U.S. EPA's Creating Resilient Water Utilities

Our Mission

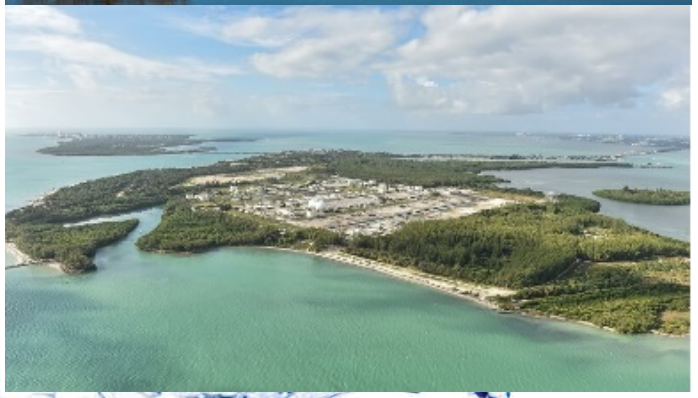
- Provide water sector utilities with the practical tools, training, and technical assistance needed to increase resilience to climate risks
- Promote a clear understanding of complex climate science and potential long-term adaptation options
- Collaborate with utilities and partners to increase our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

Contacts: Fries.steve@epa.gov Baranowski.curt@epa.gov

CRWU: www.epa.gov/crwu

Utility Resilience Critical to Community Resilience

- Safe drinking water and clean water services are critical to public and environmental health
- Utilities are anchor institutions in their communities, providing critical services and leadership in climate resilience
- Available funding can accelerate the development of water infrastructure to bolster resilience and readiness to future climate impacts like extreme temperatures, precipitation, and natural disasters
- Effective preparedness and adaptation requires awareness and a clear understanding of climate science data and potential long-term adaptation options

