

## **Toronto's Climate Change Readiness: Updates on commitments and a refreshed mandate for coordinating resilience activities**

**Date:** March 13, 2024

**To:** Infrastructure and Environment Committee

**From:** Executive Director, Environment & Climate Division

**Wards:** All

### **SUMMARY**

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This report offers a comprehensive update on climate change. It highlights the progress made in mitigating greenhouse gas (GHG) emissions towards achieving net-zero emissions by 2040 (with full details in the attached *Annual TransformTO Net Zero Progress and Accountability Report*) and proposes a renewed focus and coordinated approach to building resilience to a changing climate within the City of Toronto.

#### **Impacts of the changing climate**

Toronto is experiencing weather that is hotter, wetter, and wilder, and these conditions are expected to worsen. The number of days per year with temperatures above 30°C (extreme heat days) has already increased from an average of 8 days in the 1950s to about 18 days per year now. Data suggests that if global emissions remain on their current path this could increase to 29 days by the 2030s (2021-2050), and 54 days by the 2060s (2051-2080)<sup>1</sup>. As well, data suggests that by 2080 Toronto will experience an increase in annual precipitation of 19%, and extreme rainstorms with 30% more rainfall than the historical baseline (1971-2000), which are expected to lead to flooding and associated infrastructure damage, injuries, habitat degradation, degraded water quality, soil erosion and disruptions to services and the economy.

Over the past year, extreme heat, wildfire, flooding, and storm events in Toronto, across Canada, and globally further illustrated how harmful and costly these events can be to residents and the assets and services that support them. The impacts of climate change also amplify existing socio-economic vulnerabilities and inequities, unfairly affecting people who already have challenges coping.

The City's focus to date has been to do its share to respond to a global call to reduce greenhouse gas emissions and avoid harmful temperature rise. A second but no less

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<sup>1</sup> Based on data extracted from [ClimateData.ca](https://climatedata.ca) and [Ontario Provincial Climate Change Impact Assessment](#)

important stream of City responsibility is to steadily build Toronto's resilience and readiness at a local level to respond to the day-to-day exposure of Torontonians living in an increasingly unpredictable climate.

## **Progress towards achieving net zero emissions**

The City's efforts to mitigate climate change by reducing greenhouse gas emissions are detailed in *Attachment 1: Annual TransformTO Net Zero Progress and Accountability Report*. This new annual report format offers a comprehensive and accessible view of City-led GHG reduction actions, highlighting the progress midway through the City's first Short-Term Implementation Plan (2022-2026) with respect to the critical steps needed to achieve net zero.

The City is leading at the cutting-edge of work to reduce emissions in Toronto. Key highlights include:

- The Toronto Green Standard which is helping new developments reduce emissions by 15,000 t CO<sub>2</sub>e per year,
- City-led work to develop Emission Performance Standards for existing buildings that will help align business and household decisions with a transition to technologies like heat pumps that run on clean electricity, and
- Greening the Corporate fleet with emissions on pace for the 45% emission reduction target by 2025 and TTC planning for a zero-emissions bus fleet by 2037 – three years ahead of schedule.

Additionally, a summation of Toronto's 2024 budget commitments shows that while Toronto's actions are making a positive difference, the goal of net zero emissions by 2040 is at risk unless the City, other levels of government, residents and businesses support and invest in transformative actions that meet the scope and scale of the climate challenge.

The report also highlights how the City can tackle the biggest source of GHG emissions – fossil (natural) gas for heating buildings – by moving forward with Emission Performance Standards for every building in Toronto which will be outlined in further detail later in 2024. Additional opportunities to accelerate progress will be presented in Toronto's next 2026-2030 Net Zero Strategy Short-term Implementation Plan, due in 2025.

Full details on progress implementing the Net Zero Strategy and new Carbon Accountability measures can be found in the attachments to this report.

## **Increasing Readiness for Climate Change**

As the climate changes, Toronto strives to remain a livable and vibrant City for all. While many divisions are already doing important work to reduce risks from climate change, the potential for climate change to negatively affect the City and its residents is clear.

