REPORT FOR ACTION

Progress and Priorities for Enhancing Toronto's Climate Resilience

Date: November 25, 2025
To: Executive Committee
From: Executive Director, Environment, Climate and Forestry
Wards: All

SUMMARY

In 2024, Toronto City Council directed Environment, Climate and Forestry to report back on current and future climate resilience initiatives across the corporation, provide a refreshed governance approach to climate resilience, identify climate resilience priorities and discuss Indigenous worldviews and relationships in climate resilience planning. This report responds to this direction, and has been prepared in coordination with two other heat-related reports being presented to City Council: *Towards Implementing a Maximum Indoor Temperature Requirement for Rental Units and Cooling Rooms*, led by Municipal Licensing and Standards Division (and co-signed by Toronto Public Health and Environment, Climate and Forestry), and *Strengthening the Heat Relief Strategy*, led by Toronto Emergency Management. Together, these reports contribute to a coordinated approach to enhancing heat resilience across Toronto.

Toronto's climate is changing, with extreme heat and flooding from heavy rainfall two of the city's most urgent climate hazards. Extreme heat is projected to escalate rapidly in the coming decades, making it the most pressing concern. High winds, poor air quality and severe winter weather also pose risks to the city. Most risks are expected to intensify over the coming decades, with growing impacts on public health, infrastructure, mobility, access to services and natural systems. Importantly, the impacts are not felt equally, making equity a critical consideration in building climate resilience.

Two essential types of climate action are *mitigation*, which means reducing greenhouse gas emissions to limit future climate change, and *adaptation*, which involves preparing for and responding to the impacts we are already experiencing and those to come. Effective adaptation strengthens Toronto's overall climate resilience, with evidence consistently showing that it delivers long-term benefits that outweigh the costs.

City Divisions are already taking important actions to build climate resilience, including actions to address heat, flooding and other climate risks through emergency preparedness, seasonal planning and dedicated initiatives. Despite these efforts, more is needed to close gaps and plan for risks that will continue to escalate in coming decades, coordinate and direct efforts and resources where they are needed most,

connect long-term planning with seasonal planning and short-term response and ensure climate risks are considered in the mandates of City Divisions. The City also needs to fill information gaps, clarify accountabilities and specify resourcing needs for climate change adaptation actions.

Staff will convene an Oversight Table for Climate Resilience, co-chaired by Environment, Climate and Forestry and Toronto Emergency Management, to reflect the importance of connecting long-term climate resilience planning and seasonal preparedness and emergency response to extreme weather events. The Oversight Table will be composed of City Division Heads with representation from each City service area and will be supported by interdivisional working tables, including a wider range of City Divisions, Agencies, and Corporations, to generate a Climate Change Adaptation Action Plan. This Plan will enable the City to address the risks identified in the City's new climate change risk and vulnerability assessment. The climate change adaptation action planning process will also include engagement with residents to ensure actions are inclusive and locally relevant, and to generate data to support decision-making.

Complementary work to embed climate risk considerations into existing cross-corporate decision-making processes, such as asset management and budget planning, will further enable climate change adaptation actions to be identified, prioritized and addressed systematically. Over time, these changes will be mainstreamed into annual operations, strengthening decision-making to account for future climate conditions.

This governance approach will be coordinated by Environment, Climate and Forestry as described in the attached Climate Change Resilience Workplan (Attachment 2). This approach is recommended over the creation of a singular Chief Resiliency Officer position, as it builds on and leverages existing expertise, Division-specific authorities and responsibilities and limits duplication or uncertainty around accountabilities.

This report also recognizes that Indigenous climate solutions are an essential companion to Western climate science approaches. Indigenous communities led and maintained the health of these lands and waters, and the living beings that are here, since time immemorial. As it works toward climate resilience, the City seeks to honour this knowledge and work alongside Indigenous communities to enable approaches that centre reciprocity and kinship with all beings and collective prosperity.

RECOMMENDATIONS

The Executive Director, Environment, Climate and Forestry recommends that:

1. City Council adopt the Climate Change Resilience Workplan, as presented in Attachment 2, to the report dated November 25, 2025 and direct the Executive Director, Environment, Climate and Forestry, to lead its implementation in collaboration with the applicable City Divisions.

2. City Council direct that the item be forwarded to Toronto Community Housing Corporation Board, Toronto Hydro Corporation Board, Toronto and Region Conservation Authority Board, Toronto Public Library Board, and the Toronto

Transit Commission Board for their consideration and request the Boards to consider actions they can take to address climate change risks, and participate in the Climate Change Resilience Workplan as presented in Attachment 2 to the report dated November 25, 2025 from the Executive Director, Environment, Climate and Forestry.

3. City Council authorize the Executive Director, Environment, Climate and Forestry, or their designate, until December 31, 2028, to negotiate, enter into, and execute non-procurement agreements, as may be required, to support the implementation of the Climate Change Resilience Workplan, as presented in Attachment 2, to the report dated November 25, 2025 from the Executive Director, Environment, Climate and Forestry, with City of Toronto Agencies and Corporations, and with the non-profit, private, and public sectors to:

(a) Collaborate on research, projects, forums, or initiatives;
(b) Provide in-kind and/or financial support from the approved Environment, Climate and Forestry Division budget and that is within the Executive Director, Environment, Climate and Forestry financial authority;
(c) Data sharing; and/or
(d) Accept funding and/or in-kind support

with each non-procurement agreement being on such terms and conditions acceptable to the Executive Director, Environment, Climate and Forestry, and each being in a form satisfactory to the City Solicitor.

4. City Council direct the Executive Director, Environment, Climate and Forestry, in consultation with the applicable City Divisions, to develop a Climate Change Adaptation Action Plan for the City, as outlined under Action 1.2.1 in the Climate Change Resilience Workplan, as presented in Attachment 2, to the report dated November 25, 2025, from the Executive Director, Environment, Climate and Forestry, and report back to City Council by Q2 2027 with information on feasibility, cost and accountability for climate change adaptation actions proposed for the City.

5. City Council direct the Chief Financial Officer and Treasurer, in collaboration with the Executive Director, Environment, Climate and Forestry, and the General Manager, Parks & Recreation, to develop a workplan to improve integration of climate risks and impacts and incorporate natural assets into the City’s asset management planning process, in line with improvement initiatives currently identified in the City of Toronto's 2025 Corporate Asset Management Plan, and reflect these developments and enhancements as part of the 2030 update to the Corporate Asset Management Plan.

