base with current vendors for new ideas.

Andrew was outstanding in helping us with, not only our Wellhead Protection Plan, but also a draft of our Wellhead Protection Ordinance. Andrew was instrumental in heading us in the correct direction and making sure we completed our task in a timely fashion.

Your Circuit Rider program is unequalled in professionalism and the knowledge they provide. They are always available by phone to answer questions, and in person when extra help is needed. Helping us with leak detection is one of the areas that still leaves me in amazement. Neither Ed Hendzel nor Todd Weich have been off the mark by more than a bucket of an excavator bucket. When our local repair contractor knows they have a locate by Rural Water, they are very quick to respond.

Helping with setting up our GIS Mapping was another remarkably easy process when Todd came to demonstrate and help us begin.

The use of loaner equipment provided by you is an additional area which allows access to equipment small districts would never be able to afford, or own, but desperately need. Making this equipment available, and having personnel to deliver it, and demonstrate operation, is extremely invaluable.

Please find our enclosed donation to your loaner equipment fund and keep up the good work.

See you in March.

Again, Thank You.

Three Lakes Sanitary District #1

Hey Guys and Gals,

Thank you for everything you've done, everything you're doing, and everything you're planning on doing in the future. specially PFOS related things. My water to PFOS level is 2,100 PPT in my house! So, I'm counting the days till I get a permanent solution for drinking water to my home.

Thanks again and have a wonderful holiday season.
Sincerely,
Lenny Hasz, Town of Campbell

I would like to thank WRWA so much for your hard work on the numerous projects the City of Hayward's had over the past year The Water and Sewer Utility Electrical Assessment from Matt Rettler. Dan Wundrow's Water Technical advice and tool loaner program. Tony Roche's Wastewater Technical advice and training.

I am really proud of the effort WRWA put into these projects and wanted to give you a shout-out for all your hard work. It's great to see how much you've grown as an association and team members, and it was my pleasure to work with WRWA on these projects.

Keep up the great work! I don't know what we would do without your help/service!
Thanks!
John McCue, Public Works Director,
City of Hayward

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CMOM PROGRAM

Tony Roche,
WRWA Wastewater Trainer

Hello Rural Water! I am writing this article just a couple days before the opening day of the 2024 gun deer season, and I am anxiously awaiting some time in the treestand. This is a very special time of year in Wisconsin. Thanksgiving is right around the corner, Christmas is not too far off, and many operators out there are looking to wrap up 2024 projects. One project you might have on your list is to update your CMOM plan. Maybe some of you are not familiar with the CMOM program...so let's take a moment to familiarize ourselves with CMOM.

CMOM stands for Capacity, Management, Operation and Maintenance. It is a plan that wastewater utilities can use in order to prevent overflows, manage assets of the utility, promote safety, prioritize maintenance activities, enforce ordinances, effectively budget for projects, and educate the public on the importance of the collection system.

A major component of the CMOM plan is a system profile of the wastewater utility. In this profile utilities need to identify the type of treatment plant as well as plant design capacity, miles of gravity sewers,

Let's take a moment to familiarize ourselves with CMOM.

miles of force mains, number of lift stations, and number of manholes. The system profile also needs to have an organizational chart of the system that identifies chain of command from the director of public works, to crew members, and to office staff.

Another critical component of the CMOM plan is the collection system routine maintenance schedule. With this maintenance schedule utilities list "trouble spots" within their collection system and list the frequency of maintenance activities associated with the trouble spots. Examples of maintenance activities for trouble spots include cleaning lift stations to reduce grease and rag buildup, cleaning/removing root intrusions into gravity mains, regularly televising mains with known inflow and infiltration issues. Maintenance activities are important because they help minimize backups and help prolong the life of collection systems assets.

The CMOM plan also highlights the importance of mapping the collection system. It is a good idea for collection system maps to have information



FEATURE

on sewer gravity mains, building laterals, backup-prone homes, manholes, cleanouts, force mains, lift stations, and landmarks such as roads, waterbodies, and railroad crossings. Digital mapping has come a long way in the last 10 years and there are digital mapping options that are very inexpensive. Digital mapping systems are completely customizable, and operators can upload photos to the map that show problem spots. Another advantage of digital mapping is that you can view your collection system on a smartphone or tablet and leave the paper maps in the office. Many of our systems have switched to digital mapping, and if you are interested in learning more about this please contact me and I will help you out.

The last element of the CMOM plan that I will write about is an overflow emergency response plan. Overflows can result from overflowing manholes, sewer main breaks, electrical failures and power outages at lift stations. Procedures within the emergency response plan help to ensure public safety and should be understood by utility personnel.

That was a lot of information! If you need help updating your CMOM please give me a call and I will be happy to help you. Have a happy Thanksgiving and a safe hunt! – Tony

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Before you blame the Lab for your Bacti issues...

Kelly Thomas,
WRWA Technical Assistance Director

I've been hearing from many water operators throughout the state that they're having an unusual amount of positive coliform bacteria (bacti) samples. I'm also hearing many operators blaming the laboratories for the positive bacti sample results. Some operators even split their water samples, sending one to lab "A" and another to lab "B" and see which come back negative. I guess if it makes you feel better go ahead to do that. However, I feel that practice is a waste of money and time.

I feel some of us need a refresher of what total coliform bacteria actually is. This is not going to be a biology lesson but a very simple explanation.

Coliform bacteria are not harmful and are naturally present in the environment. They are an indicator bacteria. This means if you have coliform bacteria in your drinking water, you have the potential of having harmful fecal bacteria as well. Coliform bacteria in your tap water suggests there could be a problem with some existing equipment or treatment systems or contamination of the source water. It could also mean you have disinfection issues. This is why the lab will further test a positive coliform sample to be sure E coli is not present. We all know that E coli is a specific indicator of fecal contamination and can be way more harmful to humans if found in your drinking water.

I feel some of us need a refresher of what total coliform bacteria actually is.

Improper sampling procedures can result in total coliform positive samples. Some things to avoid while taking your routine total coliform samples can be:

- Avoid new faucets, newly repaired faucets, leaky faucets, outdoor faucets.
- Avoid faucets connected to softeners, water heaters, or pressure tanks.
- Resist the urge to set down the lid of your sample bottle.
- Do not rinse out the bottles prior to drawing the sample.

Try to take your time when collecting your routine samples. Prior to taking the water sample, turn on the sample tap as high of a flow as the drain can take it. Flush the sample tap for at least 5 minutes. Now it's time to sanitize the area. You can use alcohol wipes and alcohol solution in a spray bottle, or a torch for metallic fixtures. After the sample site has been sanitized, turn the sample faucet back on to the speed that you want the flow of water when you're going to take the sample. Next you are going to want to remove the seal of the sample bottle. Remove all the plastic completely. Do not



remove that cap till immediately prior to gathering your sample and then replace the lid as soon as the sample is collected.

Now that your water is safely in your bottle, fill out the necessary DNR paperwork completely and correctly.

Now it's time to get it to the lab as soon as possible. Remember the 30-hour rule. Your sample needs to be analyzed within 30 hours. Not just at the lab within 30 hours. Do not put your lab in a situation where they need to immediately start analyzing your sample because you failed to get your sample there soon enough.

Because we take coliform samples more often than any other sample, we tend to become complacent and maybe a bit reckless when taking these samples. Be aware of your surroundings and the atmosphere when taking a water sample. Use your senses. If something doesn't seem quite right, stop what you're doing and reschedule your sample collection for another time. There are many more variables that can influence a coliform bacteria sample in the field than in the lab. The lab is a reasonably controlled environment. So, blaming the lab for a positive total coliform sample is likely not the case.

Remember that our goal is to sample the drinking water. If the atmosphere interferes or influences the result of the drinking water sample, repeat water samples will likely need to be taken. Also, Mother Nature can influence the drinking water supply. In extreme drought and extreme wet conditions, your aquifer may slightly compromise the usual static and pumping levels. These are things that are out of your control. Do not take it personal if Mother Nature shows her wrath.

So, please take your time, be thorough, and exercise proper sampling techniques. Stay safe. Stay healthy. *Kelly*

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PSC WATER RATE INCREASE ORDERS ISSUED

9/1/2024 – 11/15/2024

UTILITY NAME	ORDER ISSUED	OVERALL% INCREASE
Balsam Lake Municipal Water Utility	9/6/2024	149.0%
Whitelaw Municipal Water and Sewer Utility	9/13/2024	19.95%
Maplewood Sanitary District No 1	9/16/2024	171.33%
Town of Portland Sanitary District #1	9/26/2024	35.11%
Adell Municipal Sewer and Water Utility	10/3/2024	30.87%
Hillsboro Municipal Water Utility	10/3/2024	24.65%
Greenleaf Water Utility	10/11/2024	-1.72%
Ellsworth Municipal Water and Sewer Utility	10/16/2024	41.03%
Holmen Municipal Water Utility	10/16/2024	50.17%
Ironton Water Utility	10/17/2024	36.39%
Sextonville Waterworks San District	10/17/2024	66.3%
Pardeeville Municipal Water Utility	10/18/2024	35.52%
City of Rhinelander Water Utility	11/6/2024	34.77%
Village of Greendale Water Utility	11/11/2024	9.35%

PSC CONSTRUCTION AUTHORIZATIONS ISSUED

9/1/2024 – 11/15/2024

UTILITY NAME	ORDER ISSUED	CONSTRUCTION COST
Village of Howard Water and Sewer Department	9/20/2024	\$4,645,000
Multiple Utilities	9/23/2024	\$1,287,000
Oregon Municipal Water and Sewer Utility	10/28/2024	\$2,079,168
Eau Claire Municipal Water Utility	10/30/2024	\$27,919,000
Manitowoc Public Utilities	11/4/2024	\$9,963,263
Green Bay Water Utility	11/12/2024	\$11,700,000

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Business card	\$160	\$575	\$200	\$600

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Educating Your Board

Jesse Hass,
WRWA Wastewater Trainer

The job of operating a utility seems to become more cumbersome by the year. With constrained budgets, reporting limits that continue to drop, media and social media not understanding our industry, and a host of other issues, being an operator seems pretty thankless these days.