The City of Toronto does not currently have a Council-adopted climate resilience or adaptation plan; however, consistent with recommendations from the [Resilience Strategy](#), Environment and Climate (E&C) is restarting city-wide discussions on

resilience by establishing a new role to coordinate climate resilience planning and action in a unified way, city-wide, starting with proposing a refreshed governance approach.

In 2022-2023, a new team was established within E&C to specifically support climate resilience. During Fall 2023, E&C led inter-divisional discussions and workshops with 21 divisions and agencies to identify the current status of climate resilience work across the city and map out priorities for addressing climate risks now and in the future.

An outcome of this work identified the benefit of establishing centralized, refreshed guidance on climate resilience that builds on past work, incorporates up-to-date information, aligns us with peer cities, and protects vulnerable people. Four priority areas for action surfaced: (i) clear direction to address climate resilience as a priority (ii) an approach that will prioritize Indigenous worldviews, relational views of land protection and Indigenous community leadership to enhance climate resilience, (iii) more access to evidence, information, expertise, and advice to guide the City's priorities and actions, and (iv) development of a clear framework, mandate and objectives for addressing climate impacts at a City-wide level.

It should be noted however, that while E&C is well-positioned to coordinate and support climate resilience city-wide, each division, agency and corporation will need to play a leadership role to integrate climate considerations into their own policies, programs, and activities.

As part of this work, E&C will be collecting and analysing local evidence and data which is fundamental to the work of collective and divisional resilience planning. A climate risk and vulnerability assessment will meet this need, generating updated, local, future climate projections for the City and identifying the people, assets, and services, including natural systems, that are most vulnerable to climate impacts. This additional work scope, which will conclude in early 2025, will help prioritize potential adaptation actions and support recommendations for how to best minimize impacts to residents, many of whom are already disproportionately impacted by climate change.

To clarify the financial risks facing Toronto from climate change and provide context to the costs of adaptation, the City is partnering with the new Ontario Resource Centre for Climate Adaptation (ORCCA) to estimate the cost of inaction. In 2020, Toronto reported that four rainstorm, ice storm, and high lake / windstorm events directly [cost the City a combined \\$228 million](#) dollars between 2005-2017 while a recent study done in Ontario estimated that a proactive adaptation approach would [save \\$1.1 billion dollars per year](#) in climate costs by the end of the century, compared with paying for the damage inflicted by those same impacts retrospectively.

A detailed evaluation of our progress to net zero by 2040 and a renewed focus on coordinating climate resilience activities that builds on data about future climate, risks, and costs will together shape critical actions and next steps that will prepare our city government, our economy, our ecosystems, our communities, and our residents for a changing climate.

## **RECOMMENDATIONS**

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The Executive Director, Environment & Climate, recommends that:

1. City Council receive the Annual TransformTO Net Zero Progress and Accountability Report (Attachment 1) and its related attachments for information.
2. City Council confirm support for a renewed focus and coordinated approach on climate resilience at the City of Toronto
3. City Council direct the Executive Director, Environment & Climate Division in collaboration with all City Divisions, Agencies, Boards, and Corporations to report back to the Infrastructure and Environment Committee in Q4 2025 with the following:
  - (a) an update on Division, Agencies and Corporations' current activities and future plans where current and future climate conditions are included in their respective infrastructure, operational, policy, and program planning
  - (b) a refreshed governance approach that integrates climate resilience into decision-making and co-ordination across the services, assets, and communities of the City of Toronto, that builds upon the climate-specific learnings from the City's 2019 Resilience Strategy
  - (c) a list of climate resilience priorities and recommended next steps based on technical analysis of climate risk that incorporate insights from engagement with internal and external partners
  - (d) a discussion of how Indigenous worldviews and relationships with Indigenous communities have been prioritized in climate resilience planning to date

## **FINANCIAL IMPACT**

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There is no additional financial impact to the approved 2024 Operating and Capital budgets for the Environment and Climate (E&C) Division.

There is no financial impact relating to the attached Annual TransformTO Net Zero Progress and Accountability Report.

