



Route to Resilience Report

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Introduction

This report contains all the products and services at each stop on the Route to Resilience. In the report you will find a listing of available tools and resources that you can use to help achieve your resilience goals. Each product listed will feature a hyperlink to take you directly to that product.

Use this report to have a discussion with others at your utility regarding your overall resilience goals. Based on those discussions, determine which action items you would like to implement from the suggested products and begin the journey to increase your utility's resilience!

The icons in the table below indicate whether a product listed in this report is applicable to all utilities, drinking water utilities, or wastewater utilities.

Product Legend

	All utilities
	Drinking water utilities
	Wastewater utilities

Please note that the product listings contained in this report are not exhaustive of all the materials available online through EPA's water resiliency webpage and from other sources. Rather, they are selected key product listings specifically designed to help you on your journey to resilience.

1 – Assess

Conducting an all-hazards risk assessment and developing a risk management plan are key steps for water sector utilities to reduce risk and increase resilience. A risk assessment examines a utility’s vulnerable assets, threats to those assets, and resulting consequences to the utility and community. Threats may be natural, such as hurricanes, tornadoes, and changing climate impacts, or man-made, such as cyber-attacks or intentional contamination. Threats, vulnerabilities, and consequences are assessed initially based on the security and resilience measures currently in place at the utility. Additional countermeasures are then analyzed for their cost-effectiveness in reducing risk and increasing resilience.





The result of the risk assessment is the development of a risk management plan. This plan contains a prioritized list of cost-effective projects to reduce risk and enhance resilience. It may include both near-term projects requiring minimal resources, such as emergency response and consequence management planning, as well as longer-term projects that require capital investment and can achieve significant risk reduction. Section 2013 of America's Water Infrastructure Act (AWIA), signed into law on October 23, 2018, requires community water systems serving more than 3,300 people to develop or update risk assessments and emergency response plans (ERPs) and review them at least once every five years to determine if they should be revised. The law specifies the components that the risk assessments and ERPs must address and establishes deadlines by which water systems must certify to EPA completion of the risk assessment and ERP.

Based on the capability goal you selected, the following products will help you to better characterize risks and ultimately implement your risk reduction projects.

Basic Product List

- 🌐 [VSAT Web \(Vulnerability Self Assessment Tool\)](#) - Helps utilities to identify the threats that pose the highest risk to critical assets, and to assess the cost and benefit of countermeasures to reduce these risks. VSAT Web is a risk assessment application designed for mobile devices as well as computers.
- 🌐 [Earthquake Resilience Guide](#) - Helps utilities to be more resilient to earthquakes that can damage above and below ground pipelines, pumps, tanks, administrative and laboratory buildings, reservoirs, chemical storage buildings and treatment facilities. (EPA 810-B-18-001)
- 🌐 [Flood Resilience Guide](#) - Helps utilities know the local flooding threat and identifies practical mitigation options to protect critical assets. (EPA 817-B-14-006)
- 🌐 [Resilient Strategies Guide for Water Utilities](#) - Provides options for drinking water, wastewater, and stormwater utilities to assist them in developing plans that contain strategies that address their specific needs and priorities. This guide outlines the resilience planning process and helps you to identify potential strategies and promote a better understanding of resilience strategies.
- 🌐 [Case Study and Information Exchange](#) - Explore real-world case studies of utilities addressing climate challenges. Review and submit potential adaptation strategies identified by utilities of similar type, location, or climate challenge that have shared their experiences and lessons learned to assist others.

Advanced Product List

-  [VSAT Web \(Vulnerability Self Assessment Tool\)](#) - Helps utilities to identify the threats that pose the highest risk to critical assets, and to assess the cost and benefit of countermeasures to reduce these risks. VSAT Web is a risk assessment application designed for mobile devices as well as computers.
-  [CREAT Risk Assessment Application for Water Utilities](#) – Helps utilities assess potential climate impacts and related risks. The tool guides users through a threat identification process and the design of adaptation plans based on their considered threats.
-  [Water Quality Surveillance and Response System \(SRS\) Capabilities Assessment Tool](#) - Helps utilities assess existing capabilities and identify potential enhancements to improve their water quality surveillance and response capabilities.
-  [Water Health and Economic Analysis Tool \(WHEAT\)](#) - Assists utility owners and operators in quantifying human health and economic consequences for a variety of scenarios that pose a significant risk to the water sector.

