HURON COUNTY

2025 | Huron's Climate Action Strategy

An Adaptation and Mitigation Plan

HuronCounty.ca

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The Climate Change Committee would like to acknowledge all the staff, community members, and partners who contributed their time, efforts, and expertise to this strategy.

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Project Support

Rooted in Resilience is the culmination of expertise, opinions, and values from many partners across Huron County. We are grateful to everyone who committed their time and effort to planning for a resilient future. The County's Leadership Group, comprised of staff in leadership positions from all County departments, was integral to the development of this strategy as they worked collaboratively to incorporate their expertise.

We are grateful to have begun conversations with Chippewas of Kettle and Stony Point First Nation about the local environment, our shared interests related to the changing climate, and to find future opportunities for partnerships and knowledge sharing. As this is a living document, we will continue to build relationships with neighbouring Indigenous communities and strive to reflect their interests and values in climate actions.

The Climate Change Committee would also like to thank the following community partners who provided input and guidance on local challenges and future areas for collaboration:

- Ausable Bayfield Conservation Authority
- Huron County Federation of Agriculture
- Huron Perth Public Health
- Huron Stewardship Council
- Lake Huron Coastal Centre
- Lakeshore Eco-Network
- Maitland Valley Conservation Authority
- Municipality of Bluewater
- Municipality of Bluewater's Communities in Bloom and Environmental Committee
- Municipality of Central Huron
- Municipality of Huron East
- Municipality of Morris-Turnberry
- Municipality of South Huron
- Sustainable Huron Steering Committee
- Township of Ashfield-Colborne-Wawanosh
- Township of Howick
- Town of Goderich
- Town of Goderich's Environmental Committee
- Township of North Huron

Land Acknowledgement

We acknowledge that the land we stand upon today is the Traditional Territories of the Anishinaabe, Haudenosaunee, and Neutral Peoples and is connected to the Dish with One Spoon wampum, under which multiple Nations agreed to care for the land and its resources by the Great Lakes in peace.

We also acknowledge the Upper Canada Treaties signed in regards to this land, which include Treaty #29 and Treaty #45 ½.

We recognize Indigenous Peoples' continued stewardship of the land and water, as well as the historical and ongoing injustices they face in Canada. We accept responsibility as a public institution and as treaty people to build relationships with First Nation, Métis, and Inuit Peoples through reconciliation, community service, and respect. We acknowledge that the County's relationship-building with Indigenous communities on climate adaptation and mitigation is in the beginning stages, and we are committed to meaningfully engage with, learn from, and support the efforts of Indigenous communities to adapt to climate change.

We acknowledge that the land we stand on holds a deep history of Indigenous land stewardship and a meaningful connection with the environment. We recognize that Indigenous worldviews, Knowledge systems, and land stewardship are integral to climate action. This strategy acknowledges the importance of combining Indigenous Knowledge systems and Western science to inform our actions to strengthen the resilience of the land and all the current and future generations to future climate hazards.

Message from the CAO

Huron County has always been shaped by the land and the people who care for it. From our farms and forests to our villages and shoreline communities, we are rooted in a deep connection to place. As the climate changes, this connection takes on new meaning. It challenges us to look ahead, to adapt, and to make choices that protect what we value most.

Rooted in Resilience: Huron's Climate Action Strategy reflects the shared efforts of staff, community partners, and residents who understand that climate action is local action. It is about how we plan our communities, manage our infrastructure, protect our natural assets, and support one another in times of change.

This strategy provides a framework to guide that work. It focuses on practical solutions, partnerships, and innovation, while recognizing that meaningful change requires persistence and collaboration. Climate adaptation is not a single project or policy—it is a long-term commitment to resilience, equity, and care for future generations.

On behalf of County Council and staff, I want to thank everyone who contributed their time, expertise, and ideas to this plan. Together, we are building a stronger, more resilient Huron County—one that continues to thrive in a changing world.

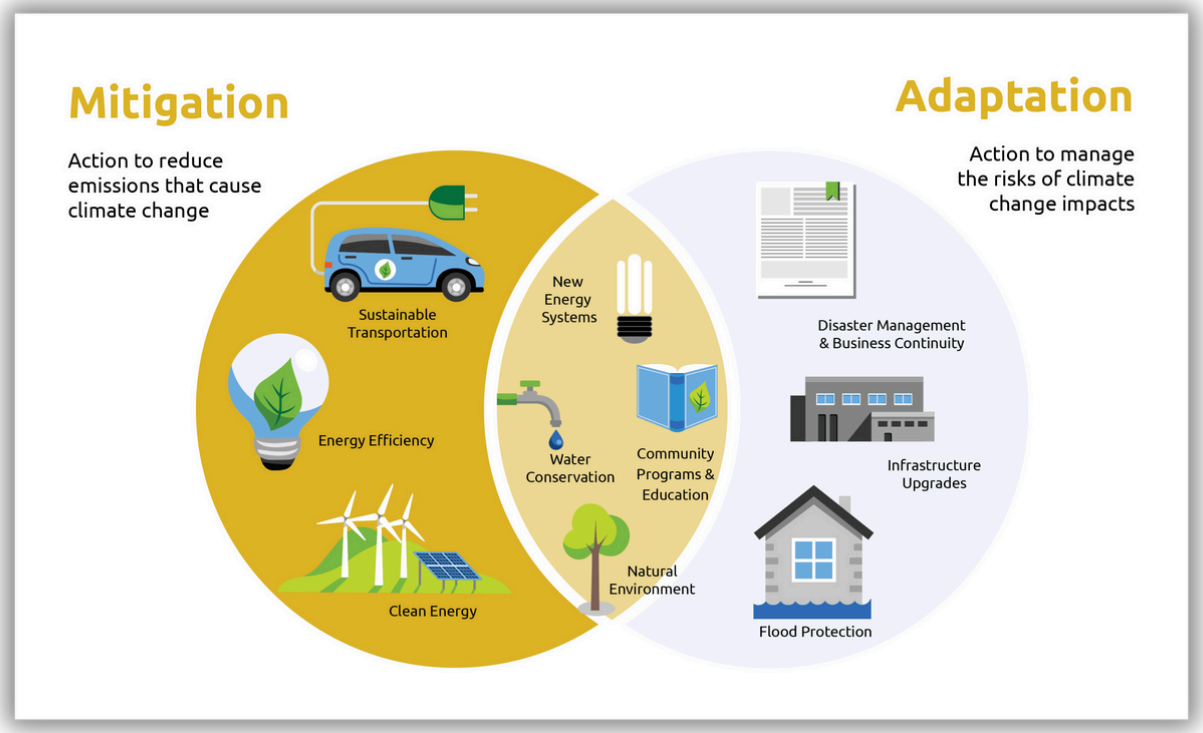
Meighan Wark
Chief Administrative Officer
County of Huron

Executive Summary

Communities around the world are feeling the effects of climate change. Warming temperatures influence global cycles, resulting in floods and droughts, more extreme weather events, and reduced snow and ice cover. Greenhouse gases get trapped in the Earth's atmosphere and make the planet warmer by preventing heat from escaping back into space, causing climate change. As greenhouse gas emissions continue to rise, scientists are projecting that the impacts of climate change will worsen.

Climate adaptation, or just 'adaptation', is taking action to reduce the effects of climate change by putting in place strategies to cope with future events. Adaptation is especially important for municipalities, like the County of Huron, who often lead their community's response to local impacts of climate change.

The primary goal of this strategy is adaptation. Even so, Huron County recognizes that climate mitigation, which is reducing greenhouse gas emissions, is also important. The County has included actions in this strategy related to both adaptation and mitigation, since both are needed to build a more resilient future.



To adapt to the changing climate, Huron County is being proactive by putting resources and strategies in place to respond to and recover from climatic events. The County of Huron created its first Corporate Climate Change Adaptation Plan in 2020, which was focused on climate adaptation for the County's services, operations, and assets. Huron County is now expanding its planning and resources to the broader community through Rooted in Resilience: Huron Climate Action Strategy.

Through corporate and community feedback, the County developed twelve (12) goals for this strategy. The County and community partners will work to achieve these goals in leading and supporting roles. These goals focus efforts in six (6) priority areas, including:

Healthy Air, Water and Land

Resilient Buildings and Infrastructure

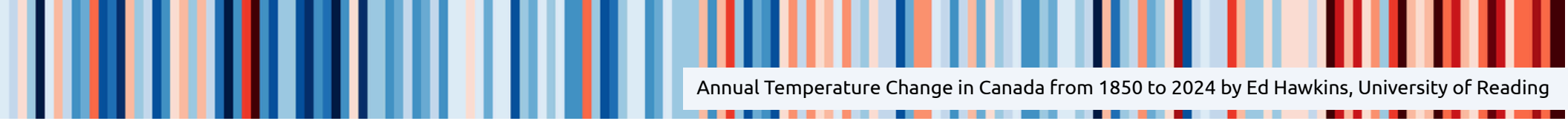
Supporting Health, Safety and Wellbeing

Empowering through Education and Outreach

A Healthy and Sustainable Economy

Corporate Sustainability Leadership

These priority areas include eighty-five (85) actions that will ensure Huron County is better prepared to lessen the effects of future climate changes, as well as respond to and recover from climate-related events. It is important to recognize that adapting to climate change is a dynamic and ongoing process that involves uncertainty. As new data arises or knowledge is shared, the County will review and update this strategy to ensure that the corporation and community are continuing to take effective action towards a more equitable and resilient future.



Annual Temperature Change in Canada from 1850 to 2024 by Ed Hawkins, University of Reading

Introduction

Climate change concerns people around the world. Scientists and communities everywhere are observing its effects. Warming temperatures are influencing global cycles and changing patterns of rain and snow (precipitation). Climate change causes floods and droughts, reduces snow and ice cover, and triggers more extreme weather events. These changes have significant impacts on people, communities, and the environment, and experts expect them to intensify as greenhouse gas emissions continue to rise.

