? 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 a heavy precipitation event, for example.

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 both design elements to address greater (increased volumes, flows) and more frequent precipitation. This category includes, for example, optimal stormwater management practices.

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.

FCM | Case Studies: Using Data to Address Water Infrastructure Vulnerabilities (2020)	**A**	B	**C**

A series of case studies prepared by FCM on the adaptation to climate change by various Canadian municipalities. The case of the City of Saskatoon is particularly interesting, with its Climate Change Adaptation initiatives. Its flood control strategy for its wastewater system is presented.

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.

Québec Vert | Inventaire des infrastructures végétalisées au Québec [in French only]	**A**	**B**	C

An inventory, prepared by Québec Vert, of municipal green infrastructure projects that have been implemented in Quebec. It provides concrete examples of projects and paves the way for knowledge sharing and feedback between municipalities.