

NRWA's Cyber-Security Initiative Program

Lead By: Don Craig, IRWA Executive Director

Article By: Charles Stephens, NRWA Senior Executive Policy Director



September 2025 Newsletter

As many of you are aware, Cyber-Security is definitely one of the many "hot topics", in the water and wastewater industry as it is in our entire world commerce and day-to-day living. No one is immune from the possibility of 'bad actors' taking the initiative to cause operational problems for utilities, with the typical goal of financial rewards as the end-game.

This is, and will continue to be, a seemingly never ending process in regard to taking and implementing safeguards to combat these malicious efforts of intrusion. In that regard, NRWA's Charles Stephens recently wrote the following article (entitled Empowering Rural Water Utilities) in regard to the specific initiative (study) the National Rural Water Association and the federal government have taken to help small rural community water and wastewater systems across America in regard to this ongoing problem.

I feel that this information is very important to all rural systems throughout Illinois, as it is to those across the nation. Hopefully, as Charles indicates near the end of his article, this 'beta' test of this limited program, will lead to more needed such programs offered by all NRWA's state affiliates across the United States in the years to come.

In collaboration with the White House Office of the National Cyber Director (ONCD) and the United States Department of Agriculture (USDA), the National Rural Water Association (NRWA) launched a year-long Cybersecurity Circuit Rider Program Study aimed at strengthening the cybersecurity posture of rural water utilities in November 2024. This study is designed to assess and improve the cybersecurity capabilities of the water and wastewater systems, one of the nation's most vulnerable sectors.

The growing threats in the cyber world have underscored the need for heightened security measures across all industries, and rural water utilities are no exception. These utilities play a vital role in ensuring safe, clean water for millions of people across the country, and the consequences of a cyberattack can be devastating. Not only financially but also to public health and safety.

Cybersecurity for rural water systems is a challenge. Small utilities often lack the resources, expertise, and technical support to address cyber threats. The Cybersecurity Circuit Rider Program aims to bridge this gap by providing direct, hands-on, in-person assistance by cybersecurity experts who understand rural water and wastewater system designs and operations. What makes this program different from others is that the onsite aid is provided by water sector experts who have cybersecurity experience. In the past, many wellintended government programs have provided cybersecurity expertise, but in most cases, these experts have never seen a water or wastewater operation. They don't speak our language or understand the nuances of running a utility in rural America. Additionally, these experts provide their advice remotely; on-the-ground, face-to-face assistance can't be overlooked.

The program study is being conducted in Oregon and Vermont. At the heart of this initiative are the Cybersecurity Circuit Riders, who are former water operators with cybersecurity experience. They engage directly with rural water utilities to assess their cybersecurity infrastructure, identify vulnerabilities, and offer tailored solutions. Our systems are very different, and cyber solutions must be individually based. A one-size-fits-all solution doesn't work. These Circuit Riders are working with utility managers and staff to provide training, implement best practices, and develop long-term strategies to bolster their defenses against cyber threats.

This one-year study focuses on gathering essential data to understand and address small water systems' specific cybersecurity needs and how they can be supported through ongoing technical assistance. By taking a proactive approach to cybersecurity, the NRWA, ONCD, and USDA hope to create a model that can be replicated nationwide.

The Cybersecurity Circuit Rider Program Study is more than just a government initiative; it's a testament to the power of collaboration. The NRWA, in partnership with ONCD and USDA, has brought together a diverse group of stakeholders committed to safeguarding rural water systems. This partnership will allow for the development of comprehensive solutions that address these critical utilities' immediate and long-term needs.

As the study unfolds, it will serve as a valuable learning tool for rural water utilities and other sectors that face similar cybersecurity challenges. The data collected will provide a clearer picture of the gaps in cybersecurity preparedness and highlight practical strategies for mitigating risks.

The insights gleaned from this one-year study will be crucial in shaping future cybersecurity initiatives for rural water systems. By equipping these utilities with the tools and knowledge they need to protect themselves from cyber threats, the program will contribute to the overall resilience of the nation's infrastructure.