6. City Council direct the Executive Director, Environment, Climate and Forestry, with the support of the Executive Director, Financial Planning, to report back to Infrastructure and Environment Committee in Q2 of 2027 on the feasibility of amending Toronto Municipal Code Chapter 669, Climate Change Goals and Governance, to include climate resilience and climate change adaptation in the Carbon Budget Report.

7. City Council direct the Executive Director, Environment, Climate and Forestry and the Director, Indigenous Affairs Office, in collaboration with the applicable City Divisions, to identify and encourage the adoption of new approaches to engaging with Indigenous communities on stewardship of lands and waters that respect, honour and enable Indigenous-led climate action.

FINANCIAL IMPACT

Adopting the recommendations will have no immediate financial impact. Year 1 (2026) will focus on strategic planning, initiating, and implementing effective internal governance structures. This will include evaluating the costs, feasibility, and resourcing needs associated with potential actions. These enabling activities will be prioritized and accommodated within divisional budgets. Staff will also assess and identify the resources required to implement a Climate Change Adaptation Action Plan as part of the report back in 2027. The Climate Change Resilience Workplan is a City-wide initiative involving multiple Divisions. Any incremental funding or resource requirements will be requested through future staff reports to Council and/or in subsequent budget processes, to be considered alongside other City priorities.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial implications as presented in the Financial Impact section.

EQUITY IMPACT

Climate risks in Toronto are not experienced evenly. Climate impacts are shaped not only by individual factors (such as older age, disability, living alone and pre-existing health conditions) but also by systemic inequities, including racism, colonialism, ableism, poverty, isolation, precarious work, insecure housing and language barriers. These conditions limit people’s ability to prepare for, withstand and recover from extreme heat, flooding, poor air quality and power disruptions, turning climate hazards into compounding health and affordability crises.

Populations most at risk from climate change include people experiencing houselessness, renters, especially in older apartment buildings without adequate cooling, lower-income households, older adults, people with disabilities, racialized communities, newcomers facing language barriers and outdoor, shift, gig and care workers whose jobs increase exposure to climate hazards and who may have limited benefits such as paid sick leave, health insurance or income protection during extreme weather events. Place also matters: risks accumulate in neighbourhoods with higher social marginalization, hotter microclimates, aging buildings and limited transit access. Livelihoods and lifestyles of Indigenous peoples, often dependent on natural systems, are highly sensitive to climate change. Further, Indigenous people can be marginalized by climate change policies that do not reflect their knowledge, values and activities.[i]

Addressing the climate risks facing Toronto's services, assets and communities through a coordinated and equitable approach to climate resilience is an opportunity to reduce the impact of climate change on everyone and especially those most vulnerable. At the same time, many communities often referred to as "vulnerable" have already exhibited

strength and resilience and have many learnings to share as a result of the barriers and challenges they have overcome.

Key principles underlying Toronto's approach to climate resilience are *climate equity* and *climate justice*. Climate equity ensures that climate resilience efforts prioritize historically marginalized and vulnerable communities such as Black, Indigenous and equity-deserving groups, ensuring equal access to resources and decision-making processes. Climate justice recognizes that impacts of climate change disproportionately affect those least responsible for it. Together, these principles seek to centre resilience on those most affected, fostering inclusivity and redressing historic injustices. As described in this report, it also means working to honour traditional knowledges of Indigenous peoples, who have maintained the health of these lands and waters and the living beings that are here, since time immemorial, and respecting the distinctive and inherent rights of Indigenous peoples as the original inhabitants of this land.

This report describes climate risks and potential actions to address them, as well as the potential for compounding risks that result from systemic inequities. The Climate Change Resilience Workplan (Attachment 2), will result in the design and development of climate change adaptation actions, each of which will need to consider equity. The Work Plan will be implemented through a whole-of-City approach, enabling appropriate subject-matter experts in equity and inclusion from across City Divisions to help inform implementation. Closing outcome gaps will require targeting resources to residents and places with the highest combined climate and social vulnerability, and so the City's approach will include deep engagement with communities across Toronto.

DECISION HISTORY

At its meeting of July 25 and 26, 2025, City Council adopted Item 2025.MM31.21 entitled "Addressing Gaps in the City’s Heat Relief Strategy" which requested consideration of the creation of a Chief Resiliency Officer.
https://secure.toronto.ca/council/agenda-item.do?item=2025.MM31.21

At its meeting of December 17 and 18, 2024, City Council adopted Item 2024.PH17.5 entitled "Establishing a Framework to Address Excessive Indoor Temperatures in Leased Residential Premises," to report back by Q4 2025 with implementation considerations and recommended next steps to implement a health-based maximum indoor temperature of 26°C for leased residential premises and cooling rooms.
https://secure.toronto.ca/council/agenda-item.do?item=2024.PH17.5

At its meeting of April 17 and 18, 2024, City Council adopted Item 2024.IE12.3 entitled "Toronto's Climate Change Readiness: Updates on commitments and a refreshed mandate for coordinating resilience activities," which confirmed support for a renewed focus and coordinated approach on climate resilience at the City of Toronto including a focus on technical analysis, a refreshed governance approach and the importance of prioritizing Indigenous worldviews.
https://secure.toronto.ca/council/agenda-item.do?item=2024.IE12.3

At its meeting of April 6 and 7, 2022, City Council adopted Item 2022.EX31.1 entitled "Actions to Advance Truth and Justice for Indigenous People in the City of Toronto:

Reconciliation Action Plan 2022-2032," which includes Action 19.a to Prioritize Indigenous worldviews and relational views of land protection and Indigenous community leadership to enhance climate resiliency.
https://secure.toronto.ca/council/agenda-item.do?item=2022.EX31.1

At its meeting of October 2 and 3, 2019, City Council adopted Item 2019.MM10.3 entitled "Declaring a Climate Emergency and Accelerating Toronto's Climate Action Plan," which declared a climate emergency and directed the Environment and Climate Division to integrate resilience into TransformTO and establish leadership on resilience, consistent with actions in the Resilience Strategy.
https://secure.toronto.ca/council/agenda-item.do?item=2019.MM10.3