2 – Plan



Develop plans for your utility that will help to mitigate the risks and vulnerabilities that you identified during the previous step. This includes developing emergency response and risk communication plans, establishing response partners, and joining laboratory and mutual aid and assistance networks. Planning ultimately lays the groundwork for all the other stops on the Route to Resilience.

Emergency Response

All drinking water systems and the people and businesses they serve benefit from a well-prepared ERP. A comprehensive ERP describes the actions that a drinking water utility would take in response to various major incidents (e.g., hurricanes, tornadoes, storms, earthquakes, flood, acts of terrorism). The ERP should include plans, procedures, and identification of equipment that can be implemented or utilized to significantly lessen the impact of an “all-hazards” incident on public health and the safety and supply of drinking water provided to communities and individuals. Overall, the ERP enhances the ability of utility and response partner agency personnel to provide a proactive, quick, and effective response during an emergency.

Based on the capability goal you selected, the following products will help you to either update your ERP or develop an ERP for the first time:

Basic Product List

-  [All-Hazard Consequence Management Planning for the Water Sector](#) - Provides utilities with planning recommendations derived from emergency management, mitigation planning, and emergency response resources.
-  [Emergency Response Plan Template and Instructions](#) - Assists utilities with developing an ERP in accordance with AWIA Section 2013(b). The template and instructions feature a blank ERP template in Word format that can be easily accessed and modified by utility personnel.

- 🌐 [Drought Response and Recovery Guide for Water Utilities](#) - Provides worksheets, best practices, videos and key resources for responding to drought emergencies and building long-term resilience. The guide relays lessons learned from seven small- to medium-sized utilities nationwide that have responded to extreme drought conditions.

Intermediate Product List

- 💧 [Planning for Contamination Primer](#) - Provides steps for utilities to prepare for distribution system contamination incidents and includes a template for developing a Distribution System Contamination Response Procedure. (EPA 817-B-18-006)
- 🌐 [All-Hazard Consequence Management Planning for the Water Sector](#) - Provides utilities with planning recommendations derived from emergency management, mitigation planning, and emergency response resources.
- 🌐 [Drought Response and Recovery Guide for Water Utilities](#) - Provides worksheets, best practices, videos and key resources for responding to drought emergencies and building long-term resilience. The guide relays lessons learned from seven small- to medium-sized utilities nationwide that have responded to extreme drought conditions.

Advanced Product List



- 🌐 [All-Hazard Consequence Management Planning for the Water Sector](#) - Provides utilities with planning recommendations derived from emergency management, mitigation planning, and emergency response resources.
- 🗄️ [Wastewater Response Protocol Toolbox: Planning for and Responding to Wastewater Contamination Threats and Incidents](#) - Helps utilities, government agencies, and emergency responders in protecting wastewater systems from contamination incidents. (EPA 817-B-09-001)
- 💧 [Guidance for Responding to Drinking Water Contamination Incidents](#) - Provides information for managing distribution system contamination incidents. Discusses a framework for responding to an incident, stresses coordination with local, state, regional, and federal response partners, and describes how training and exercises improve response procedures. (EPA 817-B-18-005)
- 🌐 [Cybersecurity Incident Action Checklist](#) - Provides a list of activities that utilities can take to prepare for, respond to and recover from a cyber incident.

Risk Communication



As part of the utility ERP, risk communication procedures (i.e., Risk Communication Plan) should be developed to assist the utility Public Information Officer in communicating information during a crisis. These procedures guide utility personnel on when and how to communicate, how to compose messages, how to work with response partners and the media, and how to develop a delivery system for messages during an emergency. Utilities can derive many benefits by developing and implementing risk communication procedures, including the ability to provide timely, accurate, and helpful information both internally and externally. Many communication decisions and activities are identified during development of risk communication procedures, leaving fewer actions to be determined under the pressure of a crisis. Overall, this enhances the ability of utility personnel to provide a proactive, quick, and effective response during an emergency.

