Simcoe County Municipal Comprehensive Review – Draft Climate Change Strategy

October 14th, 2021
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Glossary

Climate Action – “Climate action” refers to specific actions taken by governments, public and private organizations, and communities to address climate change and its impacts. For example, climate actions to mitigate climate change are those intended to reduce energy use and emissions, such as generating renewable energy in communities; and climate actions for adapting to climate change are those intended to help communities respond to extreme weather, such as property improvements to avoid basement flooding. Climate action is a United Nations Sustainable Development Goal.

Climate Change Adaptation – The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects.

Climate Change Mitigation – Human intervention to reduce the sources or enhance the sinks of greenhouse gases (GHGs). Includes human interventions to reduce the sources of other substances which may contribute directly or indirectly to limiting climate change, including, for example, the reduction of particulate matter emissions that can directly alter the radiation balance (e.g., black carbon) or measures that control emissions of carbon monoxide, nitrogen oxides, volatile organic compounds and other pollutants that can alter the concentration of tropospheric ozone which has an indirect effect on the climate.

Greenhouse Gas Emissions – Emissions of greenhouse gases due to human activity that cause global warming. Gases in the atmosphere such as water vapour, carbon dioxide, methane, and nitrous oxide absorb infrared radiation and trap heat in the atmosphere, causing the “greenhouse effect”.

Green Infrastructure – Refers to natural and engineered greenspace and relates to natural vegetative systems and green technologies that collectively provide society with a multitude of economic, environmental, health, and social benefits.¹

Low-Carbon Community – A broad term that refers to a community with land use and development patterns that support a culture of conservation including energy conservation and efficiency as well as the use of renewable energy systems and low-carbon alternative

¹ As defined by the Green Infrastructure Ontario Coalition
energy systems. Low-carbon refers to carbon emissions from fossil fuels and does not encompass all types of GHG emissions. The concept of low-carbon is not intended to refer to quantified emissions reduction targets.

**Municipal Comprehensive Review** – As defined by the Growth Plan, “a new official plan, or an official plan amendment, initiated by an upper- or single-tier municipality under section 26 of the Planning Act that comprehensively applies the policies and schedules of this Plan”.

**Net-Zero Energy** – Refers to buildings that consume no more energy than is produced on a given site.

**Net-Zero Emissions** – Refers infrastructure and technologies that produce onsite, or procure, carbon-free renewable energy in an amount to offset the annual carbon emissions associated with operations.

**Resilience** – The capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure while also maintaining the capacity for adaptation, learning and transformation.
1. **The Context For Integrating Climate Change Policies Into Simcoe County Official Plan**

This report was prepared by Hemson and Laura Taylor Designs (LTD) and provides an initial framework for considering climate change in the context of Simcoe County’s Municipal Comprehensive Review (MCR), including the development of Official Plan policies. It is expected that this strategy and the recommendations contained herein will evolve throughout the remainder of the MCR process and beyond. The rapid increase of carbon dioxide and other greenhouse gases (GHGs) caused by modern human activity has intensified the natural phenomenon of trapping the sun’s heat within the atmosphere. Increases in GHGs have caused changes in climate patterns resulting in extreme weather such as unseasonal high and low temperatures (resulting in increased usage of heating for buildings which often creates GHGs), major localized rainfall and storm events, and even drought. In order to prevent further consequences of increased GHGs, which are known contributors to climate change, land-use planning needs to play an important part in reducing such emissions. In order to address the impacts of extreme weather, especially flooding and wind damage, land-use planning can play an important part in helping communities in Simcoe adapt and become more resilient.

The land use planning framework in Ontario has undergone significant changes in the past decade to include climate change mitigation and adaptation. Increasing awareness of the role local governments can play in climate action is now clearly reflected in provincial legislation and policy. The County of Simcoe and its local municipalities are required under planning legislation to update their own policies and plans to guide development and redevelopment in a changing climate.

The report begins with a brief description of the MCR process, where the County is updating its Official Plan to ensure conformity with provincial policies. Comprehensive climate change planning for mitigation and adaption will not be completed within the relatively short timeframe of the MCR process but this report sets out a process to do so. The report reviews Simcoe’s climate forecast, discusses how climate change is being integrated into land use planning including eight best practices for the County to consider going forward, acknowledges the impressive work that has already been done by local municipalities, conservation authorities, organizations, and community members, and recommends a process for planning for climate change at the County level following the MCR.
A. SIMCOE COUNTY CONTEXT AND LEGISLATIVE REQUIREMENTS

1. Location and County Responsibilities

Simcoe County is an upper-tier municipality located just north of the Greater Toronto Area, to which it is connected by Highway 400. It contains approximately 4,900 km² of land located around Lake Simcoe, Georgian Bay, the Niagara Escarpment and the Oak Ridges Moraine. There are 16 lower-tier municipalities within the County, each with a distinct pattern of settlement and growth management plans. The County exhibits a wide range of urban and rural land uses, a diverse economy that includes agricultural, industrial, and tourism-related employment, and a rich natural heritage system. Municipal services such as libraries, paramedics, long-term care, social housing, public works, waste management and arterial roads infrastructure are generally provided by the County while lower-tier municipalities are responsible for other local services, including the delivery of water and wastewater infrastructure. Land use planning is closely co-ordinated, with the County being responsible for guiding overall growth and development primarily through its Official Plan and acting as the approval authority for many planning approvals.

The following map identifies the County and its lower-tier municipalities, including the existing primary settlement areas.
2. Growth Plan Requirements

The County is currently undertaking a comprehensive update to its Official Plan (a Municipal Comprehensive Review or MCR). The update is required to ensure the Official Plan is consistent with provincial policies and conforms with provincial plans. These policies and plans—particularly the Provincial Policy Statement 2020 (PPS) and A Place to Grow – Growth Plan for the Greater Golden Horseshoe (Growth Plan)—have undergone substantial revision in recent years. Of great importance is that the Growth Plan now requires that the County plan for growth over a thirty-year time horizon to 2051. Section 6 of the Growth Plan includes
specific policies for managing growth in the Simcoe Sub-Area, which includes the County and its 16 lower-tier municipalities.

The County is located within the Outer Ring of the Greater Golden Horseshoe (GGH) as defined by the Growth Plan. The Growth Plan includes detailed policies for planning for future population and employment and establishing settlement area boundary expansions and official plan reviews. All County Council decisions made in respect of these matters must conform to these policies. As such, the Growth Plan is the crucial policy document guiding the MCR.

Schedule 3 of the Growth Plan requires that the County plan to achieve a minimum population of 555,000 and employment of 198,000 by 2051. This represents population and employment growth of about 55% and 69% respectively from today (see Table 1).

Table 1: Simcoe County Population and Employment Forecast to 2051

<table>
<thead>
<tr>
<th></th>
<th>POPULATION</th>
<th>EMPLOYMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>357,000</td>
<td>117,000</td>
</tr>
<tr>
<td>2051</td>
<td>555,000</td>
<td>198,000</td>
</tr>
<tr>
<td>Growth 2021-2051</td>
<td>198,000 (55%)</td>
<td>81,000 (69%)</td>
</tr>
</tbody>
</table>

3. Overview of County’s Municipal Comprehensive Review Process

Through the MCR, Simcoe’s Official Plan will be brought into conformity with the Growth Plan. The scale of the work involved is necessarily broad. The updated Official Plan establishes the overall pattern of development and environmental stewardship in the County and sets the stage for substantial and more detailed planning by local public bodies.

The MCR must be completed by July 2022. It includes a review of Provincial policies and plans, and associated technical studies to support the updated Official Plan policies, on the following matters:

- refinements to the Provincial natural heritage system mapping;
- refinements to the Provincial agricultural system mapping;
- growth management, including a land needs assessment (LNA);
- planning for employment;
- climate change; and
- watershed planning.
The MCR is being closely co-ordinated with the lower-tier municipalities. Lower-tier municipalities will play a key role in identifying appropriate locations for future urban lands and impacts on the agricultural system, natural heritage system, watersheds, and infrastructure requirements.

Throughout the MCR, the County will engage with a range of stakeholders including the lower-tier municipalities, Indigenous communities, Provincial staff, public agencies, County residents, environmental groups, representatives of the agricultural community, developers, and community associations. The technical studies will be made available to these stakeholders and the general public for review and comment.

B. THE PURPOSE OF THE CLIMATE CHANGE STRATEGY WITHIN THE COUNTY’S MUNICIPAL COMPREHENSIVE REVIEW PROCESS

Simcoe’s updated Official Plan will need to include expanded climate change policies to ensure conformity with the provincial planning framework. Currently, the County’s Official Plan makes some reference to the impacts of climate change but does not outline specific climate change goals and targets. The purpose of this report is to identify provincial policy requirements for climate-related land use planning policies in Ontario and Simcoe County.

