

# Climate Action Plan

## Background Report

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# County of Lennox and Addington Climate Action Plan

## Table of Contents

Acronyms .....	3
Key Terms.....	4
CAO's Message .....	8
Introduction .....	9
Climate in Lennox and Addington .....	11
Responding to Climate Change .....	13
“Reassessing Nature’s Worth” – Conservation Authorities .....	14
County’s Role.....	16
What is a Climate Action Plan?.....	18
County’s Vision, Goals and Objectives .....	19
Priority Action Areas .....	21
Priority Area 1: Buildings, Infrastructure & Assets.....	24
Priority Area 2: Health & Safety .....	28
Priority Area 3: Mobility & Transportation.....	30
Priority Area 4: Energy Consumption & Waste Reduction .....	31
Priority Area 5: Partnerships & Engagement.....	33
References.....	35



# County of Lennox and Addington Climate Action Plan

## Acronyms

CAP	Climate Action Plan
COOP	Continuity of Operations Plans
EMS	Emergency Health Services
EV	Electric Vehicle
GHG	Greenhouse Gas
HVAC	Heating, ventilation, and air conditioning
IPCC	Intergovernmental Panel on Climate Change
JMPC	John M Parrott Centre
LED	Light Emitting Diode
MOECC	Ministry of the Environment and Climate Change
MCVA	Mississippi Valley Conservation Authority
PCF	Pan-Canadian Framework
QC	Quinte Conservation
Solar PV	Solar photovoltaic





# County of Lennox and Addington Climate Action Plan

## Key Terms

### Adaptation

Anticipating the adverse effects of climate change and taking appropriate action to prevent or minimise the damage they can cause or taking advantage of opportunities that may arise. Examples of adaptation measures include large-scale infrastructure changes, such as building defenses to protect against sea-level rise, as well behavioral shifts, such as individuals reducing their food waste. In essence, adaptation can be understood as the process of adjusting to the current and future effects of climate change.

### Carbon footprint

Total amount of greenhouse gases (including carbon dioxide and methane) that are generated by our actions.

### Climate change

Refers to long-term shifts in temperatures and weather patterns. These shifts may be natural, but since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels (like coal, oil, and gas), which produces heat-trapping gases.

[Definition from the United Nations]

### Climate resilience

Ability to anticipate, prepare for, and respond to hazardous events, trends, or disturbances related to climate. Improving climate resilience involves assessing how climate change will create new, or alter current, climate-related risks, and taking steps to better cope with these risks.



# County of Lennox and Addington

## Climate Action Plan

### **Electric Vehicles**

Vehicles that are either partially or fully powered on electric power. Electric vehicles have low running costs as they have fewer moving parts for maintaining and also very environmentally friendly as they use little or no fossil fuels (petrol or diesel).

### **Greenhouse gases**

Gases that absorb and emits radiant energy within the thermal infrared range, causing the greenhouse effect. The primary greenhouse gases in Earth's atmosphere are water vapor, carbon dioxide, methane, nitrous oxide, and ozone.

### **Heat wave**

A period of excessively hot weather, which may be accompanied by high humidity, especially in oceanic climate countries.

### **Migration**

General process of people or animals moving from one place to another. There are many different types of migration, including internal and external migration, gross or net migration, and immigration and emigration. In general, migration occurs seasonally, but moves can also be permanent with the more specific types of migration. Climate-induced migration exposes the fundamental connection between climate change and development directly impacting lives and livelihoods.

### **Mitigation**

Making the impacts of climate change less severe by preventing or reducing the emission of greenhouse gases (GHG) into the atmosphere. Mitigation is achieved either by reducing the sources of these gases — e.g., by increasing the share of renewable energies, or establishing a cleaner mobility system — or by enhancing the storage of these gases — e.g., by increasing the size of forests. In short, mitigation is a human intervention that reduces the sources of GHG emissions and/or enhances the sinks.



# County of Lennox and Addington Climate Action Plan

## **Out-migration**

One of the two main forms of internal migration. Like the term migration, it usually refers to a large-scale movement of people, but unlike general migration, the relocation is usually permanent instead of seasonal. Out-migration is defined as the movement of people out of one region of a country to live in another region of the same country. It differs from emigration because during that process, people are relocating to a different country or region of the world.

## **Recycling**

Process of collecting and processing materials that would otherwise be thrown away as trash and turning them into new products. Recycling can benefit your community and the environment.

## **Renewable energy**

Energy that is collected from renewable resources that are naturally replenished on a human timescale. It includes sources such as sunlight, wind, the movement of water, and geothermal heat. Although most renewable energy sources are sustainable, some are not.





# County of Lennox and Addington Climate Action Plan

## **Sustainability**

A societal goal that broadly aims for humans to safely co-exist on planet Earth over a long time. It consists of fulfilling the needs of current generations without compromising the needs of future generations, while ensuring a balance between economic growth, environmental care and social well-being.

## **Vulnerability**

Degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes.

## **Watershed**

A drainage basin is an area of land where all flowing surface water converges to a single point, such as a river mouth, or flows into another body of water, such as a lake or ocean.



# County of Lennox and Addington Climate Action Plan

## CAO's Message

The effects of global warming and climate change have impacted all of our communities through increased temperatures, increased flooding and extreme weather events. These occurrences will only increase over time unless there is a significant change on a global level. As community leaders we have a responsibility to both ensure we minimize our own impact on global warming and also to mitigate the effects of climate change for our residents, neighbours and visitors. Therefore, as a County we need to continually review our capital and operating decisions to ensure we are making the best long term choices for our residents.

This Climate Action Plan is designed to challenge our decision-making and coordinate our efforts in order to maintain a strong, resilient and responsible community. This plan will be reviewed and updated annually as we embrace our commitment to address climate change. The County of Lennox and Addington is committed to making a difference and leading by example.