Based on the capability goal you selected, the following products will help you to either update your Risk Communication Plan (RCP) or develop an RCP for the first time:





Basic Product List

-  [Developing Risk Communication Plans for Drinking Water Contamination Incidents](#) - Helps utilities develop and implement an effective RCP to respond to drinking water contamination incidents. (EPA 817-F-13-003)
-  [Water Utility Public Awareness Kit](#) - Helps inform your customers and community about the threats to your water system and motivate them to take action.

Intermediate Product List

-  [Developing Risk Communication Plans for Drinking Water Contamination Incidents](#) - Helps utilities develop and implement an effective RCP to respond to drinking water contamination incidents. (EPA 817-F-13-003)
-  [Drinking Water Advisory Communication Toolbox](#) - Provides a practical guide and protocol for communicating with stakeholders and the public about water advisories that is based upon research and identified practices.

Advanced Product List

-  [Developing Risk Communication Plans for Drinking Water Contamination Incidents](#) - Helps utilities develop and implement an effective RCP to respond to drinking water contamination incidents. (EPA 817-F-13-003)
-  [Effective Risk and Crisis Communication during Water Security Emergencies: Report of EPA Sponsored Message Mapping Workshops](#) - Provides the results of the EPA-sponsored message mapping (a method of preparing ahead of time for crisis communication) workshops held in 2005 and 2006 for water sector organizations. (EPA 600-R-07-027)
-  [Need to Know: Anticipating the Public's Questions during a Water Emergency](#) - Provides practical information that crisis communicators can directly apply to planning and response. (EPA 600-R-12-020)
-  [Revised Public Notification Handbook](#) - Explains EPA's Public Notification Rule and provides examples of effective public notices. (EPA 816-R-09-013)

Response Partner Network

As part of a comprehensive ERP, an established response partner network is a collaborative team that includes personnel from local, state and federal agencies. Drinking water and wastewater utilities rely on and integrate with external partners during response and recovery. It is important to identify these individuals through training, exercises and community workshops prior to emergencies. Maintaining current contact lists with your response partners and ensuring that they are accessible during and after emergencies can help drinking water and wastewater utility personnel to get the resources necessary and communicate properly with their service population while restoring service.

Based on the capability goal you selected, the following products will help you to establish a response partner network:

Basic Product List

- 🌐 [Community-Based Water Resiliency Guide](#) - Helps utilities and communities prepare for water service interruptions before an emergency occurs and can be used by utilities, state primacy agencies, hospitals, emergency responders, emergency managers, elected officials and concerned citizens.
- 🌐 [Coordination of the Water and Emergency Services Sectors: An Important Step to Better Response](#) - Highlights why it is important for utilities to establish working relationships with local Emergency Management Agencies. (EPA 817-K-12-001)
- 🌐 [Power Resilience Guide for Water and Wastewater Utilities](#) - Helps utilities identify how to increase their resilience to power outages. (EPA 800-R-15-004)

Intermediate Product List

- 🌐 [Community-Based Water Resiliency Guide](#) - Helps utilities and communities prepare for water service interruptions before an emergency occurs and can be used by utilities, state primacy agencies, hospitals, emergency responders, emergency managers, elected officials and concerned citizens.
- 🌐 [Bridging the Gap: Coordination between State Primacy Agencies and State Emergency Management Agencies](#) - Highlights collaborative opportunities between state water programs and emergency managers. (EPA 817-F-12-006)

Advanced Product List

- 🌐 [Community-Based Water Resiliency Guide](#) - Helps utilities and communities prepare for water service interruptions before an emergency occurs and can be used by utilities, state primacy agencies, hospitals, emergency responders, emergency managers, elected officials and concerned citizens.
- 🌐 [EPA's Support to the Water Sector under the National Response Framework \(NRF\)](#) - Informs utilities and other partners and stakeholders about the roles and functions performed by EPA for the water sector under the NRF. (EPA 817-F-09-011)

Laboratory Support

Utilities should be prepared to effectively respond to local and national emergencies that threaten the integrity of the water supply. Such water contamination emergencies could result in a surge of water sampling and analysis that can quickly overwhelm resources or require laboratory expertise unavailable to most utilities. Proper preparation and planning by utilities is critical for reducing response times during an emergency.

