Climate Action Plan

GEORGINA

georgina.ca/**ClimateAction**

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Land Acknowledgment

The Town of Georgina recognizes and acknowledges that we are on lands originally used and occupied by the First Peoples of the Williams Treaties First Nations and other Indigenous Peoples, and on behalf of the Mayor and Council, we would like to thank them for sharing this land. We would also like to acknowledge the Chippewas of Georgina Island First Nation as our close neighbour and friend, one with which we strive to build a cooperative and respectful relationship.

We also recognize the unique relationship the Chippewas have with the lands and waters of this territory. They are the water protectors and environmental stewards of these lands, and we continue to join them in these responsibilities as we advance action in protecting the lake and our communities from the impacts of climate change and environmental pollution.

Executive Summary

The Town of Georgina's Climate Action Plan outlines the risks caused by climate change, and the priority actions for the corporation and broader community from 2026-2030. These actions will help Georgina adapt to current and future risks of climate change, protect Lake Simcoe, and reduce greenhouse gas emissions to slow future climate change. Numerous environmental initiatives are already underway in Georgina, many of which are listed in Appendix D.

Background research, stakeholder engagement (Section 3), risk assessment (Section 4), and greenhouse gas inventories (Sections 5.5 and 5.6) informed the top climate risks and objectives:

1. **Protect vulnerable people and promote safe summer recreation during extreme heat**
2. **Reduce Lake Simcoe nutrient loading for continued use and enjoyment**
3. **Protect vulnerable people and adapt winter recreation to warmer and rainier winters**
4. **Ensure infrastructure and lands can handle more intense one-day storms**
5. **Reduce corporate greenhouse gas emissions, mainly from buildings**
6. **Reduce community-wide greenhouse gas emissions, mainly from transportation**

Forty three new or enhanced actions were developed to address the objectives, which are summarized in Section 5.

Advocacy topics include enhanced public transit, air conditioning in schools, more action for Lake Simcoe and electric vehicle chargers in the Ontario Building Code.

Operationally, the most energy-intensive Town buildings can be assessed for efficiency and upgraded, stormwater culverts, ditches and ponds maintenance can be enhanced, and public events can provide cooling and shading.

Public education is recommended to promote responsible lake practices, flood prevention, pet safety, and funding opportunities for homeowners, businesses, and farmers.

Community partnerships can be leveraged for shoreline clean ups and tree planting of climate-resilient species.

Capital projects include diversifying outdoor activities to attract visitors and exploring the option of Net Zero Ready for new corporate buildings.

Policies can encourage the development of walkable communities. An updated plan for salt management and a solid waste management plan are scheduled in the near future.

The action plan will be integrated into the Town's annual budget and business planning processes. On a continuous basis, the Town will monitor and report on progress and evaluate new opportunities to address the objectives.

The implementation of the plan can have far reaching benefits for the Town and community such as long-term cost savings for residents and businesses, increased tourism, improved air quality and public health. These benefits are an important part in making Georgina a vibrant and healthy place to live, work, and play.

A Message from **Mayor Quirk**

The Town of Georgina is committed to promoting a high quality of life for our community which requires a thriving economy and sustainable environment. Climate change is not a distant threat; its impacts are already being felt right here in our own backyard, from extreme weather events to hotter summers to milder winters. As Lake Simcoe is at the centre of our community identity and well-being, it's essential that we continue to steward it for future generations.

On behalf of my fellow members of Council, I am pleased to present the Town of Georgina's Climate Action Plan. Investing in green spaces and resilient infrastructure, supporting local agriculture, diversifying outdoor recreation, reducing salt and pollutants from entering the lake, and encouraging responsible development not only addresses climate risks and reduces emissions, but improves our public safety, economy, health and wellbeing.

Each of us has a role to play. Whether it's choosing active transportation, buying local, or planting pollinator gardens, small changes add up to big impacts. As a municipality, we look forward to working with residents, businesses, and partners with these goals in mind.

Margaret Quirk

Mayor

A Message from the **Chair of the Georgina Environmental Advisory Committee**

As a long-time advocate for Lake Simcoe, Ward 3 Councillor, and Chair of the Georgina Environmental Advisory Committee, I am pleased to share the Town of Georgina's Climate Action Plan.

This plan demonstrates the Town's continued and expanded commitment to protecting Lake Simcoe and the health and safety of our community and lays out a plan to tackle the most pressing risks and opportunities.

Residents and community partners have been demonstrating leadership for years when it comes to advocating for phosphorus and salt reduction in the lake and protecting green spaces, and I want to take a moment to thank everyone for their efforts.

The challenges that climate change poses are real, but so are the solutions. By taking bold climate action and safeguarding our environment and freshwater today, we are securing a more sustainable, livable tomorrow—for ourselves and for future generations. I look forward to the work ahead.

Dave Neeson

Councillor for Ward 3

A Message from **Georgina's CAO**

As Chief Administrative Officer, it is my responsibility to ensure that the Town of Georgina continues to sustainably and intentionally plan for the future of our community. Climate change and the stewardship of Lake Simcoe are some of the many significant challenges facing our community, and I am proud to share the Town of Georgina's Climate Action Plan - another step towards strengthening our corporate efforts in support of a healthy and vibrant community.

Just recently, we saw the extensive impacts of the March 2025 ice storm, which highlighted the importance of emergency preparedness and resilience in coming together as a community. This plan is a clear commitment to considering how future climate conditions can be addressed across Town operations - from asset management to community services. Along with this commitment from staff, we need the support and involvement of our residents, local businesses, and partners in navigating the challenges posed by the changing climate. We look forward to tackling these pressing issues together.

Ryan Cronsberry

Chief Administrator Officer

Contributors to the Plan

This document was published in June 2025.

Hundreds of residents, staff, and partners contributed to the development of the Climate Action Plan. Without their support and contributions, this plan would not be reflective of the realities and priorities in Georgina.

We want to thank everyone who attended meetings, events, focus groups, or participated in the online surveys.

Town of Georgina Project Team

- Stephanie Wolfe, Climate Initiatives Lead
- Neil Comer, Climate Initiatives Advisor
- Simone Lopreiato-Weinstein, Program Manager
- Olga Lawton, Manager of Corporate Strategy and Transformation

Town of Georgina Departments

- Operations and Infrastructure
- Development Services
- Community Services
- Strategic Initiatives
- Emergency Services
- Office of the CAO

Town of Georgina Advisory Committees

- Georgina Environmental Advisory Committee
- Georgina Economic Development Advisory Committee
- Georgina Agricultural Advisory Committee

Stakeholders

- Chippewas of Georgina Island First Nation
- Regional Municipality of York
- Lake Simcoe Region Conservation Authority (LSRCA)
- Georgina Community Action Table
- The Atmospheric Fund
- ClearWater Futures Foundation (also known as ClearWater Farm and Ontario Water Centre)
- Rescue Lake Simcoe Coalition
- Ontario Clean Air Alliance
- Lake Simcoe Watch
- Neighbouring York Region municipalities (East Gwillimbury, King, Whitchurch-Stouffville, Newmarket, Aurora, Markham, Vaughan)
- Federation of Agriculture (York Chapter)
- Soil and Crop Improvement Association (York Region)
- Routes Connecting Communities
- Ontario Ministry of Environment, Conservation, Parks
- Central Counties Tourism
- York Region Environmental Alliance
- Society for the Prevention of Cruelty to Animals (SPCA)
- Southlake Health
- Georgina Builders Association
- Jericho Youth Services
- Local business owners

Introduction

The case for action

Human activities such as the burning of fossil fuels and industrial processes are causing the climate to change at an accelerated rate. As a result, we are experiencing changes such as hotter summers, warmer and rainier winters, and impacts on Lake Simcoe. Last year (2024) was the most expensive year for climate disasters in Canadian history. Unfortunately, these changes are expected to worsen. Municipalities have a responsibility to protect their communities from the challenges posed by the changing climate.

The Town of Georgina, local organizations, and community members are already taking action to minimize the impacts of climate change. Planting trees, advocating for lake health, installing electric vehicle chargers, and maintaining stormwater infrastructure are some of the initiatives underway.

A key pillar in the Town's 2023-27 Corporate Strategic Plan is Advancing Environmental Sustainability. The Climate Action Plan guides the Town's mitigation and adaptation actions for the corporation and community from 2026 to 2030. It provides direction to prioritize staff time on the most feasible and impactful initiatives, as well as improve the Town's ability to clearly communicate past, present, and future projects.

As Lake Simcoe is important to the identity of the community, this plan also addresses watershed health beyond climate change.

Benefits of taking action

The many benefits to climate action include cost-savings, access to new funding, improved community well-being and resilience, enhanced community engagement, and strengthened partnerships. According to federal research, every dollar spent on adaptation measures saves $13–$15, including direct and indirect economy-wide benefits.

If no action is taken, the Town loses the opportunities to proactively address heat-related health risks, infrastructure repair costs, affected summer and winter tourism, and pollution of Lake Simcoe and wetlands, among other risks discussed in the plan.

Alongside our residents and partners, The Town of Georgina will continue to tackle the greatest challenges and opportunities that climate change presents to our community.

Community Spotlight

The Town of Georgina is geographically one of the largest municipalities in York Region, situated one hour north of Toronto on the southeast shores of Lake Simcoe. The municipality is comprised of a number of lakefront communities, small rural hamlets and three larger communities: Keswick, Sutton/Jackson's Point and Pefferlaw. Known for its lakeside living close to Toronto, Georgina has a mix of cottage country "feel" and urban amenities.

According to Statistics Canada, Georgina's population was just over 51,000 people in 2023 and the median age was 42.8. The before-tax median household income was $105,399 which is higher than that of Ontario.

The top five employment sectors are construction, retail trade, health care and social assistance, manufacturing and educational services. The labour force is approximately 28,000 with roughly 10,000 residents commuting outside of Georgina to their place of work.

The Town of Georgina manages the following facilities, assets and infrastructure:

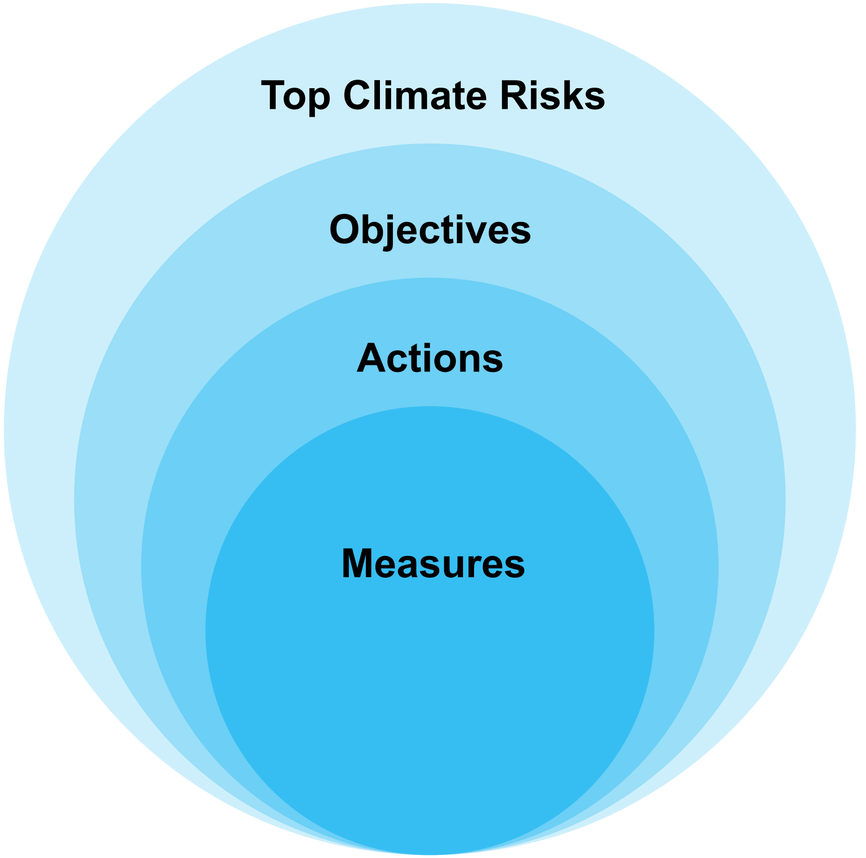
- Corporate buildings (52)
- Fleet vehicles (250)
- Water infrastructure (pump stations, etc.)
- Wastewater infrastructure (pump stations, etc.)
- Stormwater infrastructure (management ponds, bioswales, etc.)
- Roads infrastructure (streetlights, etc.)
- Public parks and beaches
- Wetlands, forests and shorelines

Summary of Approach

The development of the climate action plan followed a five-phase approach:

Feb-April 2024	**Phase 1:** Planning and Initiation
May-June 2024	**Phase 2:** Background Research and Greenhouse Gas Inventory
July-August 2024	**Phase 3:** Stakeholder Engagement
Sept-Nov 2024	**Phase 4:** Risk Analysis & Prioritization
Dec 2024-June 2025	**Phase 5:** Action Plan Development
June 2025-Ongoing	Action Plan Implementation

The plan development framework consisted of analyzing and identifying the top climate risks, creating objectives and actions to address them, and selecting measures to track progress over time



Alignment with Georgina plans

Climate Change Action planning is cross-departmental and community-wide in nature as the impacts and responsibilities are not limited to an individual group.

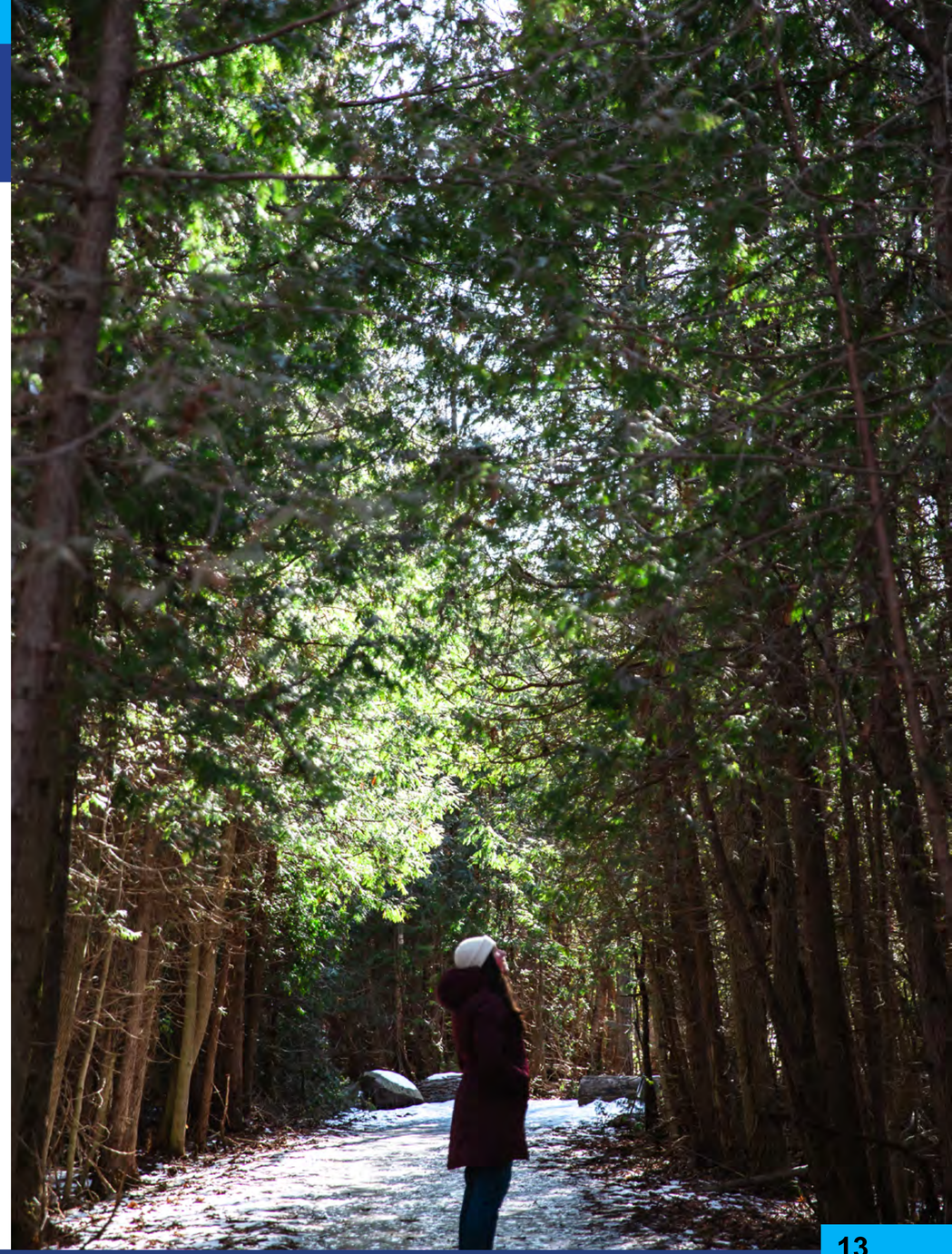
Other Town plans that reference climate change and/or environmental sustainability were reviewed, including:

- The Corporate Strategic Plan (2023-27) includes Protecting the Natural Environment as one of the five pillars. This shows the Town's strategic commitment to environmental protection
- The Official Plan (2016) guides sustainable development and prioritizes protection of natural resources, healthy communities, and food security
- The Keswick Secondary Plan Urban Design and Architectural Control Guidelines emphasizes active transportation, energy efficiency and green infrastructure.
- The Asset Management Plan - Core Infrastructure has a section on climate change.
- The Asset Management Plan – Non-Core Assets has sections on parks, active transportation and urban forestry.
- The Comprehensive Stormwater Management Master Plan includes climate change considerations.
- The Community Risk Assessment and Reduction Plan (2023) allows staff to identify risks and vulnerabilities, including power outages and weather-related emergencies
- The Energy Conservation and Demand Management Plan has energy data for corporate buildings
- The Community Improvement Plan speaks to the sustainability benefits of revitalizing downtown areas including encouraging infill and mixed-use neighbourhoods
- The Waterfront Parks Master Plan includes bike lanes, pedestrian walkways, naturalized areas and/or Low Impact Development
- A Parks, Trails and Active Transportation Master Plan is in development (2025)
- An update to the Salt Management Plan is planned for 2025
- A Solid Waste Strategy is planned for development (2026)
- Development Design Criteria are in development (2025)

Alignment with Other Governmental Plans

Climate change action planning and implementation is underway by other levels of government. Staff reviewed the following plans and met with regional counterparts to understand how our plan can align and support their climate change actions.

- Government of Canada's Adaptation Action Plan.
- Canada's Net-Zero Emissions Accountability Act includes a net zero emissions target by 2050.
- Ontario has a Made in Ontario Environment Plan. The provincial emissions target is 45 per cent below 2005 levels by 2030, and 82 per cent below 2005 levels by 2050
- Ontario's Provincial Climate Change Impact Assessment
- York Region's Climate Change Action Plan, Energy Conservation and Demand Management Plan, including a net zero emissions target by 2050, and the Climate Change and Health Vulnerability Assessment
- Lake Simcoe Region Conservation Authority (LSRCA)'s Adaptation Strategy and Climate Change Mitigation Strategy for the Lake Simcoe Watershed
- Chippewas of Georgina Island First Nation's Climate Adaptation Project



Stakeholder Engagement

During the plan development, the project team received input from more than 600 stakeholders, representing residents, local businesses, Town staff, non-profit organizations and other key partners. Details of the engagement methods and results are found in Appendix B. The highlights are summarized below:

600+
stakeholders engaged in total

25
stakeholder groups engaged during focus groups and individual meetings

300
in-person interactions at public events

211
public survey responses

30
youth engaged

90
staff survey responses

Staff attended the following events to gather in-person feedback from the general public:

- Canada Day Event (Keswick)
- Festival on High (Sutton)
- Farmer's Market booths (Sutton)
- Pefferlaw Street Festival
- Painted Perch Festival (Jackson's Point)
- Farm to Table Event (Willow Beach)
- Chippewas of Georgina Island Powwow

Staff also attended the following sessions to gather feedback from youth on environmental action:

- Town of Georgina Summer Camp Counselor-in-Training Session (ROC)
- Town of Georgina Summer Camp Workshop (ROC)

The graphics below include what we heard from the general public and youth. Detailed results from the surveys are found in Appendix B

When surveyed about hazards caused by climate change

Residents are most concerned about

4 in 5

people are concerned about Lake Simcoe getting warmer and more polluted.

