



**MI-ACE**  
**2023**



85th Annual Conference & Exhibits

**WaterOperator.org - Online Support and  
Resources for Water & Wastewater Operators**

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**University of Illinois**



**Prairie Research  
Institute**  
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN  
ILLINOIS STATE WATER SURVEY

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# Outline

- What is WaterOperator.org
- Wide range of topics with example resources
- How to find resources on WaterOperator.org
- Other features of WaterOperator.org



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## WaterOperator.org

- Clearinghouse of information for anything related to wastewater and water operations.
- Legwork has been done for you, easy to use, value-added information.
- An easy to use interface for finding, free, publicly available information on the web.
- Supports operators, can call us, email us, request our help in finding resources or help.

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## We Have Done The Legwork

- Search hundreds of organizations nationwide.
  - That provide technical assistance and training
  - Regulatory agencies and associations
- Links to over 15,000 free, publicly available documents, presentations, manuals, programs.
- Nationwide calendar that lists over 11,000 events annually for operators.
- All from nearly 800 organizations, (RCAP, RWA's, WEA's, AWWA's, states, feds, other vendors)

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# Value Added Information

- Complete details.
  - Clear, concise summary of every document
  - List the host/owner and source pages
  - *All event info in one location*
- Logic put into search and database information.
- Clickable details with contact info.

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Search...

Short on time?

We've collected the *best* resources on the web just for you.

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Tap Talk

Tap Talk: The Drinking Water in Rural America Podcast

Everyone has a role to play in protecting public health. This free audio show connects professionals across the water sector with ideas to enhance our work.

Upcoming Free Webinars

AUG 24 2023 12:00 PM Eastern Live Online

Cross-Connection Control Program Basics

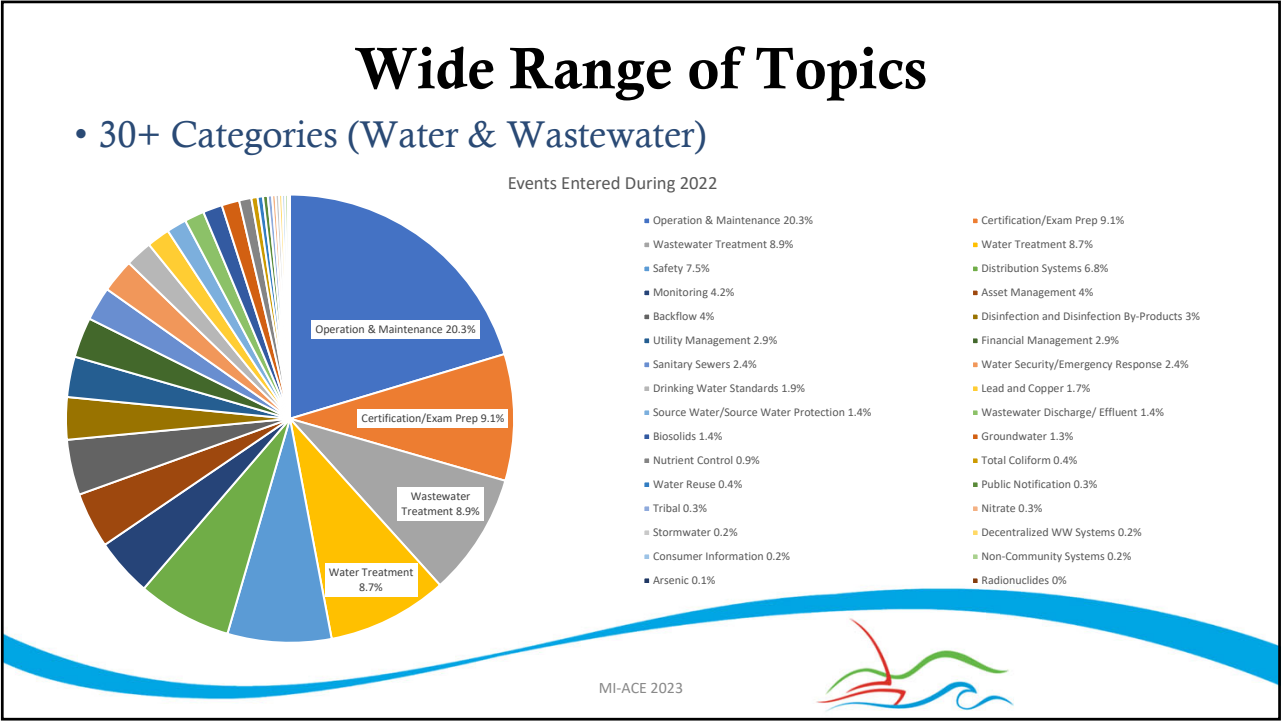
This webinar will cover updates and basic elements that all public water system professionals should be aware of relating to backflow prevention and cross connection hazards. | [Learn More](#)

SEP 12 2023 9:30 AM Central Live Online

How to Comply with EPA's Reporting Requirements for Chlorine

This webinar will provide participants

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# Small Systems Resources

US EPA - Simple Tools for Effective Performance (STEP) Guide Series:

- Series of guides to help small public water systems build their technical, managerial, and financial (TMF) capacity.
  - Safe Drinking Water Act regulations guide
  - Strategic planning guide
  - Asset management guide
  - Asset inventory guide
  - Drinking water security guide
  - Rate setting guide

### Step #2 – How Do I Inventory My Assets?

Before you can manage your assets, you need to know what you have, what condition it is in, and how much longer you expect it to last. To complete an inventory, list all your assets and collect the following information for each:

- Condition
- Age
- Service history
- Useful life

The worksheets on the following pages will help you develop an asset inventory and keep track of important information. Detailed instructions are provided. Later on, you may want to keep track of your assets on a computer spreadsheet or use custom software program for easier use and accessibility.