Moreover, this report recommends a “made in Simcoe” approach which reflects not only the policy requirements of the County, but will also enable the local municipalities to update climate change goals and objectives within their own Official Plans and related policy tools.

The findings of this report will be used to consult with stakeholders and local municipalities through the MCR process. Feedback received will be used to develop policies that will inform the Official Plan update which forms part of the MCR.
2. Why Climate Change Matters in Simcoe County

Simcoe County is already experiencing the impacts of climate change including more frequent and severe extreme weather events such as flooding, damaging winds, and ice storms, which have resulted in property destruction and significant financial impacts. Climate change will continue to impact existing and future residents and businesses in the County.

A. Ontario and Canada Climate Action Timeline and Simcoe Municipal Comprehensive Review

Once the County’s Official Plan is updated through the MCR process, the County will now plan to a horizon of 2051. This long-term planning horizon should be considered within the context of federal and provincial climate change objectives and targets (as shown in Figure 2). For example, Canada is one of 196 parties to who signed the Paris Agreement in 2012, a legally binding global treaty on climate change. The treaty is intended to address global warming by limiting GHG emissions and ultimately achieving “net-zero emissions” by 2050 (see Glossary). In developing its new Official Plan and future climate change policies, the County may wish to align with this objective.

Other important considerations include an anticipated shift in the production and purchasing of fossil-fuel burning vehicles to electric which do not emit GHGs. Further, it is anticipated that by 2030, Ontario’s building code will require that all new construction be net-zero energy ready meaning that the facility is so efficient that a renewable energy system can off-set most or all of its energy consumption, for example through on-site solar panels.
Figure 2: Timeline of Climate Action and Simcoe MCR Source: Hemson and LTD, 2021
B. SIMCOE COUNTY CLIMATE FORECAST AND GHG EMISSIONS

In Simcoe County, it is expected that average annual temperatures will increase by approximately 3.5 degrees Celsius by 2050 resulting in a climate similar to that of the state of Kentucky,\(^2\) which has relatively hot, humid, rainy summers, and more moderate cold and rainy winters.\(^3\)

The most recent report by the Intergovernmental Panel on Climate Change (IPCC), which is the United Nations body for assessing the science related to climate change, confirms that human-induced climate change is already affecting many weather and climate extremes in every region across the globe with observed changes in extremes such as heatwaves, heavy precipitation, and droughts.\(^4\) The IPCC uses the language of “extremes” to draw attention to the idea that while global warming is occurring, local communities will experience extremes in temperature and precipitation, with swings between very hot and very cold, and drier and wetter days and seasons.

Figure 3 illustrates forecast precipitation, average temperature, very hot days, very cold days, frost-free days and other variables for the Lake Simcoe Region. Two scenarios are shown—a high-carbon climate future where high levels of GHGs continue and a low carbon climate future where a dramatic reduction in GHGs occurs (due to global efforts to reduce emissions) allowing the amount of emissions in the atmosphere to stabilize by the end of the century.

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\(^2\) Anticipated increase in temperatures has been identified by the Simcoe Muskoka Health Unit


### RCP 8.5: High Carbon Climate Future
GHG emissions continue to increase at current rates

<table>
<thead>
<tr>
<th>Variable</th>
<th>Period</th>
<th>1976-2005</th>
<th>2021-2050</th>
<th>2051-2080</th>
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<tr>
<td>Precipitation (mm)</td>
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<td>884</td>
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<td>941</td>
</tr>
<tr>
<td>Precipitation (mm)</td>
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<td>209</td>
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<td>Precipitation (mm)</td>
<td>summer</td>
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</tr>
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<td>Mean Temperature (°C)</td>
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<tr>
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<tr>
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<td>8.9</td>
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<td>-7.4</td>
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<td>Tropical Nights</td>
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<td>3</td>
<td>9</td>
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<td>Very hot days (+30°C)</td>
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<td>25</td>
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<td>Very cold days (+30°C)</td>
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<td>0</td>
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<td>April 9</td>
<td>April 28</td>
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<tr>
<td>Date of First Fall Frost</td>
<td>annual</td>
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<td>Oct. 2</td>
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<td>Frost-Free Season (days)</td>
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<td>148</td>
<td>172</td>
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</tbody>
</table>

### RCP 4.5: Low Carbon Climate Future
GHG emissions much reduced

<table>
<thead>
<tr>
<th>Variable</th>
<th>Period</th>
<th>1976-2005</th>
<th>2021-2050</th>
<th>2051-2080</th>
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</thead>
<tbody>
<tr>
<td>Precipitation (mm)</td>
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<td>855</td>
<td>777</td>
<td>927</td>
</tr>
<tr>
<td>Precipitation (mm)</td>
<td>spring</td>
<td>209</td>
<td>155</td>
<td>223</td>
</tr>
<tr>
<td>Precipitation (mm)</td>
<td>summer</td>
<td>220</td>
<td>142</td>
<td>223</td>
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<td>Precipitation (mm)</td>
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<td>Mean Temperature (°C)</td>
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<td>Mean Temperature (°C)</td>
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<td>5.1</td>
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<td>6.9</td>
</tr>
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<td>Mean Temperature (°C)</td>
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<td>19</td>
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<tr>
<td>Mean Temperature (°C)</td>
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<td>8.4</td>
<td>8.6</td>
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<tr>
<td>Mean Temperature (°C)</td>
<td>winter</td>
<td>-7</td>
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<td>-4.8</td>
</tr>
<tr>
<td>Tropical Nights</td>
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<td>8</td>
</tr>
<tr>
<td>Very hot days (+30°C)</td>
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<td>8</td>
<td>7</td>
<td>22</td>
</tr>
<tr>
<td>Very cold days (+30°C)</td>
<td>annual</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Date of Last Spring Frost</td>
<td>annual</td>
<td>May 8</td>
<td>April 11</td>
<td>April 28</td>
</tr>
<tr>
<td>Date of First Fall Frost</td>
<td>annual</td>
<td>Oct. 6</td>
<td>Oct. 1</td>
<td>Oct. 17</td>
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<tr>
<td>Frost-Free Season (days)</td>
<td>annual</td>
<td>148</td>
<td>145</td>
<td>168</td>
</tr>
</tbody>
</table>

*Figure 3: High and Low Carbon Climate Future*
*Source: Climate Atlas Canada, Region‒Lake Simcoe, 2019*
According to the 2018 Local Climate Change Action Plan prepared by Sustainable Severn Sound for six local municipalities in central and north Simcoe County and one municipality from the District of Muskoka, the majority of community GHG emissions in the region are related to the transportation (52%) and residential (25%) sectors (Figure 4). “Community GHG emissions” refers to activities related to residential, commercial and institutional, industrial, transportation and solid waste uses. Similarly, corporate emissions, which include emissions from municipal buildings, streetlights, water/sewage treatment, municipal fleets, and solid waste, are also predominantly related to building and transportation activities with the fleet sector emitting 40% and buildings emitting 34% of GHGs (Figure 4).

This baseline of GHG emissions provides important context to climate change in Simcoe County. By understanding which sectors are the highest contributors of GHG emissions, policies and interventions can be created to reduce these emissions in a targeted and meaningful way.

C. CLIMATE CHANGE AND LAND USE PLANNING

Efforts to address environmental impacts of development are not new to land use planning and are part of the overall planning process in Ontario. For example, stormwater management and water quality improvement efforts have long been undertaken by the province, municipalities, and by Conservation Authorities. Other examples include air quality and ecosystem health. Climate change raises the threat of extremes related to these issues,
for example through more frequent and heavier rainfall events potentially leading to flooding and conversely more frequent and hotter heat days throughout the year, potentially leading to drought, wildfire risk, and negative impacts to human health. In other words, climate change will negatively impact communities in the future due to the destruction of property, loss of natural ecosystems and habitats that both humans and wildlife depend on, health impacts due to easier spread of diseases through insects, reduced air quality and other effects.

Climate change planning adds a sense of urgency and immediacy to municipalities’ capacity to respond to extremes in weather, requiring reliance on policy direction and support from the province, greater inter-municipal and inter-organizational cooperation and collaboration, and greater efforts by local residents and business to support and implement policies.

Simcoe County has experienced significant development pressure in recent years and is forecast to grow considerably, based on the population and employment forecasts prepared for the Growth Plan (see Chapter 1), and which are being reviewed as part of the MCR. Simcoe must plan to accommodate future people and jobs while creating a meaningful policy framework to address climate change considerations. The current provincial climate change guidance reviewed in this report, and climate change guidance generally, is focused on adaptation and mitigation measures for cities, with small towns and rural communities not yet being given sufficient attention.

