

THE RESOURCE

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Minnesota Municipal Utilities Association

MMUA

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Updates to MMUA's Apprenticeship Program make a difference for lineworkers and utilities alike

MMUA's Apprenticeship Program has made some exciting changes over the last couple of years, as this long-running educational program has further adapted to the needs and wants of apprentices and their home utilities.

MMUA sat down with Roger Avelsgard, Apprenticeship and JTS Instructor, and Cody Raveling, Assistant Director of Education and Outreach, to learn more.

A conversation with apprentice lineworker Sean Kramer, who hails from Langford, South Dakota, follows.

MMUA: Roger, you are the Apprenticeship and JTS instructor for MMUA. How did you get interested in teaching and working with apprentices?

Roger Avelsgard: I have had the opportunity to work with a lot of apprentices throughout my career. I believe I have knowledge that I can share with appren-



MMUA apprentices pose for their annual photo at Underground School in 2023. Roger Avelsgard, Apprenticeship and JTS Instructor, is pictured ninth from left.

tics, like the way I was taught when I began.

MMUA: What is special about the

MMUA Apprenticeship Program? What makes it a leader?

Roger: The MMUA Apprenticeship Program is a great training

program. It is really tailored to each individual and utility. Everyone's needs differ; one utility may require more hands-on

Continued on page 4

Preparing for the worst

Summer Conference provides plenty of opportunities to test your systems, learn from others, and plan for whatever happens.

Disasters happen. When tornadoes, floods, and ice storms hit, nobody is to blame for that, but the whole community expects things fixed fast. When the problem is caused by one or more malicious actors—be they cyber thieves from far away or joyriding local teenagers who hit a pole and knock out a transformer—it's easier to assign responsibility. Ratepayers still expect things to be fixed fast. In those unfortunate circumstances when the utility is perceived to be the source of the problem, the community's expectations are even more exacting. They still want things fixed fast, but they also expect answers. How did this happen? What are you doing to make sure it doesn't happen again? And how much is that going to add to my bill?

This year's Summer Conference is going to provide you and

your team with numerous ways to assess your strengths and vulnerabilities. You'll hear from experts, and you'll hear from other Minnesota utility leaders. They will share their real experiences. You will not only leave with ideas and actions you can implement at home, you will have the opportunity to inform MMUA's Resiliency Planning Task Force's work. That will help us support you better in the future. Here's what you'll find at the Summer Conference to help you prepare for the worst.

Cybersecurity tabletop exercise. MMUA is proud to collaborate with the Minnesota Department of Commerce Office of Energy Reliability and Security, the Cybersecurity and Infrastructure Security Agency, Minnesota Information Technology Services, the Minnesota Department of Homeland Security to offer this comprehensive tabletop exercise.

Cyberattacks on cities and utilities across the country have resulted in significant financial losses, and the damage they

Continued on page 6

2024 Interacting on the Issues meetings a success

By Kent Sulem

MMUA's annual regional meetings known as "Interacting on the Issues" have wrapped up for another year.

Held this year in Hutchinson, Brainerd, Blue Earth, and Alexandria, these meetings provide MMUA staff the opportunity to highlight matters of interest and concern arising from the recently completed legislative session, as well as to provide an update on administrative happenings. More importantly, they give attendees the chance to share their concerns about the impact of the new statutory changes, and to provide suggestions for future legislation.

In addition to the primary focus on legislative changes, Interacting on the Issues sessions provide an opportunity for attendees to better understand the scope of services MMUA provides to members, and in

turn they give MMUA staff the opportunity to hear how these services are being both received and perceived. The forum also allows attendees and staff to discuss what changes or additions to MMUA's programs and services would enhance MMUA's value to members.

This is why MMUA strongly encourages attendance by the local commissioners and city council members who govern municipal utilities. Having these local decision makers understand who is doing what and why, and for MMUA to learn what these leaders think, is well worth the two-hour time commitment.

Concern over how to satisfy the carbon-free standard imposed by the 2023 legislature, particularly without jeopardizing reliable service and without dramatically increasing rates, was a common theme at each location.

Continued on page 7

Inside Stories

10
Upper Midwest flooding causes wastewater plant problems



14
NRC admits that radioactive tritium reached Mississippi River after Monticello leak



16
Where's that weather coming from? Being aware of the causes of climate irregularities for utilities operations

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Countries race to be the first to generate power from fusion

Fusion power promises nearly unlimited energy with a fuel that can be created from seawater.

Unlike fission power, it is very safe, and its process stops when something goes wrong in the nuclear reaction. The accomplishment of a net energy gain (meaning more energy was created than used) in a fusion reaction in December of 2022 excited a world that had been hoping for this accomplishment for decades.

For these reasons, countries around the world are racing to bring commercial fusion to market. On June 6, President Biden announced the United States would pursue several new efforts aided by the provision of \$180 million in funding. These funds will help to build a pilot fusion power plant, create a framework for public/private partnerships in the space, and develop a fusion strategy document.

Other countries are also plunging ahead with their efforts. China has created a technology



campus just for fusion, with \$1.5 billion in funding per year. China is also founding a new state-owned fusion company that will help organize the various entities pursuing fusion in the country.

In the European Union, countries are working on the International Thermonuclear Experimental Reactor, or ITER. This fusion project is located in France and is expected to be operational by 2025. ITER's supporters include the European

Union, China, India, Japan, Russia, South Korea, and the United States.

Whoever reaches commercial-scale fusion first will have an enormous leg up against other countries in the areas of energy costs, energy production, and carbon emissions. Whether arrived at collaboratively or alone, the incentives are too great for most developed nations to ignore the potential of fusion.

Jay Lutz joins MMUA Board of Directors



In June, the MMUA Board of Directors appointed Jay Lutz to fill a seat reserved for mayors, council members or commissioners.

The Board position became vacant in April when past president Don Martodam left the Hawley Public Utilities Commission with 17 months remaining in his MMUA Board term.

Jay is a resident of Austin and has served in several capacities for the city, including on the City of Austin Charter Commission, Planning and Zoning Commission, and on the Board of Commissioners for Austin Utilities. Jay has also been active with the American Public Power Association, serving on the organization's Policy

Makers Council as well as the Legislative Resolutions Committee.

Professionally, Jay is a retired staff engineer. He worked at Hormel Foods, where he oversaw issues related to energy, including sourcing fuels and electricity resources for Hormel's facilities around the country. He also worked on the company's sustainability goals and reported Hormel's greenhouse gas emissions to federal regulators.

Jay is a graduate of Minnesota State University, Mankato where he majored in Business Administration - Management.

Blaine Chaulklin joins MMUA



Blaine Chaulklin has joined MMUA as the Association's Grant Development/Technical Support Coordinator.

Blaine will help MMUA's member utilities learn about available grants and coach

them on techniques for pursuing both small and large funding opportunities that fit with member needs.

Blaine previously worked for the University of Minnesota as a grant and contract officer for the Office of Sponsored Projects Administration. In that role he mainly served healthcare programs by helping them get their grants successfully through the process.

Blaine has an undergraduate degree in philosophy from St. Mary's University in Winona, and also holds a paralegal certificate. He has served as a reservist in the United States Army and Air Force for the past 11 years, where he holds the rank of

staff sergeant.

Blaine lives in Anoka with his wife Joanna and their three-year-old daughter. He enjoys learning, reading, and doing home improvement. What does he do with that degree in philosophy? Blaine says he likes to ponder the ideas of thinkers through time.

As for grants, Blaine had this to say: "There are two important parts to my role: I want to help make members more aware of funding opportunities and provide them with assistance to make the process for applying less daunting. It is not as scary as it looks. It just involves time and effort."

Hey Martha!

Back when a newspaper was something to look forward to every day, I was introduced to the concept of “Hey Martha!” stories.

They were little blurbs folks might find interesting, used as filler where there were small orphan spots on a page. The idea was to make these tidbits so captivating that a guy reading the paper at breakfast would say to his wife, “Hey Martha, listen to this!” and then read it out loud.

Here at *The Resource*, we don’t have too many occasions for “Hey Martha” stories. Our layout guy Joe, a contractor from Arizona, is amazing, and there isn’t a lot of leftover space. So, I’ve got a list of things to share this month that could have been “Hey Marthas” for MMUA, and they’re all in this one column for your convenience.

The MMUA Board of Directors updated the Association’s strategic plan in June. Perhaps the biggest change is an acknowledgement that the significant pressures associated with the evolution of energy sources for generating electricity pose an existential threat to local control of municipal utilities. MMUA will roll out our plans for addressing that threat at the upcoming Summer Conference in Fargo and in a follow-up article in *The Resource*.

A study from the University of Oregon shows that organizations with a solid plan increase their chances of obtaining the funding they need for projects. Small Business Trends found that your chances for funding **double**—that is, increase by 100 percent—if you have a plan you are working to achieve.

MMUA will be conducting its triennial member survey in September. Three years ago when I joined the MMUA team, we did a comprehensive assessment of our members’ ideas and opinions concerning the Association. We wanted to know how well we were meeting your needs, and what you expected to need from us in the future. More than 400 people responded, and that feedback has been our guide. Now, it’s time to do it again. The survey we launch in September will cover a broad range of topics,

from public policy to leadership development to crisis management to safety. We hope many people—decisionmakers, rank and file employees, commissioners, council members—will participate. If you think there’s a particular topic we should explore or questions we should ask, please let me know.