Other key climate concerns

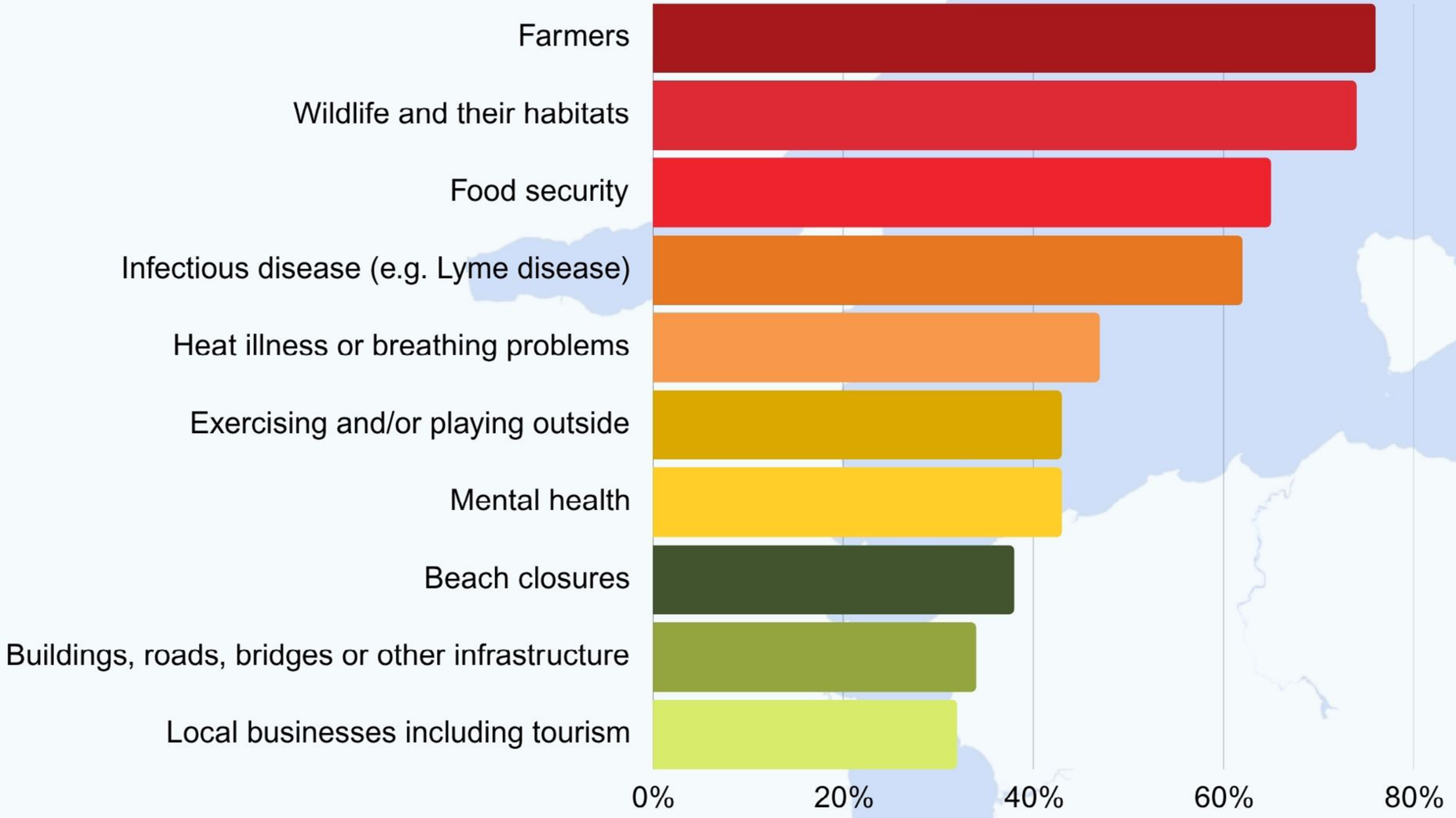
Extreme heat and wildfire smoke

Warmer, rainier winters

Extreme one-day storms

Data Source: Georgina Climate Change Action Plan Public Survey, 2024

People are concerned about climate change impacts on:



Data Source: Georgina Climate Change Action Plan Public Survey, 2024

Most suggested ways to address the environmental and climate risks:

- More nature, wild spaces, gardens
- More awareness and engagement
- Develop denser communities and save farmland

Data Source: Georgina Climate Change Action Plan Public Survey, 2024

We asked Georgina teens

"If you were Georgina's Mayor for the day, what would you do to help the environment?"

"Get invasive species out of the lake"
"Garbage and recycling bins all over"
"Make days where the town comes together to pick up trash, clean beaches and plant trees"
"Add more fish"

"More plants because some places in Georgina look dead"
"Make more accessible nature spaces outside"

"Not putting houses on farm fields"
"Stop building huge things that heavily pollute the air"

"Reduce the need for cars and increase the opportunities to walk and bike to places"

"Create a mural that allows citizens to share thoughts on the current climate"
"More public education"
"Set up more environmental clubs for the town"

Data Source: Georgina Climate Change Youth Survey, 2024

We asked Georgina kids

"How is Georgina doing on the environment?"

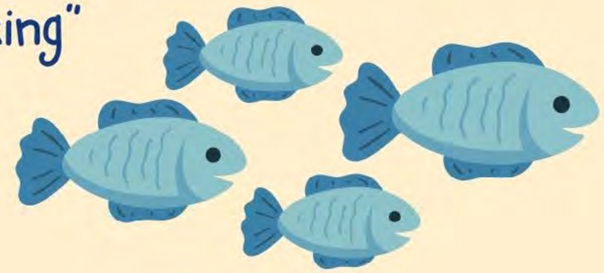
"Garbage hurts turtles"
"Stop wasting food"
"Less building"
"Killing bees"

"Lots of green space"
"Bike instead of driving"
"The ROC has a good forest"
"Plant vegetables"

"Use less plastic"
"Restore fish"
"Help poor people"

"Save wetlands"
"Build bike trails and racks"
"More electric cars"

"Clean the air"
"More walking"



Data Source: Georgina Climate Change Action Plan Youth Survey, 2024

Stakeholder Engagement

The following stakeholder groups were engaged and consulted through either focus group sessions or individual meetings. Their feedback was analyzed to determine the impact of climate hazards on different sectors, and possible solutions.

- The Atmospheric Fund
- Chippewas of Georgina Island First Nation
- York Region divisions:
  - Climate Change and Energy Conservation
  - Public Health
  - Accessibility, People, Equity and Culture
  - Indigenous Relations
  - Homelessness Community Programs
- Lake Simcoe Region Conservation Authority (LSRCA)
- Federation of Agriculture (York Chapter)
- Soil and Crop Improvement Association (York Region)
- Georgina Community Action Table
- Routes Connecting Communities
- Ontario Ministry of Environment, Conservation, Parks
- ClearWater Futures Foundation (also known as ClearWater Farm and Ontario Water Centre)
- Central Counties Tourism
- York Region Environmental Alliance
- Rescue Lake Simcoe Coalition
- Ontario Clean Air Alliance
- Society for the Prevention of Cruelty to Animals (SPCA)
- Southlake Health
- Georgina Builders Association
- Jericho Youth Services
- Lake Simcoe Watch
- Windfall Ecology Centre
- Local business owners
- Georgina's Advisory Committees:
  - Environmental
  - Agricultural
  - Economic Development

Assessing Climate Hazards

While weather conditions can vary from day to day and year to year, climate represents average weather patterns over decades. Climate models show the most likely trends in the future to help understand whether average temperatures are likely to increase or decrease, for example, compared to a baseline period.

The recent (2023) Ontario Provincial Climate Change Impact Assessment (PCCIA) considered climate models for the entire province. These data and evaluation methods were applied locally to assess climate trends in Georgina.

For further details on the hazard projections and risk assessment methods, refer to Appendix A.

Did you know?

- In 2023, Ontario released its first ever Provincial Climate Change Impact Assessment to help government, public and private institutions understand the impacts of climate change on communities, critical infrastructure, economies and the natural environment. It was developed by the Climate Risk Institute and engaged more than 140 subject-matter experts and Indigenous organizations. Neil Comer (PhD), Climate Initiatives Advisor for the Town of Georgina and local resident, was the lead climate scientist on this provincial assessment and applied it to the local context for this action plan

Climate Hazard Projections for 2050 in Georgina

Variable Name	Description	Magnitude of Change (relative percentage)
Extreme Hot Days	Number of days with maximum temperature above 30 degrees Celsius	Increase of 300 per cent 
Cooling Degree Days (Building cooling demand)	Sum of degrees greater than 18 Celsius of daily mean temperatures for one year	Increase of 130 per cent 
Growing Degree Days (Heat for growing season)	Sum of degrees greater than 5 Celsius of daily mean temperatures.	Increase of 33 per cent 
Growing Season Length	Number of days from seeding date (10 days after avg daily temp > 5°C) until fall frost or until Oct 31, whichever comes first	Increase of 19 per cent 
Degree Days below freezing	Sum of degrees less than zero Celsius of daily mean temperature for one year	Decrease of 44 per cent 
Extreme Cold Days	Number of days below –25 degrees Celsius	Decrease of 66 per cent 
Type of winter precipitation	Per cent of winter precipitation that falls as rain instead of snow	Increase of 77 per cent 

Variable Name	Description	Magnitude of Change (relative percentage)
One-Day Precipitation	Maximum volume of precipitation over one day	Increase of 23 per cent 
Three-Day Precipitation	Maximum volume of precipitation over three days	No change 
Total Winter Precipitation	Total volume of precipitation in winter	Increase of 17 per cent 
Total Spring Precipitation	Total volume of precipitation in spring	Increase of 14 per cent 
Total Summer Precipitation	Total volume of precipitation in summer	Same volume but heavier 
Total Autumn Precipitation	Total volume of precipitation in autumn	Increase of 5 per cent 
Lake Simcoe salt and phosphorus loads	Volume of salt or phosphorus running into Lake Simcoe annually	Increase 

TOP CLIMATE HAZARDS in Georgina by 2050

- Extreme heat
- Lake Simcoe nutrient loads
- Warmer, rainier winters
- Extreme one-day storms
- Wildfire smoke
- Annual precipitation
- Extreme cold

These findings are based on climate projection data from Ontario's Provincial Climate Change Impact Assessment for the Central Region and water quality and temperature data from Lake Simcoe Region Conservation Authority. This data was analyzed for its impact on infrastructure, people, nature, economies and agriculture in Georgina to determine the ranking of climate hazards.

TOP 4 Climate hazards in Georgina by 2050 explained

Extreme heat

By 2050, there will be 35 days above 30 degrees Celsius per year on average, which is a 300% increase. In other words, there will be many more extremely hot days.

Warmer, rainier winters

By 2050, 53% of winter precipitation will fall as rain, which is a 77% increase. In other words, there will be as much rain as snow in winter.

Lake Simcoe nutrient loads

By 2050, phosphorus levels in the lake may increase due to more intense rainfall. Salt levels may also increase with more frequent freeze/thaw cycles.

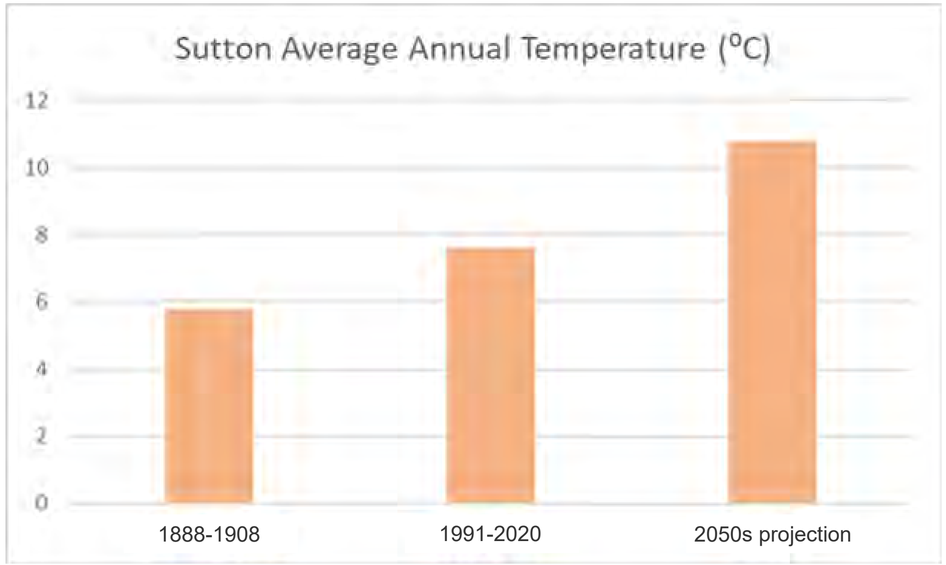
Extreme one-day storms

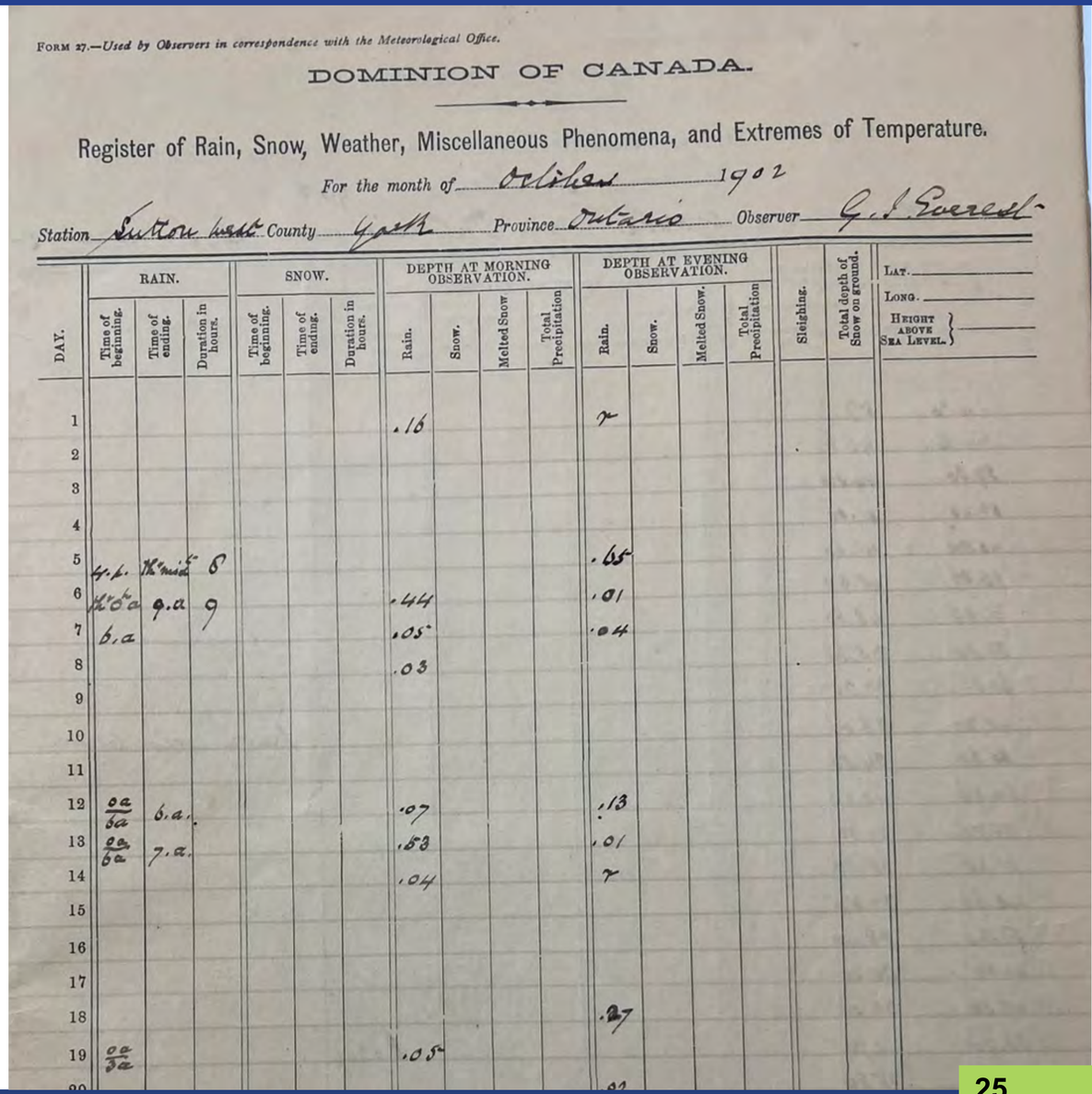
By 2050, the volume of rain during one-day storms will increase by 23% to 89mm. In other words, there will be more intense rainfall

These findings are based on climate projection data from Ontario's Provincial Climate Change Impact Assessment for the Central Region and water quality and temperature data from Lake Simcoe Region Conservation Authority. The relative change for each hazard in 2050 is compared to the baseline period of 1981-2010.

Did you know?

The oldest government climate observations in Georgina date back to 1871 at ‘Sutton West Station’. It closed in 1908. Within that period, the average annual temperature was 5.8ºC. For the most recent period of 1991-2020, this value is 7.6ºC from nearby station approximations. Model projections indicate this will be 10.8ºC by the 2050s using the “business as usual” emissions pathway.





FORM 27.—*Used by Observers in correspondence with the Meteorological Office.*

DOMINION OF CANADA.

Register of Rain, Snow, Weather, Miscellaneous Phenomena, and Extremes of Temperature.

For the month of October 1902

Station Sutton West *County* York *Province* Ontario *Observer* G. J. Everest

DAY.	RAIN. Time of beginning.	RAIN. Time of ending.	RAIN. Duration in hours.	SNOW. Time of beginning.	SNOW. Time of ending.	SNOW. Duration in hours.	DEPTH AT MORNING OBSERVATION. Rain.	Snow.	Melted Snow	Total Precipitation	DEPTH AT EVENING OBSERVATION. Rain.	Snow.	Melted Snow.	Total Precipitation	Sleighing.	Total depth of Snow on ground.
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LAT. LONG. HEIGHT ABOVE SEA LEVEL.

Environment and Climate Change Canada (ECCC). 2024. Climate Archive.

Climatedata.ca projections.

Photograph (on right) courtesy of Georgina Village Museum, 1971.15.1d

Assessing Risk from Climate Hazards

The Risk Assessment for Georgina was based on methods used in the Ontario Provincial Climate Change Impact Assessment (PCCIA). Details of the methods used can be found in Appendix A. Risk was quantified by assessing the impact of each climate hazard on the following sectors:

People **Economies** **Agriculture** **Nature** **Infrastructure**

Within each sector, there are different impacts on different ‘entities’ so the risks on each were assessed separately. For example, within the “People” sector, the impacts of each hazard are different for people who are unhoused, outdoor workers, medically vulnerable etc.

The formula for assessing risk is found below. The first four variables were derived from the PCCIA, and the “Level of Public Concern” was added to account for public input from a local survey in Georgina. The total risk score was calculated for each climate hazard in each sector.

TOTAL RISK SCORE = Magnitude of Climate Hazard X Likelihood of Climate Hazard X Consequence of Hazard X Adaptive Capacity X Level of Public Concern

Source: Ontario Provincial Climate Change Impact Assessment Technical Report (January 2023)

An illustrative example of how the total risk score was calculated can be found on the next page, and a description of the variables can be found in Appendix A

Assessing Risk from Climate Hazards

Example: Understanding the Risk of Extreme Heat on Outdoor Workers

Magnitude of Climate Hazard = High
(The number of extremely hot days [above 30 degrees Celsius] is expected to increase from 9 days to 35 days in 2050, which is greater than 2.5 standard deviations above baseline)

Likelihood of Climate Hazard = Very Probable
(The likelihood of extreme heat increasing as predicted is over 80 per cent)

Consequence of Hazard = High
(Extreme heat adversely impacts over 80 per cent of outdoor workers)

Adaptive Capacity = Medium
(Outdoor workers have some ability to keep cool such as policies allowing breaks and access to air-conditioned spaces)

Level of Public Concern = Moderate
(The score on the general public survey for extreme heat was ‘moderate’)

Total risk score = High

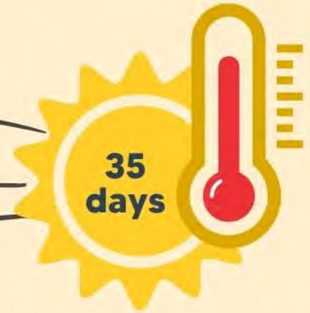
Equity Considerations

The risk assessment approach inherently considers equity by recognizing that not all groups have the same ability or capacity to adapt to climate hazards. For example, someone who is unhoused is more vulnerable to heat waves than someone who has easy access to indoor air conditioning. This was factored into the risk assessment equation under the ‘adaptive capacity’ variable. The plan has considered equity in the development of priority actions.

Who or what will be most impacted in Georgina?