**Brenda Orchard**  
Chief Administrative Officer





# County of Lennox and Addington Climate Action Plan

## Introduction

All nations on all continents are being impacted by climate change. It is harming people's lives and upsetting national economies. Sea levels are rising, weather patterns are shifting, and extreme weather events are happening more frequently. Within a matter of weeks, the COVID-19 pandemic and the accompanying restrictions on international travel and other economic activities by nations all over the world significantly reduced air pollution and greenhouse gas (GHG) emissions. Although the COVID-19 pandemic-related travel restrictions and economic slowdowns caused a reduction in greenhouse gas emissions in 2020, this improvement is only transitory. There is no pause in climate change. Emissions are increasing or expected to increase once the world economy has recovered from the pandemic. Action must be taken immediately to address the climate disaster in order to save lives and livelihoods.

## Climate Change is Real!

The catastrophic heatwaves, floods, wildfires, and tropical cyclones have made the mounting effects of climate change evident around the globe. The Intergovernmental Panel on Climate Change (IPCC) concluded that there is now a clear connection between rising greenhouse gas concentrations in the atmosphere and increases in the frequency and intensity of extreme weather events in a new assessment of the science that was published in August 2021. According to the report, "Climatic change is already having an impact on every populated part of the world, with human activity responsible for many of the observed changes in weather and climate extremes."



# County of Lennox and Addington Climate Action Plan

In Ontario, rainstorms and flooding have always been a regular occurrence. The same is true for heat waves, tornadoes, windstorms, and winter storms. These occurrences used to be rare. These occurrences are now more frequent and more intense, which is a certain indicator of a change in our weather patterns. This change is referred to as "climate change." Our environment, our economy, and our health are all at risk. Over the course of the next century, average temperatures in Ontario might increase by as much as 3 to 8 degrees Celsius. An increasing frequency of severe weather events, such as record-breaking storms, floods, droughts, and heat waves, will be brought on by warmer temperatures, which will also result in milder winters and longer growing seasons. All areas of our province will be significantly impacted by the anticipated changes in our climate. Climate change, however, is more than just a natural occurrence. Through modifications in weather patterns, humans are directly and indirectly exposed to the health risks associated with climate change. As per the Ontario Climate Change and Health Modelling Study report in 2016, the heat wave in Lennox & Addington was  $0.17^{\circ}\text{C}$  during 1971-2000 and is expected to be increased by  $1.19^{\circ}\text{C}$  and  $2.89^{\circ}\text{C}$  in 2050 and 2080 respectively. A heat wave is defined in the study report as the excessive hot weather for at least three consecutive days exceeding  $32^{\circ}\text{C}$ .





# County of Lennox and Addington

## Climate Action Plan

### Climate in Lennox and Addington

The risks that climate change bring to humanity and its extensive repercussions have made it a topic that has recently attracted more attention. Both global and local effects of climate change are present. Governmental Authorities at all administrative levels must first comprehend the anticipated changes brought on by climate change in order to effectively plan for it. The causes of climate change, worldwide climate trends and projections, and expected effects in Eastern Ontario are briefly discussed in the section that follows. *Adapting to Climate Change in Ontario* was published in 2009 by the Ontario Ministry of the Environment and Climate Change (MOECC) (EPCCA, 2009). According to the forecasts for Ontario, surface air temperatures are predicted to rise 2.5–3.7°C by 2050 in comparison to levels between 1961 and 1990. Climatic trends in Eastern Ontario for the last 2-3 decades are shorter, milder, less snowy winters, spring coming earlier, summer temperatures hovering in upper end of historical range, fewer cool summers, and frequent microbursts.

Lennox and Addington County must balance the dual challenges of proactively adapting our infrastructure and programs to lessen the effects of extreme and changing weather patterns like hotter and drier summers, more intense rainfall events, warmer winters, icing conditions, and new types of pests and diseases with reducing our impact on global climate change. With records breaking increasingly frequently, changes in precipitation and temperature have become the new normal. Between the beginning of March and the end of May 2020's spring experienced roughly half the usual amount of rainfall, with a record-high temperature of 27.5° C.





# County of Lennox and Addington Climate Action Plan

Residents have noticed changes in the local environment and weather. They have noted less winter snow, shorter winters, fewer cold snaps, earlier springtime onsets, longer and hotter summers, greater wind, and more frequent extreme windstorms. According to data, winters are getting shorter and milder and there is less snow during the season. Both the maple syrup season and hot, dry summers are occurring earlier in the year. According to pollen taken from sediment cores, there are more birch and oak trees and less white pine and hemlock in the forest now than there were before the advent of the Europeans. Across the county, the effects of climate change are already being felt. Daily struggles for communities include high energy costs (consumption), sharp economic declines, the future of farming, an ageing population, youth outmigration, and limited access to communication technologies. Construction, forestry, hunting, fishing, tourism, and agriculture are all climate-sensitive industries with employment in the region. Adaptive communities constantly strive to make the most of or use their resources to address current issues while keeping an eye out for brand-new issues. There is some uncertainty due to the complexity of the factors at play and the potential for emissions levels to shift over time. Having said that, the climate adaptation plan offers the best tool currently available for foreseeable planning.



