DWSRF and Capacity Building in Action: Climate Change Resiliency

December 12th, 2022

EPA

OFFICE OF GROUND WATER AND DRINKING WATER

Welcome!

All attendees are in listen-only mode. Please do not unmute yourself during the presentation.

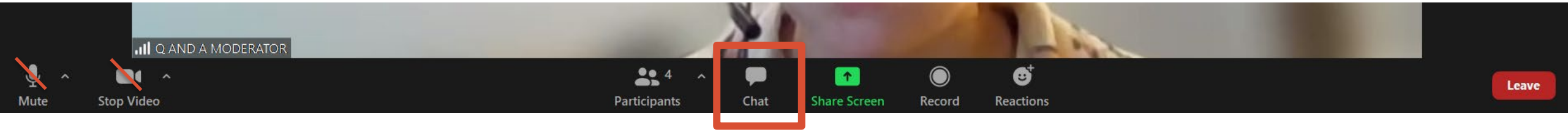
We will be recording this webinar. Please do not turn on your video during the presentation.

The recording and slides will be posted and a link emailed to all registered attendees 1-2 weeks after the webinar.

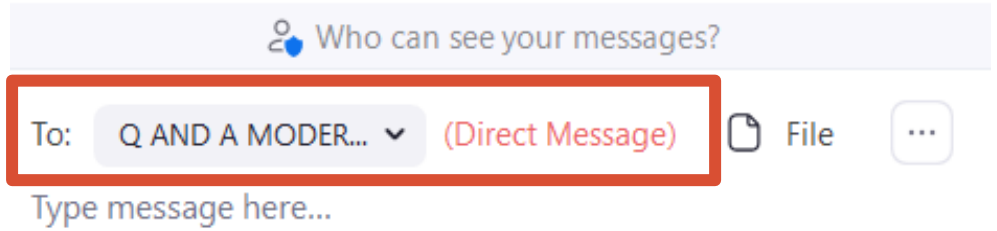
Check out https://www.epa.gov/dwreginfo/drinking-water-training for more drinking water webinars and trainings.

We encourage attendees to ask questions throughout the presentation by using the chat feature.
DIRECT YOUR QUESTIONS TO "Q AND A MODERATOR"

OFFICE OF GROUND WATER AND DRINKING WATER



Chat box will pop up. Type in your questions at the bottom.
PLEASE DIRECT YOUR QUESTIONS TO "Q AND A MODERATOR"



Learning Objectives

- Introduction to DWSRF Climate Resilience-Related Eligibilities
  Dallas Shattuck, EPA HQ

- Climate Related Resources for Utilities
  Dawn Ison, EPA HQ

- EPA's Creating Resilient Water Utilities (CRWU) Program
  Curt Baranowski, EPA HQ

- Q&A at the end of the presentation.

Climate Change Resiliency the Drinking Water State Revolving Fund

December 2022

United States Environmental Protection Agency

Office of Water

Climate Change and Drinking Water Utilities

- Changes in climate, such as higher average temperatures and increased storm frequency and intensity, can intensify public health stressors including decreased air and water quality, accidental exposure to chemicals, and extreme heat.
- The operations and infrastructure of drinking water utilities can be threatened by more frequent and intense storms that can lead to flooding. Operations and infrastructure can also be adversely affected by more frequent and intense drought, more rapid sea-level rise, and saltwater intrusion.
- Communities should consider possible ways to address anticipated current and future climate threats to their drinking water systems.

Sources: https://www.epa.gov/arc-x/implications-climate-change; https://www.epa.gov/arc-x/adaptation-actions-water-utilities#tab-1

Drinking Water State Revolving Fund: Overview

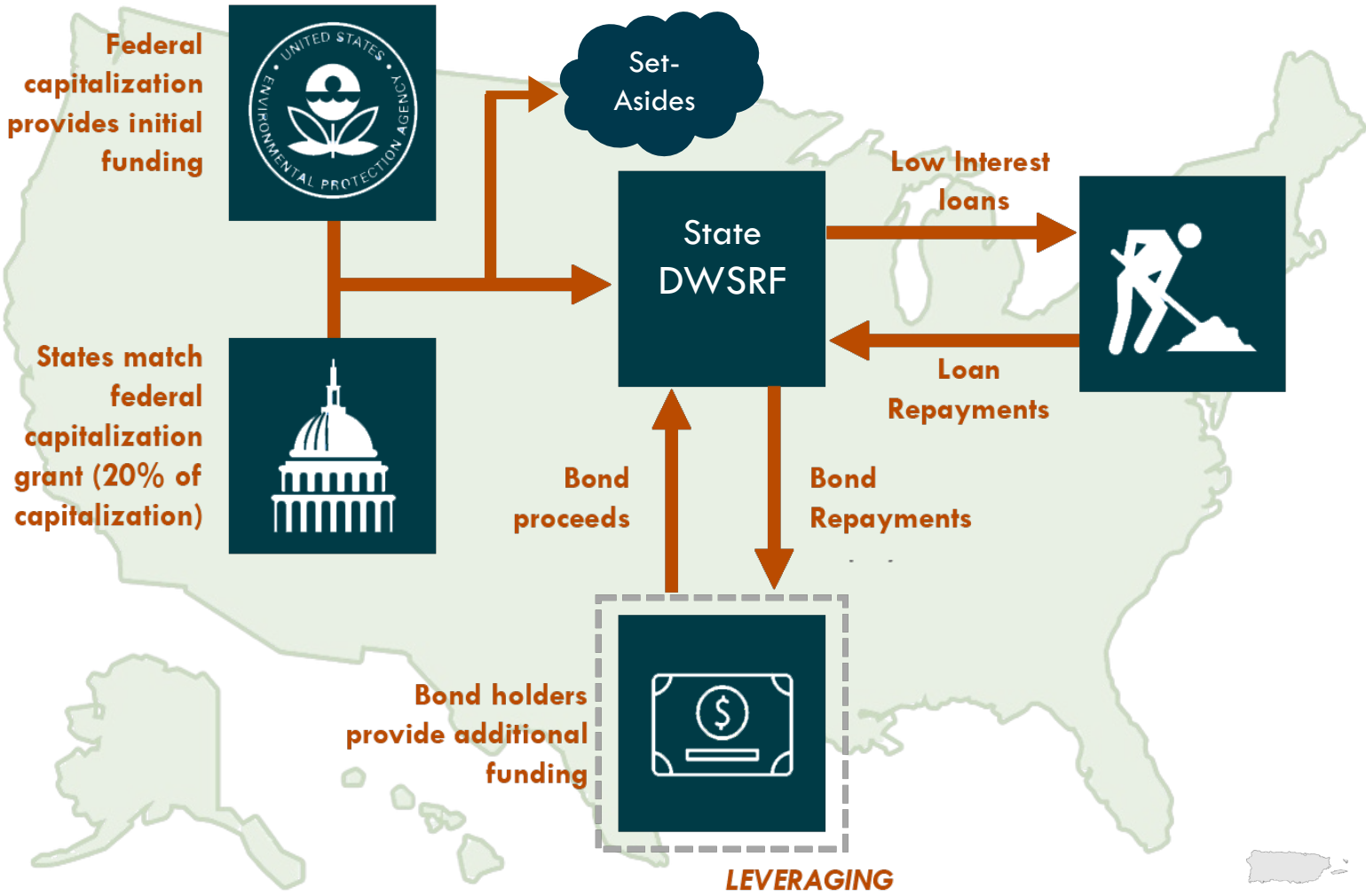
How does the DWSRF work?