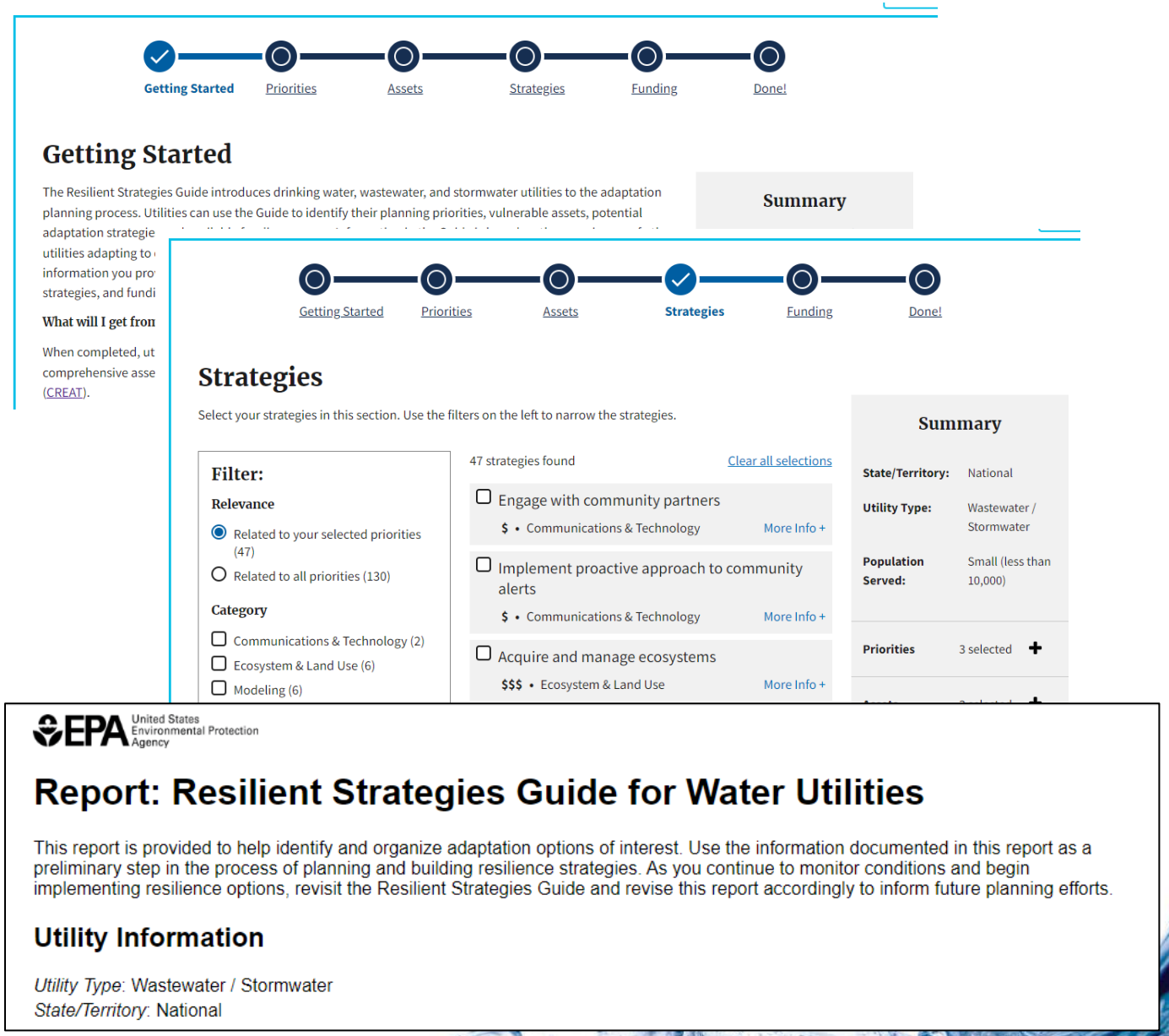


CRWU - Tool Provision Accelerators

- EPA working with States and technical assistance providers to increase use of CRWU tools and resources in the Sector
- Efforts include training and leveraging networks to demonstrate value of using these resources to inform planning and support project funding decisions
- Increased application of resources builds a community of practice that can exchange their adaptation experience
- Experience informs other utilities planning projects, funding Agencies and their partners (like CRWU)