Taking inventory your assets can be an intensive job. Get the best information that you can, but don't get bogged down in this step and use estimates where needed. As crews respond to work orders, they can build the asset inventory by collecting information such as age, condition, location, and other valuable information. As you are acquiring new assets, immediately add it to your inventory organization. If you keep up with an asset management program, your inventory will be up to date.

**Remember**

The worksheets in this guide could contain sensitive information. Store these worksheets, as well as all other asset information, in a secure location.

### VA Step 1

**YOUR SYSTEM AND ITS COMPONENTS – KNOWING AND EVALUATING CRITICAL RELATIONSHIPS**

In this step you should think about your entire water system, including your primary goals, the customers you serve, and your system's components. To tackle this step, you should:

- Identify different groups among your customers and consider their specific needs.
  - Examples of customers include the general public, hospitals, fire departments, industry and retail operations.
- Identify your primary system goals.
  - If water service during an emergency is especially important to any of these groups (e.g., hospitals), highlight them so that you can be sure to consider any special activities needed to protect their service.
- Think about your facilities and how your system operates.
  - You'll want to include information about your water source, treatment, storage, chemical use and storage, supervisory control and data acquisition (SCADA) and computer systems, and your distribution system.
  - Highlight critical facilities and "single points of failure," or components that are especially important to providing a safe and reliable supply of water, and describe any special problems they might have (e.g., dependency on electricity, lack of back-up capacity, etc.).

Although you may feel that you already are familiar with your system and how it works, evaluating each system component (including water source and water treatment) independently and as part of overall system operations is the key to identifying its possible weaknesses. It is important to identify "single points of failure" in the system, or system components or processes that, if they failed, would threaten the system's ability to supply reliable, safe water. It is also especially important for you to identify your critical customers (e.g., hospitals, fire departments), services, and components to help you prioritize your activities. It is important to provide yourself with an accurate picture of your system in this step. The rest of the VA process relies on this information!

1. Evaluate System → 2. Identify Threats → 3. Consider Consequences → 4. Assess Likelihood → 5. Evaluate Measures → 6. Plan Action

<https://www.epa.gov/dwcapacity/simple-tools-effective-performance-step-guide-series>

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# Small Systems Resources

Michigan Department of Environment, Great Lakes, and Energy (EGLE) - Small System Water Operator Training

- Series of webinar recordings for small system operators.
  - Capacity development/MIEHDWIS database
  - Coliform bacteria source investigation
  - Cross connections/flushing/valve exercising
  - Asset inventory guide
  - Consumer communication
  - Water system emergencies

## Small System Water Operator Training

Outreach Water Operator Training Courses Small System Water Operator Training

The Michigan Department of Environment, Great Lakes, and Energy has developed this virtual training for operators and owners of small, privately-owned public drinking water supplies across the state. Topics include EGLE's new MIEHDWIS database, capacity development, coliform bacteria source investigation, cross connection, system maintenance, communications, water system emergencies, and other issues relative to small drinking water supplies.

Recorded Webinar Series for Small Systems Operators

- Session 1: MIEHDWIS and Capacity Development (Recorded 08/08/2023, Duration 1 Hour 2 Minutes)
- Session 2: The Continuous Coliform Investigations of Col (Recorded 08/07/2023, Duration 1 Hour 11 Minutes)
- Session 3: Cross Connections and Flushing & Valve Exercising (Recorded 08/05/2023, Duration 1 Hour 6 Minutes)
- Session 4: Transparency and Communications with Consumers (Recorded 08/07/2023, Duration 1 Hour 3 Minutes)
- Session 5: Response and Planning for Water System Emergencies (Recorded 08/22/2023, Duration 1 Hour)

### Common Cross Connections and Prevention Devices

EGLE

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<https://www.michigan.gov/egle/outreach/water-operator-training-courses/small-systems>

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# Lead and Copper Rule Resources

- US EPA – Developing and Maintaining a Service Line Inventory: Small Entity Compliance Guide
  - 50-page guide for small water systems
  - LCRR initial inventory requirements
  - How to develop a service line inventory
  - Reporting requirements (State/Public)
  - Blank template forms + completed example for a hypothetical system
- US EPA – Funding and Technical Resources for Lead Service Line Replacement in Small and Disadvantaged Communities
  - 24-page guide to help small and disadvantaged communities
  - Overview of funding sources for LSLR
    - Eligibility
    - Application process
    - Funding cycle/amount
    - Contact info

## WIIN Act Drinking Water Grant Programs

### Assistance for Small and Disadvantaged Communities

The assistance for Small and Disadvantaged Communities Grant program is administered by EPA under the Water Infrastructure Improvements for the Nation (WIIN) Act and supports drinking water projects and activities in small and disadvantaged communities that are unable to finance projects to comply with drinking water requirements under the Safe Drinking Water Act (SDWA). The grant program also provides funding assistance to communities to manage drinking water concerns through household water quality testing, including testing for unregulated water contaminants.