- Congress appropriates funding to EPA for the DWSRF program. EPA then awards capitalization grants (i.e., seed money) to each state.
- States may take part of their capitalization grant as set-aside funds, if desired.
- For most appropriations, each state provides a 20 percent match to those capitalization grants.
- Public water systems apply for project funding from their state's DWSRF.

Drinking Water State Revolving Fund: Overview

How does the DWSRF work?

- States then provide below-market rate loans and other authorized assistance to eligible public water systems for water infrastructure projects.
- States disburse DWSRF funds to those eligible assistance recipients on construction costs that are incurred.
- Assistance recipients repay their loans back into the state's DWSRF typically over 20-40 years.
- The state DWSRF programs use these "recycled" funds to make additional loans, and the "revolving" cycle continues.


Federal capitalization provides initial funding
Set-Asides
Low Interest loans
State DWSRF
States match federal capitalization grant (20% of capitalization)
Loan Repayments
Bond proceeds
Bond Repayments
Bond holders provide additional funding
LEVERAGING

Who is Eligible to Use the DWSRF?

- **Public or private* community water systems**
  - A water system serving at least 15 service connections used by year-round residents, or regularly serves at least 25 year-round residents
- **Nonprofit non-community water systems**
  - Some examples may include schools, publicly-owned campgrounds, parks, and churches that are not part of a community water system.

**Some states do not fund private systems.*

What Type of Projects Can Be Funded by the Loan Fund?

- **Source**: Rehabilitation of wells or development of eligible sources to replace contaminated sources
- **Treatment**: Projects to install or upgrade facilities to improve drinking water quality to comply with drinking water regulations
- **Transmission and distribution:** Rehabilitation, replacement, or installation of pipes to improve water pressure to safe levels or to prevent contamination caused by leaky or broken pipes, including lead service line replacement
- **Storage**: Installation or upgrade of finished water storage tanks to prevent microbiological contamination from entering the distribution system
- **Consolidation**: Interconnecting two or more water systems
- **Creation of new systems**: Construct a new system to serve homes with contaminated individual wells or consolidate existing systems into a new regional water system
- **Planning and design:** For all project types listed above.

https://www.epa.gov/sites/default/files/2019-10/documents/dwsrf_eligibility_handbook_june_13_2017_updated_508_versioni.pdf

DWSRF Set-Asides

- Set-asides provide additional non-infrastructure tools for states to help achieve the public health protection objectives of SDWA.
  - complement infrastructure financing
  - strengthen Public Water System Supervision (PWSS) program
  - to implement “preventive” SDWA programs
    - Capacity Development – technical, managerial, and financial (TMF)
    - Operator Certification
    - Source Water Protection

How Much Funding Can Be Set-Aside?

- States can take up to ~ 31% of their capitalization grant for set-aside activities

Purpose	Set-Aside Amount (up to)
Administration of DWSRF and Technical Assistance to Water Systems	*Greatest of:* **4%,** $400k, or 1/5th of a Percent of Fund Valuation
Technical Assistance to Small Water Systems (<10,000 population)	2%
State Program Management • Administer Public Water System Supervision and Source Water Protection Programs • Implement Capacity Development Strategy and Operator Certification Program	10%
Local Assistance to Public Water Systems for Source Water Protection and Capacity Development • Loan to acquire land/conservation easement for Source Water Protection • Loan to implement voluntary Source Water Protection measures • Provide assistance to public water systems for Capacity Development Strategy • Establish/Implement Wellhead Protection Program and Source Water Protection	15%

Bipartisan Infrastructure Law (BIL)

- Also known as the Infrastructure Investments and Jobs Act (IIJA).
- Signed by President Biden on November 15, 2021.
- Historic investment in key programs and initiatives implemented by the U.S. Environmental Protection Agency to build safer, healthier, cleaner communities.
- Includes $50 billion to EPA to strengthen the nation's drinking water and wastewater systems – the single largest investment in water that the federal government has ever made.
- Approximately $30 billion of this funding through the existing DWSRF programs.