At its meeting of December 13, 14 and 15, 2016, City Council adopted Item 2016.PE15.2 entitled "Resilient City - Preparing for a Changing Climate - Status Update and Next Steps," which provided an update on activities to increase climate resilience across the City at the time.
https://secure.toronto.ca/council/agenda-item.do?item=2016.PE15.2

At its meeting of June 8, 9, 10, and 11, 2014, City Council adopted Item 2014.PE28.6 Entitled "Resilient City: Preparing for Climate Change," which outlined an approach for integrating climate change resilience into decision-making and co-ordination of City operations and services.
https://secure.toronto.ca/council/agenda-item.do?item=2014.PE28.6

COMMENTS

Toronto's Changing Climate

Toronto's climate is changing. Toronto's Current and Future Climate,[ii] a 2024 analysis prepared for the City by the Toronto and Region Conservation Authority, shows that Toronto is warmer than it used to be, with the pace of warming accelerating in recent decades. The ten warmest years on record (since 1850) have occurred since 1998. By the end of summer 2025, Toronto recorded 24 days above 30ºC, more than double the historical annual average. The number of very hot days per year with temperatures above 30ºC is expected to increase from 10 days between 1971-2000, to 36-44 days by the 2050s and to 46-78 days by the 2080s, with the range depending on future global greenhouse gas emissions trends.

Toronto's climate is also becoming wetter, with a larger share of precipitation occurring as rain rather than snow. In the past 20 years, Toronto has experienced four significant storms that overwhelmed infrastructure designed for historical climate conditions. By the end of the century, annual total precipitation is expected to increase by approximately 11-15 per cent. Extreme precipitation[1] is also expected to increase, with the total precipitation falling on the wettest day increasing from 37 mm in 1971-2000 to 42-44 mm by the 2050s, and 44-48 mm by the 2080s. Extreme storms are also expected to

[1] Extreme precipitation refers here to unusually intense or prolonged rainfall events that exceed typical historical patterns.

occur more often, such as the July 2024 storm that resulted in more than 100 mm of rain in some Toronto areas in the span of three hours.

Current and Future Climate Risks in Toronto

Toronto's Climate Risks: Understanding Vulnerability Today, Preparing for Tomorrow (Summary Report) (Attachment 1) is Toronto's first city-wide assessment of climate risks across major urban systems. This City of Toronto study evaluated how current and projected climate hazards interact with four key City systems: population and local economy, municipal services, infrastructure systems and natural systems and green spaces. The analysis identified and evaluated more than 400 potential impacts based on the relationships of the four key City systems to people, assets and services for which the City holds direct responsibility, regulatory authority or significant influence.

The analysis found that the most urgent climate-related risks currently facing Toronto are extreme heat and flooding from heavy rainfall. Elevated risks were also identified for high winds, poor air quality, winter weather and impacts to ecosystems. By the 2050s, the number and severity of high-risk climate impacts are expected to grow, with increased risks associated with extreme heat and flooding and fewer risks related to cold and winter conditions. The following section outlines five key risk themes for Toronto, which are further articulated in Attachment 1. A full description of the methodology, the complete list of risks, existing climate change adaptation measures and potential future actions is available at toronto.ca/climateready.

Risk Theme 1: Compounding Heat, Health, and Affordability Pressures

Extreme heat and its impact on human health is Toronto's most urgent climate threat, with impacts including heat exhaustion, heat stroke and exacerbation of cardiovascular and respiratory conditions that can lead to hospitalization and death. People experiencing homelessness, older adults, people with disabilities, low-income households and people living in buildings without air conditioning face disproportionate exposure to rising temperatures and more frequent heat events. At the same time, higher electricity costs, driven by increased use of cooling equipment, add pressure on low-income households and may lead to people keeping air conditioners off even when it is hot. When smoke from wildfires coincides with heat, health risks increase further.

Extreme heat risks in Toronto are expected to escalate over the coming decades, with the share of residents living in areas with dangerous temperatures during heat events increasing from about 25% today to about 70% by 2050 and about 95% by the 2070s, as outdoor extreme heat becomes widespread across the City.

Risk Theme 2: Infrastructure Disruptions and Cascading Impacts[2]

Climate change is placing growing stress on infrastructure in Toronto. Residential, commercial, industrial and municipal buildings are at high risk of water damage from

[2] Cascading impacts refer to a chain of events triggered by a climate-related hazard—such as extreme heat, flooding, or storms—where the initial impact leads to further disruptions across systems like transportation, health or the economy. These interconnected effects can result in broader physical, social or financial challenges for communities and infrastructure.

extreme precipitation and associated flooding. These impacts can be widespread and can lead to costly repairs, operational shutdowns or long-term structural degradation. Road networks are similarly at risk, with flooding causing damage to pavement and increasing the likelihood of road safety incidents and broader transportation disruption.

Heat waves can also impact infrastructure. High temperatures increase the risk of power outages by reducing transformer efficiency and driving up electricity demand. Heat can soften asphalt that can slow traffic and cause overhead rail wires to sag, potentially disrupting transit services. Data centers and telecommunications systems as well as electrical transformers are also vulnerable to overheating, which can cause cascading service disruptions.

While cold weather risks are expected to decrease over time, winter storms continue to pose a serious risk to Toronto’s infrastructure. Equipment failures and tree damage, especially from branches laden with ice, can cause widespread power outages, disrupting heating systems and other critical services. Water infrastructure is also vulnerable, with freeze-thaw cycles affecting the risk of burst municipal pipes, leading to household water supply interruptions.

Risk Theme 3: Emergency, Municipal and Health Services Under Strain

Municipal services will face escalating pressure as extreme weather becomes more frequent and severe. Shelters already operate at or near capacity, and surges in demand during heat waves, air quality events and storms strain available resources. The City's outdoor workers face direct exposure to climate hazards while demand for their services increases. Tasks such as clearing storm debris and investigating and addressing storm damage may divert attention from regular duties. In the face of increasingly volatile weather, the existing plans, processes and resources of a broad range of City Divisions, Agencies and Corporations will face strain, increasing the need for enhanced response coordination. When demand peaks, cascading effects will follow for both municipal and broader service delivery agencies: emergency services face increasing call volumes which result in longer response times, hospitals and community health service capacity is further strained and outreach teams are stretched thin precisely when outdoor conditions are most dangerous. Toronto Emergency Management and multiple City Divisions involved in emergency response will face increasing response demands while still being expected to deliver other core services.