In Canada, people and governments increasingly recognize the impacts of climate change. From 1948 to 2016, Canada's annual temperature increased by 1.7°C, which is about twice the global rate of warming (Bush & Lemmen, 2019). Many communities across the country have begun to experience the consequences, including agricultural challenges, localized flooding, forest fires, damage to critical infrastructure, and a rise in natural disasters (Warren & Lulham, 2021).

What are greenhouse gas emissions?

Greenhouse gas emissions, or GHGs for short, are gases, like carbon dioxide and methane, that absorb heat in the atmosphere and prevent the heat from escaping to space, which causes temperatures to warm. Carbon dioxide is an example of a greenhouse gas that is produced from fossil fuel burning.

These impacts create both direct and indirect health risks. Poor air quality contributes to respiratory and cardiovascular diseases, while higher temperatures increase the spread of diseases and heat-related illnesses. Extreme weather events can cause physical injuries, and the stress and anxiety linked to these events affect mental health (Berry & Schnitter, 2022). Climate change disproportionately affects vulnerable populations, including children, the elderly, Indigenous Peoples, low-income individuals, and those with pre-existing health conditions. To protect everyone, equitable climate action must address existing vulnerabilities and help everyone in a community adapt to the changing climate.

Municipalities often lead the response to climate-related events and provide services that can increase the adaptive capacity of a community to climate change. Municipalities must plan and prepare for future changes to protect people and the environment. Taking early action is essential, as climate change already imposes significant financial costs.

In 2024, the Insurance Bureau of Canada (2025) reported that extreme weather events cost over $8.5 billion in insured damages from severe storms, hailstorms, flooding, wildfires, and hurricanes nationwide. By 2050, researchers estimate that climate change could cost between $30 to $62 billion annually in Canada, depending on future greenhouse gas emissions and growth scenarios (Boyd & Markandya, 2021). In Ontario, municipalities own and maintain about 70% of public transportation, building, water, and wastewater infrastructure. Without climate adaptation, rising greenhouse gas emissions could increase annual infrastructure costs by 18% (FAO, 2023).

What is the difference between mitigation and adaptation?

Mitigation refers to reducing greenhouse gas emissions that are contributing to climate change. In other words, mitigation helps address the cause of the problem.

Adaptation refers to taking action to adjust our lives, communities, or systems to stay safe and healthy as the climate changes. In other words, adaptation focuses on responding to current and future impacts.

Adapting to the changing climate can help reduce future costs. The Canadian Climate Institute found that investing one dollar in proactive adaptation measures can generate $13 to $15 in benefits by avoiding infrastructure damage and creating widespread economic benefits (Sawyer et al., 2022). When local governments implement adaptation and mitigation actions, they also create social, economic, and environmental benefits for individuals and communities.

Environment	Economic	Health & Safety	Community
Improves biodiversity	Improves biodiversity	Improves air quality	Empowers the community and creates local solutions
Improved soil quality	Reduced costs for businesses and operations	Reduced risk of injury or disease prevention	Improved access to natural spaces
Carbon sequestration and pollution removal	Create diverse and innovative job opportunities	Improved physical and mental well-being	Increases social connection
Creates habitat	Avoided insurance and infrastructure damage costs	Encourages active lifestyles	Supports local food supply and access
Encourages water retention and management	Reduces resource use and waste	Improves emergency preparedness and response	Prioritizes accessibility and equity

Table 1. The social, economic, health & safety, and community co-benefits of climate action for communities and individuals (Warren & Lulham, 2021; Karlsson, Alfredsson & Westling, 2020)

Climate action at all levels

All levels of government share the responsibility for climate action and continuous action is needed over the long term. Governments, the private sector, Indigenous communities, community organizations, and individuals must work together to address the impacts of climate change and reduce associated risk.

Level of Goverment	Responsibilities related to climate change	Climate policies and plans
International	• Sharing international best practices for climate adaptation and mitigation • Global agreements and targets • Intergovernmental Panel on Climate Change (IPCC) assessments	Canada signed the Paris Agreement in 2016, which is a global commitment to limit the global average temperature rise to 1.5°C. The United Nations adopted the 17 Sustainable Development Goals in 2015, including goal 13, which includes taking urgent action to combat climate change and its impacts.
National	• National Building Code of Canada, including energy efficiency tiers • Funding, subsidies, and incentives • Energy ratings • Carbon pricing	In 2023, the Government of Canada released the National Adaptation Strategy, which outlines a shared path for climate resiliency through goals in disaster resilience, health and wellbeing, nature and biodiversity, infrastructure, and economy and workers. The Government of Canada's mitigation plan, "2030 Emissions Reduction Plan: Clean Air, Strong Economy", has pathways to reduce emissions in each sector, as well as an overall reduction target to be net-zero by 2050.

Level of Goverment	Responsibilities related to climate change	Climate policies and plans
Provincial	• Provincial Infrastructure • Ontario Building Code • Regulations and standards for municipalities (i.e., Provincial Planning Statement) • Energy efficiency programs and incentives • Schools and education	In August 2023, the province released the Ontario Provincial Climate Change Impact Assessment – Technical Report. This report provides an overview of climate impacts, including risks and opportunities, that may affect the province's infrastructure, agriculture sector, economy, public health and safety, natural environment, and communities.
County of Huron and Local Municipalities	• Emergency preparedness and response • Protection and enhancement of parks, forests, and natural spaces • Public infrastructure (roads, libraries, stormwater, and water) • Land use planning (Official Plans)	In 2020, the County of Huron released the Corporate Climate Change Adaptation Plan with 63 actions that help the corporation and community reduce, respond to, and recover from the impacts of climate change. Local municipalities in Huron County have declared climate emergencies, recognizing the importance of mitigating and adapting to climate change across service areas.

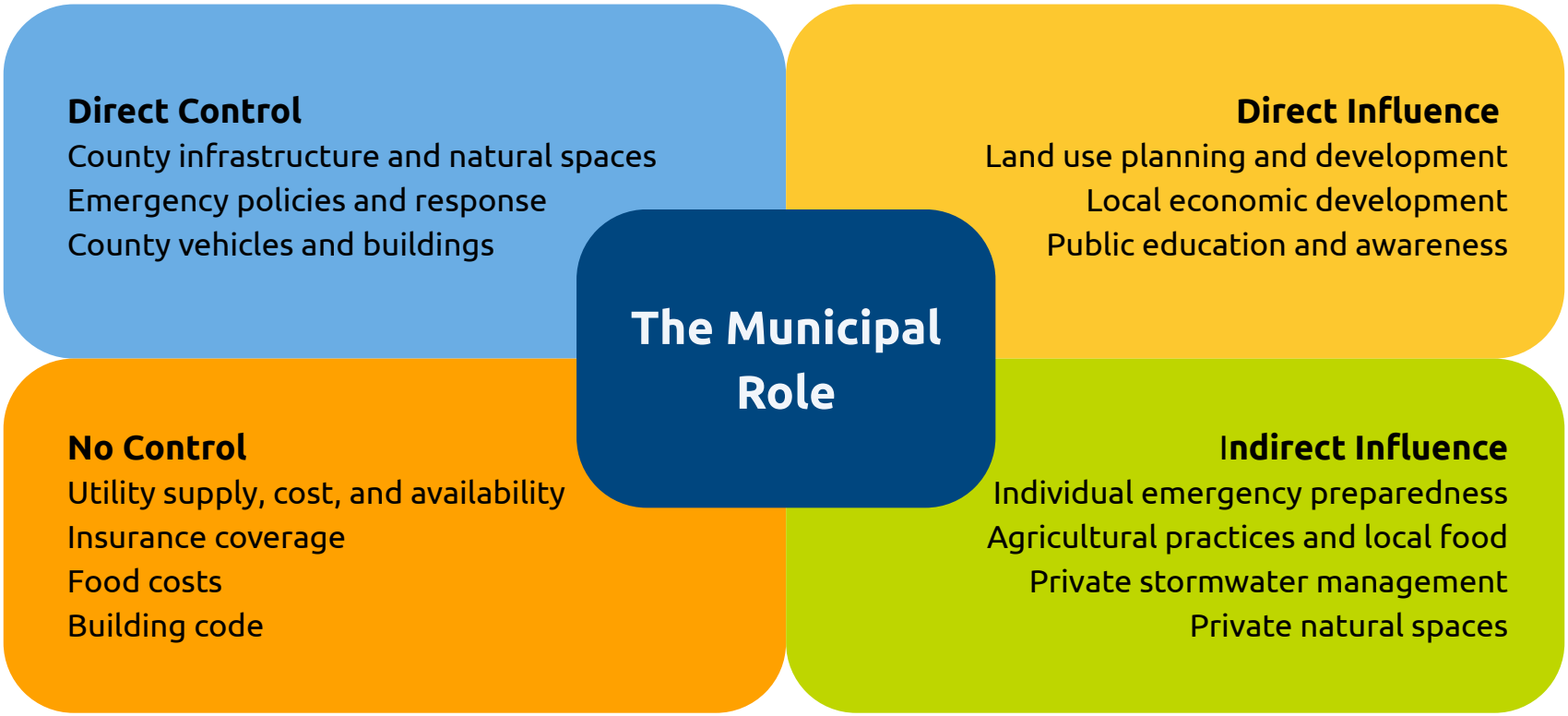
Table 2. Climate responsibilities for each level of government in Canada and internationally, with examples of current strategies or policies.

What does resilient mean?

Resiliency means being ready for the impacts of climate change and being strong enough to respond to and recover from them. Climate adaptation helps us prepare for and reduce the harm of anticipated events. For instance, this might include taking action to prevent flooding that could result from increased rainfall.