Simcoe County is unique in that its communities include a wide range of urban fully-serviced communities (e.g., Innisfil, New Tecumseth, Collingwood etc.) to more rural areas (e.g., Adjala-Tosorontio, Tiny, Essa etc.). The biophysical landscape gives each community in Simcoe County its distinctive character based on its location relative to Georgian Bay or Lake Simcoe or smaller lakes and rivers, distinctive bedrock formations, forests, and farmland.

All communities in Simcoe are unique and will face different threats or opportunities. Some communities in the southern part of the County are at the urbanizing edge of the Greater Toronto Area whereas others derive their “cottage country” character from lakes and forests, and are dominated by tourism and second homes, facing increased development pressure of uses related to recreation and potential destruction of amenities that attract investment. Some places are historic towns and hamlets serving the larger area, with some potential for intensification and more of a mix of uses, and a greater focus for transit. Residents and businesses across Simcoe are motivated by different ideas about living and working in their communities and may celebrate enhanced policies to improve environmental conservation and protection, and potential investment opportunities that
come with sustainable land use planning, such as green tourism and renewable energy projects.

Local municipalities and organizations have taken action on climate change, many of these actions relate to land use planning, which are described in Appendix 2.

1. Climate Change Adaptation

Climate change adaptation (see Glossary) is addressed in large part by watershed and natural heritage system planning. Through the MCR, resilience to climate impacts can be addressed to ensure that residents and businesses are protected against future risks and vulnerabilities such as flooding, drought, access to emergency services and management of potential air, soil and water pollutants. Ecological changes are anticipated, resulting in changes to existing habitats, potentially causing the loss of some existing species and the introduction of new ones.

Simcoe’s natural and cultural heritage and its scenic landscape attract and retain residents and businesses. Simcoe’s landscape is also key to responding to impacts of climate change. Adaptation involves actions that respond to climate change while also taking advantage of any benefits. For example, adaptation through greater reliance on green infrastructure strategies means that the landscape also absorbs rainwater and prevents flooding.

2. Climate Change Mitigation

Climate change mitigation (see Glossary) is a relatively new consideration for integration into land use planning requiring the inclusion and implementation of goals and objectives for GHG emission reduction. As described in Chapter 1, Simcoe’s GHG emissions are mostly caused by heating buildings and by transportation. Energy is emerging as part of the planning-related issues that need to be addressed by proposed development such as how to minimize energy needs through better design and management of buildings and through transportation, especially through reducing vehicle kilometres travelled by car. While public transit and active transportation networks do not yet cover all areas throughout the County, maximizing the opportunity to reduce GHG emissions by leaving cars at home to commute to work, shop, or take part in recreational activities should be considered. The widespread adoption of electric vehicles is anticipated, thus vehicle charging stations will be required.

5 Please refer to separate technical studies on watershed and natural heritage systems being undertaken as part of the MCR process.
3. **BEST PRACTICES AND LESSONS LEARNED FROM OTHER JURISDICTIONS**

Local governments around the world are addressing climate change in their land use planning policy frameworks. In this section, we have distilled best practices tailored to Simcoe County as an upper-tier municipality sharing responsibility for climate change planning with the province and its local municipalities based on climate change research completed by Hemson and LTD. Table 1 provides a summary of the identified climate change best practices.

<table>
<thead>
<tr>
<th>NO.</th>
<th>BEST PRACTICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Integrate Climate Change into all Areas of Municipal Responsibility</td>
</tr>
<tr>
<td>2</td>
<td>Adopt a Stand-Alone Climate Change Action Plan</td>
</tr>
<tr>
<td>3</td>
<td>Adopt Emissions Targets</td>
</tr>
<tr>
<td>4</td>
<td>Plan for Resiliency</td>
</tr>
<tr>
<td>5</td>
<td>Political Support</td>
</tr>
<tr>
<td>6</td>
<td>Monitor Policies Over Time</td>
</tr>
<tr>
<td>7</td>
<td>Focus on Public Education and Consultation</td>
</tr>
<tr>
<td>8</td>
<td>Support Collaboration</td>
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</tbody>
</table>


In Chapter 4, we provide our recommended strategy for Simcoe County, which is to consider the MCR process as a first important step in policy development and along with a commitment to creating a process over the longer-term to address climate change considerations.

**A. EIGHT BEST PRACTICES FOR MUNICIPAL CLIMATE PLANNING**

1. **Integrate Climate Change into all Areas of Municipal Responsibility**

Climate change is often included as a strategic vision for municipalities. For example, many municipalities in Canada have declared a climate emergency to draw attention to the climate crisis and to signal climate as a priority issue. A municipal official plan is a good document to express the municipality’s strategic vision and to link that vision with goals and objectives for managing land use planning. This is often referred to as “mainstreaming”,...
where a climate change lens is applied across all areas of municipal responsibility. In considering climate change policies in official plans, it is recommended to:

- Include climate change as an overall priority in the Official Plan, ideally as part of the overall vision for the Plan, an “umbrella” vision, and to identify planning for climate change as a guiding principle.

- For example, the City of Ottawa’s [draft brand New Official Plan](#) (August 2021) identifies climate change as a major challenge at the beginning under 1.1 Context, with emissions targets clearly illustrated:

  “... Ottawa’s growth will need to align with Council approved community and corporate greenhouse gas emissions reduction targets and take steps to adapt to a changing climate. We will need to find new ways to ensure we can weather crises - be they health, environmental or economic. We will also need to find ways to harness rapid technological change to support local economic development and quality of life. We will need to create an affordable supply of options across the city for different household types and income groups. And we will need to find ways of supporting urban and rural neighbourhoods as healthy, inclusive and vibrant places.”

- Integrate climate adaptation and mitigation goals in order to better demonstrate co-benefits. Climate change mitigation and adaptation are the common ways of distinguishing between those actions that reduce GHG emissions that cause global warming and actions that respond to impacts already being experienced.

  - The danger if mitigation and adaptation goals are not integrated is that energy and emissions reduction strategies and resilience strategies will not be visible as a coherent approach to climate change. A best practice is to ensure that overall climate change goals and objectives for planning built and natural environments will be seen together.

- For example, in Ottawa’s [draft brand New Official Plan](#), climate change responsibilities are identified across all areas of responsibility. The Official Plan identifies climate change as a “cross-cutting issue” (Section 2.2), identifying both energy and emissions reductions and adaptation as issues.
2. Adopt a Stand-Alone Climate Change Action Plan

Municipalities should prepare stand-alone climate change action plans to collect data as a baseline for current emissions from both the municipal corporation (fleets, buildings, operations) and the community (transportation, buildings, industry, agriculture, and waste) and then to determine appropriate targets for emissions reduction and then strategies to achieve those targets. Plans can also identify areas of vulnerability to climate change and address ways to adapt in the future. They can also identify community partners needed to undertake this work.

One of the first Climate Change Action Plans in southern Ontario was undertaken by the Region of Durham, approved by regional council in 2012, the result of a three-year study and consultation process.

Many use the Federation of Canadian Municipalities’ Partners in Climate Protection framework, which is a guide to climate action planning. The County of Simcoe has been a member of the program since 2018 and has initiated work on various milestones to support the development of a climate change action plan.

The County is also involved with climate change related organizations including the Simcoe Muskoka Climate Change Exchange and the Simcoe Muskoka District Health Unit. The Simcoe Muskoka Climate Change Exchange was created in 2018 with many partners across

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**Buildings and transportation are the two largest emitters of GHGs in Ontario**

**Building emissions** are mostly caused by hot water and space heating with natural gas, which can be reduced through district and distributed energy sources which rely on renewable energy sources. Why shift to district and distributed energy?

- Ontario’s system is centralized, therefore a substantial loss of energy is experienced through heat loss during transmission over long distances from source to user.
- Nuclear and hydro are not without negative impacts.
- Local economic development benefits of constructing and maintaining energy infrastructure within the local community.

**Transportation emissions** can be reduced by:

- Drastically reduce trips in fossil-fuel burning vehicles:
  - phase-out fossil-fuel burning vehicles
  - phase-in electric vehicles
  - reduce trip length for commuting and everyday activities
  - increase trips by public transit
  - increase trips by active transportation
Simcoe and Muskoka. The organization has developed a Terms of Reference (TOR) to guide climate action in the region and has created the following documents in draft form:

- Regional Climate Change Charter
- Consolidating Ideas: Planning to Action

3. Adopt Emissions Targets

Reducing GHG emissions requires an understanding of the current state of emissions and then setting goals for reduction. The most progressive municipalities have emission reduction strategies for their corporate operations and for the community broadly.