According to the 2024 Membership Marketing Benchmarking Report, 47 percent of trade associations use surveys to engage tenured members, and associations that grow “more often conduct regular member surveys compared to those reporting declines in the same period.”

Grant preparation assistance is now available. MMUA has added staff that can help you successfully pursue grants to support your utility’s work. With 186 members, we don’t have the horsepower to actually write your grant for you, but we can take you through the steps to write it yourself. For example, during the months of July and August, we are offering weekly webinars that take utility staff through the process step-by-step as they apply for the BIL-40101(d) Strengthening the Reliability and Resiliency of Minnesota’s Electrical Grid Grant Program, and we’ll do the same with upcoming opportunities. These services are free as part of your MMUA membership.

Grants are one of the ways things get done in our country. According to USGrants.org, the federal government and Minnesota’s department of finance are providing \$11.7 billion in federal grants and \$9.3 billion in other types of government financial assistance in Minnesota alone this year. These grants cover college expenses, housing, veterans, small business assistance, the environment, utilities, and more.

Writing grants has a lot in common with America’s pastime. Rod Carew, the best hitter in the history of the Minnesota Twins, batted .3276. That means more than 67 percent of the time, he didn’t succeed in reaching a base. Depending on the type of funds you are seeking, you are likely to see somewhat better

results with grants. Despite the frustration of not always succeeding, grants are still usually the cheapest money you can get for your ratepayers. Grants are not for everybody—but don’t let getting a “no” or two discourage you from applying. Adjust your expectations and grow your skills. Once you know how to write grants and you have the necessary information ready for any opportunity, it’s not that hard to do. The time involved goes down and the ROI goes up.

According to the 2024 State of Grantseeking Report, respondents said about 57 percent of grants they wrote to the federal government were funded in 2023. About 32 percent of those grants required matching funds, and the median award was \$615,000.

MMUA has a new technology platform. In June we rolled out a much-needed revamp to the Association’s website at mmua.org. Apart from its fresher look and easy navigability, we have several features that should make your life easier.

- Our industry library is the place to go when you are looking for resources like the cold weather rule, guidance on distributed energy resources, model policies, and toolkits.
- Two member directories make it simple to find contact information for fellow utilities and for the many vendors that serve Minnesota’s municipal utilities. It is always showing the most current information we have, making it a smart bookmark for your phone or computer. MMUA will also publish a membership directory in hard copy each year as well. We know many of you still value that book.
- The platform allows the administrator of your utility account to easily change your list of employees, see current invoices, download them, and pay online via ACH or credit card. Individual employees can see all the events for which they have registered, past events, and all of their training records.
- New pages allow you to see the curricula and learning

From My Desk to Yours

Karleen Kos
MMUA CEO



objectives for each of our schools and workshops at any time. This will make it easier for you to compare them and plan for your team’s continuing education needs. You can also download a pdf copy of the latest brochure in case you need it for a file or to justify the expense. Similarly, we have pages for each of our programs with easy-to-understand explanations and downloadable flyers.

- Should you or your commission/council be looking for documentation of MMUA’s organization, you can easily find our bylaws, annual audit, and annual report under “Get to Know MMUA.”

There are many other new features to the website; these are just a few. We’ve held two training sessions on how to use the platform—one with utilities and one with vendors—since we introduced it in June. They were recorded, so if you missed the sessions, let us know and we’ll send you the recording or go over it with you and your team.

MMUA’s new system—Novi AMS—is the highest rated association management software system as of 2024 according to user reviews that give it 4.9/5.0 stars. It is cost effective as well. MMUA estimates that approximately .5 FTE time will be saved, more than paying for the investment we are making.

Group discussion forums are coming next. With the new software in place, MMUA is exploring add-on solutions that will allow us to create groups of similarly minded members. Similar to APPA’s forums, the Minnesota version will likely have some groups that are related to the members’ daily work. We want to go beyond that, though. In Minnesota, we


hope to also use the system to link training cohorts so that instructors can communicate with the group, and we’d like to connect committees or task forces working together on a project. We are currently in the exploratory stages of testing software options. We hope to get more information from members at both the Summer Conference and through the triennial survey so that we make the best choice. Watch for more information on this in the coming months.

Since 2022–23, member engagement in special interest groups (51 percent) and participation in members-only online discussion groups (45 percent) have risen dramatically in associations, according to the 2024 Membership Benchmarking Report.

We have to tell the municipal story in a simple and compelling way. One of the things I will talk about at the upcoming Summer Conference is this fact. When ratepayers and lawmakers understand the value of our organizations, they are more likely to improve and support them. We need data to help with that—data that will be used for MMUA messaging, and that you can use to tell your story locally. To do this, we will need your help. We don’t want to make things burdensome, but a little effort will go a long way. MMUA already gathers salary data from members; around 60 of our 186 members participate. What other data would be useful to you? I look forward to talking with you about it at Summer Conference and beyond.

Municipal utilities are a bargain. Xcel Energy’s CEO, Bob Frenzel, earned \$21.36 million last year, up more than 100 percent from the year before, and some 151 times more than the average Xcel employee made. By contrast, the highest paid Minnesota municipal utilities general manager makes just \$247,520, and the average general manager salary according to MMUA’s 2024 survey was \$166,239. General manager salaries in Minnesota went up 8.47 percent from 2023, and they average just two to three times the salary of municipal utilities employees.

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MMUA's Apprenticeship Program

Continued from page 1

training than another, which may want more curriculum-based training. The program also has the advantage of incorporating four major training opportunities in Marshall at the training center, which allows apprentices to also learn in a larger group setting.

MMUA: Tell me about the recent changes/upgrades to the MMUA Apprentice Program. What has been done to make the program work even better?

Roger: Over the last two years, we have opened up a workshop at the training center in Marshall for apprenticeship program enrollees. This gives each utility another opportunity to send the apprentices for focused training. This provides yet another opportunity for apprentices to get training in areas to which they may not be exposed at their home utility. For example, this year we were able to complete a single-phase overhead line build for the training center—something a lot of the apprentices would never have been able to do back at home.

MMUA has also partnered with the Minnesota Department of Labor and Industry (MN DOLI). We are now the sponsor for the Lineperson Apprenticeship Program. This will help each utility work with MMUA on the apprenticeship program while minimizing the administrative burden locally. When the apprentice completes the program, they will also be able to attain the MN DOLI credential.

MMUA: What does the education program look like for an apprentice? How can it differ for individual apprentices?

Roger: Each apprentice is required to complete the following:

- Curriculum: four years plus successful completion of the exam
- Safety trainings
- On-the-job training: 8,000 hours over four or more years.

Each utility may have different requirements depending on whether they have more overhead or underground infrastructure. Each utility size is also different. So, at some utilities the lineperson also takes care of other duties like water, streets, and parks. Because of that, the person may be in program for an extended period of time to complete all the electric hours that are necessary.

MMUA: Tell me about the program being "on the road." What are the real-world benefits for apprentices and utilities of doing it this way?

Roger: Visiting each individual utility has the advantage of being able to customize the training for the needs of the utility. It

can also be tailored to the needs and interests of the individual apprentice. Each apprentice learns both at a different speed and with different instruction types, whether it is hands on, with text-based curriculum, or a combination of both. It also has the advantage of allowing the instructor to tailor the instruction based on the utility infrastructure in each apprentice's hometown.

MMUA: How does attending MMUA's schools further the learning that apprentices are a part of?

Roger: By attending the four major schools in Marshall, each apprentice gets more hands-on experience. Each school has different stations that apprentices will be able to work on. It also benefits them to be able to network with other lineworkers. This networking gives the advantage of being able to call others in times they have questions.

MMUA: How do you see your role as apprenticeship instructor? What does working with students teach you?

Roger: I feel that I am an extension of the training each utility is



Apprentices receive training at their home utility, plus schooling at the MMUA Training Center during Underground, Overhead, Meter, and Transformer Schools (which is pictured above).

doing. I am another resource for the utility, whether that is how to do a certain task or providing help with some utility project. I also have a broad knowledge of different information within the electric distribution and transmission infrastructure.

MMUA: What is our connection with Northwest Lineman's College (NWLC)?

Roger: MMUA is the main sponsor with NWLC. I help in proctoring tests. I also help each apprentice with the curriculum, whether the apprentice has questions or experiences issues understanding the material.

Cody Raveling: NWLC and MMUA have built a great relationship over the years. NWLC has an excellent curriculum to help build the apprentices into

knowledgeable journeymen. They are easy to work with and always show their support in attending our annual Technical and Operations Conference when we announce the graduates for the year.

MMUA: Cody, the MMUA Apprenticeship Program started at the Training Center. How does the

Continued on page 5



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MMUA's Apprenticeship Program

Continued from page 4

MMUA Training Center still help apprentices today?

Cody: Where the program started and where it is today remain somewhat the same. We are still providing valuable training for the apprentices. However, rather than the apprentices always coming to us, we now go to them. By offering the training at their own utility, it benefits both the apprentices and the utility. We are not removing them from their own work that needs to be completed. We come to them to offer the guidance and training they need during their apprenticeship. This has proven to be a big part in the success of our apprentice-

ship program.

MMUA: What does the future look like for the MMUA Apprenticeship Program?

Roger: I feel the future looks bright. There are a number of utilities that will need this training at some time. New lineworkers are starting in the industry all the time. When that happens, they begin as apprentices, and MMUA is uniquely qualified to help them learn all they can on the road to journeyman status. We look forward to playing an important role in municipal electric utility workforce development for a long time to come.