Risk Theme 4: Degradation of Natural Areas and Habitat, and Tree Canopy Loss

Urban forests and green spaces including parks, pollinator habitat, wetlands, streams and ravines provide important benefits: they offer cooling and carbon sequestration, absorb and manage stormwater, improve health and wellbeing, provide wildlife habitat, sustain biodiversity, offer noise mitigation and energy savings for buildings and, in the case of trees, offer shade during hot weather. However, risks related to tree loss, impacts of invasive species, vector-borne diseases and allergens are expected to become more severe as climate conditions continue to shift. Storm events, warmer temperatures, longer growing seasons and increased pest survival are already straining urban ecosystems, with consequences for biodiversity and human health.

Loss of meadows, wetlands and tree canopy contribute to the erosion of Toronto's natural heritage system defenses against climate impacts, which will contribute to increased neighbourhood temperatures, increased flood volumes and degradation of habitat quantity and quality leading to species loss.

Risk Theme 5: Interconnected Risks

Climate hazards do not affect systems in isolation. Conditions likely to amplify negative impacts across multiple systems include heat event blackouts, flood-related transport disruption, heat-related illnesses, telecom outages, social isolation, rising household energy costs and tree canopy loss. For instance, heat-driven power outages in dense neighbourhoods could cut off access to cooling when residents need it the most, while telecom failures hamper communications tools and platforms that direct vulnerable groups such as seniors to safe locations. Extreme winter weather can cause power outages that disrupt heating and critical services when mobility is limited and access to safe spaces is difficult. Flood events can also limit mobility and prevent vulnerable individuals from accessing healthcare, social supports and daily necessities.

The Cost of Current and Future Risks to the City and the Public

Across Canada, the costs of weather-related disasters increased from an average of $8.3 million per event in the 1970s to $112 million per event[3] from 2010 to 2019.[iii] Climate-induced damages are already slowing Canada's economic growth by $25 billion annually, equal to 50 per cent of projected GDP growth in 2025.[iv] While the City has reduced its state of good repair backlog from $26 billion in 2024 to $18 billion in 2025, the impacts of climate change could stall or slow this progress by damaging infrastructure and adding to the backlog. These figures illustrate that pressure is being placed on assets that Torontonians rely on every day such as roads, bridges, utilities and municipal buildings.

Toronto faces financial, social, environmental and health costs from climate change. Costs to the City may arise from damage to infrastructure and buildings, disruptions to services and transportation, increased emergency response and environmental cleanup needs. For residents, costs may include property damage, health risks, displacement, lost income and reduced access to essential services. These challenges also contribute to rising insurance costs and place added pressure on vulnerable populations. For a more complete list of costs identified by a recent Toronto research project, refer to Attachment 3: Anticipated Climate-Related Costs to the City of Toronto and the Public.

The range and nature of these costs illustrates the urgency for the City to invest in climate change adaptation measures, especially since the benefits of climate change adaptation actions are known to outweigh the costs across sectors and regions. Early investments in climate change adaptation are especially cost-effective, reducing long-term damages, health impacts and improving resilience. Measures such as upgrading infrastructure or installing shading technology, can cut damages five-fold and save millions of labour hours lost to extreme heat.[v] For example, high-level modelling conducted in support of the climate change risk and vulnerability assessment showed

[3] Expressed in 2019 Canadian dollars to account for inflation.

that applying floodproofing measures to just 10 per cent of buildings in Toronto with the highest riverine damages may reduce total losses by more than 40 per cent, and could help avoid approximately $866 million in damages.[4]

Indigenous Knowledge and Worldviews

While climate change risk and vulnerability assessments are common mechanisms for identifying municipal climate change risks and adaptation actions, they are not the only form of evidence and knowledge that can inform the City's path to climate resilience.

Indigenous communities have led and maintained the health of these lands and waters, and the living beings that are here, since time immemorial. Indigenous peoples have also been forced to adapt to the degradation of their traditional lands and lifestyles since settler contact. A recent United Nations report affirms that Indigenous communities safeguard 80 percent of the world's remaining biodiversity, and that forests on their land are better maintained, with a higher preserved biodiversity than those on non-Indigenous lands.[vi] Indigenous Peoples carry generations of governance experience, land-based knowledge and community practices, and Indigenous knowledge and climate solutions that are essential companions to Western climate science approaches.

Indigenous leadership is necessary for building resilient, just and future-focused approaches to climate solutions. This is recognized in Action 19 of the City of Toronto's 2022-2032 Reconciliation Action Plan (RAP), which acknowledges that Indigenous oppression and genocide is rooted in the impacts of land dispossession and displacement. The RAP also acknowledges that Indigenous Peoples are experts in local land stewardship and carry thousands of years of collective knowledge of how to live in right relations[5] with the land, water and all its inhabitants.

Current Actions Underway to Address Climate Risks

Climate action involves both climate change mitigation (reducing greenhouse gas emissions to limit future climate change) and climate change adaptation (preparing for and responding to current and future climate risks). This report is focussed on climate change adaptation actions that build climate resilience, strengthening Toronto's ability to withstand and recover from climate impacts. While climate change adaptation is essential, climate change mitigation remains a critical strategy for limiting the severity and extent of future climate impacts.

The City is already taking action to address climate risks, with more than 80 existing climate change adaptation actions identified that contribute to climate resilience. A comprehensive list of initiatives is available at toronto.ca/climateready. Key initiatives that promote climate-resilient natural and built environments, include the Toronto Green

[4] This scenario is hypothetical and intended to demonstrate the potential scale of impact from targeted interventions. It does not distinguish between municipal and privately-owned infrastructure and should not be interpreted as a prescriptive solution or policy recommendation.

[5] Right Relations or Righting Relations refers to the ongoing process of restoring balance, accountability and ethical reciprocity between Indigenous and non-Indigenous peoples, institutions, waters, lands and ecosystems. It emphasizes relational repair through truth-telling, responsibility and the re-establishment of respectful, just and place-based relationships grounded in Indigenous laws and worldviews.

Standard, Toronto Green Streets, the Wet Weather Flow Master Plan, and the Ravine, Biodiversity, Pollinator Protection and Parkland Strategies. Responding to climate impacts is a core component of the City's Emergency Response Plan, as well as key-people centered strategies such as the Heat Relief Strategy and the Wildfire Smoke Response Strategy. Some key ongoing initiatives and new data are profiled below to illustrate work underway.