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**

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"People who are socially, economically, culturally, politically, institutionally, or otherwise marginalized are especially vulnerable to climate change... This heightened

vulnerability is rarely due to a single cause. Rather, it is the product of intersecting social processes that result in inequalities in socioeconomic status and income, as well as in exposure. Such social processes include, for example, discrimination on the basis of gender, class, ethnicity, age, and (dis)ability." [United Nations Intergovernmental Panel on Climate Change](#)

Addressing the risks to Toronto's services, assets, and communities through a coordinated approach to climate resilience is an opportunity to reduce the impact of climate change on everyone and especially those most vulnerable.

A key principle underlying Toronto's approach to climate resilience is climate equity. 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. These communities often face unfair impacts from climate change due to factors like inadequate infrastructure and social disparities. Climate equity seeks to centre resilience around those most affected, fostering inclusivity, and redressing historic injustices.

## DECISION HISTORY

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### TransformTO Net Zero Decision History

On May 10, 2023, City Council adopted the TransformTO 2022 Annual Report and a Carbon Accountability governance system that included a new Carbon Budget process and required reporting on the GHG reduction impact of City budgets, as well as 5-year emission budgets with required planning and reporting processes.

<https://secure.toronto.ca/council/agenda-item.do?item=2023.IE3.3>

<https://secure.toronto.ca/council/agenda-item.do?item=2023.IE3.4>

On May 11, 2022, City Council adopted the report, Accountability and Management Framework for the TransformTO Net Zero Strategy, creating three advisory groups and providing a reporting schedule for the TransformTO Net Zero Strategy. The three groups are: (1) Climate Advisory Group (CAG) made up of community members; (2) Joint TransformTO Implementation Committee (JTIC) made up of City staff and labour union organizations; and (3) Net Zero Climate Leadership Table (NZCLT) made up of internal, inter-divisional City senior management staff.

<https://secure.toronto.ca/council/agenda-item.do?item=2022.IE29.10>

On December 15, 2021, City Council endorsed the targets and actions in the report "TransformTO - Critical Steps for Net Zero by 2040". City Council endorsed the TransformTO Net Zero Strategy Short-Term Implementation Plan 2022-2025.

<https://secure.toronto.ca/council/agenda-item.do?item=2021.IE26.16>

In October 2019, City Council declared a climate emergency; strengthened Toronto's carbon-reduction goal by establishing a net-zero greenhouse gas emission target for Toronto by 2050 or sooner and required the Environment and Climate Division

(formerly, Environment and Energy) to report back on the feasibility of actions to achieve net zero by 2040.

<https://secure.toronto.ca/council/agenda-item.do?item=2019.MM10.3>

On July 4, 2017, City Council unanimously adopted TransformTO: Climate Action for a Healthy, Equitable and Prosperous Toronto, the City's climate action strategy to meet Council's long-term, GHG-reduction target while creating an equitable, healthy, prosperous and resilient Toronto that benefits all).

<https://secure.toronto.ca/council/agenda-item.do?item=2017.PE19.4>

## **Climate Resilience Decision History**

In April 2022, City Council Adopted the 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>

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. While the report was not considered by Council, it was widely distributed and remains a public point of reference for many.

[https://www.toronto.ca/ext/digital\\_comm/pdfs/resilience-office/toronto-resilience-strategy.pdf](https://www.toronto.ca/ext/digital_comm/pdfs/resilience-office/toronto-resilience-strategy.pdf)

In October 2019, City Council declared a climate emergency and directed the Environment and Climate Division to integrate resilience into TransformTO consistent with [Resilience Strategy](#) Action 4.2 and establish leadership on resilience consistent with Resilience Strategy Action 4.5 ("to support local partners in academia, industry, and community to take leadership on resilience").

<https://secure.toronto.ca/council/agenda-item.do?item=2019.MM10.3>

In December 2016, City Council adopted the report Resilient City - Preparing for a Changing Climate - Status Update and Next Steps (PE15.2) 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>

In June 2014, City Council received the report, Resilient City: Preparing for Climate Change. This report 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**

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### **Toronto's climate is changing and our weather will be more extreme**

"Climate" means the prevailing weather conditions in a specific place over a long period of time. "Climate change" refers to the long-term shift in weather patterns such as temperature and precipitation.