The first step is to undertake GHG emissions modelling (see Community Emissions Reduction Planning: A Guide for Municipalities, 2018). Most southern Ontario municipalities have found that the greatest amount of emissions are caused by buildings and transportation, with lesser amounts from industrial operations, waste, and agriculture. Carbon sequestration is important, but has less of an impact than reducing emissions in the first place.

- Reducing **corporate carbon emissions** across all municipal service areas may include: buildings, road and bridge construction and maintenance, paramedic services, waste management, social housing, and a wide range of community services including child and seniors services, long-term care, and libraries.

- Reducing **community carbon emissions** may include: retrofitting existing buildings to be more efficient, using a range of federal and provincial programs to continue to support renovations, transitioning away from natural gas heating to renewable energy sources, as well as encouraging the adoption of electric vehicles by making infrastructure available.

With targets in place, the next step is to plan for energy, where land use planning can support eliminating GHG emissions from the energy supply, moving away from fossil-fuels (especially natural gas to heat buildings and oil and gas for internal combustion vehicle engines) to renewable energy supplies. District energy systems, which are low carbon thermal energy networks, are increasingly preferred with energy locally captured and distributed through communities. Many communities are adopting community energy plans, as overall policy statements and then requiring integrated energy plans to accompany development approvals. For example, the City of Brampton recently approved a Community Energy and Emissions Reduction Plan for the entire city.
4. Plan for Resiliency

Municipalities should also plan for resiliency by protecting natural systems, providing innovative green infrastructure, ensuring proper stormwater management practices, community design standards, habitat changes, changes to farming practices etc.

In climate change planning, resiliency is a useful concept as it can be applied to many types of planning challenges. The idea of resiliency draws from ecology and engineering where resiliency is related to the ability of a system to bounce back from natural disasters.

Resiliency has more recently been related to equity planning to address risks and vulnerabilities related to climate change. Some communities, based on their location and socioeconomic status, may be more susceptible to harm and have a lack of capacity to adapt to climate change. Municipalities need to consider where communities are at the greatest risk for adverse consequences from a climate-related hazard, and proactively plan to address these challenges. For example:

- The City of Burlington mapped the location of seniors living in areas of potential flood vulnerability from a high rainfall event.
- The City of Toronto’s Resilience Strategy follows the 100 Resilient Cities process to engage the public in adapting to climate change.

5. Political Support

Climate change mitigation and adaptation must be undertaken immediately but are longer-term goals that exceed any one Council’s tenure. Political support across the community for climate action must be fostered. This can be done through Council’s priority goals and objectives and/or strategic vision for their term as well as municipal mission statements which are typically updated and reviewed each time a new Council is elected.

For example, the Region of Durham’s Strategic Plan 2020-2024 identifies “Environmental Responsibility” as a corporate value and “Environmental Sustainability” as a goal to protect the environment for the future by demonstrating leadership in sustainability and addressing climate change.

Simcoe County’s Strategic Plan to 2025 includes the core value of “Stewardship: Responsible Guardians for a Sustainable Future” and includes “Environmental Sustainability” as one of six strategic directions. This political support can be further reinforced by including climate change policies in other master plans and policies such as transportation master plans, official plans, design guidelines etc.
A stronger version of this would be to identify “Leadership” or “Champions” as a best practice. For example, the Lake Simcoe Region Conservation Authority (LSRCA) includes “Leadership” as the first goal in their climate mitigation recommendations. County planners are in an appropriate position to take on a leadership role in terms of political support for climate action.

6. Monitor Policies Over Time

Successful climate change policies are visible as incremental changes aggregated at a large scale, with measurable objectives linked to a timeline. Achieving climate-related goals and objectives set out in policy requires a range of implementation measures and monitoring tracks progress towards achieving those goals and objectives. The best monitoring processes are designed to track performance measures.

For example, Milestone 5 of the Partners for Climate Protection (PCP) program recommends “monitoring progress and reporting results”. The idea is that municipalities assess their progress reducing corporate or community emissions. An example of such a report is the Region of Waterloo’s Progress Report: Corporate GHG Emissions Reduction Plan completed in 2013.

Such reports help municipalities remain accountable to their commitments and identify potential areas where improvements may be needed. Simcoe County’s ongoing participation in the PCP program will support the objective of monitoring the impact of climate change policies over time.

7. Focus on Public Education and Consultation

The successful implementation of climate policy requires the support of civic and business organizations, environmental non-governmental organizations, and residents, young and old. Public awareness of the impacts of climate change and of the ways in which residents and business owners can address climate change through their choices and local leadership to support public awareness is important. As stated previously, the County supports public education through its involvement with the Simcoe Muskoka Health Unit, Simcoe Muskoka Climate Change Exchange, and its participation in the PCP program.

Examples of public education and consultation in other jurisdictions include:

- The City of Toronto’s Resilience Strategy uses a variety of methods to communicate with the public about climate change. Their webpage provides links to scientific data as well as stories of resilience and opportunities for residents to get involved.
Another excellent example of public engagement is the City of Cambridge (UK) Climate Change Charter, which “gives everyone the opportunity to find out more about their carbon emissions and how to reduce them, and to make a pledge to take action”. Such a Charter can be a meaningful public engagement approach, but one that is results-oriented, too.

8. Support Collaboration

Upper-tier municipalities have the ability to play an important role in supporting collaboration amongst local municipalities and organizations as it relates to climate action. Vision and leadership by upper-tiers can facilitate partnerships with communities and may help in terms of organizing roles and responsibilities and overcome potential barriers. Although climate change plans and strategies are often considered a local municipal responsibility, a broad, collaborative perspective by an upper-tier municipality is helpful to achieve high level buy-in and ensure that climate change action is coordinated throughout the region.

Examples of climate change collaboration already exists within Simcoe County. The terms of reference established by the Simcoe Muskoka Climate Change Exchange states that its purpose is to “is to reduce climate change risk across Simcoe Muskoka, by supporting collaboration on climate change mitigation and adaptation actions among stakeholder organizations and municipalities across the region. The Simcoe Muskoka Climate Change Exchange provides an opportunity to work collaboratively toward a cohesive, coordinated regional approach to climate change that enables knowledge and resource sharing, to assist with capacity building to expand successful climate change action, to reduce overlapping efforts, and to use resources efficiently”.

The County through its MCR process can further support the objectives of the Simcoe Muskoka Climate Change Exchange and provide guidance to local municipalities in producing their own climate change policies and related plans.

B. BEST PRACTICES ARE STILL EMERGING

In the GGH region, best practices for climate change planning are still emerging, especially navigating between upper- and lower-tier municipalities. Very few have truly come to grips with the relative responsibilities of the regional- or county-level plans and local plans, and in many cases lower-tier municipalities have completed their own climate change plans, sought membership in global initiatives, such as 100 Resilient Cities and ICLEI (among
many more), and have hired staff to oversee the climate change policy-making and implementation. Many have identified goals, objectives and targets for the municipal corporation itself (developing, maintaining and operating municipal buildings and fleets). Upper-tier municipalities have a role to play in setting the stage for climate change education and consultation and encouraging collaboration across its jurisdiction and lower-tier municipalities.

C. RECOMMENDATIONS FOR SIMCOE ARISING FROM BEST PRACTICES

Based on the review of best practices, short and long-term recommendations for the County have been prepared (as shown in Table 2). The short-term considerations can be implemented through the County’s current MCR process, whereas the long-term considerations would be addressed through policies and initiatives once the County’s new Official Plan is enacted. It is anticipated that the County’s amended Official Plan will include climate change policies that will guide the future development of the County. The recommendations provided are to be considered draft and will evolve overtime with the needs of the County in responding to climate change.