Final piece of Sherco Solar approved by PUC

On July 18, the Minnesota Public Utilities Commission (PUC) approved Xcel Energy's site permit for the Sherco Solar 3 project.

Sherco Solar 3, which is on a site near the existing Sherco coal plant, will consist of 250 megawatts (MW) of solar generation. It joins the previously approved Sherco 1

Solar and Sherco 2 Solar, which are expected to generate up to 460 MW. This brings the total output of the planned solar facilities to 710 MW. The site will also include a 10 MW battery pilot project.

Sherco Solar 1 and 2 were approved in 2022. All parts of the Sherco Solar installations are expected to be completed by 2026.

Sean Kramer shares his experience with the MMUA Apprentice Program



Sean Kramer, a resident of Langford, South Dakota, has lived there for 21 years.

He works for the Town of Langford as Utility Manager and Fire Chief, and he is also an apprentice lineworker. Sean spoke to MMUA about his experience with the program and what it has taught him.

MMUA: Tell me about your educational/professional background in the utilities field before entering the apprenticeship program.

Sean Kramer: I started my career in the construction industry. I did concrete work, built houses and pole barns, and did commercial glass work for my first four years after college. In June of 2019, I took a job with the Town of Langford. I got to know the water and sewer system well during two big projects in my first couple of years. In May

2021, the manager quit, and I moved to utilities manager. I didn't know a lot about the electrical system, and so I worked with our local cooperative for assistance. They helped me get a good understanding of our system and got me on the right path.

MMUA: How did you come to learn about the MMUA Apprenticeship Program?

Sean: I learned a lot from the co-op and had a basic understanding of the system. I wanted to further my knowledge and safely be able to do some simple maintenance work. Heartland Energy had incentives at the same time to get into the program, and so I started in January 2022.

MMUA: How has the program been so far? What have been some interesting things that you've learned?

Sean: The program has been great. We have done everything from metering, regular system maintenance to changing out a pole, adding a three-phase riser to the pole, and going to a new underground transformer.

MMUA: What unique skills have you learned that you use, or eventually will use at your utility?

Sean: Safety. We never had a full-time lineman or anyone with lineman experience at our utility and things were done kind of "western."

MMUA: What would you tell other students about the apprenticeship program?

Sean: This is a great program to expand your knowledge. It brings more to the table and helps make you a better employee.

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Preparing for the worst

Continued from page 1

can cause to an organization's reputation can take an emotional toll.

Participating in this interactive activity will prepare you to better understand cyberattacks to make informed decisions and take proactive measures to help protect your city/utility services and your customers' personal information. Exercise objectives include:

1. Recognizing a cyberattack and assessing your readiness to respond.
2. Learning to coordinate information sharing during a significant cyber incident.
3. Gaining the information you need to create or update a cyber incident response plan for your utility.
4. Honing your skills for addressing public affairs
5. Exploring processes for additional incident response resources once organizational resources are exhausted.

The session will be held Monday morning, August 19 from 8:30 to 11:30 am at the Hjemkomst

Center in Moorhead. The session will be completed in time for you to join the golf event also being held in Moorhead that day.

Managing a Utility Crisis: Sometimes, It's Not a Drill is a featured plenary session on Tuesday afternoon, August 20. Julie Kennedy, General Manager at Grand Rapids Public Utilities and Chad Seidel, President at Corona Environmental Consulting, LLC, will share their experience dealing with a crisis many customers perceived be the utility's fault.

In 2023, Legionnaire's disease—a severe form of pneumonia—struck members of the Grand Rapids community. The illnesses were clustered in one part of town and the city's water supply was suspected. Mindful that friends and neighbors were at risk, the utility faced pressure on its operations, regulatory agencies trying to help, advice from consultants, daily public relations challenges, and mounting expenses. Join Grand Rapids on its journey through the fears and frustrations of dealing with an unfolding crisis and find out

what they learned so you can take action in your community to prepare if it happens to you.

On a related note, if you are interested in the details of the water system and the testing/mitigation strategies Grand Rapids is using, you'll also want to attend the follow-up session Wednesday morning that will cover the investigation process and future plans for the system.

Once you have heard about Grand Rapids' experience with Legionella and the complicated communication challenges they faced, you'll be grateful for the next plenary on Tuesday afternoon: **Utility Under Pressure: How the Latest Best Practices in Crisis Communications will Protect Your Reputation.** Utilities have a lot going on, even when there isn't a crisis. Communicating effectively about your work is essential to building community understanding and goodwill—something that will really pay off if disaster strikes.

The presenter for this session is Mark Weaver, the founder of Communications Counsel, Inc., an organization focused on

helping organizations navigate prickly challenges in a manner that protects both rate payers and your reputation. He is an attorney and crisis communications expert with three decades of experience advising clients in more than 30 states and at the highest levels of national government. He counsels public and private-sector clients on crisis communications, social media challenges, and high-profile litigation communications. He will share best practices both in this session and in a Wednesday morning follow-up entitled **Legal Issues in Utility Crisis Communications: Calming your Lawyer as you Communicate to your Ratepayers** that addresses first amendment rights, social media, meetings, and more.

Resiliency planning will be front and center at MMUA's popular round-table discussions. These popular discussion forums are a great place to share ideas and voice concerns about resiliency and planning for the sorts of challenges utilities face from disasters caused by nature or human actions. To that end,

MMUA's task force on resiliency has been hard at work for more than a year, looking specifically at steps utilities can take to assess and address resiliency concerns in the areas of electric service, gas service, water/wastewater, and utility operations. Each of these roundtables will be facilitated by Minnesota municipal utility personnel who have agreed to lead the discussion on a topic of great interest to their own utilities. The roundtables will focus on resiliency practices that already exist in each of these areas and what is needed to support utilities like yours even further. Ideally you will leave with ideas, and MMUA will gain a window into how the new tools we are working on for you will have maximum effect.

Not seeing you at the Summer Conference would be among the worst disasters for MMUA and your utility colleagues. So please, register now and join us for some great sessions, excellent networking, a robust tradeshow, hospitality rooms, awards, and more. See you there!

World's largest nuclear power plant to partially reopen after long closure

The Kashiwazaki Kariwa nuclear power station in Niigata Prefecture, Japan, is the world's largest nuclear power plant by electrical power rating, with a nameplate capacity of 7.965 megawatts produced by seven nuclear reactors.

However, a 2007 earthquake and the 2011 earthquake that led to the Fukushima nuclear disaster have kept some of its units offline from 2007-2011 and all its operating units offline since 2011.

The plant's operator, the Tokyo Electric Power Company,

has now received permission from the Japanese Nuclear Regulation Agency to start operations on reactor number seven. Fuel assemblies will be inserted into the reactor in a one to two month process.

Operation of the reactor will start after this process, which

will include numerous safety checks before, during, and after the loading of the fuel assemblies. Local officials will also have to sign off on the restart. Unit number seven is expected to begin producing power in October of 2024.



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Issues meetings

Continued from page 1

MMUA is very active in the docket opened by the Minnesota Public Utilities Commission (MPUC) to interpret the applicable statutes and to provide guidance on compliance. The docket is number 23-151.

Another topic raised at each meeting was per- and polyfluoroalkyl substances (PFAS). The lack of sufficient funding from the 2024 legislature raises serious concerns about long-term testing and treatment options. The biggest area of anxiety currently appears to be the presence of PFAS in wastewater, with a particular emphasis on bio-solids and what happens if they can't be spread on farm fields due to the concern about spreading PFAS contamination. The lack of a bonding bill this year only adds to the challenge of inadequate funding. On a related note, the issue of in-

creasing the cap on Point Source Implementation Grants (PSIG) from \$7 million to \$12 million was suggested as a possible item for inclusion in MMUA's 2025 legislative agenda.

Clarification on the interpretation of a few 2024 legislative changes was also raised as a concern. These include whether a utility employee already trained on diagonal boring will need the new Department of Labor and Industry (DLI) diagonal boring training intended for installers of fiber optic and related border-to-border cable beginning July 1, 2025, in the seven-county metro area and July 1, 2026, state-wide. Attendees also asked how the exemption of retail sales to select data mining operations is to apply when using three-year averaging.

Other issues raised include whether utility employees

should be defined as essential workers, and if so, when would the designation apply. Work force challenges, MISO forecasts, and ways MMUA can alert members of a critical issue at the legislature as well as to provide general updates to commissioners and council members also came up. MMUA is already exploring periodic short video updates that could be played at commission/council meetings.

Overall, participants spoke favorably about the 2024 regional meeting efforts, and attendance was up from 2023. However, there was also consensus that even further increases in turnout, particularly by commissioners and council members, will be critical in maximizing the benefits of Interacting on the Issues and guiding municipal utilities through the challenges ahead.

Great River Energy's use of sensor devices could yield 30–40 percent higher capacity on power lines

A pilot program introduced by Great River Energy (GRE) in 2023 using the Heimdall Neuron device has found that better knowledge of transmission capacity at a granular level can yield dramatic gains in power line capacity.

In 2023, GRE installed four Neurons on its power lines to collect information about its transmission. Neurons are sphere-shaped sensors that sit directly on the power line, collecting data on things like current and line conditions. The devices use machine learning to better understand the moment-by-moment capacity of a line.

Using the knowledge unlocked by the Neurons, GRE was able to increase electric capacity by 42.8 percent on a single line.