Based on the capability goal you selected, the following products will help you to establish a laboratory network:

Basic Product List

- 🌐 [Water Laboratory Alliance \(WLA\) Analytical Preparedness Self-Assessment \(APS\)](#) - aims to increase stakeholder preparedness to respond to analytical needs arising from water contamination incidents by enhancing awareness of EPA water security tools and resources.

- 🌐 [Compendium of Environmental Testing Laboratories](#) - Contains an online database of environmental laboratories nationwide that is available to EPA; federal, state, and local emergency responders; laboratory personnel; and (with limited access) utilities.
- 🌐 [Water Laboratory Alliance: A Utility Perspective](#) - Highlights why it is valuable for utilities to consider becoming a part of the Water Laboratory Alliance. (EPA 817-F-09-007)
- 💧 [Guidance for Building Field Capabilities to Respond to Drinking Water Contamination](#) - Provides guidance for utilities to plan for and implement field activities that support sampling and analysis in response to drinking water contamination emergencies. (EPA 817-R-16-001)
- 🌐 [Accessing Laboratory Support Tool](#) - Shows how to access lab support at the local, state, regional and federal levels.

Intermediate Product List

- 🌐 [Water Laboratory Alliance Toolkit](#) - Provides an introduction to a selection of EPA resources that may be beneficial to your laboratory or organization. (EPA 817-B-12-001)
- 🌐 [Water Laboratory Alliance Response Plan](#) - Establishes a comprehensive, national laboratory response approach to water contamination incidents that covers a spectrum of activities including utility and laboratory preparedness, response, remediation, and recovery. (EPA 817-R-10-002)
- 🌐 [Water Laboratory Alliance Overview for Members Video](#) - Describes Water Laboratory Alliance basics such as what it is, how to join, and how to access lab resources.
- 🌐 [Accessing Laboratory Support Tool](#) - Shows how to access lab support at the local, state, regional and federal levels.

Advanced Product List

- 🌐 [Continuity of Operations Plan Interactive Template for Drinking Water and Wastewater Laboratories](#) - Helps drinking water and wastewater laboratories create a Continuity of Operations Plan (EPA 817-B-14-007).
- 🌐 [Water Contaminant Information Tool \(WCIT\)](#) - Provides drinking water-specific contaminant data compiled in a single location that can be accessed and used by the water sector to plan for and respond to drinking water contamination incidents.
- 💧 [Guidance for Building Laboratory Capabilities to Respond to Drinking Water Contamination](#) - Provides guidance regarding identification of representative contaminants from contaminant classes of concern to drinking water security, analytical methods, and potential support laboratories for responding to water contamination. (EPA 817-R-13-001)
- 🌐 [Accessing Laboratory Support Tool](#) - Shows how to access lab support at the local, state, regional and federal levels.

Mutual Aid and Assistance

Mutual aid and assistance agreements allow utilities to share resources with one another more efficiently and effectively. Participating in a mutual aid and assistance network will reduce the amount of time it takes to access resources and help restore normal operations more quickly. Mutual aid and assistance agreements can also reduce the costs of emergency preparedness by providing a pool of resources that can be shared, rather than each utility buying every resource for itself. Note that shared resources through mutual aid and assistance

agreements can be eligible for FEMA Public Assistance reimbursement. Utilities should consider having mutual aid and assistance agreements with neighboring utilities, participate in their intrastate Water and Wastewater Agency Response Network (WARN) program, understand how their resources may be shared through statewide agreements and the Emergency Management Assistance Compact (EMAC) in coordination with state and local emergency management agencies.