#### Eligible Activities

Grants can be used to support projects and activities in small and disadvantaged communities that include:

- Investments necessary for a public water system to comply with the SDWA
- Assistance that directly and primarily benefits a disadvantaged community
- Programs to provide household water quality testing, including testing for unregulated contaminants
- Activities necessary and appropriate for a state to respond to a contaminant

Full LCR is covered under this grant program.

#### Applicant Eligibility

Eligible applicants include:

- States on behalf of an underserved community

Projects must either serve (1) disadvantaged communities or (2) small communities of less than 10,000 individuals that lack the capacity to incur the debt necessary to carry out the project or activity. For this grant program, a disadvantaged community is one meeting the state's established affordability criteria.

Eligibility to apply for and receive funds is limited to the geographical 50 states, Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and tribes within the U.S.

#### Application Process

Funding will be awarded on a rolling basis, as applications are submitted before the deadline of June 30, 2023 or until all funds have been awarded. EPA Regional offices are the primary points of contact to approve grant applications and award funding. Communities will apply to their respective state program for assistance.

### Exhibit 5: Example of Service Line Ownership Distinction Between the Water System and Customer

Note that lead goosenecks, pigtail, or connectors are not considered part of the service line under the LCR. These are defined as "a short section of piping, typically not exceeding two feet, which can be bent and used for connections between rigid service piping" (40 CFR §141.2). Section 141.84(d) of the LCR specifies the requirements for when lead goosenecks, pigtail, or connectors must be replaced.

Developing and Maintaining a Service Line Inventory: Small Entity Compliance Guide 9 June 2023

<https://www.epa.gov/ground-water-and-drinking-water/supporting-materials-final-revisions-lead-and-copper-rule>

<https://www.epa.gov/ground-water-and-drinking-water/revise-lead-and-copper-rule>

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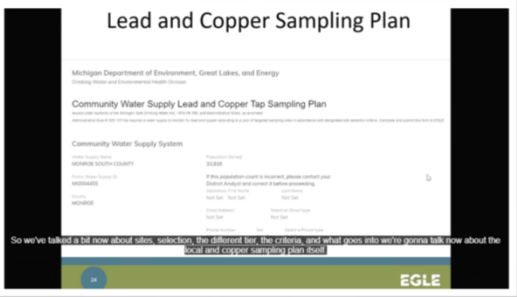
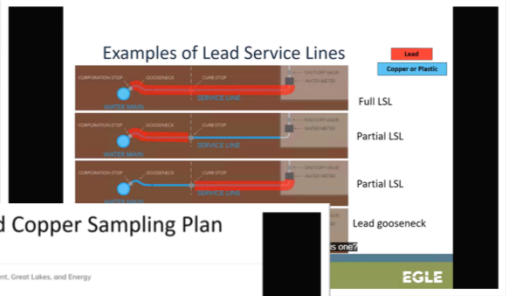
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# Lead and Copper Rule Resources

Michigan Department of Environment, Great Lakes, and Energy - Lead and Copper Rule Training

- Webinar series on Lead and Copper Rule and the Complete Distribution System Materials Inventory (CDSMI)
  - Site Selection/Sampling Plans
  - Sampling
  - Reporting



<https://www.michigan.gov/egle/outreach/past-events>

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# PFAS Treatment Resources

## PFAS Treatment in Drinking Water and Wastewater – State of the Science

- 42-minute webinar recording from the EPA Tools and Resources webinar series.
- Overview of EPA’s research on PFAS treatment from drinking water and wastewater.
- Resources and tools to learn about available treatment options
  - Drinking Water Treatability Database
  - Drinking Water Treatment Technology Unit Cost Models



<https://www.youtube.com/watch?v=RgXcCchD1U>

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<https://tdb.epa.gov/tdb/home>

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# Cybersecurity Resources

## 15 Cybersecurity Fundamentals for Water and Wastewater Utilities

- 56-page guidance document from the Water Information Sharing and Analysis Center.
- Includes 15 fundamental steps to secure information technology and operational technology.
- Guides utilities to develop a more cybersecurity conscious culture.
- Cyber Incident Response Plan

6. Install Independent Cyber-Physical Safety Systems

Adversaries may compromise an IT or OT control system to seek monetary gain, perform reconnaissance, modify operations, weaken customer trust, injure people or physically destroy equipment or infrastructure. Malicious cyber actors targeting the water sector may seek long-term physical service disruption by breaking pipes or damaging large rotating equipment that have long replacement times. These types of cyber attacks, resulting in physical impact, represent a complex, or blended, threat. To protect critical assets from blended threats, utilities should consider non-digital engineering solutions such as independent cyber-physical safety systems.

If we can protect our critical assets from physical damage, service disruption from a cyber-attack may be limited to the time it takes to transition to manual operation. Blended attacks with long-lasting impacts can be mitigated by physically preventing access to process equipment and by installing independent cyber-physical safety systems. These systems should prevent conditions such as excessive levels of pressure, chemical additions, vibrations or temperature change from occurring due to malicious acts against a compromised control system.