# County of Lennox and Addington Climate Action Plan

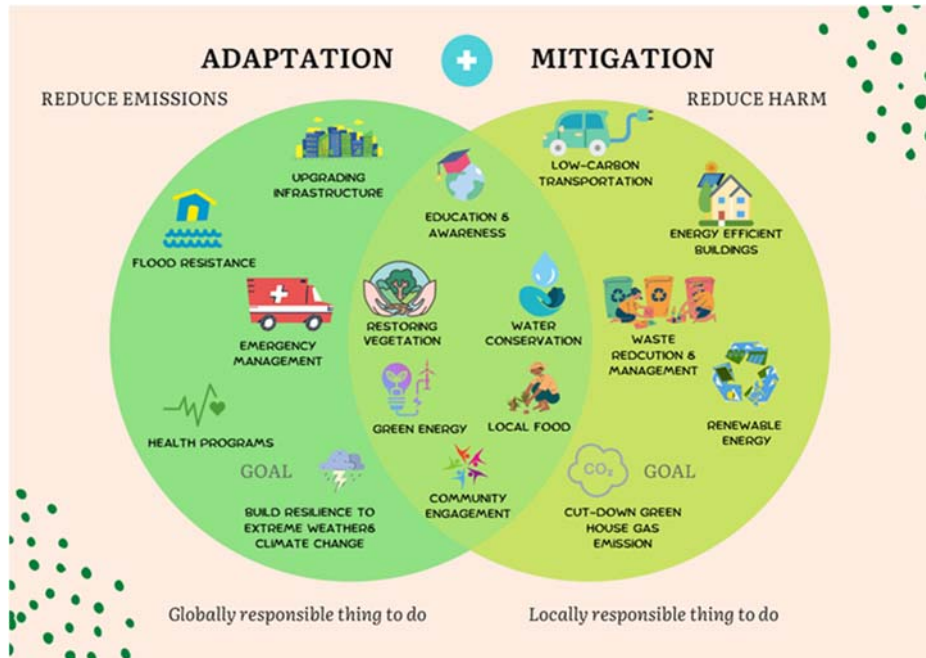
## Responding to Climate Change

The climate is changing. Beyond doing everything in our power to reduce emissions and slow down the rate of global warming, we must adapt to the effects of the climate change in order to safeguard our communities and ourselves. Where you reside determines the fallout. It could include wildfires or floods, droughts, hotter or colder days, or an increase in sea level. While some climate change is a result of natural oscillations that have existed for millions of years, human activities that put heat-trapping gases into the atmosphere are increasingly warming the world by adding to the "greenhouse effect." The best estimate for global average surface air warming over the current century, according to the Intergovernmental Panel on Climate Change, varies from 1.8°C to 4.0°C (IPCC 2007). There has never been a temperature change at this rate in the past 10,000 years, at the very least. As a result, past climate no longer serves as a reliable indicator of present climate. The 2015 Paris Agreement seeks to enhance the international response to the threat posed by climate change by limiting the increase in global temperature this century to well under 2°C above pre-industrial levels. The accord also aspires to improve countries' capacity to deal with the effects of climate change through appropriate financial flows, a new technological framework, and a strengthened capacity building framework.

When it comes to reducing the effects of climate change, there is no one approach that works for everyone. It is a continual process that requires a combination of both adaptation and mitigation strategies. While adaptation seeks to decrease the negative effects through a variety of initiatives at the local level, mitigation focuses on limiting climate change by reducing the global emissions of greenhouse gases. The adjacent diagram summarises the preceding discussion of the overarching goal guiding the vision for our Climate Action Plan. Adaptation measures are actions that are made to adapt to climate change, mitigate potential damages, or deal with its effects. Therefore, it combines technology, policy, and the speed at which they may be put into practice.



# County of Lennox and Addington Climate Action Plan



## “Reassessing Nature’s Worth” – Conservation Authorities

Conservation Authorities identify and implement energy-saving technologies and techniques, as well as operate and increase the usage of sustainable mobility within their fleet. They also incorporate or implement renewable energy systems (e.g., water power). The County of Lennox & Addington is covered by three Conservation Authorities: [Cataraqui Region Conservation Authority](#), [Mississippi Valley Conservation Authority \(MCVA\)](#), and [Quinte Conservation Authority \(QCA\)](#). There are numerous public nature preserves and conservation sites in Lennox & Addington County that are accessible all year round. The QCA Authority covers the communities of Camden East, Colebrook, Deerock, Flinton, Forest Mills, Napanee, Newburgh, and Sheffield. There are hiking trails, fishing piers, picnic tables, and restrooms at each location. Parrott's Bay Conservation Area, which is close to Amherstview, is run by the Cataraqui Region Conservation Authority. The MVCA watershed area extends into a part of the northwest corner of Lennox & Addington County, within the Township of Addington Highlands. It includes the upper headwaters that feed the Mississippi River system and the Mazinaw Lake. QCA suggest future areas of development and resources such as water balance study, [climate assessment for source water](#) and [Climate Change Vulnerability Assessment Tool created by Conservation Ontario](#). Here are some thoughts from our Conservation Authorities about our CAP initiatives.



# County of Lennox and Addington Climate Action Plan

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We appreciate the opportunity to review and provide input on the Climate Action Plan (CAP) of Lennox & Addington County. We'd like to congratulate the County on taking the initiative to prepare this important document. As an agency responsible for water resource management, Mississippi Valley Conservation Authority (MVCA) is acutely aware of the pressing need to put actions and tools in place to assist our watershed communities in preparing for and adapting to the impacts of a changing climate.

We note that the County CAP includes several actions involving collaboration with the CAs, including facilitating the planting of trees and communications regarding floodplain mapping. We would welcome the opportunity to work with the County on these and other initiatives. Again, we congratulate the County on this initiative!!

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## Partners Who Are Vital for a More Resilient Ontario

The growth of Ontario's low carbon economy is supported by [Conservation Authorities](#). By promoting more renewable energy sources, engaging in water conservation, cutting emissions, preparing for, and executing climate change adaptation, and enhancing watershed resilience through watershed management programmes, conservation authorities are transforming to a greener economy. This strategy is more cost-effective, slows down our use of resources, and lowers waste and pollution. In this way, we can adapt to constantly changing circumstances and coexist with the natural world.

