

# CONSERVATION AUTHORITIES ACT DELIVERABLES – AT DECEMBER 31, 2024 – CONSERVATION HALTON

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## Conservation Halton Board Meeting AMENDED Agenda

Conservation Halton  
2596 Britannia Road West, Burlington, ON  
October 31, 2024, 1:00 PM - 4:00 PM EDT

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**REPORT TO:** Conservation Halton Board

**REPORT NO: #** CHB 06 24 04

**FROM:** Chandra Sharma, President & CEO/Secretary-Treasurer

**DATE:** October 31, 2024

**SUBJECT:** Update on Regulatory Deliverables: *Ontario Regulation 686/21* under the *Conservation Authorities Act*

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### Recommendation

THAT the Conservation Halton Board **receives for information the staff report entitled “Update on Regulatory Deliverables: *Ontario Regulation 686/21* under the *Conservation Authorities Act*”.**

### Executive Summary

Under [Ontario Regulation 686/21](#): *Mandatory Programs and Services under the Conservation Authorities Act* (O. Reg. 686/21), Conservation Authorities (CAs) are required to complete six (6) legislated deliverables for mandatory programs and services by December 31, 2024. O. Reg. 686/21 prescribes the requirements for the regulatory deliverables. Each CA is required to:

1. Conservation Areas Strategy (CA Strategy)
2. Ice Management Plan (IMP)
3. Land Inventory
4. Natural Hazard Infrastructure Asset Management Plan(s)
5. Natural Hazard Infrastructure Operational Management Plan(s)
6. Watershed-Based Resource Management Strategy

### Report

Changes to the CA Act require that all CAs complete legislated deliverables for mandatory programs and services. O. Reg. 686/21 prescribes the requirements for these deliverables. Each CA is required to complete

1. Conservation Areas Strategy (O. Reg 686/21, s.10)
2. Develop and implement an Ice Management Plan (O. Reg 686/21, s.4)
3. Land Inventory (O. Reg 686/21, s.11)
4. Develop and implement a Natural Hazard Infrastructure Asset Management Plan (O. Reg 686/21, s.5)
5. Develop and implement a Natural Hazard Infrastructure Operational Management Plan (O. Reg 686/21, s.5)
6. Watershed-Based Resource Management Strategy (O. Reg 686/21, s.12(4))



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### *Conservation Areas Strategy and Land Inventory*

O. Reg 686/21 provides the mandatory components of the Conservation and Management of Lands program and service. The objective of the CA Strategy is to ensure CH has a documented and current set of objectives to inform decision-making related to lands owned or controlled by CH.

O. Reg 686/21 requires the development of a Land Inventory that captures specific information for each parcel of land owned or controlled by CH. The Land Inventory is directly linked to the CA Strategy as the land use categories established in the Strategy will be applied to each parcel of land in the Inventory. Information contained in the Inventory includes details on parcel acquisition, location, categorization, and CH projects. Staff anticipates that the Inventory will positively support the management of CH land holdings as well as provide an easy-to-use reference document for all CH-owned land and managed properties. Major components of the Land Inventory have been completed and work is in progress to finalize the inventory by December 31, 2024.

A detailed overview of the CA Strategy is provided in Board Report No. CHB 06 24 06.

### *Ice Management Plan*

Ice management is a mandatory program and service that CH provides within its jurisdiction to reduce risk associated with natural hazards. O. Reg 686/21 stipulates that the Ice Management Program (IMP) must include how ice within CH's jurisdiction may increase the risk of natural hazards and the necessary steps to mitigate risk, including identifying the equipment and resources needed to carry out said steps. Updates to the IMP will occur on a set frequency as determined by CH.

The requirement of an IMP provides CH with the opportunity to formalize existing ice management practices within the watershed, specifically outlining CH's role in ice management activities, identifying areas prone to ice jam flooding, clarifying the relationship between ice jams and other concerns related to ice management and the relationship to natural hazards, and identifying recommendations for structural and/or operational measures to mitigate associated flood risks.

An IMP is currently being completed to describe general riverine ice conditions within CH's jurisdiction and the proposed actions that CH has undertaken to address ice jam and ice jam-related flood forecasting, field monitoring and surveillance of riverine ice during the winter months, river ice conditions reporting to affected municipal partners, and issuance of flood messages. The document will be completed before December 31, 2024, as required

### *Natural Hazard Infrastructure Asset Management Plan(s)*

A Natural Hazard Infrastructure Asset Management Plan is required to support mandatory programs and services related to flood control, low flow augmentation, and erosion control infrastructure—including CH-owned infrastructure and any infrastructure that CH operates through a landowner agreement.

The Plan includes the identification, location, and specifications of dams and dike and floodwall systems; a condition assessment of major infrastructure components and current maintenance practices, processes, and systems; a review of the maintenance program to identify any modifications or updates required to meet organizational goals; and documents CH's water control infrastructure




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asset management strategy and associated funding needs (e.g., major maintenance, large capital for individual dams and dikes, and an outline of recommended works).

An [Asset Management Plan \(AMP\) for CH's dams and channels](#) was previously completed by Watson & Associates in 2022. Staff is implementing the plan and will update as necessary to keep it current.

#### *Natural Hazard Infrastructure Operational Management Plan*

The operation, maintenance, repair, and decommissioning of any water control infrastructure where the purpose of the infrastructure is to mitigate risk to life and damage to property resulting from flooding and/or assist in flow augmentation and erosion control infrastructure is a mandatory program and service. O. Reg 686/21 stipulates that an operational plan be developed and implemented for water control/flow augmentation and erosion control infrastructure.

Preparation of a Natural Hazard Infrastructure Operational Plan (NHIOP) is currently underway. The document will include a comprehensive matrix that describes existing key documents relating to Operations, Maintenance & Surveillance (OMS), Emergency Preparedness (EPPs) and Public Safety (PSPs) associated with CH flood infrastructure and for long-term planning of capital repairs (Dam Safety Reviews, Channel Condition Assessment & Capital Plan, etc.). The document will be completed before December 31, 2024, as required.

#### *Watershed-Based Resource Management Strategy*

O. Reg 686/21 requires CAs to prepare a Watershed Based Resource Management Strategy (RMS) that provides watershed context and rationale for CH's Category 1, 2, and 3 programs and services and identifies current priorities and future direction.

The Watershed-Based RMS will assess Category 1 programs for regulatory compliance and make recommendations and provide cost estimates to address any issues and mitigate risks that may limit the effectiveness of these programs. The RMS may include both Category 2 and Category 3 programs and services provided by CH where service delivery agreements under an overarching Memorandum of Understanding (MOU) with local municipalities are in place to provide for the delivery of these programs or services, thereby permitting the inclusion in the Strategy. Examples of eligible Category 2 and Category 3 programs and services include stewardship programs, tree planting and forestry, invasive species management, wetland restoration, sub-watershed plans, stormwater management, and natural heritage mapping.

A detailed overview of the Watershed-Based Resource Management Strategy is provided in Board Report No. CHB 06 24 05.

### **Impact on Strategic Priorities**

This report supports the Momentum priority of "Organizational Sustainability".

### **Financial Impact**

The staff time required to develop the legislated deliverables for mandatory programs and services under O. Reg 686/21 has been included in the existing budget allocations and dedicated focus by the Senior Leadership Team; there is no financial impact to this report.



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Signed & respectfully submitted:

A handwritten signature in black ink that reads "Chandra Sharma".