In 2007, Idaho National Labs dramatically demonstrated an example of a cyber-physical vulnerability in their experimental AURORA attack by remotely damaging a large diesel generator. During the demonstration, the generator's virtual breaker was rapidly opened and closed to force it out of phase with line power, which in turn created destructive electrical torque that physically damaged the unit.

Now utilities have cybersecurity experts readily available, but every utility already has staff and consultants who understand the intricacies of their water or wastewater processes and infrastructure. Existing staff can collaborate to identify ways that physical damage or hazardous situations can be created either intentionally or accidentally.

For example, a contingent of experienced staff should imagine worst case scenarios, assuming an attacker has full knowledge and total control of the OT system. What could the attacker do to cause injury or lasting system damage?

While we carefully protect against adverse conditions, if the protection comes from logic built into the control system, the system can still be compromised. It is critical to design and implement independent protections.

Example Solutions and Potential Precautions

In the same way that a large generator can be protected from an AURORA style attack with a properly designed protection relay, a boiler can be protected from a low-water explosion

with an independent low-water trip switch, vital components of water systems can also be protected.

For example, attempts to break pipes by valve water hammer or harmonics can be mitigated with appropriate slow mechanical gearing of valve actuators. Attempts to break pipes by turning on too many pumps within a pressure zone can be handled by independent pressure switches wired to pump controllers, or by increasing tank overflow capacity. Dangerous overloading of treatment chemicals can be mitigated by careful pump sizing. Attempts to damage large rotating equipment through variable frequency drive manipulation can be countered with independent vibration monitoring interlocks. Attempts to run wastewater pumps dry for extended periods by falsely presenting high wet-well levels to the control system might be managed by creating a combined high RPM and low electrical current triggered interlock.

The independent and isolated aspects of a cyber-physical safety system are essential to its success. In 2017, the TRITON/TRISIS attack against a Saudi Arabian petrochemical plant demonstrated what could happen when a safety system is connected to a control system. In this case, the rigorous safety instrumented system required for hazardous chemical facilities was compromised, presenting the potential for serious damage and injury if the control system had been subsequently attacked.

Finally, it is very important not to reduce the overall reliability of water and wastewater service because of the design, implementation or maintenance of a cyber-physical safety system. Achieve simplicity and lower risk by using mechanical safety systems, such as a rupture disk. Use independent process monitoring alarms (Fundamental 1) in an initial, conservative approach. In some less time-sensitive cases, such as attempts to damage heat sensitive electronic equipment by compromising an HVAC and building control system, use mechanical safety systems to reduce the likelihood of breach.

Resource Links

- Subject Matter Expert Workshop to Identify Cybersecurity Research Gaps and Needs of the Nation's Water and Wastewater Systems Sector (IS DPA)
- The End of Cybersecurity (Harvard Business Review)
- Engineering Out the Cyber-Risk to Protect What Matters Most (Idaho National Laboratory at ISA Conference 2019 (sign-up required))
- Cyber-Informed Engineering (Idaho National Laboratory)
- Improving Safety in Process Control (Control Engineering)
- Cyber-Physical Attack Recovery Procedure (Batt April 2018)
- Mitigating the AURORA Vulnerability with Existing Technology (Georgia Tech Protective Relating Conference)
- What You Need to Know (and Don't) About the AURORA Vulnerability (Power Magazine)

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<https://www.watersisac.org/system/files/articles/15%20Cybersecurity%20Fundamentals%20%28WaterISAC%29.pdf>

# How to use WaterOperator.org

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TRIBAL RESOURCES  
Tribal Assistance Providers  
Tribal Contact Manager  
NAWMA Working Groups

SMALL SYSTEM CLASSES  
Operator Certificate Programs  
The Private Well Class  
Groundwater and Well Care for PWS