Based on the capability goal you selected, the following products will help you to build your mutual aid and assistance network:

Basic Product List

- 🌐 [Got WARN? Video](#) - Presents an overview of the WARN program to help educate utilities who are interested in becoming members.
- 🌐 [Mutual Aid/Assistance Agreements: Integrating WARN and Other Mutual Aid Agreements](#) - Describes how participating in multiple agreements provides utilities with flexibility in evaluating the most effective and efficient means of obtaining resources during an emergency. (EPA 817-F-11-001)
- 🌐 [Water Sector Mutual Aid and Assistance: Utilities Helping Utilities](#) - Overviews the WARN and explains why this mutual aid and assistance network is vital to utilities, especially during emergencies. (EPA 817-F-07-015)
- 🌐 [Wastewater Systems a Vital Component of WARN](#) - Describes the role of wastewater systems in a WARN. (EPA 817-F-10-003)

Intermediate Product List

- 🌐 [WARN Tabletop Exercise Facilitator Guide](#) - Helps a WARN to develop and execute a tabletop exercise designed to create, update and/or improve its WARN mutual aid/assistance operational plan and agreement. (EPA 817-R-08-005)
- 🌐 [State Primacy Agencies a Vital Component of WARN](#) - Describes the role of state primacy agencies in a WARN. (EPA 817-F-10-002)
- 🌐 [Small Water Systems a Vital Component of WARN](#) - Describes the role of small water systems in a WARN. (EPA 817-F-09-009)
- 🌐 [Tribal Water Systems a Vital Component of WARN](#) - Describes the role of tribal water systems in a WARN. (EPA 817-F-09-010)

Advanced Product List










- 🌐 [Water Utilities and the Emergency Management Assistance Compact \(EMAC\)](#) - Helps utilities understand what EMAC is and how it can be used to support them in exchanging resources across state lines during emergencies. (EPA 817-F-17-001)
- 🌐 [WARN Tabletop Exercise Lessons Learned](#) - Provides WARNs with information on how to improve their operations, based on lessons learned from former tabletop exercises. (EPA 817-F-11-004)
- 🌐 [WARN Tabletop Exercise Facilitator Guide](#) - Provides instructions for planning, organizing and conducting a tabletop exercise to create or update a WARN operational plan or agreement. The guide includes sample materials such as scenarios, discussion questions and presentation slides. (EPA 817-R-08-005)

3 – Train


Training and exercises provide an opportunity for utilities to practice response actions and learn where improvements are needed to increase overall preparedness. This helps to better understand roles and responsibilities before emergencies occur and ensures that personnel are familiar with the response procedures contained in ERPs. The training strategy used should be modeled after the Department of Homeland Security Exercise and Evaluation Program (HSEEP). This program provides a system to develop and conduct exercises from discussion based, such as workshops, to operations based, such as full-scale exercises.

Based on the capability goal you selected, the following products will help you to implement a Training & Exercise Program as described by HSEEP:

Basic Product List

-  [Water Quality Surveillance and Response System Exercise Development Toolbox](#) - Helps utilities and response partners design, develop, conduct, and evaluate Surveillance and Response System (SRS)-related discussions and operations-based exercises. These exercises help to develop, teach, refine, and improve SRS procedures.
-  [ICS-100 Introduction to the Incident Command System \(ICS\) Refresher Training](#) - Designed to quickly refresh the basic concepts and vocabulary for utility personnel already certified in ICS-100.
-  [ICS-200 ICS for Single Resources and Initial Action Incidents Refresher Training](#) - Designed to quickly refresh the basic concepts and vocabulary for utility personnel already certified in ICS-200.
-  [NIMS-700 Introduction to the National Incident Management System \(NIMS\) Refresher Training](#) - Designed to quickly refresh the basic concepts and vocabulary for utility personnel already certified in NIMS-700.
-  [NRF-800 Introduction to the National Response Framework \(NRF\) Refresher Training](#) - Designed to quickly refresh the basic concepts and vocabulary for utility personnel already certified in NRF-800.
-  [How to Develop a Multi-year Training & Exercise \(T&E\) Plan](#) - Assists utilities to create multi-year T&E plans that can lead to increased emergency preparedness. (EPA 816-K-11-003)
-  [Water/Wastewater Utility All-Hazards Bootcamp Training](#) - Designed for water and wastewater employees responsible for emergency response and recovery activities. It also explains why and how to implement an all-hazards program.
-  [Workshop Planner for Water Utilities Adapting to Extreme Weather Events](#) - Assists drinking water and wastewater utility personnel, technical assistance providers and other water sector stakeholders with conducting an extreme events adaptation workshop. To provide guidance, tailored materials are generated by the tool for your specific workshop needs.
-  [Tabletop Exercise Tool for Water Systems](#) - Helps utilities plan and facilitate tabletop exercises that address an all-hazards approach to emergency preparedness and response, including natural hazards and manmade incidents. (EPA 817-C-10-001)

