



## Water Infrastructure and Cyber Resilience Division (WICRD) Products and Services List

The U.S. Environmental Protection Agency’s (EPA) Water Infrastructure and Cyber Resilience Division (WICRD) has developed a robust suite of products and services to improve the resilience of the water sector to all types of hazards. WICRD resources can be found at [www.epa.gov/waterresilience](http://www.epa.gov/waterresilience). Direct links to specific tools and resources are provided below.

Products are organized by topic: America’s Water Infrastructure Act, Assess Risks, Emergency Preparedness, Laboratory Support, Risk Communication, Mutual Aid and Assistance, Training and Exercises, Emergency Response and Recovery. The following product, Route to Resilience, incorporates the critical stages of resiliency and can assist water and wastewater utilities in locating the appropriate services to fulfill their needs.



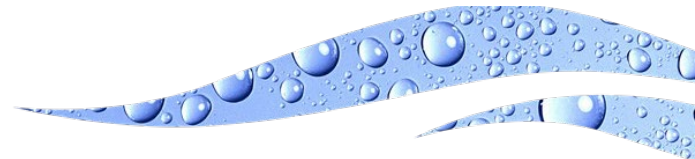
### Route to Resilience (RtoR)

RtoR helps small and medium sized drinking water and wastewater utilities learn more about becoming resilient to all-hazards. The interactive desktop application guides utilities through five stops along the Route to Resilience – Assess, Plan, Train, Respond, and Recover – and provides users with a custom report that highlights specific products and tools.

### America’s Water Infrastructure Act (AWIA) Sections 2013 and 2018

AWIA tools and resources can assist drinking water systems in conducting a risk and resilience assessment and developing or updating an emergency response plan. Spanish versions of AWIA resources can be found [here](#) and are denoted with an asterisk (\*).

- [AWIA Risk and Resilience Assessment and Emergency Response Plan Fact Sheet](#) – Provides an overview of the new risk and resilience assessment and emergency response plan (ERP) requirements for Community Water Systems (CWSs) serving a population greater than 3,300.
- [AWIA Small System Risk and Resilience Assessment Checklist](#) – Provides guidance for small CWSs to comply with the requirements for risk and resilience assessments under AWIA. \*
- [AWIA Section 2013 Technical Assistance Primer](#) – Provides information to technical assistance providers, circuit riders and others who will assist utilities in complying with the AWIA risk and resilience assessment, ERP, and EPA certification requirements.
- [Baseline Information on Malevolent Acts for Community Water Systems](#) – Assists utilities in estimating the likelihood of credible threats to their water system.
- [Vulnerability Self-Assessment Tool 2.0 \(VSAT Web 2.0\)](#) – Assists utilities in assessing the potential impacts from both man-made and natural disasters in accordance with AWIA requirements and provides actions to enhance security and resilience.
- [ERP Template and Guidance](#) – Assists utilities in creating an ERP in accordance with AWIA requirements. \*
- [AWIA Section 2018 Factsheet for the Water Sector](#) – Discusses the amendments to the Emergency Planning Community Right to Know Act (EPCRA) under AWIA Section 2018.



## Assess Risks

Risk assessment tools can assist water and wastewater utilities in identifying potential threats and vulnerabilities.



- [Climate Resilience Evaluation and Awareness Tool \(CREAT\)](#) – Under the [Creating Resilient Water Utilities \(CRWU\) initiative](#), this tool is a risk assessment application that helps utilities to adapt to extreme weather events by better understanding current and long-term weather conditions.
- [Resilient Strategies Guide](#) and [Case Study and Information Exchange Map](#) – Under the CRWU initiative, these products assist utilities in developing climate resilience plans that address their specific needs and priorities, along with providing information on what other utilities are doing to build and improve their climate resilience.
- [Water Health and Economic Analysis Tool \(WHEAT\)](#) – Helps utility owners and operators to better understand the human health and economic consequences of potential disasters.
- [Water Quality Surveillance and Response System \(SRS\)](#) – Helps drinking water utilities detect and respond to water quality problems – including contamination – in their distribution system or source water.
- [SRS Capabilities Assessment Tool](#) – Helps drinking water utilities assess existing SRS capabilities and develop potential enhancements to meet specific goals for water quality surveillance and response.
- [Water Sector Cybersecurity Brief for States](#) – Assists state technical assistance providers with assessing cybersecurity practices at water and wastewater systems and developing an improvement plan to reduce cyber risks.