Increasing temperatures and other extreme weather events are being observed in Canada and around the world. In 2023, [the hottest year on record globally](#), the Intergovernmental Panel on Climate Change ([IPPC](#)) declared that human activities are unequivocally causing climate change as a result of greenhouse gas emissions.

Toronto is experiencing weather that is hotter, wetter, and wilder, and these conditions are expected to worsen. The number of days per year with temperatures above 30°C has already increased from an average of 8 days in the 1950s to about 18 days per year currently. Data suggests that if global emissions remain on their current path this could increase to 29 days by the 2030s (2021-2050), and 54 days by the 2060s (2051-2080)<sup>1</sup>. As well, data suggests that by 2080 Toronto will experience an increase in annual precipitation of 19%, and extreme rainstorms with 30% more rainfall than the historical baseline (1971-2000), which are expected to lead to flooding and associated infrastructure damage, injuries, habitat degradation, degraded water quality, soil erosion and disruptions to services and the economy.

### **The impacts of climate change are significant**

In 2023, the Canadian government released a [National Adaptation Strategy](#) and [Climate Change Knowledge Synthesis](#) reports outlining the profound impacts climate change is having on health systems and peoples' well-being, built and natural infrastructure, and economic and financial systems across the country. Also in 2023, Ontario's [first assessment of the impacts of climate change](#) confirmed that climate change has already had significant impacts on people, communities and services here, that the impacts are expected to increase, and that Ontario's most vulnerable populations are worst affected. In 2023, Toronto Public Health identified climate change as a significant and growing health risk facing the City.

Climate change affects the health and wellness of Toronto residents and damages public and private infrastructure and natural ecosystems. It disrupts transportation systems, causes power outages, interrupts service delivery and can lead to loss of revenue and long-term health impacts.

The impacts of climate change are often unfairly borne by people who have lower ability to cope, [amplifying existing and often intersecting socio-economic vulnerabilities and inequities](#). The most vulnerable populations will be disproportionately affected by climate impacts due to increased exposure and sensitivity to climate risks, or a lack of capacity to deal with the impacts.

### **The increasing costs of extreme weather**

The costs of climate change are climbing. Across Canada, the costs of weather-related disasters, such as floods, storms, and wildfires, [increased in Canada from an average of \\$8.3 million per event in the 1970s to \\$112 million per event from 2010 to 2019](#) – an increase of 1,250 per cent.

The [Insurance Bureau of Canada](#) reports dramatic increases in weather-related catastrophic losses over the last decade. Nationally, 2022 and 2023 were two of the top

four most expensive years in terms of insured losses, at \$3.4 and \$3.1 billion respectively. Without adaptation, the [dangers of a changing climate could add more than \\$4 billion per year](#) to the cost of maintaining Ontario's public infrastructure over the rest of the century.

In addition to cost, a human toll is also paid as a consequence of extreme events:

- the 2021 heat dome in British Columbia led to 619 deaths and cost an estimated \$12 million in hospital care.
- the 2021 Pacific Northwest floods caused significant transportation disruption, 4 deaths, 15,000 people displaced and cost an estimated US \$2.0-7.5 billion.
- in 2022 hurricane Fiona battered the Atlantic provinces causing more than 25 deaths, displaced 13,000 people and cost over \$3 billion in damages, with insured damages of over \$800 million.
- the 2023 Canadian wildfire season affected all thirteen provinces and territories. Over 150,000 Canadians were displaced, with Indigenous communities disproportionately impacted. The health cost for Ontario of the harmful air pollution from these fires between June 4-8 2023 has been [estimated at \\$1.28 billion](#).
- In 2020, Toronto reported on four rainstorm, ice storm, and high lake / windstorm events [that cost the City a combined \\$228 million](#) dollars between 2005-2017.

The costs of climate change will affect every Toronto resident. In an extreme weather event, for every \$1 of insured losses, Canadians pay an additional \$3-4 on uninsured losses such as time lost from work, loss in property value, and environmental clean-up.