Chandra Sharma  
President & CEO/Secretary-Treasurer

**FOR QUESTIONS ON CONTENT:**

Chandra Sharma, President & CEO/Secretary-Treasurer  
csharma@hrca.on.ca, 905-336-1158 x 2270



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**REPORT TO:** Conservation Halton Board

**REPORT NO: #** CHB 06 24 05

**FROM:** Barbara J. Veale, Senior Director, Watershed Management & Climate Change

**DATE:** October 31, 2024

**SUBJECT:** Watershed-Based Resource Management Strategy

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### Recommendation

THAT the Conservation Halton Board **approves the Watershed-Based Resource Management Strategy;**

And

THAT the Conservation Halton Board **directs staff to post the Watershed-Based Resource Management Strategy to the corporate website as required by *Ontario Regulation 686/21*;**

And

THAT the Conservation Halton Board **directs staff to advise participating municipalities and neighbouring Conservation Authorities that the approved Watershed-Based Resource Management Strategy has been completed and posted.**

### Executive Summary

Conservation Halton (CH) released its draft Watershed-Based Resource Management Strategy (Watershed Strategy) to the public for comment on July 12, 2024. The Watershed Strategy identifies further actions that should be taken by CH to address key watershed-based natural resource management issues and alleviate or mitigate risks within our watersheds through existing Category 1, 2, and 3 programs and services.

The public commenting period ended September 13, 2024. Several submissions were received. The Watershed Strategy has been updated based on these submissions.

Staff recommends that the CH Board approves the Watershed Strategy as presented and directs staff to post the Watershed Strategy to the corporate website to fulfill requirements under *Ontario Regulation 686/21* (O. Reg. 686/21). Once approved, staff recommends that CH's participating municipalities and neighbouring Conservation Authorities (CAs) be notified of the posting.

### Report

Recent changes to the *Conservation Authorities Act* (CA Act) require CAs to complete a Watershed-Based Resource Management Strategy (Watershed Strategy) by December 31, 2024, with the following components:



- Guiding principles and objectives that inform the design and delivery of CH's programs and services;
- A summary of existing technical studies, monitoring programs, and other information on the natural resources the authority relies on to directly inform and support the delivery of programs and services;
- A review of the CA's programs and services to 1) determine if the programs and services comply with the regulations, 2) identify and analyze issues and risks that limit the effectiveness of the delivery of these programs and services, and 3) identify actions to address the issues and mitigate risks identified by the review, and providing a cost estimate for the implementation of those actions; and
- A process for periodically reviewing and updating the Watershed Strategy that includes procedures to ensure stakeholders and the public are consulted during the review and update process.

These studies and reports were completed between October 2023 and June 2024 and are posted to the CH website at [www.conservationhalton.ca/watershed-strategy](http://www.conservationhalton.ca/watershed-strategy). The studies improve our understanding of human-nature relationships in CH's watersheds and how they interact to aggravate or create natural resource issues and risks. These studies and reports include:

- **Guiding Principles and Objectives** – the overarching goal, principles, and objectives that underpin the Watershed Strategy were developed with input from municipalities and the public and are highlighted on the CH website.
- **Key Natural Resource Issues** – this report identifies and describes key natural issues in CH's jurisdiction through a review of available monitoring data, technical studies, staff expertise, municipal input, and public feedback.
- **Characterization Summary** – this report 1) summarizes the biophysical traits of CH's watersheds and how they influence the water cycle and other natural processes; 2) identifies the key influences on natural processes driven by human activities (including climate change); and 3) describes resulting natural resource conditions, trends, vulnerabilities, and risks and links them to the above key watershed-scale natural resource issues.
- **Watershed Monitoring Programs Summary** – this report describes CH's overall monitoring program, which includes the collection and assessment of a suite of data and information to inform the design and delivery of CH's programs and services, and identifies opportunities to modernize, streamline, and improve CH's monitoring networks.
- **Climate Change Vulnerability and Risk Assessment** – this qualitative study assesses potential future climate risks and vulnerabilities to natural resources in our watersheds based on current climate change projections and provides recommendations for action.
- **Watershed Climate Resiliency Plan** – this plan provides insight into how climate change is affecting natural resources and aggravating natural hazards in CH watersheds and identifies high-level actions that will improve the capacity of natural systems to cope with and adapt to the impacts of predicted warmer, wetter, and wilder weather.



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At the Board meeting on June 21, 2024, actions to better address key natural resource issues through CH's existing programs and services were proposed and endorsed for inclusion in the draft Watershed Strategy. These actions aligned with and advanced the overall goal and guiding principles and objectives that underpin the Watershed Strategy. They were grouped in the same way as the Programs & Services Inventory submitted to the Province and participating municipalities in 2022.

The proposed actions are within the scope of the programs and services defined under the legislation or as agreed to through the existing Memoranda of Understanding (MOUs) with participating municipalities. Many of these proposed actions have already been initiated and are integrated into the 2025 budget or proposed to be phased in through the ten (10) year budget forecast. As is CH's practice, program costs are minimized by offsetting costs through other revenue sources such as grants, fee-for-service, and other funding sources.

#### *Public Review Comments*

CH's draft Watershed Strategy was posted to the CH website for public review and comment between July 12 and September 13, 2024. Invitations to provide comments through a short online survey were extended to municipal staff, First Nations, and environmental groups. Notices were placed in CH's newsletter and social media channels.

Ten (10) complete surveys were submitted. Comments were received from Halton Region, Peel Region, City of Burlington, and Town of Oakville. The proposed actions were generally supported, with some constructive suggestions for added context, elaboration, or clarification. No dissenting comments were submitted. Based on the additional input received during the commenting period, the draft Watershed Strategy has been updated (Attachment 1: "Draft Watershed-Based Resource Management Strategy").

#### *Final Draft Approval*

Staff recommends that the Board approves the draft Watershed Strategy as attached and direct staff to post the Strategy to the corporate website to fulfill requirements under O. Reg. 686/21. Once approved, staff recommends that CH's participating municipalities and neighbouring CAs be notified of the posting.

#### **Impact on Strategic Priorities**

This report supports the Momentum priority of "Natural Hazards and Water", "Science Conservation and Restoration", "Education, Empowerment and Engagement", "Nature and Parks", "Organizational Sustainability", and "Digital Transformation and Innovation". Implementation of the Watershed Strategy supports six (6) of the seven (7) priorities in CH's strategic plan.

#### **Financial Impact**

There is no financial impact to this report.



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Signed & respectfully submitted:

Barbara J. Veale  
Senior Director, Watershed Management & Climate  
Change

Approved for circulation:

Chandra Sharma  
President & CEO/Secretary-Treasurer

**FOR QUESTIONS ON CONTENT:**

Barbara J. Veale, Senior Director, Watershed  
Management & Climate Change  
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Attachments:

Attachment 1: 2024 Watershed-Based Resource  
Management Strategy



Conservation  
**Halton**



# 2024

Watershed-Based  
Resource Management  
Strategy



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# HONOURING THE LAND AND TERRITORY

We acknowledge that our work, and the land that we steward in Conservation Halton's watersheds, are on traditional First Nations territories. Our watersheds, as we know them today, are rich in the history and modern traditions of many First Nations. From the lands of the Anishinaabe to the Wendat, Attawanderon, and the Haudenosaunee, these lands are steeped in First Nations history.

We are thankful for the opportunity to work in solidarity with First Nations partners and treaty holders to honour and respect the four directions, lands, waters, plants, animals, and ancestors that walked before us and together ensure the stewardship of the land for future generations.