By working with other levels of government, municipalities can play a unique role in reducing greenhouse gas emissions and adapting to the changing climate. They can access national and provincial funding, manage critical community infrastructure and services, and collaborate with local businesses, organizations, and community members to develop local solutions.

In relation to climate change, the County of Huron plays direct and influential roles across the following service areas:



Through these roles, the County of Huron works alongside partner organizations, Indigenous communities, community members, and local municipalities to create a more resilient Huron County.

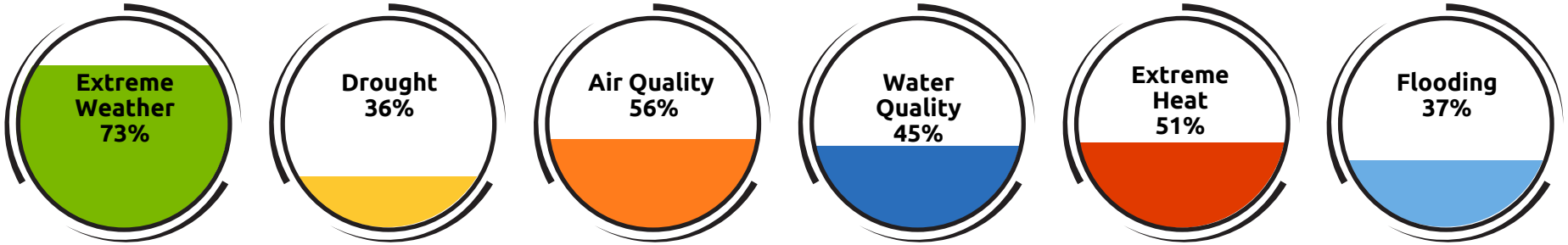
Climate Change in Huron County

Huron County already experiences the effects of climate change. In recent years, changing conditions have caused more extreme weather events, localized flooding, and variable weather patterns. To understand how the community experiences climate impacts and takes actions locally, the County of Huron released a climate change survey in 2025. Over the past five years, community members in Huron County have experienced the following climate impacts to varying degrees (Figure 1). The results were similar to findings of a Canada-wide survey where 87% of respondents mentioned their community is seeing the effects of climate change (Warren and Lulham, 2021). In Huron County, community members identify water quality, air quality, and extreme weather as the climate impacts that affect their community the most.

What is the difference between climate and weather?

Climate refers to long-term weather patterns (often averaged over 30 years) for a region. Weather is different from climate, as it refers to changes that occur over a short period, such as day-to-day changes in temperature and precipitation patterns.

Figure 1. The percentage of respondents to the community climate survey who had experienced these climate impacts in the last five years.



To prepare for the future, communities must understand how climate trends will change over time. This includes looking at temperature and precipitation patterns, as well as the frequency and intensity of extreme weather events, such as floods and storms. By comparing historic trends with scientific data used to model future greenhouse gas emission scenarios, we can begin to predict the long-term effects of climate change on Huron County.

Huron County is projected to see the following differences in climate compared to the historic climate between 1981-2010, under a high greenhouse gas emissions scenario (ClimateData.ca, 2024):

TEMPERATURE

Annual Average Temperatures

Temperatures are projected to increase significantly in Huron County.

Historic	2020s	2050s	2080s
8°C	9°C	11°C	14°C

Very Hot Days (+30°C)

The number of very hot days (+30°C) per year is projected to increase)

Historic	2020s	2050s	2080s
10	21	42	74

Heat Waves Per Year

Heat waves occur when high temperatures (+30°C) last for 3 or more days. The number of heat waves in a year, is projected to increase in Huron County.

Historic	2020s	2050s	2080s
1	3	6	7

Frost Days Per Year

Temperatures are expected to increase most significantly in winter months leading to shorter winters in Huron County.

Historic	2020s	2050s	2080s
140	122	96	62

LAKE HURON

Water Temperatures

Annual surface water temperatures are projected to increase by an average of 3.85° by the end of the century.

Lake Levels

Water levels will continue to vary with more extreme high and low levels.

Lake Ice

Seasonal lake ice has declined by 71% from 1973 to 2010. The extent and duration of lake ice will continue to decline with rising temperatures.

PRECIPITATION

Annual Total Precipitation

Precipitation is projected to rise in Huron County.

Historic	2020s	2050s	2080s
962 mm	+5%	+9%	+14%

Wettest Day of the Year

The amount of precipitation on a single day is projected to increase. This will contribute to more extreme rainfall events.

Historic	2020s	2050s	2080s
37 mm	+15%	+14%	+24%

EXTREME WEATHER

Ice Storms

Ice storms are projected to worsen in Huron County as winter temperatures become warmer and snow turns to rain.

Snow Storms

A reduction in lake ice in combination with rising temperatures is projected to increase lake-effect snow storms in Huron County by mid-centrury.

Wind Gust Events

Wind gust events are projected to become stronger by the end of the century.

Huron County community members recognize that these climate hazards are occurring and may worsen with the changing climate. In the 2025 climate change survey, Huron County community members ranked the following aspects of their community as most vulnerable to climate hazards:

It is important to note that there is uncertainty in predicting how climate change will affect the local area. Climate models are useful to anticipate future trends, enabling communities to plan and adapt. These models use scientific data from historic climate records to project future conditions based on global greenhouse gas emissions. There is always some uncertainty as these variables can change, and greenhouse gas emissions may shift over time. In the future, the County hopes to learn more from neighbouring Indigenous communities about how the local land and waters have changed over time, strengthening our understanding of local histories and trends.

For more information on climate projections for Huron County, read the detailed report on the *Historic Climate Trends & Future Projections in Huron County* available on the County's website.

Climate Risk Assessments

To prepare for the future, the corporation and community must assess the potential impacts of climate change in Huron County. A climate risk assessment evaluates the likelihood of future climate hazards and examines how they could affect the community's social, economic, and environmental assets.

In a climate risk assessment, the following equation is used to determine climate risk: **Likelihood x Consequence = Risk**

Likelihood is the probability of a climate hazard occurring in Huron County, ranked from 1 to 5

- *The rank is determined using historic climate data and future climate projections*

Consequence is the potential impact of a climate hazard, such as damage to a community's infrastructure, economy, or people, each consequence category (environment, social, economic) was ranked from 1 to 5

- *The known or estimated impact is determined using community-specific demographics, indicator data, local knowledge, and local experiences*

Risk is the combination of the likelihood of a climate hazard and its potential impact

- *This numeric value is used to compare climate impact statements to prioritize actions, resources and spending*

Likelihood Scores					
Almost Certain (5)	15	30	45	60	75
Likely (4)	12	24	36	48	60
Possible (3)	9	18	27	36	45
Unlikely (2)	6	12	18	24	30
Rare (1)	3	6	9	12	15
	Negligible	Minor	Moderate	Major	Catastrophic
			Consequence Scores		

Table 3. Climate risk score matrix. Green = very low risk, yellow = low risk, orange = moderate risk, red = high risk

What is the difference between a climate hazard and a climate impact?

A **climate hazard** is a natural or human-caused physical event or trend, and can include extreme weather events like floods or heatwaves, or slower trends like rising sea levels.

A **climate impact** is the result of a climate hazard interacting with a community. Climate impacts can include damage to property, infrastructure, and ecosystems, as well as health impacts and loss of life.

Following this process, the County of Huron completed a corporate and a community climate risk assessment to build our understanding of where to prioritize resources and actions to reduce, respond to, and adapt to the changing climate.

Corporate Climate Risk Assessment

In 2020, the County conducted its first corporate climate risk assessment to understand how current and future climate projections would affect each department, service, operation, and asset. Out of two hundred and forty-seven (247) potential impact statements, the County assigned risk scores to one hundred and twenty-six (126) climate impact statements and prioritized actions based on those with the highest risk.

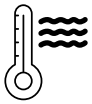
In 2025, staff aimed to build on the 2020 assessment while simplifying the process. Staff combined and condensed the one hundred and twenty-six (126) climate impacts into thirty-four (34) climate impact statements for the climate risk assessment (see Appendix 1). This approach captured the corporation's potential impacts while reducing repetition across service areas or asset types.

Staff then assessed each climate impact statement for anticipated likelihood and consequence. They used their knowledge of local climate trends and operational expertise to rank the likelihood of each impact. To determine the consequence, they evaluated how each impact could affect the corporation and local community through social, economic, and environmental lenses. Members of the County's leadership group also prioritized which climate impact statements the corporation should focus on addressing in this strategy, Rooted in Resilience.

The resulting risk scores show whether the corporation faces vulnerability or risk from specific climate impact statements. Based on these results, the corporation faces the highest risk from the following climate impact statements:

More lake-effect snow and ice storms can create hazardous travel conditions and increase demand for snow removal and road salt application.

More frequent and extreme weather events during any season can lead to more accidents and emergencies.



More humidity and longer heat waves will impact vulnerable populations and those with existing health conditions (i.e., no access to air conditioning).

More frequent and extreme weather events could impact county processes, staff schedules, and workload.

Increases in freezing rain and snow/ice storms may increase damage to vegetation and utility lines, resulting in more frequent and longer power interruptions.

Many of the identified risks affect the health and safety of County staff and the community, as well as the County's ability to maintain operations and services during extreme weather conditions. The County still needs to consider climate impact statements with lower overall scores in this strategy. Although these areas may not be immediate priorities, the corporation remains vulnerable and at risk.

Community Climate Risk Assessment

The community climate risk assessment process aimed to prioritize climate impacts that pose significant risks to the community. The County involved various community partner organizations to develop both numeric and descriptive risk results for Huron County. This process relied on community partners' expertise and experience in economics, social services, public health, natural environment, emergency management, culture and immigration, and community planning. The Rural Ontario Institute's Wellbeing Dashboard provided key indicator data for demographics, housing, health, society, and environment, using publicly available data and the results from the 2021 federal census for Huron County.