Actions to Address Heat

City Council has acknowledged the significant risks of extreme heat for Toronto on multiple occasions. Currently, Council is considering recommendations for next steps towards implementing a maximum indoor temperature standard of 26°C in leased residential premises across the City. The City is also exploring continuation of a 2025 pilot program that provided free air conditioning units to low-income seniors, subject to 2026 Budget approval. At the same time, the City is enhancing its Heat Relief Strategy, based on learnings from summer 2025. These improvements build on well-established programs that enable public access to cool spaces across Toronto and communicate practical tips to help residents to "beat the heat." In February 2025, Council adopted Thermal Comfort Guidelines which protect the quality and comfort of the public realm for new large area studies and capital projects. In parallel, Toronto Emergency Management has been working with key City divisions, agencies and corporations to advance planning for "heat emergencies" that could surpass the capacity of the day-to-day measures outlined in the Heat Relief Strategy, (such as a significant power outage during a Heat Warning or a very prolonged Heat Warning) as part of the City's overarching Emergency Response Plan. In such cases, the Emergency Response Plan is activated and the Toronto Emergency Operations Centre stands up to coordinate the response across City divisions, agencies and corporations and with external partners. The City also has minimum backup power guidelines for multi-unit residential buildings that help people stay at home during area-wide power outages. The guidelines are scheduled to be updated in 2026.

Actions to Mitigate Flooding

Flooding in Toronto can occur in two ways: riverine flooding occurs when rivers or streams overflow their banks due to heavy rainfall or snowmelt, while overland flooding happens when water flows over land that is normally dry, often caused by intense rain overwhelming drainage systems or pooling in low-lying areas. Toronto's Wet Weather Flow Master Plan is the City's long-term strategy for handling stormwater and combined-sewer overflows. It guides investments in both engineered and nature-based solutions to reduce flooding, improve water quality in local waterways and Lake Ontario, and protect neighbourhoods and infrastructure during heavy rainfall. Key initiatives include the Basement Flooding Protection Program (BFPP), the Don River and Central Waterfront project as well as various watercourse erosion management projects.

Toronto has largely limited riverine flood risk to buildings by directing new development outside floodplains. The City and Toronto and Region Conservation Authority work together to implement the provincial natural hazard framework which helps ensure buildings and infrastructure are not placed in flood-prone areas. The City is also a key partner in the ongoing Port Lands Flood Protection project, a transformative infrastructure initiative aimed at protecting over 240 hectares of land from extreme

flooding at the mouth of the Don River. It includes a total investment of over $1.4 billion by the City, the Province of Ontario and Government of Canada.

Toronto Water has undertaken an initiative to expand the City's existing Basement Flooding Protection Subsidy Program, to help property owners protect their homes from basement flooding. Since its inception in 2007, the program has received approximately 59,000 applications and the City has issued nearly $86 million in subsidies, with approximately 14 per cent of Toronto's residential properties participating. The City has also made targeted investments in flood-prone areas such as the Rockcliffe-Smythe Flood Mitigation Project.

Actions to Enhance Natural Systems that Promote Resilience
Natural and green infrastructure play a vital role in climate resilience by reducing heat and flood risks, while offering health, ecosystem and community benefits. Parks and public green spaces are essential to this effort and also provide economic value to the City. Protecting and enhancing public green spaces is key to sustaining ecosystem services[6] and should be central to climate adaptation and resilience strategies.

Recently, Parks & Recreation together with the Toronto and Region Conservation Authority and University of Waterloo estimated that City-owned or operated parks, golf courses and open green spaces provide $7.7 billion worth of ecosystem service benefits annually. These parks and public green spaces play a critical role in climate resilience by retaining stormwater, thereby mitigating the risk of urban flooding, as well as mitigating extreme heat and improving air quality. The valuation also estimated the benefits of these green spaces for storing and sequestering carbon from the atmosphere, improving physical and mental health, provisioning food from community and allotment gardens and attracting civic contribution through volunteer work and financial donations. More information about the findings of the Valuation of Ecosystem Services in Toronto's Parks, Golf Courses, and Open Green Spaces study is available on the City's website.

Ongoing work to maintain and enhance green and natural infrastructure at the City, reflects the importance of natural asset management and green infrastructure in the context of the City's asset management work. For example, Parks & Recreation is reviewing the 2019 Parkland Strategy and an updated version is expected to be considered by City Council in 2026. Environment, Climate and Forestry will also propose tree by-law amendments, which contribute to climate resilience, in 2026.

Actions to Build Indigenous Relationships
The City has supported Indigenous community-led conversations and engagements relating to climate change since 2018 to learn how the City can better support Indigenous initiatives pertaining to lands and waters.

Activities to date that support relationship building include:
- In November 2018, the City partnered with Indigenous Climate Action to facilitate an Indigenous Worldview Climate Change Toolkit workshop and summary report.

[6] Ecosystem services are the direct and indirect benefits that humans receive from ecosystems.

- The High Park Traditional and Prescribed Burn, a forest management practice used by Indigenous Peoples long before colonization, is now performed by the City in partnership with the Indigenous Land Stewardship Circle planning all traditional aspects of the burns since 2019.
- Beginning in 2022, Indigenous City staff have collaborated with Indigenous community members to host Indigenous Climate Visioning and Placekeeping Sessions and an annual community Harvest Celebration and Appreciation Feast, to enable conversations and strengthen connections.
- Officially launched in 2023, the Indigenous Climate Action Grants support Indigenous-led climate initiatives in Toronto.
- From February 2025, twice monthly Listening Sessions focussed on lands and waters have been held by Environment, Climate and Forestry to create space for community while enabling staff to be engaged in an ongoing way.

Through this and through increased understanding of Indigenous Placekeeping and climate resilience, further trust is slowly being built, largely due to relationships with Indigenous City staff.