Extreme heat

- Unhoused people, outdoor workers, kids, seniors, low income individuals, medically vulnerable
- Electricity grid
- Agriculture
- Wetlands
- Summer recreation and tourism



Warmer, rainier winters

- Chippewas of Georgina Island First Nation, First Responders
- Agriculture
- Wetlands
- Winter recreation and tourism
- Electricity grid

Lake Simcoe nutrient loads

- Chippewas of Georgina Island First Nation
- Coldwater fish, insects, amphibians
- Summer recreation and tourism

Extreme one-day storms

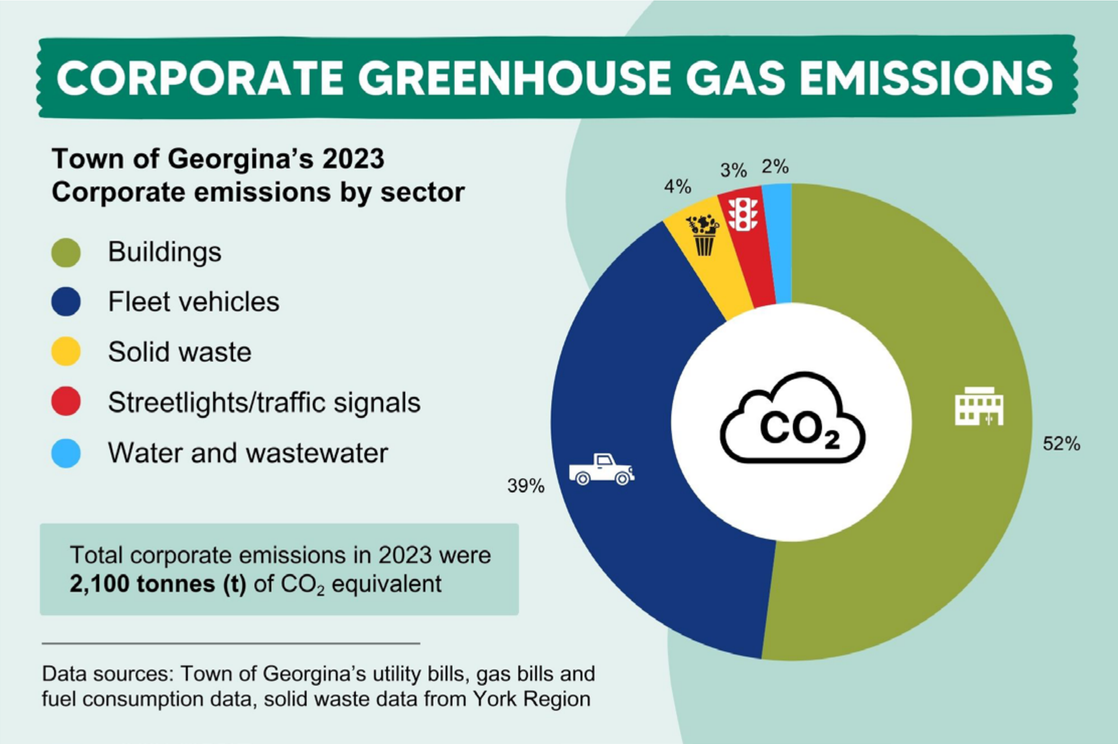
- Agriculture and fields
- Stormwater and road infrastructure

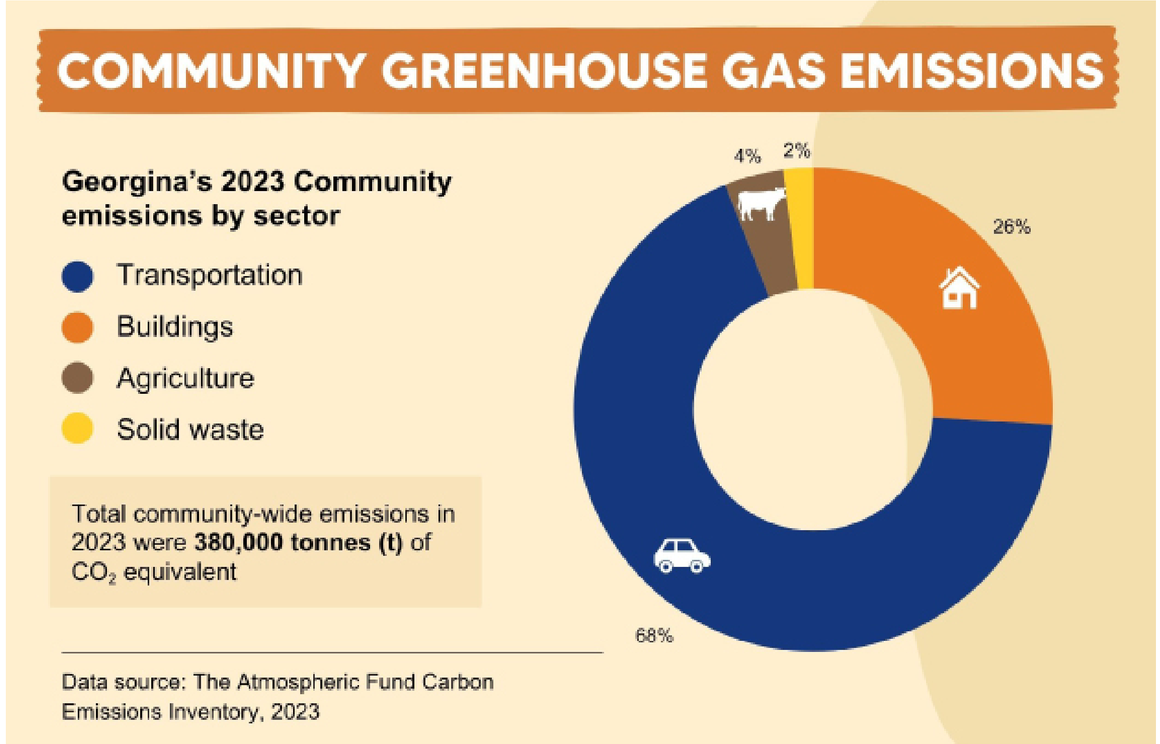
Corporate and Community Greenhouse Gas Inventories

Greenhouse gas (GHG) emissions contribute to climate change by trapping heat and insulating the earth, which causes the climate impacts discussed earlier in the report. That is why it is important to both adapt to climate impacts and do our part to reduce the potential for those impacts.

To prioritize solutions with the greatest impact, the Town calculated its own corporate greenhouse gas inventory in alignment with the Partners for Climate Protection (PCP) Milestone Framework, and the Atmospheric Fund conducted the community greenhouse gas inventory for Georgina. The high-level corporate and community inventories can be seen below, showing that buildings are the largest source of the Town of Georgina's corporate emissions, and transportation is the largest source of community-wide emissions.

More details about the findings can be found in Sections 5.5 and 5.6, and the emissions factors and formulas can be found in Appendix C.





Priority Climate Risks in Georgina

The risk assessment process identified who or what will be most impacted in Georgina:

Extreme Heat

- Seniors, medically vulnerable (refer to Appendix A for definition), kids, unhoused people, those with low incomes, outdoor workers, and pets are vulnerable to heat illness or impacts of being inside (isolation or inactivity)
- Increased energy requirements on grid
- Crop failure, livestock under stress, more invasive species, cost to cool farm buildings
- Wetlands can experience drought and birds' migration patterns can be confused
- Decreased attendance at summer events and for recreation activities

Lake Simcoe Nutrient Loading

- Loss of traditional medicine, and wild food foraging for Chippewas of Georgina Island First Nation
- Reduced population of coldwater fish
- Beach closures and loss of beach-related tourism

Warmer, Rainier Winters

- Risk of injury/death travelling on lake ice
- Winter tourism including ice fishing, operating ROC may become more expensive or unfeasible
- Saturated agricultural fields and crop loss

More extreme one-day storms

- Town fields become too water saturated for sport and recreation
- Overwhelmed stormwater infrastructure can damage road infrastructure and increase phosphorus loading

Corporate Emissions

- Emissions from buildings
- Emissions from fleet vehicles

Community Emissions

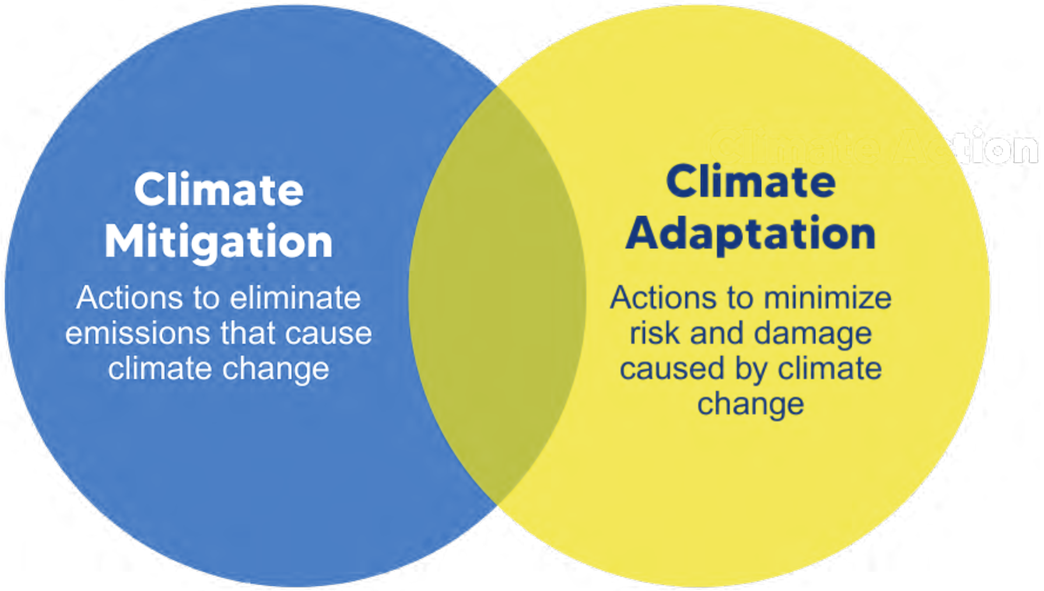
- Emissions from commuting and transportation, influenced by land use planning
- Emissions from buildings (industrial, commercial, institutional, residential)
- Emissions from waste

There were three climate hazards assessed as low priority: wildfire smoke, annual precipitation and extreme cold because the magnitude, likelihood and/or public concern were moderate or low. Details of the hazard assessments are found in Appendix A Table A.5

Action Plan Objectives

1. Protect vulnerable people and promote safe summer recreation during extreme heat
2. Reduce Lake Simcoe nutrient loading for continued use and enjoyment
3. Protect vulnerable people and adapt winter recreation to warmer and rainier winters
4. Ensure infrastructure and lands can handle more intense one-day storms
5. Reduce corporate greenhouse gas emissions, mainly from buildings
6. Reduce community-wide greenhouse gas emissions, mainly from transportation

Action Plan Summary



Climate action can be classified based on function: adaptation actions minimize the risk and damage caused by climate change, and mitigation actions reduce greenhouse gas emissions that cause climate change.

In this plan, objectives 1-4 aim to adapt to climate change, and objectives 5-6 aim to mitigate climate change; however some actions have crossover benefits to both goals. For example, tree planting provides cooling benefits and offsets greenhouse gas emissions. Overall, there are 43 new or enhanced actions across the objectives. These actions are described in section 5, and a sampling of existing actions can be found in Appendix D.

Action Development Summary

The process of conducting background research and stakeholder engagement identified over 200 potential actions to address the priority risks.

The action plan development phase involved assessing and validating the proposed actions to develop a final list that would be both impactful and feasible to implement within the next five years.

The actions were assessed based on:

1. Impact – Effectiveness at addressing risk (Bonus: resulting in co-benefits for other corporate or community priorities ie. affordability, cost savings)

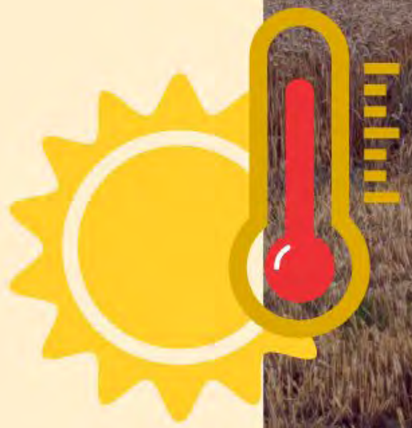
2. Feasibility – The cost, capacity, and readiness to implement the action

This assessment was done by staff, partners, and stakeholders. An example of the approach can be found in Appendix D.

Extreme Heat

OBJECTIVE 1:

Protect vulnerable people and promote safe summer recreation during extreme heat



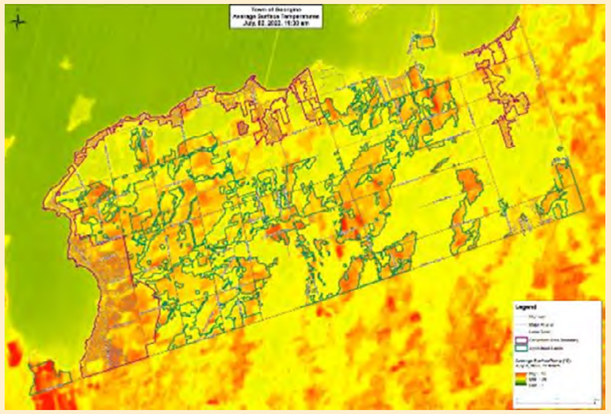
Potential impacts of extreme heat in Georgina

Impacted Entity	Risk	Red = very high risk, orange = high risk, yellow = moderate risk
Unhoused people, outdoor workers, kids, medically vulnerable people and seniors, low-income individuals, pets	These populations are most vulnerable to developing heat related illness if they do not have access to cool indoor spaces, shade or other cooling methods. For outdoor workers, productivity can decrease.	
Electricity grid	The cooling demand in hotter temperatures put an increased electrical load on the grid and increase the costs for cooling	
Agriculture	Extreme heat can lead to crop failure, stress on livestock, and proliferate invasive species	
Wetlands	Extreme heat can cause drought for wetlands and can impact birds' migratory patterns	
Summer recreation and tourism	Extreme heat without the ability to stay cool or access shade can decrease attendance at outdoor summer events and recreation activities, and impacts people's ability to stay physically active or socially connected.	

What is Georgina already doing to adapt to extreme heat?

Did you know?

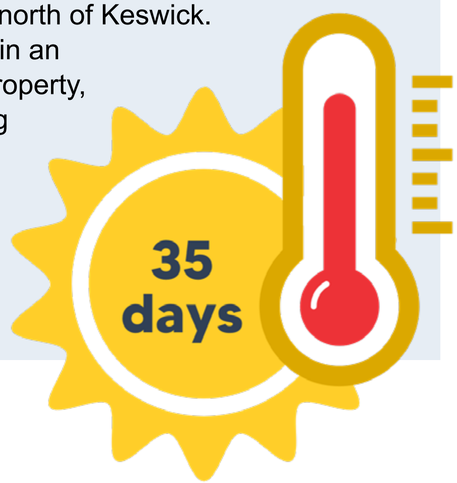
- **Urban Heat Island Effect:** Have you ever noticed that it's hotter on the pavement or in a built-up environment? That's due to the Urban Heat Island Effect, which effectively traps heat in the concrete environment and raises the surface temperature. Trees and green spaces provide shading and a cooling effect, which is another reason why they are so beneficial to our health.
- **Hot Spots in Georgina:** In drought conditions, agricultural land surface temperatures can rival urban centre areas. This image is from July 2, 2022 when the maximum temperature at Baldwin was 27ºC. At that time, there had been no appreciable rainfall in Georgina for three weeks. The warmest zones can be found in urban areas: Keswick, Sutton and Pefferlaw. More surprisingly, agricultural lands were equally warm. The coolest zones are the lake (green) and forested areas (yellow). This highlights the importance of maintaining and enhancing tree cover for moderating temperatures which are projected to increase under climate change.



Urban Heat Islands. https://www.urbanheatislands.com/uhi-web-maps/ Landsat 8, Band 10 (Date acquired = 2020-07-02, Scene center time = "16:03:11.4161800Z") Local Time = "11:03AM". Reprocessed by Georgina IT

Community Spotlight:

- **Heat Relief Response Plan:** York Region has a Heat Relief Response Plan and a York Region Emergency Housing Central Intake Line (1-877-464-9675 ext. 76140) which is a 24/7 resource for people experiencing homelessness or who are at risk of homelessness. York Region staff provide solutions including temporary housing, resources, or wraparound support to those in need.
- **On-Request Transit:** To help people get around safely, which can become more important during extreme heat, York Region Transit offers On-Request transit services for those not on fixed transit routes. QuestBus, operated by Routes Connecting Communities, offers free or subsidized charter bus services for Georgina residents and visitors to attend educational, recreational and cultural events.
- **Lake Simcoe Conservation Preserve:** In 2022, Lake Simcoe Region Conservation Authority (LSRCA) acquired 890 acres of forest, grasslands, active agricultural fields, and extensive wetlands north of Keswick. LSRCA is working with Indigenous partners to gain an understanding of Traditional Knowledge on the property, as they are interested in taking a two-eyed seeing approach to the long-term management of these lands. In addition to mitigating heat, protecting these natural features provides habitat for wildlife, sequesters carbon, improves air quality and helps manage stormwater.



Success Stories

What is Georgina already doing to adapt to extreme heat?

Public Spaces for Cooling Relief:

Town facilities such as pools, splash pads, beaches, waterfront parks, and the air-conditioned recreation centres are available for cooling relief. Georgina's four splash pads — the ROC, Constable Garrett Styles Park, Whipper Watson Park and Julia Munro Park — are open daily in the summer from 10 a.m. to 9 p.m starting when there are a number of consecutive days of hot weather. The Georgina Ice Palace, the Link, the MURC, Club 55 and all public libraries are available as cooling centres during operational hours.

Pollinator Gardens:

Pollinators are threatened by increasing temperature. In 2024, the Town of Georgina became a certified Bee City. The Town has planted pollinator gardens at the ROC, the Link, and Pefferlaw Library, and encourages community members to list their pollinator gardens on the pollinator garden map.

Cooling and Hydration for Firefighters:

In extreme heat, firefighters' core body temperature can rise rapidly due to intense physical exertion and exposure to high temperatures, leading to increased risk of heat stress or heat stroke. Georgina Fire and Rescue Services provides rehabilitation and protective equipment for firefighters during these conditions such as active cooling and hydration for effective recovery.

Action Plan to Address Extreme Heat

The Town of Georgina and local partners are already taking action to protect against extreme heat as listed in the existing actions table in Appendix D. Below is the list of new or enhanced actions that the Town of Georgina will implement from 2026-2030:

Sector	Action	Responsibility	Type
People	Advocate for expanded on-demand public transit options and continue to promote existing public transit options	Strategic Initiatives, Corporate Strategy and Transformation	Enhance
	Advocate for air conditioning in schools	Strategic Initiatives, Corporate Strategy and Transformation	New
	Develop and share tip sheet on pet safety during extreme heat	Legislative Services, Municipal Law Enforcement / Animal Services	New
Natural Environment	In partnership with LSRCA, ensure tree species planting list is climate resilient	Operations and Infrastructure, Roads/ Forestry and Development Services, Development Planning	Enhance
Economy and Tourism	Ensure attendees have access to shading and cooling at Town-run summer events (ie. shade, fans, water, etc.)	Community Services, Cultural Services	Enhance
	Increase shade at beaches and parks (tree canopy and/ or shade structures) to encourage safe use during extreme heat	Community Services, Parks	Enhance
	Diversify activities at waterfront parks to attract visitors in extreme heat or poor lake quality conditions	Community Services, Recreation Services and Parks	New
	Investigate adding “Rural Resiliency” stream to Community Improvement Plan to support agri-tourism all year round	Strategic Initiatives, Economic Development and Tourism	New
	Extend use of recreational fields and diamonds into evenings when temperature is cooler with adequate lighting	Community Services, Parks	Enhance

Future Considerations

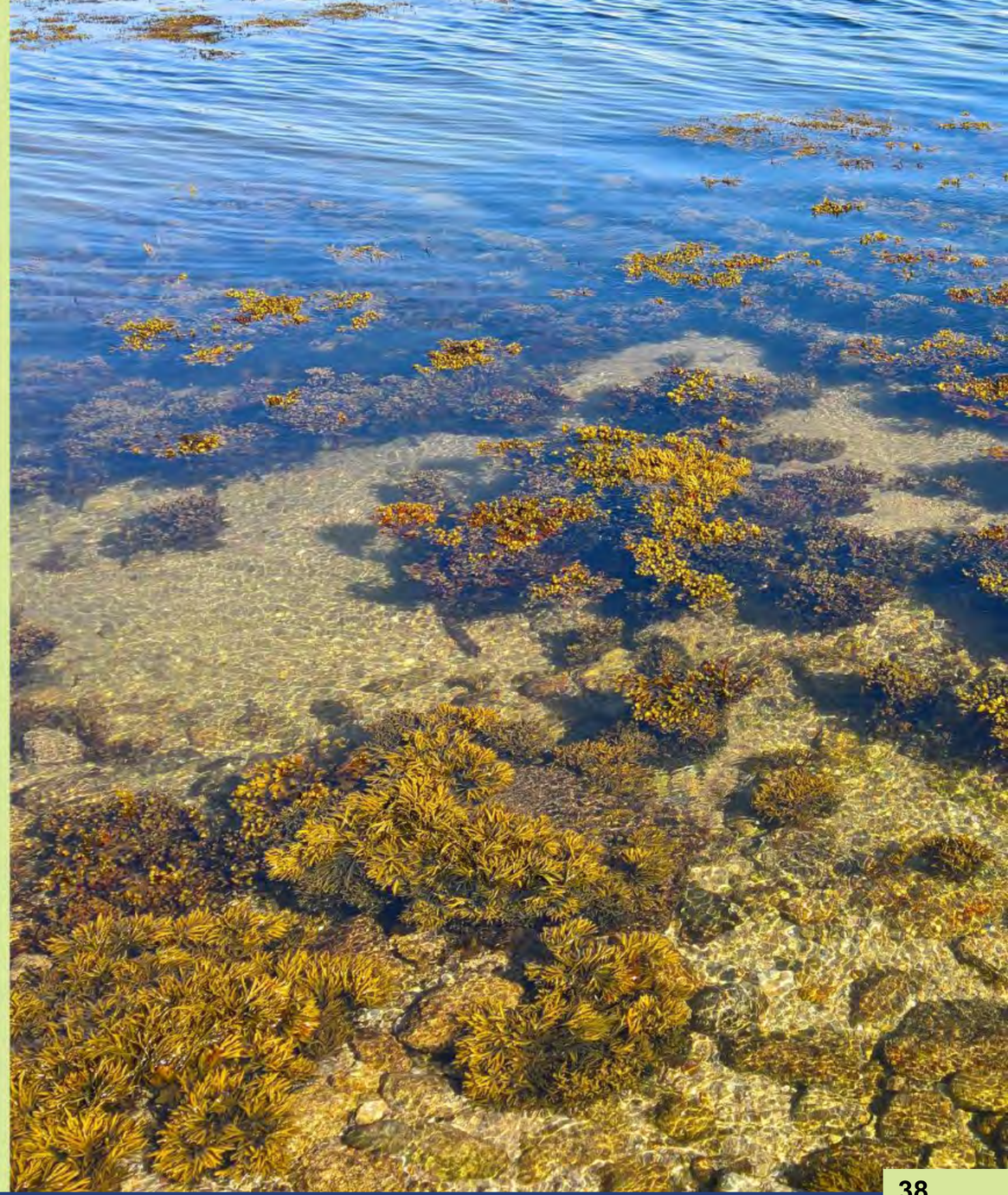
These were the more ambitious actions requiring additional capital and resources that were identified through the process to help accelerate impact to address extreme heat. For consideration as capital and resources become more readily available:

1. Increase animal shelter capacity to take in more pets during extreme heat and other weather events (storms, etc.)
2. Create a Maximum Temperature Bylaw regarding the safe upper temperature limit in buildings. (As precedents are set in other municipalities, Georgina can assess the feasibility of this type of bylaw)
3. Explore subsidy program for air conditioning units for low-income renters, with York Region (As an example, the City of Hamilton gave $350 grants for air-conditioning units to 200 low-income Hamilton tenants in 2024)
4. As bus stops expand throughout the municipality, work with York Region to ensure that there is adequate shading at bus stops including tree cover and/or adequate shelters

Lake Simcoe Nutrient Loading

OBJECTIVE 2:

Reduce nutrient loading in Lake Simcoe for continued use and enjoyment



PHOSPHORUS AND SALT sources in Lake Simcoe

Roads, sidewalks and parking lots:

- Salt run-off from paved surfaces
- Sediment run-off and dust from rural roads

Agriculture

- Manure and fertilizer run-off
- Dust from bare fields

Sewage treatment

- Effluent and conveyance

LEGEND

- Source of salt
- Source of phosphorus

Homes

- Driveway salt
- Soaps from washing cars
- Septic system leaching
- Rainwater run-off carrying pet waste, fertilizers, soil, leaf and plant litter

Construction

- Dust from construction sites, bare land, pits and quarries

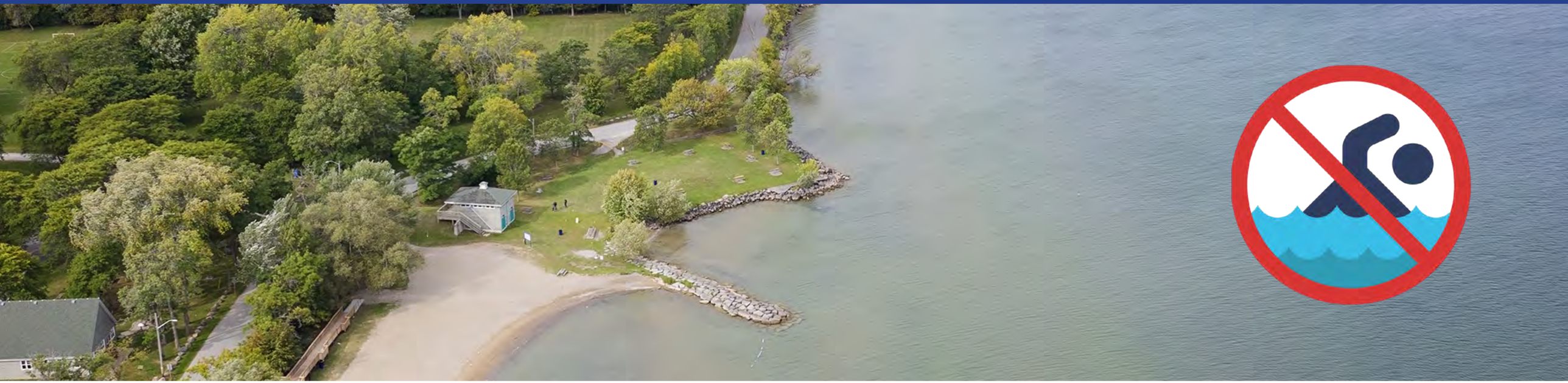
Natural environment

- Erosion of streambanks
- Decomposition of plant material
- Groundwater

LEGEND

- Source of salt
- Source of phosphorus

Potential impacts from Lake Simcoe nutrient loading



Impacted Entity	Risk Red = very high risk, orange = high risk, yellow = moderate risk
Chippewas of Georgina Island First Nation	Loss of wild rice, traditional medicine, and wild food foraging because of nutrient loading and invasive species in the lake
General Population	Increased nutrient loading and affected lake conditions can impact overall community pride and identity
Coldwater fish, insects, amphibians	Nutrient loads can change lake conditions and reduce the population of coldwater fish and other aquatic species
Summer recreation and tourism	Nutrient loads can result in beach closures and as a result, a loss of beach-related tourism and economic activity

What is Georgina doing to reduce salt and phosphorus loads?

Did you know?

- **Annual Phosphorus Loading:** Lake Simcoe phosphorus loads have been calculated by the Lake Simcoe Region Conservation Authority (LSRCA) for decades. The good news is phosphorus loads are lower now than in the 1990's but efforts are still necessary to meet the Lake Simcoe Protection Plan target of 44 tonnes per year. Annual loads are highly correlated with the volume of water flowing from rivers into the lake. For example, 2017 was a wet year and saw high loads while 2020 was a dry year so phosphorus loads were low. Under projections of climate change, more winter rain and extreme one day storms increase the potential for higher phosphorus loading while periods of low water are expected to result in years with lower loads.

LSRCA. https://lsrca.on.ca/index.php/watershed-health/phosphorus/

Georgina Post. https://georginapost.com/2024/10/09/cleaning-up-lake-simcoe-what-are-the-next-steps-for-a-phosphorous-recycling-plant/

Community Spotlight:

- **Youth Education and Inspiration:** ClearWater Farm is a 30-acre property on Lake Simcoe at Willow Beach that embraces experiential, innovative education for children and youth. The regenerative farm is part of the ClearWater Futures Foundation (formerly Ontario Water Centre). Children there helped develop "Future Chicken" a multi-platform "edutainment" initiative expanding on the UN Sustainable Development Goals (SDGs). Short, humorous videos and games show a time-travelling chicken and friends who, along with a website for parents and teachers, demonstrate how small actions today can lead to lasting positive effects tomorrow. Videos can be seen on CBC TV and CBC Gem or on YouTube with over 120,000 subscribers and 24 million views in the past year.
- **Indigenous Food Sovereignty:** The Chippewas of Georgina Island First Nation are planting wild rice (manoomin) along their shores in an effort to restore this food source and some food sovereignty.
- **Phosphorus Reduction Facility:** In early 2025, Bradford West Gwillimbury council endorsed a non-binding initial agreement with the Ministry of Environment, Conservation and Parks to become the proponent and owner of a new phosphorus-reduction facility which could help reduce phosphorus pollution by up to five tonnes per year. The Town of Georgina has been advocating for this phosphorus recycling plant for many years.
- **Phosphorus Offsetting Policy:** In 2018, Lake Simcoe Region Conservation Authority (LSRCA) developed the Phosphorus Offsetting Policy, a first-of-its-kind policy in Canada, requiring that new developments maintain phosphorus loading at pre-development levels. Exceedances are subject to fees which then go towards phosphorus offsetting projects such as engineered wetlands and stormwater pond retrofits.
- **Naturalizing Lake Simcoe shorelines:** Rescue Lake Simcoe Coalition has resources and education about the importance of naturalizing the Lake Simcoe shorelines. They encourage shoreline property owners to make a difference for the lake's ecological health by re-naturalizing the shorelines and following environmental lawn care practices.
- **Funding for agricultural best practices:** LSRCA has grants available to farmers for practices to protect and restore Lake Simcoe. They provide up to of $20,000 at a 50 per cent funding rate for projects such as wildlife habitat enhancement, tree and shrub planting, manure management, wash water treatment systems, and livestock fencing along waterbodies.

Success Stories

What is Georgina doing to reduce salt and phosphorus loads?

Stormwater catch basins:

To reduce phosphorus loads in the lake, the Town is piloting solutions such as stormwater catch basin filters which trap sediments and solids in stormwater drains.

Shoreline stabilization:

Shoreline erosion causes sedimentation and phosphorus loading of the lake. The Town prevents erosion through projects such as the Hedge Road Bank Stabilization that include geotechnical solutions and planting trees and shrubs to anchor the soil.

Salt mitigation:

The Town has demonstrated initiative in salt mitigation efforts including committing to the use of rock salt alternatives, installing electronic spreader controllers on all material spreading units, reducing application rates when appropriate, and using pre-wet and brine when appropriate. The Salt Management Plan outlines best management practices for salt during winter maintenance operations.

Action Plan to Address Lake Simcoe nutrient loading

The Town of Georgina and local partners are already taking action to protect against Lake Simcoe nutrient loading, as listed in the existing actions table in Appendix D. Below is the list of new or enhanced actions that the Town of Georgina will implement from 2026-2030:

Sector	Action	Responsibility	Type
People	Create a “Love our Lake” campaign to promote responsible resident and visitor practices to protect lake health and support climate action	Strategic Initiatives, Corporate Strategy and Transformation	New
	Advocate for more provincial and federal funding, support, and coordinated action for Lake Simcoe in partnership with Lake Simcoe Region Conservation Authority and regional coalitions	Strategic Initiatives, Corporate Strategy and Transformation	Enhance
	Share resources and explore partnerships on lake-related conservation projects with the Chippewas of Georgina Island First Nation	Strategic Initiatives, Corporate Strategy and Transformation	New
	Partner with local organizations to host community shoreline and beach clean-ups	Strategic Initiatives, Corporate Strategy and Transformation	New
Nature	Update and implement Salt Management Plan	Operations and Infrastructure, Roads/ Forestry	Enhance
	Update septic maintenance inspection program to encourage maintenance best practices	Development Services, Building	New
	Incorporate Low Impact Development (e.g. bioswales) when expanding or rehabilitating stormwater infrastructure and roads where topographically feasible based on groundwater levels	Operations and Infrastructure, Capital Delivery	Enhance
Agriculture	Promote third-party environment-related funding programs and resources available for farmers	Strategic Initiatives, Corporate Strategy and Transformation	New

Future Considerations

These were the more ambitious actions requiring additional capital and resources that were identified through the process to help accelerate impact to address Lake Simcoe water quality. For consideration, as capital and resources become more readily available:

1. In the long-term, expand the municipal wastewater system along the lake (on Hedge Road in Sutton/ Jackson’s Point) to move residents off septic services
2. Work with LSRCA to understand benefits of more frequent street sweeping

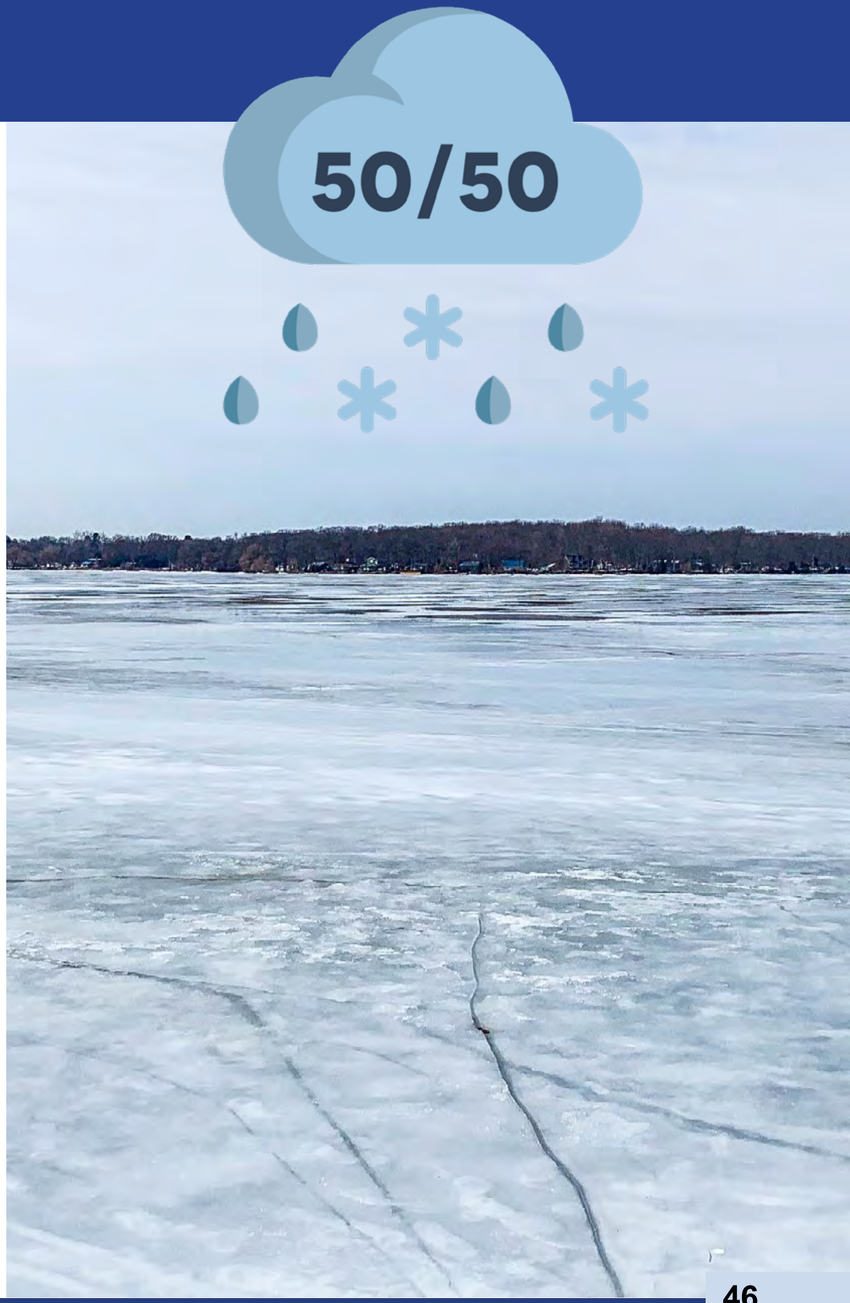
Warmer and Rainier Winters

OBJECTIVE 3:

Protect vulnerable people and adapt winter recreation to warmer and rainier winters

Potential impacts of warmer and rainier winters

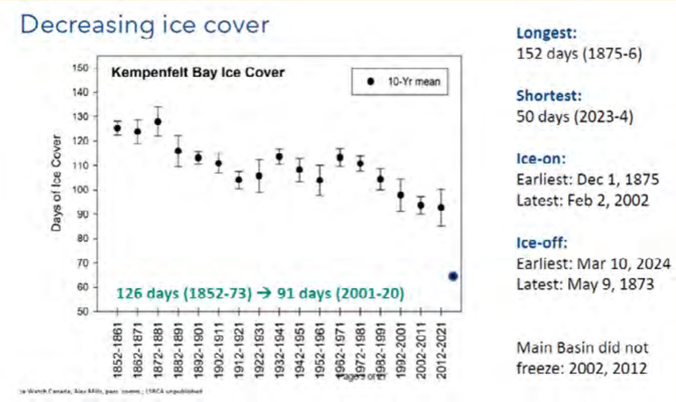
Impacted Entity	Risk	Red = very high risk, orange = high risk, yellow = moderate risk
Chippewas of Georgina Island First Nation	Warmer winters means that lake ice may not always be frozen solid, which increases the costs to travel to/from Georgina Island safely and increases the risk of injury	
First Responders	Unfrozen lake ice increases the likelihood of unsafe usage for travel or recreation and the potential for emergency response	
Agriculture	Rainier and warmer winters can lead to losses of some winter crops and damage agricultural fields	
Wetlands	More frequent freeze-thaw cycles in warmer winters increases the demand for pavement salting and the run-off into wetlands and water bodies	
Winter recreation and tourism	In poor winter conditions (ie. no snow and an unfrozen lake), winter tourism and recreation such as ice fishing, snowmobiling, and operating the hill at the Recreation Outdoor Complex (ROC) may not be possible	
Electrical utilities	The freeze-thaw cycle in warmer, rainier winters increases the likelihood of ice storms which can damage electrical utilities and other infrastructure	



What is Georgina doing to adapt to warmer and rainier winters?

Did you know?

- **Lake Simcoe Ice Cover Trends:** Lake Simcoe ice cover in Kempenfelt Bay near Barrie has been observed since 1853 and has decreased on average by 35 days per season. This is due to later freeze up and earlier spring melt.



LSRCA, April 1 2025. “Ecological Health of Lake Simcoe” presentation to the Georgina Environmental Advisory Committee: https://pub-georgina.escribemeetings.com/Meeting.aspx?Id=6cf921c1-d622-4d73-9dde-a49c1d34465b&Agenda=Agenda&lang=English

Community Spotlight:

- **Diversifying winter activities:** While activities such as ice fishing, snowmobiling, and skiing at the ROC have been tourism draws in Georgina during the winter season, the Town and local businesses offer other fun activities to attract visitors when there is no snow on the ground. Taste of Georgina takes place in February and celebrates the local culinary scene, and the Stephen Leacock Theatre offers shows and entertainment all year round.
- **Emergency preparedness and community resilience:** Local community groups and residents stepped up to help one another after the ice storm in March 2025. As Pefferlaw was the hardest hit community, the Pefferlaw Lions Community Hall opened to offer food and warmth. The Red Cross, St. John Ambulance, York Regional Police, Georgina Fire and Rescue Services, Councillors and staff provided support, including door-to-door wellness checks.

Success Stories

What is Georgina doing to adapt to warmer and rainier winters?

Lake ice rescue:

Each winter, York Region Police, Georgina Fire and Rescue Services, and Lake Simcoe Region Conservation Authority (LSRCA) notify residents when warm weather creates unpredictable ice conditions on lakes and rivers including open water and thin ice. Even with these warnings, first responders are called to perform lake rescues every year. As this seasonal weather becomes increasingly variable, it will be especially important for residents to take precautions around the lake for everyone's safety.

Action on salt pollution:

As the number of freeze-thaw cycles increases with warmer and rainier winters, the demand for salt use is expected to increase. In addition to existing salt management practices described in Section 5.2, in early 2025, the Town of Georgina unanimously supported a motion brought forward by the Rescue Lake Simcoe Coalition and the Ontario Salt Pollution Coalition calling for provincial action on salt pollution.

The motion asks Ontario to create a framework for the private snow and ice management sector that would allow the sector to stop oversalting, as well as establish a provincial stakeholder advisory committee to recommend how Ontario should manage its salt pollution problem affecting freshwater ecosystems.

Action Plan to Address Warmer and Rainier Winters

The Town of Georgina and local partners are already taking action to protect against warmer and rainier winters, as listed in the existing actions table in Appendix D. Below is the list of new or enhanced actions that the Town of Georgina will implement from 2026-2030:

Sector	Action	Responsibility	Type
Recreation and tourism 	Diversify outdoor activities for years of warm winter conditions	Community Services, Recreation Services and Parks	New
Natural Environment 	*Refer to Section 5.2 Lake Simcoe Nutrient Loading for actions regarding salt management*		

Future Considerations

These were the more ambitious actions requiring additional capital and resources that were identified through the process to help accelerate impact to address warmer, rainier winters. They are for consideration as capital and resources become more readily available:

1. Explore more ambitious alternative winter tourism activities including innovative recreation facilities such as domed fields, pools with indoor rock-climbing walls, etc.

More Extreme One-Day Storms

OBJECTIVE 4:

Ensure infrastructure and lands can handle more intense one-day storms

Potential impacts of extreme one-day storms

Impacted Entity	Risk Red = very high risk, orange = high risk, yellow = moderate risk
Agriculture and fields	Low-lying fields can become waterlogged which can impact soil quality, crops, and increase phosphorus loading in waterbodies from run-off
Stormwater and road infrastructure	Extreme rainfall can overwhelm stormwater infrastructure, damage road infrastructure and increase phosphorus loading in waterbodies from run-off

What is Georgina doing to adapt to more extreme one-day storms?

Did you know?

- **Low relative flood risk:** Relatively speaking, the Town of Georgina is at low risk of flooding during storms due to the amount of greenspace that allows water to infiltrate the ground, and newer, above-ground stormwater infrastructure (ditches, culverts, etc.). In Ontario, cities with more paved surfaces and older infrastructure (such as combined stormwater and sanitary sewers) are at greater risk of flooding due to the restricted capacity of the system to handle extreme volumes of water. The LSRCA maps areas where development could be subject to flooding, erosion and other hazards, and the Town of Georgina works closely with LSRCA to adapt to these risks.

Community Spotlight:

- **Flood risk resources:** LSRCA can help homeowners understand whether they are in a flood prone zone by calling 905-895-1281. Their flooding website lists how residents can prepare:
  1. Understand your insurance policy
  2. Plan for an emergency and ensure you have a 72-hour emergency kit on hand
  3. Protect your property with flood-readiness fixes.

Success Stories

What is Georgina doing to adapt to more extreme one-day storms?

Capacity of stormwater infrastructure:

The Town's Operations and Infrastructure department ensures that Town stormwater infrastructure, including ditches, culverts, and stormwater ponds, is designed to handle future climate conditions.

Stormwater infrastructure maintenance:

The Operations division regularly cleans and maintains stormwater infrastructure to ensure optimal functionality and diversion during extreme storms. The Town recently completed a stormwater pond condition assessment in Georgina with specific upgrade and maintenance recommendations.

Infiltration and inflow:

In 2024, the Town of Georgina completed an infiltration and inflow (I and I) study for selected areas to identify sources of water entering the sanitary sewers and develop a plan to reduce these flows. Infiltration and inflow add unnecessary groundwater and stormwater into the wastewater system, resulting in higher volume requiring treatment at a treatment facility. This increases the cost of treatment and can contribute to sewage backups and overflows due to restricted capacity. The Town is working towards meeting its regional target reduction. Residents should ensure that sump pumps and downspouts are not connected to the sanitary and wastewater systems.