Community expertise, data, and climate hazard projections guided the assessment. Similar to the corporate process, this assessment grouped twenty-nine (29) climate impact statements into five climate hazard categories: growing season, winter season, heat, precipitation, and extreme weather (Appendix 1).

The group assigned risk scores to each climate impact statement, considering both the probability of a climate hazard occurring (likelihood), and the environmental, social, and economic impact it could cause (consequence).

The risk scores show whether Huron County faces vulnerability or risk from specific climate impact statements. Based on the results, the community faces the highest risk from the following five climate impact statements:

- More extreme rainfall events could lead to impacts on infrastructure (roads, culverts, bridges) and displacement from flooded buildings/homes/roads.
- More frequent and extreme weather events during any season will exacerbate existing inequities for low-income and vulnerable populations.
- More wet days or extreme rainfall events may cause flooding for farming operations and fields.
- More lake-effect snow and ice storms can create hazardous travel conditions and increase demand for snow removal and road salt application.
- More frequent and extreme weather events during any season can lead to more accidents and emergencies.

Climate risk assessments are subjective exercises that depend on available data and the perspectives of the participants. This assessment did not capture individual community members' perspectives and experiences outside of the census data. Without individual or household data, the community climate risk assessment cannot determine how or if each household or individual will recover from a climate event, their length of recovery, their adaptive capacity, or the compounding factors that influence their vulnerability or risk level. In the future, staff hope to create a more robust climate risk assessment process by including more community members' experiences, as well as the perspectives of neighbouring Indigenous communities.

It is also important to recognize that there was an effort made to ensure the list of climate impact statements was comprehensive and inclusive of the climate impacts that have been or could be experienced in Huron County; however, there may be some specific impacts that were missed during this assessment.

For more information, view the process and results of the community climate risk assessment here.

Greenhouse Gas Emission Inventories

Corporate

For the Corporate Climate Change Adaptation Plan (2020), the County created a 2017/2018 Corporate Greenhouse Gas Inventory to understand our baseline emissions. To understand if greenhouse gas emissions have changed over time, staff updated the greenhouse gas emissions inventory for this strategy using 2024 data. Updating the corporate inventory will allow staff to track progress towards reducing greenhouse gas emissions, which will help track long-term climate mitigation and adaptation efforts.

The figures below reflect a summary of the County's 2017 and 2024 corporate greenhouse gas emissions. In 2024, the County emitted a total of 3,807 tonnes of carbon dioxide equivalents (tCO_2e). The County's facilities accounted for over 54% of total emissions (Figure 2). When examined by the type of energy, almost half of the County's emissions are from natural gas, followed by electricity (Figure 3). Compared to 2017, the County's corporate emissions rose by 9%, which can be partially attributed to the inclusion of waste data, the construction of additional social housing properties, and an increase in fleet usage (Figure 4).

For more information, see the complete 2024 Corporate Greenhouse Gas Inventory, posted on the County's website.

Figure 2. 2024 corporate emissions by sector.

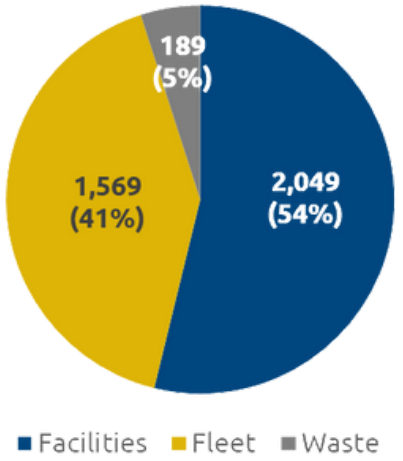


Figure 3. 2024 corporate energy use by energy source.

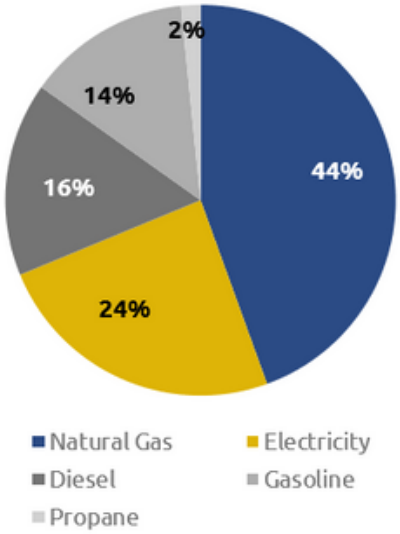
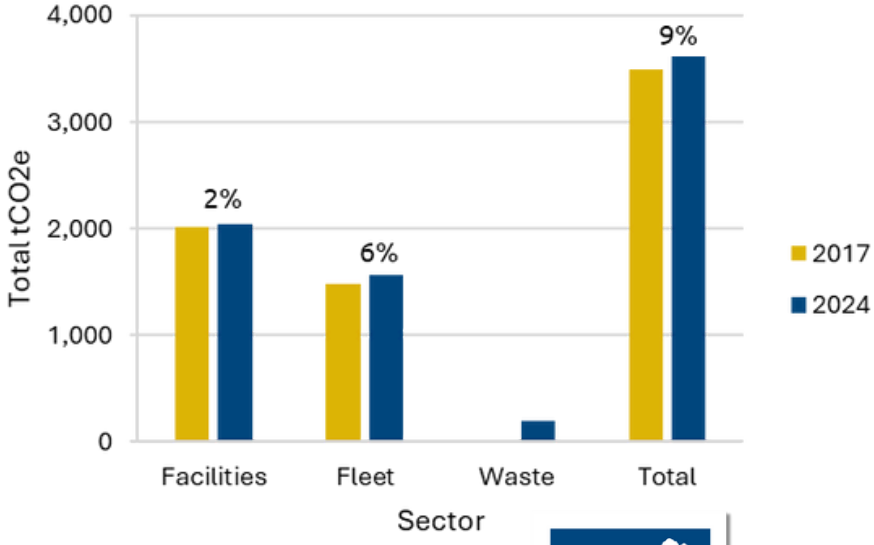


Figure 4. Comparison of greenhouse gas emissions by sector for 2017 and 2024.



Community

In addition to the corporate greenhouse gas emissions inventory, the County conducted a preliminary community greenhouse gas emissions inventory for 2024. Understanding community emissions is integral to designing and implementing climate mitigation efforts that can reduce emissions in the community.

The figures reflect a summary of the community's 2024 greenhouse gas emissions based on the best available data to staff. In 2024, it is estimated that Huron County emitted a total of 756,849 tonnes of carbon dioxide equivalents (tCO_2e). Huron County's agriculture, and on-road transportation sectors accounted for 68% of total emissions (Figure 5). The building sector, including residential, industrial, and commercial buildings, accounted for 31% with solid waste only accounting for 1% of community emissions. When examined by the type of energy, over half of Huron County's emissions were from transportation fuel, followed by natural gas at 37% (Figure 6).

Nationally, Canada emitted 694,000,000 tonnes of carbon dioxide equivalents (tCO_2e) in 2023 (ECCC, 2025), which the Canadian Climate Institute (2025) estimates to be similar in 2024. With over 41 million residents, each Canadian is estimated to emit 16.8 tonnes of carbon dioxide equivalents (tCO_2e) in 2024. Based on the estimated greenhouse gas emissions for Huron County, each resident emits 12.5 tCO_2e a year, which is below the national average.

For more information, see the complete 2024 Community Greenhouse Gas Inventory, posted on the County's website.

Figure 5. 2024 community emissions by sector.

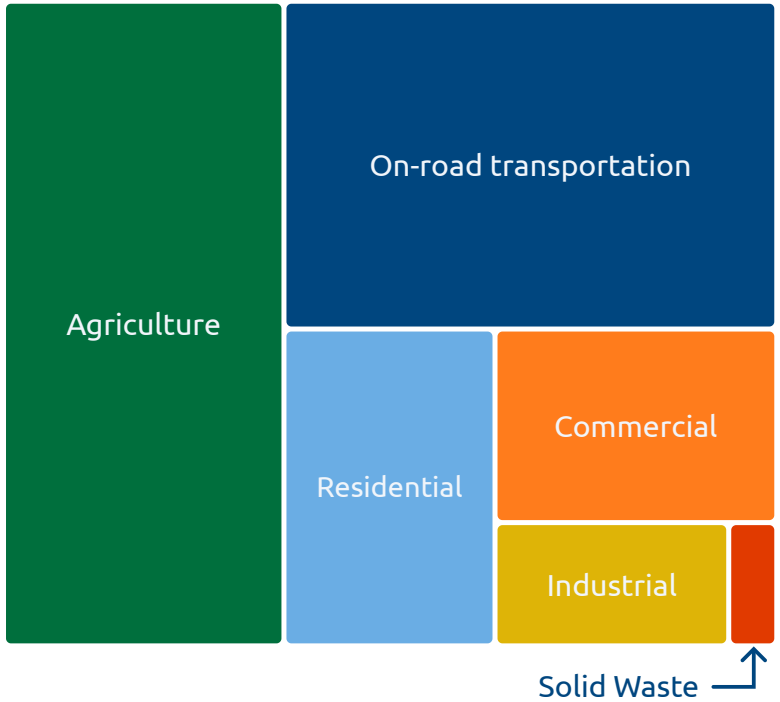
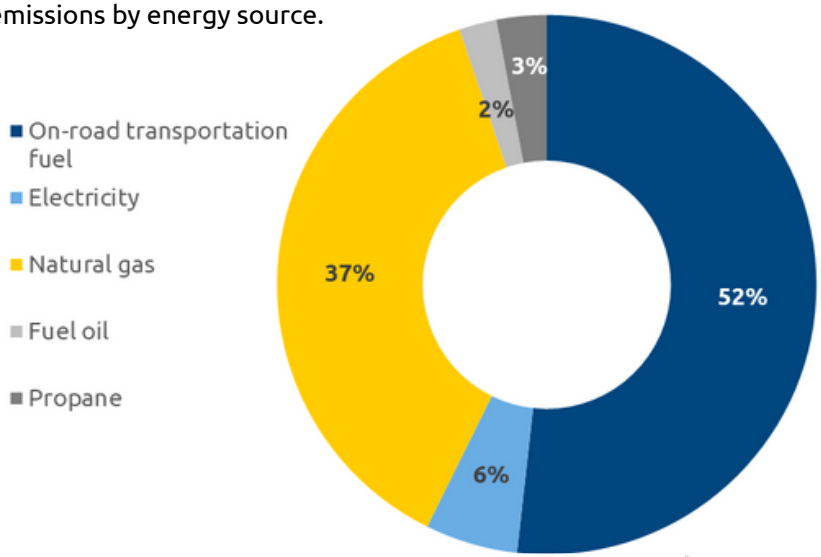


Figure 6. 2024 community emissions by energy source.