Table 2: Short vs. Long-Term Climate Change Recommendations

<table>
<thead>
<tr>
<th>SHORT VS. LONG-TERM</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term considerations for the MCR update</td>
<td>Use provincial policy and guidance to establish climate change policies in the Official Plan</td>
</tr>
<tr>
<td></td>
<td>Commit to a future process to confirm the vision, goals and policy objectives related to climate change to support future policy development, coordination of efforts across the County and local municipalities</td>
</tr>
<tr>
<td></td>
<td>Create a GHG emissions inventory of current sectors (e.g., buildings, transportation, industry, etc.). This analysis may or may not be available before the Official Plan is amended but should be considered a short-term objective.</td>
</tr>
<tr>
<td></td>
<td>Begin identifying the general role of the County, local municipalities and other organizations in climate change action</td>
</tr>
<tr>
<td>Long-term considerations following approval of the new Official Plan is approval (5-years +)</td>
<td>RECOMMENDATIONS</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td></td>
<td>Commit to a planning process to create a Simcoe County climate change approach that moves beyond general and broad policies</td>
</tr>
<tr>
<td></td>
<td>Follow the identified best practices (or other framework) and/or consider modelling of future GHG emissions which recognizes:</td>
</tr>
<tr>
<td></td>
<td>The Ontario Building Code is expected to require all new buildings to be net zero by 2030</td>
</tr>
<tr>
<td></td>
<td>Existing buildings will be retrofitted overtime to achieve net-zero emissions and municipalities can play a role in implementing these initiatives</td>
</tr>
<tr>
<td></td>
<td>New cars and light-duty vehicles are expected to be mostly electric by 2030</td>
</tr>
<tr>
<td></td>
<td>Highlight and educate the public and developers on co-benefits of climate change initiatives. For example, enhance design concepts for energy efficient housing, retrofitting existing homes which will reduce homeowners’ energy costs, and active transportation that promotes health benefits</td>
</tr>
<tr>
<td></td>
<td>Clearly identify the role of the County, local municipalities and other organizations in climate change action and consider implementing coordinated action to maximize benefits</td>
</tr>
</tbody>
</table>
4. **PROPOSED STRATEGY FOR INTEGRATING CLIMATE CHANGE INTO SIMCOE COUNTY LAND USE PLANNING FRAMEWORK**

The Simcoe County Official Plan must be updated to conform to provincial policies. Given what is at stake in terms of the climate crisis, the Official Plan should take a robust approach to climate change policy. Following the MCR, Simcoe should decide how to integrate climate change into land use planning processes more broadly and how to support climate change initiatives across the County.

A. **PROVINCIAL POLICY FRAMEWORK PROVIDES GUIDING PRINCIPLES FOR OFFICIAL PLAN POLICIES**

Figure 5 provides an overview of the plans and policies that guide land use planning in Ontario with specific reference to climate change. County and local municipalities are required to address resilience, energy and emissions-related policies.

In the land use planning process, policies must be consistent with the requirements of the *Planning Act*, PPS and other Provincial land use plans, including the Growth Plan and the Greenbelt Plan. Simcoe County must also conform/not conflict with the requirements of the *Lake Simcoe Protection Act* and the Lake Simcoe Protection Plan.
A goal of the MCR process is to update Simcoe’s Official Plan to be in conformity with provincial policies. Municipalities develop official plan policies and secondary plans that are consistent with the provincial plans and policies. Official plans often inform various master plans (e.g., infrastructure, transportation, green space and natural heritage, climate change, energy) and vice versa. In particular, official plans and secondary plans may refer to design guidelines for building and community design. Official plan policies inform detailed and site-specific land use regulation through municipal zoning by-laws and implementation through the development application and review process, though plans of subdivision and site plan approvals.

1. Simcoe MCR Process to Ensure Provincial Climate Change Policy Requirements are Met

The first task with respect to climate change is to ensure the Simcoe Official Plan is in conformity with the provincial policy framework. The purpose of a MCR is to bring an official plan into conformity with the Growth Plan, which has been substantially revised with respect to climate change considerations. The Simcoe Official Plan establishes the overall pattern of development and environmental management in the County and sets the stage for the integration of climate change considerations.
for more detailed local planning. At a minimum, the Simcoe Official Plan must conform to the provincial policy framework, but policies can be more proactive or detailed.

The current MCR process will enable the County to conform to and be consistent with provincially mandated plans and policies that relate to climate change. Appendix 1 provides an overview of the relevant sections of the Planning Act, PPS, Growth Plan, Lake Simcoe Protection Act, Lake Simcoe Protection Plan and Greenbelt Plan that relate to climate change which need to be addressed through Official Plan policies. This appendix acts as a “check list” and provides reference to be used when writing the County’s new Official Plan policies.

From a natural heritage systems and water planning perspective, impacts on Simcoe’s watersheds also will be addressed in detail by other technical reports.

2. Current Official Plan Policies

The County’s Official Plan provides an extensive overview of the legislation and policies that shape future growth of Simcoe County and its local municipalities. Currently, the County’s Official Plan makes some reference to the impacts of climate change but does not outline specific climate change goals and targets.

Incorporating climate change policies into the County’s Official Plan through the current MCR process will be required to meet provincial policy requirements. The impacts of climate change such as: extreme heat, potential flooding, and erosion, must be addressed when thinking of the future of Simcoe County. The overall climate change policy objective should be to build a resilient County that supports forward-thinking decisions that will make Simcoe less vulnerable and be able to withstand extreme climate change conditions.

Climate change is referenced in section 3.13 Lake Simcoe Protection Plan. This section outlines the provincial plan to protect and restore the ecological health of Lake Simcoe and its watershed. The Lake Simcoe watershed has experienced pressure from invasive species and anthropogenic activity that exacerbates the impact of climate change. Section 4.5 Resource Conservation also requires that local municipalities consider the potential impacts of climate change that may increase the risk associated with natural hazards. In order to address these concerns, the new Official Plan policies should ensure that the health of Lake Simcoe and the surrounding watershed are key policy considerations.
B. CLIMATE ACTION IS UNDERWAY IN SIMCOE COUNTY LOCAL MUNICIPALITIES

Local municipalities have an important role to play in addressing climate change. To better understand how the County’s Official Plan policies can help the local municipalities achieve their climate change goals and objectives, a review of current climate change initiatives was undertaken and are summarized in the following sections.

1. Local Municipal Climate Change Plans and Strategies

A summary of climate change plans and policies prepared by Simcoe County local municipalities is provided below. Where an “N/A” has been identified in the table, it means that no strategies or plans which explicitly address climate change have been prepared. It is not intended to suggest that the municipality has not considered climate change through other plans and/or policies, including official plan policies.

<table>
<thead>
<tr>
<th>MUNICIPALITY</th>
<th>RELEVANT CLIMATE CHANGE DOCUMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bradford West Gwillimbury</td>
<td>N/A</td>
</tr>
<tr>
<td>Collingwood*</td>
<td>2019 Energy Conservation &amp; Demand Management Plan</td>
</tr>
<tr>
<td></td>
<td>2008 Sustainable Community Plan</td>
</tr>
<tr>
<td>Innisfil</td>
<td>N/A</td>
</tr>
<tr>
<td>Midland**</td>
<td>2018 Midland’s Climate Change Action Plan</td>
</tr>
<tr>
<td></td>
<td>Local Climate Change Action Plan</td>
</tr>
<tr>
<td>New Tecumseth</td>
<td>N/A</td>
</tr>
<tr>
<td>Penetanguishene**</td>
<td>2019 Penetanguishene’s Climate Change Action Plan</td>
</tr>
<tr>
<td></td>
<td>Local Climate Change Action Plan</td>
</tr>
<tr>
<td>Wasaga Beach*</td>
<td>N/A</td>
</tr>
<tr>
<td>Adjala-Tosorontio</td>
<td>N/A</td>
</tr>
<tr>
<td>Clearview</td>
<td>N/A</td>
</tr>
<tr>
<td>Essa</td>
<td>2017 Energy Consumption and Gashouse Emissions Report</td>
</tr>
<tr>
<td>Oro-Medonte**</td>
<td>Local Climate Change Action Plan</td>
</tr>
<tr>
<td>Ramara</td>
<td>N/A</td>
</tr>
<tr>
<td>Severn**</td>
<td>Local Climate Change Action Plan</td>
</tr>
<tr>
<td>Springwater</td>
<td>N/A</td>
</tr>
</tbody>
</table>
In addition to the review of relevant climate change documents, other plans and policies were studied at the local municipal level. A review of asset management plans indicates that some environmental services such as water and wastewater services include climate in their budgeting. However, financial budgets to combat GHG emissions, retrofitting of buildings, accommodations of electric vehicles, and sustainable infrastructure have generally not yet been discussed in climate change plans.

2. Conservation Authorities and Other Organizations Addressing Climate Change

There are several Conservation Authorities which have jurisdiction within Simcoe County, these include:

- Lake Simcoe Region Conservation Authority (LSRCA)
- Nottawasaga Valley Conservation Authority (NVCA)
- Toronto and Region Conservation Authority (TRCA) (small portion located in the southern edge of the County)
- Grey Sauble Conservation Authority (GSCA) (small portion of watershed located along the western edge of the County)

LSRCA has produced two plans: Climate Change Adaptation and Climate Change Mitigation (2020). These documents include extensive data and research and discuss the challenges faced by communities in the Lake Simcoe watershed.

Similarly, the NVCA has completed a Climate Change Strategy and Action Plan in accordance with three of the five milestone framework set out by PCP program. The plan identifies strategic goals and objectives to protect life and property, increase watershed resilience, enhance knowledge of the watershed, ensure lands are responsive to climate change etc.

In addition to the Conservation Authorities, other organizations in the County play an important role in addressing climate change. Such examples organizations include the...
following (additional information on these organizations and other initiatives is provided in Appendix 2).