A topic that comes up often in my visits is the best way to work with and educate a board or council. City budgets continue to tighten while the cost of nearly every service and good continues to rise. The fiscal policy of a board that is deciding whether to raise water or sewer rates is an issue I run across often. Most boards don't want to put a strain on the rate payers, so most boards are reluctant to raise rates. If a utility board rarely raises rates, when a big project comes up a rate increase may be needed to pay for a project. If rates were not raised for many years funding a new project may require a utility to raise rates by double or triple. A solution some municipalities have implemented is having rates raise a percent each year to avoid the shock of a massive single year increase.

Another board related issue is that a single board member can make things stressful for city employees. Sometimes a board member decides to serve for reasons that may not be with the Village's interests at heart. They may be running because they are upset you got the job over a relative or you trimmed a tree in their yard. In those instances, there not much you can do to make either situation better. Luckily, in most cases, dealing with a board is difficult because of lack of education. Try to schedule a meeting every so often at your facilities to show the board what assets you maintain and what goes in to performing the duties of an operator. Also sending out weekly updates or updates when major things are done may help the board understand what you are doing for the utility. Another thing I recommend is starting a list on paper or spreadsheet that documents when you complete something that saves the utility money. Maybe you can rebuild a pump that used to be sent out for repair, if you are saving the utility thousands of dollars completing a task, let them know.

Another issue regarding budgets is trying to plan for DNR limits. Public safety and wildlife protection are very important issues. I understand that it isn't easy for regulating agencies to determine limits. The problem is, as limits go lower on a variety of contaminants and new contaminants are identified, the cost to municipalities is astronomical. On the wastewater side of things there is BOD, solids, nitrates, ammonia, phosphorus, and the

If rates were not raised for many years funding a new project may require a utility to raise rates by double or triple

possibility of future contaminants. Some of those contaminants are very expensive to remove.

Systems should start planning for ways to optimize their utility to meet lower limits. A major issue is, even if a plant is optimized, the plant treatment process may not be amenable to removing certain contaminants. All plants should be collecting data to optimize plant performance. Always read through your ordinances and make sure your utility is covered in all scenarios. Make sure you understand and identify all sources of waste entering the plant. Try to have an idea what the waste from each industry in town is sending to your facility. Sampling at an industry or in the collection system will allow you to gather data to strengthen your ordinances against slug loads and unwanted waste. Try to work with your board to set prohibitive fees for all contaminants that affect the treatment process. Start planning now for how your utility is going to deal with meeting low limits and other issues that may arise in the utility.

Another major issue in this industry is one big media story can have major ramifications on future budgets. When a story gets traction there tends to be tons of misinformation that can spread like wildfire. Having a way to deal with concerned citizens quickly before they get misinformation is going to be a much more important part of working for a utility moving forward. Something that may help cities is developing a checklist of how to deal with different types of emergencies and developing a plan to get information to your ratepayers. Developing a social media presence can be a valuable tool to get correct information to the public.



Although it may seem like the deck is stacked against public employees it still is a job with a lot of upsides. This is a great profession with many great people in every aspect of the industry. Reach out to other municipalities to see how they are dealing with issues. Always try to compile knowledge to stay ahead of the curve. Lastly, if you need someone to talk to about some of these issues give your WRWA circuit rider a call and bounce things off us. *Jesse*

Small Water Systems OTM/NN: "Effective online tools"

Good morning, Today I would like to talk about using the WI-DNR website as an effective online tool to find all your operator needs. I've personally used this site daily to help me complete work and research for all the small water system communities I've served.

Drinking Water System Portal: This site allows you to query and download data from the WI-DNR database and is maintained and used by DNR -SDWA regulators. It includes information such as PWS monitoring and other requirements, sample results, violations, inspection findings, public water systems, bacti laboratory listings, plan/document review statuses.

Operator Certification: The program is responsible for ensuring that various types of professional operators have adequate training to perform the necessary tasks at the facilities or businesses. Through this site you will also be able to look up:

Operator Certification Look up: Look up by name, review training history, certification and print card.

Exams: Exam information, schedules and applications.

Training: Training Calendar information for operators and providers.

Forms: Water, Wastewater, Septage and Land Fill.

Electronic monthly operating report: "EMOR"

The electronic monthly operating report (EMOR) is an online tool for reporting monthly pumpage, chemical addition, treatment at public water systems and other information as required by DNR. Monthly reporting is a requirement for all municipal water systems and some other qualifying water system types, per NR 810.07, Wisconsin Administrative Code [exit DNR]. Only a certified operator for the water system can submit the report. However, staff associated with the system who are not certified operators can enter data with the permission of the certified operator. Monthly reports are due within 10 days from the end of the month for which the data is reported. For example, data from July must be submitted by the 10th day of August.

These are just a few of the online tools that the Wisconsin DNR provides for small water system operators. If you would like more information on the subjects I've talked about or listed, please give me a call. You can also contact your DNR representative if you have any additional questions.

Thanks for reading,

George Taylor, Small Water System Circuit Rider
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TRENCH SAFETY

Annie Von Rueden,
WRWA Water Circuit Rider

Tis the season. It would be nice if we were in our warm cozy homes sitting in front of the fire watching the snow fly. But.... As any experienced operator knows, "Tis the season" presents another meaning. With the upcoming snow and predicted cold, usually are accompanied by water main breaks. Last winter, it was warmer and most of us got away lucky.

I would like to touch on a few important safety items to keep in mind during the main breaks.

Know where your valves are and make sure they are operable or not. They should be exercised every two to four years.

Locating utility lines. Before making ANY excavation, call 811 to determine the location of all buried gas, electricity, telephone, and cable TV lines in the work area. Generally, the utility (you) locates the water, sewer and storm sewer. Damage prevention benefits everyone and avoids minimized service interruption for utility customers.

Gather barricades and cones, to safely block off work areas from traffic. Do not forget about you and others in the work area wearing protective safety vests and jackets.

Before making ANY excavation, call 811 to determine the location of all buried gas, electricity, telephone, and cable TV lines in the work area.

Excavation and shoring. When excavating a trench, some type of surface material is to be removed. In asphalt, and concrete removal, usually a cutting wheel is used. The debris from the cuttings are to be removed before excavation starts because it cannot be used to refill the trench.

When excavating beware of old hazardous waste dump sites. If the soil looks different in color, composition, or compaction or smells different, it may be an indicator. If so, these soils may be required to be hauled to a hazardous waste site. Pre plan a place, usually offsite, for the old soil, or spoils to go.

Generally, the trench should be no more than two to three feet wider than the outside diameter of the pipe. This ensures proper installation of the pipe and gives the crew enough room to do the work. Excavated soil is piled on the side of the trench between the trench and traffic and far enough away so the crew can walk between the trench and the excavated materials. Excavated rock and unstable material must be hauled away and not be used for backfilling.

Shoring is used to protect operators from cave-ins. Shoring is a complete framework and sides of metal that is designed to support the walls of a

trench. The need for shoring and shoring requirements depends on many factors. Depth and width of trench, type of soil, soil conditions, and nearby activities that could cause vibrations. Shoring requirements are dictated by laws and codes and are strictly enforced by regulatory agencies. Lack of shoring or shoring failure are the major causes of underground construction deaths. Learn the laws and codes of shoring types and proper use. WRWA holds many safety classes throughout the year on trench safety.

After the main is repaired and filled, the excavation is manually backfilled with select material. Compaction may be required depending on the trench conditions. Compaction around the pipe and above it is done gradually in stages. The backfill material must contain enough moisture for full compaction under and on both sides of the pipe, so the pipe is supported without any hollow spaces in the soil to provide even support and bearing of the pipe.

After the excavation is properly backfilled and compacted, clean up the work area. Pull barricades and cones and restore traffic patterns back to normal.

These are just a few reminders of conditions and events to think about during a main break. Fingers crossed, there won't be any for you this year.

Enjoy the season!! *Annie*

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Wisconsin Groundwater Geology and Aquifers

Andrew Aslesen,
WRWA Source Water Specialist

Wisconsin is a water rich state. We have more than 15,000 lakes, 7,000 streams and five million acres of wetland, but that just scratches the surface. Below the surface is 1.2 quadrillion gallons of groundwater, often referred to as Wisconsin's buried treasure. The quality and quantity of this groundwater varies from place to place which is typically controlled by the geology and characteristics of the aquifer.

An aquifer is a geologic formation (rock or sediment) that is permeable and can store or yield usable amounts of water. There are four main aquifers in Wisconsin all with varying properties that affect water quality and quantity. They are the surficial sand and gravel aquifer, the eastern dolomite aquifer, the sandstone and dolomite aquifer and the crystalline bedrock aquifer. Figure 1 shows the position and of each aquifer as they are found in the state. Figure 2 shows each aquifer individually, which helps get a better idea of the extent of each aquifer unit.

