

Case study on Climate Change Adaptation – Longueuil

The CERIU's climate change adaptation case study sheets aim to highlight inspiring municipal projects that offer concrete solutions to the challenges posed by climate change.

Municipality:

Longueuil



267,524 residents
(2021 census)




Geographical context:



Urban

Main hazard:



Heavy rainfall

Adaptation measures studied:

- › Development of a strategy
- › Adaptation strategy
- › Construction of resilient infrastructure
- › Changes in maintenance activities
- › Changes in operational activities

Action Plan for Heavy Rainfall Resilience

What is the project?

Adopted in 2025, the City of Longueuil's Heavy Rainfall Resilience Strategy aims to strengthen collective resilience to reduce the consequences of heavy rainfall and better adapt to current and future climatic conditions.

Implementation relies on an action plan developed by the Heavy Rainfall Resilience Committee, which brings together teams from several municipal departments. This committee uses a sectoral analysis of the territory to identify priority interventions for the drainage network.

The actions selected fall under at least one of the six orientations of the Strategy:

1. Analyse and map
2. Prevent in public spaces
3. Prevent in private spaces
4. Prepare and intervene
5. Recover sustainably
6. Facilitate communication with citizens

Longueuil's territory has been divided into 13 sectors, and analyses were planned in three phases:

Phase 1: priority given to the four sectors that experienced incidents before or early in the committee's work (2023).

Phase 2: covers three additional sectors. Modelling is 75% complete, and a preliminary draft of solutions is expected in 2026.

Phase 3: analyses of the remaining sectors will be completed by the end of 2027.

Examples of selected actions:

- › Construct retention basins
- › Adopt a monitoring methodology for sponge infrastructure performance
- › Identify needs and potential interventions for tenants
- › Conduct an emergency measures simulation
- › Study the possibility of adding stormwater management infrastructure in certain sectors
- › Proactively inform citizens about the City's actions and encourage property owners to adopt better practices

Learn more

on the City of
Longueuil project

[Heavy Rainfall Resilience Strategy –
City of Longueuil \(PDF\)](#)

Who were the project stakeholders?

The selected actions span a variety of fields, meaning that more than a dozen municipal departments are involved in implementing the heavy rainfall resilience action plan. These include the Water Management Department, Planning and Urban Development, Legal Services, Culture, Sports, and Community Development.

What triggered the project?

The increasing recurrence of heavy rainfall events and the growing scale of the resulting damage, both on private properties and public assets, prompted the project's development.

As the issue was not localised to a single area, media coverage also helped raise awareness and accelerate the City's commitment to this initiative.

How is project effectiveness being measured?

A three-year action plan (2025-2027) was developed. It includes concrete measures, each with a timeline and a designated person responsible for its implementation.

What challenges were encountered?

Implementing the targeted actions requires not only substantial financial resources but also qualified human resources. Interventions therefore had to be planned in accordance with budget constraints and the operational capacity of municipal teams.

What good practices helped address these challenges?

The Strategy's action plan was developed in alignment with the City's three-year capital works programme, allowing actions to be integrated into infrastructure planning.

Additionally, political prioritisation of this issue made it easier to allocate necessary resources and foster buy-in across municipal departments.

Was any specific documentation used to guide the project?

Yes. Numerous documents served as references, including Longueuil's strategic documents and several scientific studies on water management in the context of climate change. *The City of Longueuil's official documents are available in French only.*

The full list of references is provided in the [Official Heavy Rainfall Resilience Strategy document](#).

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