PREPARING FOR LESS WATER?

Many areas of North America are already warning of the potential of water restrictions come spring if there is no significant snowfall in the next few months. A warmer than normal winter, thanks to El Niño, has meant above average temperatures and below average snowfall.

What can you be doing now to prepare your municipality and community for the potential of reduced precipitation, drier conditions, and less water availability?

Drought is forecast to result in a loss of US $8 billion in GDP across Australia, Canada, China, the Philippines, the United Arab Emirates, the United Kingdom, and the United States between 2022 and 2050.[4]

Cascading drought hazards

Pre-planning for drought should also include planning for the other hazards that are compounded and amplified by drought.

- Extreme heat
- Wildfires
- Flooding
- Water quality
- Food shortages and costs

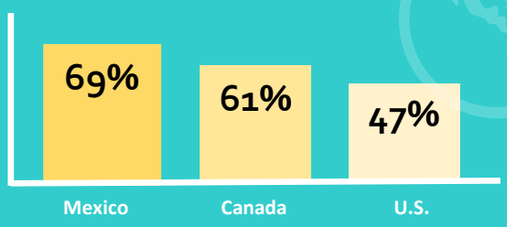
In 2023, 77 countries had their highest average annual temperature in at least 45 years.

Is it a drought?

A drought is a sustained and regionally extensive occurrence of **appreciably below-average natural water availability** in the form of precipitation, streamflow, or groundwater. Droughts can be:

- **Hydrological:** lower-than-average water in streams, rivers, and reservoirs
- **Meteorological:** lower-than-average precipitation leading to sustained periods of low water supply
- **Agricultural:** lower-than-average soil moisture, which can lead to crop failure
- **Socioeconomic:** lower-than-average water supply that affects people's livelihoods

What percent of North America is experiencing drought?[1]



But we are getting some snow now…isn't drought risk over?

- Most of the Canadian Prairies received less than 40% of normal precipitation over November and December.[2]
- In the U.S., drought expansion and intensification is observed in the Northern and Central Rockies, northern Arizona, and Tennessee and Ohio Valleys. Widespread drought persistence is expected in the Midwest, Tennessee Valley, and Northern Plains due to uncertainty in the precipitation outlook.[3]

What resources are helpful for monitoring and preparing for drought?

The Canadian Drought Monitor
Canadian Drought Monitor

Canadian Drought Outlook
Canadian Drought Outlook

North American Drought Monitor
North American Drought Monitor

United States National Integrated Drought Information System
Drought.gov

How can I show emergency management leadership?

1. **Form a drought advisory committee.** Many agencies and groups will have knowledge of – or be impacted by – drought and water use. Consider the inclusion of regional, provincial, municipal, climate, environmental, agricultural, Indigenous, water suppliers, land-use planning agency, and water representatives. Consolidate the resources within your area and develop coordinated responses before the onset of a disaster or multiple extreme events.
2. **Establish drought monitoring and indicators.** Your committee should set up drought monitoring that provides an early warning system to help mitigate the impacts of drought on your area. Your monitoring should consider measuring changes in precipitation, temperature, streamflows, and ground and reservoir water levels. Identify the types of drought impacts to which your region is vulnerable to help select the best drought indicators.
3. **Develop a drought response plan.** In addition to your early warning system tools and monitoring, your plan should identify when different water conservation and efficiency actions are triggered based on the measurements and indicators you have put in place. Consider a system for water allocation and prioritization during different phases of drought conditions. Integrating multiple, cascading hazards into your efforts is a key aspect of community resilience and can help facilitate a more rapid recovery from drought conditions.
4. **Provide briefings to your local government and leadership.** Create a simple briefing you can regularly update and share with your elected officials and administrative leadership. Inform them of the current drought conditions and forecasts for your area, preparedness and mitigation activities, planned next steps, indicators, and key messages they can use.
5. **Communicate early and often with your stakeholders and citizens.** Many businesses and residents are already preparing for spring and summer. Early communications can help these stakeholders understand the drought risk and what actions they can expect or take to reduce water use if restrictions are possible. Effective drought communication should be easy to understand, focus on solutions, include region-specific information, and address values relevant to the targeted audience.

Sources

1. Statistics, November 2023, North American Drought Monitor
2. Dry winter heralds worsening drought for 2024, January 16, 2024, AGCanada
3. U.S. seasonal drought outlook, January 18, 2024, Climate Prediction Center
4. Aquanomics: The economics of water risk and future resiliency, GHD, 2022, Aquanomics

Need help developing a drought response?
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