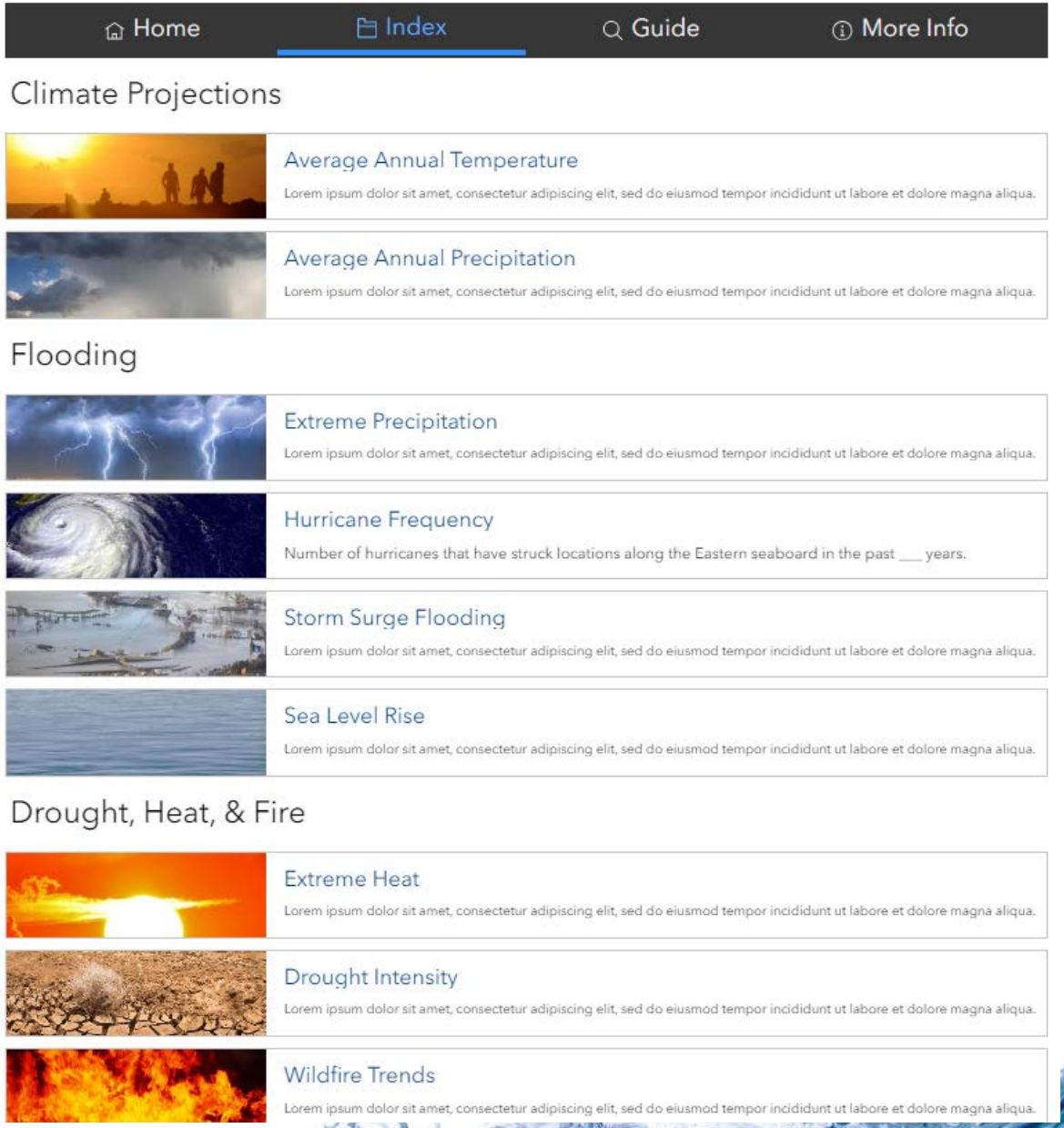
Resilient Strategies Guide

- Introduction to adaptation planning for those with limited knowledge 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