# County of Lennox and Addington Climate Action Plan

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We think the plan looks great and are supportive of all our municipal and county partners within the Quinte Conservation watershed taking action to develop and implement Climate Adaptation Plans.

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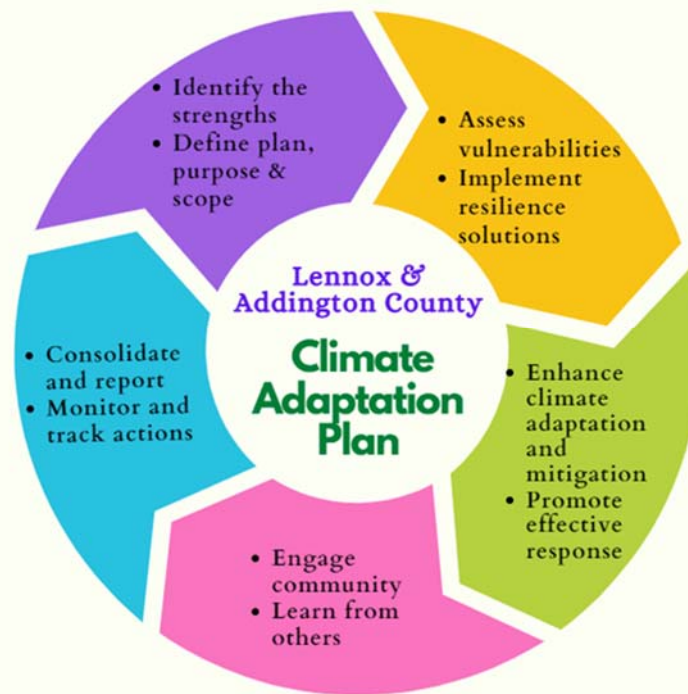


Quinte  
CONSERVATION

## County's Role

The Canadian government unveiled its [2030 Emissions Reduction Plan](#) in March 2022, which lays out a roadmap for the country's economy to follow in order to reduce emissions by 40 to 45 percent below 2005 levels by 2030. [A Healthy Environment and a Healthy Economy](#), Canada's reinforced climate strategy, was introduced by the Canadian government in December 2020. The strategy expands on initiatives to reduce pollution, increase the number of well-paying jobs, and promote a healthier environment and economy. The Government of Canada agreed to collaborate with Indigenous Peoples, provincial, territorial, and municipal governments, as well as other important partners, to create Canada's first [National Adaptation Strategy](#) as part of the plan. The adaptation strategies in the Pan-Canadian Framework will be built upon by the National Adaptation Strategy in order to bring actors from across Canada together through shared priorities, cohesion in action, and a whole-of-Canada approach to reducing climate change risks. Canada's first national climate plan, the 2016 [Pan-Canadian Framework on Clean Growth and Climate Change](#) (PCF), was created in collaboration with the provinces, territories, and Indigenous peoples. It is a crucial first step in helping Canada meet its goal under the Paris Agreement, and it reduces pollutants more effectively and affordably than any other climate plan in the country's history. All things considered, Canada is now on track to meet its emissions reduction goal under the Paris Agreement for 2030 and has the foundation in place to achieve a successful net-zero emissions future by 2050.

# County of Lennox and Addington Climate Action Plan



Social-ecological changes will have a significant impact on how we perceive the climate. An Ontario summer by the end of the century may resemble the hot, muggy summers of northern Virginia today (United States). According to climate forecasts, severe storm events and excessive heat are predicted to increase in frequency as global temperatures rise. Asthma and other respiratory conditions are probably made worse by increased ground-level ozone and smog development brought on by higher temperatures and more power being produced for air conditioning. Drought and intense storms have a major impact on farming communities. Cities, where 80% of Ontarians reside, are also very susceptible to the dangers of climatic extremes. This causes immediate economic losses and necessitate expensive modifications for both rural and urban residents.

The main role of the County is to minimise greenhouse gas emissions in Lennox & Addington as a whole. Climate action has a wide range of additional advantages, such as thriving, walkable communities, the preservation of natural areas, waste reduction, and improved air and water quality. Although some action areas are rarely highlighted in this report, co-benefits and climate change adaptation (or mitigating its effects) must be carefully taken into account as we carry out all of our strategies and actions. Although local governing bodies have little control over other community-related sources of emissions, if we want to keep global warming to 1.5°C, we must carefully consider measures to cut all emissions.



# County of Lennox and Addington Climate Action Plan

## What is a Climate Action Plan?

A climate action plan is a comprehensive and strategic framework for monitoring, planning, and reducing greenhouse gas (GHG) emissions and associated climatic effects. Municipalities create and use climate action plans as local road maps to help them decide where and how to cut emissions in a way that is both cost-effective and in line with other municipal objectives. Plans for reducing emissions must at the very least comprise an inventory of current emissions, reduction objectives, and evaluated and prioritised reduction activities. A climate action plan should ideally also contain an implementation strategy that details the necessary tools and financing sources.

Our strategy is centred on reducing carbon emissions including the combustion of fossil fuels in our buildings and vehicles. The plan indicates that residents, businesses, and the county are all contributing to reduction in emissions and being energy efficient. It is intended to make living a carbon-free life simpler. Residents can have more energy-efficient structures, which would result in healthier living conditions and lower energy costs. Additionally, they might gain from more diversified economies that are less susceptible to fluctuations in the price of oil and gas globally as well as the creation of quality local jobs. In sum, residents benefit from climate policies by being healthier and happier. There is only one Earth. It is our responsibility to protect it and make sure it will endure for future generations.