Developing the Strategy

The County of Huron has taken large and small steps to reduce emissions and adapt to climate change from a corporate and community perspective over the past five years. Here are a few examples of milestones and climate actions:

2020
County Council approved the Corporate Climate Change Adaptation Plan

2021
Developed a climate lens tool for all corporate projects

2022
Installed twelve (12) electric vehicle charging stations at four county facilities

2023
Creation of 2 acres of wildflower meadows through the Rural Roadside Strategy Pilot

2024
Completed a Climate Risk Assessment of county bridges and culverts

2024
Successfully achieved or initiated 53 actions (84%) in the Corporate Climate Change Adaptation Plan

2025
County Council receives Rooted in Resilience – Huron's Climate Action Strategy for review

The County used Local Governments for Sustainability's (commonly known as ICLEI) Building Adaptive and Resilient Communities framework to guide the development of Rooted in Resilience. This 5-milestone framework provides a step-by-step approach that other municipalities have used as a guide for creating climate action plans. The County worked through the milestones of this framework to update local climate trends, determine impacts and risks, identify adaptive actions, and develop a strategy to ensure climate adaptation and mitigation are prioritized and implemented.

Milestone 1	Milestone 2	Milestone 3	Milestone 4	Milestone 5
Initiate	**Research**	**Plan**	**Implement**	**Monitor/Review**
Establish County Council support for the Corporate Climate Change Adaptation Plan update Identify community partners and plan areas for research	Update projected climate trends for Huron County Identify Impacts, vulnerabilities, and risks through community and corporate risk assessments Consult with staff and community members through survey	Conduct Community conversations with local partners and organizations Organize a corporate leadership workshop focused on climate action brainstorming Identify priority areas, goals, and actions for the strategy Explore financing and budget requirements Identify process for monitoring and review Develop the strategy	Gain Council support for the strategy Begin to implement actions	Evaluate new climate data and information as it arises Track and report implementation progress on an annual basis Investigate upcoming options for adaptation and mitigation Revise strategy in the future as necessary

The County's Climate Change Committee oversaw the development of this strategy by providing strategic and financial direction. This group worked to incorporate the perspectives and expertise from other staff, community members, and partners through discussions and feedback opportunities to ensure that the final priority areas for adaptation and mitigation reflected the interests of the community and the corporation.

Engagement

The County recognizes the importance of engaging with staff and the community to develop Rooted in Resilience – Huron's Climate Action Strategy. To gather staff and community perspectives, the Climate Change Committee released two surveys – one for staff that focused on corporate services, and the other focused on the community for residents to participate. Additionally, the Climate Change & Energy Specialist conducted community conversations with local municipalities, partner organizations, conservation authorities, an Indigenous community, and community environmental groups to gain more knowledge on existing environmental projects, current gaps in climate action, and opportunities to partner on future projects. To understand corporate priorities, the Climate Change & Energy Specialist organized a one-day corporate workshop for the County's leadership group to provide insights and outline priorities for climate action moving forward. The input and experiences of community members, staff, local organizations, Indigenous communities, and local municipalities gathered by staff were used to create priority areas, goals, and actions that can address the needs and desires of the community.

A Clinton Public School grade two class shared their view of what is included in a sustainable community.

Engagement Numbers at a glance

340 responses to community survey

218 responses to corporate survey

65 members of the County's leadership group

54 members of community and environmental organizations

33 local municipal staff

For more information, see the County's Climate Engagement Process on the County's website.

VISION

We are a community committed to innovative, sustainable climate action that protects what matters today while building resilience for tomorrow.

MISSION

In Huron County, we work together to tackle climate challenges with practical, forward-thinking local solutions that reflect our community's values.

Priority Areas for Action

The goals and actions of this strategy have been organized into priority areas. The priority areas reflect common themes among the impacts that were identified for the corporation and community during engagement. By taking action to improve resiliency in these areas, Huron County will be better prepared for the future impacts of climate change. The 6 priority areas include:

Healthy Air, Water and Land
We care for our land, water, and air by supporting agriculture, protecting natural spaces, reducing waste, and encouraging best practices that help nature thrive.

Resilient Buildings and Infrastructure
We plan with creative, forward-thinking ideas that improve our buildings, roads, and systems to help our communities be safer, smarter, and more prepared for extreme weather.

Supporting Health, Safety and Wellbeing
We strive to ensure everyone is safe, healthy, and supported, especially during climate events, by focusing on equity, emergency preparedness, and access to services.

Empowering through Education and Outreach
We work together, learn from one another, and take practical actions as a community to ensure we can adapt to a changing climate now and in the years ahead.

A Healthy and Sustainable Economy
We support local businesses, tourism, and job opportunities that protect the environment and help our economy adapt to change.

Corporate Sustainability Leadership
We lead by example by incorporating sustainable practices and policies into corporate operations and decision-making.

Goals

All 12 goals support climate adaptation and/or mitigation in Huron County. Each goal is accompanied by actions that reduce vulnerability or risk, reduce emissions, or help adapt to the changing climate. Including actions under a specific goal helps highlight the purpose of each action and ensures the County can track progress towards each goal over time.

Healthy Air, Water, and Land

Goal 1: Support innovation, adaptation, and protection of agricultural land and local food in a changing climate.

Goal 2: Promote sustainable resource use and waste management practices.

Goal 3: Use a systems approach to protect, enhance, and improve the capacity of natural spaces to adapt to future changes.

Goal 4: Promote water management practices at the watershed and individual scale to manage increasing precipitation and flooding.

Resilient Buildings and Infrastructure

Goal 5: Promote and invest in the energy efficiency of buildings.

Goal 6: Explore innovative opportunities to reduce emissions and increase resiliency in transportation infrastructure.

Supporting Health, Safety, and Wellbeing

Goal 7: Minimize climate-related risks and support individual and community-level resiliency and preparedness through resource sharing and social connections.

Empowering through Education and Outreach

Goal 8: Build community awareness and knowledge of risks and opportunities with climate change.

Goal 9: Enhance community partnerships to strengthen mitigation and adaptation efforts across the County.

A Healthy and Sustainable Economy

Goal 10: Explore opportunities to encourage the incorporation of sustainable practices into the local economy and businesses through education and awareness.

Corporate Sustainability Leadership

Goal 11: Integrate climate change considerations into County policies, procedures, and develop staff training opportunities.

Goal 12: Continue to provide leadership to other organizations on adaptation and mitigation best practices.

To ensure each action is prioritized and implemented, the County outlined the action type, required staff time, timeline, cost, and responsible lead and support for each action.

The actions outlined in this strategy were identified through collaborative conversations and reflect themes and opportunities that align with shared priorities at the time of development. It is recognized that organizational priorities, capacities, and resources may evolve. The inclusion of other partner organizations or community groups within this strategy does not constitute a commitment or obligation to future participation or resource allocation.

Action Type

This strategy contains the following types of actions:

- **Partnership or Engagement** – Collaborate or engage with partners and members of the community to advance climate action.
- **Policy or Procedure** – Create or update corporate policies or procedures to account for the impacts and opportunities of climate change
- **Plan or Guide** – Conduct research or strategic planning to establish new opportunities to reduce, respond to or recover from the impacts of climate change
- **Education or Training** – Provide education or training opportunities on climate change adaptation or mitigation best practices
- **Program or Project** – Development of new programs or projects that can increase the resiliency of the corporate or community to climate change.

Staff Time

The amount of County staff time and capacity has been considered to implement each action following these three categories:

- **Low** – Minimal staff time is needed to complete this action. Staff can work on multiple projects at once.
- **Medium** – Staff will need dedicated time in their work plan to complete this action. The work plan can include other ongoing projects.
- **High** – This action will require dedicated staff time from one or more staff members to complete this action. Their work plan may not be able to accommodate other actions at the same time.

Timeline

The actions outlined in this strategy are intended to guide adaptation efforts within the corporation and community. The timeline associated with these actions allows the County to prioritize initiatives and monitor success over time.

- **Now** (0-2 years): actions that will be initiated/implemented immediately
- **Next** (2-4 years): actions that will be initiated/implemented in the near future
- **Later** (5+ years): actions that will be initiated/implemented at a later date
- **Ongoing**: actions that have already been initiated and will continue through this strategy

Cost

The cost of implementing each action has been estimated to assist with incorporating these actions into annual budgets, as well as to help identify necessary external funding opportunities. All project costs will be brought to County Council for approval as part of the budget process.

- N/A: Cost is accounted for by existing staff capacity or within operating budgets
- ($) Low cost: $0 to $7,500
- ($$) Medium cost: $7,500 to $50,000
- ($$$) High cost: over $50,000

Responsibility

The responsibility outlines the lead and support departments and organizations that will have ownership and oversight over each action during the implementation process.