- **Severn Sound Environmental Association (SSEA)** – is a joint service board representing a partnership between federal, provincial and municipal partners. The objective of SSEA is to “sustain environmental quality and to ensure continued protection through wise stewardship of Severn Sound and its tributaries.”

- **Simcoe Muskoka District Health Unit** – is an organization which offers programs and services to promote the health and wellbeing of the community.

- **Simcoe Muskoka Climate Change Exchange** – is an organization that was established to support local climate change mitigation, adaptation and support opportunities to address climate change throughout the region. The organization include, but is not limited to, representatives from Simcoe Muskoka District Health Unit, watershed-based planning and environmental agencies, education and training institutions, Indigenous organizations and communities, regional, lower, single, and upper tier municipalities.

SSEA has completed important climate change work in the County including the creation of Sustainable Severn Sound (SSS) whose objective is to support climate change action, mitigation and adaptation within communities. SSS created the first Climate Change Action Plan in the County with the participation of six of Simcoe County’s local municipalities which included an inventory of GHG emissions, emissions reduction targets etc.

The Simcoe Muskoka District Health Unit has identified climate change as a priority public health issue. Recently, the Health Unit published A Changing Climate: Assessing Health Impacts & Vulnerabilities Due to Climate Change within Simcoe Muskoka along with an interactive map which identifies the findings from the climate change vulnerability assessment.

The Simcoe Muskoka Climate Change Exchange has developed a Climate Change Charter and terms of reference to guide the organizations vision, mission as well as goals and objectives.

### 3. Other Initiatives in Simcoe County

In addition to the aforementioned plans and strategies, some of Simcoe’s local municipalities have developed initiatives to address climate change. Most of these initiatives are.

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6 Severn Sound Environmental Association – [About Us](#)
Proposed Strategy for Integrating Climate Change into Simcoe County Land Use Planning Framework | 32

initiatives involve raising awareness and supporting climate change adaption and mitigation. These activities range from advocacy related to waste reduction (Simcoe County, Mobile Education Unit), water conservation efforts (New Tecumseth, Low Flush Toilet Rebate Program) and environmental projects (Penetanguishene: community gardens, energy efficiency, tree planting and salt management).

C. INTEGRATING CLIMATE CHANGE INTO THE MCR PROCESS AND BEYOND

Climate change is a complex issue that requires transformative change across virtually all municipal sectors and responsibilities. Although the purpose of this report is to focus on land use planning, it is recognized that climate change considerations also impact other municipal responsibilities including infrastructure planning. The inclusion of climate change policies in the County’s Official Plan can shape how future infrastructure planning responds to and addresses climate change. This can be done through design standards that compliment and help achieve these objectives, by planning for servicing capacity that addresses anticipated changes in future weather patterns and creating transportation master plans that support a reduction in GHG emissions by achieving higher mode shares of walking, cycling and transit usage. Responding to climate change also results in fiscal considerations for municipalities. Consideration must be given to required capital and operating expenditures of infrastructure that can withstand the impacts of the changing climate as well as asset management requirements which plan for the eventual repair and replacement of infrastructure and the amount of money required to do so. These financial considerations impact municipal budgets and the ability to deliver services.

Finally, there are external policies and practices which help achieve climate change policies and objectives. For example, the Ontario Building code will require that all new buildings be “net zero” by 2030, thus supporting reduced GHG emissions from future development. Voluntary standards to promote net zero construction, the use of renewable energy sources and resilient building design can also be useful. With increased pressure to respond to climate change mounting from politicians and future home buyers, some developers are exploring innovative ways to reduce their carbon footprint through strategic partnerships with energy providers. For example, developers in Brampton, Ontario are working with a third party provider to supply new subdivisions with green infrastructure and allowing renewable district energy to be integrated into all new buildings.

Figure 6 below provides a high-level summary of municipal sectors and responsibilities related to climate change, but is not exhaustive.
Figure 6: Climate Change and Municipal Activities
5. **CONCLUSION: CONSIDERATIONS FOR THE MCR PROCESS**

It is anticipated that the MCR will be completed in 2022. Given the short timeframe, the immediate next step is to update Official Plan policy to conform to the provincial climate change policy framework. However, as part of the MCR process, the County has the opportunity to set a course for future action.

In developing Official Plan policies for Simcoe County and in thinking about long-term climate change recommendations, we recommend the following:

1. **Update Simcoe Official Plan to conform to Provincial Climate Change Policies**
   - The Official Plan should provide a strong policy framework to support climate change at the upper-tier and lower-tier levels.
   - Appendix 1 of this report may be used as a “checklist” to ensure that the County’s proposed Official Plan is in conformity with Provincial planning requirements.

2. **Identify the Role of Simcoe County**
   - The County should determine its role in climate change planning. As reviewed in this report, several organizations and local municipalities have undertaken climate change studies, identifying anticipated impacts on human health and natural systems, but these reports do not necessarily include all of the County, nor are they written with the perspectives in mind of the various municipal responsibilities of the County and local municipalities.
   - The role of the County could be to act to coordinate resources County-wide, such as preparing a GHG emissions modelling/base line study so the range of options to reduce energy use and GHG emissions are monitored and understood. Some of this work is already underway as part of the County’s participation in the [Partners for Climate Protection (PCP) Program](http://partnersforclimateprotection.ca) 5-Milestone framework.
   - The County may also consider formally recognizing the Climate Change Charter prepared by the Simcoe Muskoka Climate Change Exchange which would highlight their contributions and commitments to climate action.
3. Potential Future Commitments

- Following the MCR process, the County may also identify other climate change commitments. For example, the County can develop a Climate Change Action Plan and commit to a GHG reduction target in accordance with the Growth Plan (4.2.10.2c), as municipalities are encouraged to establish municipal interim and long-term GHG emissions reduction targets.

4. Other General Considerations

In developing policies for the County’s Official Plan and other climate change commitments, consideration should also be given to:

- Vulnerable communities, where low income and elderly residents are at risk.
- Supporting existing settlements and designing new development to be sympathetic to existing road and settlement patterns to reduce vehicle kilometres travelled and to make walking and cycling easier.
- Woodland retention to prevent flooding.
- Food security, such as support for local food systems.
- Carbon sequestration of greenspaces, especially tree cover.

While the focus of this report has been on integrating climate change and land use planning because of the MCR process, the implementation of these policies can only be successful with coordination between municipal departments including Energy, Planning & Environment, Corporate Performance, Health & Emergency Services etc.
APPENDIX 1

PROVINCIAL CLIMATE CHANGE POLICY

REQUIREMENTS
PURPOSE OF THIS APPENDIX

The current MCR process will enable the County to conform to and be consistent with provincially mandated plans and policies that relate to climate change. This Appendix provides an overview of the relevant sections of the Planning Act, Provincial Policy Statement, Growth Plan, Lake Simcoe Protection Plan and Greenbelt Plan and how these policies will be addressed through the MCR process. This acts as a “check list” and provides reference to be used to inform the development of the County’s new Official Plan policies.

This section is for reference only. Please refer to the policy documents themselves to ensure accuracy.

Note that other technical studies for Simcoe’s MCR will be dealing with detailed policy review and recommendations for refinements to the Provincial natural heritage system and for watershed planning.
**THE PLANNING ACT**

The *Planning Act* (herein referred to as the “Act”) is the central piece of legislation that guides land use planning in Ontario. Section 2 of the Act identifies matters of provincial interest and requires that the council of a municipality have regard to these matters when carrying out responsibilities required by the legislation. Climate change and energy are matters of Provincial interest. The Planning Act identifies climate change policies that should be identified in Official Plan objectives in order to mitigate greenhouse gases and increase resiliency.

<table>
<thead>
<tr>
<th>SECTION</th>
<th>POLICY</th>
</tr>
</thead>
<tbody>
<tr>
<td>2(e)</td>
<td><strong>Provincial Interest</strong>&lt;br&gt;Matters of provincial interest include “the supply, efficient use and conservation of energy and water”.</td>
</tr>
<tr>
<td>2(s)</td>
<td><strong>Provincial Interest</strong>&lt;br&gt;“the mitigation of greenhouse gas emissions and adaptation to a changing climate” is identified as a matter of “provincial interest”</td>
</tr>
<tr>
<td>16(14)</td>
<td><strong>Climate Change Policies</strong>&lt;br&gt;“An official plan shall contain policies that identify goals, objectives and actions to mitigate greenhouse gas emissions and to provide for adaptation to a changing climate, including through increasing resiliency”.</td>
</tr>
</tbody>
</table>
**PROVINCIAL POLICY STATEMENT**

The Provincial Policy Statement (PPS) provides provincial policy direction regarding matters such as land use, housing, environmental protection, agricultural lands, economic development and job creation, infrastructure and municipal servicing, and growth management. The County’s Official Plan policies “shall be consistent with” the policies of the PPS.