Sand and Gravel Aquifer The sand and gravel aquifer is the upper most unit in most of the state. It consists mostly of sand and gravel deposited by glacial ice. The glaciers were large and carried lots of ground-up rock. They crossed large parts of Wisconsin several times over the last two and a half million years, leaving behind layers of clay, sand and gravel up to 300 feet thick. As the glaciers melted, meltwater moved and deposited sand and gravel in broad areas and in river valleys such as the Chippewa, and Wisconsin river valleys. This aquifer is not evenly distributed across the state but in areas such as the central sand plain and Wisconsin River valley the sand and gravel aquifer is one of the most productive in the state. In portions of northern Wisconsin,

There are four main aquifers in Wisconsin all with varying properties that affect water quality and quantity.

Wisconsin's Aquifers

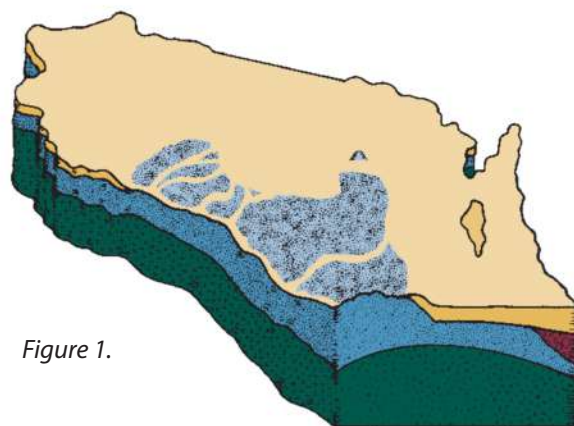
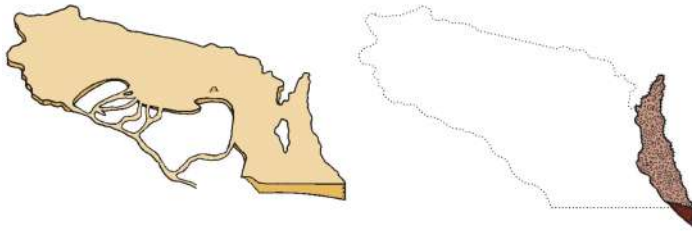


Figure 1.

the sand and gravel aquifer consist of more silt and clay which can be much less productive. In these areas the sand and gravel aquifer is sometimes still utilized because it is the only option. In much of north/north-central Wisconsin the top bedrock formation below the sand and gravel aquifer is crystalline bedrock, which often only yields sufficient groundwater for domestic supply wells. The sand and gravel aquifer is commonly near the land surface it is highly susceptible to contaminants from surface pollutants.

Eastern Dolomite Aquifer In eastern Wisconsin, the uppermost bedrock is mostly a carbonate rock called dolomite which forms the eastern dolomite aquifer. It extends from Door County in the north where dolomite forms cliffs along Green Bay, along the east shore

Sand and Gravel Aquifer Eastern Dolomite Aquifer



Sandstone & Dolomite Aquifer Crystalline Bedrock Aquifer

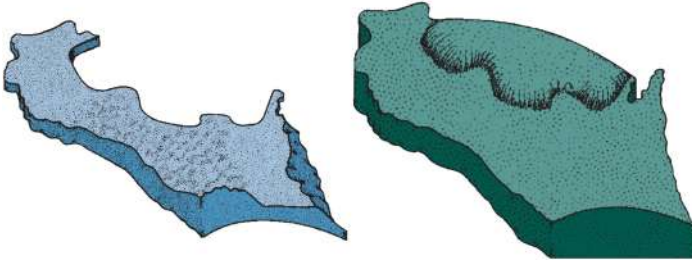


Figure 2.

of Lake Winnebago, to the Wisconsin-Illinois state line. In the northern counties, the dolomite is found at or near the land surface. In other places, especially in the south, the dolomite is covered by hundreds of feet of glacial deposits. The dolomite aquifer primarily produces water from interconnected cracks, fractures and pores. The amount of interconnection varies across the aquifer, meaning well yield can vary widely from well to well. Groundwater is transmitted quickly through cracks and fractures making it vulnerable to contamination, especially in the northern counties where the glacial material covering it is very thin.

Sandstone and Dolomite Aquifer The sandstone and dolomite aquifer is sometimes also called the Cambrian sandstone aquifer. It is found at the surface in southwest Wisconsin, beneath glacial deposits in central Wisconsin, beneath the dolomite aquifer and shale aquitard in eastern Wisconsin and is absent in north-central Wisconsin. The sandstone yields water from open spaces or pores between sand grains and the dolomite produces water from cracks and fractures. Well yields depend on which rock type is dominant in the area. Low hydraulic conductivity layers of clayey sandstone and shale within the sandstone and dolomite aquifer also affect well yield. This aquifer is the primary source of groundwater for much of the state.

Crystalline Bedrock Crystalline bedrock underlies all of Wisconsin. Much of the state has sandstone, dolomite or glacial deposits overlying the crystalline bedrock. In parts of North-central Wisconsin the crystalline bedrock is at or near the surface and may be the only available aquifer. These very old rocks are primarily fine grained igneous and metamorphic rocks which only yield small quantities of water from fractures and cracks. If there are numerous interconnected fractures it can provide 20-100 gallons per minute, barely enough to be considered adequate for a municipal supply.

Andrew

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ENERGY SAVING TIPS

for Winter Water/Wastewater Operations

Matt Rettler,
WRWA Energy Efficiency Circuit Rider

While not every reduction in speed may reduce energy consumption, it can still be beneficial to the process in other ways.

As winter approaches, water and wastewater utilities can face new and unique challenges that the cold weather can bring. Heating, maintaining infrastructure, and ensuring uninterrupted water and wastewater processing require careful considerations and management strategies. Implementing energy saving measures during winter months is essential for reducing costs and maintaining system reliability. I will highlight a few practices that facilities can adopt to improve efficiency and reduce energy consumption in the winter months.

Optimizing Pumping Systems

Pumping systems can consume a significant amount of energy throughout the year in both water and wastewater plants. As winter

sets in, many systems will see a reduction in flows that enables a chance to adjust pump speeds to a more efficient setting. Most often a reduction in speed to match the process can save on energy used. While not every reduction in speed may reduce energy consumption, it can still be beneficial to the process in other ways. There are two critical components to a more efficient pumping process in winter. The first is to have motors/pumps equipped with a Variable Frequency Drive (VFD) that can allow the speeds to be manipulated. This will allow the most accurate speed and efficiency for the process. The second is to adjust your pump operating schedules. Having pumps synchronized with operation demands can greatly reduce the energy needed for your system. Examples of energy savings for

optimizing your pumping needs include: having flow meet demand, using technology to automatically adjust motor speeds (DO probes, flow meters, transducers), adjusting pumps to winter electric rate changes, turning off unnecessary pumps, and etc.

Improved Insulation and Heating Systems

Winter operations demand extra attention to maintaining the temperatures of water and wastewater systems that include freezing pipes, chemical stability, and building climates. Effective and efficient insulation and heating can have a dramatic effect in reducing energy costs needed for winter. Proper pipe insulation in areas prone to freezing can reduce expensive repairs caused by burst pipes. Proper insulation can also reduce the need for supplementary heating in rooms with energy consuming electric heaters. While walking into a pump house that is 70 degrees Fahrenheit in the cold weather is nice, it is unnecessary and demanding more energy use than is necessary. Reducing thermostat settings to lower temperatures to maintain a comfortable environment for the equipment in non-occupied rooms is beneficial. Occupancy sensors can ensure that lights are turned off when no one is around in the shorter days of winter. Window blinds will help hold heat inside the room rather than escaping through windows that tend to have poor efficiency. Ensuring any gaps, cracks, door jams, windows, and hatch openings are sealed off will also promote energy savings by allowing heated air to stay inside while cold winter air stays outside. Building heating systems can vary from electric, oil, and gas and need to be serviced for the best efficiency. Having programmable thermostats in areas occupied by personnel will help in the reduction of energy used in heating.



Winter operations can bring new challenges that demand careful planning and efficient energy use.

By adopting strategies such as optimizing pumping systems, improving insulation, integrating energy efficient lighting, and embracing technology, utilities can reduce their energy use and lower operational costs. All these strategies need the operators to think about the health and reliability of the utility to maximize the benefits. If you need any assistance in making any of these systems more efficient, please give me a call.

Matt

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Easy Winter Prep for Your Water System

Todd Weich,
WRWA Water Circuit Rider

Is your water system and you prepared for winter this year? The extreme weather that can come with the winter season is only growing more severe as climate change intensifies. Many areas across the country have experienced some of the coldest temperatures they have ever had in the last decade. Preparing for winter is also a smart financial decision. Frozen water lines can also cause expensive water leaks. Customers rely on safe drinking water. Although winter weather can be intense and unpredictable, there are things that you can do to be more prepared.

Cold weather can bring freezing temperatures, heavy snowfall, and ice storms that can have multiple impacts on a community that may include the following:

- Pipe breaks throughout the distribution system.
- Loss of power and communication lines- SCADA radio antennas become iced over.
- Limited access to facilities because of icy roads or debris such as downed power lines or tree limbs.
- Reduced workforce due to unsafe travel conditions throughout the service area- or divided work force due to snow removal.
- Source water quality impacts due to increased amount of road salt in stormwater runoff.
- Potential flooding risk due to snowpack melt and ice jams.
- Surface water supply can have ice and frozen slush that can block valves and restrict intakes.

Prepare yourself:

- Make sure you and your employees have the proper equipment.

Although winter weather can be intense and unpredictable, there are things that you can do to be more prepared.

- Check your supply inventory.
- Stock up on supplies in case you or your employees need to stay overnight.
- Have a change of clothing available.
- Coordinate with the local fire department for use of the sleeping area and showers if available.
- Stock extra fuel or have a plan on how you will get fuel if needed.