Toronto's Future as a Climate-Resilient City

The City's goal for climate resilience is to provide services, programs, planning and advocacy to ensure that everyone in Toronto is prepared and protected from the impacts of climate change, now and in the future. This will be accomplished when further progress is made toward the following future state goals:

- The City creates a shared understanding of climate change that allows staff to plan across all City activities, policies, programs, operation, planning and capital projects.
- The City enhances budget, asset management (including natural assets and green infrastructure) and risk management tools it already has at its disposal to identify risks and allocate resources, to add consideration of climate change risk in a way that requires all City Divisions to plan for a future that is different from today.
- The City provides information, resources and services to communities and organizations across Toronto that support climate readiness and reduce the impacts of extreme weather, while prioritizing action and support to communities who need it most.
- The City collaborates with federal and provincial governments in a way that reflects the magnitude and distribution of costs and needs of effective climate change adaptation, and with other municipalities to identify best practices related to the implementation of climate change adaptation actions.
- The City works effectively alongside and resources Indigenous climate leadership to sustain Indigenous climate solutions and decisions made concerning lands and waters in Toronto.

These outcomes align closely to the City's corporate strategic priority to tackle climate change and build resilience, and action 19 in the Reconciliation Action Plan to prioritize Indigenous worldviews and relational views of land protection and Indigenous community leadership to enhance climate resilience.

An All-of-City Climate Resilience Approach

In June 2019, Toronto released its first Resilience Strategy, which set out a vision, goals and actions to help Toronto survive, adapt and thrive in the face of any challenge, including climate change and growing inequities.

In April 2024, Toronto City Council confirmed its support for a renewed focus and coordinated approach on climate resilience at the City of Toronto. A Climate Resilience Team (CRT) was established in late 2024 and was made up of multiple Divisions and key Agencies and Corporations as well as the Toronto and Region Conservation Authority. The CRT provided input and advice on an "all-of-city" approach to climate resilience (see Attachment 4 - Overview of Interdivisional Climate Resilience Team (2024-2025)). The CRT identified that effective prioritization and action on climate resilience and climate change adaptation requires:

- Clear direction and mandates for climate resilience
- Data and other informational resources related to community-level climate vulnerability and infrastructure risks
- Data and tools to enable monitoring, evaluation and reporting on progress
- Enhanced coordination between City Divisions, Agencies and other interested parties on climate resilience and climate change adaptation work
- Financial resources to conduct climate resilience work
- Integration of climate change adaptation and resilience into the City's financial planning processes
- Enhanced internal and external communications approaches for climate resilience
- Development of informational materials that are relevant to communities, and that help residents understand and prepare for climate impacts
- Public engagement to inform future actions on climate resilience and climate change adaptation

Environment, Climate and Forestry intends to continue collaborating with the participants of the CRT as it advances a Climate Change Resilience Workplan (described below and in Attachment 2). Lessons learned from implementing the CRT informed the approach to climate resilience governance proposed below.

Governance of Climate Resilience

A review of major cities including Montreal, Calgary, Boston and Los Angeles found that successful municipal climate resilience governance requires clear leadership and accountability with shared ownership of resilience goals and effective coordination across the organization. The review found diverse structures for addressing climate resilience based on each municipality's unique needs, priorities and capacities. There is no standard model, with climate resilience embedded in departments as varied as Emergency Management, City Planning, or Sustainability, or sometimes as an office reporting directly to a City Manager or Mayor.

Some cities created specialized roles, such as a Chief Resilience Officer or Chief Heat Officer to address climate hazards. Where they exist, the scope of these roles differs across jurisdictions, shaped by the organization's strategic focus and climate priorities. Often, a Chief Resilience Officer is responsible for developing and overseeing

strategies, plans, policies and programs related to resilience, and for coordinating their implementation across departments. The placement of this role within municipalities varies significantly. Locating the role in an executive office can elevate the visibility of the resilience portfolio but introduces vulnerability to policy shifts and administrative changes, and limits opportunities for deep integration across functional areas. Positioning the role deeper within the organization, similar to a division head, can offer greater stability but not afford as much visibility to the work and may limit the ability to drive cross-cutting initiatives.

In Toronto, strategies and initiatives that align to the broad concept of resilience are already well-established in a number of City Divisions. Some City Divisions are embedding consideration of climate risks by initiating targeted climate change risk assessments, considering climate in their strategic planning, or developing public-facing capacity building or communications materials. Social Development embeds concepts of climate into its ongoing equity-focussed work in communities and Toronto Emergency Management includes extreme weather hazards in its planning and response. A range of City Divisions carry out seasonal planning for extreme heat and winter weather. An all-of-City approach for climate resilience should leverage the wide range of staff expertise and ongoing climate-related work that is being undertaken across City Divisions and be responsive to the City's existing organizational structure and Divisional mandates.

Past experience with a Chief Resilience Officer role in Toronto suggests that creating an executive coordination role at the City, separate from a divisional structure and without ongoing funding and resources, created challenges for continuity on the portfolio and reporting on progress. Between 2017-2019, a Chief Resilience Officer position was funded by the Rockefeller Foundation to create Toronto's Resilience Strategy. The role had a broad scope that included climate as one element alongside other pressures like housing and inequality. The position was not continued following the release of the strategy and the conclusion of external funding. In 2020, decisions on how climate resilience would be further staffed or resourced were paused while immediate demands of the COVID-19 pandemic drew attention from across the corporation. In late 2022, Environment, Climate and Forestry began staffing up a small team dedicated to climate resilience and rebuilding the capacity to coordinate work across the corporation.

A singular Chief Resiliency Officer in a centralized office lacks direct authority over implementation, potentially limiting their impact and effectiveness. The amount of work and range of expertise required for effective coordination can be substantial and requires dedicated financial and staff resources to be successful. Over the past two years, Environment, Climate and Forestry has grown its capacity to support strategic, longer-term planning, coordination and convening related to climate resilience. Dedicated staff are developing evidence to support climate resilience decision-making, have initiated new interdivisional networks to support climate resilience activities and are working to build relationships on lands and waters with local Indigenous communities. Based on information gathered in response to 2025.MM31.21, staff are not recommending the creation of a Chief Resiliency Officer.