By 2025, the impact of climate change–related factors to average Canadians [will feel like losing \\$700 from their annual household income](#). This will occur even if the extreme weather occurs far from home, as supply-chain disruptions increase grocery prices, home insurance premiums go up, and taxes increase to pay for disaster recovery and infrastructure repairs.

## **Taking action to reduce risks and costs of climate change**

Tackling climate change involves taking action that is both present- and future-focused. Cities must reduce greenhouse gas emissions to prevent global temperature rise beyond 1.5 degrees Celsius in order to slow down the frequency of unpredictable weather extremes. At the same time, they need to build local resilience to address changes already occurring in our climate as well as changes to come.

## **Progress towards achieving net zero emissions**

Toronto's signature [TransformTO Net Zero Strategy](#) is focussed on reducing Toronto's contribution to harmful global warming emissions which indirectly reduces costs for residents and the City corporation by contributing to a future with fewer and less severe storms, heatwaves, floods and other climate hazards. Also, many actions that reduce emissions also reduce operational costs by increasing energy efficiency and lowering exposure to the volatile prices of fossil fuels.

The City's efforts to mitigate climate change by reducing greenhouse gas emissions are detailed in *Attachment 1: Annual TransformTO Net Zero Progress and Accountability*



*Report.* This new annual report format provides a comprehensive and accessible view of City-led GHG reduction action highlighting the City's progress halfway through Toronto's first Short Term Implementation Plan (2022-2026) with respect to the critical steps needed to achieve net zero.

The City is leading at the cutting-edge of work to reduce emissions in Toronto. Key highlights include:

- The Toronto Green Standard which is helping new developments reduce emissions by 15,000 t CO<sub>2</sub>e per year,
- City-led work to develop Emission Performance Standards that will help align business and household decisions with a transition to technologies like heat pumps that run on clean electricity for existing buildings, and
- Greening the Corporate fleet with emissions on pace for the 45% emission reduction target by 2025 and TTC planning for a zero-emissions bus fleet by 2037 – three years ahead of schedule.

Additionally, a summation of Toronto's 2024 budget commitments shows that while Toronto's actions are making a positive difference, the City's goal of net zero emissions by 2040 is at risk unless the City, other levels of government, residents and businesses support and invest in transformative actions that meet the scope and scale of the climate challenge.

The report also highlights how the City can tackle the biggest source of GHG emissions – fossil (natural) gas for heating buildings – by moving forward with Emission Performance Standards for every building in Toronto which will be outlined in further detail later in 2024. Additional opportunities to accelerate progress will be presented in Toronto's next 2026-2030 Net Zero Strategy Short-term Implementation Plan, due in 2025.

Full details on progress implementing the Net Zero Strategy and new Carbon Accountability measures can be found in the attachments to this report.

## **Readying Toronto for climate change**

Alongside strategies to reduce emissions, we also need strategies to ensure Toronto remains a livable and vibrant City while our climate continues to change. These strategies relate to climate adaptation and climate resilience:

*Climate change adaptation* means taking proactive action to lower the risks and negative impacts of a changing climate so that communities and ecosystems are prepared to cope with the new climate conditions.

*Climate resilience* is the ability to respond to climate change and extreme weather events quickly, effectively, and equitably. In a climate-resilient city, the interconnected systems we depend on can respond and reorganize to provide the functions and services we depend on and recognize. Building climate resilience in Toronto means considering climate impacts to the city's green spaces, hard infrastructure, services, and the people who live in our communities, as well as the economic and social systems

that support them. This includes developing emergency response plans to climate emergencies.