Action Plan to Address Extreme One-Day Storms

The Town of Georgina and local partners are already taking action to protect against extreme one-day storms, as listed in the existing actions table in Appendix D. Below is the list of new or enhanced actions that the Town of Georgina will implement from 2026-2030

Sector	Action	Responsibility	Type
Tourism and Economy	Identify parks with persistently poor drainage and re-naturalize priority areas	Community Services, Recreation Services and Parks	New
Infrastructure	Maintain and clean ditches, culverts, and stormwater management ponds	Operations and Infrastructure, Roads / Forestry	Enhance
People	Share resources to help residents reduce flood risk at home	Strategic Initiatives, Corporate Strategy and Transformation	Enhance
Agriculture	*Refer to Section 5.2: Lake Simcoe Nutrient Loading for action regarding resources for farmers*		

Corporate Greenhouse Gas Emissions

OBJECTIVE 5:

Reduce corporate greenhouse gas emissions, mainly from buildings

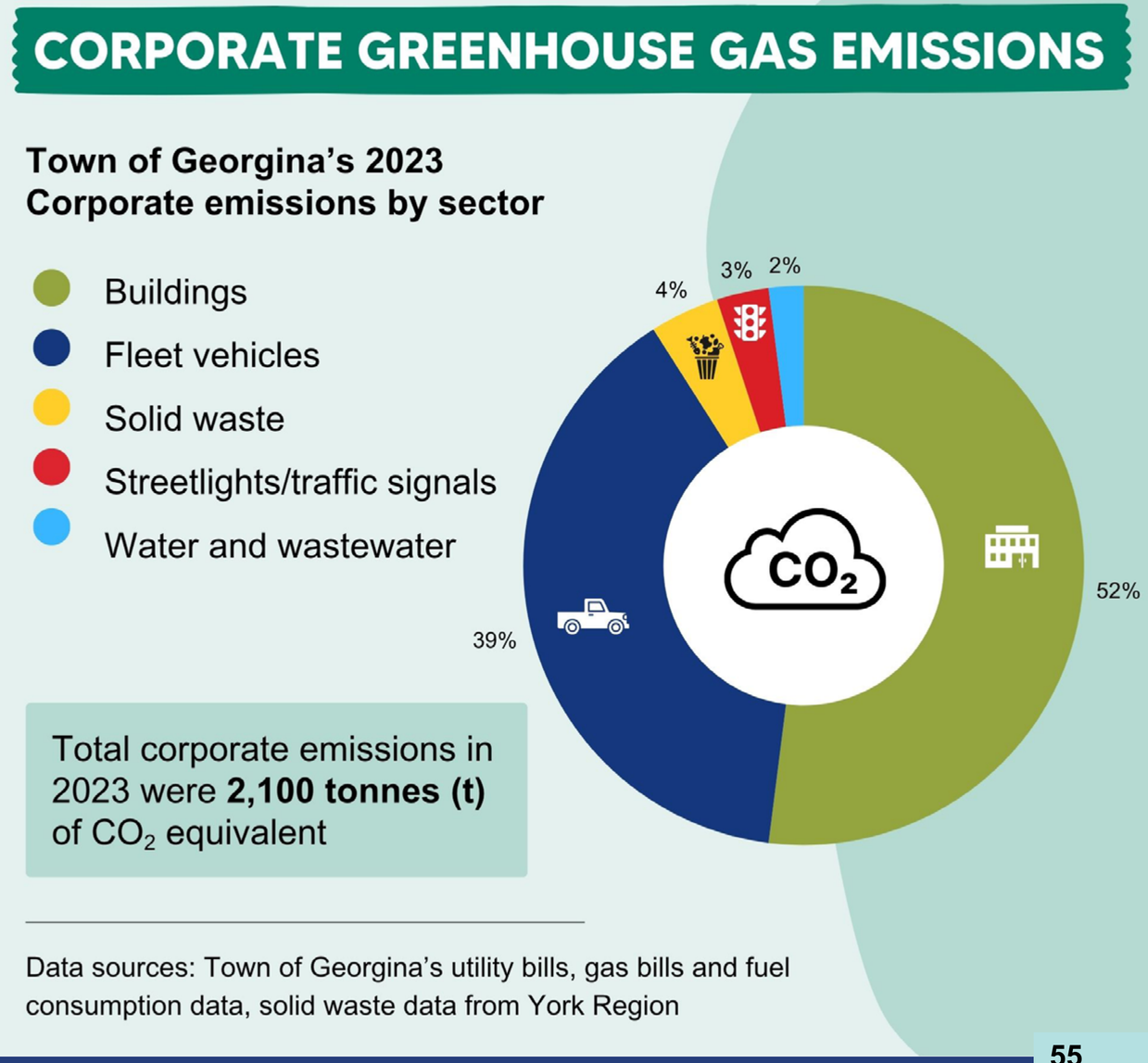
Corporate Greenhouse Gas Emissions

What are Greenhouse Gas Emissions?

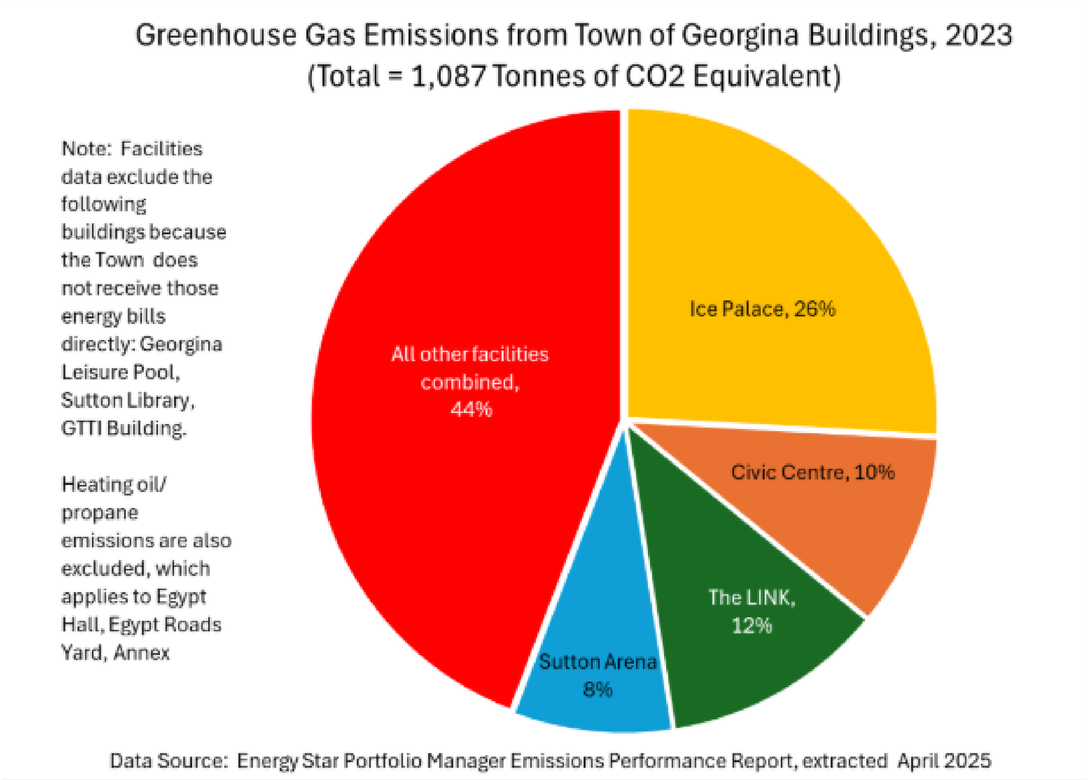
Greenhouse gas (GHG) emissions contribute to climate change by trapping heat and insulating the earth, which causes the climate impacts discussed in Section 4. Most of these emissions come from the burning of fossil fuels such as coal, oil or natural gas, whether in vehicles, furnaces to heat buildings, or as a fuel source to power the provincial electrical grid etc. Burning fewer fossil fuels mitigates climate change.

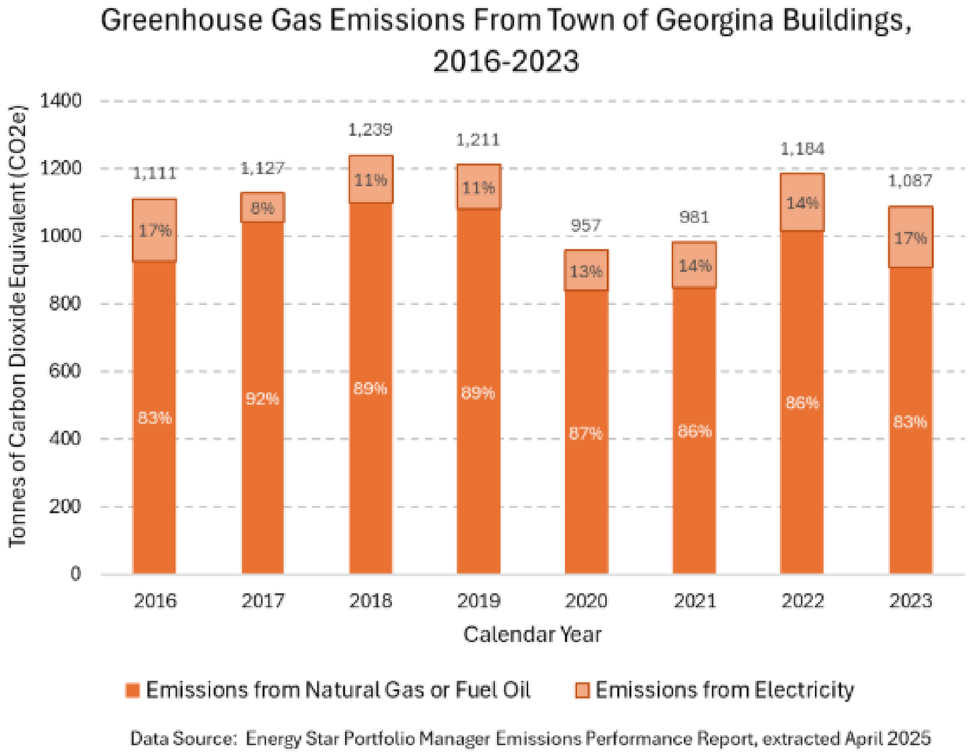
Corporate Greenhouse Gas Emissions

To prioritize solutions with the greatest impact, the Town calculated its own corporate greenhouse gas inventory in alignment with the Partners for Climate Protection (PCP) Milestone Framework to understand the sources of its emissions. Scope 1 and 2 emissions (buildings, fleet vehicles, streetlights/traffic signals, waste and wastewater facilities) are included as well as solid waste (managed by York Region). Details about the emissions calculations can be found in Appendix C.



Corporate Greenhouse Gas Emissions





In 2023, municipal buildings emitted approximately half (52 per cent) of Georgina's corporate emissions, with the top four emitting facilities being the Georgina Ice Palace, Civic Centre (old building), the Link and Sutton Arena. The Multi-Use Recreation Complex (MURC) opened in 2024 and is therefore not included. The natural gas used for space heating accounts for most building emissions. Moreover, electricity in Ontario is increasingly reliant on natural gas.

The Town's fleet vehicles made up over a third (39 per cent) of Georgina's corporate emissions in 2023. These include snowplows, lawn mowers and light to heavy duty trucks.

The emissions from water and wastewater pumping stations, solid waste and streetlights are less than 5 per cent each. Electricity and fuel-burning equipment is accounted for at pumping stations.

Success Stories

What is Georgina doing to mitigate corporate GHG emissions?

Streetlight and light fixture retrofits:

Between 2015 and 2024, all Town streetlights, nearly 5000 of them, were upgraded to light emitting diode (LED) bulbs from high pressure sodium (HPS) bulbs. LED bulbs are highly efficient, saving maintenance and energy costs estimated at over $300,000 annually and over 50 tonnes of GHG emissions (carbon dioxide equivalent) per year. Since 2014, the Town has also changed over 700 light fixtures to LED bulbs at Sutton Arena, Ice Palace, Pefferlaw Lions Hall, and Georgina Leisure Pool

Sustainable building design:

The Multi-Use Recreation Complex (MURC) was designed with sustainability in mind, incorporating high performance, energy-efficient design including solar-reflective materials, air-side heat recovery and high R-value insulation. It is pending LEED Gold certification, which is an international green building standard for energy and water conservation among other metrics.

Electric vehicles:

The Town owns three hybrid electric vehicles (non plugin), two electric push mowers, and is in the process of procuring two electric ice re-surfacers. The Town owns and operates eight electric vehicle charging stations: six at the MURC and two at Pefferlaw Lions Hall. York Region operates two stations at the Link.

What is Georgina already doing to adapt to corporate GHG emissions?

Did you know?

- **Net Zero Buildings:** A Net Zero building generates as much energy as it consumes. This designation requires extra levels of insulation, airtightness and/or high-performance windows to maximize energy efficiency, and a renewable energy system (e.g. solar panels) to generate the required electricity. Since renewable energy projects and electric heating, ventilation, and air conditioning (HVAC) systems can have large capital costs, many municipalities are building Net Zero Ready facilities to space out the investment. This means that at the time of construction, efficiency measures such as insulation and windows are included and capacity for future renewable energy generation is built in. The replacement Civic Centre will be built to be Net Zero Ready
- **Sustainable procurement:** Scope 3 emissions are those generated from the goods and services procured (but not owned) by the Town of Georgina. Georgina can influence these emissions by choosing to procure sustainable options. For example, the Town has implemented the practice of reclaiming and reusing asphalt as part of the pavement management strategy. In the first two years of the program, the Town recycled approximately 3,400 tonnes (or over 150 loads) of asphalt, which has significant environmental benefits as asphalt is carbon intensive to produce.

Actions to Reduce Corporate Greenhouse Gas Emissions

The Town of Georgina is already taking action to mitigate corporate GHG emissions as listed in the existing actions table in Appendix D. Below is the list of new or enhanced actions that the Town of Georgina will implement from 2026-2030:

Sector	Action	Responsibility	Type
Buildings	Evaluate Net Zero Ready option in the design of new corporate buildings	Community Services, Capital Projects	Enhance
	Perform energy efficiency assessments on buildings with greatest absolute emissions or intensity; and implement improvements (e.g. building commissioning, retrofits, etc.)	Community Services, Capital Projects and Facilities	Enhance
	Consider options for more energy efficient (including electric) models (rather than like-for-like replacement) for building retrofits and equipment upgrades	Community Services, Capital Projects and Facilities	Enhance
Fleet	Monitor and communicate driver behaviour statistics to promote fuel efficiency	Operations and Infrastructure, Fleet	New
Tree canopy (to offset emissions)	Develop a plan to strategically plant trees and vegetation in priority locations	Operations and Infrastructure, Roads and Forestry	Enhance
Procured goods and services (scope 3 emissions)	Provide resources and education about sustainable product and material options for procurement	Strategic Initiatives, Corporate Strategy and Transformation	New

Future Considerations

These were the more ambitious actions requiring additional capital and resources that were identified through the process to help accelerate impact the reduction of corporate greenhouse gas emissions. For consideration as capital and resources become more readily available:

1. Use opportunity-based benchmarking for setting reduction targets. In other words, once energy reduction opportunities have been identified and calculated, set an emissions reduction target (e.g. 25 per cent reduction by 2030)
2. Explore innovative financing options for retrofit, renewable energy, and new construction projects
3. Establish localized, small-scale generation of renewable energy at Town facilities (e.g. Solar panel installations.)

Community Greenhouse Gas Emissions

OBJECTIVE 6:

Reduce community-wide greenhouse gas emissions, mainly from transportation

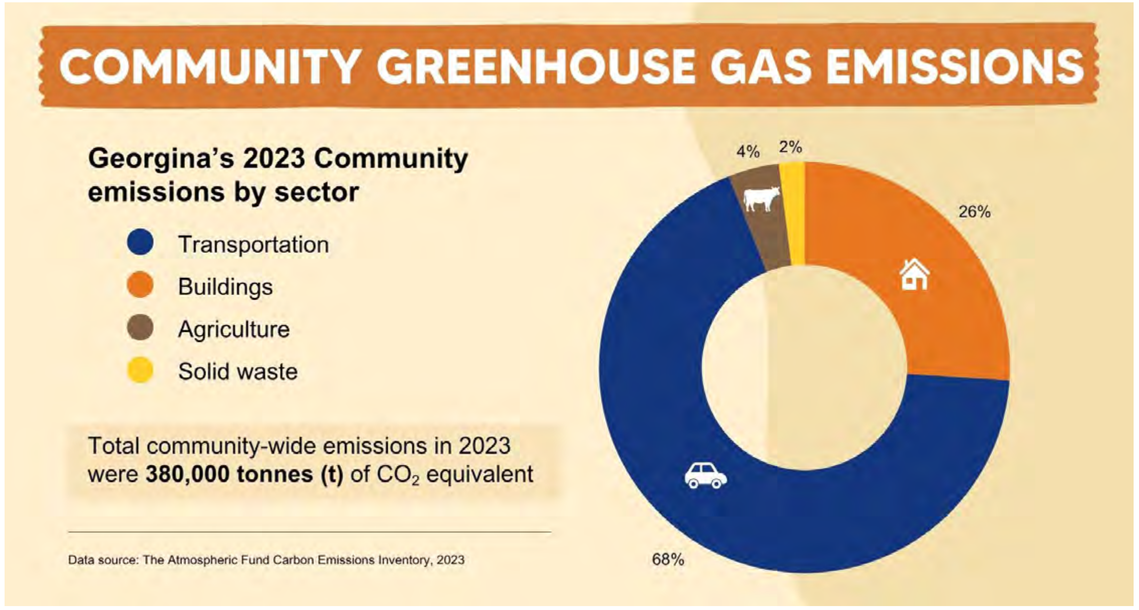
Community greenhouse gas (GHG) inventory

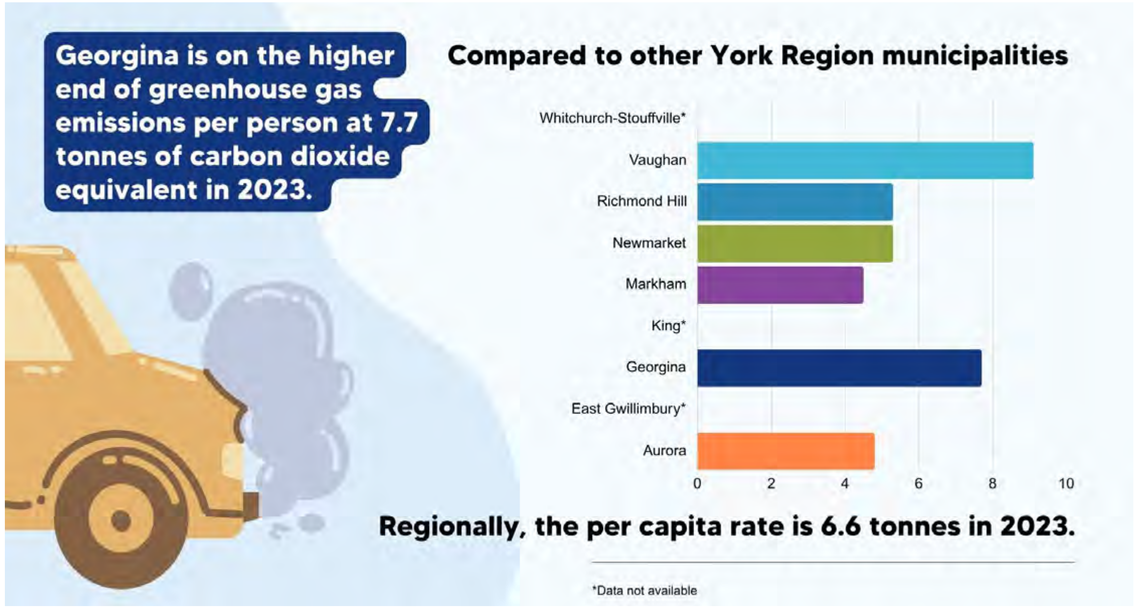
The Atmospheric Fund conducted the GHG inventory for Georgina as part of their annual carbon emissions inventory for York Region. Data tables and methods can be found in Appendix C.

In 2023, two-thirds (68 per cent) of Georgina's community emissions were from transportation, which include passenger and commercial road vehicles. Buildings emitted approximately one-quarter (26 per cent) of community emissions, including residential, industrial and commercial buildings.

As Georgina is a relatively rural municipality, these results make intuitive sense due to the large land area, high number of commuters, limited public transit, and relatively low number of buildings. In the five other York region municipalities with complete data, the proportion of emissions attributed to transportation ranges from 40 per cent to 57 per cent.

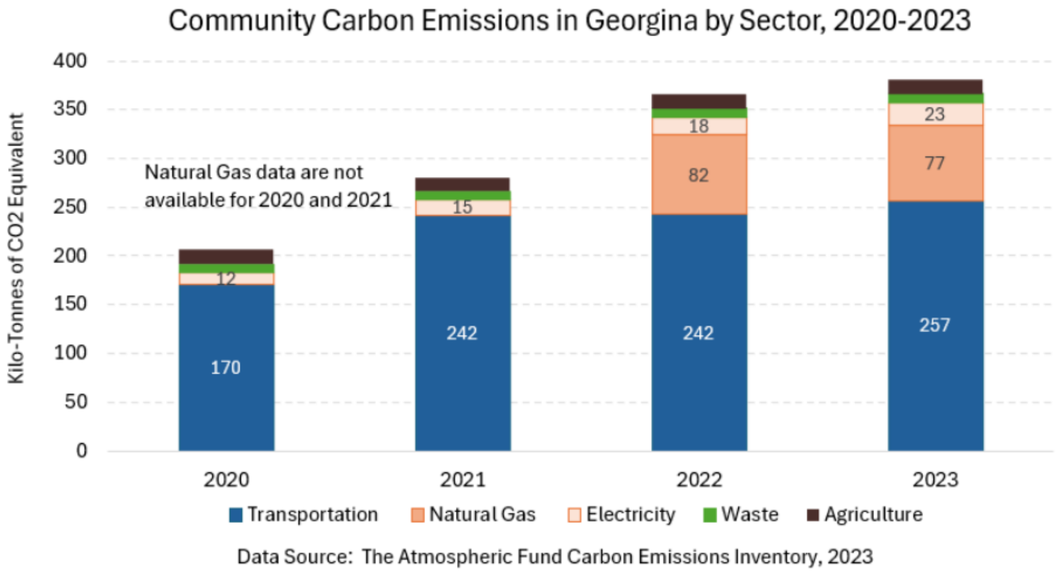
Agricultural and waste emissions are small in comparison at just over five per cent of emissions combined. Industrial emissions in Georgina do not meet the threshold for accounting and are therefore not included.