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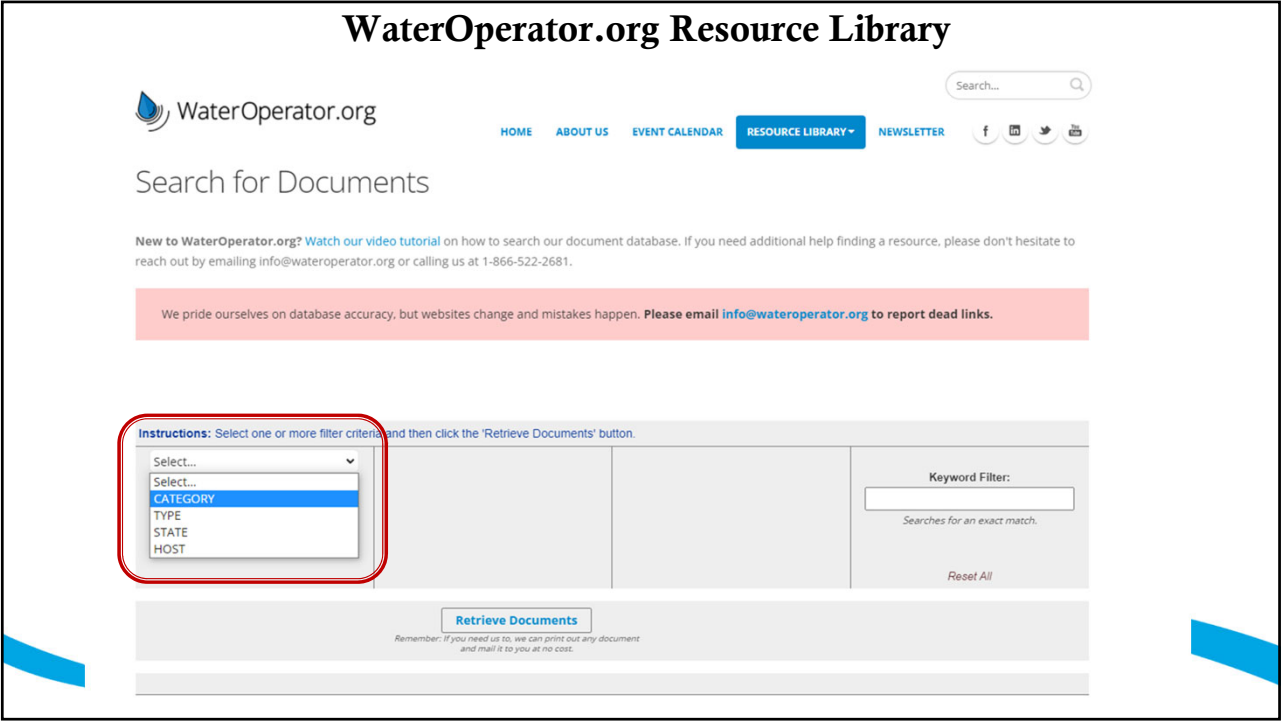
Upcoming Free Webinars

AUG 24 2023 12:00 PM Eastern Live Online

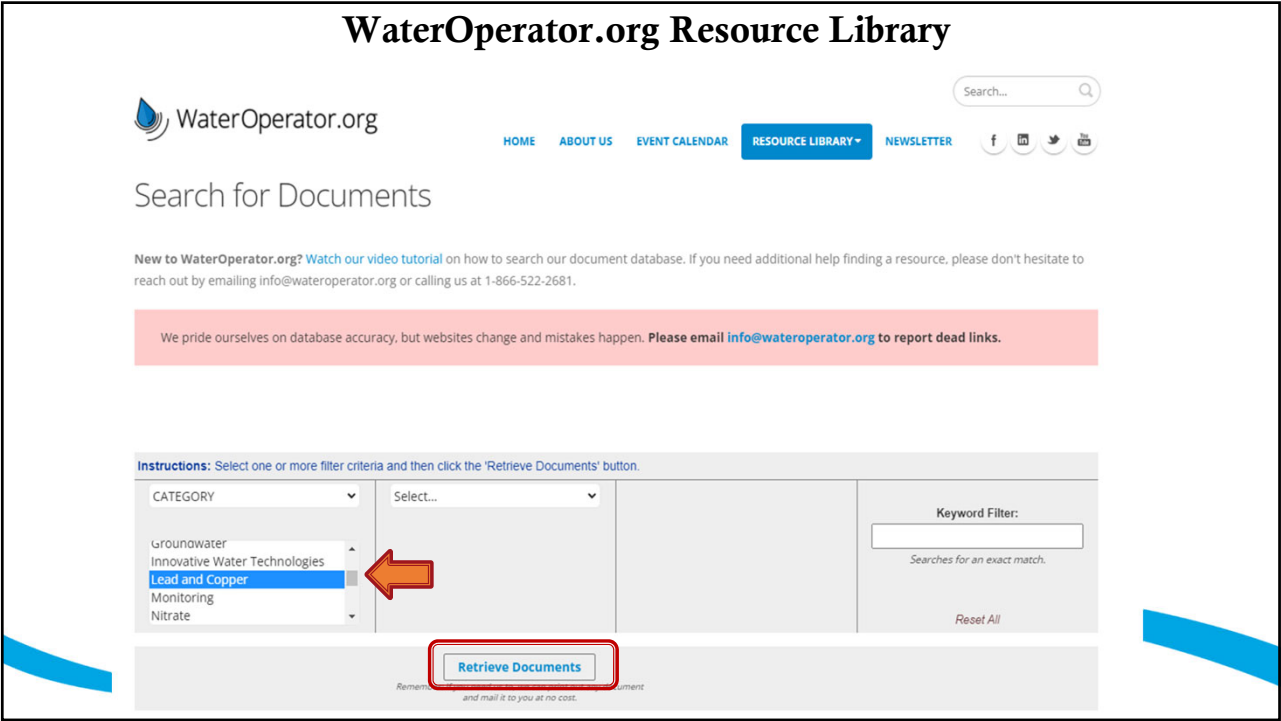
Cross-Connection Control Program Basics

This webinar will cover updates and basic elements that all public water system professionals should be aware of relating to backflow prevention and cross connection hazards. | Learn More »

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1) Title: Recursos Para Consumidores Interesados

Summary: The web-page links to spanish resources where customers can learn more about lead and lead service line replacement.

