

# Toward a Net-Zero Future

## Corporate Climate Change Strategy: An Overview



**Hamilton  
Conservation  
Authority**

A Healthy Watershed for Everyone





## Introduction

# Toward a net-zero future – in our operations and on our lands

Becoming net zero is the ultimate goal of the Hamilton Conservation Authority. Our ***Corporate Climate Change Strategy*** is a guiding document and the next important step in that journey.

Our role is critical as environmental leaders – not only for the natural heritage we oversee, but for the communities we serve and for society as a whole.

This strategy, and the actions within, respond to the fundamental question:

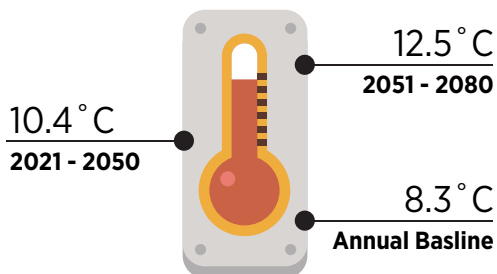
**What more can the HCA do to reduce our footprint and adapt to the realities of climate change in the way we work and how we conserve our lands?**

## Climate Change: A global problem with local impacts

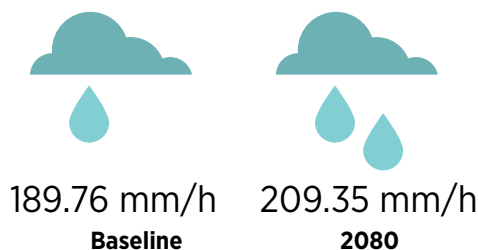
The impacts of climate change are being felt across the globe and in our communities. Due to increasing greenhouse gas (GHG) emissions, we see raging wildfires, devastating floods, extreme rainfalls, rising temperatures, and more. Right here in our own watershed, we have experienced periods of prolonged droughts, increased flooding, and erosion.

The City of Hamilton projects annual average temperatures could increase by more than 4°C by 2080 and the amount of rain in a five-minute downpour is projected to increase by 10%. These changes will have real and lasting impacts we have to mitigate or be ready for.

### Annual projected average temperatures in Hamilton\*



### Projected rainfall in 5-minute downpour.\*



\*Data from the City of Hamilton's (2021) Future Climate Projections

## HCA's role

The mandates of Ontario's conservation authorities are directly related to addressing and adapting to climate change. That's why what we do everyday at the HCA to achieve our vision of *a healthy watershed for everyone* means we need to strive to be local leaders in how we operate and reduce our carbon footprint. Our programs and services include:

- Flood forecasting and warning
- Dam operations
- Land use planning and regulations
- Aquatic and terrestrial monitoring
- Land stewardship
- Operation of conservation areas and education

### **The HCA owns and manages**

11,000 acres, 6 major creek systems, 11 significant wetland complexes and has identified more than 1,000 species of plants and animals.

**Net zero means** the amount of greenhouse gasses released into the atmosphere is equal to the amount removed from the atmosphere.

## **Where we've been: Progress since 2012**

The overall important message on climate change is to try and prevent it. The HCA has not been standing still. We developed our first strategy in 2012 to increase the resiliency of our watershed, systems, and operations.

What we learned then was that the HCA was at a starting point. We needed to build sustainability into the core of our operations, gather more robust data and strengthen partnerships with other local organizations working to achieve similar goals.

Since developing the 2012 strategy, we've conducted audits and assessments of our office, operations, and practices with respect to sustainability. We increased our monitoring, planting, and stormwater diversion. We enhanced our work with the City of Hamilton and the Bay Area Climate Change Council (BACCC). We also established an internal Sustainability Committee to help reduce our footprint. Now, we are taking steps to build on what we learned and continuously do better.

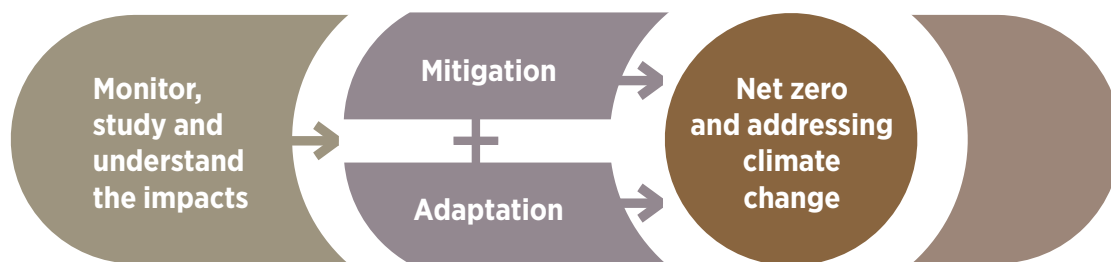
## **Rising to meet the challenge: HCA's *Corporate Climate Change Strategy***

### **Looking ahead: guiding decision-making practically and realistically**

HCA's *Corporate Climate Change Strategy* document continues the work we started in 2012. It lays out the next steps we will take on the road to becoming net zero.