So, what can be done within the distribution system:

- Make sure your tower mix or re-circulating pump is on and working correctly.
- Have an up-to-date map- either paper or GPS/GIS.
- Make sure your distribution valves are in good working order.
- If possible, have wells run late night or early morning. This will put warmer water in the tower during the coldest part of the night. (This technique is based on system demands and storage available.)
- Adjust setting on the water tower. You can either have short fills more often or longer fill rates by adjusting the well gallons per minute output.
- Check manhole for the frost depths.

If you have an area that is known to freeze, have the customer run water to prevent freezing. (PSC does allow for billing adjustments if needed.)

These practices may aid in preventing freezing within your municipality. If it does by chance happen, WRWA may have tools to assist in resolving the issues.

Please contact your Circuit Rider immediately! *Todd*



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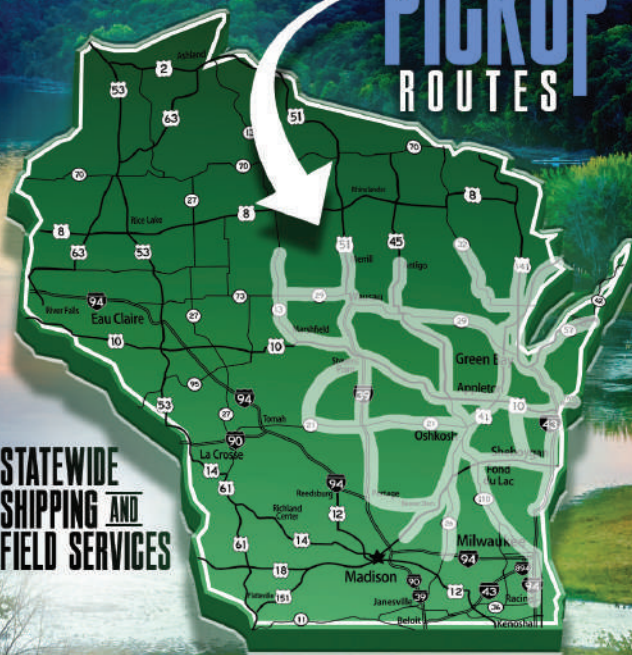
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PSC REPORT



Dan Wundrow,
WRWA Circuit Rider

Over the last few months, I have been deeply involved with the Public Service Commission (PSC) of Wisconsin annual water reports, a crucial tool for water operators. Whether dealing with lead and copper, rate cases, AWWA water loss, water loss, the number of meters, comparing water sales, or creating historical trends for a system, these reports play a pivotal role. It's important to remember that we have a plethora of new water operators out there, and they need to be made aware of this vital information. This article will be geared towards the new operators and some of those who need a refresher on this report.

What is the annual PSC report? The PSC requires this report from municipal and privately owned water utilities operating in the state. It is a comprehensive document that provides financial, operational, and compliance information about the utility's performance for the previous year. More than just a report, it is an accountability tool, a means of regulation, and a way for the PSC to monitor utility performance. It is essential to fill out this report accurately, as it will be used by many over the next year. The statutory due date for the annual report is May 1st of the following calendar year.

It's important to remember that we have a plethora of new water operators out there, and they need to be made aware of this vital information.

There are three main parts that are helpful for examining: the financial data, water use and sales data, and operational information. This can be pretty intimidating at first, but once you get through that, you can find a lot of information quickly. The financial section covers income statements/balance sheets, revenues from water sales/other services, and operating expenses. Water use and sales data cover the total water pumped, breakdown of water sales by customer class, water loss through leaks, and system inefficiencies. Operational information goes over system details like miles of main, age of water main, number of connections, storage capacity, well depths, meter stock, and system upgrades, which refer to any significant changes or improvements made to the water distribution system.

Here is the link to find your most recent report that was filed. You can follow along and find out about your system. <https://apps.psc.wi.gov/ARS/annualReports/content/listingWEGS.aspx> I will just be going over the things that I use in the reports, but if you want to take your time and read more, please do. This is an excellent tool for new water operators to learn about your system, and I encourage you to explore it at your own pace.

Continued on page 26

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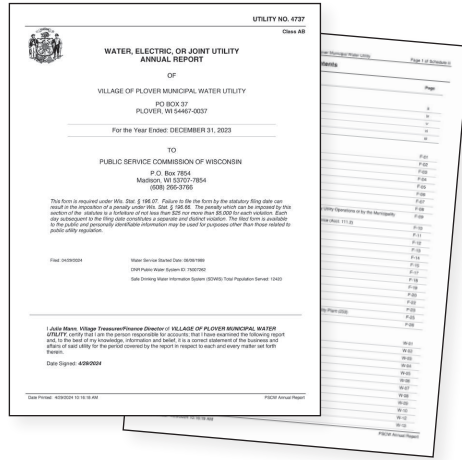
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When you open the report, you will see the main cover page. Scroll down to the second page or the table of contents. The first page I look at with this report is page iv. This is used for our national logs, ensuring we have the correct phone number and email address. It is nice to know who helped complete this report.



While reviewing the financial section of the report, I like to look at pages F-06, F-17, and F-23. I use the full-time employees or full-time equivalency (F-06) page to see what your system is budgeted for labor and what departments. Bonds (F-17): this is a page that everyone should be familiar with. This page informs what bonds your system currently has, including the date of issue, final maturity date, interest rate, principal amount at the end of the year, and the total amount of all bonds. This is extremely helpful when we are talking about funding options. Return on rate base computation (F-23): I only look at the net operating income as a percent of the average net rate base.

I use almost every page of the water section as it tells a good story about any water system's infrastructure. I will go over the significant pages and what I'm looking at. The first page is water operating revenues and expenses (W-01). These are the nuts and bolts of the financials: total operating revenue, total operating expenses, and the utility's net income. We would like to see the utility net income be positive. If your system is negative, the number will appear in parentheses.

Water operating revenues-sales (W-02). In the last few months, I have spent a lot of time looking at this page, developing a historical trend for water sales and the increase and decrease of water meters by account type. Creating a comprehensive water loss sheet from 1997-2023 is a great way to see if you have water loss from water meters or system leaks. While looking back from 97-2023, you notice that your meter count goes up and water sales drop, which is a good indicator that your meters may be slowing down. However, if the meter count goes up and the sale of water goes up as well, but you have a higher well gallons being pumped, that's an indicator that your system leaks.

Water operation and maintenance expenses(W-05). I typically look for chemical expenses, fuel or power for pumping, supplies, and expenses, and repairs to the water plant. This information is beneficial when an operator questions why the maintenance cost is higher than normal. I can tell you from the past that if you track the fuel or power purchased for pumping and you see a sudden spike in cost and the total gallons pumped are the same, you may have some energy efficiency problems. If that's the case, you need to get on the phone and call Matt Rettler to get an energy assessment done.

Age of water mains (W-13). This page helps you determine the number of feet of water main, its size, and its installation date. It also

gives the total length of the water main throughout the entire system. This information is very handy when filling out the AWWA water loss spreadsheet and is also excellent when planning for future capital improvement plans.

Sources of water supply statistics (W-14). This is one of the most critical pages regarding the historical trend of water loss. It is broken down by the monthly pumping totals and the year's total. When going back over the years from 97-2023, looking at the monthly total, if you see a month that spikes and doesn't drop, we have a starting point of where and when the leak started. I have mentioned this to operators a handful of times, and instantly, they will remember something like a pre-lube leaking or a wet spot that developed on the road or ditch. Those are the best spots to start looking for leaks.

Water audit and other statistics (W-15). This page is one that everyone should know and look at. It is a quick reference to the water system's performance. This will give the total finished gallons pumped, gallons entering the distribution system, non-revenue water, unbilled authorized consumption, apparent loss, real loss, and other statistics. In the other statistics, you will find some good information about max gallons, minimum gallons, and total kWh for the year. The total kWh should also be used to create a historical trend. Take the kWh/ Finished water pumped=kWh per million gallons. If you see this number creeping up and up, then definitely call Matt for an energy assessment.

Sources of water supply well information (W-16), Pumping and power equipment (W-18), Reservoirs, standpipes, elevated tanks (W-19), and Water treatment plant (W-20). I will group all this data together. This tells an incredible amount of information about the utility water system and its capacity. We can see immediately what this system has for well types, depth of wells, capacity of the wells, type of reservoirs, chemical addition, type of treatment, and so much more.

Utility-owned water service lines (W-22). This was one of the most used pages during lead and copper inventory. It lists all utility-owned lines, the pipe material and diameter, and the number at the beginning and end of the year. As the year progresses, the system should remember to change these as upgrades occur.

Meters (W-23). This is set up like a balance sheet for the meters by size, first of the year, added during the year, retired during the year, meter type by account, in-stock meters, and total meters. This page also indicates the residential meter replacement schedule, and the methods used to read customer meters. The second page of W-17 will be different for each utility, and each operator should read it for their system.

This is just a quick rundown of the annual PSC water report. There is so much information in this document that I could write a few articles on it, breaking down each section a little more or showing ways that we could track different data. If you want to know other ways to track things or want ideas on specific things to track, give me a call, and we can discuss them. I hope that you enjoyed this article and hope to see you soon. *Dan*



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Water System Security: ARE WE FOCUSING ON THE RIGHT RISKS?

Seth Petersen,
WRWA EPA Water Technician/Training Specialist

As cyber threats continue to evolve, water systems must adapt by adopting advanced security measures.

During a recent review for a Risk and Resiliency Assessment (RRA), I came across some insightful information from the Environmental Protection Agency (EPA). An RRA evaluates the natural and intentional threats to drinking water systems. It forces systems to consider the likelihood of such events, analyze the systems preparedness, and identify potential improvements systems should make to enhance resilience.