Source: https://www.idr-collaborative.org/downloadable-resources.html

Host Organization(s): Lead Service Line Replacement Collaborative

2) Title: 2016 Lead Service Line & Lead Component Survey of Washington's Water Utilities

Summary: The 47-page report summarizes the findings from a 2016 survey on lead service lines and lead components in Washington water utilities.

Source: https://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/Contaminants/Lead

Host Organization(s): Washington State Department of Health

3) Title: 2017 Safe Drinking Water Program Workshop

Summary: This 220-slide presentation is a collection of workshop presentations from the 2017 Safe Drinking Water Program on November 7, 2017 hosted by the Water Replenishment District of Southern California. Presentations include: WRD Safe Drinking Water Program & WRD DAC Pilot Program, Salinas Valley Distributed Water Treatment Project, California Drinking Water Program Updates, Nitrate Biological Treatment, Well & Pump Rehab, BACT and Other Common Well Issues, pumps & motors and much more.

Source: https://www.wrd.org/technical-presentations-and-workshops

Host Organization(s): Water Replenishment District of Southern California

4) Title: 2018 EPA Region 5 Water Finance Forum

Summary: This 364 page slide presentation covers the following general topic areas: Funding Panel Discussion, Communications, Lead service Line Replacement, Regional water Systems and Shared Services, Water Tank Maintenance, Succession Planning and Operator Recruitment. Within each topic are a number of presentations.

Source: http://gleic.org/training-events-webinars

Host Organization(s): Great Lakes Environmental Infrastructure Center

5) Title: 2018 Surface Water Treatment Workshop

Summary: The Minnesota, North Dakota, and South Dakota AWWA sponsor this bi-annual workshop that covers topics such as asset management, treatment technologies, biological treatment, water source, operations and maintenance, and more. Select presentations include: Membrane Clean In Place Optimization, Removal of

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HOST = 'U.S. Environmental Protection Agency'

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1) Title: 2021 DW Workshop Session 3a - Monitoring & Distribution II: Corrosion & Lead

Summary: This 2-hour recording is from the 18th Annual EPA Drinking Water Workshop which provides in-depth information and training on solutions and strategies for handling small drinking water system challenges with a focus on monitoring, distribution, source, and treatment topics. This session is from the monitoring and distribution track and will focus on topics related to corrosion and lead in drinking water. The first presentation is titled "Lead in Drinking Water in Schools and Childcare Facilities: The Massachusetts Experience". In 2016, after the events in Flint, Michigan turned a spotlight on the continued issues of lead in drinking water, MassDEP developed an ambitious testing program that collected 60,000 samples at nearly 1,000 public schools. Four years later, in 2020 MassDEP expanded the testing program to include all 8,000 childcare facilities and programs in the state. This presentation will describe the assistance programs run by MassDEP, what the results tell us, and lessons learned. The second presentation is titled "Experiences with Michigan's New Lead and Copper Rule". This presentation will cover the changes to Michigan's lead and copper rules, present some of the data from monitoring over a two-year period, and Michigan's experience with implementing the new rule set. The third presentation is titled "Corrosion Control Evaluation Considerations with Change in Source and Treatment". This talk will outline the process by which Ohio EPA is ensuring corrosion implications are considered prior to a system making a source or treatment change so as to ensure a proactive approach to corrosion control.

Source: https://www.epa.gov/water-research/agenda-and-recordings-18th-annual-epa-drinking-water-workshop-virtual

Host Organization(s): U.S. Environmental Protection Agency

2) Title: 3Ts for Reducing Lead in Drinking Water Fact Sheet for Public Water Suppliers

Summary: This 2-page document gives an overview of the 3Ts Program and its purpose. It also covers the idea of potential sources of lead in drinking water.

Source: https://19january2017snapshot.epa.gov/dwreginfo/3ts-reducing-lead-drinking-water-schools-and-child-care-facilities\_.html

Host Organization(s): U.S. Environmental Protection Agency

3) Title: 3Ts for Reducing Lead in Drinking Water in Child Care Facilities: Revised Guidance

Summary: This 16-page booklet is designed for small child care facilities to help them ensure the drinking water in their buildings does not contain elevated levels of lead.

Source: https://www.epa.gov/dwreginfo/lead-drinking-water-schools-and-child-care-facilities#3Ts

Host Organization(s): U.S. Environmental Protection Agency

4) Title: 3Ts for Reducing Lead in Drinking Water in Schools

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1) Title: Comprehensive Lead and Copper Rule Training

Summary: The purpose of this 28-slide presentation is to improve consistent implementation of the Lead and Copper Rule, to present the Lead and Copper Rule Minor Revisions, to explain primary issues, and to present SDWS (Safe Drinking Water Information System) reporting.

Source: <https://www.epa.gov/groundwater-and-drinking-water/lead-and-copper-rule>

Host Organization(s): U.S. Environmental Protection Agency

2) Title: Developing and Maintaining a Service Line Inventory: Small Entity Compliance Guide

Summary: This 8-page guide is intended for small water systems and assists them in complying with the Lead and Copper Rule Revisions (LCRR) initial inventory requirements. The guide provides an overview of the inventory-related actions small community and noncommunity water systems are required to take under the LCRR. The guide will detail information needed to be included during the initial inventory process, how to develop a service line inventory, and what information has to be reported to the state and public.