## Emergency Preparedness

Water and wastewater utilities can build resilience by planning for emergencies before they occur. WICRD has developed both hazard- specific and generalized products to help utilities prepare for disasters.

- [Flood Resilience Guide](#) – Helps drinking water and wastewater utilities understand local flooding threats and identify practical solutions to protect critical assets.
- [Drought Response and Recovery Guide](#) – Helps drinking water and wastewater utilities identify key drought preparedness and response actions to address both short-term drought impacts and long-term drought resilience with a user-friendly guide and accompanying case studies.
- [Earthquake Resilience Products](#) – Helps drinking water and wastewater utilities understand the earthquake threat and identify practical solutions to protect critical assets using an easy-to-use guide, video, and interactive maps.
- [Power Resilience Guide](#) and [Public Safety Power Shutoff Standard Operating Procedure Template](#) – Assists drinking water and wastewater utilities in identifying and implementing key actions to improve resilience to power outages.
- [A Critical Connection: The Water and Healthcare/Public Health Sectors](#) - Provides information on building relationships, coordinating water use advisories, and partnering with Poison Control Centers.
- [Connecting Water Utilities and Emergency Management](#)



[Agencies](#) - Summarizes best practices for how water utilities can work with emergency management agencies to increase coordination and better respond to emergencies.

- [Guidance for Responding to Drinking Water Contamination Incidents](#) - Provides information to help drinking water utilities prepare for distribution system contamination incidents.
- [Planning for an Emergency Drinking Water Supply \(EDWS\)](#) – Prepares drinking water and wastewater utilities for large-scale disasters by developing an EDWS plan.
- [State EDWS Plan Instructions and Template](#) – Provides a template and instructions that can be used by state drinking water primacy agencies as a starting point in the development of a state-wide EDWS Plan.

## Laboratory Support

Laboratories provide vital emergency response services during a contamination incident.



- [Analytical Preparedness Full Scale Exercise Toolkit](#) – Provides states, water utilities, and laboratories the tools and training necessary to conduct an exercise that involves coordinating laboratory support during a contamination incident.
- [Analytical Preparedness Self-Assessment](#) – Seeks to increase stakeholder preparedness to respond to analytical needs arising from water contamination events by enhancing awareness of EPA water security tools and resources.
- [WLA Response Plan](#) – Outlines processes and procedures that can help individuals lead a coordinated laboratory response during water contamination incidents.
- [Water Laboratory Continuity of Operations Plan \(COOP\)](#) – Prepares laboratories for continued service during an emergency by developing a Continuity of Operations Plan (COOP), using available templates and instructions.
- [Accessing Laboratory Support Tool](#) – Shows users how to obtain support at the local, state, regional, and federal levels using tips, references and a one-page summary resource.
- [Sampling Guidance for Unknown Contaminants in Drinking Water](#) – Provides recommended procedures for the collection, storage, preservation, and transportation of potentially contaminated water, as well as monitoring, detection, and identification recommendations.
- [Guidance for Building Laboratory Capabilities to Respond to Drinking Water Contamination](#) – Provides guidance for water utilities wishing to build laboratory capabilities for response to water contamination. It identifies contaminant classes of concern, lists analytical methods, and provides information on the role of laboratory networks in responding to contamination.
- [Guidance for Building Field Capabilities to Respond to Drinking Water Contamination](#) – Provides guidance to help water utilities plan for sample collection, water quality parameter testing, and other field activities during the response to a contamination incident.



## Risk Communication

Communicating with the public prior to and during an emergency can help to mitigate public health and economic impacts.