DWSRF Climate Resilience-Related Eligibilities

United States Environmental Protection Agency

Office of Water

Example DWSRF Climate Resiliency Assistance (Loan Fund)

- Eligible resilience projects pertain to many activities that help to:
  - Preserve, protect, and maintain the operation of public water systems
  - Establish interconnections/partnerships with other utilities
  - Energy and water efficiency upgrades
  - Treat alternative sources with differing water quality and vulnerabilities
  - Relocate or deepen wells/new water sources (including aquifer storage and recovery)
  - Increase finished water storage capacity
  - Institute backflow prevention (including backsiphonage)
  - Conduct risk and vulnerability assessments*
  - Resiliency and recovery-related infrastructure improvements
    - Backup generators, telemetry systems for remote operation, saltwater-resistance equipment
    - Waterproofing electrical components, sealing structures to prevent floodwater intrusion, and adding wind-resistant features.
  - Planning and design of climate resiliency/recovery projects*

**Eligible under both the loan fund and set-asides*.

Example DWSRF Climate Resiliency Assistance (Set-asides)

- Conduct risk and vulnerability assessments*
- Planning and design of climate resiliency/recovery projects*
- Source water protection – including purchasing recharge areas and implementation of protection measures
- Drought monitoring, water loss audits, leak detection studies, water conservation plans, drought response plans*
- Training for water systems
- Develop and update emergency response plans
- Table-top and full-scale exercises

**Eligible under both the loan fund and set-asides.*

Example DWSRF Climate Resiliency Assistance (Set-asides)

- Extreme weather mitigation plans, business continuity plans, predictive tools, vulnerability assessments
- Emergency preparedness training
- Implement State PWSS primacy agency capabilities for responding to emergencies
- Develop ordinances to promote and increase public awareness on water reuse
- Climate adaption and mitigation plans*
- Technical assistance to water systems to increase their resiliency

**Eligible under both the loan fund and set-asides.*

Set-Asides In Action

Maine

- Emergency response table-top exercises
- ME Water and Wastewater Agency Response Network (MEWARN) to help utilities prepare for emergencies and organize response

New Mexico

- Water loss audits for small systems, water reuse studies, and regional planning/sustainability assistance (including climate resilience assistance)

New Hampshire

- Climate change vulnerability assessments, water audits, energy audits

DWSRF Resources

- **DWSRF**: https://www.epa.gov/dwsrf
  - State DWSRF contacts
- Addressing and Mitigating Drought with the DWSRF
- Developing Emergency Response Plans with the DWSRF
- Addressing Water Reuse with the DWSRF
- Addressing Resiliency with the DWSRF
- Addressing and Mitigating Flooding with the DWSRF (coming soon!)
- DWSRF Eligibility Handbook

Thank you!

Dallas Shattuck, Shattuck.Dallas@epa.gov

EPA United States Environmental Protection Agency

Climate Related Resources for Utilities

Dawn Ison
U.S. Environmental Protection Agency
Office of Water

Assess Risk

Risk = function of threat, vulnerability and consequence

Risk and Resilience Assessment Checklist

EPA Resilience CEU Program

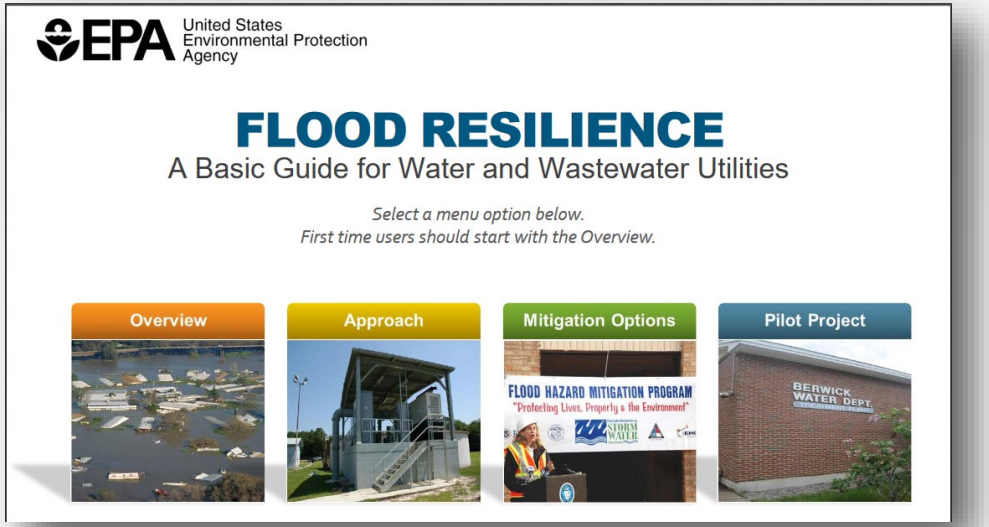
Mitigate Risk

EPA Tools to Assess and Mitigate Risk

(by disaster type)

Resilience Guides

- Floods
- Earthquakes
- Drought
- Power
- Cybersecurity Assessments

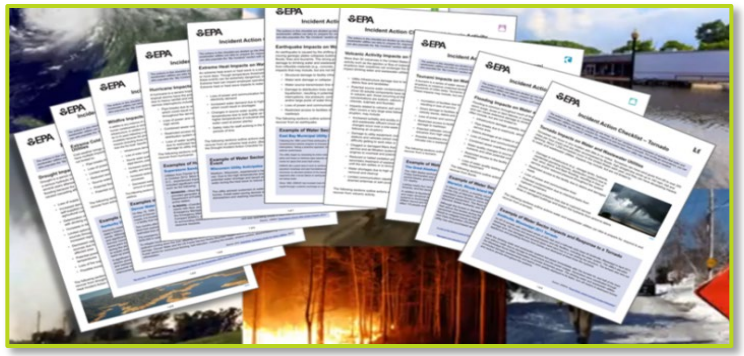


www.epa.gov/waterresilience

EPA Tools for Emergency Response Program

ERP Template

Mutual Aid (WARN)