Community Greenhouse Gas Emissions

Historical data show increasing transportation emissions since the height of pandemic closures in 2020. Natural gas emissions in buildings decreased between 2022 and 2023 likely due to milder winter weather in 2023, which means reduced heating requirements. Emissions from electricity has increased in recent years because of increasing reliance on gas to power the provincial grid.



The Town has indirect influence on community emissions through advocacy, partnerships, incentives, and land use planning.

Success Stories

What is Georgina doing to mitigate community GHG emissions?

Upcycling:

The Town of Georgina hosts a popular Annual Swap and Sell and eWaste event. It is an opportunity for residents to sell or buy used or new wares and dispose of old, unused or broken electronics to be recycled, free of charge.

Tree planting:

Close to half (44.4 per cent) of Georgina's land cover was tree canopy according to York Region's 2021 State of the Forest Report. The target canopy cover for Georgina according to this report is 47 per cent by 2051. Most recently, the Town received funding to plant over 200 large-stock trees in 2025 and give away 2,000 trees to residents on Earth Day in April 2025.

Active transportation:

The Town is working to make Lake Drive safer for all, promote active transportation and maintain good traffic flow. In summer 2025, the Town will implement a new seasonal multi-use pathway (MUP) on Lake Drive East from Civic Centre Road to South Drive.

Local jobs:

Keswick Business Park provides significant economic development and employment opportunity in the Town. Local jobs reduce the need to commute to other municipalities, thereby reducing carbon emissions from transportation.

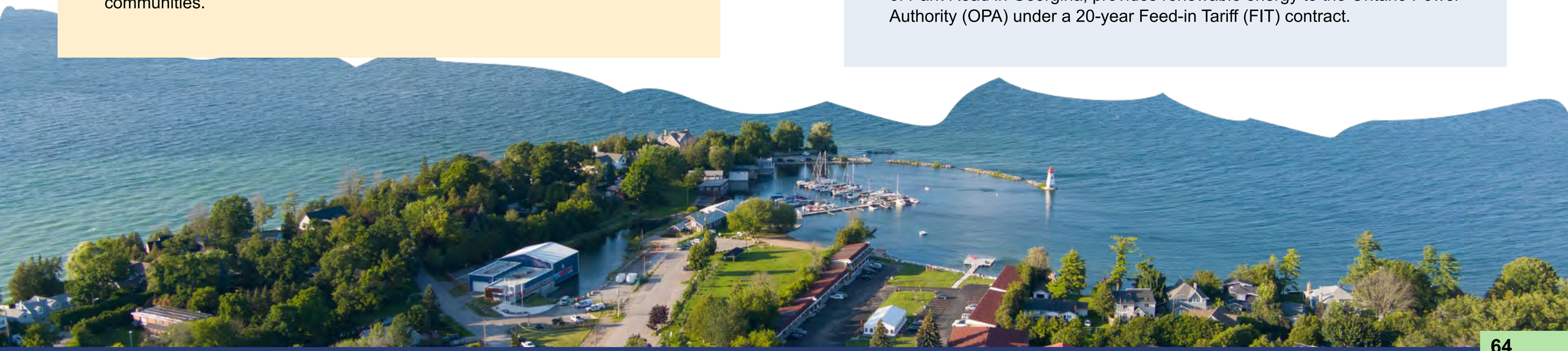
What is Georgina doing to mitigate its community emissions?

Did you know?

- **Greenbelt Act:** In 2005, Ontario established the Greenbelt Act and the Greenbelt Plan to preserve agricultural land, ecosystems and open space, control urbanization and promote sustainable resource use. Georgina lies within this Greenbelt Plan, so much of the countryside is protected under provincial regulation. Development can occur within designated boundaries to minimize urban sprawl as the population grows. Compact design can significantly reduce carbon emissions.
- **Compact Development:** Mixed use, dense communities make active and public transportation more feasible thus reducing the per capita greenhouse gas emissions of a community. The Keswick Secondary Plan states that the Town will promote compact built form, a mix of residential and commercial uses and active transportation, all of which support more climate-friendly communities.

Community Spotlight:

- **Electric vehicles:** York saw a moderate rise in electric vehicle registrations in 2023 compared to 2022: 18,170 EVs (up 55%) and 4,141 PHEVs (up 31 per cent). Georgina led electric vehicle registrations with a significant 70 per cent growth.
- **Grants for homeowners:** There are several funding programs and resources available to homeowners to support home energy efficiency upgrades. The provincial Save on Energy program has a number of rebate programs. The federal Canada Greener Homes Loan offers interest-free financing for home retrofits. The Clean Air Alliance has a Heat Pump Selection resource.
- **Renewable energy:** The 10MW solar project on Old Homestead Road, east of Park Road in Georgina, provides renewable energy to the Ontario Power Authority (OPA) under a 20-year Feed-in Tariff (FIT) contract.



Actions to reduce community greenhouse gas emissions

The Town of Georgina and local partners are already taking action to mitigate community GHG emissions as listed in the existing actions table in Appendix D. Below is the list of new or enhanced actions that the Town of Georgina will implement from 2026-2030:

Sector	Action	Responsibility	Type
Industrial, commercial, institutional (ICI) buildings	Promote third-party grants and programs available for small business and Industrial Commercial and Institutional (ICI) energy retrofits (ie. Save on Energy program)	Strategic Initiatives, Corporate Strategy and Transformation	New
	Add “Green Business Leader” award to Business Excellence and Mayor and Council Milestone Awards	Strategic Initiatives, Economic Development and Tourism	New
Residential buildings	Promote third-party grants and programs available for residential energy and water conservation	Strategic Initiatives, Corporate Strategy and Transformation	New
Transportation (Commuting)	Encourage carpooling (use of 404 Go Transit Lot or digital platforms)	Strategic Initiatives, Communication	New
	Advocate for electric vehicle readiness in Ontario Building Code for commercial and residential buildings	Development Services, Planning Policy, Building	New
	Explore electric vehicle infrastructure requirements for parking lots through Parking Study Review	Development Services, Planning Policy	New
	Encourage builders to include electric vehicle readiness as option in sales packages	Development Services, Development Planning	New
	Encourage electric vehicle charging infrastructure in industrial, commercial, institutional (ICI) development through site plan approval process	Development Services, Development Planning, Development Engineering	Enhance
Land use planning (as it relates to building and transportation emissions)	Encourage mixed-use neighbourhoods in applicable Secondary Plans	Development Services, Planning Policy	Enhance
	Encourage more compact development through incentive programs (as available), streamlined application processes, and policies	Development Services, Development Planning	Enhance
Waste	Create and implement Solid Waste Management Plan	Operations and Infrastructure, Waste and Wastewater	Enhance
Tree canopy (to offset emissions)	Partner with local organizations on tree planting and native restoration initiatives, prioritizing areas near watercourses or sloped grassy areas	Operations and Infrastructure, Roads and Forestry	Enhance
	Promote legacy programs to encourage residents to contribute to community tree plantings	Strategic Initiatives, Communication	New

Future Considerations

These were the more ambitious actions requiring additional capital and resources that were identified through the process to help accelerate impact to address extreme heat. For consideration as capital and resources become more readily available:

1. Invest in distributed community energy projects (ie. wind, solar, geothermal) to reduce greenhouse gas emissions and improve the resiliency of the electricity grid (reduces potential for disruption if there is more decentralized distribution)

2. Led by York Region, collaborate on a regional Community Financing Program to provide incentives for homeowners to conduct energy efficiency retrofits (similar to Durham Greener Homes)

Measuring Outcomes

To evaluate success and how the Town and community are addressing the priority risks and to gather feedback for continuous improvement, the Town will report on the following measures each year.

Objective 1: Extreme Heat

- Number of hot days over 30 degrees Celsius (Source: Environment Canada)
- Number of Emergency Department vistis for heat-related illness (Source: York Region Public Health)

Objective 2: Lake Simcoe Nutrient Loading

- Number of beach closures (Source: York Region Public Health)
- Chloride levels in Lake Simcoe (Source: LSRCA Environmental Monitoring Data Portal)
- Phosphorus levels in Lake Simcoe (Source: LSRCA Environmental Monitoring Data Portal)
- Total suspended solids (TSS) levels in Lake Simcoe (Source: LSRCA Environmental Monitoring Data Portal)

Objective 3: Warmer, Rainier Winters

- Number of days between December and February date above 0 degrees Celsius (Source: Environment Canada)
- Number of lake ice-related rescues (Source: Town of Georgina Emergency Services)
- Number of winter-season operational days at ROC (Source: Town of Georgina Community Services)

Objective 4: More Extreme One-Day Storms

- Maximum daily precipitation over one year (Source: Environment Canada)

Objective 5: Corporate Greenhouse Gas Emissions

- Corporate greenhouse gas emissions inventory by source, by facility, and total (Source: Town of Georgina)

Objective 6: Community Greenhouse Gas Emissions

- Community greenhouse gas emissions inventory by sector and total (Source: The Atmospheric Fund)

All Objectives

- Local satisfaction survey question(s) on how the Town is addressing each of the priorities (Source: Town of Georgina
- Progress on the actions and related success stories (Source: Town of Georgina and community partners)

Action Plan Summary

Governance

This plan is the formalization of the climate program at the Town of Georgina and provides a more strategic oversight to managing climate risk and reducing emissions.

While the climate actions are the responsibility of their respective departments, the governance of the plan will be led by the Strategic Initiatives department, and includes the following activities:

Collaborate cross-departmentally on plans, policies, and projects to incorporate climate considerations and solutions

Join municipal networks for learning and collaboration opportunities (e.g. Partners for Climate Protection, Clean Air Partnership)

Include the Climate Action Plan in the Terms of Reference for the Georgina Environmental Advisory Committee

Implementation, communication, and reporting

The actions will be integrated into the Town's annual budget and business planning process over the next five years. As the Town continues to change and evolve, so will the plan, and it should therefore be considered a 'living document'.

More capital-intensive, ambitious actions that were identified throughout the plan development have been documented as "Future Considerations." These opportunities can be evaluated as technology, resources, and funding become available.

Once the plan is endorsed by Council, Town staff will promote it through various events, social media channels, media releases, Town's website, Town's facilities, signage, etc.

In keeping with the commitment to accountability, the Town will report on progress on the climate actions and outcomes each year.

Appendix

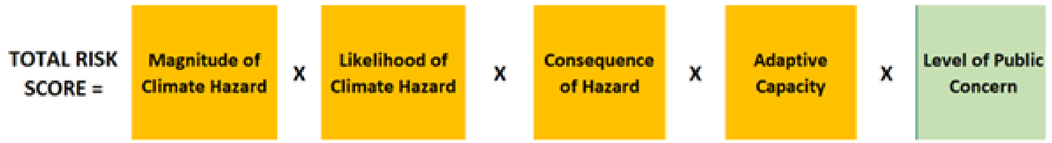
Appendix A: Hazard Projection and Detailed Risk Assessment Methodology

The Ontario Provincial Climate Change Assessment (PCCIA 2023) was used to determine historical (1981-2010) and projected future (2041 to 2070) climate conditions in Georgina. Provincial models were based on climate data in 10 x 10 km grids so this report extracted data for the grids found within Georgina's municipal boundaries. For a wholesome discussion of the climate variable selection and process, readers are directed to the full PCCIA report.

Projections for fifteen climate hazard variables were based on the best-practice methodology of using an ensemble (many model) average of future outcomes. In this case, 33 models for the 'high' greenhouse gas (GHG) projection pathway were used. This pathway, known as Representative Concentration Pathways (RCP) 8.5, has historically been the most appropriate trajectory for global GHG concentrations in spite of international commitments to reduce. Beyond the PCCIA variables, Lake Simcoe salt and phosphorus loads were assessed for this Georgina report based on reports and expertise from the Lake Simcoe Region Conservation Authority.

The formula to calculate risk was a combination of hazard projection characteristics, hazard impact metrics and a public survey variable. Hazard impact was assessed on five sectors: people, economies, agriculture, nature and infrastructure consistent with the PCCIA report. Within each sector, different 'entities' are impacted differently so these sub-categories were assessed separately to determine the most vulnerable. For example, within the "People" sector, the impacts of climate hazards are different for people who are unhoused, outdoor workers, medically vulnerable etc.

The formula for assessing risk is found below. The first four variables were derived from the PCCIA, and the "Level of Public Concern" was added to account for input from a local survey in Georgina. The total risk score was calculated for each climate hazard in each sector. Each variable in the formula is described in greater detail in subsequent paragraphs.



Source: Ontario Provincial Climate Change Impact Assessment Technical Report (January 2023)

The **magnitude of each climate hazard** represents the degree to which the projected value varies from baseline values. The calculation is the difference between the two values, and this is subjected to descriptive statistics defined into five categories described in Table A1, taken from the PCCIA.

Table A1 – Hazard Magnitude Scores:

Score	Description	**Definition – Amount of Change from Baseline (1981-2010 average)** I.e. degrees Celsius, degree days or per cent change difference between projected value and historical value
16	Much more than baseline	Greater than 2.5 standard deviations (SD) above baseline
8	More than baseline	Greater than 1.5 to less than 2.5 SD above baseline
4	Baseline/No Change	Within 1.5 SD
2	Less than baseline	Greater than 1.5 to less than 2.5 SD below baseline
1	Much less than baseline	Greater than 2.5 standard deviation below baseline

Appendix A: Hazard Projection and Detailed Risk Assessment Methodology

Table A2 – Hazard Magnitudes:

Hazard Variable Name and description	Baseline Value (1981-2010 average)	Projected Value (2041-2070 average)	Magnitude of Change (relative percentage)
Extreme Hot Days = Number of days with maximum temperature above 30 degrees Celsius	9 days	35	Increase of 300%
Cooling Degree Days = sum of degrees greater than 18 Celsius of daily mean temperatures for one year. Measures building cooling demand	212 degree days	497	Increase of 130%
Growing Degree Days = sum of degrees greater than 5 Celsius of daily mean temperatures. Measures heat for growing season	2069 degree days	2762	Increase of 33%
Growing Season Length = Number of days from est. seeding date (10 days after avg daily temp > 5°C) until fall frost (minimum daily temp = 0°C) or until Oct 31, whichever comes first)	193 days	229	Lengthen by 36 days (Increase of 19%)
Degree Days below freezing = Sum of degrees less than zero Celsius of daily mean temperature for one year	707 degree days	394	Decrease of 44 per cent
Extreme Cold Days = number of days below –25 degrees Celsius	3 days	1	Decrease of 66 per cent
Per cent of winter precipitation that falls as rain instead of snow:	30 per cent	53 per cent	Increase of 77 per cent
Maximum Precipitation in One Day:	72 mm	89	Increase of 23 per cent
Maximum Precipitation in Three Days:	82 mm	83	No change
Total Winter Precipitation:	180 mm	210	Increase of 17 per cent
Total Spring Precipitation:	193 mm	221	Increase of 14 per cent
Total Summer Precipitation:	207 mm	209	Same volume but ‘flashier’ events
Total Autumn Precipitation:	228 mm	240	Increase of 5 per cent
Lake Simcoe Salt and Phosphorus Loads			Increase

Appendix A: Hazard Projection and Detailed Risk Assessment Methodology

The **hazard likelihood** represents the probability that the hazard magnitude values would occur. This is derived from the level of uncertainty in the modelling. Five categories of annual probability are described in Table A3, taken from the PCCIA

Table A3 – Hazard Likelihood Scores:

Score	Description	Definition – Annual Probability that Hazard Magnitude will occur
16	Very Probable	Greater than 80 per cent to 100 per cent
8	Probable	Greater than 60 per cent to 80 per cent
4	Occasional	Greater than 40 per cent to 60 per cent
2	Remote	Greater than 20 per cent to 40 per cent
1	Improbable	Zero per cent to 20 per cent

The **level of public concern** for each hazard was based on a Town of Georgina survey conducted in July and August 2024. Details of the survey are found in Appendix B: Public Engagement.

Table A4: Level of Public Concern Scores

Score	Description	Definition – Average "worry" score on general public survey Question 1
8	High	Between 3 and 4
4	Moderate	Between 2 and 3
2	Low	Between 1 and 2

The top hazards were determined by multiplying the scores for magnitude, likelihood and public concern (see Table A5).

Table A5 – Results of Climate Hazard Assessment:

Climate Hazard Name:	Magnitude in 2050	Likelihood in 2050	Public Concern	Overall Hazard Assessment
Extreme Heat	Much More	Very Probable	Moderate	Very High
Lake Simcoe Phosphorus and Salt loads	Much More	Probable	High	Very High
Warmer, Rainier Winters	More	Very Probable	Moderate	High
Extreme One-Day Storms	Baseline/No Change	Probable	High	Moderate
Wildfire Smoke	More	Occasional	Moderate	Low
Extreme Cold	Baseline/No Change	Occasional	Moderate	Very Low
Average Precipitation	Baseline/No Change	Occasional	Not asked	Very Low

Appendix A: Hazard Projection and Detailed Risk Assessment Methodology

Climate hazards will impact **sectors** of society differently. Five main sectors, each with sub-categories called 'entities' were defined by the PCCIA and assessed separately for impact, also known as consequence, of the top four hazards. These are listed below:

People Sector:

Entities: Unhoused people, People living with low income, Seniors and children, Outdoor workers including firefighters, medically vulnerable people, Chippewas of Georgina Island First Nation

Agriculture Sector:

Entities: Livestock, field crops and fruit/vegetable farmers

Infrastructure Sector:

Entities: Electrical power generation and demand, Stormwater management, Buildings, Roads and bridges, Sewage treatment, Water supply and irrigation, Transportation, Telecommunications

Economic Sector:

Entities: Summer recreation and tourism (outdoor arts, entertainment, and fishing), Winter recreation, Construction, Manufacturing, Retail trade

Nature Sector:

Entities: Wetlands, Lake Simcoe, Coldwater fish, Warmwater fish, Migratory songbirds and insects, Mammals, Coniferous forests.

The **impact, or consequence,** of each climate hazard on each entity was assessed by applying the relevant scale specific to every sector. These can be found in tables A6 to A9, taken from the PCCIA.

Table A6 – Consequence Scores for People Sector:

Score	Description	Definition – Annual Probability that Hazard Magnitude will occur
16	Very High	Greater than 80 per cent to 100 per cent
8	High	Greater than 60 per cent to 80 per cent
4	Medium	Greater than 40 per cent to 60 per cent
2	Low	Greater than 20 per cent to 40 per cent
1	Very Low	Zero per cent to 20 per cent

Table A7 – Consequence Scores for Economic Sector:

Score	Description	Definition – Annual Probability that Hazard Magnitude will occur	Interpretation	Per cent of Annual Revenue Lost Due to Climate Hazard
16	Very High	Greater than 80 per cent to 100 per cent	100 per cent means total loss of asset function (ie. Shut down) Five per cent is the lowest level of function loss.	Greater than 50 per cent
8	High	Greater than 60 per cent to 80 per cent		25 per cent to 50 per cent
4	Medium	Greater than 40 per cent to 60 per cent		10 per cent to 24 per cent
2	Low	Greater than 20 per cent to 40 per cent		6 per cent to 10 per cent
1	Very Low	Zero per cent to 20 per cent		0 per cent to 5 per cent

Table A8 – Consequence Scores for Agriculture or Infrastructure Sector

Score	Description	Agriculture: Per cent Yield Loss	Infrastructure: Per cent of Asset Requiring Replacement Due to Climate Hazard
16	Very High	Greater than 50 per cent	Greater than 60 per cent = Full failure/ damage to asset
8	High	30 per cent to 50 per cent	40 per cent to 60 per cent = Earlier end of life
4	Medium	10 per cent to 30 per cent	20 per cent to 40 per cent
2	Low	5 per cent to 10 per cent	10 per cent to 20 per cent = Increased Maintenance
1	Very Low	0 per cent to 5 per cent	0 per cent to 10 per cent = Status Quo

Appendix A: Hazard Projection and Detailed Risk Assessment Methodology

Table A9 – Consequence Scores for Nature Sector:

Score	Description	Ability to Recover from Impact of Climate Hazard	Ability of Natural Asset to Deliver Services Due to Climate Hazard Impact
16	Very High	Very serious, widespread and potentially permanent/ irreversible damage or loss to population and/or habitats (e.g. local extinctions) occurring due to deterioration in habitat conditions, reduced food availability and/ or other factors	Catastrophic disruptions affecting all and leading to permanent changes in systems.
8	High	Serious impact on populations and/or habitats from large changes in habitat quality and/or population demographics (e.g. serious decline in reproduction which limits population increase) that will be very difficult (but not impossible) to reverse/ mitigate with a long period likely needed to restore to an acceptable level	Widespread and long-term disruptions in flows of services, impacting large numbers of people
4	Medium	Wider and longer-term impacts on populations and/or habitats	Frequent and numerous disruptions within the capacity of the system to recuperate and recover over the medium to short term.
2	Low	Minimal impacts on population and/or habitats from small, general reversible/ mitigatable changes.	Many localized disruptions that are easily accommodated by normal system protocols for repair and maintenance, or changes in people's attitudes or behaviour
1	Very Low	Negligible impacts	Very few localized disruptions

Every entity has a different ability or capacity to adapt to climate hazards. This was also accounted for in the risk equation under 'Adaptive Capacity'. The scores are defined in Table A10, taken from the PCCIA.