# PREFACE

Since it was formed in 1963, Conservation Halton has delivered a wide range of programs and services to fulfill our object under section 20 of the Conservation Authorities Act (CA Act) which was “to establish and undertake, in the area over which it has jurisdiction, a program designed to further the conservation, restoration, development, and management of natural resources other than gas, oil, coal, and minerals.”<sup>1</sup> Recent amendments to the CA Act require all conservation authorities in Ontario to re-examine their programs and services to ensure that they comply with new regulations made under clause 40 (1) (b) and complete a Watershed-Based Resource Management Strategy by December 31, 2024. While our strategy was developed to ensure compliance and fulfill requirements of O. Reg. 686/21, we viewed this initiative as an opportunity to:

- verify key natural resource issues within our watersheds;
- better understand the nature and extent of natural hazard and natural resource issues and risks, especially in the face of rapid urban growth and climate change;
- critically assess the scope, outcomes, and effectiveness of our current programs and services relative to current needs;
- identify and confirm gaps and challenges in delivering our programs and services;
- identify ways to update our existing programs and services to improve delivery and performance, reduce or mitigate natural hazards, and address key watershed natural resource issues and risks; and
- collaborate with municipalities and others who share responsibility for addressing natural resource issues and climate change impacts.

Our strategy builds on work undertaken by Conservation Halton in 2023 and 2024 to summarize the unique physical and biological characteristics of our watersheds, determine the impacts of human activities on natural features and processes, and identify our key watershed natural resource issues. These issues were subsequently confirmed through a public review and consultation process. This information was supplemented by a high-level examination of the probable impacts of climate change on risks and vulnerabilities associated with natural hazards and biodiversity within our watersheds. These compilations and analyses enhanced our understanding of human-nature relationships and their influence in causing new or aggravating resource issues and risks.

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<sup>1</sup> In 2021, the object of a conservation authority as stated in the CA Act was amended slightly and replaced by the following purpose statement: “The purpose of this Act is to provide for the organization and delivery of programs and services that further the conservation, restoration, development, and management of natural resources in watersheds in Ontario. 2017, c. 23, Sched. 4, s. 1.”



Our overall goal and guiding principles and objectives underpin the strategy and align with legislative requirements, our current strategic plan called "*Momentum*", and recently signed Memoranda of Understanding (MOUs) with participating municipalities. Conservation Halton also hosted workshops to identify gaps and limitations of existing programs and services to appropriately address known risks and vulnerabilities. These workshops were attended by subject matter experts from Conservation Halton, participating and local municipalities, First Nations, and other partners.

By working systematically and thoughtfully through this collaborative process, we have identified a series of actions that will enhance the effectiveness of existing programs and services in addressing key watershed natural resource issues, reducing or mitigating risks, and advancing the overall goal and guiding principles and objectives of this strategy. Many of these actions are already fully or partly underway and are integrated into the current budget process. Other actions require further discussion with participating municipalities to:

- determine their scale and scope and the priorities, timeframes, and funding opportunities for implementation;
- ensure that all programs and services are effective, complementary, value-added, and customer-focused;
- eliminate unnecessary duplication and streamline environmental and watershed-related programs and services to optimize the use of existing resources and technical expertise and, where possible, coordinate efforts;
- continuously improve working relationships and enhance service performance; and
- ensure natural resources are protected, managed and/or restored using a watershed or systems-based approach and cost-effective solutions.

We do not anticipate undertaking actions beyond the scope of programs and services defined under the legislation or as agreed to through our MOUs or other agreements. We will make every effort to reduce program costs for participating municipalities by offsetting them through other revenue sources such as grants, fee-for-service, and other funding sources.

We have a clear and transparent budgeting process to assign costs that follows the approach and methods of apportionment prescribed by legislation. All programs and services we propose to deliver, along with their anticipated costs, will be discussed and confirmed with participating municipalities during the annual budget review process.

We are an independent, corporate body set up under the terms and conditions of the CA Act. Each year, the budget is formally approved by our Board after consultations with participating municipalities. This process ensures that all participating municipalities are aware of and support the delivery of our programs and services within the scope defined by the budget.

We track the performance of our programs and services through our annual report. Quarterly progress reports on their status and outcomes (e.g., Key Performance Indicators) are provided to our Board and are publicly accessible on our website.

The strategy enables us to take a long-term, strategic view of the collective actions needed to address the key watershed natural resource issues and alleviate or mitigate risks within our watersheds. It should improve our ability to plan for and target our programs and services to respond accordingly and guide our next strategic plan.

We will renew our strategy every five years based on a rigorous assessment process and in consultation with participating municipalities, agreement holders, First Nations, and other partners to ensure it remains applicable and current.

# PURPOSE AND BACKGROUND



## Purpose and Legislative Context

Under recent changes to the Conservation Authorities Act (CA Act) and related regulation (O. Reg. 686/21), conservation authorities (CAs) in Ontario are required to complete a Watershed-Based Resource Management Strategy (herein referred to as “Watershed Strategy”) on or before December 31, 2024. Components of the Watershed Strategy specified in the regulation include:

- Guiding principles and objectives that inform the design and delivery of Conservation Halton’s programs and services;
- A summary of existing technical studies, monitoring programs, and other information on the natural resources the authority relies on to directly inform and support the delivery of programs and services;
- A review of the CA’s programs and services to 1) determine if the programs and services comply with the regulations, 2) identify and analyze issues and risks that limit the effectiveness of the delivery of these programs and services, and 3) identify actions to address the issues and mitigate the risks identified by the review and providing a cost estimate for the implementation of those actions; and
- A process for the periodic review and updating of the Watershed Strategy that includes procedures to ensure stakeholders and the public are consulted during the review and update process.

## Background

In 2017, Conservation Halton (CH) began a process of transformation through its strategic plans, starting with *Metamorphosis* and continuing with CH's current strategic plan, *Momentum*. These strategic plans, developed with public input and approved by the CH Board, provide a strong foundation and direction for CH's programs and services based on a clear purpose, values, priorities, and objectives.

On October 1, 2021, O. Reg. 687/21 under the CA Act came into effect. This regulation outlined the steps that were to be taken by CAs to develop an inventory of programs and services and to enter into agreements with participating municipalities to fund non-mandatory programs. Later, on January 1, 2022, O. Reg. 686/21, which prescribes the mandatory programs and services CAs must provide, came into effect. Under O. Reg. 687/21, CA programs and services fall within one or more of three categories as shown in Figure 1.

**Figure 1: Conservation Authority Programs and Services**

<b>Category 1</b> <b>Mandatory Programs and Services (O.Reg.686/21)</b>	<b>Category 2</b> <b>Municipal Programs and Services</b>	<b>Category 3</b> <b>Other Programs and Services</b>
<p>Programs and services that all CAs <u>must</u> provide in their jurisdiction</p> <p><u>Eligible</u> for costs to be apportioned to participating municipalities without an agreement</p> <p>Funded through participating municipalities, user fees, and/or grants</p>	<p>Programs and services that a CA agrees to provide on behalf of a municipality</p> <p><u>Eligible</u> for costs to be apportioned to participating municipalities if there is an MOU or other agreement</p> <p>Funded through participating municipalities, user fees, and/or grants; MOU/service agreement</p>	<p>Programs and services that a CA determines are advisable to further the purpose of the CA Act</p> <p><u>Eligible</u> to be apportioned wholly or partially to municipalities through a cost apportioning agreement</p> <p>Funded through participating municipalities, user fees, and/or grants; MOU/service agreement required for use of municipal funding</p>

In 2023, CH developed Memoranda of Understanding (MOUs) for the delivery of Category 2 and 3 programs and services with participating municipalities, including Halton Region, Peel Region, the City of Hamilton, and the Township of Puslinch. These high-level MOUs, approved by the participating municipalities and the CH Board, were posted to CH's website in December 2023. They support "the organization and delivery of programs and services that further the conservation, restoration, development and management of natural resources," in accordance with CH's statutory purpose as stated in the CA Act. The MOUs can be accessed at <https://www.conservationhalton.ca/governance/>. The legislation also permits CH to provide additional Category 2 and 3 programs and services to municipalities and other partners by agreement.