Addressing climate change is complex. There are no easy solutions and no quick fixes. This strategy is a guiding document. It will inform decision-making and future budgets in ways that move us closer to our net-zero goal practically and realistically.

Our strategy is based on three overarching approaches:



- **Monitoring and data collection** is a focus on the areas where we need more information to set specific targets (e.g., GHG inventory, utilities tracking, etc.). Once we have effective data, we can then set targets and move to develop and implement the next steps of mitigation and adaptation.
- **Mitigation strategies** are actions that reduce greenhouse gas emissions with the goal to make the impacts of climate change less severe (e.g., retrofitting buildings, using electric vehicles).
- **Adaptation strategies** include measures to help reduce the impacts of climate change for our natural environment as well as for our community, visitors and staff (e.g., introducing climate-resilient species, enhancing wetlands).

## Four key areas of focus

HCA's Corporate Climate Change Strategy focuses on our operations and land management practices to reduce our energy use and implement more sustainable practices in four overarching areas under our control:



**Operations**



**Environment  
and natural  
heritage**



**Experience,  
education and  
awareness**



**Partnerships**



# HCA Operations

## GREENHOUSE GAS (GHG) EMISSIONS

GOALS	SAMPLE HIGH-LEVEL ACTIONS	Monitor	Mitigation	Adaptation
<ul style="list-style-type: none"> <li>• Reduce emissions</li> <li>• Increase the amount of available data</li> <li>• Achieve cost savings</li> <li>• Promote eco-friendly solutions within our buildings, fleet, and operations</li> </ul>	• Establish ongoing monitoring and data reporting practices	●		
	• Conduct energy audits	●	●	
	• Set specific targets to reduce emissions		●	
	• Review HCA's sustainable/environmentally preferable purchasing policy		●	

## ENERGY USE

GOALS	SAMPLE HIGH-LEVEL ACTIONS	Monitor	Mitigation	Adaptation
<ul style="list-style-type: none"> <li>• Increase use of renewable energy</li> <li>• Make our buildings as energy efficient as possible</li> <li>• Actively reduce our use of energy</li> </ul>	• Conduct feasibility studies to use alternative sources of energy (such as solar panels)	●	●	
	• Retrofit buildings to meet modern standards of sustainability		●	
	• Consider LEED standards for future buildings		●	
	• Implement sustainable practices throughout HCA's buildings (adjust thermostats, turn off computer monitors, etc.)		●	
	• Switch to electric-powered vehicles and maintenance equipment		●	



## Environment and natural heritage

### WATER MANAGEMENT

GOALS	SAMPLE HIGH-LEVEL ACTIONS	Monitor	Mitigation	Adaptation
<ul style="list-style-type: none"> <li>• Increase access to data for decision-making purposes</li> <li>• Better understand how land uses impact water quality during storm events</li> <li>• Reduce water runoff, contamination, soil erosion, and other impacts of climate change on water systems</li> <li>• Reduce flooding and its impacts on lands, communities, and infrastructure</li> </ul>	• Continue to enhance monitoring efforts to better understand/anticipate climate change impacts	●		●
	• Plan for permeable parking lots and rain gardens			●
	• Create rainwater capture systems to provide water for public washrooms			●
	• Assess impacts from previous floods and how to mitigate damage	●		●
	• Create flood forecasting plans and conduct permit reviews			●

### WETLAND MANAGEMENT

GOALS	SAMPLE HIGH-LEVEL ACTIONS	Monitor	Mitigation	Adaptation
<ul style="list-style-type: none"> <li>• Identify threats to wetlands and make it easier for ecosystems to adapt to climate change</li> </ul>	• Investigate opportunities to enhance, reclaim, or create wetlands		●	●
	• Identify resilient native species to target for restoration			●
	• Restore floodplain natural areas		●	●
	• Control drainage of wetlands		●	●
	• Encourage integration of wetland restoration, creation, and management into local adaptation plans		●	●

### CARBON SEQUESTRATION

GOALS	SAMPLE HIGH-LEVEL ACTIONS	Monitor	Mitigation	Adaptation
<ul style="list-style-type: none"> <li>• Increase natural carbon stores which help remove excess CO<sub>2</sub> from the atmosphere</li> </ul>	• Create more wetlands to act as carbon sinks		●	
	• Increase forest and prairie cover, which also reduces erosion and moderates water flow		●	
	• Look for opportunities to purchase more land and create or restore wetlands		●	