Intermediate Product List

-  [Water Quality Surveillance and Response System Exercise Development Toolbox](#) - Helps utilities and response partners design, develop, conduct, and evaluate Surveillance and Response System (SRS)-

related discussions and operations-based exercises. These exercises help to develop, teach, refine, and improve SRS procedures.

- 🌐 [Incident Command System \(ICS\)-300 and 400 Trainings](#) - Provides a contact for your state emergency management agency's State Training Officer in order to find ICS-300 and ICS-400 course offerings in your state.
- 🌐 [Tabletop Exercise Tool for Water Systems](#) - Helps utilities plan and facilitate tabletop exercises that address an all-hazards approach to emergency preparedness and response, including natural hazards and manmade incidents. (EPA 817-C-10-001)

Advanced Product List

- 💧 [Water Quality Surveillance and Response System Exercise Development Toolbox](#) - Helps utilities and response partners design, develop, conduct, and evaluate Surveillance and Response System (SRS)-related discussions and operations-based exercises. These exercises help to develop, teach, refine, and improve SRS procedures.
- 💧 [Analytical Preparedness Full-Scale Exercise \(AP-FSE\) Toolkit](#) - Provides states, utilities and laboratories the tools and training needed to conduct an exercise that involves coordinating laboratory support during a contamination incident. (EPA 810-B-20-001)
- 🌐 [Don't Get Soaked: Invest in Emergency Preparedness, Prevention and Mitigation Activities Video](#) - Educates drinking water and wastewater utility managers, board members, elected and appointed officials on the benefits of investing in preparedness, response and recovery activities at the utility.

4 – Respond

At some point, utilities will likely find themselves responding to an actual emergency that is impacting their operations and community. This is where previous preparedness planning and training activities will really pay off. There are several valuable resources that are available to assist utility personnel during a disaster response. Key state-level contact information, weather links and streamlined checklists are available to facilitate response. Additionally, mobile websites and smart phone apps tailored to the water sector can facilitate access to response information from remote locations. Finally, online databases are available to help you quickly locate certified analytical laboratories or provide information on unusual water contaminants.

Based on the capability goal you selected, the following products will help you during times of emergency:

Basic Product List

- 🌐 [Water Utility Response On-The-Go Mobile Application](#) - Consolidates, and makes accessible from the field, information and tools that water utility operators and response partners may need during an emergency. Available resources include response partner contact information, severe weather and forecasting tools, damage assessment forms, incident-specific action checklists, incident command system information and links to additional resources.
- 🌐 [Incident Action Checklists for Water Utilities](#) - Suggests response activities for water and wastewater facilities to facilitate emergency preparedness, response and recovery actions for drought, extreme heat and cold, tornadoes, wildfires, earthquakes, flooding, tsunami, hurricanes and volcanic activity.

- 🌐 [Weather and Hydrologic Forecasting for Water Utility Incident Preparedness and Response](#) - Compiles a list of resources that utilities use to maintain awareness of current and projected weather conditions. (EPA 817-F-13-005)