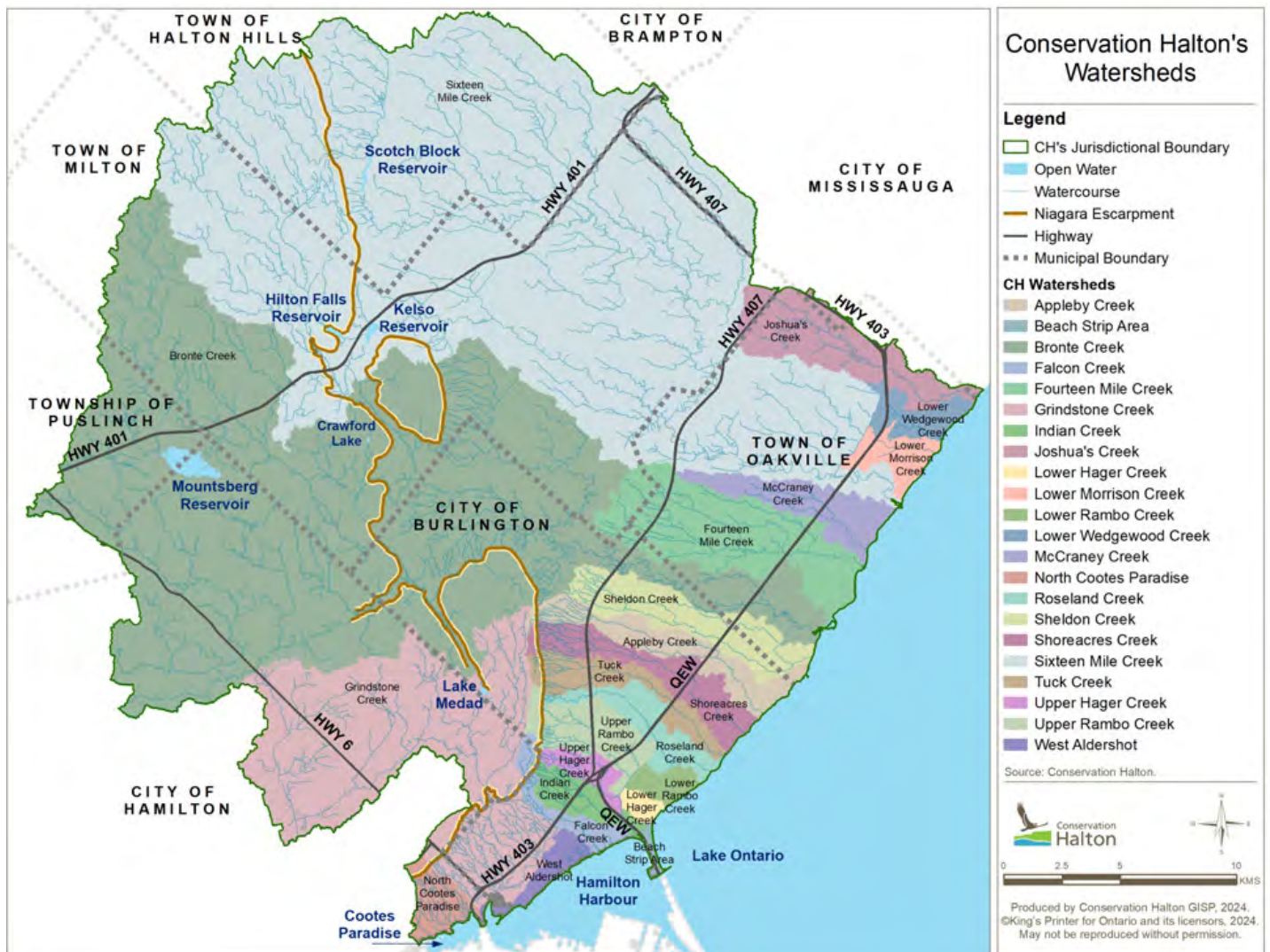
The Watershed Strategy addresses the programs and services required by legislation as well as those supported in the MOUs and current agreements. It also aligns with CH's existing strategic plan, *Momentum*. It brings together the latest scientific data and technical information and applies a climate change lens to natural resource management. The Watershed Strategy underpins CH's programs and services implemented to avoid, manage, and mitigate natural hazards, protect natural systems, and support the health and resilience of our watersheds for years to come.

## About Conservation Halton

The Halton Region Conservation Authority (Conservation Halton or CH) was established in 1963 through the amalgamation of two CAs, the Sixteen Mile Creek Conservation Authority formed in 1956, and the Twelve Mile (Bronte) Creek Conservation Authority formed in 1958, both under the terms and conditions of the CA Act. CH's area of jurisdiction is watershed-based<sup>2</sup> and was established by two Orders in Council.

CH's area of jurisdiction (Figure 2) is bisected by the Niagara Escarpment and includes multiple watersheds that cover an area of more than 1000 square kilometres. These include the Grindstone, Bronte, and Sixteen Mile Creek watersheds and 18 smaller urban watersheds that enter Lake Ontario, from North Cootes Paradise in the west to Joshua's Creek in the east. These watersheds lie within the Greater Golden Horseshoe, one of the fastest growing areas in Canada, and include portions of Halton Region (including the City of Burlington and the Towns of Milton, Halton Hills, and Oakville), Peel Region (including the City of Mississauga, the County of Wellington (including the Township of Puslinch), and the City of Hamilton. CH's jurisdiction also includes almost 51 kilometres of Hamilton Harbour<sup>3</sup> and Lake Ontario shoreline and extends two kilometres into the lake.

Figure 2: CH's Area of Jurisdiction



<sup>2</sup> A watershed is an area of land where surface water drains into the same body of water such as a stream, creek, river, or lake.

<sup>3</sup> The shoreline also includes Cootes Paradise which is an inner bay separated from Hamilton Harbour by a barrier bar.

CH's governing body or Board is comprised of 20 appointees, who are both elected municipal councillors and citizen appointees from participating municipalities including Halton Region, Peel Region, the City of Hamilton, and the Township of Puslinch. The Board oversees an array of programs and services delivered by CH. Through these programs and services, CH protects communities from natural hazards such as flooding, drought, and erosion, manages and restores the natural resources and biodiversity in CH's watersheds, protects drinking water sources, monitors environmental conditions, trends, and risks, and creates opportunities to connect with nature through recreation and education. Watersheds often extend across multiple municipal boundaries. CH partners with local levels of government and other government and non-government partners in discharging its mandate and approves corporate policies and annual budgets.

CH has a clear and transparent budgeting process to assign costs that follows the approach and methods of apportionment prescribed under legislation. All proposed programs and services, along with their anticipated costs, are discussed and confirmed with participating municipalities during the annual budget review process.

CH is an independent, corporate body set up under the terms and conditions of the CA Act. Each year, the budget is formally approved by the Board after consultations with participating municipalities have been held. This process ensures that all participating municipalities are aware of and support the delivery of CH's programs and services within the scope defined by the budget. CH also tracks the performance and outcomes of programs and services through the annual performance reviews, which are summarized in the annual report.