- The **lead** refers to the department or community partner who will lead or co-lead an action. Identifying a lead will help to incorporate corporate actions into annual strategic plans or provide credit to the community partner leading the initiative.
- **Support** refers to a County department, local organization, municipality, or community group that has outlined an interest in supporting the planning and implementation of climate actions.

Priority Area 1: Healthy Air, Water, and Land

Goal 1: Supporting innovation, adaptation, and protection of agricultural land in a changing climate.

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
1.1	Continue to implement agricultural systems planning to protect farmland (i.e., agricultural strategies)	Program or Project	High	Now	$	Planning & Development Economic Development	Finance & Corporate Services
1.2	Pilot innovative stormwater management, naturalization, and agricultural practices through the Huronview Demonstration Farm and share findings	Program or Project	Low	Ongoing	$$$ (as funding becomes available)	Ausable Bayfield Conservation Authority Huron Soil & Crop Improvement Association	Planning & Development Social & Property Services
1.3	Coordinate and create opportunities to increase food security with a changing climate (i.e., gardens, seed library)	Program or Project	High	Next	$$	Climate & Energy Cultural Services	Homes for the Aged Social & Property Services
1.4	Share information on local food availability across all 9 local municipalities to promote local food consumption (i.e., Taste Trails)	Program or Project	Medium	Now	N/A	Economic Development	Finance & Corporate Services

Goal 2: Promote sustainable resource use and waste management practices.

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
2.1	Promote the battery recycling program and explore opportunities to expand collection locations	Program or Project	Low	Next	$	Social & Property Services	Climate & Energy
2.2	Promote and explore expanding 'loose parts' play at EarlyON programs to divert waste from landfill, and promote beneficial learning for youth	Program or Project	Medium	Ongoing	$	Social & Property Services	Climate & Energy
2.3	Promote waste clean-up events in natural spaces (beach, roadside, trail, and forest)	Program or Project	Medium	Next	$	Lake Huron Coastal Centre Trail Associations	Climate & Energy Planning & Development Service Groups
2.4	Explore the feasibility of expanding and implementing community composting programs, such as curbside collection, in-home composters, or backyard composters	Program or Project	High	Later	$$$ (as funding becomes available)	Climate & Energy Local municipalities	Social & Property Services
2.5	Conduct an industrial composter pilot at the Homes for the Aged to understand waste diversion potential, staff resources, and return on investment	Program or Project	Medium	Now	$$$	Homes for the Aged	Climate & Energy

Goal 3: Use a systems approach to protect, enhance, and improve the capacity of natural spaces to adapt to future changes.

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
3.1	Trail talks – storytelling on trails with educational signage/stories in natural spaces	Program or Project	Low	Next	N/A	Climate & Energy Planning & Development	Social & Property Services Administration Cultural Services
3.2	Create partnerships to improve the management and benefits of County-owned forests (i.e., Maitland Trail Association)	Partnership or Engagement	High	Ongoing	$$	Planning & Development Climate & Energy	Environmental organizations
3.3	Naturalize County-owned properties with native species to reduce mowing, increase habitat, and sequester carbon (i.e., through the rural roadside strategy)	Program or Project	Medium	Next	$$	Social & Property Services Public Works Homes for the Aged	Planning & Development
3.4	Create a natural asset inventory for Huron County using a standardized approach	Plan or Guide	High	Later	$$$ (as funding becomes available)	Climate & Energy Conservation Authorities	Finance & Corporate Services

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
3.5	Partner with local organizations and Indigenous communities to monitor, map, and manage key invasive species in existing natural spaces (i.e., the Early Detection of Giant hogweed using drone technology)	Program or Project	Medium	Ongoing	$$	Conservation Authorities Local Municipalities	Climate & Energy Huron Stewardship Council Environmental Committees
3.6	Continue to support collaborative monitoring strategies for environmental indicators (i.e., forest health, water quality/quantity) to understand watershed health with a changing climate	Program or Project	Medium	Ongoing	N/A	Conservation Authorities Climate & Energy	Huron Stewardship Council
3.7	Create a corporate tree planting policy to ensure the replacement of damaged or removed trees	Policy or Procedure	Low	Now	N/A	Public Works	
3.8	Encourage and partner on naturalization events for private or public lands	Partnership or Engagement	Medium	Ongoing	$	Lake Huron Coastal Centre Lakeshore Eco-Network Huron Stewardship Council	Environmental Committees Climate & Energy

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
3.9	Create educational resources on nature-based solutions and green infrastructure alternatives to traditional infrastructure projects on private land	Education and Training	Medium	Next	N/A	Climate & Energy Huron Stewardship Council	Conservation Authorities Local Municipalities
3.10	Create a naturalization guide for community members to understand best practices for increasing natural spaces on their property	Plan or Guide	Medium	Now	N/A	Huron Stewardship Council	Climate & Energy Planning & Development
3.11	Find opportunities to learn about and incorporate two-eyed seeing* into environmental projects	Education and Training	Medium	Now	$	Climate & Energy	Planning & Development Indigenous communities

*Two-eyed seeing: brings together the strengths of Indigenous Knowledge and Western ways of knowing with respect and reciprocity to benefit all

Goal 4: Promote water management practices at the watershed and individual scale to manage increasing precipitation and flooding.

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
4.1	Continue to promote and implement the Huron Clean Water Project to address climate impacts	Program or Project	Low	Ongoing	$$$	Planning & Development Conservation Authorities	
4.2	Promote wetland creation and restoration success stories	Partnership or Engagement	Medium	Next	N/A	Conservation Authorities Climate & Energy	Planning & Development
4.3	Implement strong policy protection for existing wetlands and promote the importance of these features in mitigating the intensity of flood events.	Policy or Procedure	Low	Now	N/A	Planning & Development	Conservation Authorities
4.4	Explore pilot opportunities for innovative stormwater management/municipal drain implementation projects that can incorporate natural water flow and promote habitat	Program or Project	Medium	Later	$$$ (as funding becomes available)	Public Works	Local Municipalities
4.5	Complete Intact's municipal flood risk check-up to understand local flood challenges and build adaptive capacity to minimize flooding	Program or Project	Medium	Next	N/A	Climate & Energy Conservation Authorities	Local Municipalities

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
4.6	Continue to promote best practices for shoreline protection, including directing development away from hazard areas	Policy or Procedure	Low	Ongoing	N/A	Conservation Authorities	Planning & Development Local Municipalities

Priority Area 2: Resilient Buildings and Infrastructure

Goal 5: Promote and invest in energy efficiency of buildings.

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
5.1	Complete energy modeling before and after any new building (or retrofit) is complete to increase opportunities for efficiencies	Policy or Procedure	Low	Next	$$	Social & Property Services Public Works Homes for the Aged	Climate & Energy Emergency Services Cultural Services
5.2	Take advantage of professional development opportunities to increase staff knowledge on energy management	Education or Training	Medium	Ongoing	$	Social & Property Services	
5.3	Continue to determine the impacts of climate change on the County's built infrastructure by conducting climate risk assessments (i.e., culverts, buildings)	Program or Project	Medium	Later	$$$ (as funding becomes available)	Social & Property Services Homes for the Aged	Climate & Energy Public Works
5.4	Explore investment opportunities to advance renewable energy generation at County facilities	Program or Project	High	Later	$$$ (as funding becomes available)	Climate & Energy	Social & Property Services Public Works Homes for the Aged

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
5.5	Explore community energy needs, capacity limits, and opportunities for renewable energy	Program or Project	High	Later	N/A	Planning & Development Economic Development	Utility Companies Climate & Energy
5.6	Explore opportunities to share learning and promote access to energy efficiency in the community (i.e., virtual home energy assessments, municipality-led home retrofit program, targeted funding for cooling infrastructure, etc.)	Program or Project	Medium	Now	$$	Climate & Energy	Local Municipalities
5.7	Continue to set targets and reduce emissions through the Energy Conservation and Demand Management Plan (2024)	Program or Project	Medium	Ongoing	N/A	Climate & Energy	Social & Property Services Homes for the Aged Public Works
5.8	Use energy monitoring software to track the return on investment of energy retrofit projects	Policy or Procedure	Low	Now	N/A	Climate & Energy	Public Works Homes for the Aged Social & Property Services

Goal 6: Explore innovative opportunities to reduce emissions and increase resiliency in transportation infrastructure.

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
6.1	Implement staff training opportunities sourced by the Climate Change & Energy Specialist to reduce emissions and impact on the environment (i.e., salt management best practices, smart driving training	Education or Training	Medium	Now	N/A	Public Works Social & Property Services	Climate & Energy Independent Contractors
6.2	Implement a clean equipment protocol and training to reduce weed and invasive species transportation	Policy or Procedure	Medium	Later	N/A	Public Works	Planning & Development Social & Property Services Homes for the Aged
6.3	Incorporate electric or hybrid vehicles into the corporate fleet where financially and operationally feasible, based on the Electric Vehicle Feasibility Study (2025)	Policy or Procedure	Medium	Ongoing	$$	Public Works Social & Property Services Emergency Services	Climate & Energy
6.4	Work with other counties to complete the Rural Recharge network for EV charging stations	Partnership or Engagement	Low	Ongoing	N/A	Climate & Energy	

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
6.5	Host an electric and hybrid vehicle test drive event to share the realities of owning and operating low emission vehicles	Education or Training	High	Later	$$	Climate & Energy	Finance & Corporate Services Economic Development
6.6	Consider new technologies or pilot innovative materials when replacing infrastructure to reduce waste and greenhouse gas emissions	Program or Project	Medium	Ongoing	$$	Public Works	Finance & Corporate Services
6.7	Encourage walking, cycling and low emission transportation for all ages through pilots, policies and educational content	Partnership or Engagement	Medium	Next	$$ (as funding becomes available)	Planning & Development Economic Development Public Works	Lakeshore Eco-Network Local Municipalities Environmental Committees
6.8	Implement supportive active transportation policy in local Official Plans, Secondary Plans and implement through development review	Plan or Guide	Low	Ongoing	N/A	Local Municipalities	Planning & Development
6.9	Implement the findings of the 2014 Active Transportation Call to Action for Huron County and support Active Transportation Master Plans at local municipal level.	Plan or Guide	Medium	Next	N/A	Planning & Development	Huron Perth Public Health Local Municipalities

Priority Area 3: Supporting Health, Safety, and Wellbeing

Goal 7: Continue to support individual and community-level resiliency and preparedness through resource sharing and scoail connections.