Recommended Approach for Governance of Climate Resilience at the City of Toronto

The proposed approach consists of:

- A structure of visible leadership with coordinated staff support that effectively serves the functions of a Resilience Office while building on existing strengths and expertise across the City's Divisions
- A set of proposed outputs that will enhance coordination, accountability, and enable better decisions about resource allocation

Staff will convene an Oversight Table for Climate Resilience, led and coordinated by Environment, Climate and Forestry to bring together the range of expertise and authority required to advance climate adaptation and resilience in the near term. The Oversight Table will be composed of City Division Heads with representation from each City service area. The Oversight Table will bring together diverse perspectives that reflect the interconnected social, infrastructure and service systems that are affected by climate change. The Table will be co-chaired by Environment, Climate and Forestry and Toronto Emergency Management, to reflect the importance of connecting long-term climate resilience planning with seasonal preparedness and emergency response to extreme weather events. Divisions expected to participate in the Oversight Table include Environment, Climate and Forestry (co-chair), Toronto Emergency Management (co-chair), City Planning, Financial Planning, Municipal Licencing and Standards, Social Development, Toronto Public Health and Transportation Services. This Table will provide visible leadership and a unified direction for climate change adaptation across the corporation, recognizing the complexity and cross-cutting nature of resilience issues. The Oversight Table will also support the integration of climate resilience and climate change adaptation into divisional mandates and operations.

The Oversight Table will be informed by working tables comprised of staff from City Divisions. Representatives from Agencies and Corporations may also be requested to participate where relevant. The working tables will focus on:

- People and neighbourhoods
- Infrastructure and assets, including natural and green infrastructure
- Indigenous relationships

These working tables will bring together subject matter experts to inform decisions about which actions the City should pursue in the Climate Change Adaptation Action Plan. They will inform development and application of a method to prioritize potential climate change adaptation actions that are identified in Attachment 1, including factors such as feasibility, cost and equity. The working tables will also help identify coordination and accountability gaps, shape public and other external engagement strategies and advise on monitoring and evaluation. Members will play a championing and convening role within their own Divisions to enable implementation of climate change adaptation actions within their specific mandates, that are included in the Climate Change Adaptation Action Plan. Coordination will also enable a long-term climate change planning lens to be consistently applied alongside seasonal/short-term planning and preparation activities, and in response to extreme weather events, for a variety of programs, services, plans and projects.

Environment, Climate and Forestry will continue coordinating and looking for opportunities for alignment of City Agencies and Corporations with the Climate Change Adaptation Action Plan objectives, requesting their participation on Working Tables as relevant and providing input on any related reporting required by their Boards. These working structures will create space for focused discussions on adaptation and resilience, complementing the broader mandate of the Net Zero Climate Leadership Table, which also includes participation from key City Agencies and Corporations.

The proposed approach positions climate resilience as a key pillar of Toronto's climate change response, complementing mitigation efforts and enabling a holistic approach to climate action.

Climate Change Resilience Workplan

The Climate Change Resilience Workplan (Attachment 2) outlines activities that will be initiated in the next three years to move the City closer to its desired future state for climate resilience. These are organized into four focus areas:

1. Leadership and Governance
2. Embedding Climate Risk into Decision-Making
3. Co-creating Resilience and Climate Change Adaptation with Communities
4. Two-Row Wampum: Working Alongside Indigenous Climate Leaders

Leadership and Governance (Focus Area #1), and Embedding Climate Risk into City Decision-Making (Focus Area #2)

Focus Area #1 (Leadership and Governance) and Focus Area #2 (Embedding Climate Risk into City Decision-Making) describe the activities of the Oversight Table and working tables to develop a Climate Change Adaptation Action Plan and to embed climate risk information into decisions about resource allocation.

Climate Change Adaptation Action Plans are a best practice for municipalities and a natural next step after completing a climate change risk and vulnerability assessment. Toronto’s climate change risk and vulnerability assessment identified more than 60 potential climate change adaptation actions the City can pursue to further strengthen resilience. These need to be evaluated and prioritized with consideration for feasibility, cost and accountabilities to set out a coordinated approach for how the City will address risks in the short, medium and long term.

Climate Change Adaptation Action Plans are sometimes a condition of funding for external funders, such as the Federation of Canadian Municipalities, and can strengthen funding applications by demonstrating readiness and impact. Toronto’s Climate Change Adaptation Action Plan will be complemented by a comprehensive and adaptive monitoring, evaluation, reporting and learning approach that uses key performance indicators and targets to improve decision making. It will also be informed by engagement with residents and discussions with local Indigenous communities as described in Focus Areas #3 and #4.

The development of the Climate Change Adaptation Action Plan will be complemented by initiatives to better embed climate risk and resilience considerations into existing processes at the City that are used to prioritize and allocate resources. These include:

- The Carbon Budget, which is currently used to prioritize capital projects based on their ability to support climate mitigation by reducing greenhouse gas emissions. An assessment will be completed to determine the feasibility of amending Toronto Municipal Code Chapter 669, Climate Change Goals and Governance, to include climate resilience and climate change adaptation in the Carbon Budget Report.
- Toronto's Climate Lens, a policy and decision-making framework designed to integrate climate impact considerations into all major City decisions as part of the TransformTO Net Zero Strategy.
- The Corporate Asset Management Plan, which ensures that the City has the capacity to maintain its infrastructure, including natural assets, make strategic decisions about future investments and provide the level of services needed to support Toronto residents.
- Public-facing financial disclosures such as the annual financial report and the Environmental, Social, and Governance report, which could be increasingly aligned with the Task Force on Climate-related Financial Disclosures (TCFD). TCFD is a globally recognized framework for reporting climate-related risks and opportunities that is increasingly being leveraged by accounting standard-setting bodies and cities across Canada to guide transparent and strategic decision-making around climate resilience.

In addition, the City will seek to embed climate risk considerations into tools and processes that are currently in use or development, including:

- As the Chief Financial Officer & Treasurer continues to mature the Enterprise Risk Management program, climate change can be included in a corporate wide perspective to understand, manage, communicate and respond to threats and opportunities that impact the City's ability to achieve its objectives.
- As City Divisions plan, procure and implement infrastructure projects, opportunities exist to identify and apply consistent requirements to ensure climate resilience is built into the lifetime of the asset.
- As the City pursues opportunities to reduce GHG emissions from buildings, the City will explore opportunities to add a resilience lens to enabling and supporting programs and information provided to property owners.

The City will continue to address data and information gaps by maintaining consistent, up-to-date climate data and resilience planning guidance packages for City Divisions, mapping neighbourhood-level climate vulnerability in Toronto, exploring data needs and solutions to map pluvial flood risk city-wide and helping City Divisions assess the costs and benefits of climate change adaptation.

