



## Cross-Cutting Actions

Cross-cutting actions apply to a variety of Goals. The City uses actions to integrate climate change considerations into existing plans, policies and decision making frameworks.

Action ID	Action	Implementation Status
CC.1 & CC.2	Incorporate climate change into the Official Plan.	On-going
	Integrate climate change considerations into Barrie's existing plans and policies.	
CC.3	Empower residents and businesses of the City's climate change efforts through education and awareness.  Develop education initiatives for residents and businesses to create awareness of the City's climate change efforts.	On-going



## Goal 1: Maintain Public Health and Safety

Climate Change is expected to cause public health and safety concerns. Vulnerable demographics may be particularly affected, including children, people experiencing homelessness, the elderly, and those with existing health conditions. Barrie will experience more severe and potentially life threatening weather and climate changes (e.g. extreme heat and freezing rain events) and impacts due to disease (e.g. West Nile and Lyme disease), which are expected to increase in the future. In the face of a changing climate, the City is committed to maintaining the health, safety and wellness of the entire community.

Action ID	Action	Implementation Status
1.1	Enhance public communications regarding road conditions and municipal facility closures during extreme weather events.	On-going
1.2	Obtain blue flag certifications for all of Barrie's beaches.	In progress
1.3	Continue to communicate beach closures and swimming advisories to the public.	On-going
1.4	Support the continued implementation of Barrie's Geese Management Program.	On-going
1.5	Follow the Ministry of Labour recommendations for Threshold Limit Values (TLVs) to reduce heat or cold stress when working in extreme temperatures and maintain productivity.	On-going

1.6	Partner with Simcoe Muskoka District Health Unit to address climate change considerations in food-security communications and programming.	On-going
1.7	Consider impacts and risks of increased disease vectors in design and operation of stormwater infrastructure (e.g. avoiding ponding/standing water).	On-going



**Goal 2: Minimize Risks to Building and Properties**

As a result of changing climate, the City has experienced more incidents of basement flooding, cracked foundations and damaged landscapes. More frequent extreme weather events, overland flooding and changes to freeze-thaw cycles affect the way in which buildings and landscapes are designed, constructed, managed and maintained. Barrie is dedicated to minimizing risks from climate change to buildings and properties, as well as reduce costs incurred by property owners.

Action ID	Action	Implementation Status
2.4	Promote higher building standards which reflect climate projections by updating by-laws, development guidelines, and zoning regulations.	Up-coming
2.2, 2.5, & 2.8	Develop an education and incentive program to promote lot level stormwater controls (e.g. rain barrels, rain gardens, downspout disconnections, etc.).	On-going
	Develop a communications campaign with messaging to residents on lot-level resiliency actions (e.g. green roofs, shade structures, rain gardens, etc.).	
	Develop an outreach program to teach residents what they can do to reduce snowmelt flooding on their property.	
2.1 & 2.6	Enhance Barrie’s Disconnect to Protect rebate program to reduce inflow and infiltration to City sewers from private property.	On-going
	Update the City’s Sanitary Inflow and Infiltration Reduction Program.	
2.3 & 2.7	Evaluate and recommend opportunities to reduce flood risks by increasing stormwater management in new and existing parking developments.	On-going
	Explore possibilities of implementing stormwater management facilities within existing developed watersheds to reduce flooding where needed.	



### Goal 3: Strengthen Infrastructure Resilience

Recent climate events, such as increased rainfall intensity causing runoff and erosion leading to wash-outs, have offered insight into what continued changes might mean for Barrie’s infrastructure. Recognizing that climate change will strain Barrie’s infrastructure, the City is committed to strengthening the resilience of its infrastructure systems while managing water naturally through the protection of wetlands and greenspace. Strengthening the integrity of City infrastructure to climate change is essential to prevent disruptions of essential services and ensure safety of the community.

Action ID	Action	Implementation Status
3.1	Increase staff and/or resources to maintain and preserve road surfaces.	On-going
3.2	Increase natural/forested areas within subwatersheds with high surcharge and flooding.	Up-coming
3.4 & 3.6	<p>Manage a comprehensive operations, maintenance and inspection program for stormwater infrastructure.</p> <p>Conduct stormwater drainage area inspections to identify areas of potential risk for debris blockage and dams.</p>	In progress
3.5	Improve sediment and erosion control from construction activities through improved inspections, reporting and operational controls.	In progress
3.7	Develop an inspection policy for high risk infrastructure to identify any damage from major storm and extreme weather events.	Up-coming
3.8	Investigate and apply methods of incorporating climate change considerations into infrastructure (grey, green, and urban forests) asset management.	In progress
3.3, 3.9, & 3.11	<p>Develop and implement a plan to regularly update the rain Intensity-Duration- Frequency (IDF) curve to reflect the geographic areas of the municipality and changing climate parameters.</p> <p>Develop engineering policy for regularly updating design standards to reflect new climate change projections.</p> <p>Update engineering policy and standards to encourage design that includes consideration of the potential impacts of climate change.</p>	Up-coming
3.10	Investigate and explore opportunities to promote the collection and recycling of greywater and stormwater on private property and City facilities.	Up-coming

3.12	Explore the possibility of implementing a stormwater utility/rebate in Barrie to manage and operate stormwater infrastructure.	In progress
3.13	Improve stormwater infrastructure capacity as part of renewal projects.	On-going



#### Goal 4: Help Local Businesses and the Tourism Industry Adapt to Changing Conditions

Climate change can pose significant risks to businesses— to their operations, suppliers, employees, customers and people living in the areas in which they operate. The City will help local businesses and the tourism industry adapt to climate change impacts to ensure the continuity of their operations, improve their ability to reduce and manage risk, and build and maintain a positive reputation in the community.