Source: <https://www.epa.gov/groundwater-and-drinking-water/lead-and-copper-rule>

Host Organization(s): U.S. Environmental Protection Agency

3) Title: Drinking Water Regulatory Updates

Summary: This 35-slide presentation discusses drinking water regulatory updates as of March 2019 relating data collected nationally and in Guam. The presentation covers information on the Unregulated Contaminant Monitoring Rule (UCMR) 3 and 4 summarizing the results from UCMR 3 and noting how UCMR 4 will proceed with monitoring requirements based on a range of those results. Also covered in the presentation includes challenges with Agency and the Lead and Copper Rule (LCR), PFDA/PTDS are discussed with background about their origins, health effects, persistence in drinking water, and future anticipated actions.

Source: <https://www.epa.gov/groundwater-and-drinking-water/lead-and-copper-rule>

Host Organization(s): Hawaii Section American Water Works Association  
U.S. Environmental Protection Agency

4) Title: Proposed Lead and Copper Rule Revisions PWS Reference Guide

Summary: This 8-page table compares the major differences between the current Lead and Copper Rule (LCR) and proposed Lead and Copper Rule Revisions (LCRR).

Source: <https://www.epa.gov/groundwater-and-drinking-water/lead-and-copper-rule-revisions-pws-reference-guide>

Host Organization(s): U.S. Environmental Protection Agency

5) Title: Fact Sheet for Developing and Maintaining a Service Line Inventory

Summary: This 8-page fact sheet provides an overview of EPA's requirements for developing a service line inventory for identifying and replacing lead service lines (LSLs). The fact sheet also contains a summary of EPA's recommendations to help water systems develop a comprehensive and accurate inventory, publicly track progress on LSL identification and replacement, engage communities, and enhance transparency.

Source: <https://www.epa.gov/groundwater-and-drinking-water/lead-and-copper-rule>

Host Organization(s): U.S. Environmental Protection Agency

6) Title: Funding and Technical Resources for Lead Service Line Replacement in Small and Disadvantaged Communities

Summary: This 24-page resource serves as a guide to help small and disadvantaged communities identify potential federal funding sources for lead service line replacement (LSLR) and technical assistance related to LSLR. The information includes an overview of the funding programs, ongoing application process, as well as contact information.

Source: <https://www.epa.gov/groundwater-and-drinking-water/supporting-materials/federal-revisions-lead-and-copper-rule>

Host Organization(s): U.S. Environmental Protection Agency

7) Title: Guidance for Developing and Maintaining a Service Line Inventory

Summary: This 16-page guide provides recommendations to public water systems in developing and maintaining a service line inventory and will help systems comply with the requirements under the Lead and Copper Rule Revisions (LCRR) that are in effect at the time of document publication. The guide will also assist water systems to begin replacing lead service lines (LSLs) as soon as possible. This guidance covers the lifecycle of the inventory, including inventory creation, material investigations, system reporting, data review, public accessibility of service line information, and service line consumer notification. In addition, the guidance provides best practices, case studies, and resources related to issues such as the identification of customers, governments, and governmental purchasing, best practices for service line material investigations, inventory from and foreign inventory accessibility tools to support inventory development and data tracking, and ways to prioritize

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FirstPreviousNextLast

1) Title: 2021 DW Workshop Session 3a - Monitoring & Distribution II: Corrosion & Lead

Summary: This 2-hour recording is from the 18th Annual EPA Drinking Water Workshop which provides in-depth information and training on solutions and strategies for handling small drinking water system challenges with a focus on monitoring, distribution, source, and treatment topics. This session is from the monitoring and distribution track and will focus on topics related to corrosion and lead in drinking water. The first presentation is titled "Lead in Drinking Water in Schools and Childcare Facilities: The Massachusetts Experience". In 2016, after the events in Flint, Michigan turned a spotlight on the continued issues of lead in drinking water, MassDEP developed an ambitious testing program that collected 60,000 samples at nearly 1,000 public schools. Four years later, in 2020 MassDEP expanded the testing program to include all 8,000 childcare facilities and programs in the state. This presentation will describe the assistance programs run by MassDEP, what the results tell us, and lessons learned. The second presentation is titled "Experiences with Michigan's New Lead and Copper Rule". This presentation will cover the changes to Michigan's lead and copper rules, present some of the data from monitoring over a two-year period, and Michigan's experience with implementing the new rule set. The third presentation is titled "Corrosion Control Evaluation Considerations with Change in Source and Treatment". This talk will outline the process by which Ohio EPA is ensuring corrosion implications are considered prior to a system making a source or treatment change so as to ensure a proactive approach to corrosion control.

Source: <https://www.epa.gov/water-research/agenda-and-recordings-18th-annual-epa-drinking-water-workshop-virtual>

Host Organization(s): U.S. Environmental Protection Agency


2) Title: A Renewed Commitment to Prevent Childhood Lead Exposure in the post-Flint Era

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# WaterOperator.org Events Calendar



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## Event Calendar

We constantly scour the Internet for water operator training events, workshops, classes, conferences, and webinars across the United States and on tribal lands. No longer do you need to visit two, three, or more websites in your area to find available training. We have it all here, in one easily-searchable place.