NRWA is working closely with Congress on the next Farm Bill to address this issue further. NRWA is requesting authorization to implement the Cybersecurity Circuit Rider Program, and this study will prove that Cybersecurity Circuit Riders are the best option for the sector. Regulations and government mandates burden the systems. Rural water systems need direct assistance and resources, not additional regulation.

The goal is to create a lasting impact, ensuring that rural water utilities can respond to cyber incidents and anticipate and prevent them. The success of this program study will hopefully lead to broader national efforts to safeguard critical infrastructure in rural communities, promoting safety, sustainability, and the continued delivery of safe drinking water.



Water/Wastewater Apprenticeships Sustaining Tomorrow By: Jeff Tumiati, IRWA Apprenticeship Coordinator

As always, it's my pleasure to provide updates about the apprenticeship program both nationally and locally.

As of June 30, 2025, nationwide, there are thirty-five states that have active apprenticeship programs that represent 626 active apprentices, and three hundred forty-five completed graduates. In Illinois, we have 45 active apprentices. Of those, thirty-three are in the water training program, and twelve are in wastewater, of which, several will soon be completing the program, and have already obtained various levels of certification.

We are very proud of all of our apprentices, for not only making the commitment to the industry, but to their selves as well. Water/Wastewater apprenticeships aren't just about filling jobs, they're about safeguarding public health, protecting natural resources, and building resilient communities. By investing in apprenticeships, we ensure that water and wastewater systems remain safe, efficient, and sustainable for generations to come.

In an ongoing effort to recruit career seekers into the Water/ Wastewater industry, the Illinois Rural Water Association continues to partner with high schools, community colleges, and trade schools to present at career fairs and events. As our communities grow and infrastructure ages, the demand for skilled professionals in the industry has never been greater. These apprenticeships offer a powerful solution by blending hands-on experience with classroom learning, to prepare the next generation of water/wastewater operators, technicians, and environmental stewards.

A large portion of the water sector's workforce is nearing retirement, creating this urgency to pass down institutional knowledge. Estimates show that about 30 to 50 percent of drinking water and wastewater professionals, will be eligible to retire within the next 5 to 10 years; and that the median age of water/wastewater employees is around 48 years of age. With so many seasoned professionals retiring, utilities struggle to recruit and retain younger workers into these technical roles.

Apprenticeships in these fields, have never been more important. The program can help bridge this gap by creating career pathways for high school graduates, veterans, and career changers, while reducing barriers through paid training.

Apprentices will be working alongside mentors who are experienced professionals, which are willing to pass down their legacy and knowledge to the next generation. All the while ensuring effective knowledge transfer from those experienced operators to the next generation of operations specialists. This is completed by offering classroom instruction covering technical, safety, and regulatory knowledge, while providing career coaching to guide apprentices through certification and advancement.

IRWA currently has several eligible applicants waiting for a chance to get started on their journey in a great career the water and wastewater fields have to offer. If you are thinking of hiring additional staff, please give one of our eligible applicants your consideration. I truly believe that the National Rural Water Apprenticeship Program is changing the tide of the Rural Water Workforce one person at a time, both today and into the future.

"Individually, we are one drop. Together, we are an ocean." – Ryunosuke Satoro



Pictured here is Jake Johnson, IRWA Board member, showing students at the Vermillion County Career Expo how to tap a water main.



IRWA Support Letters Are Needed

IRWA employees are dedicated in helping the water and wastewater systems throughout the state in making onsite visits and providing technical assistance in helping to ensure your systems have safe and quality water. Please take a moment to thank any or all of the IRWA employees who have helped your system by writing an appreciation letter on your letterhead and mail to:

Illinois Rural Water Association*P.O. Box 49*Taylorville, IL 62568



Overview of School Monitoring for Lead By: Mary Reed, IRWA Compliance Assurance Specialist

With a new school year upon us and new regulations abound, I thought I would provide you with a brief overview of the monitoring for lead in elementary schools and child care facilities.