Action ID	Action	Implementation Status
4.1	Improve communications to local businesses on their role in the maintenance of sidewalks, appropriate salt application rates and best management practices during freezing rain or snow events.	In progress
4.2	Assess new opportunities for different forms of tourism as a result of changing climate conditions.	In progress
4.4 & 4.3	Establish a local best practice network (e.g. business continuity, green business practices, adaptation measures, etc.) and provide guidance for businesses. Provide guidance to local business on how to maintain business continuity (e.g. supply chain) during extreme weather events.	Up-coming



#### Goal 5: Protect Biodiversity and Enhance Ecosystem Functions

Climate change affects ecosystems by creating favorable conditions for the spread of invasive species, causing environmental damage due to extreme weather events, and interacting with other human stressors. The City will take steps to further protect and enhance ecosystems' functions and services as increases in rainfall intensity leads to overburdened stormwater ponds, or an increased frequency of winter events requiring the use of de-icing products.

Action ID	Action	Implementation Status
5.2	Develop incentives, standards and permitting processes to enhance green space, green roofs, and tree canopy on private and public properties.	Up-coming
5.3 & 5.1	Collect data on the urban canopy to develop baseline information and direction for a future Urban Forest Management Plan. Develop an Urban Forest Management Plan with specific greening strategies for areas of the City where tree canopy/greenspace is low.	On-going

5.5, 5.4, & 5.6	Develop partnerships and funding strategies to control invasive species.	Up-coming
	Support the identification and mapping of invasive species as part of the Urban Forest Strategy.	
	Increase education and communication to public about invasive species (e.g. dog strangling vine, garlic mustard, round goby, zebra mussels, and quagga mussels).	
5.7	Explore the possibility of implementing a Naturals Area and Trails Master Plan that includes initiatives to reduce erosion, improve creek and ravine health and promote native vegetation and biodiversity.	Up-coming
5.8	Support the implementation of road salt handling, storage and application best management practices to optimize salt used by the City, businesses and residents.	On-going
5.9	Increase Low Impact Development (LID) technologies throughout the City and update engineering policy and standards accordingly.	On-going



### Goal 6: Minimize Disruption to Corporate Services

Frequent occurrence of extreme weather can hinder routines and day-to-day activities, while posing safety risks to drivers or people using outdoor spaces. Recognizing the ability of the City to efficiently deliver services to residents will be under pressure due to changing climatic conditions, the City will take measures to ensure that the needs of the community are met and disruption to core services are minimized.

Action ID	Action	Implementation Status
6.1	Develop a communication tool (e.g. an app) which tells residents the plowing/sanding/salting of roads in order to plan routes for driving in hazardous conditions.	Complete ( <a href="https://www.511portal.com/barrie#">https://www.511portal.com/barrie#</a> )
6.2	Mandate the use of snow tires on all City vehicles during winter months.	Up-coming
6.3 & 6.4	Continue to treat roads using anti-icing/de-icing liquids where practical to reduce sodium chloride usage and engage in continuous research on best practices for winter control.	On-going
	Continue to implement winter control measures (snow removal and de-icing) on waterfront park and community park pathways and parking lots.	
6.5	Enhance communication plans between departments (e.g. Environmental Operations, Roads, Parks, and Fleet, Emergency Management, etc.) to ensure efficient response and clean-up during extreme weather events.	On-going
6.7 &	Increase preventative maintenance and inspection of trees on public property (e.g. tree pruning, removal of diseased/hazardous trees,	On-going

6.6	proactive planting in strategic areas) in order to reduce damage to the urban forest caused by extreme weather events.	
	Plant trees in strategic areas to reduce wind pressure and serve as windbreaks where feasible.	
6.8	Expand Barrie’s Road Weather Information System (RWIS) network and take advantage of new and advanced road conditions sensing technology to enhance winter maintenance actions.	Complete
6.9	Operationalize alternative work arrangements (e.g. Stay-at-home days/shifted/flex) that eliminate commuting during extreme weather events and hazardous road conditions.	On-going



**Goal 7: Build Community Resilience**

Climate change poses risks to the community, from flooding to extreme heat and cold, to habitat loss and property damage. To ensure that the City of Barrie is able to withstand and recover, it is important to build and maintain community resilience. The City will examine actions that can be taken to support residents to improve local adaptive capacity and reduce risks.

Action ID	Action	Implementation Status
7.2	Conduct education and outreach to developers to encourage the use of Low Impact Development (LID) technologies.	On-going
7.3	Increase education to residents on planting urban gardens with native species that provide habitat and enhance local biodiversity.	Up-coming
7.4	Encourage natural and constructed shade, cooling structures and spaces (e.g. recreational/sprinkler community water parks) on public and private property.	On-going
7.5	Support ongoing community initiatives that address extreme heat and cold.	Up-coming
7.6 & 7.1	Create naturalized and edible landscapes on City land using existing resources.	On-going
	Continue with active tree planting, community partnerships and naturalization programs as outlined in the Urban Forest Strategy.	