Several sections of the PPS require planning authorities to consider climate change, air quality, ensure adequate energy supply, promote energy efficiencies and conservation, and minimize GHGs through efficient land use patterns. Policies which are relevant to the County are identified below. Other climate change related policies may be applicable to local municipalities based on their service delivery responsibilities (e.g. Water).

<table>
<thead>
<tr>
<th>SECTION</th>
<th>POLICY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.1</td>
<td>Managing and Directing Land Use to Achieve Efficient and Resilient Development and Land Use Patterns</td>
</tr>
<tr>
<td>1.1.1.i</td>
<td>Preparing for the regional and local impacts of changing climate.</td>
</tr>
<tr>
<td>1.1.3.2</td>
<td>Settlement Areas</td>
</tr>
<tr>
<td>1.1.3.2.c</td>
<td>minimize negative impacts to air quality and climate change, and promote energy efficiency;</td>
</tr>
<tr>
<td>1.1.3.2.d</td>
<td>prepare for the impacts of a changing climate;</td>
</tr>
<tr>
<td>1.1.3.2.e</td>
<td>support active transportation</td>
</tr>
<tr>
<td>1.1.3.2.f</td>
<td>are transit-supportive, where transit is planned, exists or may be developed</td>
</tr>
<tr>
<td>1.6.1</td>
<td>Infrastructure and Public Service Facilities</td>
</tr>
<tr>
<td>1.6.1</td>
<td>Infrastructure and public service facilities shall be provided in an efficient manner that prepares for the impacts of a changing climate while accommodating projected needs.</td>
</tr>
<tr>
<td>1.6.2</td>
<td>Planning authorities should promote green infrastructure to complement infrastructure.</td>
</tr>
<tr>
<td>1.6.11.1</td>
<td>Energy Supply</td>
</tr>
<tr>
<td>1.6.11.1</td>
<td>Planning authorities should provide opportunities for the development of energy supply including electricity generation facilities and transmission and distribution systems, district energy, and renewable energy systems and alternative energy systems, to accommodate current and projected needs.</td>
</tr>
</tbody>
</table>
### Long-Term Economic Prosperity

- j) promoting energy conservation and providing opportunities for increased energy supply
- k) minimizing negative impacts from a changing climate and considering the ecological benefits provided by nature

### Energy Conservation, Air Quality and Climate Change

Planning authorities shall support energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions, and preparing for that impacts of a changing climate through land use and development patterns.

### Natural Hazards

Planning authorities shall prepare for the impacts of a changing climate that may increase the risk associated with natural hazards.
# A Place to Grow: Growth Plan for the Greater Golden Horseshoe

The County is located within the Outer Ring of the Greater Golden Horseshoe (GGH) as defined by the Growth Plan. The Growth Plan includes detailed policies for planning for future population and employment and establishing settlement area boundary expansions and official plan reviews. All County Council decisions made in respect of these matters must conform to these policies. As such, the Growth Plan is the crucial policy document guiding the MCR.

The Growth Plan outlines the importance of protecting and conserving natural resources and also provides policy direction on how municipalities should address climate change and build resilience. Reducing greenhouse gas emissions and adaptive climate change measures to support provincial environmental goals is also a policy requirement.

<table>
<thead>
<tr>
<th>SECTION</th>
<th>POLICY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.2.1 Guiding Principles</strong></td>
<td>Integrate climate change considerations into planning and managing growth such as planning for more resilient communities and infrastructure — that are adaptive to the impacts of a changing climate — and moving towards environmentally sustainable communities by incorporating approaches to reduce greenhouse gas emissions.</td>
</tr>
<tr>
<td><strong>2.1 Where and How to Grow</strong></td>
<td>Complete communities support climate change mitigation by increasing the modal share for transit and active transportation and by minimizing land consumption through compact built form.</td>
</tr>
<tr>
<td></td>
<td>Building compact and complete communities, and protecting agricultural lands, water resources and natural areas will help reduce greenhouse gas emissions and ensure communities are more resilient to the impacts of a changing climate. Ontario has recently affirmed its commitment to reduce greenhouse gas emissions by 30 per cent below 2005 levels by 2030 in Preserving and Protecting our Environment for Future Generations: A Made-in-Ontario Environment Plan. This target aligns Ontario with Canada’s 2030 target under the Paris Agreement.</td>
</tr>
</tbody>
</table>
### SECTION

#### Managing Growth

f) mitigate and adapt to the impacts of a changing climate, improve resilience and reduce greenhouse gas emissions, and contribute to environmental sustainability;

g) integrate green infrastructure and appropriate low impact development

#### Integrated Planning

3.2.1.2 Planning for new or expanded infrastructure will occur in an integrated manner, including evaluations of long-range scenario-based land use planning, environmental planning and financial planning, and will be supported by relevant studies and should involve:
d) considering the impacts of a changing climate.

3.2.1.4 Municipalities will assess infrastructure risks and vulnerabilities, including those caused by the impacts of a changing climate, and identify actions and investments to address these challenges, which could be identified as part of municipal asset management planning.

#### Transportation – General

c) Be sustainable and reduce greenhouse gas emissions by encouraging the most financially and environmentally appropriate mode for trip-making and supporting the use of zero- and low-emission vehicles.

#### Stormwater Management

d) Examine the cumulative environmental impacts of stormwater from existing and planned development, including an assessment of how extreme weather events will exacerbate these impacts and the identification of appropriate adaptation strategies
e) Incorporate appropriate low impact development and green infrastructure

#### A Culture of Conservation

Municipalities will develop and implement official plan policies and other strategies in support of the following conservation objectives:
b) Energy conservation for existing buildings and planned developments, including municipally owned facilities.

#### Climate Change

4.2.10.1 Upper- and single-tier municipalities will develop policies in their official plans to identify actions that will reduce greenhouse gas emissions and address climate change adaptation goals, aligned with other provincial plans and policies for environmental protection, that will include:
a) supporting the achievement of complete communities as well as the
minimum intensification and density targets in this Plan;
b) reducing dependence on the automobile and supporting existing and planned transit and active transportation;
c) assessing infrastructure risks and vulnerabilities and identifying actions and investments to address these challenges;
d) undertaking stormwater management planning in a manner that assesses the impacts of extreme weather events and incorporates appropriate green infrastructure and low impact development;
e) recognizing the importance of watershed planning for the protection of the quality and quantity of water and the identification and protection of hydrologic features and areas;
f) protecting the Natural Heritage System for the Growth Plan and water resource systems;
g) promoting local food, food security, and soil health, and protecting the agricultural land base;
h) providing direction that supports a culture of conservation in accordance with the policies in subsection 4.2.9; and
i) any additional policies to reduce greenhouse gas emissions and build resilience, as appropriate, provided they do not conflict with this Plan.

4.2.10.2 In planning to reduce greenhouse gas emissions and address the impacts of a changing climate, municipalities are encouraged to:
a) Develop strategies to reduce greenhouse gas emissions and improve resilience through the identification of vulnerabilities to climate change, land use planning, planning for infrastructure, including transit and energy, green infrastructure, and low impact development, and the conservation objectives in policy 4.2.9.1
b) Develop greenhouse gas inventories for transportation, buildings, waste management and municipal operations.
c) establish municipal interim and long-term greenhouse gas emission reduction targets that support provincial targets and reflect consideration of the goal of low-carbon communities and monitor and report on progress made towards the achievement of these targets.
LAKE SIMCOE PROTECTION ACT, 2008 AND LAKE SIMCOE PROTECTION PLAN

The Lake Simcoe Protection Act is a piece of legislation which protects and restores the ecological health of the Lake Simcoe watershed. The Lake Simcoe Protection Plan was prepared and approved under the requirements of this Act.

The Lake Simcoe Protection Plan outlines objectives to protect, restore or improve the ecological health of the Lake Simcoe watershed. The Plan addresses climate change concern of reducing the amount of phosphorus and other nutrients in Lake Simcoe. The Plan focuses on building resilience and adapting Lake Simcoe’s watershed to future impacts of climate change.

