? UNDERLYING QUESTION

What measures should be put in place to reduce the vulnerability of water infrastructure and the resulting loss of associated functions following a weather event?

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After identifying and understanding the risks to which it is exposed, a municipality can put in place practices to improve alertness to weather events that could put a huge strain on its system. Adjustments can also be made to the system to make it more resilient during prolonged extreme heat events.

POTENTIAL SOLUTIONS

A Infrastructure configuration and condition to address risks

In order to improve the resilience of assets, solutions related to their configuration can be implemented. These involve design elements to address drought impacts on assets.

B Hazard and asset monitoring

In addition to a design better adapted to hazards, it is relevant to have a system to monitor and predict them in order to improve a municipality's preparedness for weather events. The same is true for assets. Monitoring their status allows for intervention at the right time.

C Prevention program and regulations

Solutions in line with the regulations in place to reduce the amount of rainwater being returned to the system.

REFERENCES

Ministère de la Sécurité publique | Mesures permettant d'augmenter la résilience de la municipalité à la distribution de l'eau en cas de pénurie ou de contamination de l'eau potable (2018) [in French only]	**A**	B	C

For a municipality, the drinking water supply is essential. Planning actions to increase resilience is therefore also essential. Such planning helps you to respond quickly to problems associated with water quantity or quality. It is recommended to draw up a list of potential problems (e.g., shortages, breakdowns) in advance, based on your specific situation.

MELCC | Guide pour l'élaboration d'un plan de protection des sources d'eau potable (2022) [in French only]	A	**B**	C

A guide that provides an approach for those in charge of drinking water abstraction and management when developing a drinking water source protection plan.

Quinte Conservation | Drought Plan (2021)	A	**B**	**C**

A drought control plan for the Quinte region in Ontario, which, after experiencing several events, has put in place a drought management plan that helps municipalities identify the actions to be taken before, during and after a prolonged extreme heat event.

Section 4.2, *Drought warning plan*, outlines the tools used to monitor water levels to ensure up-to-date information and implement appropriate actions based on the level of urgency assigned to each situation. Table 3, *Low Water Level Triggers, Tools and Actions*, provides guidance on actions to be taken based on the observed rainfall decline over a specified time horizon.

FCM | Case Study – Developing a Multi-Risk Adaptation Plan (2021)	A	**B**	**C**

Like many other municipalities in southern Quebec, L'Islet is experiencing increasingly frequent heat waves and droughts. This case study shows how this municipality with limited resources implemented a climate adaptation plan to improve the resilience of its infrastructure.

**FCM	Guide for Integrating Climate Change Considerations into Municipal Asset Management (2020)**	**A**	**B**	**C**

A guide developed by the Federation of Canadian Municipalities addressing actions to improve climate change resilience within a municipality's water asset management plan. Measures are presented, among others, to:

- Integrate climate change considerations into decision-making;
- Identify strategies to address gaps and risks due to climate change;
- Monitor progress and explore opportunities for continuous improvement.