# County of Lennox and Addington Climate Action Plan

## County's Vision, Goals and Objectives

### Our Vision

An ambitious vision for our County is to call for stepping up the fight against climate change. The 2015 Canadian Energy Strategy announced by the Council of the Federation, National Adaptation Strategy and the 2016 Pan-Canadian Framework are just a few of the countless other climate change commitments that will be addressed by this strategy. This plan includes a strategy for adapting to climate change that is backed up by measures to strengthen the resilience of our towns, businesses, infrastructure, and natural resources. Early action and climate adaptation are significantly more efficient and economical than addressing climate impacts after they have already occurred. This CAP is the result of broad stakeholder involvement, expert collaboration, and county staff input. By being a low-carbon and resilient county, Lennox & Addington is dedicated to doing its share to secure a brighter future. The community as a whole, including residents, business owners, and visitors, as well as Lennox and Addington County as a corporation, will take steps to achieve this goal by lowering the carbon footprint of our activities and services. The main goal of this CAP is to make Lennox and Addington County a low-carbon, energy-efficient and resilient region. The CAP provides a path ahead over the following ten years by offering a gradual procedure.



# County of Lennox and Addington Climate Action Plan

The main goal of our Climate Action Plan:

**To enhance our community's ability to prevent, endure, respond to, and recover from climate change effects like rising temperatures, more frequent and intense heat waves, drought, heavy rains, and severe storms.**

The plan is designed to achieve the following objectives that will help in accomplish our main goal.

**Objective 1:** Integrate climate change considerations into County's strategies, plans, policies, procedures, operations, and services

**Objective 2:** Prevent environmental deterioration, improve ecosystem services, and safeguard natural resources

**Objective 3:** Reduce the negative effects of extreme weather and emergency situations to minimize health threats & safety risks to community members and staff

**Objective 4:** Consider the effects of climate change on land-use, building design, infrastructure, transportation, and asset management

**Objective 5:** Raise staff and public awareness of climate change





# County of Lennox and Addington Climate Action Plan

## Priority Action Areas

The County has established action pathways, which are focused areas with accompanying actions that it intends to complete within the next five to ten years. By implementing some action pathways Lennox and Addington County will be able to achieve its net zero goals. Each of these priority areas of action consists of many initiatives that will lower GHG emissions while enhancing the standard of living and affordability for people living in and operating businesses in Lennox and Addington County. The following categories are used to group the action pathways:

**Priority Area 1** : Buildings, Infrastructure & Assets

**Priority Area 2**: Health & Safety

**Priority Area 3**: Mobility & Transportation

**Priority Area 4**: Consumption & Waste Reduction

**Priority Area 5**: Partnerships & Engagement



# County of Lennox and Addington Climate Action Plan



## Assessment Criteria

Each strategy has a cost, timeline, responsibility, and status evaluation. Staff from Lennox and Addington County will review these internally using the following criteria:

### Cost

Each action's implementation costs have been calculated to make it easier to include the CAP's annual budgets and to find outside financing sources. According to a relative scale, the projected cost of carrying out each action has been described as follows:

- Not-Applicable (N/A): Cost is accounted for within existing operating budgets or covered by existing staff capacity
- Low cost: \$0 to \$25,000
- Medium cost: \$25,000 to \$75,000
- High cost: over \$75,000

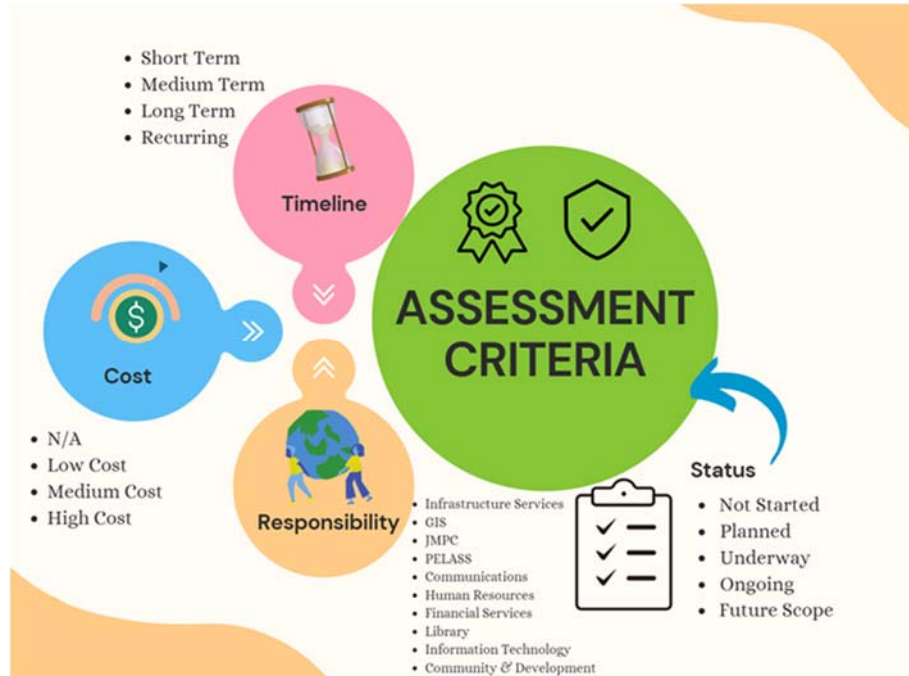
### Timeline

The CAP's initiatives are meant to direct adaptation efforts over a ten-year period. A road plan for the following years is provided by the supporting actions. The County can prioritise initiatives and track their progress over time thanks to the timetable connected to these actions.

The duration of initiatives is classified as short-, medium-, or long-term as follows:

- Short Term: actions that will be initiated/implemented immediately
- Medium Term: actions that will be initiated/implemented in the near future
- Long Term: actions that will be initiated/implemented at a later date
- Recurring: actions that have already been initiated and will continue through the CAP

# County of Lennox and Addington Climate Action Plan



## Responsibility

In order to increase ownership and accountability throughout the implementation process, roles and duties are identified. There are also other parties mentioned whose cooperation is essential to carrying out each action. The department that has been designated to take the lead in initiating and/or implementing a course of action is referred to as bearing responsibility. Finding the accountable division will make it easier to include the initiatives in yearly strategic plans. This will guarantee that the CAP is given top priority and put into practice throughout the organization.

