

# Climate Adaptation Plan 2023 Progress Report



#OurGreenSTC



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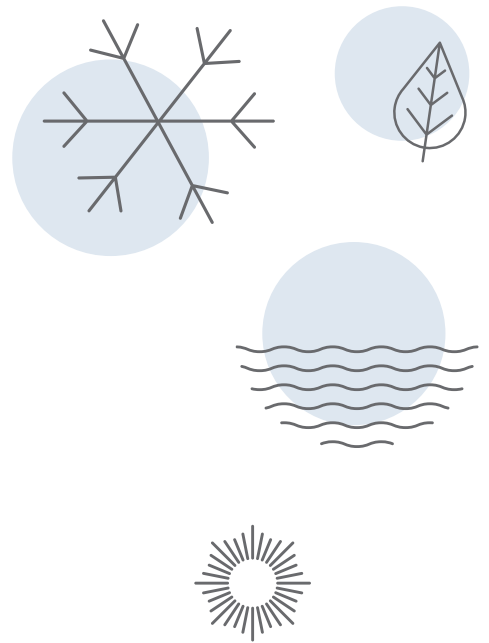
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# Summary

The Corporate Climate Change Adaptation Plan's (CAP) goals and actions were informed by the top climate impacts for St. Catharines. Adaptation actions are designed to prioritize and address the highest risks and vulnerabilities to the Corporation while considering relevance and feasibility as they pertain to the plan's five-year timeline.

An adaptation action is any project or initiative that seeks to increase the City's adaptive capacity to climate change. The focus was to reduce the vulnerability and risk of delivering municipal services and assets; ensure overall feasibility of the City's operations; and otherwise increase the long-term safety and well-being of the community.

The CAP supports actions that are already underway at the City that aid in adaptation to climate impacts, therefore not all actions included in the plan were new. There are in total 28 identified adaptation actions, of which were classified as either in-progress, complete, future, and ongoing.

The following pie chart (Figure 1) provides a snapshot of the status of the actions collectively. This progress report aims to provide the status of each action individually. For full details of each action please refer to the implementation schedule (Appendix E) in the Climate Adaptation Plan.