On November 3, 2023, the Illinois Pollution Control Board adopted the federal Lead and Copper Rule Revisions (LCRR) into Illinois State Law. Part of the new rule requires a community water supply (CWS) to monitor for lead in elementary schools and child care facilities constructed prior to January 1, 2014. Sampling is required at least once at each elementary school and child care facility, and upon request after that. Let's dig in and break it down by requirements.

<u>Notification</u> – this section outlines what is required of the CWS when starting out the program. You must first submit a list of all the elementary schools and licensed child care facilities to the Illinois EPA. They will assign sample site IDs for each sampling location within the monitoring site. You are required to send an informational document to each facility about health risks from lead in drinking water. The information provided to schools should be similar to the Public Education for lead that is distributed after a lead action level exceedance.

EPA is working on getting approval for a template for this notification and others. IRWA will provide a link to them on our website once they have been released. In the meantime, we have an IRWA developed FAQ sheet posted at IRWA School Lead Sampling FAQ.pdf

Annually or more frequently each CWS should provide notice to elementary schools and child care facilities including the following information:

- A proposed schedule for sampling at the facility.
- Information about sampling for lead in schools and child care facilities.
- Instructions for identifying sampling locations and preparing for a sampling event. This should be done at least 30 days prior to monitoring.

If an elementary school or child care facility fails to respond or otherwise declines to participate in lead monitoring, the CWS must document outreach attempts for reporting to the IEPA. In addition, the CWS should contact all secondary schools (junior high and high school) it serves to provide information on health risks from lead in drinking water and how to request lead sampling. This would be similar to the initial notification sent out to the facilities that are required to monitor.

<u>Sampling</u> - Each CWS must collect five samples per school and two samples per child care facility at locations typically used for consumption. The sampling locations must not have a point of use device installed unless <u>all locations</u> used for consumption have point of use devices installed.

Elementary schools will be monitored at the following locations:

- Two drinking water fountains.
- One Kitchen faucet used for preparing food or drink.
- Once classroom faucet or other outlet persons use for drinking.
- One nurses office faucet as available

Childcare facilities will be monitored at the following locations:

- One drinking water fountain.
- Either a Kitchen faucet used for preparing food or drink or one classroom faucet or other location that is used for drinking.

If any school or child care facility has fewer than the required number of locations the supplier must sample all locations used for consumption. If any school or child care facility does not contain the type of faucets listed above, the supplier must collect a sample from another location within the school or facility that is typically used for consumption.

<u>Methods for Sampling</u> - The supplier must collect all samples from cold water taps that satisfy these specific requirements:

- All samples for lead must be first draw samples.
- All samples must be 250 ml in volume.
- The water must remain stationary in the sampling site's (building's) plumbing system for at least eight but no more than 18 hours before sampling; and
- The CWS must acidify the samples and have a laboratory analyze them using the same analytical methods as routine lead and copper samples.

The samples may be collected by appropriately trained personnel of the water system, school, child care facility, or another appropriately trained person.

Sampling Frequency - Annually, or on an alternative IEPA approved schedule, each supplier must collect samples from **no** fewer than 20% of elementary schools and 20% of child care facilities, until the supplier samples all schools and child care facilities listed in its distribution system that did not decline to participate. The CWS may count an elementary school or child care facility failing to respond or otherwise declining to participate as part of its annual 20% minimum.

The CWS_must sample all elementary schools and child care facilities it serves at least once in the five years following January 1, 2025.

After the CWS completes one required cycle of sampling in all elementary schools and child care facilities any additional sampling would be upon request of the elementary school or child care facility.

The CWS must sample at the request of a secondary school. If the CWS receives requests from more than 20% of secondary schools in its distribution system in any of the five years following January 1, 2025, the supplier may schedule the requests which exceed 20% for the following year, and the supplier would not need to sample an individual secondary school more than once during the five-year monitoring cycle.