Co-creating Resilience and Climate Change Adaptation with Communities (Focus Area #3)

Engagement with Toronto's residents will be considered during the development of the Climate Change Adaptation Action Plan. As described in Attachment 5 - Community-Informed Climate Resilience, deep engagement is required to ensure that actions are

designed with an equity focus to address the unique needs of communities. Priorities related to community engagement and public communications and education include:

- Leveraging the Community Coordination Plan, an initiative of Social Development and the United Way of Greater Toronto, for community-led conversations about the design and implementation of actions in the Climate Change Adaptation Action Plan.
- Embedding climate resilience in ongoing equity-centred community engagement and capacity building initiatives, such as Community Development Plans, the Toronto Strong Neighbourhoods Strategy's existing community networks and ongoing Community Resilience Hub work that is being led by Social Development.
- Increasing public education and awareness on climate change, associated risks, resident preparedness and the City's ongoing efforts to manage extreme weather and long-term climate impacts. Staff will build on existing resources and Divisional initiatives, such as developing inclusive information in multiple formats for *Emergency Ready* (led by Toronto Emergency Management), as well as adding resilience messaging to climate retrofit programs.

As part of developing the Climate Change Adaptation Action Plan, the need for any additional capacity and resources will be considered to ensure that engagement activities are robust and meet the needs of communities as the climate evolves.

Two-Row Wampum:[7] Working Alongside Indigenous Climate Leaders (Focus Areas #4)

Effective stewardship co-developed with Indigenous communities and leaders will reduce the impacts of climate change on ecosystems and protect those environments which offer significant benefits to the wellbeing of everyone in the City. However, while Indigenous peoples have modelled impactful leadership in innovating strategies for climate action, due to historic injustice, dishonesty and inconsistency, Indigenous communities may be unwilling to work with the broader municipal government.

Through its work on climate resilience, the City will prioritize intentional efforts to build and deepen relationships and enable collaboration and co-creation grounded in mutual trust, respect and honesty. Indigenous relationship-building needs to strengthen connections to local communities and should also consider opportunities to initiate discussions with local Treaty and Territorial Partners to scope out approaches for enabling local Indigenous climate leadership.

In the short-term, this means enhancing internal capacity of City staff to work with Indigenous communities, as well as building community capacity to engage with the City in addressing climate issues. There is a need to build capacity within the City to engage respectfully, accountably and relationally with Indigenous peoples and governance systems. For example, learning about international standards such as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) to complement

[7] The Two Row Wampum (Gaswéñdah) is one of the oldest treaty relationships. Made in 1613 between Onkwehonweh and Dutch immigrants, it continues to symbolize mutual respect and peaceful coexistence. It represents two distinct paths—one for Indigenous peoples and one for settlers—traveling the "river of life" side by side, without interference, in friendship and harmony. (Onondaga Nation. Two Row Wampum – Gaswéñdah.)

City-driven frameworks when available (i.e. Reconciliation Action Plan) as foundational relationship building blocks to build trust.

There is also a need to convene an interdivisional table (one of the working tables expected to report to the Oversight Table) to support cross-divisional sharing of needs and priorities identified by local Indigenous communities during City engagements. This table will enable City staff to appropriately respond to community-identified priorities in a holistic manner in keeping with the way communities are likely to raise and view the interconnected issues and needs they may be facing. This table may consult with the Aboriginal Affairs Advisory Committee to seek advice on outward-facing activities related to lands and waters.

Outward-facing activities to build capacity in local Indigenous communities could mean exploring potential approaches and structures to establish sustained relationships, where leadership from Treaty, Traditional, Knowledge Holders, Elders, Matriarchs, youth and those most marginalized can guide climate priorities and policies in ways that reflect Indigenous ways of being, responsibilities to land, water, all our relations[8] and future generations.

Indigenous relationship building and reconciliation at the City is the responsibility of all City Divisions. Environment, Climate and Forestry has a unique relationship to Indigenous communities due to its mandate pertaining to environmental stewardship. As such, the Division's climate resilience efforts will continue to prioritize building relationships with and understanding of Indigenous communities and ways of being, with lands and waters as common interest and priority.

As a starting point, Environment, Climate and Forestry and the Indigenous Affairs Office will seek to identify and adopt new approaches to engaging with Indigenous communities on the stewardship of lands and waters that respect, honour and enable Indigenous-led climate action. These efforts are part of the City's ongoing commitment to reconciliation and relationship building on climate resilience, and an opportunity to signal the City's readiness for a new era of collaboration, moving beyond short-term engagement, advancing Indigenous leadership for a resilient future and making a commitment to reshaping how the City walks alongside[9] Indigenous Peoples in addressing the climate crisis. City staff also recognized that any approach that is proposed for the City to enable Indigenous leadership and co-create actions related to climate resilience must be community-led in its design and intent and will likely require multiple discussions over time to scope. This approach ensures that climate resilience is not only technically sound but also culturally grounded, respecting and working in parallel with Indigenous climate leaders in this place called Toronto.

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[8] "All our relations" refers to the interconnectedness of all things in the universe - people, animals, plants, lands, waters.

[9] "What does it mean to 'walk alongside' each other in reconciliatory practice? It is a long path that takes slow, committed work. […] The practice of walking alongside isn't a journey from one point to another but rather, an ongoing cycle of learning (seeing), relating, understanding, and doing. Acknowledging injustices, truth-telling, and educating others begins with you." (McGill University. Walking Alongside.)

Next Steps

In 2026, Environment, Climate and Forestry will focus on planning, initiating and implementing effective internal governance structures to develop a City of Toronto Climate Change Adaptation Action Plan.

In 2027, Environment, Climate and Forestry will lead a report back on the actions that City Divisions will implement in the short, medium and long term to address priority climate risks, alongside financial implications. Future reports from staff will update on progress made to add climate risk information to asset management and budgeting processes, findings and implications of technical studies and community engagement and on building relationships and visiting with Indigenous communities.

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ATTACHMENTS

Attachment 1: Toronto's Climate Risks: Understanding Vulnerability Today, Preparing for Tomorrow (Summary Report)

Attachment 2: Climate Change Resilience Workplan

Attachment 3: Anticipated Climate-Related Costs to the City of Toronto and the Public

Attachment 4: Overview of Interdivisional Climate Resilience Team (2024-2025)

Attachment 5: Community-Informed Climate Resilience

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