The program also provided the company with additional data that will provide direction for future management of the system. For example, GRE learned that about 5 percent of the time, the test line was loaded above approved capacity.

In May 2024, GRE installed

52 additional Neurons on their grid to further learn about their system's capacity and how to expand it. Using the data unlocked by Neurons, GRE looks to avoid expensive transmission line expansions and provide more efficient, safer service to its customers.

Research brings perovskite solar cells closer to mass market

Research published in the journal *Science* on June 13 by scientists at Rice University in Houston illustrated that perovskite, a natural mineral made of calcium and titanium oxides, is getting closer to replacing traditional solar cells

Although perovskites are cheaper and more sustainable, they have typically not lasted as

long in production as traditional solar cells made of materials like silicon. However, by creating a new structure for the perovskite, the researchers were able to make them last as long as a typical traditional solar cell.

The new structure of the perovskite will also allow it to be produced on a scale that will make it cost-effective and plentiful. Perovskite is solution-based,

meaning that powders of perovskite can be dissolved in solution, painted onto a base like a pane of glass, and then heated to create a perovskite.

This breakthrough means that solar panels made of perovskite may eventually replace traditional solar panels, because of their similar performance and much lower price.

2024 Minnesota Public Power Walleye Tournament



The first weekend of June, MMUA and its event sponsors hosted the annual Minnesota Public Power Walleye Fishing Tournament at the Bladow Beach Resort and Campground in Ottertail, Minnesota. The anglers had a beautiful sunny day for their competition, with 1st place going to Todd Treichler and Connor Kerr—who work for Crow Wing Power and Elbow Lake Municipal Power, respectively.

Southern Minnesota officials gather to celebrate, promote new water and wastewater operator training

On June 17, officials gathered at Riverland Community College to celebrate and learn more about promoting the new water and wastewater training programs that were funded by the 2024 Minnesota Legislature.

The Legislature appropriated \$350,000 over three years to create a program at Riverland

Community College in Austin.

Officials conveyed their excitement in creating the training for these much-needed jobs, while keeping community members close to home as they learn. The training offerings will include programs for students with various levels of experience in the water/wastewater fields.

Internet service providers ask FCC to place taxes on big tech companies

In a Federal Communications Commission (FCC) filing on June 6, USTelecom, a lobbying group for many major internet service providers (ISPs), argued the technology companies that benefit the most from widespread broadband should help ISPs financially.

The proposal would see big tech firms paying fees, with the money placed in the FCC's Universal Service Fund (USF), which helps construct broadband in rural

and underserved areas, as well as provides telecommunications access for low-income Americans. USTelecom specifically mentioned the fact that the Affordable Connectivity Program has run out of funds, and without new funding, 23 million Americans may be cut off from critical broadband service.

Phone service is the only current provider of USF funds. The FCC has in the past said that it had no plans to widen the contributors to the USF.

Granite Falls receives \$2.4 million federal utility upgrade grant

On July 9, the United States Department of Commerce announced that its Economic Development Administration (EDA) would be awarding a \$2.4 million grant to the City of Granite Falls for electrical grid upgrades.

The grant will help update and upgrade Granite Falls' electrical infrastructure, making it more resilient and helping to drive business growth.

"This funding is to replace two transformers and one of the two substations' switch gear. This award will significantly help our community fund much needed



upgrades while allowing us to continue providing reliable electric service," says Perry Peterson, Electrical Distribution Superintendent for the City of Granite Falls Electrical Distribution Department.

The project is funded by the

Disaster Relief Supplemental Appropriations Act, 2023. That law provided EDA with \$483 million in additional Economic Adjustment Assistance (EAA) Program funds for disaster relief and recovery for areas that received a major disaster declaration.

Local review area set for WMMPA's planned power plant in South Dakota

On July 2, the South Dakota Public Utilities Commission (SDPUC) set a review area within a six-mile radius of a power plant planned near Toronto, South Dakota.

Toronto is in Deuel County just west of Yellow Medicine County in Minnesota.

The plant, which is being developed by the Western Minnesota Municipal Power Agency (WMMPA) under the auspices of Missouri River Energy Services (MRES), will consist of seven or

eight reciprocating internal combustion engines producing 145 megawatts that will be used for peaking purposes. The cost of the project is estimated at \$354 million.

The review committee will consist of officials within a six-mile radius and look at several environmental and community issues that may be affected by the new plant. If the review process goes well, the SDPUC will then issue the necessary permits for the construction of the new power plant.

North Dakota Industrial Commission submits letter to PUC regarding carbon-free by 2040



On June 26, the North Dakota Industrial Commission (NDIC), which oversees the Department of Mineral Resources and its Oil and Gas Division, submitted a letter to the Minnesota Public Utilities Commission (PUC) about the state's carbon-free by 2040 law.

The NDIC argues that the carbon-free law unfairly and possibly illegally affects commerce between the states because of the effects of the law on North Dakota's internal energy policies, as well as its ability to transmit carbon-based energy to neighboring states.

The Commission argues that only the federal government can determine North Dakota's level of carbon emissions under the Clean Air Act, and that Minnesota's law would have a dampening effect on their own desired level of carbon-based power production. The NDIC also argues that the law negatively impacts North Dakota's ability to sell wholesale electricity, which is regulated under the Federal Power Act.

North Dakota noted that it reserves the right to pursue further action because of the ways in which the NDIC believes the Minnesota law conflicts with federal law and the freedom of the individual states.



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First HR webinar shares important PWFA information and website improvements with membership

On June 27, MMUA human resources manager Shelly Dau led the first in a series of quarterly webinars.

The topic was the Pregnant Workers Fairness Act (PWFA).

The federal PWFA took effect on June 18, so it is important that employers understand how to comply with the law's regulations. The PWFA is about providing accommodations to pregnant workers, including flexible hours, closer parking, and additional break time. Minnesota has had some of these protections for pregnant workers in place for a while, but not all states did. For many states, the law that took effect on June 18 is the first major workplace protection that pregnant workers

have received.

PWFA requires employers to provide reasonable accommodations to all pregnant workers.

With other laws such as The Pregnancy Discrimination Act and the Americans with Disabilities Act in place, many have questioned why this law was necessary. The reason is that pregnancy is not considered a disability under the ADA. Other laws like Title VII and the Pregnancy Discrimination Act of 1978 were also not comprehensive enough to cover accommodations related to pregnancy. PWFA is broad and also applies to other pregnancy-related conditions such as infertility and miscarriage.

Soon-to-be parents, as well as nursing parents, also receive

protection under the law. Provision of up to 12 weeks of unpaid leave for things such as prenatal care, childbirth or adoption, or bonding time for a birthing or non-birthing parent is required.

Leave must be taken within 12 months of the birth or adoption of the child.

A parent might take 12 weeks right when the child arrives, and then the spouse may take another 12 weeks of leave to provide time for bonding or post-natal care. The employee gets to choose when the leave will be taken, provided it occurs within the 12-month timeframe.

The law also requires additional break time for employees to express milk at work. A clean, safe, and private area with access to an electrical outlet is a necessary accommodation under the PWFA.

All employees have the right to pregnancy accommodation regardless of the size of the employer. Employees also have the right to return to their positions after returning from leave, at comparable levels and compensation.

Discrimination is prohibited under the Minnesota Human Rights Act, so the best advice is to err on the side of caution when addressing the needs of

pregnant workers and their spouses.

In the second segment of the webinar, Christian Glanville and Rita Kelly from MMUA spoke about the Association's new website. They discussed MMUA's goal of making the website bright, modern, and easy to navigate.

Christian showed how to join or login to the new website. The login is at the upper left corner of the site. Signups and information will be easy to find, such as for conferences. It is best to login to register for MMUA events, because member benefits and pricing will become visible when the system recognizes you as a member.

To login, enter your email address. Then, create a password for your account. Once in the system, you will see pricing and signups for conferences, schools, and events that reflect your membership. The system is easier to navigate if you are logged in.

Rita noted that invoicing is now automatic. If something isn't right, please let us know so that the invoice can be corrected.

Your Member Compass is the new center of the new website. Members can see what they have paid for and what they

have participated in. In this area, MMUA encourages you to fill out your profile, either at a utility or individual level. You can also sign up for mailing lists.

The new classifieds section allows you to submit a job posting that will appear on the website. Job postings will continue to appear for free for 30 days.

The utility directory shows information for all MMUA's regular members and out-of-state utility groups. In another directory, the website lists industry vendors both alphabetically and with a map view to find vendors near you. Management privileges on the website can be assigned to whoever each utility wants to designate.

MMUA's new website is a developing platform that will provide members with information and new member benefits. Additional tools and features will be rolled out over the coming months.

The HR webinar will be a quarterly feature provided by MMUA, with Shelly Dau offering important, timely HR information to the membership.

If you have topics of concern you would like to see covered in a future session, email them to sdau@mmua.org.