Incident Action Checklists

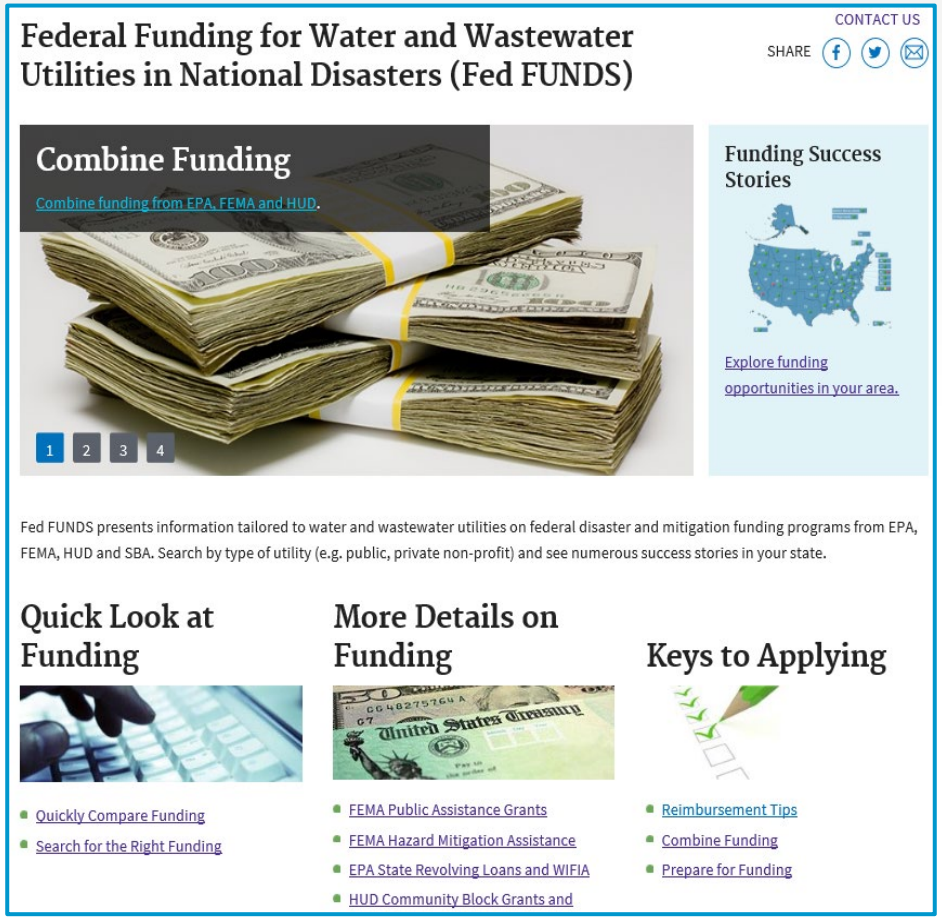
Response on the Go App

www.epa.gov/waterresilience

EPA Tools for Recovery

Fed FUNDs tool

- Funding from EPA, FEMA, USDA, HUD
- Funding examples
- Quick search

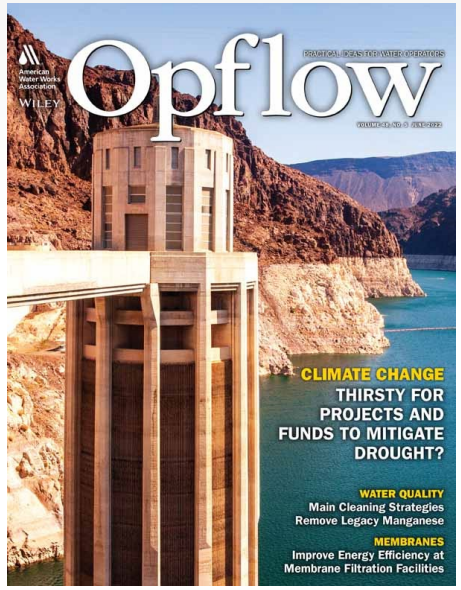


epa.gov/fedfunds

Communication to Water and Wastewater Utilities

Flood Resilience Protects Utilities in Uncertain Times

Prepare for Earthquakes with USEPA Guidance and Training



Thirsty for Projects and Funds to Mitigate Drought

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Questions?

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513-569-7686

www.epa.gov/waterresilience

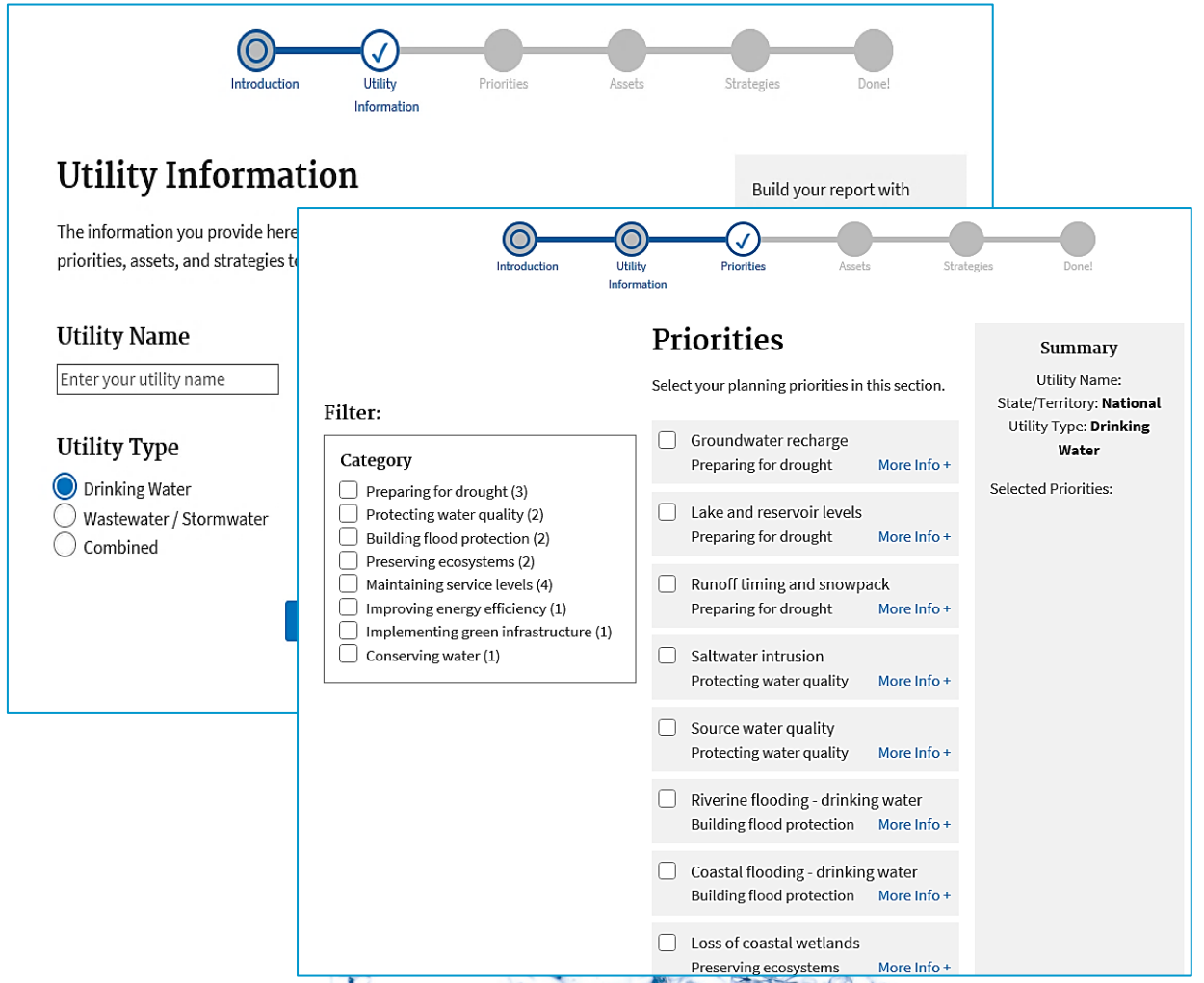
U.S. EPA's Creating Resilient Water Utilities: Our Mission