Getting ahead of the costs of extreme weather through conscious investments in adaptation and resilience will result in cost savings for the City corporation and individuals. Taking action early has been demonstrated to provide clear financial benefits: [spending a dollar today on adaptation will save \\$15 in the future](#). This includes about \$5 in direct benefits, like reducing the cost of repairing damaged infrastructure, and \$10 of indirect benefits, such as avoiding the costs of supply-chain disruptions and maintaining labour productivity. Across Ontario, a proactive adaptation approach would [save 1.1 billion dollars per year](#) in climate costs by the end of the century, compared with simply reacting to the impacts of climate change. There are also many co-benefits of climate adaptation, including improved public health, ecosystem preservation, biodiversity improvement, social inclusion, justice, and more. For example, greener neighbourhoods cool down hot urban areas, provide shade from the sun, offer mental health benefits, encourage more physical activity, offer opportunities for food and medicine growing, contribute to stormwater management, capture and store carbon, increase biodiversity, and can offer places for community connection.

### **Bridging past work with current initiatives and a plan for the future**

The City of Toronto does not currently have a Council adopted climate resilience or adaptation plan. In 2008, Toronto was an early leader with its "[Ahead of the Storm](#)" Climate Adaptation Strategy. The topic of resilience to extreme weather was later addressed in reports from City staff to Council in [2014](#) and [2016](#), which included a request from Council that all City Corporations adopt a Climate Change Risk Management Policy and listed ongoing and proposed adaptation actions.

Toronto's 2019 [Resilience Strategy](#) identified "Climate and Environment" as a key challenge facing the City among other pressures like housing and inequality. The Resilience Strategy provided background for [Official Plan Amendment \(OPA\) 583](#) adopted by Council in June 2022 which updated the environment and climate change policies of the official plan, including addressing climate mitigation, resilience and adaptation.<sup>2</sup> However, in 2020, decisions about how climate resilience would be further staffed or resourced were paused while the immediate demands of the COVID-19 pandemic drew attention from across the corporation.

The 2021 [TransformTO NetZero Strategy](#) positioned resilience as a benefit of decarbonization and identified ways to build resilience, including specific actions focussed primarily on greening the City. However, TransformTO remained primarily focussed on GHG emissions reduction. As a result, many of the programs and tools referenced in early resilience reports became outdated, while evidence of change and strategies on how cities can effectively adapt increased.

In 2022-2023, a new team was established within E&C to specifically support climate resilience. During Fall 2023, the division led inter-divisional discussions and workshops

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<sup>2</sup> [Official Plan Amendment \(OPA\) 583](#) was submitted to the Ministry of Municipal Affairs and Housing and will be in-force following the Minister's approval.

with 21 divisions and agencies to identify the current status of climate resilience work across the city and map out priorities for addressing climate risks now and in the future.

These consultations showed that despite the pause, many Divisions have continued work that increases the City's ability to cope with extreme weather. Experience with extreme weather events, emerging evidence and advances in best practise, and new standards and requirements from inside and outside the Corporation are key reasons the work continued.

While not all projects can be described here, notable initiatives include:

- [Heat Relief Strategy](#), which aims to reduce the incidence of heat-related illness and death in Toronto due to extreme heat.
- [Toronto Green Standard](#) which sets sustainable design and performance requirements for new private and city-owned developments.
- [Green Streets](#) portfolio which manages the impact of wet weather events and provides social, economic and environmental benefits.
- [Wet Weather Flow Master Plan](#) which protects our environment and water quality in Lake Ontario, rivers, streams and other water bodies from stormwater.
- Toronto's [Ravine Strategy](#) guides ravine management, use, enhancement and protection of the City's Ravines, and the [Toronto Biodiversity Strategy](#) aims to support healthier, more robust biodiversity and increased awareness of nature in Toronto.
- Recently, Toronto Public Health was requested [to develop a framework for monitoring climate-related health impacts](#).

However, there is no clear corporate approach that brings climate resilience activities under a single policy umbrella.