The EPA uses a framework developed by the American Water Works Association (AWWA) that quantifies risk using the following equation:

Risk = Threat × Vulnerability × Consequence

If a component of this equation is high, the system should plan to reduce the associated risk.

EPA’s “Baseline Information on Malevolent Acts for community Water Systems Version 3.0” shares some interesting statistics.

Table 5: Default Threat Likelihood Ranges for Malevolent Act Threat Categories

Threat Likelihood Level	Default Threat Likelihood Range	Malevolent Act Threat Categories
Low	10 ⁻⁶ – 10 ⁻⁵	Assault on utility – physical* Intentional contamination of source water Intentional contamination of finished water
Medium	0.01 – 0.1	Directed/Sabotage-physical Theft or diversion – physical**
High	1	Cyberattack

*Does not include routine crime that occurs in a community that may affect utility employees.

**This threat likelihood range applies only to a major incident of physical theft or diversion of critical resources, equipment, supplies, or infrastructure materials with the potential to disrupt the operations of a water system. It matches the range assigned to Directed/Sabotage-physical because both categories involve physical acts against water system infrastructure or resources that may disrupt operations.

EPA predicts the risk of a cyberattack is nearly **100% annually** for every water system in the United States. Cyber threats stand out because their likelihood and vulnerability are exceptionally high and the consequences of cyberattacks are escalating as attackers grow more sophisticated. For example, in Wisconsin last year, a community narrowly avoided losing millions of dollars due to a sophisticated fraudulent email scheme.

This raises a critical question: **Are we dedicating enough attention and resources to water system cybersecurity yet?**

Operators face considerable daily responsibilities, and cybersecurity can often feel overwhelming. However, with threats increasing, prioritizing cybersecurity is no longer optional. Below are actionable steps and resources to help water systems address this pressing challenge.

PRACTICAL STEPS TO STRENGTHEN WATER SYSTEM CYBERSECURITY

1. ASSESS RISKS REGULARLY

Conduct periodic reviews to identify and address vulnerabilities before attackers can exploit them. The EPA offers free cybersecurity assessments for water and wastewater systems using their Cybersecurity Checklist. For assistance, visit www.epa.gov/waterresilience/epa-cybersecurity-water-sector or contact your WRWA Water Technician or Circuit Rider.

2. KEEP NETWORKS SEPARATE

Isolating operational systems from other computer networks can significantly reduce the impact of potential breaches.

3. USE STRONG PASSWORDS

Implement strong password policies that require a minimum of eight

characters, including uppercase letters, numbers, and symbols. Regularly update passwords and consider using two-factor authentication for added security.

4. PLAN FOR EMERGENCIES

Develop a response plan to minimize damage in the event of a cyberattack. Cyber insurance can provide critical support before, during, and after an incident. Learn more about cyber insurance at www.epa.gov/waterresilience/epa-cybersecurity-water-sector.

5. TRAIN EMPLOYEES

Educate staff to recognize suspicious emails, phishing attempts, and other common cyberattack methods. Awareness is often the first line of defense.

Looking Ahead

As cyber threats continue to evolve, water systems must adapt by adopting advanced security measures. Technologies like artificial intelligence and enhanced data protection tools will play pivotal roles in safeguarding critical infrastructure. Collaboration among government agencies, private companies, and local utilities will also be vital in maintaining a strong defense.

By proactively assessing risks, addressing vulnerabilities, and understanding the consequences of cyberattacks, water systems can better prepare for the challenges ahead. For any concerns or questions about your system's cybersecurity, don't hesitate to contact your WRWA Water Technician or Circuit Rider for assistance. Have a great winter. We will be golfing soon enough!

Seth

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My Life with EPA-A Celebration of 50 Years of The Safe Drinking Water Act



Chris Groh,
WRWA Executive Director

We all have the need to help keep our environment clean and supply our neighbors safe water for their families.

I remember the summer of 1969. The Jets beat the Colts in Superbowl III, Richard Nixon became president, Apollo 11 landed on the moon, the Manson family killed Sharon Tate and the LaBianca family, Woodstock was held in upstate New York, the Viet Nam war raged, and Frosty the Snowman aired for the first time. But that was the summer that I learned to fish with my dad. We would go down to the Manitowoc River and fish for bullheads and northern pike. If we had access, we would go to Clarks mills and fish for the exotic rock bass. That's the summer I fell deeply in love with "outside." Rivers and forests of Manitowoc County were within reach of my bike, and I was always gone. My poor mother probably worried her head off wondering where I was and what I was doing.

The biggest thing that stuck in my memory occurred June 22, 1969, in Cleveland Ohio. Heavy industry dominated the river north of Cuyahoga Valley National Park. The railroad bridges would trap floating debris and cause pileups against the bridges. There was enough oil in the river (which floats on water) that a spark from a passing train actually lit the debris on fire and started the river burning. The fire reportedly only lasted about half an hour, but the images burned into everyone's memory. When I saw the fire on "CBS News with Walter Cronkite", I had questions. Unfortunately, Mom



and Dad couldn't answer my worries of "my" rivers burning up, and what happened to the fish and wildlife, and why was the water so polluted.

Good luck explaining politics, manufacturing and infrastructure to a 10-year-old. All I really got was that it was the big city, and everyone thought the river was just a means to get rid of their sewage. "My" rivers will never burn.

Luckily, this fire did spark a movement to protect our environment and our drinking water. After the Cuyahoga River fire there was a huge outcry for something to be done. In 1970 Richard Nixon called for sweeping environmental reform which consolidated into the Environmental Protection Agency in January 1970. On October 18, 1972, the Clean Water

Act aimed to restore and maintain the chemical, physical, and biological integrity of the nation's waters. It established NPDES permitting program for discharges to navigable waters, required states to establish water quality standards for their waterbodies, required municipal facilities to meet secondary treatment standards, required industrial facilities to meet technology standards, and announced a national goal of eliminating discharges of pollutants to navigable waters by 1985.

Revisions in 1981streamlined the municipal construction grants process, including prioritizing projects that will contribute the most to improve water quality. The 50-year anniversary of the CWA was celebrated in 2022, and all the things that evolved with this program shape our environment today.

This year we celebrate the 50th Anniversary of the Safe Drinking Water Act. The SDWA was signed into law on December 16, 1974. The act sought to protect public health by authorizing national enforceable standards for drinking water quality. In 1986 underground sources of drinking water were included, and also banned lead pipes and solder. 2011 brought us the "Lead in Drinking Water Act". Further acts protected fire safety, gave us emergency response planning and means to fund our infrastructure needs.

All the things I hold dear in my life relate back to those old rivers and the fight to protect them. My education and career have always paralleled the EPA programs. From testing water samples for all the exotic compounds that are found in the water from our rivers, lakes and underground sources, to helping my rural friends with their water and wastewater compliance issues has always been my way of keeping "your river" from starting on fire. My career has not been any different from any of yours (except possibly way longer!). We all have the need to help keep our environment clean and supply our neighbors safe water for their families.

Together let's step into the next 50 years of work with EPA to continue protecting what we find to be dear.



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(Includes educational sessions, continental breakfast, lunch)

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Registration options for Tuesday: \$110, \$125, and a blank line for other amounts.

2. Wednesday, March 26, 2025

(Includes educational sessions, exhibit hall, continental breakfast & lunch)

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Registration options for Wednesday: \$110, \$125, and a blank line for other amounts.

3. Thursday, March 27, 2025

(Includes educational sessions, exhibit hall, continental breakfast, lunch & banquet)

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Registration options for Thursday: \$160, \$180, and a blank line for other amounts.

4. Friday, March 28, 2025

(Includes educational sessions & continental breakfast)

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Registration options for Friday: \$60, \$70, and a blank line for other amounts.

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Thursday – 3/27

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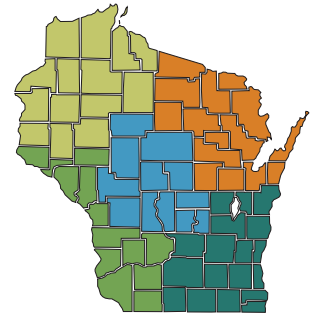
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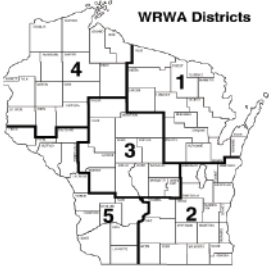
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Wisconsin Rural Water Association 2025 Awards Nomination Form

Since 1989, WRWA has recognized those in the State of Wisconsin that demonstrate excellence in the water and wastewater industries. Please add your nominations in the appropriate area of this form and submit to WRWA no later than February 7, 2025 for consideration*.

WATER/WASTEWATER SYSTEM OF THE YEAR: This award is presented to WRWA member systems that provide excellent service to their customers and stay in compliance with state & federal regulations.

Water System of the Year: _____

Wastewater System of the Year: _____

OPERATOR OF THE YEAR: This award is presented to certified operators that work for WRWA member systems to maintain regulatory compliance, protect the environment and provide excellent service to their customers.

Operator of the Year – WRWA District 1:	System
_____	_____
Operator of the Year – WRWA District 2:	System
_____	_____
Operator of the Year – WRWA District 3:	System
_____	_____
Operator of the Year – WRWA District 4:	System
_____	_____
Operator of the Year – WRWA District 5:	System
_____	_____

ADMINISTRATIVE PROFESSIONAL OF THE YEAR: This award is presented to utility clerks who work for WRWA member systems and have shown the highest level of integrity and proficiency in their field.

Administrative Professional of the Year: _____ **System** _____

BUSINESS MEMBER OF THE YEAR: This award is presented to WRWA Business Members that have worked to promote WRWA’s mission and shown dedication in providing service to the water & wastewater industries.