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
7.1	Participate in sub-committees of the Coastal Adaptation Strategy Pilot	Partnership or Engagement	Medium	Ongoing	N/A	Maitland Valley Conservation Authority	Planning & Development
7.2	Develop a list of available warming and cooling centre locations and operational hours to provide to those in need during extreme weather events	Education or Training	Medium	Now	N/A	Local Municipalities Emergency Services	Climate & Energy
7.3	Host community emergency preparedness information and training sessions	Education or Training	Medium	Next	$	Emergency Services Climate & Energy	
7.4	Understand areas prone to heat in the community and mitigate impacts (i.e., greening programs for school grounds)	Program or Project	Medium	Now	$$ (as funding becomes available)	Climate & Energy	Finance & Corporate Services

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
7.5	Pilot events, activities, handouts, and information sessions that allow individuals to get to know their neighbours to increase resiliency	Partnership or Engagement	High	Ongoing	$	Social & Property Services Cultural Services	Economic Development Local Municipalities Climate & Energy
7.6	Create a checklist of climate change and health considerations for new developments	Plan or Guide	Medium	Now	N/A	Planning & Development Huron Perth Public Health	Climate & Energy

Priority Area 4: Empowering through Education and Outreach

Goal 8: Build community awareness and knowledge of risks and opportunities with climate change.

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
8.1	Offer Earth Day adaptation and mitigation programming (local speakers, environmental fair, plant sales, seed sales, movie nights)	Program or Project	Low	Ongoing	N/A	Cultural Services	Climate & Energy
8.2	Pilot a local speaker series at library branches to share their environmental expertise	Education or Training	Low	Next	$	Cultural Services	Service Groups Environmental Committees
8.3	Explore the creation of or contribute to an existing virtual newsletter (i.e. Healthy Lake Huron) to highlight environmental events, climate research, and news	Program or Project	Medium	Now	N/A	Climate & Energy	Ausable Bayfield Conservation Authority Healthy Lake Huron
8.4	Use storytelling to share local experiences with climate impacts and local acts of adaptation and resilience	Partnership or Engagement	High	Next	$	Climate & Energy	Administration Huron Perth Public Health

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
8.5	Diversify communication strategies to ensure community members across all demographic groups are informed on adaptation and mitigation opportunities	Education or Training	Medium	Ongoing	N/A	Climate & Energy	Administration Environmental Committees
8.6	Explore opportunities to increase youth education programming and involvement in environmental projects	Education or Training	Medium	Next	$	Cultural Services Economic Development	Planning & Development
8.7	Seek opportunities to learn about how the local lands and waters have changed over time from neighbouring Indigenous communities	Partnership or Engagement	Medium	Next	$	Climate & Energy	

Goal 9: Enhance community partnerships to strengthen mitigation and adaptation efforts across the County.

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
9.1	Continue to build relationships with neighbouring Indigenous communities to strengthen respect, knowledge and understanding	Partnership or Engagement	Low	Ongoing	$	All Departments	Human Resources
9.2	Promote and participate in existing citizen science programs to document Huron County flora and fauna	Partnership or Engagement	Low	Next	N/A	Huron Stewardship Council Planning & Development	Conservation Authorities Environmental Organizations
9.3	Help host climate cafes to meet people where they are at in their climate journey	Partnership or Engagement	Medium	Now	$	Lakeshore Eco-Network	Climate & Energy
9.4	Share relevant knowledge and data between partners to demonstrate the connections with climate change	Education or Training	Medium	Next	N/A	Climate & Energy Conservation Authorities	Huron Perth Public Health Academic Institutions

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
9.5	Continue to contribute expertise and share innovative practices through local and regional climate collaboratives	Partnership or Engagement	Medium	Ongoing	N/A	Climate & Energy	Carbon Footprint Initiative Healthy Lake Huron
9.6	Prioritize strong relationships with environmental organizations (i.e., Huron Stewardship Council, Huron Perth Woodlot Association, and Lower Maitland Stewardship Group) by providing technical support, promoting events and education opportunities	Partnership or Engagement	Medium	Ongoing	N/A	Planning & Development Climate & Energy	Environmental Organizations

Priority Area 5: A Healthy and Sustainable Economy

Goal 10: Explore opportunities to encourage the incorporation of sustainable practices into the local economy and businesses through education and awareness.

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
10.1	Explore the feasibility of sustainable energy generation and storage in Huron County, including partnerships with Indigenous communities	Program or Project	Medium	Next	$-$$$	Economic Development	Planning & Development
10.2	Explore regional opportunities and best practices for rural transportation systems	Partnership or Engagement	High	Later	N/A	Economic Development Western Ontario Warden's Caucus	Planning & Development Public Works
10.3	Continue to support local businesses through environmental campaigns (i.e., buy local)	Partnership or Engagement	Medium	Ongoing	$	Economic Development	Businesses BIAs
10.4	Provide community members and local businesses with applicable business cases for environmental initiatives	Education or Training	Medium	Later	N/A	Economic Development Climate & Energy	Finance & Corporate Services
10.5	Pilot a grant or incentive program for businesses or farmers to incorporate sustainable practices into their operations	Program or Project	Medium	Later	$$	Climate & Energy	Economic Development

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
10.6	Create a green events guide for local festivals to become more sustainable	Plan or Guide	Medium	Now	N/A	Cultural Services Economic Development	Climate & Energy
10.7	Develop and implement a Sustainable Tourism Strategy to balance the social, economic and environmental impacts of tourism	Plan or Guide	High	Now	N/A	Economic Development	Climate & Energy
10.8	Use existing platforms to share opportunities to reduce emissions from tourism (i.e., through “things happening this week”)	Education or Training	Low	Now	N/A	Economic Development	Climate & Energy Finance & Corporate Services

Priority Area 6: Corporate Sustainable Leadership

Goal 11: Integrate climate change considerations into County policies and procedures.

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
11.1	Launch a dedicated email for public inquiries and climate communications	Policy or Procedure	Low	Now	N/A	Finance & Corporate Services	Climate & Energy
11.2	Review computer lifecycle and repurpose technology where appropriate	Policy or Procedure	Medium	Next	N/A	Finance & Corporate Services	Climate & Energy
11.3	Provide recommendations to incorporate sustainable and social considerations, including sourcing from Indigenous Peoples, into the County's purchasing policy	Policy or Procedure	High	Now	N/A	Finance & Corporate Services	Climate & Energy Cultural Services
11.4	Conduct ongoing monitoring of the environmental benefits of the work-from-home policy	Education or Training	Medium	Now	N/A	Human Resources Climate & Energy	Finance & Corporate Services
11.5	Upgrade the climate lens tool to enhance interaction and provide useful expertise and advice to inform projects	Policy or Procedure	High	Next	N/A	Climate & Energy	Finance & Corporate Services

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
11.6	Creation of a mandatory staff training module on climate science, and how climate change relates to each department	Education or Training	High	Later	$-$$	Climate & Energy	Human Resources Finance & Corporate Services
11.7	Create an in-person vs. virtual meeting guide with best practices for maintaining quality meetings and reducing greenhouse gas emissions	Policy or Procedure	Low	Later	N/A	Climate & Energy	Human Resources
11.8	Continue to share corporate sustainability blogs on environmental topics with staff and other organizations	Education or Training	Low	Ongoing	$	Climate & Energy	Conservation and Climate Change Committee
11.9	Share information on Continuity of Operations Plan protocols within and across departments to increase awareness of emergency planning/ response	Education or Training	Low	Now	N/A	All Departments	Emergency Services
11.10	Share current practices and develop an office closure policy for extreme winter weather to keep staff and members of the public safe	Policy or Procedure	Medium	Next	N/A	Human Resources	All Departments
11.11	Ensure county buildings are prepared for extreme weather (i.e., purchase backup generators)	Program or Project	Medium	Ongoing	$$$	Social & Property Services Homes for the Aged	Cultural Services Climate & Energy Emergency Services

Goal 12: Continue to provide leadership to other organizations on adaptation and mitigation best practices.

Action		Action Type	County Staff Time Needed	Timeline	Cost	Responsibility	
						Lead	Support
12.1	Continue to host Sustainable Huron and Water Protection Steering Committee meetings on environmental topics, including climate change	Partnership or Engagement	Medium	Ongoing	$$	Planning & Development	Climate & Energy
12.2	Continue to implement and monitor the actions within the Sustainable Huron Action Plan (2025)	Plan or Guide	Medium	Ongoing	N/A	Planning & Development Climate & Energy	Sustainable Huron Steering Committee
12.3	Pilot a staff rideshare app for corporate events, meetings and in-person office days to reduce travel expenditures and greenhouse gas emissions	Program or Project	Medium	Later	$	Finance & Corporate Services	Climate & Energy
12.4	Explore programs with interactive online displays for climate plan progress tracking	Program or Project	High	Later	$$	Climate & Energy	Finance & Corporate Services Administration

Implementation, Monitoring and Review

Implementing the Plan

Implementation is critical to the success of Rooted in Resilience - Huron's Climate Action Strategy. To achieve the vision of being a community committed to innovative, sustainable climate action, the County must ensure that the actions in this strategy are prioritized and implemented across the corporation and community.