Table A10 – Adaptive Capacity Scores:

Score	Description	Technologies that Exist that can Build Resilience*	Resource Availability ($)*	Governance*
1	High	High capacity to adapt to the climate hazard (note this means a lower score when assessing risk)		
4	Medium	Moderate capacity to adapt to the climate hazard		
16	Low	Low capacity to adapt to the climate hazard (note this means a higher score when assessing risk)		

Technologies that Exist that can Build Resilience typically refers to 'hard' or physical technologies, can include practices, planning

Resource Availability: Human, financial and natural resources, knowledge, skills and expertise in the sector, funding sources available for adaptation, implementation

Governance: Institutional support, policies, networks to enhance adaptation, implementation e.g. legislation, policy, plans

Entities with the highest consequence scores were noted, and these scores were combined with the adaptive capacity scores to determine the overall risk assessment level (see Table A11). Risk assessment results are in Tables A12-A16.

Table A11 – Consequence and Adaptive Capacity Matrix Used to Assess Risk:

Adaptive Capacity:	Consequences				
	1 = Very Low	2 = Low	3 = Medium	8 = High	16 = Very High
1 = High	-	-	-	-	Risk = moderate
4 = Medium	-	-	-	Risk = moderate	Risk = high
16 = Low	-	-	-	Risk = high	Risk = very high

Appendix A: Hazard Projection and Detailed Risk Assessment Methodology

Table A12 – Risk Assessment Results in People Sector. Red shading indicates very high risk; orange is high; yellow is moderate:

Hazard	Impacted Entities - People						
	General population	Unhoused	Chippewas of Georgina Island	Low Income	Medically Vulnerable	Outdoor Workers	Children, Seniors
Extreme Heat	-	Very High Conseq. Low Adaptive Capacity	High Conseq. Low Adaptive Capacity	High Conseq. Low Adaptive Capacity	High Conseq. Low Adaptive Capacity	Very High Conseq. Medium Adaptive Capacity	High Conseq. Low Adaptive Capacity
Lake Simcoe Phosphorus and Salt Loads	-	-	Very High Conseq. Low Adaptive Capacity	High Conseq. Low Adaptive Capacity	High Conseq. Low Adaptive Capacity	-	-
Warmer, Rainier Winters	-	-	High Conseq. Low Adaptive Capacity	High Conseq. Low Adaptive Capacity	High Conseq. Low Adaptive Capacity	-	-
Extreme One Day Storms	-	-	-	-	-	-	-

Table A13 – Risk Assessment Results in Agriculture Sector. Red shading indicates very high risk; orange is high; yellow is moderate:

Hazard	Impacted Entities - Agriculture		
	Field Crops	Fruit and Vegetable Farmers	Livestock
Extreme Heat	High Conseq. Medium Adaptive Capacity	High Conseq. Medium Adaptive Capacity	High Conseq. Medium Adaptive Capacity
Lake Simcoe Phosphorus and Salt Loads	Lake Simcoe is downstream from agricultural entities so this hazard was not assessed for consequence or adaptive capacity		
Warmer, Rainier Winters	Very High Conseq. Medium Adaptive Capacity	Very High Conseq. Medium Adaptive Capacity	Very High Conseq. Medium Adaptive Capacity
More Extreme One Day Storms	Very High Conseq. Medium Adaptive Capacity	Very High Conseq. Medium Adaptive Capacity	Very High Conseq. Medium Adaptive Capacity

Appendix A: Hazard Projection and Detailed Risk Assessment Methodology

Table A14 – Risk Assessment Results in Infrastructure Sector. Red shading indicates very high risk; orange is high; yellow is moderate:

Hazard	Impacted Entities - Infrastructure					
	Electrical and Tele-communications	Stormwater Management	Buildings (Housing)	Buildings (Public)	Roads, Bridges	Sewage Treatment
Extreme Heat	Very High Conseq. Medium Adaptive Capacity	-	-	-	-	-
Lake Simcoe Phosphorus and Salt Loads	Lake Simcoe is downstream from infrastructure entities so this hazard was not assessed for consequence or adaptive capacity					
Warmer, Rainier Winters	High Conseq. Medium Adaptive Capacity	-	-	-	-	-
More Extreme One Day Storms	-	Very High Conseq. Medium Adaptive Capacity	-	-	-	-

Table A15 – Risk Assessment Results in Nature Sector. Red shading indicates very high risk; orange is high; yellow is moderate:

Hazard	Impacted Entities - Nature						
	Cool or Warmwater Fish	Coldwater Fish	Birds, Insects, Amphibians	Wetlands	Lake Simcoe	Mammals	Deciduous Ecosystems
Extreme Heat	High Conseq. Medium Adaptive Capacity	Very High Conseq. Medium Adaptive Capacity	High Conseq. Medium Adaptive Capacity	High Conseq. Medium Adaptive Capacity	High Conseq. Medium Adaptive Capacity	-	-
Lake Simcoe Phosphorus and Salt Loads	High Conseq. Medium Adaptive Capacity	Very High Conseq. Medium Adaptive Capacity	High Conseq. Medium Adaptive Capacity	-	Very High Conseq. Medium Adaptive Capacity	-	-
Warmer, Rainier Winters	-	-	-	Very High Conseq. Medium Adaptive Capacity	Same as salt loads in lake (above)	-	-
Extreme One Day Storms	-	-	-	-	-	-	-

Appendix A: Hazard Projection and Detailed Risk Assessment Methodology

Table A16 – Risk Assessment Results in Economies Sector. Red shading indicates very high risk; orange is high; yellow is moderate:

Hazard	Impacted Entities - Economies					
	Hotel and Food Service	**Arts, Entertainment, Recreation**	**Fishing and Hunting**	**Construction, Manufacturing**	**Retail Trade**	**Transportation**
Extreme Heat	-	High Conseq. Medium Adaptive Capacity	High Conseq. Medium Adaptive Capacity	-	-	-
Lake Simcoe Phosphorus and Salt Loads	High Conseq. Medium Adaptive Capacity	High Conseq. Medium Adaptive Capacity	High Conseq. Medium Adaptive Capacity			
Warmer, Rainier Winters	-	High Conseq. Medium Adaptive Capacity	-	-	-	-
More Extreme One Day Storms	Not assessed					

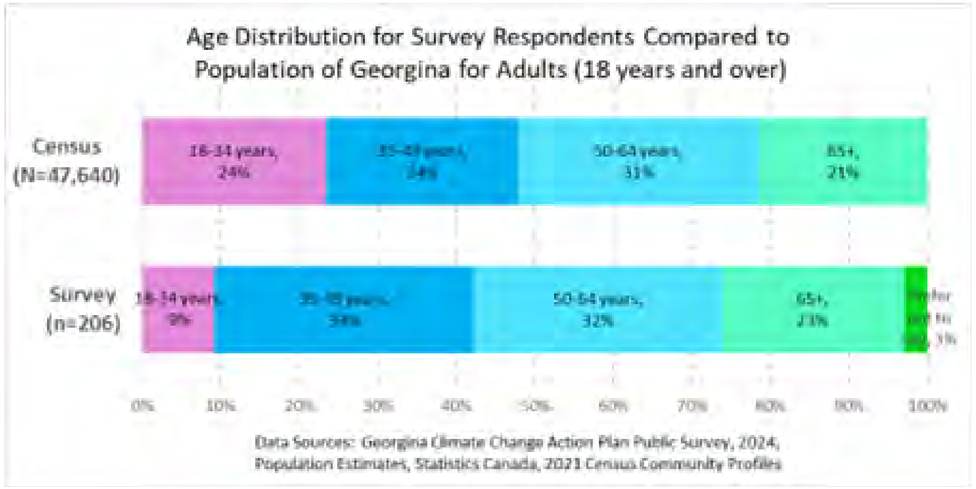
Appendix B: Public Engagement Methodology and Results

General public survey:

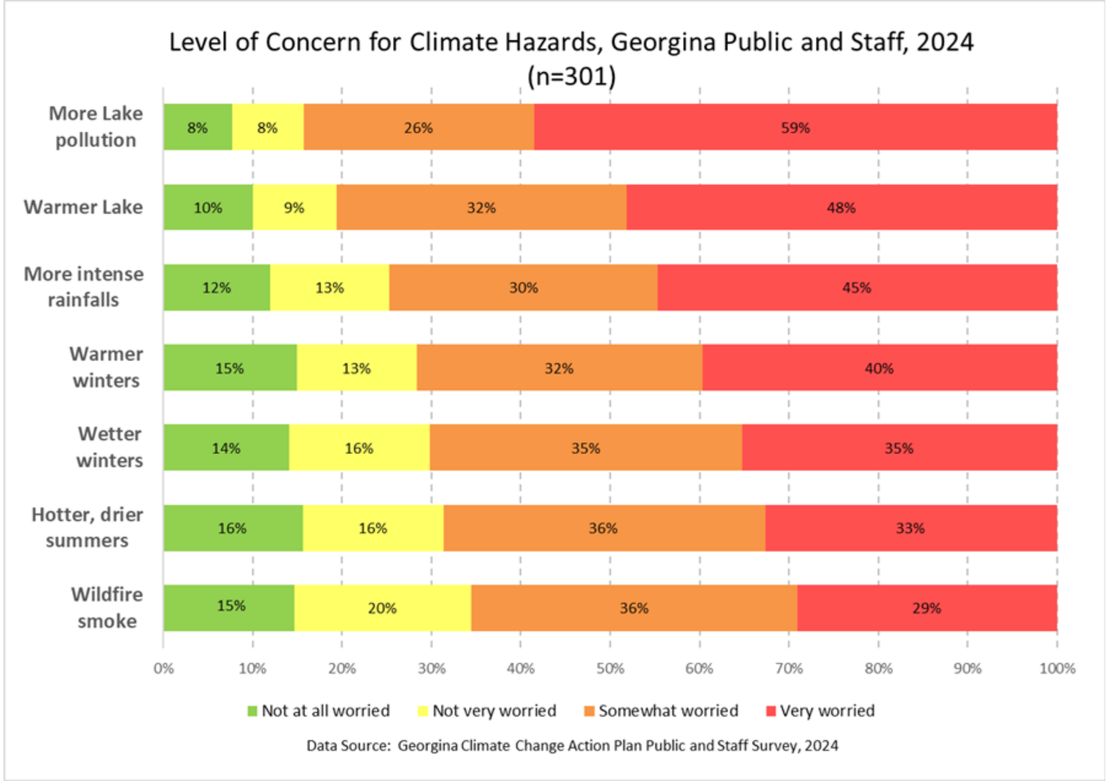
The objectives of the general public survey were to gather input on the level of concern for climate change, and on existing and proposed solutions. The 'level of concern' results served as a component of the Risk Assessment equation in the Climate Change Action Plan. The other results informed action planning.

An online survey was open for eight weeks from July 1 – August 23, 2024. The sampling frame was all people who reside or work in Georgina, and/or Chippewas of Georgina Island First Nation. Promotion of the survey link occurred at community events throughout the summer, where a member of the Climate Change Action Plan gave away LED light bulbs with the survey QR code on the box. These events were: Canada Day Event, Festival on High, Farmers' Market booths, Pefferlaw Street Festival, Painted Perch Festival, Field to Table Event, and Chippewas of Georgina Island Pow-Wow. Additionally, the Town of Georgina Facebook account promoted the link multiple times in July 2024. Georgina staff were asked to complete the survey via all-user email. This constitutes a convenience sample with inherent observer and sampling bias. Results must be interpreted with the understanding that this may not be representative of the population of Georgina since those who answer the survey were not selected randomly. There were 211 public survey responses and 90 staff responses.

The age distribution of the respondents is shown below. Note that 35 to 49 year olds are over-represented in the survey, and 18 to 35 year olds are under-represented.



Survey Question 1: How worried are you about the following climate risks in Georgina?



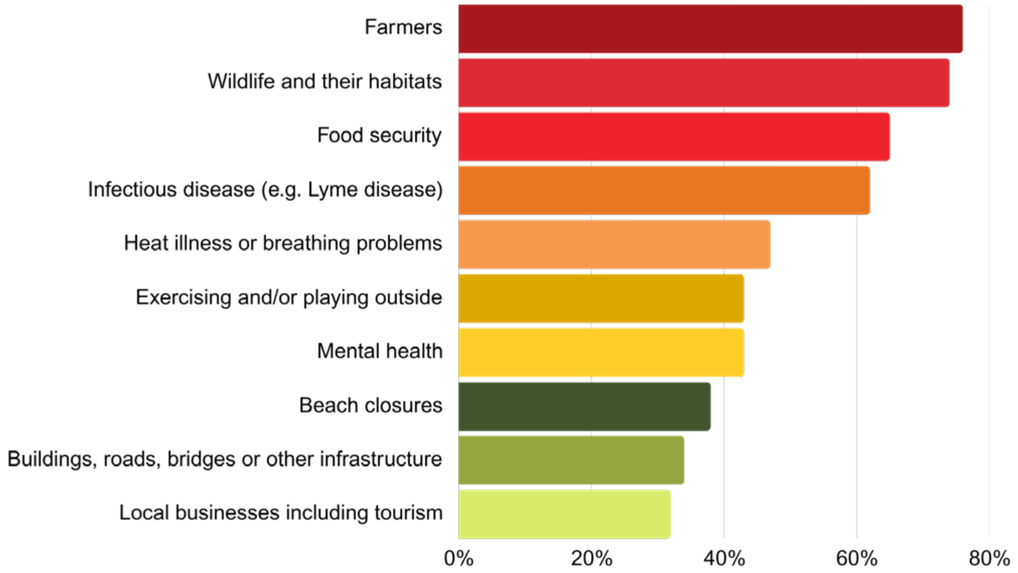
Most common "other" responses:

- Misuse of Tax dollars/ increasing taxes/ want less government restriction (6 people)
- Not worried about climate change/ hoax/ exaggerated (6)
- Over-development/ losing farmland/ paved surfaces (4)
- Loss of native species/ more invasives (4)
- Wind (4)
- Litter/ dumping (4)

Appendix B: Public Engagement Methodology and Results

Survey Question 2: If you are worried about climate change, please select all answers that apply to complete this sentence: "I'm worried about the negative impact(s) of climate change on _____".

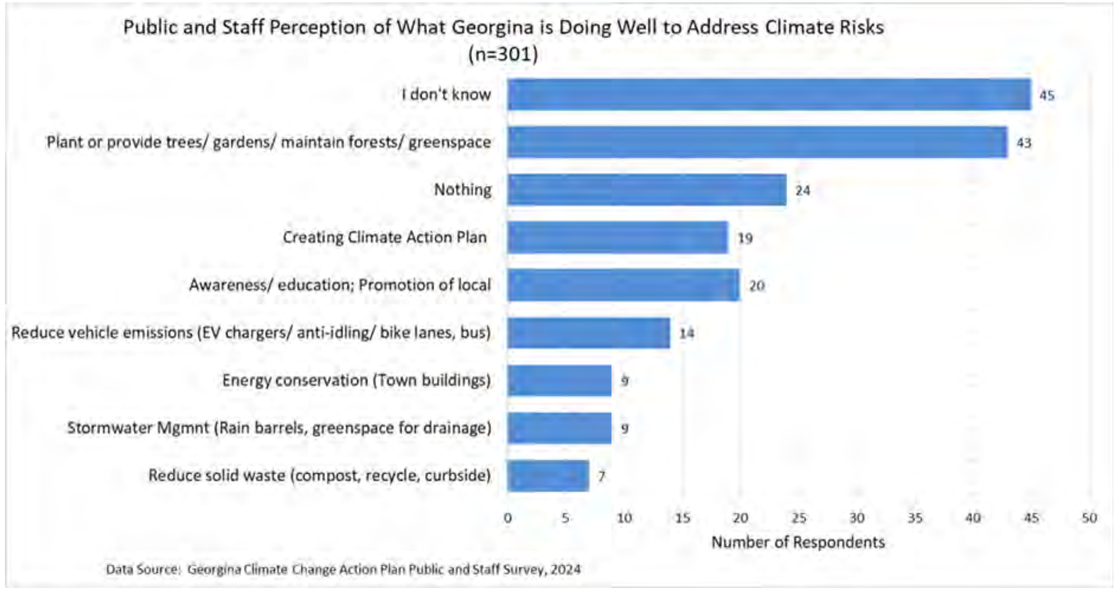
Concern for Climate Impacts, Georgina Public and Staff, 2024 (n301)



Most common "other" responses or elaborations:

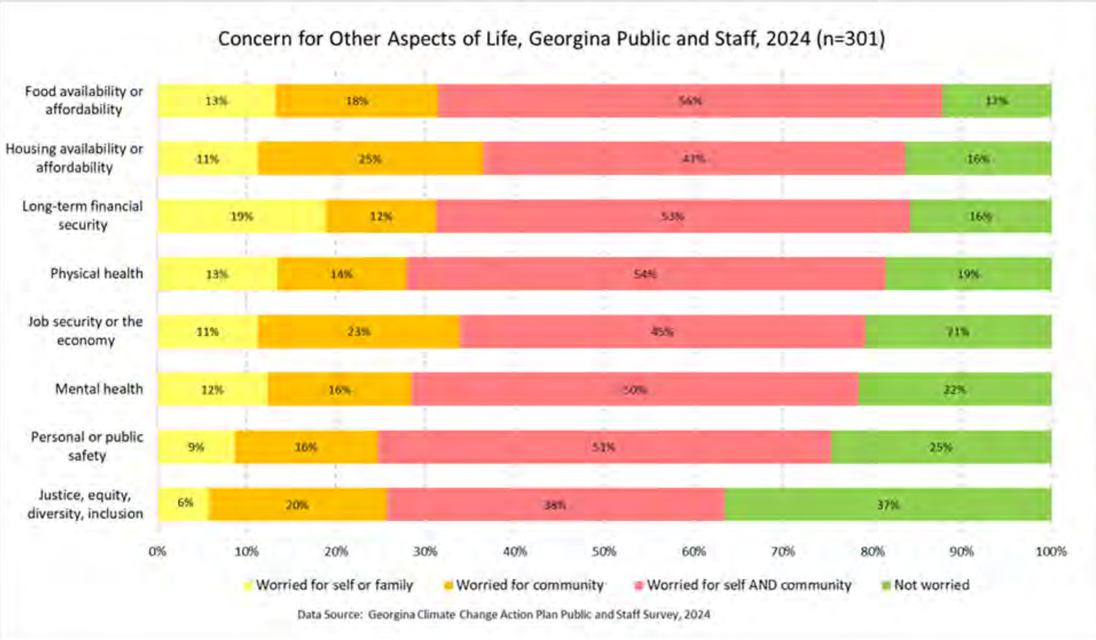
- Misuse of Tax dollars/ increasing taxes/ want less government restriction (17 people)
- Not worried about climate change/ hoax/ exaggerated (15)
- Over-development/ losing farmland/ paved surfaces (12)
- Cutting trees/ loss of natural space/ native species/ more invasives (11)
- Increasing costs of living/ Vulnerable populations (10)

Survey Question 3: What is Georgina (community groups, residents, Town) doing well to address climate risks?



Appendix B: Public Engagement Methodology and Results

Survey Question 5: Did you know that climate change can impact most aspects of life? For example: hotter summers can make it less safe to work or play outside; more intense storms can increase flood damage to your property. Therefore we want to understand which other aspects of life are most important to you so the Town's Climate Action Plan has maximum benefit. What other aspects of life are you worried about?

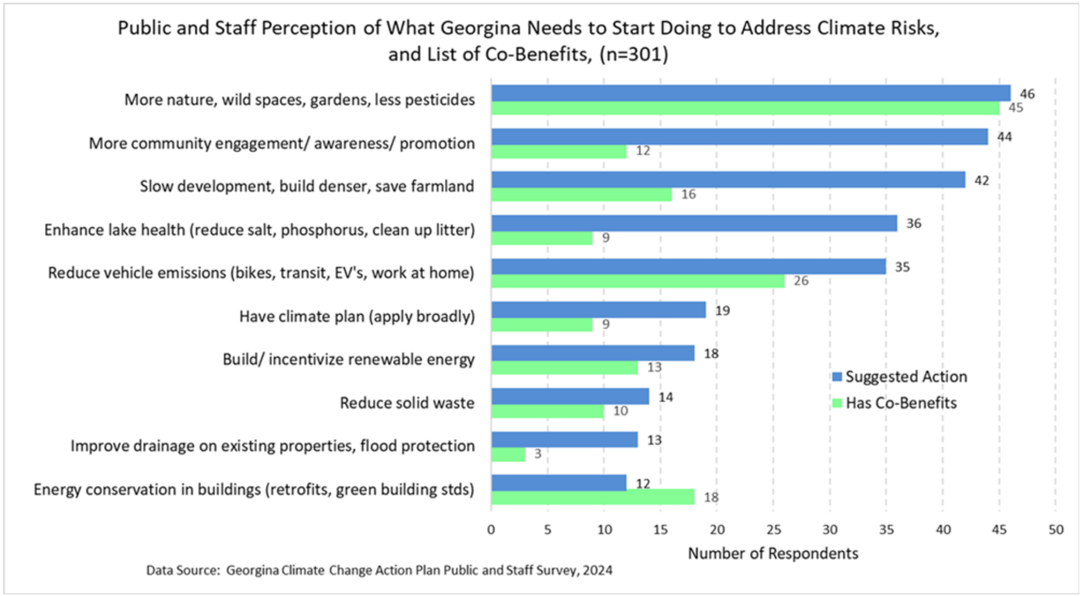


Most common "other" responses or elaborations:

- Misuse of Tax dollars/ increasing taxes/ want less government restriction (17 people)
- Not worried about climate change/ hoax/ exaggerated (15)
- Over-development/ losing farmland/ paved surfaces (12)
- Cutting trees/ loss of natural space/ native species/ more invasives (11)
- Increasing costs of living/ Vulnerable populations (10)

Survey Question 4: What does Georgina (community groups, residents, the Town etc.) need to start doing to address climate risks? (Results combined with question 6 below)

Survey Question 6: Since climate change can impact most aspects of life, then climate solutions can have far-reaching benefits as well. For example: grants for home energy retrofits can reduce energy bills; nearby access to nature can improve mental and physical health etc. Tell us how your climate solutions can benefit other aspects of life.