Business Member of the Year: _____

LIFETIME ACHIEVEMENT: This award is presented to those individuals that have worked throughout their careers to support WRWA and the water & wastewater industries, and shown a high level of dedication to their field.

Lifetime Achievement: _____

FRIEND OF RURAL WATER: This award is presented to those that have gone above and beyond the call of duty in helping WRWA in its mission of assisting rural communities and protecting Wisconsin’s natural resources.

Friend of Rural Water: _____

CONSERVATION: This award is presented each year to member systems that have shown a high level of commitment to operating efficiently and protecting & preserving Wisconsin’s water and energy resources.

Conservation: _____

***Submitting a short letter of support explaining the reasons for nomination provides valuable information to the Awards Committee during the selection process and improves the chances of winning the award.**

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Wisconsin Rural Water Association
WATER TASTE CONTEST!

THURSDAY, MARCH 27, 2025

CONTEST RULES:

- Only one sample per system please.
- Bring a 1 quart sample to the WRWA Booth before 11:00 am, Thursday, March 27, 2025 (HINT: use a glass container)
- Fill out the entry form.

.....

WATER TASTE CONTEST ENTRY FORM

(Please bring this form and water with you to the Conference, DO NOT MAIL TO WRWA)

SYSTEM _____

SAMPLE SUBMITTED BY _____



The Journey of Permit Reissuance: Why Planning Ahead and Communication with WDNR is Critical for Operators

Brooke Klingbeil,
WRWA EPA Wastewater Technician

As I write this, it is Friday, the eve of the coveted 9-day deer rifle season. Yet, arguably more importantly, it's that time of year when I become very excited about ice fishing season. I am slightly overwhelmed by the amount of prep work involved in getting everything ready. From digging out all my gear to re-lining my reels and tip-ups, setting each one up specifically for the species I'm targeting, and constantly revisiting my tackle box to make sure I have "all the things". I find myself also struggling to resist the urge to buy even more gear—knowing full well I don't need anything else. Speaking of overwhelming, many communities are currently working through the permit renewal process and being met with stricter limits and significant changes in their new permits. Renewing a wastewater permit can feel overwhelming but understanding the steps and working closely with your consulting engineer, WRWA, and the Wisconsin Department of Natural Resources (WDNR) makes it easier. Let's break down the permit renewal process and why planning and communication are so important.

Steps in the Permit Renewal Process

1. One Year Before Your Permit Expires:

WDNR sends you a letter to let you know it's time to start the renewal process. Read this carefully because it explains the timeline and what you need to do.

2. Six Months Before Expiration (180 Days):

Submit your renewal application on time. WDNR may also inspect your facility during this period, so make sure your sampling data is accurate and complete.

3. WDNR's Internal Review:

WDNR reviews your application and sampling data to prepare documents like the Water Quality-Based Effluent Limitation (WQBEL) memo. These documents help determine what limits your new permit will include.

Renewing a wastewater permit can feel overwhelming but understanding the steps and working closely with your consulting engineer, WRWA, and the Wisconsin Department of Natural Resources (WDNR) makes it easier

4. Draft Permit Preparation:

The draft permit is created based on your data and any updates to regulations. It will also include any compliance schedules or variances. WDNR sends the draft to you for review.

5. Reviewing the Draft Permit:

Upon receiving the draft, check for factual errors and typos. This is the time to get clarification on permit details. It's highly recommended to reach out to your consulting engineer, if your community has one, to assist in reviewing the draft. Additionally, scheduling a meeting with your regional compliance engineer to discuss the draft and the supporting fact sheet is invaluable. They can help clarify any technical or regulatory concerns, ensuring you fully understand the permit terms before the review period ends.

6. Public Comment Period:

The draft permit is shared online for 30 days, allowing the public and the EPA to review it. You can also submit comments or request a public hearing during this time.

7. WDNR Reviews Comments:

WDNR reviews all comments and adjusts the permit if needed before finalizing it.

8. Final Permit Issued:

WDNR sends the final permit along with an issuance letter. If there are still concerns, you can appeal certain parts of the permit.

WHY REQUESTING THE WQBEL MEMO IS IMPORTANT

The WQBEL memo is an important tool for understanding what will be required in your new permit. It helps you:

- **Understand New Requirements:** The memo outlines limits for things like phosphorus, nitrogen, and ammonia. It shows whether your current system meets these limits or needs upgrades.

- **Spot Potential Problems Early:** If the limits are stricter, you can start planning changes or improvements right away.
- **Create a Compliance Schedule:** If you need time to meet new limits, the memo can help you negotiate a timeline with WDNR.
- **Plan Your Budget:** Knowing what's coming helps you apply for funding, like grants, loans, additional laboratory expenses etc. to cover costs.
- **Inform Your Community:** Share the memo with decision-makers, like local boards or councils, to explain why changes or investments might be needed.
- **Avoid Penalties:** Early planning helps prevent violations and enforcement actions.

WHAT YOU CAN DO

- **Start Early:** Request the WQBEL memo as soon as possible to give yourself time to prepare.
- **Use Available Resources:** WRWA and groups like Municipal Environmental Group (MEG) can provide training and additional technical help.
- **Keep Up with Changes:** Regulations change over time, so stay informed about new rules, such as limits for nitrogen or PFAS.

- **Work with WDNR:** Build a good relationship with your compliance engineer and don't hesitate to ask questions or request meetings.
- **Ask for Help:** If your community has a consulting engineer, involve them in the permit process. Their expertise can make reviewing the permit and planning upgrades much easier.



Renewing a permit can feel intimidating, but it gets easier when you use available resources and ask for help when needed. Clean water is a team effort—operators run the treatment systems, users affect what goes into the system, decision-makers set priorities and budgets, and regulators make sure the rules are followed. By planning ahead, staying in touch with WDNR, and using the support available, the process becomes less stressful. This helps keep your facility on track and ready for future challenges. As always, don't hesitate to reach out if you need assistance with permit renewal. I'm here to help or can connect you with someone better suited to address your specific needs.

Tight Lines, *Brooke*





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UP THE CREEK

CHRISTMAS POWER OUTAGE

Ken Blomberg,
WRWA past Executive Director

Like many other folks, we were caught a bit off guard during a power outage that hit the river valley one past Christmas weekend. Life in the country has its distinct advantages, but when the electric meter stops spinning, the lights go out and the “well goes dry”. Not literally, but without power, the pump won’t run and the well sits idle. Our urban neighbors are at an advantage, because community water systems are designed to provide continuous service during blackouts, relying on elevated storage and standby auxiliary power.

With luck, we thought as we turned in for the night, electrical service would back by sunrise. Wrong! Eight hours into the outage and two hours before it got light, the boss woke up and began to inventory our candle supply. Her sleep was interrupted by the nagging thought of her day devoted to holiday preparation being sabotaged. Baking, cooking and cleaning were in jeopardy and with a houseful of guests due to arrive on Sunday, she was getting a bit nervous.

So, it was at the kitchen table in the candlelight that I found her and it was there that we contemplated our options.

The burners on the LP gas stove still worked, so melting snow with which to fill the tanks on the toilets for flushing was doable. A few bottles of drinking water from the fridge made perking coffee on the stove possible. Those first cups in the morning sure tasted good and made waking up in a “cool” house easier. Without wood heat that year, we were at the mercy of milder than normal winter temperatures. Sixty-two degrees wasn’t too bad when wearing a sweatshirt.

A battery-powered radio was our link to the outside world. If nothing else, the noise broke the silence and music soothed the nerves. Television was out of the question and in fact, its absence was a pleasant diversion. I’ve often felt that if a person’s status in life is judged by the size of their big screen television, then our family could be labeled rich beyond belief. Not only do we own one, but two units grace our residence – one upstairs and the other below. Both are solar powered and require no electricity. The upper level one measures 5 x 7 feet – the lower 4 x 8 feet. Together, they provide nearly 70 square feet of viewing pleasure to the outside natural world beyond the confines of our home. One’s a kitchen picture window, the other a French-style doorway in the master bedroom. We wake each morning to an easterly view of our field and woods. Bird feeders outside both windows bring literally hundreds of hours of wholesome performances from a wide cast of characters. It was there we found ourselves as the sun came up ten hours into the power outage. Oblivious

to the trouble their landlords were having, the resident flock of songbirds gave a performance fit for a king. First the cardinal gang came, including seven bright red males followed by their mates and an assortment of blue jays, chickadees, juncos, nuthatches, sparrows, doves, goldfinches and woodpeckers.

Cooking chores might have begun with a loaf of bread, had I remembered to pick one up the day before. You see, real family-style Swedish meatballs are browned on the stove and made with ground venison, bread and other secret ingredients. So, after calling to see if they were open for business, it was my job to drive to the store in town at hour fourteen. On my way home, I ran into some neighbors and together we caught glimpses of electric utility repair trucks in the area. Could relief be far off?

By the sixteenth hour, the power company announced that for some, liberation might not occur until Christmas Eve. It was time for extreme action and by then we were ready to hook-up a large generator to run the pump and furnace. A neighbor stopped within minutes of firing up the beast and reported that power restoration was just minutes away – and sure enough, after nearly nineteen hours, power was back! A full-court press to ready the house for Christmas guests was now possible.

For some we’re told, the predicament stretched on. I guess we were on the list of lucky customers. Unfortunately for the power company, they must have taken a pretty good financial hit, given the scope and expense of this major outage. They’ll survive, as rate adjustments will take care of that. But our heart-felt thanks go out to the utility crews and office folks that worked night and day throughout the holidays, missing their own family celebrations – so that we could enjoy the time spent with our family and friends.