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Flooding at Rapidan Dam draws national attention

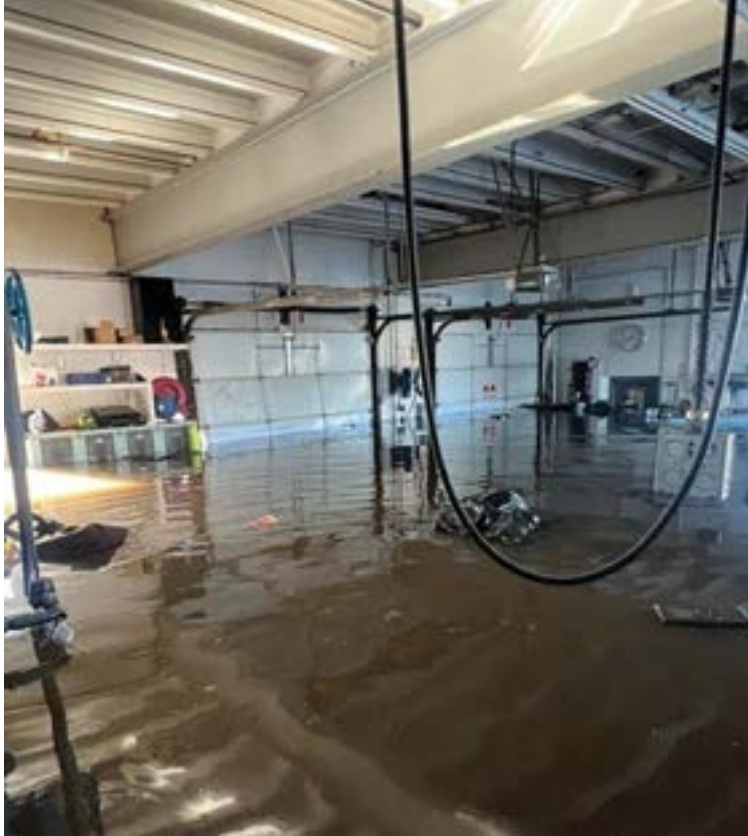
Flooding on the Blue Earth River near the Rapidan Dam southwest of Mankato drew notice this summer as high waters caused the partial failure of the dam.

On June 24, debris accumulated by flooding built up behind the dam, leading to a partial failure of the dam. Water began running over the west side of the dam, causing erosion of the neighboring riverbank.

An Xcel substation was destroyed as the water worked its destructive power, causing outages for about 600 households. Late on June 25, part of a house on the riverbank fell into the river as its resting place was eroded by the river. On June 26, the locally beloved Rapidan Dam Store was purchased by Blue Earth County and demolished before it could fall into the river. Both the home and store were owned by the Hruska family.

As of July 10, the county is examining the strength and stability of both the Rapidan Dam's remaining structure and the nearby County Road Nine bridge. Officials in Blue Earth County are working with local and state personnel to inspect the dam and bridge and determine what actions need to be taken.

One thing known now is that



Flooding in Jackson, Minnesota affected the city shop in late June. The clock on the far wall is hung over a door, illustrating the height of the floodwaters. (Photo courtesy of Dan Nath.)

sediment released from the dam has reached 11.6 million cubic yards. Environmentalists are still examining what impact this release may have on the environment.

The Rapidan Dam was originally built between 1908 and 1910 to generate electricity.

From 1911 to 1965, the annual average power output of the dam was 7.3 gigawatt-hours. The dam was owned for much of its life by Northern States Power.

After a series of repairs over the years, the dam was damaged by flooding in 2019 and permanently stopped producing power.

Upper Midwest flooding causes wastewater plant problems



Heavy rains and the resultant flooding that hit much of Minnesota and surrounding states in mid- to late June caused several communities to divert wastewater as water flows overwhelmed their systems.

Things started to happen on June 21, when heavy rain forced Waseca and Lake Crystal to make emergency discharges of wastewater due to heavy rains. Waseca discharged excess wastewater into Clear Lake, while Lake Crystal bypassed its sewer system and

discharged into Lilly Lake and Minneopa Creek.

In Sioux City, Iowa, flood waters on June 25 overwhelmed the system and forced the city to dump nearly a million gallons of untreated sewage per day into the Missouri River. At the time, the plant was handling 61 million gallons of water per day. A few days later, the flood waters had started to recede, and the worst of the discharges were over.

In Vermilion, South Dakota, on June 24 officials said flooding was beginning to impact the city's

sanitary sewers. On June 23, the city had lost two of the three force main pipes that carry sewage across the Vermilion River. The city was able to use the third force main to direct most of the wastewater to the treatment plant. However, on June 27, the third force main failed, leading to most of the city's wastewater being discharged into the Vermilion River.

On June 24, one of LeSueur's lift stations failed because of high floodwaters, resulting in a release into the Minnesota River. A temporary bypass was put in place so wastewater could be sent to the wastewater plant.

On June 23, Madelia was forced to pump sewage down the streets so that it could reach the river. This move was necessary to prevent sewage backups to the system.

In hard-hit Waterville, the flooded city saw the Minnesota National Guard running pumps to keep the city's sewer system operational.

Other municipalities' wastewater systems were also affected by the nearly unprecedented rain and flooding.

Elk River Municipal Utility "Riveters" team of Angela Hauge and Katy Olson place 8th in international competition

Angela Hauge and Katy Olson have returned from the "Hydrant Hysteria" competition at the ACE24 American Water Works Association (AWWA) conference in Anaheim, California.

They placed 8th out of 20 teams with a time of one minute, 53 seconds. The event saw Angela and Katy assemble an M&H 129

hydrant from its components in less than two minutes.

Their road to the competition was covered in the June 2024 edition of *The Resource*. Angela and Katy were the first all-female team from Minnesota to compete at this level. MMUA and our members congratulate them on a job well done.

Germany likely to phase out coal power plants before goal date of 2038

German climate envoy Jennifer Morgan said on June 24 that Germany will plan to end its use of coal-fired power plants before its pledge date of 2038.

That commitment was made in 2019. The move is coming because the economics of operating coal-fired power plants as compared to other methods of generation, including gas and renewables, are making less sense.

Germany, a long-time center of coal mining and coal-fired power production, saw its 2023 coal power production drop to the lowest level in 60 years. Germany is increasingly sourcing cheap renewable electricity from neighboring countries. All of these phenomena are made even more remarkable by the fact that Germany still has remaining coal reserves that total 154 times its current annual coal consumption level.



Pope Francis issues papal edict to build solar farm for Vatican City

On June 25, Pope Francis issued a personal papal edict, *Motu Proprio*, (meaning "on his own impulse"), which ordered the construction of a new solar farm to serve the energy needs of Vatican City.

The farm will be located on land the Vatican owns in northwest Rome.

The Pope has been a longtime critic of climate change. Archbishop Fernando Vergez Alzaga, president of the Governorate of Vatican City, and Giordano Piccinotti, head of the Vatican's central bank, have been tasked with heading up the project.

Iowa Utilities Board approves Iowa carbon capture pipeline

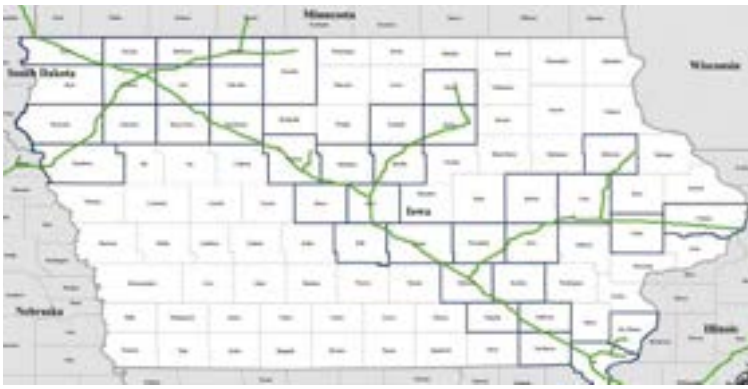
On June 25, the Iowa Utilities Board (IUB) approved Summit Carbon Solutions' plan to build a carbon capture pipeline that will cross 29 counties in the state.

The 700-mile pipeline will move up to 12 million metric tons of carbon dioxide captured at the state's ethanol plants to a carbon sequestration site in North Dakota.

The ruling by the IUB will give Summit Carbon Solutions

the ability to use eminent domain to obtain property from landowners who do not wish to participate in the project. Summit will also have obligations under the ruling, including the use of thicker walled pipes in certain parts of the project, and equipping each county on the pipeline route with an alarm system in case of leaks.

Construction of the pipeline is expected to begin in 2025, with operations to start in 2026.



Ecuador hit by nationwide power outage

On June 19, power failed for most of the country of Ecuador, cutting off electricity to more than 18 million citizens of the country.

According to Public Works Minister Roberto Luque, the outage was caused by a transmission line failure.

The power outage began around 3:15 pm, and restoration was mostly accomplished within

hours. Power initially resumed in the capital, Quito. By late that day, 95 percent of service had been restored.

While the transmission failure illustrated the nation's aging transmission infrastructure, power production in Ecuador is usually not a problem. In 2021, Ecuador generated 79 percent of its power from hydropower, with fossil fuels producing less than 20 percent.

2024 Session Laws grant MMUA consulting authority

By Kent Sulem and Bill Black

Chapter 127, Article 3 of the 2024 Minnesota Session Laws establishes the Minnesota Advisory Council on Infrastructure.

The council's purpose is to define and maintain a vision for Minnesota's infrastructure future that provides for its proper management, coordination, and investment.

The Council will be made up of 11 voting members and 15 non-voting members. The non-voting members are primarily department and agency leaders. Toward the Council's initial formation, the statute requires the governor, the House majority and minority leaders, the Senate majority and minority leaders, and the Indian Affairs Council to acknowledge and give consideration to appointment recommendations for the voting members of the Council made by interested stakeholders. These include but are not limited to a list of specified organizations including MMUA. Except for Indian Affairs, each appointing authority must appoint one per-

son from a metropolitan county and one from a non-metro county.