From Left to Right: Griggs Reservoir on Scioto River in OH; Water Replenishment District in Southern CA; Water Sanitation Area in Cincinnati, OH; Water Treatment Plant in San Diego, CA

- Provide utilities with the practical tools, training, and technical assistance needed to increase resilience to climate change
- Promote a clear understanding of climate science data and potential long-term adaptation options
- Collaborate with utilities and partners to increase our reach and improve our tools

Resilient Strategies Guide

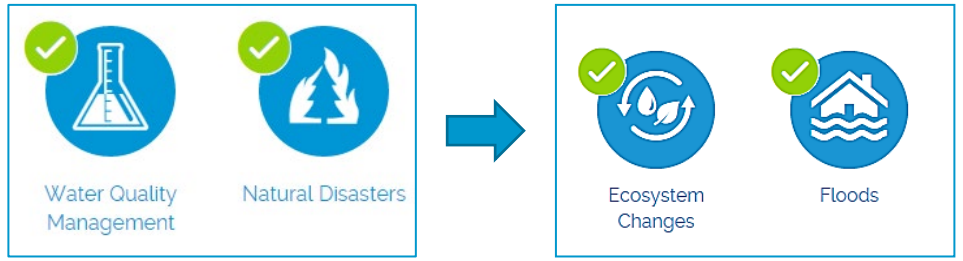
- Introduction to adaptation planning for those with limited knowledge and/or experience
- Final report documents priorities, vulnerable assets, and relevant strategies to explore during adaptation planning
- Provides financing advice and best practices from other utilities

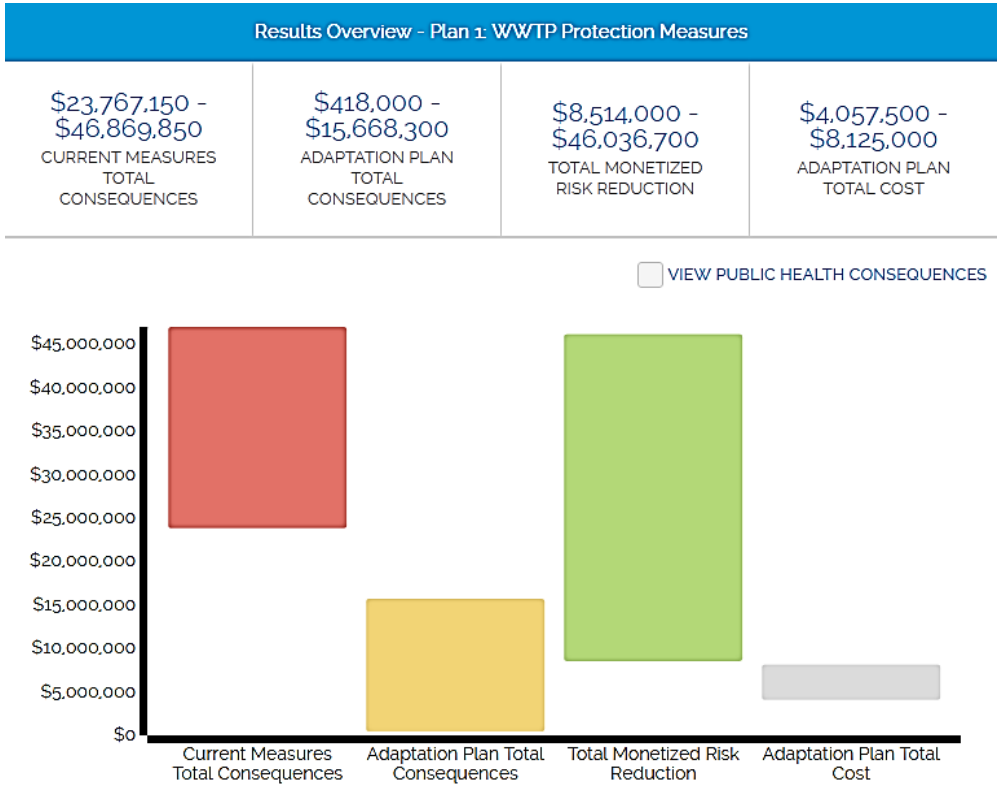


Climate Resilience Evaluation and Awareness Tool

CREAT 3.0

- **First of its kind** – web-based climate change risk assessment tool for the water sector
- **Flexible** and **customizable** risk assessment framework
- **Guides users** through identifying impacts, vulnerable assets, and adaptation options to help **reduce risks**
- Built with **significant stakeholder input**
- **Natural disaster risk assessment: VSAT**
- CRWU **conducts trainings and workshops** to assist utilities