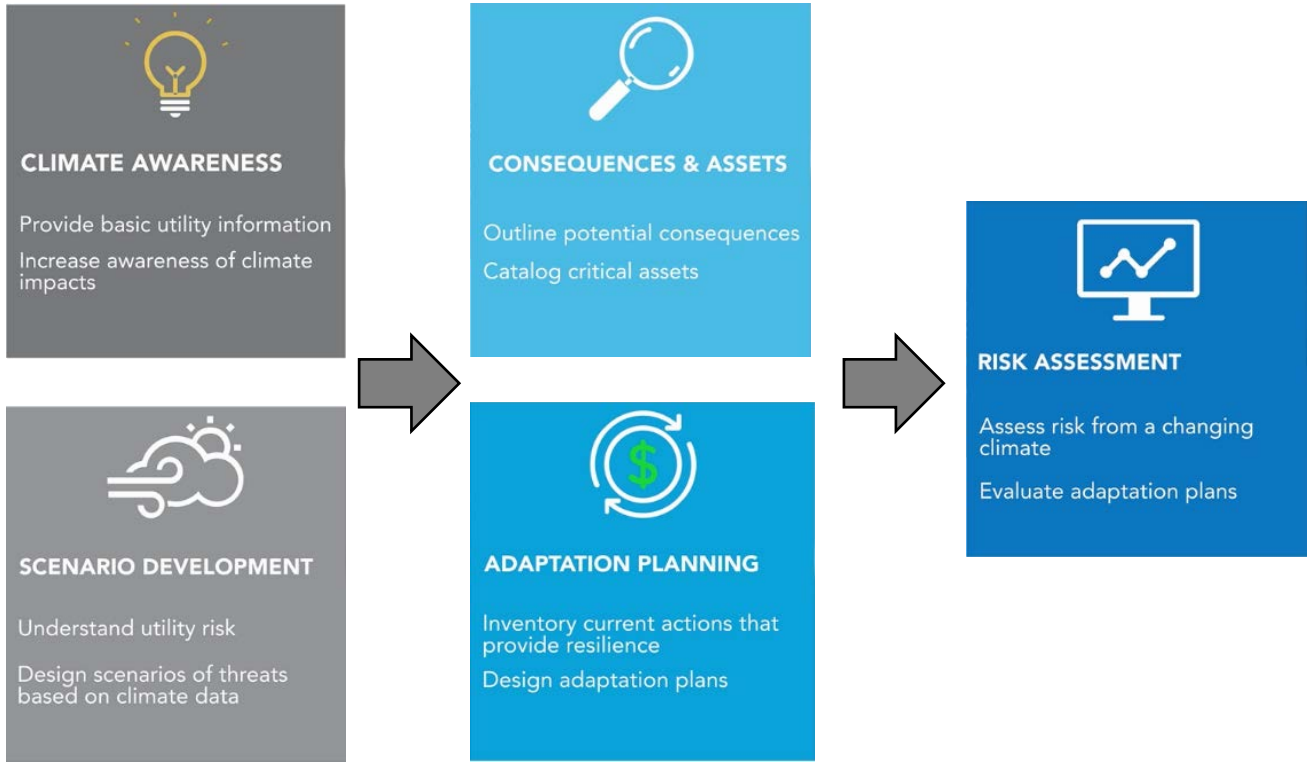
CRWU Data Services

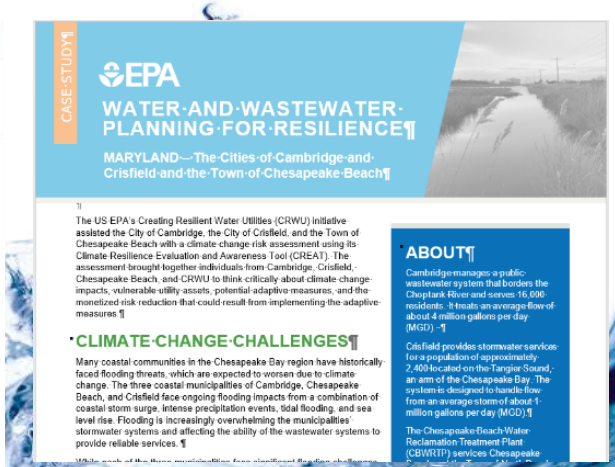
- Access to decision-relevant climate data is a critical capacity gap for many water systems
- Understanding the applicability of available data often requires translation and context for making design and operational decisions as part of resilience planning
- Leveraging published data sets from Federal agencies and academic groups, and the experiences of our partners using these data, CRWU provides access to these data focused on water sector needs



Climate Risk Assessments

- Module-based process
- Presents available climate data in multiple scenarios
- Process prioritizes the threats posed by climate conditions and the values of specific utility components to the utility and their community
- Results can help evaluate current levels of risk and performance
- Technical assistance provides a basis for further exploration of the potential to reduce risk through adaptation





Direct Technical Assistance and Training

- Climate Change Risk Assessment Technical Assistance:
  - FY23: 71 communities benefited from 50 assessments through direct assistance
  - FY24: 50 additional assessments planned to benefit similar number of communities through direct CRWU support

- Workshops and Training
  - Virtual and In-Person
  - CRWU Training and Engagement Center

South Monmouth Regional Sewerage Authority (NJ)

- The South Monmouth Regional Sewerage Authority (SMRSA) is located in Monmouth County, New Jersey, and serves over 50,000 people in eight coastal communities,
- A long history of coastal flooding and storm surge motivated their assessment and recent improvements (portable pumping stations)
- Technical assistance guided their use of CREAT, helping to evaluate the performance of several projects they are considering:
    - Relocate the pump station to higher elevation
    - Install flood doors
    - Build a sea wall around pump stations
- The Authority partnered with EPA to host training event for other coastal systems to share experiences and promote climate change considerations when preparing for the next storm

Montague and South Hadley (MA)

- Montague Water Pollution Control Facility and South Hadley Water Pollution Control Division serve 2,000 and 17,000 residents, respectively
- Focus of their assessment was on impacts of changing storms and challenges to collection and treatment
- Technical assistance guided their use of CREAT, helping to evaluate the performance of several current practices (storage, pumping, upgrades/elevation) and potential improvements:
  - Natural Flow Improvements
  - Pump Replacements
  - Inflow and Infiltration Assessment / Pipe Lining
- Participants included Massachusetts Department of Environmental Protection and the Pioneer Valley Planning Commission, fostering the consideration of climate change and potential adaptation into their relationships with State and watershed organizations