Appointees must have direct and practical expertise and experience, whether from the public or private sector, in any of the following: asset management in one or more of the areas of planning, design, construction, management, or operations and maintenance, for drinking water, wastewater, stormwater, transportation, energy, or communications, financial management and procurement, or regional asset management across jurisdictions and infrastructure sectors.

The Council will be responsible for activities in a nonregulatory capacity and will work in coordination with stakeholders to identify and recommend best practices that preserve and extend the longevity of Minnesota's public and privately owned infrastructure as well as providing for effective and efficient management of infrastructure. Its duties are to identify approaches to enhance and expedite infrastructure

coordination across jurisdictions, agencies, state and local government, and public and private sectors, including planning, design, engineering, construction, maintenance, and operations; to analyze methods to improve efficiency and the use of resources related to public infrastructure and public asset management practices; to identify opportunities to reduce duplication in infrastructure projects and asset management; to identify barriers and gaps in effective asset management; and to identify objectives and strategies that enhance the longevity and adaptability of infrastructure throughout the state.

To prepare our recommendations to the appointing authorities, MMUA is seeking suggestions from its membership. Anyone with questions or interest in having MMUA recommend them for appointment, or who would like to suggest someone MMUA should contact about being a possible appointee, should contact Kent Sulem.

Minnesota utility leaders win public power awards at the APPA National Conference

On June 11, eighteen people received public power awards at the APPA National Conference, which was held in San Diego, California.

Among the winners were Mark Mitchell, Director of Operations and Chief Operating Officer at the Southern Minnesota Municipal Power Agency (SMMPA), and Jeff Amy, General Manager at Wells Public Utilities.

Mark Mitchell received the James D. Donovan Individual Achievement Award, which recognizes people who have made substantial contributions to the

electric utility industry, with a special commitment to public power.

Mark Mitchell served with SMMPA for 13 years. During this time, Mark oversaw the construction of two of SMMPA's energy stations. He also oversaw and implemented SMMPA's plan to reach 80 percent carbon-free energy by 2030. Mark has also been chair of Grid North Partners' vision team.

Jeff Amy received the Larry Hobart Seven Hats Award, which recognizes managers of small utilities serving fewer than 2,500 meters. These man-

agers have a very small staff and must assume multiple roles.

Jeff Amy has been with Wells Public Utilities since 2009. His accomplishments during this time include coordinating the implementation of water service for the nearby community of Easton, Minnesota. He also serves as lead staff for the Tri-City Sanitary Sewer System. Jeff has also helped Wells Public Utilities support the Wells community and its activities.

MMUA congratulates Mark and Jeff and all their excellent work as advocates for public power!

Salty wastewater could efficiently break up PFAS' chemical bonds

Research conducted by a team at the University of California-Riverside and published in the journal *Environmental Science & Technology* has found that the high levels of salt sometimes found in wastewater can act to break up per- and polyfluoroalkyl (PFAS) substances.

The salts, which include chloride and sulfate, were used in a photolysis process (the separation of molecules by the action of light) which leverages ultraviolet light to lead to the near total defluorination of perfluorooctanoic acid (PFOA). The technology was able to destroy not only long-chain PFAS, but shorter chains

of PFAS that are usually more difficult to eliminate.

This research suggests that in the future, water treatment plants may be able to efficiently destroy PFAS contamination locally without the use of additional chemicals. Additional study is needed.

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Workers at nine Metropolitan Council wastewater treatment plants to strike

On June 17, the International Union of Operating Engineers Local 49 filed an intent-to-strike notice for around 175 workers from nine different wastewater treatment plants operated by the Metropolitan Council in the Twin Cities.

The notice came after a contract offer from the Met Council was rejected by a large margin by union membership.

In a statement, Local 49 Business Manager Jason George said, "Our members at the Met Council nearly unanimously rejected the latest insufficient contract offer by management and at the same time authorized the union to call a strike. They are united, their demands are fair and supported by factual wage comparisons, and the 15,000-member-strong International Union of Operating



Engineers Local 49 has their back."

If it happens, a strike would occur toward the end of July. In the meanwhile, negotiations will continue. Complicating matters, 94 percent of more than 700 Met

Council workers represented by AFSCME voted in mid-July to authorize a strike of their own. These employees include Metro Transit accident investigators, payroll, information technology workers, and more.

New Wärtsilä module cuts down construction and commissioning time

Wärtsilä, the Finnish power system manufacturer, recently introduced an engine auxiliary module called the Wärtsilä Connector Module, which will allow for the faster construction and commissioning of its peaking engine power plants.

Connector modules can be installed in the power plant before

the engines are placed, speeding up construction by three months when compared to the previous method. The modules are also smaller than the old ones, allowing for generation buildings with a reduced footprint.

The company estimates the new module will cut installation and commissioning times for new builds by 25 percent.



New England's municipal utilities work to get their share of region's offshore wind production

Offshore wind generation that has been built in areas off the New England coast has the potential to revolutionize green energy production in the region.

Until recently, though, most of that energy production has been directed to investor-owned utility interests.

Now, Energy New England (ENE), a municipal light plant cooperative composed of 20 municipal electric systems located in New England states, has struck a deal with Vineyard Offshore. The company is developing Vineyard Wind 2, a



planned 1200-megawatt (MW) offshore wind farm that will be located about 30 miles south of Nantucket Island. The deal says ENE will be able to access generation more than the nameplate 1200 MW of capacity. This

is expected to be approximately 20 MWs of capacity.

Now, Vineyard Wind 2 must receive a green light for construction. The project is up for approval later this summer.

ERCOT projects that Texas' power needs will double in the next six years

On June 12, the Electric Reliability Council of Texas (ERCOT) briefed state lawmakers in Austin about the growing threats challenging the state's electric grid.

Officials estimate the greatest threat is posed by the growth of electricity demand projected over the next six years.

In their analysis, ERCOT noted the growth of data centers, hydrogen production, and electrification of gas and oil production all present a significant

threat to the power grid in the state. The growth of the state's population is also a factor.

State officials said continued work at expanding transmission and other electrical infrastructure in the state is needed, as well as more regulation of cryptocurrency operations.

In a recently released forecast, ERCOT said Texas faces a 16 percent chance of a grid emergency this summer, and a 12 percent chance of rolling blackouts.



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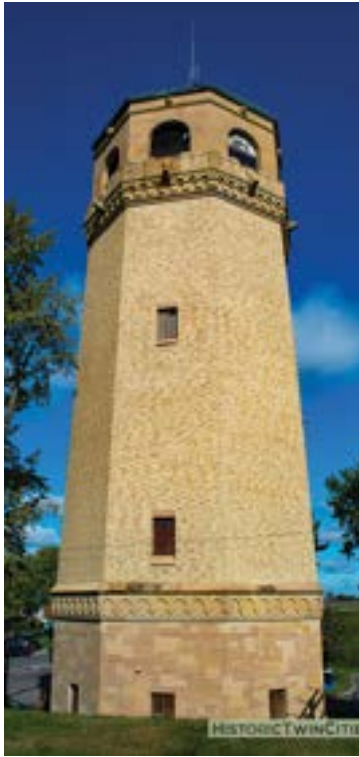
“American Water Landmarks” registry recognizes America’s historic water infrastructure

Have you ever heard of the National Register of Historic Places?

This national registry registers districts, sites, and buildings that are deemed historically significant or worthy of preservation.

Water infrastructure in the United States also has its own special registry, with structures within the registry known as *American Water Landmarks*. The American Water Landmark registry was created in 1969 by the American Water Works Association (AWWA).

Some of the famous structures that are registered as American Water Landmarks include the Chicago Water Tower, which was built in 1869 and was one of the few structures in the “burn zone” to survive the Great Chicago Fire of 1871, and the Louisville Water Tower, which is the oldest ornamental water tower in the world. It was built in 1860.



Water treatment plants, dams, wells, water towers, bridges, filtration operations, and res-

ervoirs are among the types of water landmarks on the registry. Minnesota has two entries on the registry. The first, the Highland Park Tower, was added in 1981. Located in the St. Paul neighborhood of Highland Park, the tower was constructed of stone and completed in 1928. The water tower was designed by Clarence Wigington, the first African American municipal architect in America.

The second American Water Landmark in Minnesota is the Third Street Pump Station, which was built in the late 1800s in Stillwater, Minnesota. The pump station was added to the registry in 1984.

For the water professional, or for any American who is interested in how Americans have used and controlled water in our past, it is worth it to check out the many American Water Landmarks across the United States.

World’s largest solar plant comes online

On June 3, the Chinese government announced that it has brought the Midong solar farm online in the Xinjiang area of China.

The solar farm is the world’s largest solar farm, with an output of 3.5 gigawatts. The project cost over \$2 billion to build, covers 32,947 acres, and will generate over 6 billion kilowatt

hours of electricity per year. The farm has a staggering 5.26 million bifacial 650-watt solar panels.

The northwest Chinese region where the farm was built, Xinjiang, is a good location for solar and wind installations, not only because it has strong winds and sun, but because relatively few people live there.



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Water utilities challenge Biden administration PFAS rules



On June 7, water utility advocates including the American Water Works Association (AWWA) and the Association of Metropolitan Water Agencies (AMWA) filed a challenge to new Biden Administration rules addressing new drinking water limits for per- and polyfluoroalkyl substances (PFAS).