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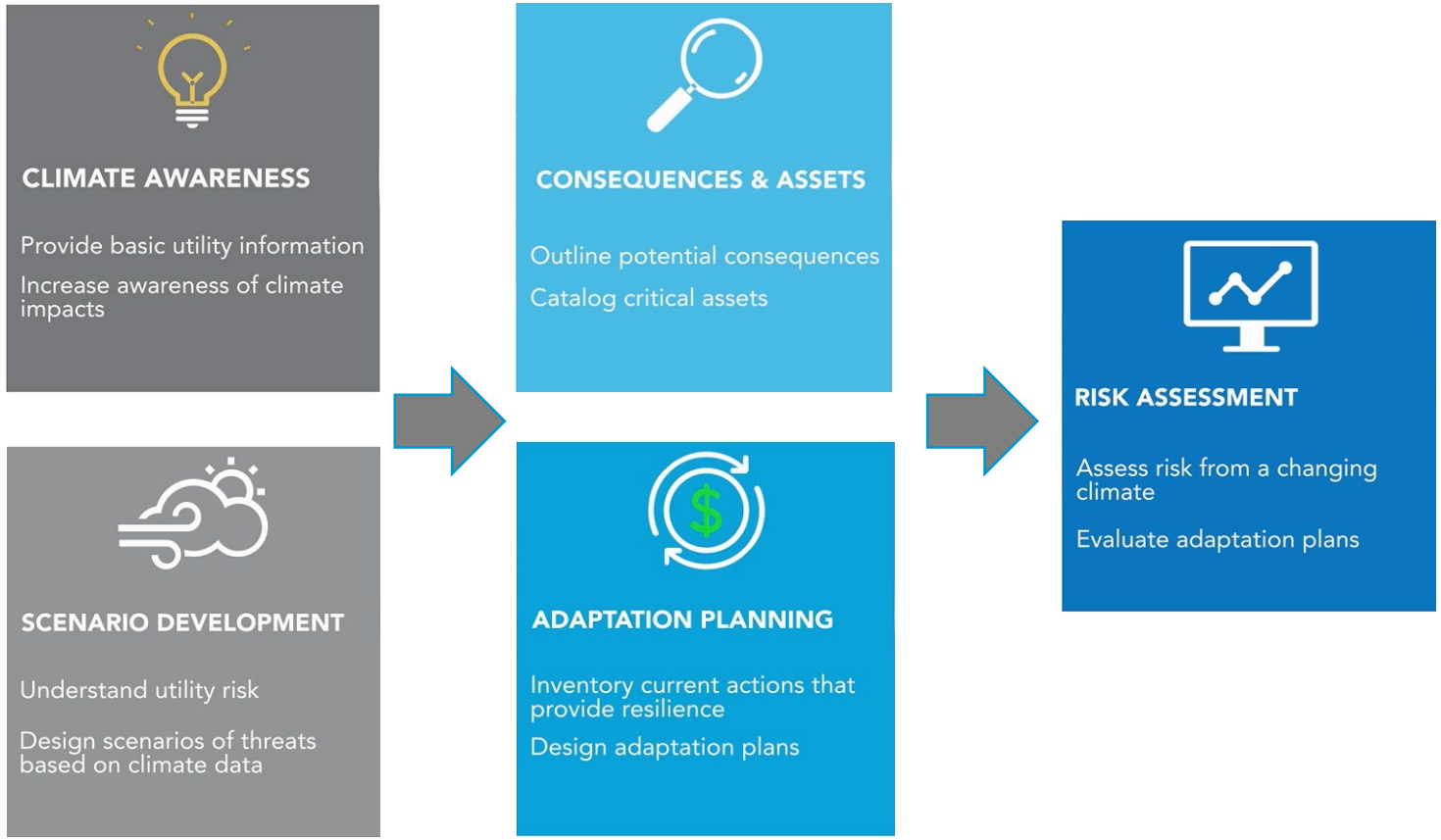
Climate Resilience Evaluation and Awareness Tool

CREAT 3.0

- **Module-based process** with clearly defined goals and reports
- Presents available climate data at the **regional and local levels**
- Multiple scenarios provided to help **capture uncertainty**
- **Assessment of current resilience** will help inform **adaptation planning**
- Results help utilities compare **risk reduction value** and **implementation costs**



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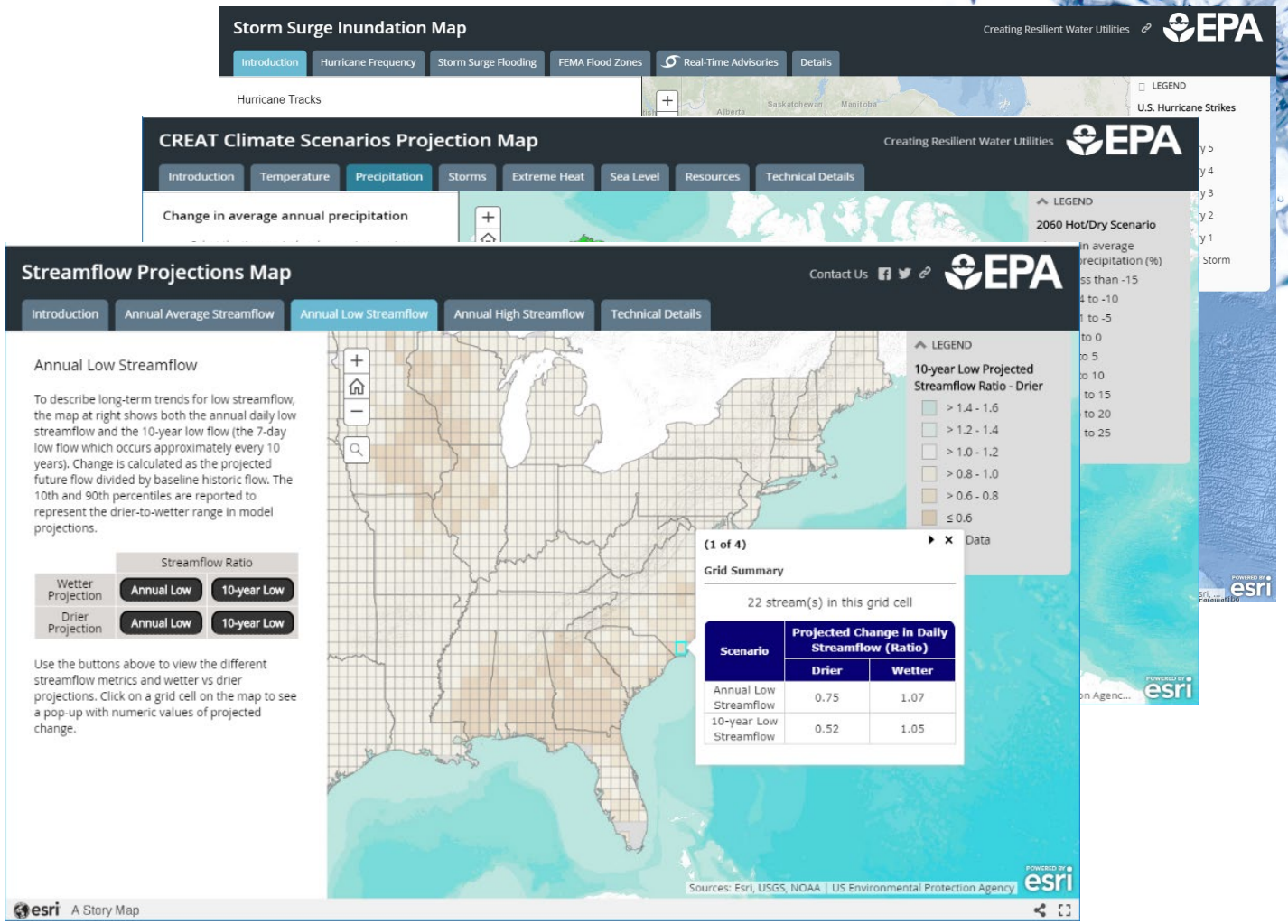
Interactive Climate Change and Weather Maps