Most common co-benefits:

- Human health, safety, wellbeing (37 people)
- Financial, economic benefit (32)
- Mitigation (ie. Reduces heat, flood, greenhouse gases etc.) (22)
- Planetary health (14)

Appendix B: Public Engagement Methodology and Results

Poster Board Feedback

Two poster boards were created to gather public feedback on the level of concern for climate hazards from people who may not complete the online survey. Either the Climate Lead or Advisor attended eight festivals in summer 2024 to promote the online survey link and/or ask passers-by to complete the poster board survey questions on the spot.

The poster board responses were qualitatively assessed from five public events. The most common poster board response to Survey Question 1 (Which climate hazards are you most concerned about?) was Lake pollution, extreme heat and wildfire smoke. The most common poster board responses to Survey Question 2 (How worried are you about the climate impacts on the following?) were farmers, food security, wildlife, heat illness, infectious diseases like Lyme, and mental health. This was generally in alignment with the online survey responses.

Child and Youth Engagement

The Climate Initiatives Lead visited the Town summer camp programs to engage with children and youth on climate concerns and impacts. In July 2024, youth feedback was gathered in person from Camp Counsellors in Training (ages 14-16) through a hard copy youth-friendly survey. Feedback from children was gathered from campers (ages 6-12) through an interactive activity.

Youth Survey Results:

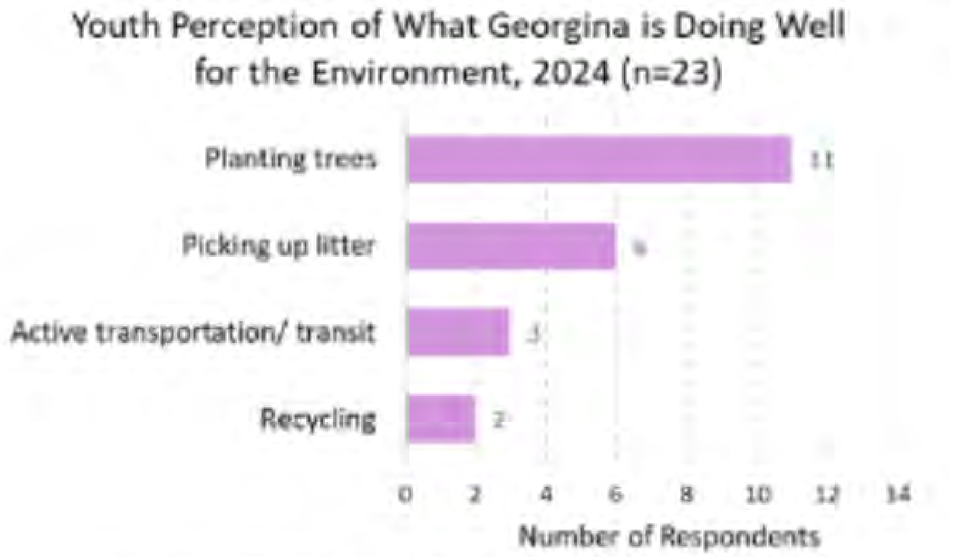
Survey question 1:

1. How well do you think Georgina's environment is doing? Please circle the answer that fits:

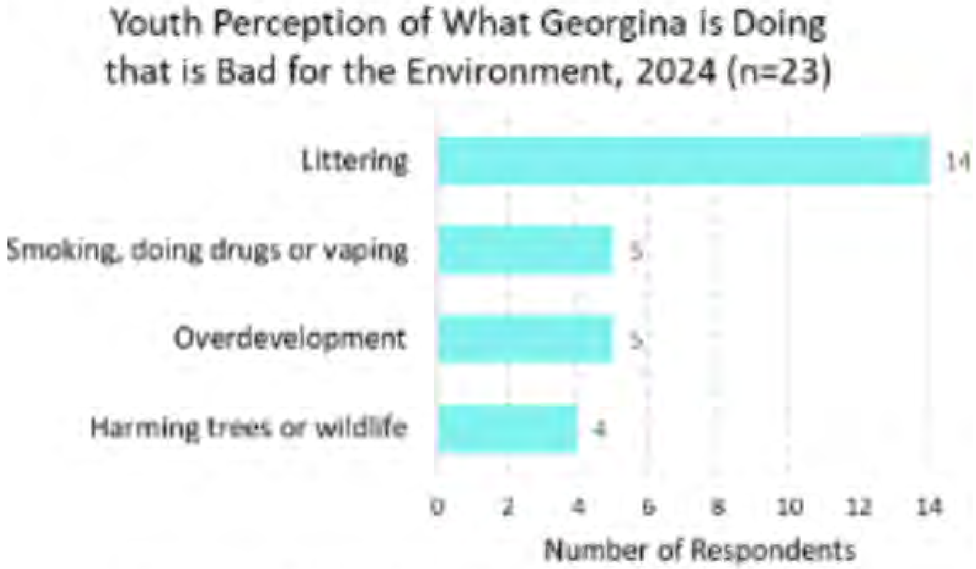
A. Having lots of trees and natural areas (forest, wetlands etc.)		Poor	O.K	Good	Excellent
B. Ensuring Lake Simcoe is clean and healthy		Poor	O.K	Good	Excellent
C. Protecting animals		Poor	O.K	Good	Excellent
D. Having clean air to breathe		Poor	O.K	Good	Excellent

Results:

- "Ensuring Lake Simcoe is clean and healthy" has the lowest score (i.e. perceived as doing poorly)
- "Having lot of trees and natural areas" and "Protecting animals" score in the middle
- "Having clean air to breathe" has the highest score (i.e. perceived as doing well)



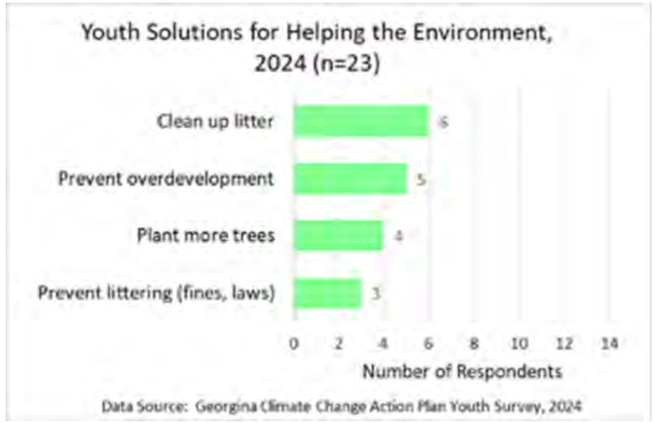
Data Source: Georgina Climate Change Action Plan Youth Survey, 2024



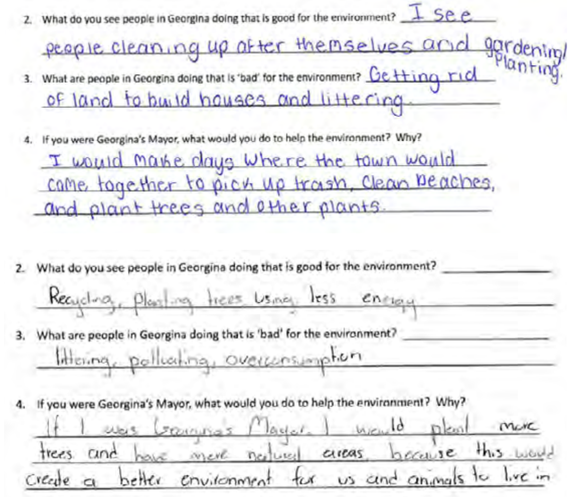
Data Source: Georgina Climate Change Action Plan Youth Survey, 2024

Appendix B: Public Engagement Methodology and Results

4. If you were Georgina's Mayor, what would you do to help the environment and why?



Examples of Youth Survey Responses:


2. What do you see people in Georgina doing that is good for the environment? I see people cleaning up after themselves and gardening/ planting.

3. What are people in Georgina doing that is 'bad' for the environment? Getting rid of land to build houses and littering.

4. If you were Georgina's Mayor, what would you do to help the environment? Why?
I would make days where the town would come together to pick up trash, clean beaches, and plant trees and other plants.

2. What do you see people in Georgina doing that is good for the environment?
Recycling, planting trees using less energy

3. What are people in Georgina doing that is 'bad' for the environment?
littering, polluting, overconsumption

4. If you were Georgina's Mayor, what would you do to help the environment? Why?
If I was Georgina's Mayor, I would plant more trees and have more natural areas because this would create a better environment for us and animals to live in

Children's Workshop Results:

1. What are people in Georgina doing that is good for the environment?

- Plant trees (4 responses)/ lots of green space
- Bike instead of driving (2)/ it's good to walk a lot/ there is a bus to camp
- Clean up garbage/ no littering (2)
- I don't waste paper
- Use less water
- I compost and recycle
- Turn off lights
- The ROC has a good forest
- Plant vegetables

2. What are people in Georgina doing that is bad for the environment?

- Littering (lake has garbage, garbage hurts turtles, (butts from smoking, poison the river, fish dying from boats, jetskiis, people putting stuff in lake) (7 responses)
- Cut down trees (2)/ Keep bad trees
- Don't kill animals/ killing bees (2)
- Too much water for dishwashing
- Stop wasting food
- Factories pollute the air
- Don't pee in lake
- Bradford bypass bad
- "less building" (ie. too much development)
- Not a lot of electric cars
- Being mean to Black people

Appendix B: Public Engagement Methodology and Results

3. What should people in Georgina do to help the environment?

- Save wetlands
- Restore fish
- More bike racks
- Build or maintain bike trails (2)
- Clean the air
- Use less plastic
- Help poor people
- More walking
- If an animal is hurt, they should help them
- Making gardens
- More elcrk (‘electric’) cars

Appendix C: Greenhouse Gas (GHG) Inventory Methodology

Corporate GHG Inventory

Table C1 below outlines the details of the data collection and analysis methods for the corporate greenhouse gas inventory for the Town of Georgina. All data were collected for the 2023 calendar year.

Sector	Indicator	Data Source	Energy Consumed; or Emissions breakdown	Emissions Factor (CO2eq per unit)	Greenhouse Gas Emissions in 2023 (tonnes of carbon dioxide equivalent CO2eq)	Per Cent of All Corporate Emissions
Buildings*	Emissions from corporate buildings and facilities	Energy Star Portfolio Manager 'Emissions Performance Report'	906 tonnes CO2eq from natural gas or fuel oil; 181 tonnes CO2eq from electricity	10.6 kg CO2eq per MBtu	1087	52 per cent
Fleet Vehicles	Emissions from corporate vehicles and equipment. Excludes residential waste pick up	Fuel usage from UPI Energy invoices	202,252 litres ethanol; 128,996 litres diesel	2.35 kg CO2eq per litre of ethanol 2.7 kg CO2eq per litre of diesel	824	39 per cent
Streetlights/ Traffic Signals	Emissions from municipal lighting systems	Hydro One electricity bills	1,656,055 kWh	38 g CO2eq per kWh	63	3 per cent
Water and Wastewater	Emissions from water and wastewater facilities	Hydro One electricity bills. Enbridge gas bills. Diesel estimate from staff.	860,734 kWh; 621 m3 natural gas; 1,490 litres diesel	38 g CO2eq per kWh; 1.93 kg CO2eq per m3 of gas; 2.7 kg CO2eq per litre of diesel	38	2 per cent
Solid Waste	Emissions from landfilled waste (excluding incinerated and industrial waste).	York Region landfill emissions scaled down to Georgina's population; accounting for corporate fraction (5 per cent)	Georgina population (2021 Census) = 47,642	York Region landfill = 0.0374 tonnes CO2eq per person per year	89	4 per cent
Total					**2100**	**100 per cent**

Building data exclude the following because the Town does not receive those energy bills directly: Georgina Leisure Pool, Sutton Library, GTTI Building. Heating oil/ propane emissions were not available, which applies to Egypt Hall, Egypt Roads Yard, Annex.

Appendix C: Greenhouse Gas (GHG) Inventory Methodology

Corporate GHG Inventory

Municipal buildings emit about half of all corporate greenhouse gas emissions. Table C2 below shows emissions for each building in 2023.

Table C2: Building Specific Greenhouse Gas Emissions for Georgina's Corporate Greenhouse Gas Inventory

Building Name	Greenhouse Gas Emissions in 2023 (tonnes of carbon dioxide equivalent CO2eq)	Per cent of Total Building Emissions
Ice Palace	281	26%
Civic Centre	109	10%
The LINK	126	12%
Sutton Arena	90	8%
The ROC Chalet	52	5%
Club 55 Keswick	45	4%
Georgina Waterworks	40	4%
Georgina Parks Shop	40	4%
Egypt Roads Yard	39	4%
Keswick Firehall	38	3%
Belhaven Roads Yard	37	3%
Kin Community Hall	35	3%
Pefferlaw Community Hall	32	3%
Sutton Fire Hall	32	3%
Pefferlaw Fire Hall	23	2%
Georgina Animal Shelter	19	2%
De La Salle Chapel Hall	12	1%
Georgina Village Museum	9	1%
Belhaven Community Hall	7	1%
Egypt Hall	6	1%
Port Bolster Hall	4	0%
Sutton Seniors Centre	3	0%
Udora Community Hall	3	0%
Georgina Operations Centre	2	0%
Pefferlaw Library	2	0%
Stephen Leacock Theatre	1	0%
Total for All Buildings	1087	

Community GHG Inventory

The data and analysis for Georgina's community greenhouse gas inventory were provided by The Atmospheric Fund (TAF). The methods are outlined in detail in The Atmospheric Fund METHODOLOGY FOR 2023 INVENTORY

Sector	Data Source(s)
Buildings	• Natural Gas consumption data from Enbridge • Electricity consumption from local and regional distributors' data • Energy and Water Reporting and Benchmarking data (EWRB) from Ontario's public data catalogue
Transportation	• Gasoline and Diesel fuel sales at the regional level, purchased from an industry-specific consulting firm • Aviation turbo fuel • Passenger movement from StatsCan • EV charging data from the Ministry of Transportation Ontario • Transit data from Transit agencies reports • Active transportation data from Google Environmental Explorer
Industrial	• Industrial emissions from Canada's large emitters database
Waste	• Tonnage of waste data from the Resource Productivity and Recovery Authority • Composition of waste and Methane capture from cities reports • Energy-from-waste facilities reports
Agriculture	• Agricultural activity data from census • Agricultural emissions proportioned from National Inventory Report for Ontario

Building notes:

"Natural gas and electricity consumption are the main sources of emissions for buildings in the Greater Toronto and Hamilton Area (GTHA). While they technically fall under the umbrella term "Stationary Energy," they are part of the building sector consumption in this inventory. According to Natural Resources Canada's Comprehensive Energy Use Database, 92 per cent of residential, 96 per cent of commercial/institutional and 57 per cent of industrial energy use comes from these two energy sources in Ontario. TAF does not account for propane, heating oil, wood and coal emissions since these are a minimal portion (less than 3 per cent) of emissions in buildings. TAF sources natural gas data from Enbridge Gas, including residential, commercial and industrial level data. Enbridge Gas data does not include grid-connected gas plants, which are captured under electricity emissions." (TAF Methodology for 2023 Inventory)

Transportation Notes:

“TAF calculates transportation emissions using gasoline and diesel fuel sales data from Kalibrate, which captures ~99 per cent of public gas stations in the GTHA. Diesel fuel from bulk contracts and cardlock sales is not included in this dataset, which means that actual diesel emissions are higher than reported. While gasoline sales in the GTHA account for 42 per cent of Ontario’s total consumption (an expected value based on population and economic activity), our diesel sales data accounts only for 10 per cent of the province’s consumption. To minimize uncertainty in estimates, retail diesel has not been extrapolated, as trends are not typically correlated with retail gasoline consumption. Our transportation emissions data does not account for private sales, railway, or marine.” (TAF Methodology for 2023 Inventory)

Industrial Notes:

“ Industrial emissions are sourced from the Government of Canada’s Greenhouse Gas Reporting Program (GHGRP), which requires facilities emitting over 10 ktCO2eq to report their annual emission totals. This is an important resource for tracking and evaluating progress across the country’s largest industrial emitters. However, the collective emissions from facilities that emit less than 10 ktCO2eq (and are therefore not required to report to GHGRP) is still likely to be substantial.” (TAF Methodology for 2023 Inventory). Industries in Georgina do not meet the threshold for reporting therefore this sector does not appear in the community greenhouse gas inventory.

Waste Notes:

“TAF uses the methane commitment approach, where the lifetime emissions of waste disposed each year are counted in that year, even though emissions will occur over many years. Waste emissions are attributed to the municipality that produced the waste, not where the waste is disposed. Captured and flared methane is considered biogenic methane and is estimated to have net zero emissions. The formulas for this method are based on the GPC protocol.” (TAF Methodology for 2023 Inventory).

Agricultural Notes:

“The main source of agricultural emissions is methane produced by cattle and nitrous oxide released from the land application of fertilizers. The former can be reduced through effective livestock feeding and management systems while the latter can be mitigated through more targeted fertilizer application and enhanced field management practices. We estimate agricultural emissions by proportioning Ontario’s agricultural emissions reported in the National Inventory Report using Statistics Canada’s Census of Agriculture. Emissions from livestock and manure management are scaled based on cattle head counts, while agriculture soils are scaled based on farmland area. We extrapolated 2022 cattle head counts and farmland area using the change between 2016 and 2021 Census of Agriculture data. We do not include resource inputs like the manufacturing of fertilizer. Additionally, we do not calculate emissions from land use change or forestry activities due to insufficient data.” (TAF Methodology for 2023 Inventory)

Appendix D: Action Plan Development Methodology and Existing Actions

Once the Risk Assessment was completed and approved by Georgina Council in November 2024, the development of the action plan began. The action plan was developed using the methods below:

1. Compiled list of almost 300 potential actions during environmental scan, background research and stakeholder engagement (ie. Public survey, focus groups, internal and external stakeholder meetings).
2. Assessed actions using pre-determined criteria to identify which were the most impactful and feasible to implement within the next five years (2026-2030). Staff and external experts were engaged using Microsoft virtual whiteboards in dedicated meetings.
3. Validated actions with internal staff and external partners through email or follow up meetings.
4. Identified 'future considerations' that are not currently feasible within the next five years, but can be considered as technology, funding, and other opportunities emerge

Figure D1: Example of Virtual Whiteboard Used to Assess Impact and Feasibility of Proposed Climate Actions

Appendix D: Action Plan Development Methodology and Existing Actions

Existing Actions:

Through the development of the Climate Action Plan, the following list of actions was noted as already existing in the Town of Georgina. Note that this list is non-exhaustive as there are many projects and actions that directly or indirectly support climate action:

Table D1: Existing Climate Actions Within the Town of Georgina:

Sector	Action	Responsibility
People	Provide kids at Town summer camps with access to indoor space for frequent breaks throughout the day	Community Services
	Support York Region's Heat Relief Response Plan for People Experiencing Homelessness (e.g. promote YR Central Intake line)	Community Services
	Provide facilities and resources for York Region or non-profit partners' drop-in cooling programs	Community Services
	Promote Town of Georgina's cooling centres (community centres, libraries, etc.)	Strategic Initiatives
	Communicate Human Resources policies to Managers and Staff at the beginning of each season and during extreme heat warnings	Human Resources
	Provide appropriate rehabilitation and PPE for firefighters during fire response in extreme heat	Emergency Services
	In partnership with York Region Police, communicate warnings about lake ice risk	Emergency Services
	Implement Emergency Response Plan and Implement Business Impact Assessment	Emergency Services
	Town staff who work outdoors in extreme heat are provided frequent breaks, access to shade or air-conditioned spaces and water	All Town departments
Nature	Explore interventions such as catchbasin filters to prevent solids from entering lake through stormwater	Operations and Infrastructure
	Ensure sufficient waste receptacles and collection at beaches	Community Services
	Advocate for provincial regulation on road salt	Council
	Restrict timelines for bare soil exposure	Development Services
Infrastructure	Update Stormwater Management Plan	Operations and Infrastructure
	Incorporate climate change considerations into Asset Management Planning	Operations and Infrastructure
	Implement stormwater levy to continue to maintain and expand stormwater infrastructure	Office of the CAO
	Implement low-impact development (LID) features in new construction through Lake Simcoe Protection Plan requirements, Phosphorus Offsetting Policy, and Urban Design Guidelines	Development Services
Mitigating Corporate Greenhouse Gas Emissions	Replace light-duty vehicles with best-in-class fuel efficient vehicles (hybrid or electric vehicles)	Operations and Infrastructure
	Right-size Town vehicles (consider size needed and how to efficiently deliver services)	Operations and Infrastructure
	Monitor and assess emerging electric/hybrid technologies and alternative fuels for medium/ heavy duty vehicles	Operations and Infrastructure
	Explore battery-powered options for replacement of equipment/tools	Operations and Infrastructure
Mitigating Community Greenhouse Gas Emissions	Promote legacy programs for residents to be able to fund public environmental initiatives	Strategic Initiatives
	Direct development into existing settlement boundaries to preserve farmland and greenspace	Development Services
	Provide report to Council on the potential of a Tree Cutting Bylaw to prevent undue removal of mature trees	Operations and Infrastructure

Climate Action Plan

GEORGINA

Stay connected

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