Standing Committee Report

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DATE PREPARED	January 9, 2026	***FILE***
STANDING COMMITTEE MEETING DATE	February 10, 2026	
SUBJECT	Climate Adaptation Update 2025	

PURPOSE

For information only.

EXECUTIVE SUMMARY

Climate change presents an increasing risk to the City of Thunder Bay, affecting infrastructure, service delivery, community wellbeing, and regional emergency response. Since adoption of the City's *Climate Adaptation Strategy: Climate-Ready City* in 2015, the City has integrated climate adaptation into core municipal functions, supported by targeted investments and more than $18 million in external funding.

However, accelerating climate impacts, growing social and equity considerations and an expanded regional emergency response role exceed the scope of the original Strategy. This report summarizes progress to date and identifies future focus areas to inform the renewal of the Climate Adaptation Strategy in 2026–2027.

The renewed Strategy will strengthen resilience, advance equity, and complement climate mitigation actions in *Climate Forward City: Thunder Bay Net-Zero Strategy*.

KEY CONSIDERATIONS

City Council declared a climate emergency on January 13, 2020, recognizing the urgent risks posed by climate change. Since that time, climate impacts have continued to intensify, placing increasing pressure on municipal infrastructure stress, services, public health systems, and finances.

For the City of Thunder Bay, climate change is no longer a future concern but a current operational reality. Greater weather variability and extreme events are shortening asset lifespans, increasing maintenance and renewal costs, disrupting services, and exposing the City to financial risk. Repeated flooding, heat events, reduced winter snowpack, and emerging threats such as Lyme disease demonstrate that historic climate data are no longer sufficient for planning, design, or investment decisions.

Over the past decade, the City has steadily advanced the integration of climate adaptation into policy. As a result, many adaptation actions that were innovative at the time of the 2015 Strategy are now standard practice.

At the same time, climate risks are becoming more complex and unevenly distributed. Climate hazards tend to disproportionately affect vulnerable populations, who often have reduced access to the resources needed to adapt, avoid, or bounce back. Thunder Bay has assumed a growing regional role in responding to climate-driven emergencies, including hosting evacuees displaced by flooding and wildfires across Northwestern Ontario.

While existing governance structures and tools have enabled progress, they were developed under different assumptions about climate risk, data availability, and municipal responsibility. As climate impacts accelerate, limitations have emerged related to social vulnerability assessment, compounding hazards, regional response capacity, and the consistent identification of climate-related financial risk. In response, Administration will renew the Climate Adaptation Strategy in 2026 and 2027, supported by funding from the Federation of Canadian Municipalities.

The following sections summarize progress and identify future focus areas relative to the seven Strategic Directions of the Climate Adaptation Strategy.

Integrate: *Integrate climate adaptation into plans, policies, procedures, projects, and investment decisions.*

Climate resilience considerations have been integrated in many municipal actions, reports, and strategies, including the Corporate Strategic Plan, Official Plan, Asset Management Plan, and Emergency Management Strategy. Environmental Stewardship has also been identified as one of five key considerations required within all action items of the Smart Growth Action Plan.

Future focus includes improving consistency in how climate adaptation is applied across departments and strengthen clarity around roles, responsibilities, and decision-making.

Assess Potential Threats: *Understand the risks specific to climate change impacts.*

Risk assessment practices have improved since adoption of the 2015 Strategy, including flood mapping by the Lakehead Regional Conservation Authority, municipal stormwater modeling in priority areas, and incorporation of climate risk into asset management processes. These efforts support a more robust understanding of infrastructure vulnerabilities.

Future focus will include updating the climate risk and vulnerability assessment, harmonizing it with the emergency management hazard identification and risk assessment so that we can move forward with common understanding of risks, recognizing the disproportionate impact on equity-deserving groups.

Increase Resilience: *Increase resilience of infrastructure and natural landscapes.*

The City continues to invest in resilience through both built and natural infrastructure that manage weather-related impacts while delivering broader environmental benefits.

Since 2015, Thunder Bay has expanded the use of green infrastructure and low impact development for stormwater management, adding additional treatment capacity for an estimated 50,000 m^3 of stormwater annually. Native plant material for these systems are now produced locally in the City's Centennial Botanical Conservatory production greenhouses.

Rebate programs, including the residential drainage rebate and rain garden rebate, delivered through EcoSuperior, support stormwater management on private property.

Urban tree planting has progressed with a focus on species diversity, canopy expansion, preservation of mature trees, and management of Emerald Ash Borer.

Future efforts will build on this progress, while also exploring methods to improve community social resilience, service continuity, and collaborative work with partners.

Inform and Equip: *Provide information, tools and training on climate adaptation to facilitate and accelerate action.*

Climate adaptation education and engagement initiatives continue for municipal staff and the broader community. While awareness has increased, understanding of how climate adaptation relates to specific roles and responsibilities remains inconsistent.

Future focus will include improving role-specific training and clarifying how climate adaptation responsibilities align with day-to-day municipal functions.

Finance: *Plan for the financing and long-term implementation of adaptive actions.*

Since 2015, the City of Thunder Bay has secured more than $18 million in grant funding tied to climate adaptation, including infrastructure upgrades, emergency preparedness initiatives, and community resilience projects. The City has also supported grant applications led by community partners, helping to expand local adaptation capacity.

Future focus will include strengthening integration of climate risk into long-term capital and operating budgets and reducing reliance on grant-driven investment alone.

Network & Collaborate: *Investigate opportunities to increase the resiliency of the region through networks and strategic collaboration.*

Climate Adaptation has been an ongoing topic of collaboration regionally, nationally, and internationally; connecting with other municipalities, practitioners, and researchers through formal and informal networks.

Additionally, many local adaptation projects have been enabled through community partnerships, including with conservation authorities, academic institutions, Indigenous partners, and emergency management organizations.

Future focus will include strengthening regional coordination, shared data, and collaborative approaches to climate adaptation.

Respond and Recover: *Plan for efficient response and recovery to extreme weather events and disasters.*

Emergency management is closely linked to climate adaptation, addressing weather impacts as they occur. Collaborative climate-focused emergency exercises held annually between 2021 and 2024, along with lessons learned in the COVID-19 pandemic response, informed updates to the City's Emergency Management Program.

The City has had a growing role in supporting regional emergencies, hosting on average over 600 evacuees a year since 2016, often limited by local hotel capacity rather than demand. These evacuations are often from communities under threat of climate impacts, including flooding or forest fire.

A local strength for emergency management has included its local partnerships and collaborations to plan for and respond to community needs, including with the Community Support Table and Emergency Food Plan.

Future focus areas include integrating climate change into disaster risk assessments, recognizing our role as a regional hub, addressing the needs of diverse populations, and continued collaboration across all phases of emergency management.

BACKGROUND

In September 2025, Federation of Canadian Municipalities announced funding supporting the City of Thunder Bay's Adaptation Strategy Renewal.

City Council declared a climate emergency on January 13, 2020, recognizing the urgent threat presented by the current and potential impacts of climate change.
Climate Ready City: The City of Thunder Bay Climate Adaptation Strategy approved in December 2015 by City Council.

FINANCIAL IMPLICATION

There are no direct financial implications from this report; however, it is estimated that every $1 spent on adaptation measures can result in $13-$15 in total benefits (National Adaptation Strategy of Canada, 2023).

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