- Storm Surge Inundation Map
  - Displays coastal flooding, hurricane surge models, FEMA flood zones, and more
- Climate Scenarios Projection Map
  - Displays local scenarios, potential changes in temperature and precipitation, and more
- Streamflow Projections Map
  - Displays possible changes in flow conditions for U.S. streams and rivers



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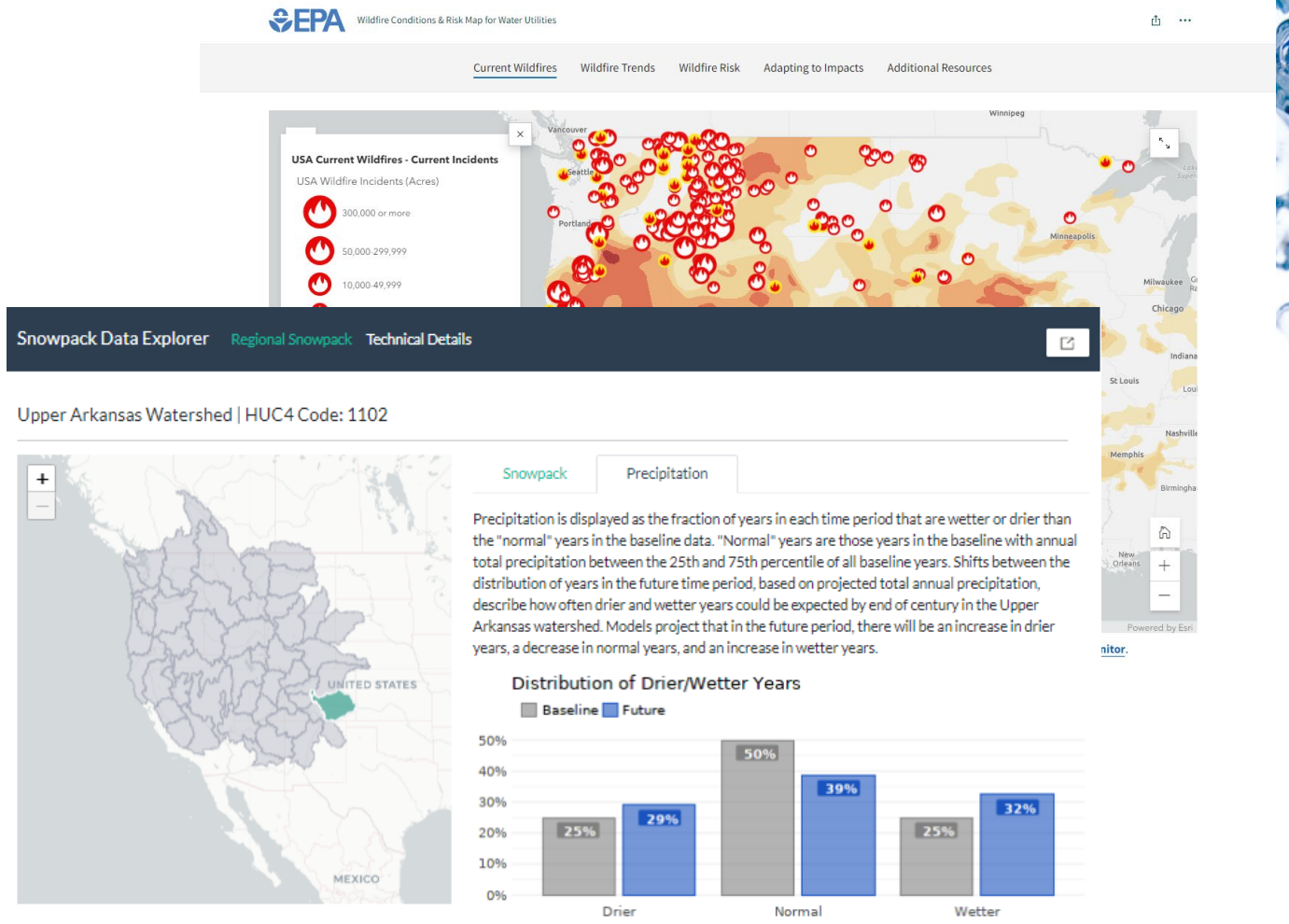
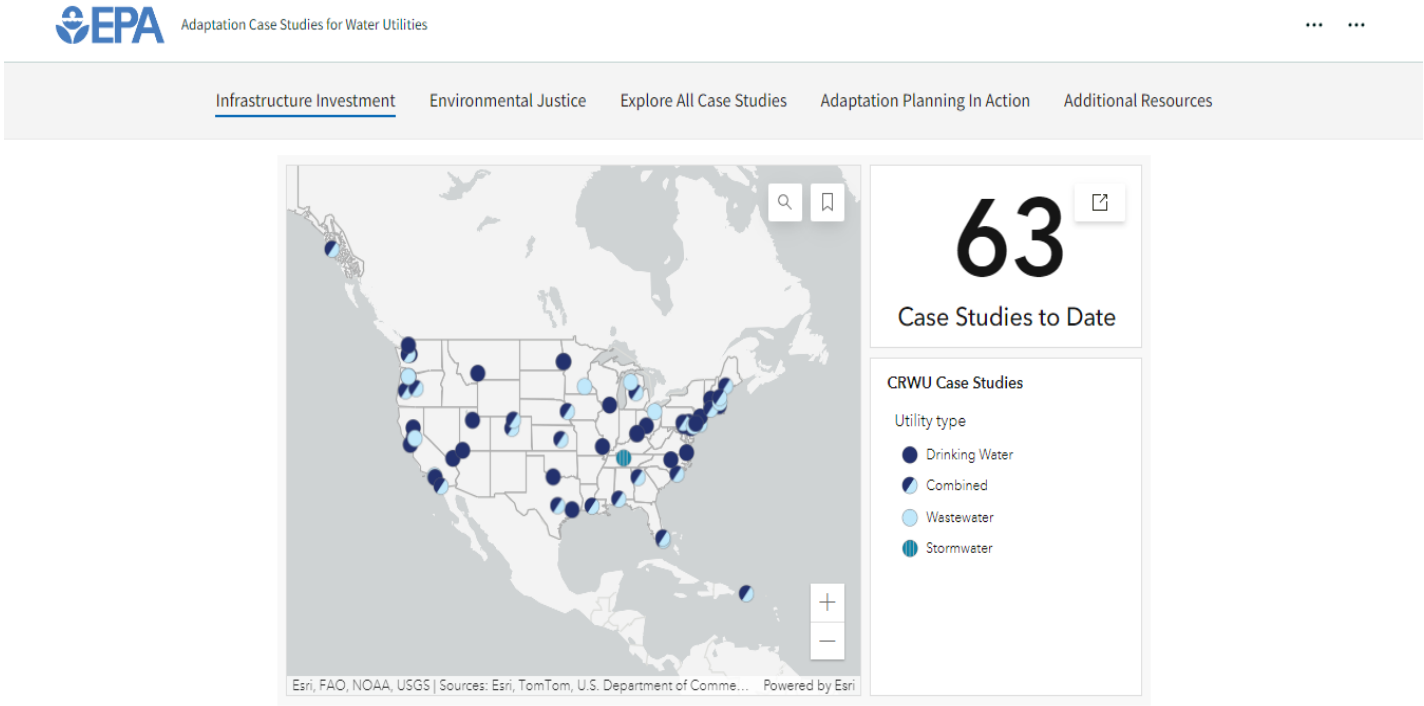
Interactive Climate Change and Weather Maps