(Continued on page 4)

Overview of School Monitoring for Lead

(Continued from page 3)

At least once every five years, the CWS must confirm that the original list of schools and child care facilities it serves has not changed, if there are changes a revised list should be submitted.

Each CWS must provide the sample results to the school or child care facility as soon as practicable but no later than 30 days after receiving them, with information about remediation options. (not discussed in this article) In addition, the CWS must also provide the analytical results to local and state health departments, as well as to the IEPA.

After the initial sampling for elementary schools and child care facilities ends, annually the CWS must still contact all of the schools and child care facilities in its distribution system to provide the following:

- Information about health risks from lead in drinking water.
- Information about how to request sampling for lead at the facility

<u>Sampling upon Request</u> – Once the CWS has completed the initial round of sampling for each elementary school and child care facilities they must conduct lead sampling for those schools and child care facilities again, but only if it is requested. Requested sampling uses the same sampling methods for the mandatory sampling including providing following information to the facility:

- Instructions for identifying locations for sampling and preparing for sampling at least 30 days before it occurs
- Sampling results

If a supplier receives requests from more than 20% of the schools and child care facilities the supplier listed in its distribution system in a given year, the supplier may schedule sampling for those exceeding 20% for the following year. A supplier needs not sample an individual school or child care facility more than once every five years.

Reporting to the IEPA - Each CWS must report the previous calendar year's activity before July 1st of the current year. The report must contain specific information:

- The CWS must certify that it made a good faith effort to identify schools and child
 care facilities. The good faith effort may include reviewing customer records and
 requesting lists of schools and child care facilities from the IEPA. Any CWS that
 does not serve any schools or child care facilities does not need to include any
 additional information above the efforts to identify.
- The CWS must certify that it delivered information about health risks from lead in drinking water to the schools and child care facilities it serves.
- The CWS must certify that it completed the notification and sampling at a minimum of 20% of the elementary schools and child care facilities served.

Each year by July 1st, the CWS must certify the following:

- The number of schools and child care served by the CWS.
- The number of schools and child care facilities the CWS sampled during the calendar year.
- The number of schools and child care facilities that refused sampling.
- Information about outreach attempts made to schools or child care facilities that declined monitoring.
- Confirm that the analytical results for all schools and child care facilities sampled in the calendar year were provided to the facilities.

There is a lot to this new regulation, and this article is not inclusive of all the requirements but only an overview. Please feel free to reach out to me at reed@ilrwa.org with any questions.

IRWA Staff Members

Executive Director

Don Craig (craig@ilrwa.org)

Deputy Director

Roger Noe (noe@ilrwa.org)

Chief Membership Officer / Chief Event Coordinator Heather McLeod (ilrwahm@ilrwa.org) Chief Financial Officer / Chief Publications Officer

Denise Burke (ilrwadb@ilrwa.org)
Circuit Rider #1 / Director of Field Staff Programs

Evan Jones (iones@ilrwa.org)

Circuit Rider #2

Jason Cochran (cochran@ilrwa.org)

Circuit Rider #3

Chuck Woodworth (ilrwacw@ilrwa.org)

Circuit Rider #4

Marc Lemrise (lemrise@ilrwa.org)

Wastewater Technician #1

Ieff McCready (mccready@ilrwa.org)

Wastewater Technician #2

Scott Tozier (tozier@ilrwa.org)
USDA Source Water Protection Specialist
Richmond Adams (adams@ilrwa.org)

State Funded EPA Technician

Clark Cameron (cameron@ilrwa.org)

Energy Efficiency Circuit Rider

Steve Stortzum (stortzum@ilrwa.org)

EPA Training Specialist

Dave McMillian (mcmillan@ilrwa.org) Steve Vance (vance@ilrwa.org)

EPA WW Training Specialist

Kent Cox (cox@ilrwa.org)

Apprenticeship Coordinator

Jeff Tumiati (tumiati@ilrwa.org)

Compliance Assistance Specialist

Mory Bood (nood@ilwyo.o

Mary Reed (reed@ilrwa.org)