According to the new rules, which were set in early April of 2024, water utilities will monitor PFAS levels for three years. If their water is not meeting the Environmental Protection Agency’s PFAS standards, the operators will have five years from that point to take necessary actions to meet the standard.

In a statement, the CEOs of AWWA and AMWA said the rule “underestimates nationwide costs” for PFAS mitigation.

Manufacturing and chemical companies have also filed suits to stop the implementation of the new rules.

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Levelized cost of electricity across generation types explored in new study

A new report released by Lazard, a worldwide financial advisory and asset management firm, explored the levelized cost of electricity (LCOE) across generation types, which is an important way to understand the relative costs to generate electricity.

Lazard reported that the LCOE of some renewable generation types increased from 2023

to 2024, as interest rates and other factors began to influence the market. Average LCOE values for utility-scale solar increased from 60 to 61 in dollars per megawatt hours (\$/MWh) from 2023 to 2024. Onshore wind stayed the same at 60 \$/MWh from 2023 to 2024, and geothermal rose from 82 to 85 \$/MWh from 2023 to 2024.

On the carbon-based generation side, gas combined cycle

went from 70 to 76 \$/MWh from 2023 to 2024, coal went from 117 to 118 \$/MWh, and gas peaking went from 168 to 169 \$/MWh.

Lazard noted the relative stability of the LCOE prices over the last few years, as inflation seemed to play more of a part in price changes than a decrease in solar panel costs or volatile energy costs played.

NRC admits that radioactive tritium reached Mississippi River after Monticello leak

In May, the United States Nuclear Regulatory Commission (NRC) held a public meeting regarding the continuing saga of a 2022-2023 tritium leak that occurred at the Monticello Nuclear Power Plant.

At the meeting, NRC Senior Environmental Project Manager Stephen S. Koenick acknowledged that some tritium from the leak had reached the waters of the Mississippi River, something the NRC had not previously acknowledged.

Koenick said, "I know we had meetings in which we reported there [was] no indication of tritium leak making it to the Mississippi. However, in our Draft Environmental Impact Statement, we do say, we do conclude, there were some very low concentrations of tritium in the Mississippi River. These concentrations were very low,



well below the required detection levels, leading to the misrepresentation that the tritium was not detected in the Mississippi," Koenick said.

Tritium has a short half-life and cannot penetrate the skin, but it can affect the body through the ingestion of contaminated food or water. Monticello's leak

began in late 2022, but the news did not reach the media until March of 2023, when the plant was temporarily shut down for repairs. Tritium was previously detected in groundwater but was not acknowledged to have reached the river until public meeting.

Minnesota governments to review broadband map accuracy

In late July, local governments, nonprofit organizations, tribal governments, and broadband providers will be able to challenge their local broadband maps so that the federal government has accurate information when considering eligibility for Broadband Equity Access and Deployment monies.

The 30-day span for submitting challenges started on July 22. This will be followed by a 30 day period for the rebuttal of the claim, and then 30 days for reaching a decision on the matter.

More information can be found at <https://mn.gov/deed/programs-services/broadband/bead/>.



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Bakersfield drinking water contamination caused by unusual backflow

On June 4, the City of Bakersfield, California, issued a water advisory for part of the city, labelling tap water as "do not drink" and "do not use" after an unusual backflow incident.



A crude oil storage facility customer connected its equipment incorrectly, causing oil to backflow into the city's water system. The contamination area was isolated, and flushing occurred to clean the primary

water main.

Some businesses in the area were closed after the backflow incident. Bottled water was provided to impacted customers.

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Scientists find method of breaking down microplastics in wastewater

Microplastics, pieces of plastic that are less than 5 millimeters in length, are common in nature and in ourselves.

These tiny pieces of plastic even enter our organs, causing health risks, many of which are still not totally understood.

Now, scientists at Cornell University have found that using enzymes within the setting of wastewater plant can break down microplastics at the very place where many plastics enter the environment. Using an enzyme evolved within the

bacteria *Ideonella sakaiensis*, scientists were able to break down polyethylene terephthalate (PET), a plastic that is ubiquitous in our world. The medium of the experiment was similar to sewage sludge.

The scientists plan to do more tests in hopes of eliminating other kinds of plastic, potentially providing a marketable process as the threat of microplastics becomes better understood and regulators begin to examine this issue more closely.

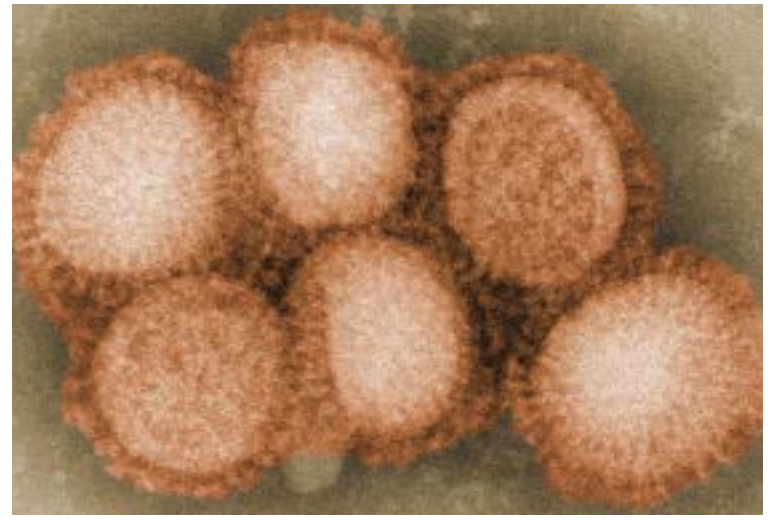
Wastewater monitoring system launches dashboard for avian influenza

On June 3, WastewaterSCAN, a national wastewater monitoring system, launched an H5 avian influenza dashboard.

The dashboard shows detection levels of avian flu across several locations in the United States.

According to the Centers for Disease Control, H5 bird flu has been found in all 50 states in wild birds. Some 48 states have experienced outbreaks in poultry, and nine states have had outbreaks in cows. Several human cases have also been reported, although there has been no person-to-person spread as of now.

The wastewater tracking will



allow officials to detect H5 spikes in local animal populations

and take actions to prevent the spread of the flu.

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Repeal of Minnesota laws provides path for easier implementation of municipal broadband



The recent Minnesota legislative session saw two statutes that have acted as deterrents to the development of municipal broadband systems in the state amended to remove the deterrent effects.

The first amendment deletes the requirement that local voters approve a referendum on any proposal to build or purchase a local telephone system, a requirement that extended to broadband services. A supermajority had been required to approve a new system prior to the change.

The second amendment deletes a restriction limiting municipalities from engaging in creating internet access. Until the change, municipalities could only provide internet if no private internet service provider was present.

The changes will allow Minnesota municipalities to create their own broadband systems more readily. It will also provide access to federal funds and thus even the playing field with the big telcos.

The changes were part of Chapter 114 (SF 4097), the Omnibus Commerce policy bill.

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Where's that weather coming from? Being aware of the causes of climate irregularities for utilities operations

The winter of 2023–2024 was the warmest meteorological winter (from December to February) in Minnesota history.

The next warmest meteorological winter, the winter of 1997–1998, was two degrees colder on average.

What this meant for Minnesota utilities was less demand for things such as gas and electricity for heating, and fewer weather-related infrastructure impacts.

Why did this happen, and how do we stay on top of these weather abnormalities? Experts say this past winter's record-breaking warmth was the result of two factors: the continuing acceleration of global warming, combined with a "Super El Niño." El Niño (Spanish for "little boy") is a phenomenon of sea surface temperature warming and wind in the Pacific Ocean that creates milder, warmer winters in the Upper Midwest.

A strong El Niño, either forecast or present, is a significant clue that a warm winter might be on the way. Conversely, La Niña (Spanish for "little girl") refers to a period of cold Pacific Ocean temperatures. It can mean a colder and snowier winter in our part of the world.

Recent La Niñas have only infrequently led to significantly snowier or colder winters here in Minnesota. That is where the interplay of El Niño and La Niña with global warming comes



into play. Global warming, it appears, is having a pronounced impact on diminishing the effects of La Niña at times.

That is not to say every weather event combines the impacts of El Niño or La Niña with global warming, even when they are both present. A 2023 drought in Panama, the third-driest year in the country's history, caused Lake Gatún, part of the Panama Canal, to have lowered water levels. The problem caused shipping on the Panama Canal to be impacted.

Scientists examining this issue attempted to determine whether global warming and/or El Niño, which were both present, caused the drought event. Using modeling, the researchers found the record-setting dry period had ties to El Niño but had a "weak

to non-existent link" to global warming. This work, as well as the research of many other scientists, has found El Niño/La Niña and climate change can work both in tandem or by themselves to cause extreme weather. Of course, when the two do work together, the probability of record-setting weather becomes a greater possibility.

Being aware of the current El Niño/La Niña trend, as well as how global warming is impacting our part of the world, can give us the tools to (partially) predict whether our coming seasons will be record-setting or average. Considerably more data and analysis will be needed before experts' models will improve to the point of consistent reliability.

Coal ash wastewater release occurs at Minnesota Power's Boswell Energy Center

On July 16, Minnesota Power announced that 1 million gallons of coal ash wastewater had spilled at the Boswell Energy Center coal plant, which is located in Cohasset, Minnesota.

The company said that the spill had occurred due to a pipeline leak from a pipeline that moves wastewater from a storage pond back to the plant.