## Status

Each supporting action includes a status update on each action, which will be updated as the CAP is put into practice. An action's status is described as follows:

- Not Started - not yet started or implemented
- Planned - the action is intended to be completed and is included in current or upcoming work plans and/or budgets
- Underway - covers initiatives that have been started, have funding in place, and/or are a part of a department's routine activities
- Ongoing
- Future Scope



# County of Lennox and Addington Climate Action Plan

## Priority Area 1: Buildings, Infrastructure & Assets

No	Action	Timeline	Cost	Responsibility	Status	Goals
	<b>Educational campaign on <i>home energy efficiency</i> and <i>fuel switching</i></b>	Short	Low	Infrastructure Services	Future Scope	Adaptation
	Have a consultant or energy expert/team to maintain and produce an <b><i>energy usage report</i></b> every 2-3 years	Medium	Medium	Infrastructure Services	Future Scope	Adaptation & Mitigation
	Prioritize <b><i>building designs</i></b> that <b>reduce energy demand</b> and <b>increase efficiency</b> (passive cooling, air source heat pump, ground source heat pump, triple pane windows, light-coloured roofs, etc.)	Medium	Medium	Infrastructure Services	Future Scope	Adaptation
	Prioritize <b><i>climate resilient building designs</i></b> (e.g., flood prevention strategies, passive cooling designs, expansion of hurricane clip program)	Medium	Medium	Infrastructure Services	Future Scope	Adaptation
	<b><i>Green Buildings programs</i></b> such as Zero Emissions Building Plan and Resilient Buildings	Long	High	Infrastructure Services	Future Scope	Mitigation
	Increase number of buildings re-commissioned each year	Long	High	Infrastructure Services	Future Scope	Adaptation
	Ground mounted <b><i>Solar PV</i></b> community energy generation	Medium	High	Infrastructure Services	Future Scope	Mitigation
	Renovations to buildings such as <b><i>bird-friendly glass</i></b> and lighting control measures to reduce light pollution	Medium	High	Infrastructure Services	Future Scope	Mitigation
	When compared to incandescent lighting, switching to <b><i>LED</i></b> lighting can save you up to 75% on electricity.	Recurring	Low	JMPC Infrastructure Services	Ongoing	Adaptation & Mitigation
	Explore feasibility of developing a <b><i>tree supply program</i></b> and or partner with conservation authorities to leverage existing nursery programs	Medium	Medium	Infrastructure Services	Future Scope	Adaptation & Mitigation
	Continue <b><i>assessing the vulnerability of County's critical infrastructure, facilities, and services</i></b> , and prioritize areas for improved climate resiliency	Short	Medium	Infrastructure Services Emergency Management	Ongoing	Adaptation
	Work with County's Lower-tier Municipalities to assist with communications with local Conservation Authorities regarding flood plan mapping	Short	Low	GIS	Planned	Mitigation

# County of Lennox and Addington Climate Action Plan

	Periodically <i>review materials, design options, and best practices for new climate-resilient infrastructure</i> , and share best practices between municipalities and other key stakeholders	Recurring	Low	Infrastructure Services	Planned	Mitigation
	Install <i>Programmable Thermostats where possible</i> to increase energy efficiency and decrease air pollution	Recurring	Low	Infrastructure Services	Ongoing	Adaptation
	<i>Reduce drafts</i> in buildings (e.g., re-apply caulking on doors and windows, replace weather-stripping, install door sweeps & window film, insulated window treatments, seal basements, ensure electrical boxes are insulated)	Recurring	Low	Infrastructure Services	Ongoing	Adaptation
	Adopt products with the <i>ENERGY STAR® Label</i>	Recurring	Low	Infrastructure Services	Ongoing	Adaptation
	Cut Energy Usage with <i>Smart Lighting</i> where possible (Motion Sensor Switches and Timers)	Recurring	Low	Infrastructure Services	Ongoing	Adaptation & Mitigation
H	Complete an assessment to determine the impacts of climate change on County infrastructure	Long	High	Infrastructure Services	Future Scope	Adaptation
H	Conduct energy audits on County facilities to assess future needs and plan for projected increases in energy demands	Recurring	Low	Infrastructure Services	Ongoing	Adaptation
H	Ensure that climate change is considered in the maintenance and inspection of County infrastructure and facilities	Recurring	Low	Infrastructure Services	Ongoing	Adaptation
H	Develop evaluation metrics to assess infrastructure projects with a climate lens, including new construction and upgrades/ retrofits to existing assets	Medium	Low	Infrastructure Services	Not Started	Adaptation & Mitigation
H	Prioritize retrofits for County facilities, Including upgrading interior and exterior features to account for energy demands (i.e., HVAC systems) and anticipated weather damage (i.e., flood proofing)	Medium	High	Infrastructure Services JMPC	Ongoing	Adaptation & Mitigation
H	Identify best practices (i.e., cost-benefit analyses) to prioritize infrastructure upgrades that account for future climate impacts and improve resiliency	Short	Low	Infrastructure Services	Ongoing	Adaptation