Search for Events

Use the search tool below to find events based on the criteria you designate.

Are we missing your organization? Email [info@wateroperator.org](mailto:info@wateroperator.org) to let us know.

Instructions: 1) To view events, select one or more filter criteria and/or enter a keyword (press the 'Go' button to apply a keyword filter).  
2) Click on an event to see the details.

Select...

Select...

CATEGORY

STATE

SPONSOR

Keyword:

Go

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Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22

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# WaterOperator.org Events Calendar

Instructions: 1) To view events, select one or more filter criteria and/or enter a keyword (press the 'Go' button to apply a keyword filter).  
2) Click on an event to see the details.

STATE

MaineMarylandMassachusettsMichigan

Select...

Keyword:

Go

Filters

STATE = 'Michigan'

Clear FiltersView List

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September 2023

Next

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6 <div>MWEA MRWA MRWA EGLE MRWA</div>	7 <div>MRWA Regulatory Monitoring And Sampling, Muir MIAWWA Advanced Cross Connection Seminar, Mount Pleasant</div>	8 <div>EGLE Drinking Water Treatment 1 Series Session 6: Chemical Feed Systems NEZAT Sewer Cleaning 102</div>	9
10	11 <div>EGLE Drinking Water Treatment 1 Series Session 7: Operator Duties and Ethics, Water Storage, and Pumping Systems</div>	12 <div>MWEA MRWA MIAWWA MRWA MRWA EGLE</div>	13 <div>MRWA Wastewater Operators Meeting, Caro MWEA C &amp; D Exam Preparation 2 Day, Lansing</div>	14 <div>MRWA Wastewater Operators Meeting, West Branch</div>	15 <div>MWEA Purpose and Fundamentals of Wastewater Treatment, Escanaba</div>	16
17	18	19 <div>MRWA EGLE MRWA MWEA MRWA</div>	20 <div>MRWA Fund. of Collection Systems, Lansing/Online AWRA From Forests to Faucets: Resilient Forests and Water Supplies</div>	21 <div>MRWA IPP Seminar, Lansing</div>	22	23
24	25 <div>EGLE Drinking Water Operations Course, Warren</div>	26 <div>MWEA GLCAP MIAWWA MRWA</div>	27 <div>MRWA Preliminary, Primary &amp; Secondary Treatment, Rockwood MWEA Fundamentals of Sludge 1, Lansing/Online</div>	28 <div>MRWA Fundamentals of Disinfection &amp; Tertiary Treatment, Lansing/Online</div>	29 <div>MWEA C &amp; D Exam Prep Class, Escanaba</div>	30

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## WaterOperator.org Events Calendar

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STATE  
Maine  
Maryland  
Massachusetts  
Michigan

CATEGORY  
Drinking Water Standards  
Financial Management  
Groundwater  
Lead and Copper

Select...

Keyword:  
  
Go

Filters  
STATE = 'Michigan'  
CATEGORY = 'Lead and Copper'  
Clear Filters View List

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10	11 EGLE Drinking Water Treatment 1 Series Session 7: Operator Duties and Ethics, Water Storage, and Pumping Systems	12 MIAWWA 85th Annual Conference and Exhibits, Port Huron	13	14	15	16
17	18	19 EGLE Great Lakes Water Infrastructure Conference, Kalamazoo	20	21	22	23
24	25	26	27	28	29	30
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STATE  
Maine  
Maryland  
Massachusetts  
Michigan

CATEGORY  
Drinking Water Standards  
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Lead and Copper

Select...

Keyword:  
  
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STATE = 'Michigan'  
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WaterOperator > Event Calendar > Calendar Details - Google Chrome

wateroperator.org/calendar\_details/ID/215616



### EGLE Great Lakes Water Infrastructure Conference, Kalamazoo

Start Date: 9/19/2023

End Date: 9/21/2023

City: Kalamazoo

State: Michigan

Location: Radisson Plaza Hotel at Kalamazoo Center,  
100 West Michigan Avenue

Start Time: 1:00 PM

Event Info: <https://egle.idloom.events/GLWIC2023>

For More Info: <https://egle.idloom.events/GLWIC2023/pages/Preliminary-Agenda>

Details: This conference will focus on sharing how Great Lakes states are addressing their water infrastructure challenges, imagining a better future, and mapping out how to get there. **Cost:** Full Rate: \$250 or \$195 (until 8/31). Daily Rate: \$125.00. **Credits:** CECS: DW 1.1, WW 1.5. See details.

Contact Information

Name: Alana Berthold  
Phone: 517-284-6854  
Email: [bertholda@michigan.gov](mailto:bertholda@michigan.gov)

Sponsor(s): Michigan Department of Environment, Great Lakes, and Energy

Fee: \$250.00

Continuing Education


Event Credit: See Details  
Accepted in: Michigan

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# WaterOperator.org Additional Resources

- Bi-weekly/monthly newsletter series:
  - Operator focused (DW, WW, Onsite WW)
  - Innovative technologies
  - Tribal operator focused
- Blog posts
- Groundwater and Well Care for Public Water Systems
  - Free virtual class for PWS operators and owners on best practices to maintain and protect a groundwater well.
  - Approved for 2 CEU's in Michigan

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# Thanks for your time!

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2023

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