# GUIDING PRINCIPLES AND OBJECTIVES

The Watershed Strategy's overarching goal as well as its guiding principles and objectives were developed with public feedback and approved by the CH Board in April 2024.<sup>4</sup> Each statement aligns with legislation and CH's current strategic plan, *Momentum*. These statements also support our MOUs with participating municipalities, which highlight several specific objectives:

- ensure that environmental and watershed-related programs and services in Halton are effective, complementary, value-added, and customer-focused;
- eliminate unnecessary duplication and streamline environmental and watershed-related programs and services to optimize the use of existing resources and technical expertise and, where possible, coordinate efforts;
- continuously improve working relationships and enhance service performance of all Parties to the MOU;
- ensure natural resources in Halton are protected, managed and/or restored using a watershed or systems-based approach and cost-effective solutions;
- support the development of a collaborative Watershed-based Resource Management Strategy that addresses natural resource issues of interest and concern to the Parties; and
- ensure relevant watershed resource data is collected using sound science and robust analytical tools and technologies, is shared among the Parties to support decision making and evaluation, and that related outcomes and progress are reported among the Parties.

## For the Watershed Strategy, these three terms are defined as follows:

**Goal:** a broad statement describing a desired long-term outcome.

**Principle:** a concept or idea that guides measurable actions.

**Objective:** a statement describing desired outcomes for measurable short-term actions that help achieve a goal.

<sup>4</sup> Draft statements were developed in late 2023. After seeking public review and comment between January 15 and February 13, 2024, these statements were revised based on the input received and approved by CH's Board on April 18, 2024.

# Goal

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To design and deliver cost-effective programs and services that:

- help protect people and property from natural hazards and related climate change impacts;
- help address watershed-scale key natural resource issues;
- help protect, conserve, and enhance nature;
- deliver environmental education; and
- provide opportunities for sustainable outdoor recreation on Conservation Halton lands.



# Principles

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## **Principle I: Natural resources provide essential services that are best managed on a watershed basis.**

**Watershed Scale:** The management of natural resources and natural hazards will be implemented on a watershed basis through our Watershed Strategy and the Conservation Area Strategy as defined by legislation.

**Watershed-based Resource Management Strategy:** The Watershed Strategy will provide a comprehensive and collaborative framework to identify and analyze natural resource issues, conditions, trends, and risks for delivering cost-effective programs and services to manage them.

**Essential Services:** Natural resources provide essential services (e.g., they buffer impacts of climate change, mitigate natural hazards, filter contaminants, sustain biodiversity, provide green spaces for recreation), and will be valued, managed, and protected as natural assets to support community prosperity, growth, and well-being.

## **Principle II: Managing water and other natural resources is a shared responsibility**

**Partners:** Key partners in natural resource management will include Conservation Halton, municipalities, First Nations, government agencies, landowners, and other stakeholders.

**Scope:** The Watershed Strategy will address key resource management issues associated with natural hazards, climate change impacts on natural resources, and drinking water sources as defined in the legislation and other resource management issues as agreed to by funding partners.

**Approach:** A collaborative, transparent, and precautionary approach will be used to develop and implement the Watershed Strategy.



## Principle III: Management of Water and Other Natural Resources is Effective and Efficient

**Funding:** Government funding will be efficiently allocated; costs for programs and services will be shared through the budget process and agreements and be offset through other partnerships, grants, fees-for-service, or sources of funding; available resources will be coordinated and pooled to achieve cost savings wherever possible.

**Management Approaches:** Best value, optimal and integrated solutions will be sought using a dynamic, responsive, and adaptive approach which is supported by monitoring, progress reporting, and periodic review.

**Implementation:** Best practices will be applied; provincial standards will be achieved or exceeded; existing staff and organizational expertise will be optimized; actions will be streamlined, complementary, value-added, and coordinated, where possible; unnecessary duplication will be eliminated.

**Data and Knowledge Sharing:** Relevant data will be collected, integrated, and analyzed using sound science, established protocols and standards, and robust analytical tools and technologies; information will be shared in usable formats among partners to support decision making and evaluation; outcomes and progress are reported.

## Principle IV: Engagement is Integrated and Iterative

**Active Participation:** Opportunities for active participation by municipalities, government agencies, First Nations, and subject matter experts will be provided.

**Public Engagement:** Community groups, farmers, landowners, residents, and other stakeholders will be invited to actively engage to provide local knowledge and perspectives; input will be documented, summarized, and publicly accessible.

**Regular Reporting and Revision:** Implementation outcomes will be reported regularly; our programs and services will be adjusted based on results.

## Objectives

1. To avoid, reduce or mitigate risk to public health and safety and property damage from flooding and other natural hazards and the impacts of climate change.
2. To identify key natural resource issues and primary stressors that influence them, both locally and cumulatively, including climate change.
3. To monitor key indicators of natural resource issues to describe conditions, trends, and risks.
4. To characterize surface/groundwater systems and natural resources, which support hydrological and ecological integrity and influence natural hazard processes.
5. To identify the causes and risks of key natural resource issues and develop potential solutions for addressing them that foster climate change resiliency, biodiversity, community sustainability, and well-being.
6. To protect, improve and restore surface and ground water quality and quantity to maintain natural watershed functions/ services and reduce impacts on the Hamilton Harbour and western Lake Ontario.
7. To mitigate risks to municipal drinking water sources as specified by the Clean Water Act and promote sustainable and clean water for communities and ecosystems.
8. To recognize the value of CH-owned lands in supporting all the objectives and providing accessible, high-quality, and sustainable outdoor recreation and education opportunities.

# PROGRAMS AND SERVICES REVIEW



## Programs and Services

CH delivers a wide range of programs and services to address key natural resource issues that help fulfill the overarching goal and guiding principles and objectives under three program and services areas, including:

- Natural Hazards and Watershed Management;
- Permitting and Planning; and
- Conservation Lands and Recreation.

The existing CH programs and services and the funding categories (i.e., Category 1, 2, or 3) that apply to each was developed in 2022 as part of an inventory of programs and services CAs were required to complete under O. Reg. 687/21 (see <https://www.conservationhalton.ca/wp-content/uploads/2023/12/Conservation-Authorities-Act-Programs-Services-Inventory-Explanatory-Documents-December-21-2023.pdf>). Through this analysis of programs and services, it was found that almost 60% of programs and services fall into Category 1 (mandatory), with over 55% of the costs funded by self-generated revenues, chargebacks, and reserves. About 45% of Category 1 programs and services and 6% of Category 2 or 3 programs are funded by participating municipalities with the remainder of the costs supported by other revenue sources.

Corporate administration and operations, including financial, technical, creative and administrative supports, facilitate efficient and effective delivery of these programs and services. CH depends on clear financial data and analyses for budget development and long-term planning. Internal services such as information technology (including geographic information systems), marketing and communications, enterprise risk management, health and safety, fleet operations, asset management, and human resources promote best business practices and support corporate economic, social, and environmental sustainability.

The following sections describe the programs and services provided by CH relating to natural hazards and watershed management, permitting and planning, conservation lands and recreation, and corporate administration and operations along with the anticipated outcomes and benefits of implementing them.

# Natural Hazards and Watershed Management

The programs and services delivered by CH to address issues relating to natural hazards such as flooding and erosion and watershed management are focused on water management, restoration, and enhancement of creeks, wetlands, forests and habitats, risk assessment and watershed management planning, and watershed monitoring and reporting. Programs and services that focus on the management and understanding of natural hazards and the protection of drinking water sources are Category 1 programs, while broader restoration programs and services fall into Category 2 or 3 programs.

### Water Management (Category 1)

CH owns, maintains, and operates water management infrastructure with a capital asset value of more than \$300 million, including four multi-purpose dams and three urban channels. Real-time rainfall and stream flow data from provincial and local monitoring stations, weather forecasts, and seasonal conditions such as ice build-up are closely monitored through sensors, photography, and data analysis. The data collected supports the modelling and forecasting of potential flood events and low flow conditions upon which operational decisions are based to retain flood storage during rainfall events and augment low flows during dry periods. Moderating the impact of extreme water events also supports local biodiversity.