**Footnote - Since this tale unfolded years ago, our family purchased an automatic backup generator that powers up our home and outlying kennel building. Within seconds of a power outage, the large generator fires up and all electrical supply needs are met until the power company supply is restored. In addition, we have wood burning capability should our LP furnace fail. The backup generator now produces both power and peace of mind.*



Autographed copies of Blomberg’s *Up the Creek, Letters from Art and Wisconsin Bird Hunting Tales* are available from the author at eaupleinekennels@gmail.com.

2025 ICE FISHEREE

Wednesday, January 29, 2025 and Thursday, January 30, 2025 ~ Fox Lake, WI
Thursday, February 6, 2025 and Friday, February 7, 2025 ~ Chetek, WI

The Ice Fisheree is held each year to bring industry professionals together to enjoy outdoor activities, share information, network and to raise money for WRWA's ongoing training and technical assistance efforts. A special thanks to all our sponsors and raffle prize donors.

For more details on
the following, please visit:
<https://www.wrwa.org/ice-fisheree/>

- 2025 Fox Lake Fisheree
- 2025 Chetek Fisheree
- Ice Fisheree Rules and Regs
- WRWA Chetek Ice Fishing Rules and Regulations



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WHAT ARE SAFETY HELMET REQUIREMENTS?

Vince Matarrese,
Advanced Safety Technology, Inc.
President

Numerous people are insisting OSHA has changed the regulations when it comes to head protection and public employees are governed by OSHA. This is not true. Hope the following will answer your questions.

OSHA releases the following bulletin:

December 11, 2023

Contact: Office of Communications

Phone: 202-693-1999

OSHA announces switch from traditional hard hats to safety helmets to protect agency employees from head injuries better

WASHINGTON – The U.S. Department of Labor’s Occupational Safety and Health Administration announced that the agency is replacing traditional hard hats used by its employees with more modern safety helmets to protect them better when they are on inspection sites.

In 2020, the Bureau of Labor Statistics reports head injuries accounted for nearly 6 percent of non-fatal occupational injuries involving days away from work. Almost half of those injuries occurred when workers came in contact with an object or equipment while about 20 percent were caused by slips, trips and falls.

Dating back to the 1960s, traditional hard hats protect the top of a worker’s head but have minimal side impact protection and also lack chin straps. Without the straps, traditional hard hats can fall off a worker’s head if they slip or trip, leaving them unprotected. In addition, traditional hard hats lacked vents and trapped heat inside.

OSHA wants employers to make safety and health a core value in their workplaces and is committed to doing the same by leading by example and embracing the evolution of head protection.

On Nov. 22, 2023, OSHA published a Safety and Health Information Bulletin detailing key differences between traditional hard hats and more modern safety helmets and the advancements in design, materials and other features that help protect workers’ entire heads better. Today’s safety helmets may also offer face shields or goggles to protect against projectiles, dust and chemical splashes. Others offer built-in hearing protection and/or communication systems to enable clear communication in noisy environments.

The agency **recommends safety helmets** be used by people working at construction industry and the oil and gas industry; in high-temperature, specialized work and low-risk environments; performing tasks involving electrical work and working from heights; and when required by regulations or industry standards.

OSHA wants employers to make safety and health a core value in their workplaces and is committed to doing the same by leading by example and embracing the evolution of head protection.

NOTE: This Safety and Health Information Bulletin is not a standard or regulation, and it creates no new legal obligations. The Bulletin is advisory in nature, informational in content, and is intended to assist employers in providing a safe and healthful workplace. Pursuant to the Occupational Safety and Health Act (OSH Act), employers must comply with hazard-specific safety and health standards and regulations promulgated by OSHA or by a state with an OSHA-approved State Plan. In addition, pursuant to Section 5(a)(1), the General Duty Clause of the Act, **employers must** provide their employees with a workplace free

from recognized hazards likely to cause death or serious physical harm. Employers can be cited for violating the General Duty Clause if there is a recognized hazard and they do not take reasonable steps to prevent or abate the hazard. However, failure to implement any recommendations in this Safety and Health Information Bulletin is not, in itself, a violation of the General Duty Clause. Citations can only be based on standards, regulations, and the General Duty Clause.

If you are a public employee in the State of Wisconsin, you are governed by The State of Wisconsin, Department of Safety & Professional Services, SPS Code 332, not by OSHA. SPS Code 332, published Register August 2015 No. 716, has adopted up to July 1st, 2010 OSHA regulations.

Your head protection must meet the following minimum requirements:

1910.135 Head protection.

(a) General requirements. (1) The employer shall ensure that each affected employee wears a protective helmet when working in areas where there is a potential for injury to the head from falling objects. DSK29S0YB1PROD with CFR

(2) The employer shall ensure that a protective helmet designed to reduce electrical shock hazard is worn by each such affected employee when near exposed electrical conductors which could contact the head.

(b) Criteria for head protection. (1) Head protection must comply with any of the following consensus standards:

(i) ANSI Z89.1–2003, “American National Standard for Industrial Head Protection,” which is incorporated by reference in § 1910.6;



(ii) ANSI Z89.1–1997, “American National Standard for Industrial Head Protection,” which is incorporated by reference in § 1910.6; or

(iii) ANSI Z89.1–1986, “American National Standard for Personnel Protection - Protective Headwear for Industrial Workers—Requirements,” which is incorporated by reference in § 1910.6.

(2) Head protection devices that the employer demonstrates are at least as effective as head protection devices that are constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section.

Are safety helmets better than traditional hard hats, yes. But first, are you enforcing the use of head protection and making sure they are wearing the proper Type (I or II) helmet?

Always remember, it’s all about going home. *Vince*




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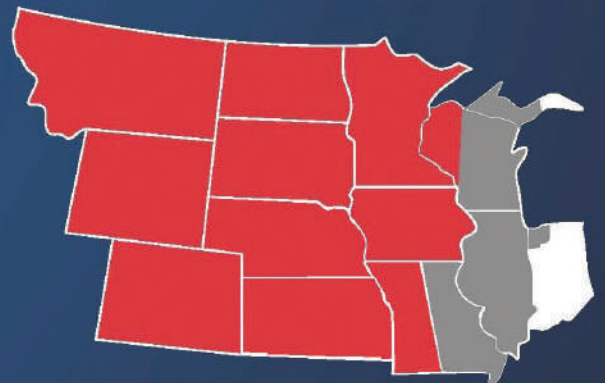
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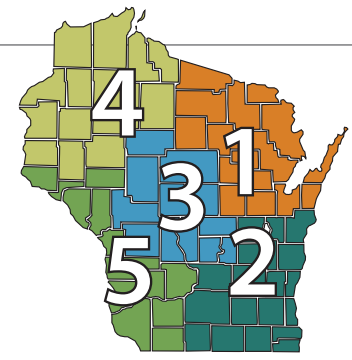
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 **Lake Meadows Water Trust
 Lake Mills
 Lannon
 Larsen – Winchester Sanitary District
 LeRoy Sanitary District #1
 Liberty Sanitary District No. 1
 Lodi
 Lomira
 Lowell
 *Madison
 *Manitowoc
 Maple Bluff
 Maribel
 Marshall
 Mayville
 Mazomanie
 McFarland
 *Menasha
 Menasha Utility District
 Menomonee Falls
 *Middleton
 Milton
 *Milwaukee
 Mishicot

Monona
 *Monroe
 Monticello
 Mount Horeb
 Mukwonago
 *Muskego
 **Natural Oven's Bakery Inc.
 *Neenah
 New Berlin
 New Glarus
 New Holstein
 Newburg
 North Fond du Lac
 Northern Moraine Utility Commission
 *Oak Creek
 Oakfield
 *Oconomowoc
 Omro
 Oostburg
 Oregon
 Orfordville
 *Oshkosh
 Palmyra
 Pardeeville
 **Pat's Services, Inc.
 *Pewaukee, City of
 Pewaukee, Village of
 *Pleasant Prairie
 Plymouth
 **Plymouth Joint School District
 Plymouth Town Sanitary District #1
 Portage
 Poynette
 *Racine
 **Rainbow Lake Manor
 Randolph
 Random Lake
 Reedsville
 Reeseville
 Rio
 Ripon
 **Robert William Park Water Assoc
 Rochester Sewer Department
 **Rock Prairie Montessori School
 **Rock River Leisure Estates Cooperative
 Rosendale
 S & R Egg Farm, Inc.
 **St. Benedict's Abbey
 St. Cloud
 St. Nazianz
 Salem Utility District
 Saukville
 **Shady Hill Mobile Home Park
 Sharon
 Sheboygan, Town of
 Sheboygan Falls
 Sherwood
 *Shorewood
 Shorewood Hills
 Slinger
 Somers

*Associate Members (Over 10,000 pop.) **Other Than Municipal

*South Milwaukee
 Stoughton
 *Sun Prairie
 **Sunnyfield Acres Water Association
 Sussex
 **The Knolls Water Co-Operative
 Theresa
 **Tremain Mobile Home Park
 **Trevor-Wilmont
 Consolidated Grade School District
 Troy Center Sanitary District #1
 **Twin Lakes Park Co. Op. Inc
 *Two Rivers
 Union Grove
 Valdres
 Verona
 Waldo
 Walworth
 *Walworth County Metro Sewerage District
 Waterford
 Waterloo
 *Watertown
 *Waukesha
 Waunakee
 *Waupun
 *Wauwatosa
 **Wendorf Enterprises 2 LLC
 *West Bend
 Westport
 **Wheel Estates, Inc Mobile Home Park
 Whitelaw
 *Whitewater
 Williams Bay
 Wind Point
 Windsor Sanitary District #1
 Winneconne
 **Winneconne Community School District
 Wyocena
 **Yorkville