# County of Lennox and Addington Climate Action Plan

H	Increase traffic calming measures in towns/hamlets and expand green infrastructure when these areas are rehabilitated for climate adaptation and mitigation	Recurring	Medium	Infrastructure Services	Ongoing	Adaptation & Mitigation
H	Continue to use localized weather data to inform the maintenance of County roads and plan for long-term resiliency	Recurring	Low	Infrastructure Services	Ongoing	Adaptation
H	Continue to identify low-carbon resilient opportunities for County infrastructure, including recycling 100% of our asphalt; including up to 15% Recycled Asphalt Product (RAP) in surface course mixes and up to 30% RAP in binder course mixes	Recurring	High	Infrastructure Services	Ongoing	Adaptation & Mitigation
	Build new housing as high efficiency units with a lower carbon footprint compared to standard building code	Recurring	High	Infrastructure Services	Ongoing	Adaptation
H	Ensure that climate projection data (i.e. precipitation variables and Intensity-Duration-Frequency curves) is used to inform upgrades to the County's drainage infrastructure	Recurring	Low	Infrastructure Services	Ongoing	Adaptation
H	Incorporate all road crossings, including existing municipal drains, entrance culverts and roadside ditches into the Asset Management Plan to plan for anticipated upgrades	Recurring	Low	Infrastructure Services	Ongoing	Adaptation
H	Identify and establish an erosion protection plan around County culverts, bridges, road shoulders, and ditches to improve resilience from rain/melt events	Medium	Medium	Infrastructure Services	Planned	Adaptation
H	Continue to use floodplain mapping, storm water requirements, and development setbacks to mitigate flood and erosion risks on private property	Recurring	Low	Infrastructure Services	Ongoing	Adaptation
H	Complete roadside spraying to manage invasive species. Replant trees that are removed from roadsides on private property.	Recurring	Medium	Infrastructure Services	Ongoing	Adaptation
H	Continue to manage the County Forests using good forestry practices to maximize forest health and carbon sequestration	Recurring	Medium	Infrastructure Services	Ongoing	Adaptation



# County of Lennox and Addington Climate Action Plan

H	Implement a tracking system to ensure mandatory review of policies by County staff, including Continuity of Operations Plans (COOP) and Emergency Response Plans	Recurring	Low	Emergency Management	Ongoing	Adaptation
H	Assess the financial implications of climate change and adjust budgets and reserve funds to account for contingencies associated with extreme weather events	Medium	Medium	Financial Services	Planned	Adaptation
H	Continue to increase access to solutions that enable remote work, including expanding the use of cloud-based software, developing work from home policies, and implementing procedures to reduce commuting during hazardous conditions	Recurring	Medium	Information Technology	Ongoing	Adaptation
H	Continue to use <b>back-up power generators</b> across the County to ensure that critical service areas are accounted for (i.e., The John M. Parrott Centre and EMS bases)	Recurring	Medium	Infrastructure Services JMPC	Ongoing	Adaptation
H	Continue to follow procedures to share human and physical resources to minimize disruptions to services in the event of a climate-related emergency (i.e. redeployment)	Recurring	Low	Human Resources	Ongoing	Adaptation
H	Continue to follow <b>high-performance building standards</b> to improve the efficiency and resiliency of new facilities and retrofits	Medium	High	JMPC Infrastructure Services	Future Scope	Adaptation & Mitigation
H	Continue to investigate new renewable energy generation at County facilities	Medium	High	Infrastructure Services	Ongoing	Mitigation
H	Incorporate climate change considerations into the County's Tourism Plan to account for future opportunities	Recurring	Medium	Community & Development	Planned	Adaptation
H	Continue to identify and take advantage of external funding opportunities	Recurring	Low	All Departments	Ongoing	Adaptation & Mitigation

# County of Lennox and Addington

## Climate Action Plan

### Priority Area 2: Health & Safety

No	Action	Timeline	Cost	Responsibility	Status	Goals
	Explore the feasibility of posting severe weather alerts on the County's website and sent directly to clients, etc. via SMS/text	Recurring	Low	Communications	Planned	Adaptation & Mitigation
	Assess training needs for staff, especially those in critical service areas, to ensure an informed response to and recovery from climate-related emergencies	Recurring	Low	Emergency Management JMPC	Ongoing	Adaptation & Mitigation
	Include mental health considerations as part of emergency preparation and recovery-related information, and in overall climate adaptation messaging	Recurring	Low	Human Resources Emergency Management	Ongoing	Adaptation & Mitigation
H	Continue to encourage the use of the County's Employee and Family Assistant Program to ensure staff have access to resources and support	Recurring	Low	Human Resources	Ongoing	Adaptation
H	Complete an assessment to identify the County's vulnerable populations, including the risks and barriers individuals may face as a result of climate change	Medium	Medium	PELASS	Future Scope	Adaptation
H	Define the County's boundaries of responsibility to provide support to vulnerable populations, and use this as guidance when planning climate-related programs and services	Recurring	High	PELASS	Ongoing	Adaptation
H	Continue to support community warming programs	Recurring	High	PELASS	Ongoing	Adaptation
H	Update health and safety policies to incorporate climate change considerations, including procedures to protect staff during extreme weather events	Recurring	Low	Human Resources	Ongoing	Adaptation
H	Assess staffing requirements in critical service areas (i.e. EMS, JMPC) to accommodate expected increases in demands as a result of climate change	Recurring	Low	Human Resources	Future Scope	Adaptation

# County of Lennox and Addington Climate Action Plan

H	Incorporate climate change considerations into Continuity of Operations Plans (COOP), Hazard Identification and Risk Assessments, Emergency Response Plans and annual training exercises	Recurring	Low	Emergency Management	Ongoing	Adaptation
H	Assess training needs for staff, especially those in critical service areas, to ensure an informed response to and recovery from climate-related emergencies	Recurring	Low	Emergency Management	Ongoing	Adaptation