## Action Status

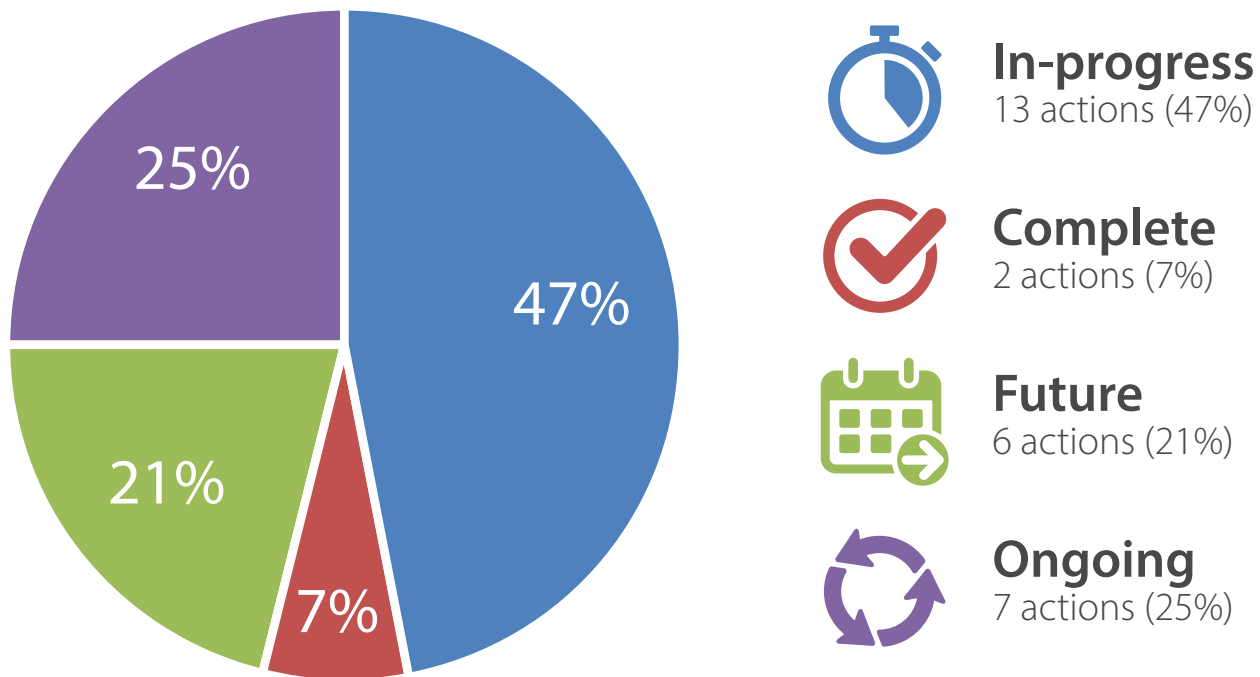


Figure 1: Overview of CAP action status

# Prepare for hotter summers



## No. 1

Review and assess measures in place to protect municipal staff from heat stress and maintain productivity

- Proactive planning for increased summer temperatures / heat-wave frequency
- Review of current measures in place
- Standardized heat guideline for outdoor staff
- Heat health education on heat stress



## No. 2

Develop a public education and awareness campaign on ways to reduce heat stress, recognizing heat exhaustion and further promote City services that are offered

- Help inform residents of behavioural changes they can make to help reduce heat related illness
- Promote personal heat resiliency preparation such as 72-hour emergency kits



## No. 3

Determine the area's most vulnerable to extreme heat to inform City planning, services and programming initiatives

- Identify areas with highest vulnerability to extreme heat
- Target service delivery of options, tree planting, swimming amenities, water fountains etc.
- Evaluate future target delivery of community energy retrofit programs



## No. 4

Continue to implement the Urban Forestry Management Plan and achieve the Urban Canopy Target

- Continue work toward 30 per cent urban canopy by 2030
- Tree planting program and partnerships
- Public education and promotion of tree stewardship
- Tree giveaways



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### **No. 5**

## Implement and support the City of St. Catharines Horticultural Management Plan

- Maximize resources for and improve horticultural assets
- Community gardens
- Naturalization efforts
- Increase use of native, drought resistant plants

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## Goal two

# Prepare and respond to extreme weather events

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### **No. 6**

## Improve communications to the public regarding health and safety updates and concerns during extreme weather events

- Keep residents informed of extreme weather instances
- Disseminate Environment Canada weather watches and warnings
- Inform residents of service disruptions and impacts
- Promote response efforts such as options



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### **No. 7**

## Ensure mutual aid agreements are practiced and receive continuous review

- Coordinate with other municipalities and upper-tier government to ensure effective response



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### **No. 8**

## Ensure communication plans are in place between departments to provide efficient clean up after an extreme weather event

- Improve response, maintenance and cleanup after weather events
- Improve anticipation of necessary responses



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### **No. 9**

Enhance corporate business continuity to continue to deliver essential services, even though extreme weather events

- Enhanced teleworking practices and paperless solutions
- Reduced road safety risks providing for better emergency and road crew response



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### **No. 10**

Review and develop an inspection policy for high-risk infrastructure to identify any damage from events

- Create a streamlined approach for identifying high-risk infrastructure through asset management process and internal data management software updates to help inform response to future events

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## Goal three

# Develop a flood prevention strategy

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### **No. 11**

Help residents take actions to protect against flooding including improved grants for protective plumbing, increased awareness, promotion and supports

- Review of current Flood Alleviation Program including grants for protective plumbing
- Help residents improve home flood resilience
- Proactive flood prevention for properties



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### **No. 12**

Develop and promote homeowner awareness of storm-water best management practices and flood protection, with consideration of new programs where applicable

- Education on basement flooding and prevention
- Continuation of incentive programs such as rain barrel giveaway
- Consideration of new programs