- [Water Utility Public Awareness Kit](#) – Includes customizable print, web, and video materials that drinking water and wastewater utilities can use to inform customers about the value of water services, threats to water systems, and actions that households can take to prepare for service disruptions.
- [Developing Risk Communication Plans for Drinking Water Contamination Incidents](#) – Helps utilities develop and implement an effective Risk Communication Plan to respond to drinking water contamination incidents.
- [Community-Based Water Resiliency Guide](#) – Helps utilities and community members to understand the community's resilience to water service disruptions and describes tools and resources that can be used to enhance resilience.

## Mutual Aid and Assistance

During an emergency, “utilities helping utilities” can be an efficient way to access needed resources.

- [Water and Wastewater Agency Response Network \(WARN\) Resources](#) – Provides videos, guidance documents, and model agreements to help water and wastewater utilities build or strengthen their mutual aid and assistance networks.
- [WARN Promotional Video](#) – highlights key aspects of the WARN program and can be played at conferences and meetings.

## Training and Exercises

Training and exercises provide utilities with opportunities to learn more about resilience and practice response actions.



- [Water/Wastewater All Hazards Boot Camp Training: Emergency Planning, Response, and Recovery](#) – Provides users with the fundamentals of water sector resilience and resources for a comprehensive all-hazards program. The training is approved for operator continuing education credit in some states.
- [Tabletop Exercise \(TTX\) Tool for Water Systems](#) – Provides users with the resources to plan, conduct, and evaluate tabletop exercises that focus on water sector-related incidents and challenges.
- [SRS Exercise Development Toolbox \(EDT\)](#) – Guides users through the steps of designing exercises based on realistic contamination scenarios.
- [Incident Command System \(ICS\) Refresher Trainings](#) – Provides an overview of the ICS specifically for water and wastewater utility personnel using pre-recorded training webinars.
- [How to Develop a Multi-year Training and Exercise Plan: A Tool for the Water Sector](#) – Provides a template and walks drinking water and wastewater utilities through the process of developing a multi-year training and exercise plan.



## Emergency Response

Water and wastewater utilities can use these tools to improve response to an emergency.



- [Water Utility Response On-The-Go \(OTG\) App](#) – Enhances and mobilizes disaster response by providing easy access to severe weather information, key emergency contacts, emergency checklists, damage assessment forms and ICS resources. Search “EPA Response On The Go” in the App Store or Google Play.
- [Water Sector Incident Action Checklists](#) – Provides responders with simple, concise checklists that provide key actions to take before, during, and after an incident or natural disaster; includes checklists for drought, extreme heat and cold, tornadoes, wildfires, earthquakes, flooding, tsunamis, hurricanes, volcanic activity, power outage, pandemic, cybersecurity and harmful algal blooms.
- [Water Contaminant Information Tool \(WCIT\)](#) – Connects users with a database with information on over 800 drinking water contaminants including pathogens, pesticides, and toxic industrial chemicals. During a contamination incident, WCIT can aid in decision making.

## Recovery

Following an emergency, drinking water and wastewater utilities can use these resources to assist in recovery.



- [Federal Funding for Utilities in National Disasters \(Fed FUNDS\)](#) – Provides a collection of resources and information for federal disaster funding programs intended for water and wastewater utilities.
- [Public Assistance for Water and Wastewater Utilities in Emergencies and Disasters](#) – Provides information about water and wastewater utilities’ eligibility for disaster funds under the Federal Emergency Management Agency’s (FEMA’s) Public Assistance Grant Program.
- [Reimbursement Tips for Water Sector Emergency Response and Recovery](#) – Provides simple tips that drinking water and wastewater utilities can use to maximize reimbursement through local, state, or federal level mechanisms.
- [Hazard Mitigation for Natural Disasters: A Starter Guide for Water and Wastewater Utilities](#) – Assists water and wastewater utilities on how to mitigate against the impacts of natural disasters and encourages collaboration with local mitigation planners to implement priority projects using FEMA or other funding sources.
- [Maintaining or Restoring Water Quality in Buildings with Low or No Use](#) – Provides information for building owners/managers and businesses to maintain and restore the water quality in their buildings while these structures are closed or unoccupied following an emergency.