CH is responsible for maintaining, repairing, and replacing sensors, equipment, and infrastructure and has completed an asset management plan to ensure these obligations are carried out in a cost-effective and timely way. CH is also responsible for issuing flood messages to watershed stakeholders and supporting municipal emergency response to flooding.

#### Outcomes

- public awareness and understanding of natural hazard and climate change risks
- informed decision making about water control infrastructure operations
- reduction and/or mitigation of potential property damage from natural hazards
- protection of development within the flood hazard
- protection of the structural integrity of valley slopes and shorelines
- timely flood warning and emergency response to flood risks
- protection of the health and safety of landowners
- increased resilience to climate change impacts
- enhanced water quality
- improved natural habitat and biodiversity
- safeguarding of public interest
- avoidance of future costs to remediate and/or recover from natural hazards for landowners, municipalities, CAs, and Province

## Restoration (Categories 1 and 2)

CH undertakes restoration projects on public and private lands including wetland rehabilitation, water quality and wildlife habitat improvement, tree planting, bioswales, and creek improvements such as creek bank stabilization, in-creek enhancements and realignments, dam removal, and riparian plantings.

CH partners with federal, provincial, and municipal governments, private landowners, farmers, community groups, and other organizations to undertake and fund restoration projects throughout its watersheds.

### Outcomes

- reduction and/or mitigation of potential property damage from natural hazards
- protection of development within the flood hazard
- stabilization of creek banks and protection against erosion
- restoration of creek and wetland hydrological functions
- increased resilience to climate change impacts
- enhanced water quality
- improved natural habitat and biodiversity

## Risk Assessment and Planning (Categories 1 and 2)

CH undertakes several risk assessment and planning initiatives in collaboration with municipalities and others to inform management decisions about natural hazards and natural resource risks. Examples include watershed-wide climate change risk and vulnerability assessments, climate change mitigation/adaption plans, watershed management plans and watershed-wide resource strategies. CH implements the Source Water Protection Program for the Halton-Hamilton Source Protection Region under the Clean Water Act and coordinates the Hamilton Harbour Remedial Action Plan. CH partners with researchers at post-secondary and other institutions to further the understanding of natural and cultural heritage and environmental cause-effect relationships, conditions, vulnerabilities, and risks on CH lands.

### Outcomes

- public awareness and understanding of natural hazard and climate change risks
- evidence/science-based and informed decision making to support the design and delivery of programs and services that safeguard drinking water sources, reduce and/or mitigate natural hazard risks, restore creek and hydrological functions, increase resiliency to climate change impacts, enhance water quality, and improve natural habitat and biodiversity
- collaboration and partnerships for shared planning and actions among partners
- coordination support for Hamilton Harbour Remedial Action Plan partners

## Data Collection and Reporting (Categories 1 and 2)

CH inventories, monitors, assesses, and reports on watershed conditions, trends, and risks such as water levels, discharge flows, and embankment groundwater levels at CH's dams to ensure safe and timely reservoir operations. Specifically, CH monitors surface and groundwater quality and quantity, rainfall and snowpack, stream morphology and erosion, wetlands, climate, forest health, and biodiversity throughout its watersheds. CH reports on watershed conditions and trends using various communication tools such as the Watershed Report Cards, digital story maps, and social media.<sup>5</sup>

### Outcomes

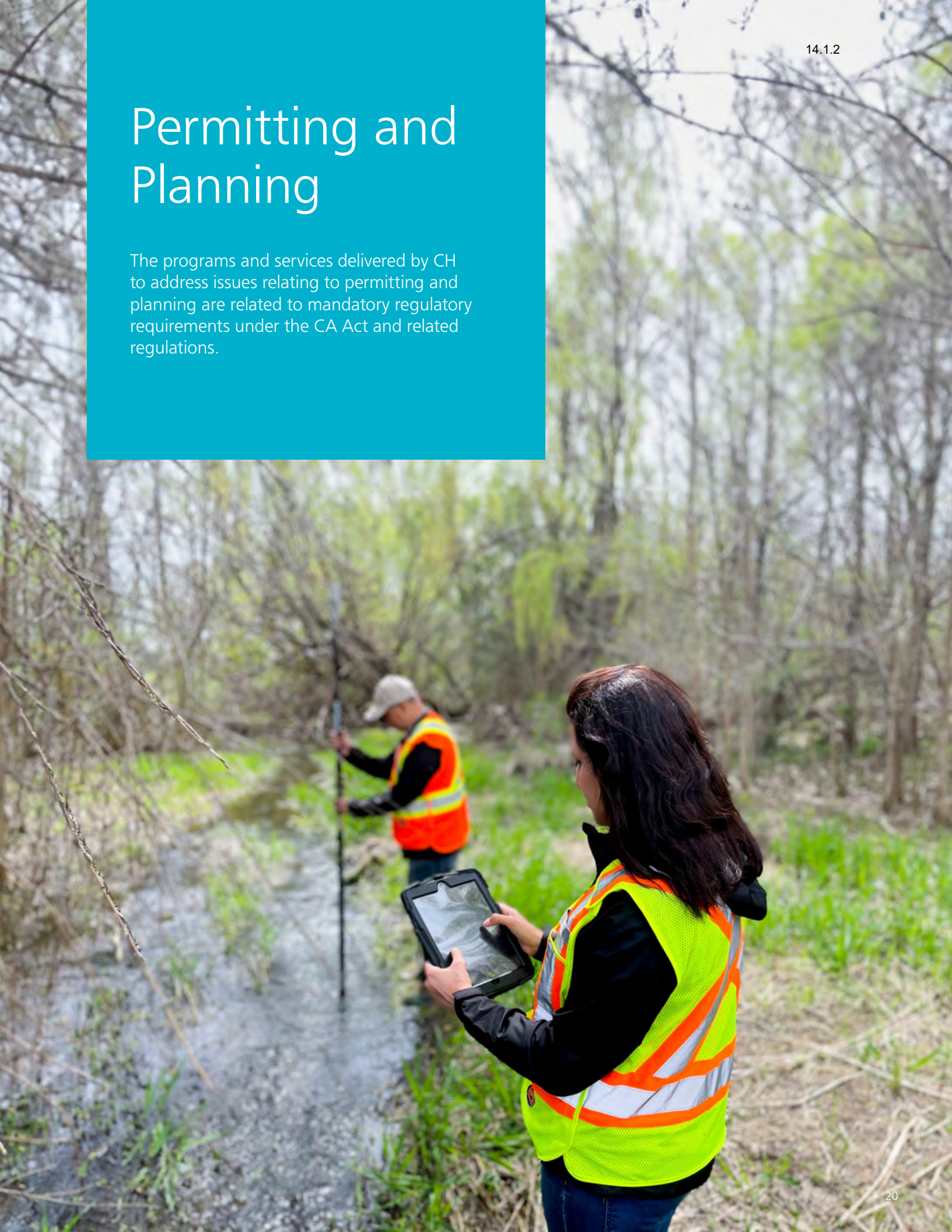
- identification, assessment, and reporting of:
  - weather and creek conditions and trends to support flood warning and forecasting, low water response, dam operations, and emergency response to natural hazards
  - watershed-wide conditions, trends, and risks to i) monitor, understand, and report on existing resource issues, ii) determine priorities and opportunities for restoration or remediation, and iii) monitor natural asset conditions and evaluate risks
  - the effectiveness of CH programs and services in managing natural hazards and addressing watershed-wide natural resource issues (performance monitoring)
- the value of restoration projects in restoring natural processes and functions at the project and watershed scales
- informed decision making about the design and delivery of programs and services to safeguard drinking water sources, reduce and/or mitigate natural hazard risks, restore creek and hydrological functions, increase resiliency to climate change impacts, enhance water quality, and improve natural habitat and biodiversity
- public awareness and understanding of natural hazard and climate change risks and watershed conditions, trends, risks, and natural resource issues

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<sup>5</sup> For a more detailed description of CH's watershed monitoring program see [Watershed Monitoring Programs Summary](#) (CH, 2024).