Advanced Product List

- 🌐 [Water Utility Response On-The-Go Mobile Application](#) - Consolidates, and makes accessible from the field, information and tools that water utility operators and response partners may need during an emergency. Available resources include response partner contact information, severe weather and forecasting tools, damage assessment forms, incident-specific action checklists, incident command system information and links to additional resources.
- 🌐 [Incident Action Checklists for Water Utilities](#) - Suggests response activities for water and wastewater facilities to facilitate emergency preparedness, response and recovery actions for drought, extreme heat and cold, tornadoes, wildfires, earthquakes, flooding, tsunamis, hurricanes and volcanic activity.
- 🌐 [Weather and Hydrologic Forecasting for Water Utility Incident Preparedness and Response](#) - Compiles a list of resources that utilities use to maintain awareness of current and projected weather conditions. (EPA 817-F-13-005)
- 🌐 [Federal Funding for Water and Wastewater Utilities in National Disasters \(Fed FUNDS\)](#) - Provides tailored information to utilities about applicable federal disaster funding programs.
- 🌐 [Water Contaminant Information Tool \(WCIT\)](#) - Provides drinking water-specific contaminant data compiled in a single location that can be accessed and used by the water sector to plan for and respond to drinking water contamination incidents.
- 🌐 [Compendium of Environmental Testing Laboratories](#) - Contains an online database of environmental laboratories nationwide that is available to EPA; federal, state, and local emergency responders; laboratory personnel; and (with limited access) utilities.

5 – Recover

Recovery of the water sector entails the efficient restoration of the systems and services that support a viable, sustainable community. Hazard mitigation for the water sector refers to actions taken to reduce or eliminate the long-term risk to human life and property from natural hazards. The water sector can participate in recovery and mitigation planning both before and after an emergency occurs. A disaster recovery plan can be developed to outline key coordination activities with local and state agencies, and to outline roles and responsibilities with the community, other infrastructure sectors, and local/state/federal governments.

Based on the capability goal you selected, the following products will help you to develop a recovery strategy for your utility:

Basic Product List

- 🌐 [Federal Funding for Water and Wastewater Utilities in National Disasters \(Fed FUNDS\)](#) - Provides tailored information to utilities about applicable federal disaster funding programs.

- 🌐 [Public Assistance for Water and Wastewater Utilities in Emergencies and Disasters](#) - Provides information about the eligibility of utilities for disaster funds under the Federal Emergency Management Agency's (FEMA's) Public Assistance Grant Program. (EPA 817-F-10-009)
- 🌐 [Reimbursement Tips for Water Sector Emergency Response and Recovery](#) - Presents tips utilities can use to maximize reimbursement through local, state, or federal level mechanisms. (EPA 817-F-09-004)
- 🌐 [Hazard Mitigation for Natural Disasters: A Starter Guide for Water and Wastewater Utilities](#) - Encourages utilities to work with their local mitigation planners to implement priority projects using FEMA or other source funding. (EPA 810-B-16-002)
- 🌐 [Reimbursement Tips for Emergency Laboratory Support](#) - This tips sheet has been developed to facilitate public laboratory reimbursement through local, state, or federal level mechanisms when fee for service agreements have not been established. (EPA 817-F-09-003)

Advanced Product List

- 🌐 [Resilient Strategies Guide for Water Utilities](#) - Provides options for drinking water, wastewater, and stormwater utilities to assist them in developing plans that contain strategies that address their specific needs and priorities. This guide outlines the resilience planning process and helps you to identify potential strategies and promote a better understanding of resilience strategies.
- 🌐 [Earthquake Resilience Guide](#) - Helps utilities to be more resilient to earthquakes that can damage above and below ground pipelines, pumps, tanks, administrative and laboratory buildings, reservoirs, chemical storage buildings and treatment facilities. (EPA 810-B-18-001)
- 🌐 [Flood Resilience Guide](#) - Helps utilities know the local flooding threat and identify practical mitigation options to protect critical assets. (EPA 817-B-14-006)
- 💧 [Drought Response and Recovery Guide for Water Utilities](#) - Provides worksheets, best practices, videos and key resources for responding to drought emergencies and building long-term resilience. The guide relays lessons learned from seven small- to medium-sized utilities nationwide that have responded to extreme drought conditions.
- 🌐 [Hazard Mitigation for Natural Disasters: A Starter Guide for Water and Wastewater Utilities](#) - Encourages utilities to work with their local mitigation planners to implement priority projects using FEMA or other source funding. (EPA 810-B-16-002)

For More Help

If you have any questions about any of the products recommended in your Route to Resilience report, or about utility resilience in general, please contact us at WSD-Outreach@epa.gov.