City of Crisfield (MD)

- Crisfield provides stormwater services for 2,400 people living on MD's Eastern Shore using a ditch and sewer system designed for 1 million gallons per day (MGD)
- Focus of their assessment was on flooding driven by combination of coastal storm surge, intense precipitation events, tidal flooding, and sea level rise
- Technical assistance guided their use of CREAT, helping to evaluate the performance of two options for a portion of their current system:
  - Ditch Maintenance
  - Convert to Closed System
- Participants are working concurrently with NOAA, FEMA and the Nature Conservancy on projects aimed to build resilience in Crisfield

Traverse City (MI)

- Traverse City provides wastewater services to about 50,000 customers across five townships
- Their assessment focused on flooding along the shoreline of Lake Michigan caused by heavy precipitation events
- Technical assistance guided their use of CREAT, helping to evaluate the performance of two options to mitigate overflows in a portion of their service area:
  - Increased Wet Well Storage Capacity
  - Relocate and Upsize Riverfront Main
- Results of this assessment helped inform changes to SRF-funded project that accommodates higher flow events under some future climate scenarios

Clackamas County (OR)

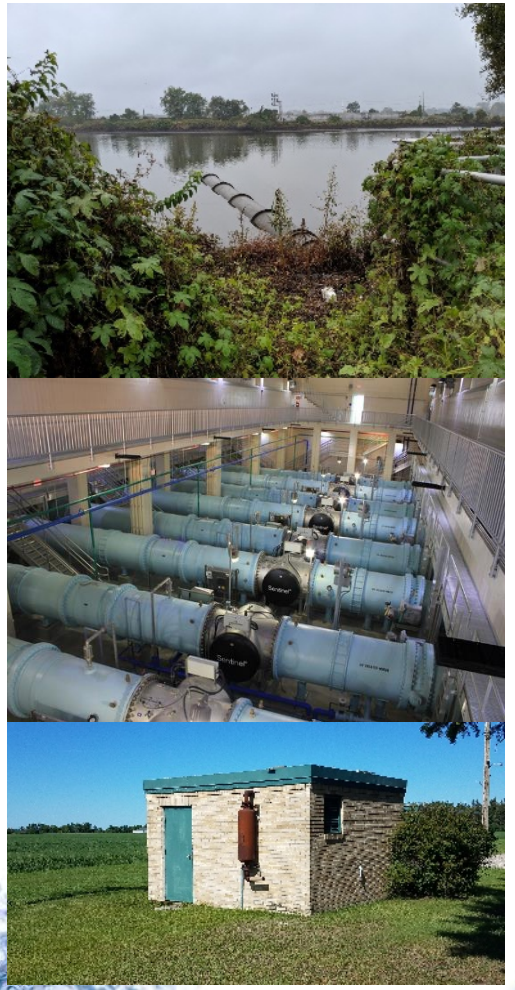
- Water Environment Services (WES) provides wastewater collection and treatment services to approximately 190,000 people
- Focus of their assessment was on flooding of pump station in the channel migration zone (CMZ) along the Sandy River and potential to add to their current practices in response to flooding events (backup power, temporary barriers)
- Technical assistance guided their use of CREAT, helping to evaluate the performance of several projects they are considering to mitigate flood damage to vulnerable facilities:
  - Replace with submersible facility of relocate outside CMZ
  - Bypass through higher elevation pumps and new treatment plant

Expanded Technical Assistance and Funding Network

- Services available through EPA's larger WaterTA network
  - National and Regional Environmental Finance Centers

- Funding Coordination
  - Clean Water & Drinking Water State Revolving Funds (States and HQ)
  - EPA's WIFIA
  - FEMA's BRIC Program
  - USDA's Rural Utility Service

- Workshops and Training
  - EPA Regional Staff
  - Tribal Networks
  - Rural Water
  - Water Sector Association Conferences and Training Events



CRWU's Continuing Impact

- Building resilient drinking water, wastewater and stormwater utilities
- Providing access to climate information and risk assessment framework
- Supporting climate adaptation as part of EPA's larger technical assistance efforts
- Connecting systems to partners and funding opportunities