An outcome of the consultations identified the benefit of establishing a centralized, refreshed guidance on climate resilience that builds on past work, incorporates up to date information, aligns us to peer cities, and protects vulnerable people. Key areas for action identified in the consultations were (i) clear direction to address climate resilience as a priority, with coordination by E&C, (ii) an approach that will prioritize Indigenous worldviews, relational views of land protection and Indigenous community leadership to enhance climate resilience, (iii) more access to information, expertise, and advice to guide the City's priorities and actions, and (iv) development of a clear framework, mandate and objectives for addressing climate impacts at a City-wide level. Next steps on each of these are described below:

### **Action areas for climate resilience**

This report seeks Council direction in the following four areas to enable staff to implement the revised approach/mandate on resilience:

## **1. Confirm support for climate resilience as a City priority that requires an all-of City approach, and that Environment and Climate Division will coordinate and convene this work:**

It has been almost a decade since Council directed staff to undertake coordinated action on climate resilience. To increase the visibility of climate resilience, add momentum to the work, and drive coordinated action, there is a need to confirm support for a renewed focus on climate resilience, agree that all divisions, agencies and corporations will participate in a corporate approach, and confirm E&C as the City lead.

Because of its connection to climate adaptation, existing connections to climate networks and experience collaborating cross-divisionally, and work to embed climate resilience into TransformTO, E&C is already taking the lead as a coordinating Division. The Division's mandate and vision have recently been updated to reflect an increased profile for the climate resilience work.

This staff report summarizes the first steps towards a refreshed focus on addressing the potential risks and costs of climate change in Toronto. While E&C is well-positioned to coordinate and support climate resilience city-wide, each division, agency and corporation will need to play a leadership role to integrate climate considerations into their own policies, programs, and activities.

## **2. An approach that will prioritize Indigenous worldviews, relational views of land protection and Indigenous community leadership to enhance climate resiliency.**

The integration of Indigenous worldviews is critical in further planning on climate resilience in our City. Indigenous worldviews have a deep connection to the land and centre collective wellbeing as well as the wellbeing of future generations. A 2018 [Indigenous Climate Action Summary Report](#) states that these and other essential knowledge and practises are currently missing from the City's climate work. Toronto's Reconciliation Action Plan (RAP) includes Action 19(a) to prioritize Indigenous worldviews and relational views of land protection and Indigenous community leadership to enhance climate resiliency, and the 2019 Resilience Strategy included a goal that Indigenous communities have a leadership role in building resilience.

The City of Toronto will need to continue to learn from these worldviews and work in new ways to achieve these goals. In 2024, E&C's budget request includes financial commitments towards building guidance and leadership on how to design climate policy to support Toronto's RAP and embed Indigenous worldviews into city climate work. With an improved understanding of Indigenous worldviews, and Indigenous leadership involved in all stages of policy development, we anticipate the development of essential actions to enhance climate resilience that would otherwise be absent in only presenting Western worldviews.

## **3. More access to information, expertise, and advice to guide the City's priorities and actions**

While the Environment and Climate Division is in an excellent position to provide coordination and leadership on climate resilience, there is an urgent need for updated, local information about the future climate in Toronto, the most critical climate risks

facing the City, who is likely to be affected most, and financial costs and benefits of adding adaptation actions to the City's annual budget, including any fiscal pressures. In addition, individual Divisions with sector and service-specific knowledge and accountabilities are looking for better access to technical and policy information and best practises to help them address climate risks in their specific portfolios.

Many City divisions have deep knowledge, experience, and expertise about climate-resilience. Others have identified a need for information and expertise to develop and manage policies, programs, assets, and infrastructure systems that are climate resilient. Currently, E&C is partnering with a variety of divisions who are advancing climate-related projects including researching the impacts of heat and wildfire smoke events, natural asset management that considers climate change, community resilience, and approaches to address adequate indoor temperatures as a result of extreme heat.

Over time, E&C anticipates playing the role of a central information hub that would support consistency in climate data, information, and standards used across the City. Projects underway to start addressing these needs include a climate risk and vulnerability assessment and a "cost of doing nothing" project in partnership with Ontario Resource Centre for Climate Adaptation (ORCCA).

### **Climate Risk and Vulnerability Assessment**

Local evidence and data are needed to identify the most important risks facing Toronto and how to address them. A climate risk and vulnerability assessment will be undertaken to develop local information about expected future climate for the City and identify the people, assets, and services that are most vulnerable to climate impacts. This project will help prioritize potential adaptation actions, and support recommendations for how to best minimize impacts to residents, prioritizing Indigenous, Black, and equity deserving groups who may be especially vulnerable to the impacts of climate change.