# Permitting and Planning

The programs and services delivered by CH to address issues relating to permitting and planning are related to mandatory regulatory requirements under the CA Act and related regulations.



## Programs and Services

### Permitting (Category 1)

CH administers and enforces Parts VI and Part VII of the CA Act and O. Reg. 41/24. In this role, CH reviews permit applications to allow development activities within regulated areas including river or stream valleys, hazardous lands, shorelines, and wetlands, and/or changes to watercourses or wetlands as defined by the legislation. Permit applications are assessed based on whether the development activity would affect the control of flooding, erosion, dynamic beaches, unstable soils, or bedrock, as well as whether the activity would create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property.

CH also develops guidance and assessment tools such as policies, implementation guidelines, and modelling and regulatory mapping of natural hazards which are approved by the CH Board to guide staff and applicants through the permitting and planning process. Regulatory and hazard mapping includes riverine flood hazards (floodplains and spill flood hazards), erosion hazards, wetlands, hazardous lands, and regulatory allowances. These tools ensure that hazard risks are avoided, existing hazards are not aggravated, and new hazards are not created. This is a mandatory program under O. Reg. 686/21.

### Outcomes

- public awareness and understanding of natural hazard risks
- general understanding of CH's regulatory role and areas regulated
- informed decision making on property matters by landowners and prospective landowners
- reduction and/or mitigation of potential property damage from natural hazards
- protection of development within the flood hazard
- protection of wetland and creek hydrological functions
- protection of the structural integrity of valley slopes and shorelines
- protection of the health and safety of landowners
- informed and timely permit decisions
- safeguarding of public interest
- avoidance of future costs to remediate and/or recover from natural hazards for landowners, municipalities, CAs, and Province



## Planning (Category 1)

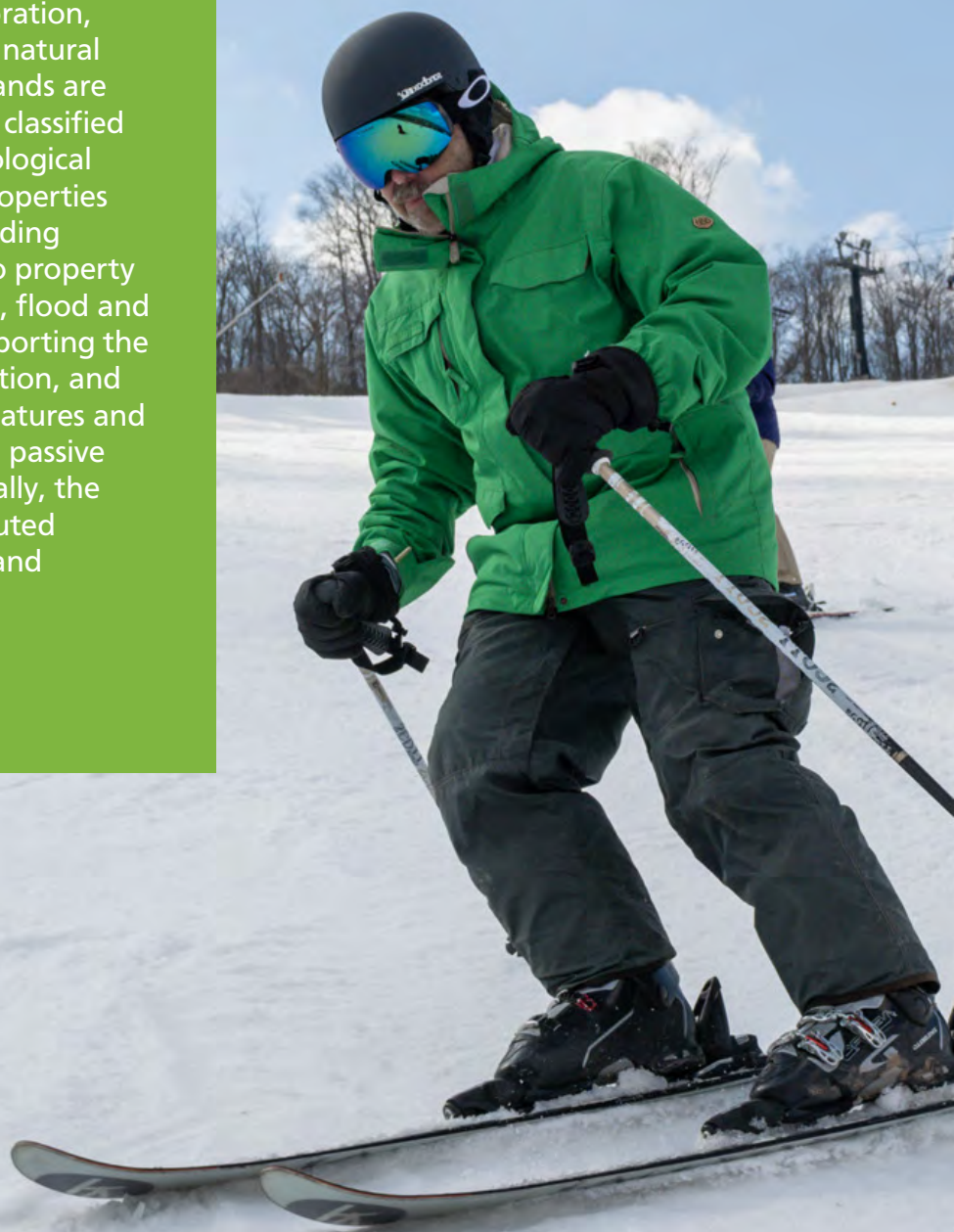
CH acts on behalf of the Province as directed in O. Reg. 686/21 under the CA Act to ensure that decisions under the Planning Act are consistent with natural hazard policies in the Provincial Policy Statements and/or Provincial Plans. In this role, CH works with municipalities to ensure that the development and implementation of municipal policies align with provincial natural hazard policies and Part VI of the CA Act and associated regulations (O. Reg. 41/24). CH also reviews proposals submitted under other legislation to ensure that risks related to natural hazards are addressed. This is a mandatory program as described in O. Reg. 686/21.

### Outcomes

- municipal awareness and understanding of natural hazard risks
- development and implementation of municipal policies aligned with provincial policy direction, O. Reg. 41/24, and CH policies and guidelines related to natural hazards
- avoidance of flood risk by directing development away from hazard lands
- protection of wetland and watercourse hydrological functions
- protection of the structural integrity of valley slopes and shorelines
- protection of development within the flood hazard
- protection of the health and safety of landowners
- informed and timely response for municipal planning applications
- safeguarding of public interest
- avoidance of future costs to remediate and/or recover from natural hazards for landowners, municipalities, CAs, and Province

# Conservation Lands and Recreation

Since it was formed, CH has acquired lands to support the delivery of programs and services that further the conservation, restoration, development, and management of natural resources in its watersheds. These lands are categorized based on their use and classified based on their natural features, ecological significance, and purpose. These properties provide broad public benefits, including reducing risks to life and damage to property resulting from natural hazards (e.g., flood and erosion control infrastructure), supporting the conservation, protection, rehabilitation, and management of natural heritage features and functions, and providing active and passive recreational opportunities. Historically, the Province and municipalities contributed financially towards the acquisition and development of these lands.