DISTRICT 3 (Central)

Abbotsford
 Adams
 Alma Center
 Almond
 Amherst
 Athens
 Berlin
 Biron
 Black River Falls
 **Brakebush Brothers, Inc.
 Brockway Sanitary District #1
 Camp Douglas
 Cashton
 **Cawley Creek Village Inc.
 Chelsea Sanitary District
 Chili Sanitary District #1
 **Clark Co Health Care Center
 Colby
 Coloma
 **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
 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
 Taylor
 Thorp
 Tomah
 Union Center
 Unity
 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 Sewerage Commission
 Centuria
 Chetek
 *Chippewa Falls
 Clayton
 Clear Lake
 Clover Sanitary District #1
 Colfax
 Cornell
 Cumberland
 Dallas
 Deer Park WWTP
 Downsview Sanitary District
 Dresser
 Drummond Sanitary District #1
 Elk Mound
 Emerald – Greenwood Sanitary District #1
 Exeland
 Fifield Sanitary District #1
 Frederic
 Glen Flora
 Owen
 Glenwood City
 Glidden Sanitary District
 Grandview Sanitary District #1
 Grantsburg
 Hammond
 Hawkins
 Hayward
 Hudson
 Hurley
 Iron River Sanitary District #1
 Joint Water Quality Commission of Danbury & St. Croix Chippewa Indians of WI
 Knapp
 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
 North Hudson
 **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
 Spooner
 St. Croix Falls
 Stanley
 Star Prairie
 Stone Lake Sanitary District
 **Stresau Lab Inc
 *Superior Water Light & Power
 Superior, Village of
 **T.A.P. Investments
 Tony
 Trade Lake
 Turtle Lake
 Washburn
 Webster
 Weyerhaeuser
 Wheeler
 Winter
 **Wisconsin Structural Steel
 Woodville

DISTRICT 5 (Southwest)

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 Altoona
 Arcadia
 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
 **De Soto Area School District
 **Dell Creek Estates
 Dickeyville
 Dodge Sanitary District #1
 Dodgeville
 Durand
 Eastman
 Eleva
 Ellsworth
 Elmwood
 Ettrick
 Fairchild
 Fall Creek
 Fennimore
 Fountain City
 Galesville
 Gays Mills
 Genoa
 Gratiot
 Hazel Green
 Highland
 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
 Muscoda
 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
 Viroqua
 Wauzeka
 West Baraboo
 West Central Wisconsin Biosolids Facility
 West Salem
 Westby
 Whitehall
 Wiota Sanitary District
 Wisconsin Dells
 Yuba

*Associate Members (Over 10,000 pop.) **Other Than Municipal

RURAL AMERICA RELIES ON RURAL DEVELOPMENT



NATIONAL
RURAL WATER
ASSOCIATION

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.

PROMOTION BY THE NATIONAL RURAL WATER ASSOCIATION

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



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.

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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Wisconsin Rural Water Association Advertise Online:

- Include company contact information, logo and link to webpage
- All listings subject to WRWA approval.
- 12 month or monthly terms
- **WRWA Members:** \$700 per year or \$60 per month
- **Non-Members:** \$1,000 per year or \$85 per month

If your company would like to sponsor the WRWA weekly E-News or advertise on the WRWA website, please contact the **Rural Water office at: WRWA@wrwa.org**

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Wisconsin Rural Water Association supports Rural Water Financing Agency

The Rural Water Financing Agency provides interim construction funding to borrowers with a USDA takeout (or other approved permanent lender).

The Agency* has made over \$1 billion in interim loans to borrowers with a USDA takeout!

**Includes the Agency's predecessor organization (Kentucky Rural Water Finance Corporation)*

STREAMLINED PROCESS

1. Submit an application online via ruralwaterfinance.com
2. Legal document preparation
3. Construction bidding, USDA takeout letter
4. Interim loan closing, funds available for disbursement
5. Construction completion, USDA loan closing/interim loan payoff

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

Chris Groh, Executive Director

Wisconsin Rural Water Association

cgroh@wrwa.org

715.340.2055

Gary Larimore, President & CEO

Rural Water Financing Agency

g.larimore@krwa.org

270.535.5921

Nick Roederer, Managing Director

Raymond James (Program Underwriter)

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502.741.3686

Kristen Millard, Director

Raymond James (Program Underwriter)

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Daniel Olson, Corporate Trust Relationship

Consultant Regions Bank (Program Trustee)

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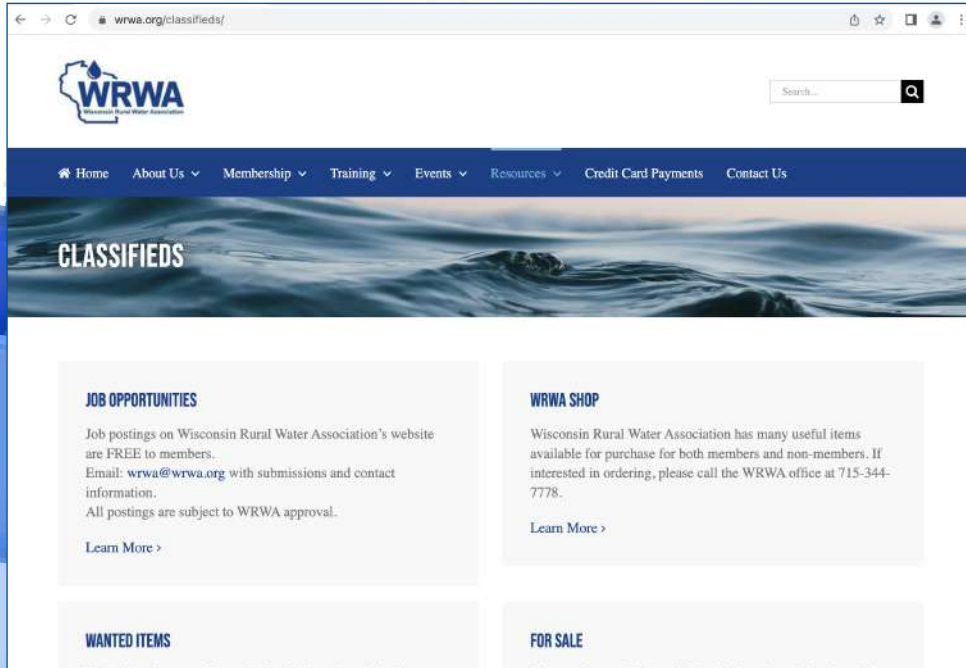
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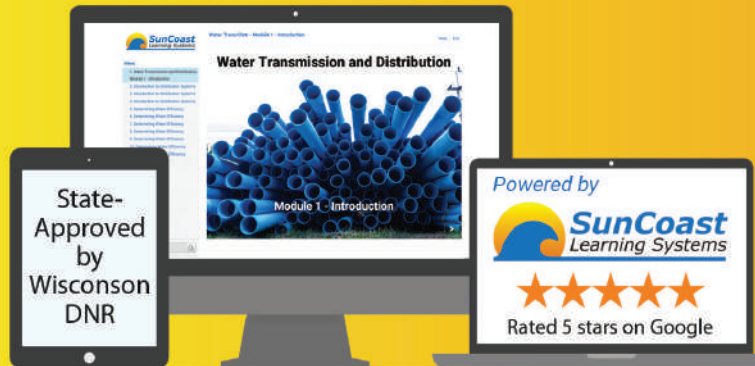
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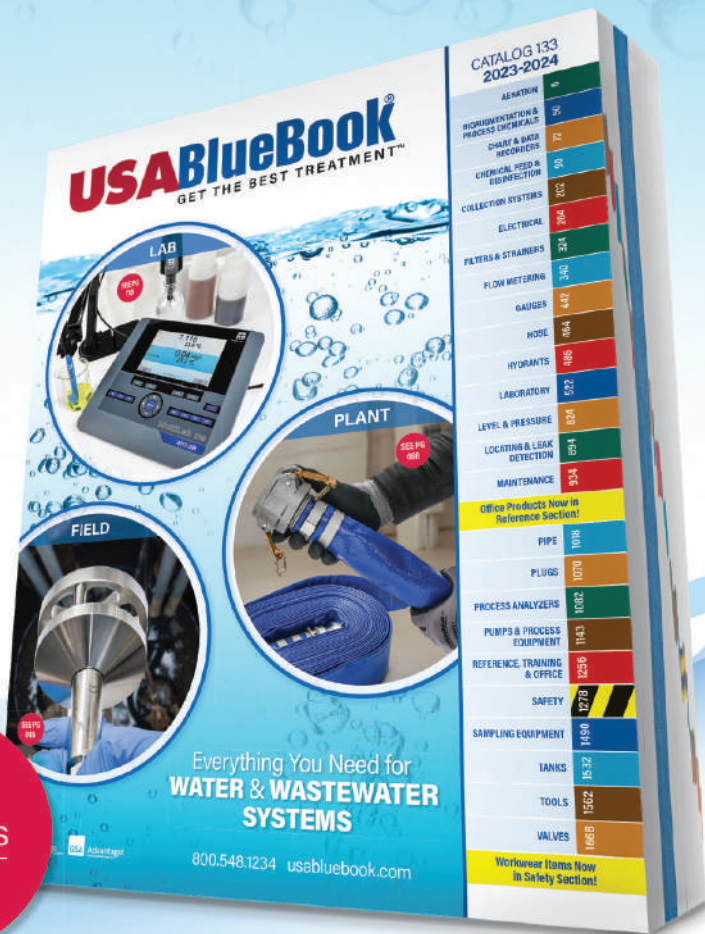
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