Completing a risk and vulnerability assessment will align Toronto to peer cities who have done similar work as part of developing formalized adaptation and resilience plans. Some examples of cities with climate resilience or adaptation plans include Vancouver, Calgary, Montreal, Edmonton, Boston, Melbourne, and Paris. Toronto's neighbours including Mississauga, Oakville, Burlington, Durham, and York regions have also prepared climate adaptation plans. Carrying out risk and vulnerability assessments to support adaptation and resilience planning in cities ensures that evidence-based, coordinated, and targeted actions are taken to protect our ability to live, work, and play in the future climate.

### **Cost of Climate Change**

Research shows that while investing in adaptation adds costs now, the financial savings are significant over the long-term. To clarify the financial risks facing Toronto from climate change and to provide context to the costs of adaptation, the City of Toronto will partner with the new Ontario Resource Centre for Climate Adaptation to estimate the

cost of inaction, applying an established "cost of doing nothing" approach to Toronto's local context. The information generated is expected to extend earlier efforts by the City to assess potential costs of climate adaptation, that were limited to some sectors and based on a provincial methodology, with a goal of providing a fuller financial picture to support adaptation planning in the City.

#### **4. Enhanced coordination and development of a clear framework, mandate and objectives for addressing risks from climate change at a City-wide level**

The systems in the City that support residents systems are complicated and interconnected, and can be affected by climate change in a variety of ways. Responses need to consider multiple geographic scales and timeframes as well as specific climate focus areas, such as extreme temperature, floods, green infrastructure, and equity challenges. Bringing together the right inter-divisional partners will foster a shared understanding of climate resilience activities, leverage the City's expertise, and improve overall coordination for more effective planning and implementation.

Environment and Climate will work with divisions, agencies and corporations to implement a governance approach for climate resilience that:

- builds on past experiences integrating climate resilience into City processes and decision-making, leverages existing structures such as the Net Zero Climate Leadership Table and creates new opportunities to align all partners towards common objectives and priorities on climate resilience now and for the future.
- applies the local information currently under development and coordinates input to identify strategic priorities, roles, and next steps across the City.
- formalizes a new internal staff network on climate resilience, building on the initial participants from over 20 divisions that provided input and advice on priorities to advance climate resilience work City-wide and adds staff who are interested, engaged, and doing climate resilience work. In addition to continuing to provide input, this network will support internal information-sharing and collaboration.
- supports divisions to be leaders in addressing climate risks that affect their operations, services and priorities.

E&C will continue to expand the scope of engagement to include all divisions as well as agencies, divisions and corporations. Engagement with external partners and the community will occur as resources permit.

## **Conclusion**

Cities are on the front lines of receiving and responding to the impacts of climate change, through mitigation, adaptation and resilience activities.

While the City's focus to date has been to do its share to respond to a global call to reduce greenhouse gas emissions and avoid harmful temperature rise, a second but no less important stream of City responsibility is to steadily build Toronto's resilience and readiness at a local level to respond to the day-to-day exposure of Torontonians living in an increasingly unpredictable climate.

E&C is working towards a comprehensive, refreshed climate resilience approach that will be informed by input from across divisions, agencies and corporations, collaboration with indigenous communities, and better information about Toronto's future climate and the risks we're facing.

Together, the progress made on the City's TransformTO Net Zero implementation and a refreshed focus on resilience will shape critical actions and next steps that will prepare our city government, our economy, our ecosystems, our communities, and our residents for a changing climate.

## **CONTACT**

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## **SIGNATURE**

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## **ATTACHMENTS**

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Attachment 1: Annual TransformTO Net Zero Progress and Accountability Report

Attachment 2: Appendix 1.1 Summary of implementation progress to date for the Short-term Implementation Plan 2022-2025 of the TransformTO Net Zero Strategy

Attachment 3: Appendix 1.2 Summary of implementation progress to date on responding to City Council directions on the TransformTO Net Zero Strategy

Attachment 4: Appendix 1.3 GHG Reduction Actions in 2024 Budget