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### **No. 13**

#### Update and review Flood Management Plans

- Encourage update of watershed plans and flood mapping allowing for informed decision making



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### **No. 14**

#### Update and implement Pollution Prevention and Control Plan to reflect current best practices to reduce water pollution from combined sewer overflows

- Focus on areas with combined sewers
- Reduce volume and frequency of overflows
- Long-term strategies for management of wastewater system
- Update Intensity Duration Frequency curves

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## Goal four

# Improve stormwater management, including the use of green infrastructure

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### **No. 15**

#### Continue to undertake rehabilitation and restoration efforts in local watercourses to reduce erosion

- Waterway restoration efforts
- Reduce erosion
- Enhance local biodiversity
- Prevent infrastructure damage
- Reduce maintenance costs



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### **No. 16**

#### Complete and implement the Storm Water Management Master Plan

- Assess current state of stormwater system and identify deficiencies
- Review flow routes
- Inform proactive decision making on reducing effects of surface flooding, high-risk infrastructure, and opportunities for low-impact development



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### **No. 17**

Encourage and promote the use of Low Impact Development in corporate renewal projects and in new developments, where feasible, to increase water quality to local waterways

- Incorporate Low Impact Development into projects to help collect rainwater, improve water quality, and divert water away from storm sewers
- More green solutions for site controls
- Lead-by-example approach with developers
- Examples could include green roofs and rain collection systems

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## Goal five

# Prepare for high Lake Ontario water levels

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### **No. 18**

Continue to enhance and maintain municipal shoreline protection by following the recommendations of the St. Catharines Shoreline Review

- Implement shoreline infrastructure updates to prevent shoreline erosion



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### **No. 19**

Ensure amenities at beaches and waterfront parks are above revised high lake levels, and design features to be resilient to higher lake levels

- Past high lake levels highlighted vulnerabilities such as closed parks and damage to areas of cultural significance
- Identify future high lake level vulnerabilities and establish responses
- Identify options to make infrastructure more resilient



## Rethink how the City addresses climate change



### **No. 20**

#### Establish a 'green' interdepartmental team

- Establish a team to aid the implementing of various smaller tasks that would help the corporation reach a broader level of resilience actions
- Team actions could include overseeing a climate change literacy program, waste management tasks and promotion of climate change resilience to the City



### **No. 21**

#### Develop a green reserve fund and seek available funding from different levels of government and non-government grants to advance climate change efforts

- Develop a fund to strengthen commitment to improving the City's environmental sustainability
- Seek new funding opportunities for climate change adaptation and mitigation efforts
- Provide for scaled-up climate change adaptation and mitigation projects



### **No. 22**

#### Incorporate climate change into the Corporate Asset Management Plan

- Identify a detailed climate change assessment into key corporate assets, including stormwater and wastewater, to identify / prioritize infrastructure vulnerabilities and reduce risks



### **No. 23**

#### Develop a strategy to include green infrastructure into the Corporate Asset Management Plan

- Implement an integrated approach to asset management that includes both built infrastructure and natural assets
- Assess available information and identify gaps in inventory data
- Review valuation methods for green infrastructure
- Establish lifecycle costs and risks



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**No. 24****Develop and implement a climate change lens tool**

- Develop a tool to align municipal actions with corporate climate goals
- Ensure all departments consider climate-change in the decision-making process



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**No. 25****Develop and implement a Green Procurement Policy**

- Provide for climate-conscious decision making in procurement



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**No. 26****Regularly review climate projections and incorporate considerations into corporate plans, policies and procedures**

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**No. 27****Promote the updated environmental considerations to developers included in the new Community Improvement Plan (CIP)**

- Encourage developers to use sustainable design and create public areas through streetscape contributions with CIP incentives
- Drive sustainable, green private development



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**No. 28****Use partnerships to address climate change considerations in food-security communications and programming such as community gardens**

- Expand community participation in existing and new community gardens
- Increase public knowledge of the importance of local food systems