- Wildfire Conditions and Risk Map for Water Utilities
  - Displays models, FEMA flood zones, and more
- Snowpack Change in the Western United States
  - Displays local scenarios, potential changes in temperature and precipitation, and more



Case Studies and Technical Assistance

- Adaptation Case Studies for Water Utilities StoryMap
  - Helps utilities connect with their peer utilities, share experiences, and learn best practices
  - 60+ CREAT success stories available
- Technical Assistance
  - Work with our partners to provide one-on-one technical assistance

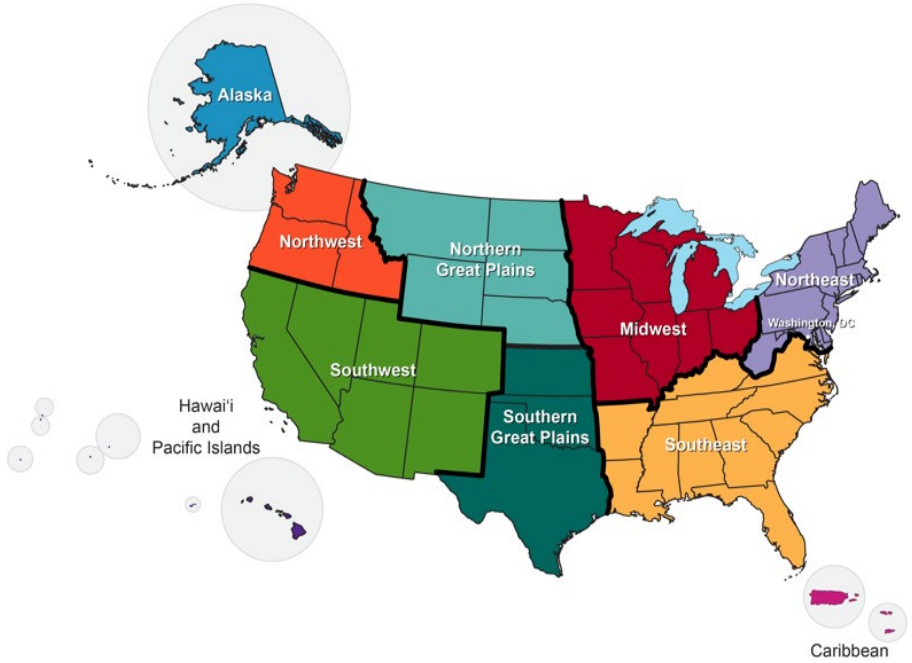


Workshops and Funding

Workshops

- Climate resilience virtual workshops
  - National, regional, local area, as well as technical assistance provider
- Training website

- Funding
  - Bipartisan Infrastructure Law
    - Clean Water and Drink Water State Revolving Funds
  - Water Infrastructure Finance and Innovation Act (WIFIA) Program



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- Email: crwuhelp@epa.gov
- CRWU website: www.epa.gov/crwu

THANK YOU FOR ATTENDING!
TIME FOR Q&A

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You many find additional drinking water webinars and resources at www.epa.gov/dwcapacity

Please Stay For A Quick 5-Question Poll