# County of Lennox and Addington Climate Action Plan

## Priority Area 3: Mobility & Transportation

No	Action	Timeline	Cost	Responsibility	Status	Goals
	Develop EV policy at the County level to ensure consistency throughout the development of a County-wide charging network	Medium	High	Infrastructure Services	Not Started	Mitigation
	Educate and raise awareness of the benefits of electric vehicles among residents, county staff and local businesses	Recurring	Low	Community & Development	Not Started	Adaptation & Mitigation
	Expand local <i>EV Charging Network</i> to support increased EVs	Medium	High	Infrastructure Services	Planned	Mitigation
	Purchase electric vehicles for County fleet when possible in order to cut energy and GHG emissions	Medium	High	Infrastructure Services	Not Started	Adaptation & Mitigation
H	Apply for funding to install electric vehicle charges across the County in partnership with local municipalities	Recurring	High	Infrastructure Services	Ongoing	Mitigation
H	Continue to make improvements to the County's trail networks	Recurring	Medium	Infrastructure Services	Ongoing	Adaptation
H	Continue to support the expansion and promote the use of active transportation routes in L&A County	Recurring	Medium	Infrastructure Services Community & Development	Ongoing	Adaptation & Mitigation



# County of Lennox and Addington

## Climate Action Plan

### Priority Area 4: Energy Consumption & Waste Reduction

No	Action	Timeline	Cost	Responsibility	Status	Goals
	Continue with food waste composting program	Recurring	Low	JMPC	Ongoing	Adaptation & Mitigation
	Print what's only required. Use recycled paper. Print double-sided whenever possible	Recurring	Low	All Departments	Ongoing	Mitigation
	Expand recycling and waste reduction outreach program with social housing tenants and staff in general to increase recycling compliance and waste diversion	Recurring	Low	Infrastructure Services All Departments	Ongoing	Mitigation
	Supporting waste audits in the long-term care facility to determine the amount of food and organic waste produced, as well as the associated greenhouse gas emissions.	Medium	Medium	JMPC	Not Started	Mitigation
	Buy supplies in bulk to prevent individual packing and buy in bulk to avoid individual packaging	Recurring	Low	All Departments	Ongoing	Adaptation & Mitigation
	Consider what materials and wastes will be generated during the project, and make sure that waste facilities are acceptable for each phase of construction	Recurring	Low	All Departments	Ongoing	Adaptation
	Awareness to staff & subcontractors on proper waste management and the site's unique measures during their project.	Recurring	Low	All Departments	Ongoing	Adaptation & Mitigation
	Reuse and recycle (construction): Large drywall scraps can be saved and used as filler pieces; Backfill along foundation walls- use clean concrete chunks, old brick, and other masonry rubble; joint compound buckets can be reused as storage containers.	Recurring	Low	Infrastructure Services	Ongoing	Adaptation & Mitigation
	Bathroom fixtures with high efficiency: Waterless urinals and high-efficiency toilets are reasonably simple and inexpensive to install-water conservation and utility cost reduction	Recurring	Medium	Infrastructure Services JMPC	Ongoing	Adaptation

# County of Lennox and Addington Climate Action Plan

Watering landscape in the morning when the temperature is lower, and the water is more likely to soak into the soil rather than evaporate.	Recurring	Low	Infrastructure Services	Ongoing	Adaptation
Office water filling station -an environment-friendly option: reducing single use bottled water	Recurring	Low	All Departments	Ongoing	Mitigation
Donating books and ensuring the responsible removal of a library's weeded, non-circulating or unwanted books	Recurring	Low	Library	Ongoing	Adaptation & Mitigation



# County of Lennox and Addington Climate Action Plan

## Priority Area 5: Partnerships & Engagement

No	Action	Timeline	Cost	Responsibility	Status	Goals
	Communication and expanding partnership with community members from local organizations, non-profits, and community groups to learn about climate change, their local impacts, and share ideas for and feedback on the County's Climate Action Plan.	Recurring	Low	Communications	Not Started	Adaptation & Mitigation
	Examine existing <i>communication procedures</i> to identify and resolve gaps related to climate change and extreme weather events	Recurring	Low	Communications	Not Started	Mitigation
	Incorporate <i>climate mitigation and resiliency</i> considerations into the county's procurement & budget processes	Recurring	Low	Financial Services	Ongoing	Adaptation
	Develop an <i>interdepartmental climate action team</i> to implement and track plan progress	Recurring	Low	All Departments	Not Started	Adaptation
	Provide training to existing and new staff to ensure climate change impacts and risks	Recurring	Low	All Departments	Not Started	Mitigation
H	Diversify communication strategies to ensure community members across all demographic groups are informed	Recurring	Low	Communications	Ongoing	Adaptation
H	Work proactively with local media to promote the County's climate change efforts	Recurring	Low	Communications	Not Started	Adaptation & Mitigation
H	Work with local municipalities to support climate initiatives, including sharing best practices and encouraging <i>community-based adaptation</i>	Recurring	Low	All Departments	Ongoing	Adaptation
H	Continue to work with local municipalities, Conservation Authorities and Public Health to support climate initiatives related to flood mitigation and community wellbeing	Medium	Low	All Departments	Ongoing	Adaptation



# County of Lennox and Addington Climate Action Plan

H	Engage and inform staff through online awareness, training, and information sessions.	Recurring	Low	Communications Human Resources	Not Started	Adaptation & Mitigation
H	Showcase and promote climate actions and successes across County departments	Recurring	Low	All Departments	Not Started	Adaptation & Mitigation
H	When applicable, apply a climate lens to the review and update of existing County plans, policies, and procedures (i.e. Official Plans, Zoning By-laws, budgets, strategic plans, etc.)	Recurring	Low	All Departments	Not Started	Adaptation



# County of Lennox and Addington Climate Action Plan

## References:

- Bush, E. and Flato, G. (2018). About this report; Chapter 1 in Canada's Changing Climate Report, (ed.) E. Bush and D.S. Lemmen; Government of Canada, Ottawa, Ontario, p. 7–23. City of Mississauga. (2013).
- EPCCA. (2009). Adapting to Climate Change in Ontario. Ontario: Ministry of the Environment.