Some of the wastewater reached the nearby Blackwater Lake. The Minnesota Pollution Control Agency and the Environmental Protection Agency are monitoring the local environs.

Boswell is expected to close Unit one in 2030 and Unit two in 2035.

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Russian nuclear power plant issue causes rolling blackouts, outages for millions

On July 16, a turbine issue at the Rostov Nuclear Power Plant in southern Russia caused millions of customers to lose power or see rolling blackouts after a safety system caused one of Rostov's units to automatically shut down.

The automatic shutdown was later found to be a malfunction: there was nothing wrong with the reactor.

Power was restored by July 17. Southern Russia has been experiencing extreme heat, leading to an overtaxed power grid and warnings from local and national energy officials.

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On June 2, the *Brainerd Dispatch* reported high water demand in the **City of Baxter** is stressing the city's wells.

The Minnesota Department of Transportation began paving work on Highway 135 in **Biwabik** on June 19.

The **Blue Earth Area School District** will seek to pass a referendum in fall of 2024 to build a new K-6 school building.

The **Brainerd Public Utilities Commission**, on the recommendation of Brainerd Public Utilities staff, adopted the use of artificial intelligence (AI) for some business processes. The Commission's move will have to be approved by the Brainerd City Council.

Caledonia is among the communities in Southern Minnesota participating in Rural Entrepreneurial Ventures, an entrepreneurial development program facilitated by the Southern Minnesota Initiative Foundation (SMIF). SMIF was created in 1986 to help advance small-town economies.



Ceylon was one of many communities affected by flooding in June. More than 14 inches of rain overwhelmed the sewer system. City workers and residents watched overnight, and pumps ran for more than 12 hours to make sure everything continued working properly.

Detroit Lakes completed the remodeling of its city hall and celebrated with an open house on July 1. Planning for the renovation began in 2016.

Moorhead Public Service has continued its survey of lead service lines to residents. So far, the utility has found 160 buildings with a lead service line, out of about 2000 buildings checked. Moorhead Public Service has about 1000 buildings left to check for lead service lines.

The "We Are Water MN" exhibit is on display at the **North Branch** library from June 20 to August 12. The exhibit, administered by the Minnesota Humanities Center, explores our relationships and responsibilities to our water, and includes special sections on water as it pertains to the Chisago County area where North Branch is located.

Olivia is moving ahead with the creation of a new city government center. The existing city hall will be remodeled, and additions will be made for the police and fire departments.

On June 17, the **Rochester City Council** considered a recommendation to continue design and engineering work necessary to modify the Silver Lake Dam in the city. The council voted 6-1 to approve an \$800,000 contract for continued design and project management. When completed, the existing dam will be replaced with a non-mechanical structure



that will allow fish passage and increase recreational uses.

Schwan's recently bought land

where it plans to build a 700,000 square foot production facility in **Sioux Falls**. The facility will employ 600 people. Schwan's also plans to build a regional office in the city that will employ 50 to 100 people.

On June 21, **Sioux Falls** asked community members to conserve wastewater due to the recent rain and flooding. The city's wastewater treatment plant was running at or near maximum capacity at this time.

The City of **Two Harbors** is seeking community input for usage

of almost a mile of shoreline acreage the city recently purchased. The city is also viewing designs for what the shoreline land could look like in the future.

Willmar Municipal Utilities (WMU) General Manager John Harren will be retiring on September 20. WMU has engaged the services of an executive search firm to help fill the position.



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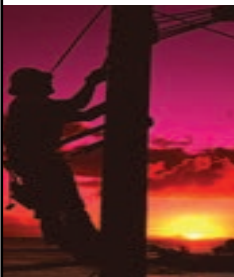


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On June 4, Ukrainian officials reported Ukraine has lost more than 9 gigawatts of power-plant capacity since the beginning of the escalation of the war with Russia in 2022.



China is moving ahead with plans to build floating nuclear power stations in the South China Sea. The floating reactors have about 25 percent of the capacity of a typical land-based reactor.

Native News Online reported on June 13 that the White Earth Nation in northern Minnesota will receive a \$1.75 million grant to expand an existing solar array and develop energy storage. The grant will support the White Earth Nation's goal of becoming energy independent.

On June 16, Norway said it would provide \$103 million to Ukraine to help the country repair its energy infrastructure and secure its electrical supply before next winter.

On June 17, the French companies SUEZ and Vinci Construction Grands Projects signed a memorandum of understanding with Serbia to construct the first wastewater plant ever for Belgrade, the country's capital. Belgrade is regarded as the last major metropolitan area in Europe that does not treat its wastewater.

On June 19, Australia's opposition center-right Liberal Party announced its goal of constructing Australia's first nuclear power plants by 2035. Australia's center-left Labor Party, which is currently in power, opposes the plans.

Naming rights for the Xcel Energy Center may change as Xcel's 25-year contract for sponsorship comes to a close. Xcel Energy paid \$3 million a year for 25 years for the privilege.

On June 24, Russian officials announced their country would help Vietnam build nuclear

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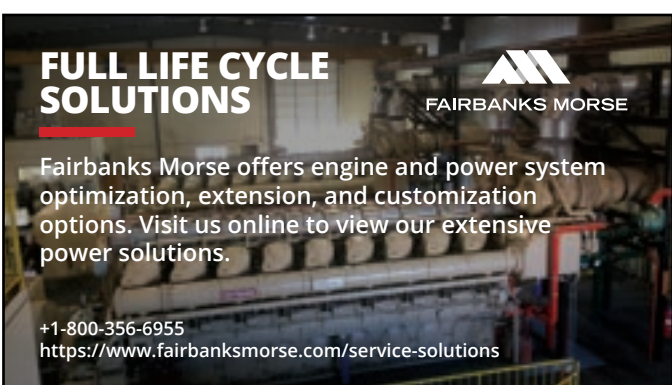
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power plants. The disclosure came after Russian President Vladimir Putin had visited Vietnam the previous week. Vietnam currently does not have any nuclear power plants.



Late on July 30, two vandals caused extensive damage to a solar farm in New Gloucester, Maine. The suspects used a construction vehicle to cause several hundred thousand dollars' worth of damage.

On July 1, the Iowa Utilities Board was renamed the Iowa Utilities Commission. The Commission will now be freestanding and not accountable to the Iowa Commerce Department.

On July 2, Hawaiian leaders announced the suspension of electric service disconnection for customers on Maui would be extended until at least August 31. The extension of Governor Josh Green's emergency proclamation is helping people on the island who were affected by, or financially challenged by, the wildfires that impacted the island in August of 2023.

On July 8, Governor Gretchen Whitmer of Michigan signed legislation that will invalidate any homeowners' association (HOA) rules which create barriers to the installation of solar panels and electric vehicle chargers on buildings. To promote energy efficiency, all HOAs are now required to adopt a solar energy policy within a year, making it easier for residents to install things like rooftop solar, clotheslines, EV charging equipment, and heat pumps.



Indonesia's state-owned electricity provider PLN says the company plans to use hydrogen to power 41 gigawatts of electricity generation. Hydrogen and ammonia will begin to be used as a substitute for fossil fuels in Indonesia between now and 2030.



Meeting and Training Calendar July 2024–May 2025

Cross Training School

August 6–8
MMUA Training Center

Summer Conference

August 19–21
Holiday Inn, Fargo

Minnesota Lineworkers Rodeo

September 10
MMUA Training Center

Overhead School

September 10–13
MMUA Training Center

Tree Trimming Workshop

October 8–10
Elk River

Transformer School and Pre-Conference Workshop

November 19–22
MMUA Training Center

Technical and Operations Conference

December 10–12
Holiday Inn, St. Cloud

Cybersecurity Workshop

January 21–22—Locations TBD

Legislative Conference

January 28–29
DoubleTree Hotel, St. Paul

Meter School and Pre-Conference Workshop

February 4–7
MMUA Training Center

Emergency Preparedness and Restoration Conference

February 19–20
Holiday Inn, St. Cloud

Substation School

March 11–13
Elk River

Electrical Skills Training for Water/Wastewater Operators

March 19–20
MMUA Training Center

Generation School

April 15–17
Glencoe

Underground School

May 6–9
MMUA Training Center

Competent Person and Excavation Safety Workshop

May 20–21
MMUA Training Center

Minnesota Public Power Walleye Tournament

May 31
Rush Lake, Otter Tail



Upcoming events

Summer Conference and Trade Show

August 19–21
Holiday Inn Fargo

The Summer Conference will be held in Fargo and Moorhead this year! This is MMUA's flagship event, and the 2024 conference theme is "Stronger Together." Learn about the challenges facing the industry and connect with fellow utility leaders. Learn more by visiting mmua.org/event/summer-2024 and check out the article on page 1 of this issue of *The Resource*. Register by July 20 for the best rate.

Minnesota Lineworkers Rodeo

September 10
MMUA Training Center, Marshall

The Rodeo is a free competition for MMUA members featuring three events, including hurtman rescue, an obstacle course, and a mystery event. Learn more by visiting mmua.org/events/rodeo-2024. Deadline to register is August 12.

Overhead School

September 10–13
MMUA Training Center, Marshall

Overhead School is an ideal venue to stay current on best practices for safety and technique while up on the lines. Learn more by visiting mmua.org/events/overhead-2024. Register by August 2 for best rate.

For more information, see the Events Calendar at www.mmua.org or call MMUA at 763-551-1230.