

Climate Resiliency for Minnesota Drinking Water Utilities

HOW TO IDENTIFY STRATEGIES AND INTEGRATE INTO EXISTING EFFORTS

Minnesota temperatures are warming – especially in the winter. Larger, more frequent precipitation events are occurring. Droughts may become more intense and frequent. This can create new problems and make existing problems worse for drinking water utilities. Climate resiliency means being able to anticipate, prepare for and respond to issues related to climate change. Take steps now to identify climate resiliency strategies and integrate into existing efforts.

Step 1. Identify Climate Resiliency Strategies

The following tools from the U.S. Environmental Protection Agency (EPA) can help drinking water utilities identify climate resiliency strategies.

- [Resilient Strategies Guide](#) – checklist of priorities/assets leads to menu of strategies (quick/easy)
- [Flood Guide](#) – flood planning tool to identify strategies (moderately involved)
- [Drought Guide](#) – drought planning tool to identify strategies (moderately involved)
- [CREAT](#) – planning tool to assess risk and then identify strategies (in-depth)

Step 2. Integrate Climate Resiliency Strategies into Existing Efforts

Drinking water utilities can incorporate climate resiliency strategies into existing planning, operations and capital/infrastructure projects. Examples are listed below.

Planning

- **Incorporate resiliency into existing plans.** Add strategies to the [water supply plan](#) (quantity) and [source water protection plan](#) (quality) and participate in local planning processes (e.g. [One Watershed One Plan](#)).
- **Establish mutual aid agreements with neighboring utilities.** Enroll in [MNWARN](#) to share personnel and resources during emergencies and natural disasters.
- **Develop an emergency response plan.** Outline activities and procedures covering preparation to recovery. For more information, visit [Overview of New Requirements for Community Water Systems](#).

Operations

- **Conduct water rate studies.** Integrate future climate conditions in water rate studies.
- **Communicate with partners and customers.** Develop educational materials to promote topics like water conservation.
- **Prepare by using exercises and trainings.** Simulate potential events like a flood or power outage. See EPA resources for planning a [water resilience tabletop exercise](#) and [extreme weather workshop](#).

Capital/Infrastructure Projects

- **Design and maintain system for climate change.** Integrate future climate conditions in capital improvement project siting and design.
- **Build redundancy into the system.** Examples include backup pumps and chemical feed equipment, alternative water sources, emergency generators and multiple communication devices.
- **Invest in technology that increases system flexibility.** Examples include new treatment, stormwater infiltration ponds/gardens and water reuse.

Links in Document

- [Resilient Strategies Guide](https://www.epa.gov/crwu/resilient-strategies-guide-water-utilities) - <https://www.epa.gov/crwu/resilient-strategies-guide-water-utilities>
- [Flood Guide](https://www.epa.gov/sites/production/files/2015-08/documents/flood_resilience_guide.pdf) - https://www.epa.gov/sites/production/files/2015-08/documents/flood_resilience_guide.pdf
- [Drought Guide](https://www.epa.gov/sites/production/files/2017-10/documents/drought_guide_final_508compliant_october2017.pdf) - https://www.epa.gov/sites/production/files/2017-10/documents/drought_guide_final_508compliant_october2017.pdf
- [CREAT](https://www.epa.gov/crwu/creat-risk-assessment-application-water-utilities) - <https://www.epa.gov/crwu/creat-risk-assessment-application-water-utilities>
- [Water Supply Plan](https://www.dnr.state.mn.us/waters/watermgmt_section/appropriations/eandc_plan.html) - https://www.dnr.state.mn.us/waters/watermgmt_section/appropriations/eandc_plan.html
- [Source Water Protection Plan](https://www.health.state.mn.us/communities/environment/water/swp/index.htm) - <https://www.health.state.mn.us/communities/environment/water/swp/index.htm>
- [One Watershed One Plan](https://bwsr.state.mn.us/one-watershed-one-plan) - <https://bwsr.state.mn.us/one-watershed-one-plan>
- [MNWARN](http://www.mnwarn.org/) - <http://www.mnwarn.org/>
- [Overview of New Requirements for Community Water Systems](https://www.epa.gov/waterresilience/overview-new-risk-assessment-and-emergency-response-plan-requirements-community) - <https://www.epa.gov/waterresilience/overview-new-risk-assessment-and-emergency-response-plan-requirements-community>
- [Water resilience tabletop exercise](https://www.epa.gov/waterresiliencetraining/develop-and-conduct-water-resilience-tabletop-exercise-water-utilities) - <https://www.epa.gov/waterresiliencetraining/develop-and-conduct-water-resilience-tabletop-exercise-water-utilities>
- [Extreme weather workshop](https://www.epa.gov/crwu/workshop-planner-water-utilities-adapting-extreme-weather-events) - <https://www.epa.gov/crwu/workshop-planner-water-utilities-adapting-extreme-weather-events>

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