A. LAKE SIMCOE PROTECTION ACT

<table>
<thead>
<tr>
<th>SECTION</th>
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<tbody>
<tr>
<td>Objectives of Plan</td>
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<tr>
<td>4 The objectives of the Lake Simcoe Protection Plan are,</td>
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<td>(a) to protect, improve or restore the elements that contribute to the ecological health of the Lake Simcoe watershed, including,</td>
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<tr>
<td>(i) water quality,</td>
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<tr>
<td>(ii) hydrology,</td>
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<tr>
<td>(iii) key natural heritage features and their functions, and</td>
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<tr>
<td>(iv) key hydrologic features and their functions;</td>
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<tr>
<td>(b) to restore a self-sustaining coldwater fish community in Lake Simcoe;</td>
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<td>(c) to reduce loadings of phosphorus and other nutrients of concern to Lake Simcoe and its tributaries;</td>
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<tr>
<td>(d) to reduce the discharge of pollutants to Lake Simcoe and its tributaries;</td>
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<td>(e) to respond to adverse effects related to invasive species and, where possible, to prevent invasive species from entering the Lake Simcoe watershed;</td>
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<tr>
<td>(f) to improve the Lake Simcoe watershed’s capacity to adapt to climate change;</td>
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<tr>
<td>(g) to provide for ongoing scientific research and monitoring related to the ecological health of the Lake Simcoe watershed;</td>
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</table>
(h) to improve conditions for environmentally sustainable recreational activities related to Lake Simcoe and to promote those activities;
(i) to promote environmentally sustainable land and water uses, activities and development practices;
(j) to build on the protections for the Lake Simcoe watershed that are provided by,
(i) provincial plans that apply in all or part of the Lake Simcoe watershed, including the Oak Ridges Moraine Conservation Plan and the Greenbelt Plan, and
(ii) provincial legislation, including the Clean Water Act, 2006, the Conservation Authorities Act, the Ontario Water Resources Act and the Planning Act; and
(k) any other objectives set out in the Lake Simcoe Protection Plan. 2008, c. 23, s. 4.

B. LAKE SIMCOE PROTECTION PLAN

Within two years of the date the Plan comes into effect, the MOE, in collaboration with the MNR, the MAFRA, the First Nations and Métis communities, the LSRCA, municipalities, and interested academic institutions, will develop a climate change adaptation strategy for the Lake Simcoe watershed. The climate change adaptation strategy will identify key recommended adaptation actions needed to increase the resiliency of the Lake Simcoe watershed to the impacts of climate change; identify roles and responsibilities for relevant parties; and identify potential amendments to the Plan to ensure the recommended actions are undertaken. As new information becomes available, the strategy will be amended, as necessary.

To support the development and implementation of the strategy, at a minimum, the following tasks will be undertaken by the MOE and collaborators specified above:

a. assess and evaluate the risk of climate change impacts on the watershed;
b. promote, conduct and support additional research to better understand the impacts of climate change in the watershed, including impacts on wetlands, aquatic life, terrestrial species and ecosystems, headwaters, conservation of life cycles, groundwater temperature, and water table levels;
c. develop an integrated climate change monitoring program to inform decision making and model the impacts of climate change on the watershed; and

d. begin the development of climate change adaptation plans and promote the building of a Lake Simcoe watershed community of practice in adaptation planning.
# The Greenbelt Plan

The Greenbelt Plan, together with the Growth Plan, establishes the land use planning framework for the Greater Golden Horseshoe region. The Plan includes policies to reduce GHG emissions, where emissions can be offset by carbon sinks found in the Greenbelt, which can include agricultural lands, green infrastructure, and other natural areas.

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<thead>
<tr>
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| **Vision** | 1.2.1 The Greenbelt is a broad band of permanently protected land which:  
- Builds resilience to and mitigates climate change. |
| **Climate Change** | 1.2.2.6 a) Integrating climate change considerations into planning and managing the Agricultural System, Natural Heritage System and Water Resource System to improve resilience and protect carbon sequestration potential, recognizing that the Natural Heritage System is also a component of green infrastructure;  
b) Integrating climate change considerations into planning and managing growth that includes incorporating techniques to reduce greenhouse gas emissions, and increasing the resilience of settlement areas and infrastructure within the Greenbelt. |
| **Natural System** | 3.2.1 The Protected Countryside contains a Natural System that provides a continuous and permanent land base necessary to support human and ecological health in the Greenbelt and beyond. The Natural System policies protect areas of natural heritage, hydrologic and/or landform features, which are often functionally inter-related and which collectively provide essential ecosystem services, including water storage and filtration, cleaner air, habitat, support for pollinators, carbon storage and resilience to climate change. The Natural System policies contribute to conserving Ontario’s biodiversity and maintaining the ecological integrity of the Greenbelt. |
| **Parkland, Open Space and Trails** | 3.3.1 A system of parklands, open spaces, water bodies and trails across the Greenbelt is necessary to provide opportunities for recreation, tourism and appreciation of cultural heritage and natural heritage. They serve as an important component of complete communities and provide important benefits to support environmental protection, improved air quality and climate change mitigation. This system currently supports a variety of |
passive and active uses as well as health, economic and other quality of life benefits within the Greenbelt.

A system of parklands, open spaces, water bodies and trails helps address the causes and impacts of climate change by capturing and storing carbon, recharging aquifers and protecting biodiversity and sensitive areas.

### General Settlement Area Policies

Municipalities shall integrate climate change considerations into planning and managing growth in settlement areas in accordance with the policies in subsection 4.2.10 of the Growth Plan.

### Developed Shoreline Area Policies

The developed shoreline areas of Lake Ontario, Lake Simcoe, Lake Scugog and other inland lakes contain substantial amounts of both seasonal and permanent residential development. The developed shoreline areas of lakes (including their littoral zones) are particularly important and sensitive because they include key natural heritage and hydrologic features and functions, benefits to water quality and quantity, cultural heritage resources, vital human services and recreational opportunities, including trail systems.

**Climate change** is expected to be an important consideration in shoreline management given projected declines in Great Lakes water levels.

### Infrastructure

Climate change also poses a challenge for maintaining existing infrastructure and planning for new infrastructure. By increasing resiliency of infrastructure and encouraging the use of green infrastructure, municipalities can reduce the risk of harm to life and property and decrease the need for costly repairs or replacement resulting from extreme weather events. Identifying infrastructure risks and vulnerabilities and undertaking climate change adaptation strategies can help mitigate the impacts of climate change.
APPENDIX 2

SUMMARY OF CLIMATE CHANGE ACTIVITIES IN SIMCOE COUNTY
<table>
<thead>
<tr>
<th>ORGANIZATION</th>
<th>CLIMATE CHANGE INITIATIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simcoe Muskoka District Health Unit - An organization which offers programs and services to promote the health and wellbeing of the community.</td>
<td>A Changing Climate: Assessing Health Impacts &amp; Vulnerabilities Due to Climate Change within Simcoe Muskoka (2017)</td>
</tr>
<tr>
<td>Simcoe Muskoka Climate Change Exchange - An organization that was established to support local climate change mitigation, adaptation and support opportunities to address climate change throughout the region. The organization include, but is not limited to, representatives from Simcoe Muskoka District Health Unit, watershed-based planning and environmental agencies, education and training institutions, Indigenous organizations and communities, regional, lower, single, and upper tier municipalities.</td>
<td>Climate Change Charter – created to support collaboration in the region as it relates to climate change. It includes guiding principles of environmental, social, economics, socio-environmental, socio-economic, environmental economic as well as identification of climate change pillars and tools.</td>
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<tr>
<td></td>
<td>Climate Change Terms of Reference – guiding document for the organizations which sets out the purpose, goals and objectives, values, membership, roles and responsibilities, and overall structure of the committee.</td>
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<tr>
<td>ORGANIZATION</td>
<td>CLIMATE CHANGE INITIATIVES</td>
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| Severn Sound Environmental Association (SSEA) | - **Sustainable Severn Sound (SSS)** – special project of the SSEA. Intended to support climate action including greenhouse gas mitigation and the development of sustainable communities.  
- **Climate Change Action Plan** |
| Simcoe County Environmental Youth Alliance | - **Public education** - The group has partnered with Electronic Recycling Associate (ERA) for the Simcoe Tech Recycling event to promote how to properly recycle electronics without harming the environment.  
- **Bee City** - This pilot project is meant to test the outcome no-mowing or reduced-mow zones in the area. By allowing these areas to grow, the hope is to create sustainable landscapes, save energy, and reduce GHG emissions. |
| Town of Midland | - **Low-Flush Toilet Rebate Program** - In order to conserve water, this program provided eligible residents with discounts if they switch to water-efficient toilets. This rebate will only be allowed for homes that were built before 1996. |
| Town of New Tecumseth | - **Various Environmental Projects**  
- Ecology garden – a community partnership with The Karma Project |
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<tbody>
<tr>
<td></td>
<td>Energy efficiency – light and heating system upgrades within the Town</td>
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<td></td>
<td>Trees – tree planting and implementation of Urban Woodlands Study</td>
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<tr>
<td></td>
<td>Salt Management – long term solution for snow storage, expansion of pre-wet system</td>
</tr>
</tbody>
</table>