## INVASIVE SPECIES

GOALS	SAMPLE HIGH-LEVEL ACTIONS	Monitor	Mitigation	Adaptation
<ul style="list-style-type: none"> <li>• Research and monitor invasive species</li> <li>• Implement best practices in preventing their spread</li> <li>• Communicate trends and impacts of invasive species locally</li> <li>• Collaborate with partners</li> </ul>	• Create action plans for each conservation area			●
	• Continue invasive species mapping	●		●
	• Research preventive invasive species actions, such as installing wash stations or boot stations			●
	• Understand how invasive species will react to climate change	●		
	• Increase education about invasive species in parks			●

## PROTECTION OF WILDLIFE

GOALS	SAMPLE HIGH-LEVEL ACTIONS	Monitor	Mitigation	Adaptation
<ul style="list-style-type: none"> <li>• Mitigate threats to biodiversity</li> <li>• Better understand assisted migration</li> <li>• Increase pollinator health</li> </ul>	• Increase pollinator gardens, add beehives		●	●
	• Use assisted migration of plant species			●
	• Assess conservation actions such as limiting sportfishing of vulnerable species and encouraging the fishing of invasive species like the Asian carp	●		●
	• Understand how plants and animals will react to climate change, and how we can react and help	●		

## MONITORING PROGRAMS

GOALS	SAMPLE HIGH-LEVEL ACTIONS	Monitor	Mitigation	Adaptation
<ul style="list-style-type: none"> <li>• Expand long-term monitoring programs</li> <li>• Increase the HCA's ability to: forecast and plan proactively related to weather and climate variability; project and monitor drought conditions, and manage and allocate water resources</li> </ul>	• Maintain HCA regulations and planning program as it relates to natural hazards and climate change implications	●		
	• Enhance HCA erosion and sediment control initiatives			●
	• Consider new monitoring programs such as soil moisture monitoring and forest health monitoring	●		
	• Research how increased CO <sub>2</sub> levels will affect local species and water bodies	●		
	• Monitor the spread of damaging pests and species	●		





## Experience, education and awareness

### CONSERVATION AREA EXPERIENCE

GOALS	SAMPLE HIGH-LEVEL ACTIONS	Monitor	Mitigation	Adaptation
<ul style="list-style-type: none"> <li>• Maintain HCA regulations and planning program as it relates to natural hazards and climate change implications</li> <li>• Anticipate and respond to operational impacts due to climate change</li> <li>• Protect staff and visitor safety</li> </ul>	• Plan for a longer tourist season			●
	• Increase staff resources to address clean-up from damaging storms, an extended growing season, and invasive species control			●
	• Maintain water levels for swimming and boating			●
	• Increase capital resources to address storm and erosion damage to trails, bridges, parking lots, roads, etc.			●
	• Update and revise safe working procedures for staff as required			●
	• Communicate impacts to the public, such as closed areas following storm damage, closed beaches due to poor water quality etc.			●

### EDUCATION AND AWARENESS

GOALS	SAMPLE HIGH-LEVEL ACTIONS	Monitor	Mitigation	Adaptation
<ul style="list-style-type: none"> <li>• Ensure an informed public related to invasive species and potential health risks</li> <li>• Increase awareness of individual roles in addressing climate change</li> <li>• Protect staff and visitor safety</li> </ul>	• Increase signage to educate visitors about invasive species and ecology changes in parks			●
	• Use social media campaigns to educate the public		●	●
	• Update procedures to respond to things like working in the heat, tick safety, and inclement weather			●



## Partnerships

GOALS	SAMPLE HIGH-LEVEL ACTIONS	Monitor	Mitigation	Adaptation
<ul style="list-style-type: none"> <li>• Strengthen community approach and build systems for collaboration</li> <li>• Learn from the work of others</li> <li>• Collaboratively address threats and identify opportunities for climate adaptation and GHG reductions</li> <li>• Strengthen relationships with Indigenous communities</li> </ul>	• Continue active involvement with the City of Hamilton and BACCC	●	●	●
	• Establish processes and practices of sharing local climate change data	●		
	• Continue to support partners in their research and monitoring of climate change effects (including McMaster University, Mohawk College, other levels of government, and other conservation authorities)	●		
	• Reach out to local Indigenous communities to discuss opportunities to share knowledge and collaborate where appropriate		●	●



# Goals and Progress

A strategy is only valuable if progress and success can be measured. We have a plan for monitoring our progress as we move towards net zero and we will work on actions each year as funding and budget allows. We will also keep our Board of Directors, staff, and the public informed along the way with annual sustainability reports, through our website and social media channels.

The HCA has a responsibility to conserve the lands under our stewardship – for current and future generations.

We acknowledge that each climate change strategy we develop is a living document as we continue to learn, gather more data and adjust to improve our results.

This strategy deepens our focus on climate change, and embeds monitoring, mitigation, and adaptation efforts in all we do. It ensures we are doing what we can to increase our knowledge, protect our lands and watershed, and enhance the resilience of species, while slowing the pace of climate change.

**HCA's Corporate Climate Change Strategy leads us forward to achieving net-zero status for our lands.**





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