To ensure this, the County assigned a lead and support responsibility, County staff time requirements, timeline, and the County's estimated cost for each action. This will help departments, organizations, or community groups integrate the actions into their annual planning and budgets. As a corporation, this will ensure that adaptation and mitigation are being prioritized and integrated over time. When capacity permits, the Climate Change & Energy Specialist can also provide ongoing support to initiate and implement the actions outlined for all departments and organizations.

Monitoring Progress

Monitoring progress is important to the success of this strategy. By keeping track of the actions that are being implemented, the County will know that the corporation and community are progressing towards a more resilient and low-carbon future. The County intends to monitor progress by taking an annual report to County Council. This report will highlight the actions that have been initiated and implemented across the corporation and community, as well as provide an opportunity to discuss any challenges or future improvements. When possible, the County will incorporate data and performance metrics to demonstrate progress on particular actions or positive impacts from those actions in the community or for the corporation. For the community, the County's Climate Change and Energy Specialist will work with partner organizations and community groups to provide updates on their progress through the annual progress report to share successes occurring across the community.

Departments will also report on individual progress in their annual updates to County Council. This will give departments an opportunity to share their successes and achievements, as they work to reduce climate-related risks in their own service areas and for the sectors of the community they serve.

Review & Update

Climate adaptation planning is a dynamic process. Given the uncertainties with future changes, climate adaptation plans are often living documents that are subject to regular review and update. Regular review allows for new information to be integrated, based on the best available data or knowledge. Annual updates could include updated research findings and best practices, minor adjustments to the goals and actions initiated in this strategy, as well as adding further actions to guide Huron County's continued efforts. This will ensure that Huron County continues to be a leader in taking action to prepare for future changes. These minor changes will be included with the annual progress report to County Council.

Rooted in Resilience - Huron's Climate Action Strategy will be reviewed in its entirety every 5 years, and staff will update the strategy if it meets one or more of the following conditions:

- Major changes in current weather trends or climate projections for Huron County that would change local vulnerabilities or risks;
- The completion of 80% or more of the actions within the plan; or,
- New federal, provincial, or corporate strategic direction that needs to be incorporated.

Terminology

Active transportation: using your own power to get from one place to another.

Adaptation: Actions that are taken to reduce or respond to the negative impacts of climate change, while taking advantage of potential new opportunities.

Biodiversity: all the different types of life (people, animals, plants, organisms, etc.) that you can find in one area.

Carbon Pricing: an economic tool that attaches a cost to greenhouse gas emissions and is used to incentivize emission reductions.

Carbon Sequestration: the long-term storage of carbon in plants, soils, geologic formations, and water bodies.

Climate: The long-term weather conditions, including temperature and precipitation patterns, for a given location. Climate variables are often averaged over a period of time, such as 30 years.

Climate Change: Changes in long-term weather patterns caused by natural variability and human activity. Changes in climate since the early 20th century are primarily driven by human activities, which have increased greenhouse gas emissions, causing surface temperatures to rise.

Climate Hazard: a natural or human-caused physical event or trend, such as floods.

Climate Impact: the result of a climate hazard interacting with a community, such as property damage from flooding.

Energy Audit: an assessment of the energy needs and efficiencies of a building.

Energy Modeling: the creation of a computer simulation for energy systems of a building to analyze and predict energy consumption.

Equitable Climate Action: taking inclusive action to address the impacts of climate change and to build resilience in a way that fairly distributes burdens and benefits with a focus on protecting vulnerable members of the community.

Food Security: occurs when people have access to enough safe and nutritious food for normal growth and development to live a healthy lifestyle.

Global Warming: An increase in the Earth's average surface temperature, primarily attributed to a rise in heat-trapping greenhouse gas emissions from fossil fuel burning.

Greenhouse Gas Emissions: Gases emitted from a natural or anthropogenic source that absorb heat in the atmosphere. Carbon dioxide, methane, and water vapour are examples of greenhouse gases.

Green infrastructure: the natural vegetative systems and green technologies that provide a community with economic, environmental, health, and social benefits.

High Emissions Scenario: a potential future pathway for greenhouse gas emissions where emissions continue to rise with little effort to reduce the current level of emissions. This scenario indicates global average warming levels of 3.2 to 5.4°C by 2090.

Intergovernmental Panel on Climate Change: the United Nations body for assessing the science related to climate change.

Mitigation: Measures that are taken to reduce or avoid the greenhouse gas emissions that are contributing to climate change.

Natural Asset: the collection of natural resources and ecosystems that contribute to the health, well-being, and long-term sustainability of a community.

Natural Spaces: an area of land or water that has plants or other living organisms that contribute to ecosystem processes.

Nature-based Solutions: actions inspired by nature that provide human and ecosystem benefits.

Net-Zero: means either no greenhouse gas emissions are emitted or the emissions that are released into the atmosphere by humans are equal to those that are removed.

Renewable Energy: energy derived from natural processes that are replenished at a rate that is equal to or faster than the rate at which they are consumed (i.e., solar or wind energy).

Resilience: The ability of a system or community to anticipate, cope with, and recover from the impacts of climate change.

Retrofit: an improvement to an existing building that increases the energy efficiency of the energy systems.

Risk: A metric that combines the likelihood of an event occurring with the consequences that may result in danger, harm, or loss.

Sustainable Tourism: balances economic growth, environmental protection, and social responsibility to minimize negative impacts while supporting local communities, conserving ecosystems, and preserving cultural heritage.

Two-Eyed Seeing: brings together the strengths of Indigenous and Western ways of knowing with respect and reciprocity to benefit all (Anderson, 2025).

Watershed: an area of land that catches all precipitation (rain and snow) that eventually drains or seeps into the same river, lake or ocean.

Weather: The day-to-day state of the atmosphere at a given location. Weather includes short-term variations in temperature, precipitation, wind, and other variables.

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Appendix 1: Climate Risk Assessment Results

Climate Impact Statement	Community	Corporate
Growing Season		
Alterations to the growing season (longer, insufficient precipitation) could place more stress on agricultural systems (local food, producers and water supply).	Moderate	Moderate
A longer growing season could allow tourism operators to extend their season.	Moderate	Low
Longer growing seasons may make it easier for invasive species to thrive and become established.	Moderate	Low
A longer growing season with sufficient precipitation could lead to longer seasonal employment.	Very Low	Very Low
A longer growing season with sufficient precipitation could lead to higher productivity of native vegetation, and opportunities to grow new crop varieties.	Very Low	Very Low
Winter Season		
Less ice formation due to warmer winter temperatures may increase erosion along the Lake Huron shoreline and local watercourses.	Moderate	Moderate
Changes in the freeze-thaw cycle may cause damage to infrastructure (roads, buildings, water, sewers, homes, etc.).	Low	Moderate
A shorter winter season could mean a longer construction season.	Moderate	Low
A shorter winter season may cause new and existing allergies and respiratory illnesses to worsen.	Moderate	Moderate
A shorter winter season could reduce the availability and options for winter recreational activities.	Low	Very Low

Climate Impact Statement	Community	Corporate
Heat		
More humidity and longer heat waves will impact vulnerable populations and those with existing health conditions (i.e., no access to air conditioning).	Moderate	High
If precipitation decreases and droughts persist, it may affect groundwater reserves, leading to potable water shortages and restrictions on use (i.e., lawn maintenance).	Very Low	Low
If there is more heat and longer heat waves, those working outdoors may experience heat-related illnesses.	Moderate	Moderate
If there is more heat and longer heat waves, soil moisture may be reduced, impacting vegetation growth and livestock.	Moderate	Moderate
Longer dry periods may increase fire risk to natural and built environments.	Low	Low
More humidity and longer heat waves may reduce access to outdoor recreational opportunities while increasing demand for shoreline recreation.	Moderate	Low
Hotter and drier weather could adversely impact air quality (i.e., through increased risk of stagnant air, forest fires, etc.) and increase indoor air conditioning use.	Moderate	Moderate
Changes in seasonal temperatures (i.e., warmer temperatures) may impact aquatic ecology and lakeshore ecosystems.	Moderate	Low
Longer heat waves could increase health concerns related to water quality and insect-borne illnesses.	Moderate	Low
Increased heat and precipitation may increase financial requirements for maintaining roads, buildings, and related equipment.	Moderate	Moderate

Climate Impact Statement	Community	Corporate
Precipitation		
More extreme rainfall events impact infrastructure (roads, culverts, bridges) and cause displacement from flooded buildings/homes/roads.	High	Moderate
More wet days or extreme rainfall events may cause farming operations and fields to flood.	High	Moderate
More extreme rain events and flood conditions could impact water quality through bank erosion and runoff into rivers and streams.	Moderate	Moderate
Limited precipitation in the spring and summer may reduce water levels of rivers, lakes, and ponds.	Moderate	Very Low
If there are more extreme precipitation events, upgrades to municipal drains and urban stormwater management infrastructure may be required.	Very Low	Moderate
Extreme Weather		
More frequent and extreme weather events during any season can lead to more accidents and emergencies.	Moderate	High
More lake-effect snow and ice storms can create hazardous travel conditions and increase demand for snow removal and road salt application.	High	High
Increases in freezing rain and snow/ice storms may increase damage to vegetation and utility lines, resulting in more frequent and longer power interruptions.	Moderate	Moderate
More frequent and extreme weather events during any season will exacerbate existing inequities for low-income and vulnerable populations.	High	Moderate

Climate Impact Statement	Community	Corporate
Extreme Weather		
Ontario is regularly becoming a hot spot for tornado activity. Higher wind speeds could impact people and cause damage, especially if tornadoes touch down.	Moderate	Moderate
Extreme weather events could impact events and tourism opportunities.	Not assessed	Low
More frequent and extreme weather events could impact staff's mental and physical well-being.	Not assessed	Moderate
More frequent and extreme weather events could impact county processes, staff schedules, and workload.	Not assessed	High