CH delivers programs and services on these lands including land management, visitor experiences, education and awareness, and active and passive recreation. As required by the CA Act, CH has developed a Conservation Area Strategy that is aligned with the Watershed Strategy. Land management (i.e., master planning, acquisitions and dispositions, risk management, administrative operations, resource management, and visitor impact management) and passive recreation are considered Category 1 programs and services. Category 2 programs and services include education and outreach programs that are implemented at the request of the municipality through an agreement. Category 3 programs and services include operations that relate to active recreation, visitor experience, education and awareness, visitor impact experience, and land acquisition that specifically supports these actions. These programs and services are considered advisable by the CH Board and are solely funded from sources other than participating municipalities.

## Programs and Services

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### Land Management (Category 1)

CH owns and manages approximately 4,303 hectares (10,633 acres) of land to support the delivery of its programs and services, including protecting and enhancing important natural features, supporting public access to greenspaces, and providing quality recreational opportunities.

Land management also includes the securement of lands to augment natural heritage protection and connectivity and enhance public access to natural areas.

Management of these lands is guided by a long-term vision and master planning and supported by regular monitoring of natural features and habitats, visitor impacts, and safety and risk factors such as hazard trees.

### Outcomes

- reduction and/or mitigation of potential property damage from natural hazards
- stabilization of creek banks and protection of the structural integrity of valley slopes against erosion
- protection and restoration of wetland and watercourse hydrological functions
- conservation, protection, rehabilitation, establishment, and management of natural heritage lands and forests
- enhanced water quality
- improved natural habitat and biodiversity
- increased watershed resilience to climate change impacts
- informed master planning and decision making to support the design and delivery of programs and services on CH lands
- protection of the health and safety of users
- provision of public access to greenspaces

### Visitor Experiences (Category 3)

Where CH permits public access, lands are managed to enhance visitor experiences through interpretive and wayfinding signage, food and retail services, events and festivals, and equipment and facility rentals supported by robust business plans and marketing strategies.

#### Outcomes

- public awareness of the importance of CH lands for reducing natural hazard and climate change risks and managing natural resource issues
- enjoyable, impactful, diverse, and quality experiences for users

### Education and Awareness (Categories 2 and 3)

CH provides public education and community outreach programs that draw over 10,000 participants annually. CH also partners with local school boards to deliver affordable and innovative outdoor education programs to approximately 65,000 school children each year. These programs connect people to nature and boost public appreciation and awareness for land and water stewardship.

#### Outcomes

- public awareness of the importance of CH lands for reducing natural hazard and climate change risks and managing natural resource issues
- guidance and encouragement to participants for supporting and/or initiating restoration and stewardship activities

### Recreation (Category 3)

CH owns, operates, and maintains eight active conservation areas including Hilton Falls, Rattlesnake Point, Kelso/Glen Eden, Mount Nemo, Crawford Lake, Mountsberg, Area 8, and Robert Edmondson. Each park offers unique experiences for visitors. Annual visitation at these parks is about 1,000,000.

#### Outcomes

- provision of public access to greenspaces
- enjoyable, impactful, diverse, and quality experiences for users

# Corporate Administration and Operations

Corporate Administration and Operations includes the financial, technical, creative, and administrative programs and services that CH requires to deliver its programs and services efficiently and effectively. The focus is on financial sustainability and clear financial data and analysis to support informed, strategic, and operational decision making, annual budgets, and long-term planning. This includes implementing business practices that ensure corporate economic, social, and environmental sustainability.



### Information Technology (Category 1)

CH utilizes digital tools to continuously improve internal administrative and financial processes and eliminate inefficiencies, redundancies, and ineffective practices.

CH also applies Geographical Information Systems (GIS) solutions to 1) map regulated areas, CH-owned lands, and other spatial data, 2) organize, analyze, and map data sets collected by staff and external agencies, and 3) generate useful and informative insights using a variety of digital assessment and reporting tools. CH also shares its data through Data Licensing Agreements and an open web-based data portal.

#### Outcomes

- informed insights and knowledge about natural resource conditions, trends, risks, and natural resource issues to support assessment of and decision making about the design, delivery and performance of CH programs and services
- increased public access to watershed data, maps, and interactive reports and data summaries
- increased public awareness and understanding of CH's programs and services and watershed conditions, trends, and risks

### Facilities and Equipment (Category 1)

CH assesses facility and equipment needs and acquires, operates, maintains, and repairs facilities and equipment in keeping with policies and procedures.

#### Outcomes

- provision of facilities and equipment to support the efficient and cost-effective delivery of CH's programs and services
- improved economic, social, and environmental sustainability

## Governance and Risk (Category 1)

CH undertakes training and risk identification and prevention programs, health and safety training and reporting, and enterprise risk management.

### Outcomes

- a strong culture of safety
- minimized risk to the organization

## Human Resources (Category 1)

CH develops human resources systems and programs that focus on 1) attracting, retaining, and investing in top talent and 2) driving employee engagement and wellness, 3) fostering respect in the workplace, 4) creating opportunities for growth and development, 5) promoting health and safety in the workplace, and 6) meeting the requirements of all employment legislation.

### Outcomes

- maximized organizational productivity
- engaged employees who value and support inclusion, diversity, equity, and accessibility
- compliance with all employment legislation
- a highly skilled, professional, and valued work force

## Finance (Category 1)

CH develops responsible financial support systems to support the efficient and cost-effective delivery of its programs and services. This includes 1) preparing and administering the annual budget, 2) financial planning, oversight, and reporting, 3) managing investments and cash flows, 4) administering accounts payable and receivable, 5) developing asset management plans, and 6) developing and implementing sound financial and procurement policies and procedures.

### Outcomes

- demonstrated fiscal responsibility, accountability, and transparency
- efficient and cost-effective delivery of programs and services
- optimized financial processes
- corporate economic, social, and environmental sustainability

## Communication (Category 1)

CH undertakes marketing and communications and uses digital media and other communications tools to 1) raise awareness of and education about its corporate roles and responsibilities, 2) boost general knowledge and understanding of the programs and services it offers and their benefits, 3) promote understanding of CH's policies and procedures, and 4) provide a wide range of opportunities to solicit public input and engagement.

### Outcomes

- engaged and informed CH staff, public, agencies, groups, First Nations, and others
- positive public perception and support





# KEY WATERSHED NATURAL RESOURCE ISSUES

## Issues Context

To better understand the key natural resource issues specific to CH's watersheds, CH reviewed available technical studies, monitoring assessments, and possible climate change scenarios. These extensive reviews are summarized in the following reports released in 2023 and 2024:

**Watershed Characterization Summary** – This report summarizes the evolving biophysical and human characteristics of CH's watersheds, how they alter the water cycle and its associated natural processes over time, and how they contribute to creating or aggravating key watershed natural resource issues and risks such as flooding and erosion. This review and associated analyses were based on existing technical studies and information and input from subject matter experts.

**Watershed Monitoring Programs Summary** – This report summarizes CH's data collection and monitoring program. CH collects data and information from a variety of sources to assess the conditions, trends, and risks within CH's watersheds. Sources of data and information are from 1) data collected in real time or on a periodic or annual basis, 2) inventories that note the presence of natural phenomena in a specific location at a specific point in time, and 3) other relevant information.

**Climate Change Vulnerability and Risk Assessment** – This report identifies the benefits and services that natural resources provide, possible climate change scenarios that

will affect CH's watersheds, and probable consequences of climate change on natural hazards and natural resources at a watershed scale. It summarizes climate change threats affecting creeks, groundwater, wetlands, vernal pools, Lake Ontario shorelines, forests, and meadows. It also recommends actions that would help alleviate or mitigate the impacts of climate change at the watershed scale. This assessment was used to inform the Watershed Climate Resiliency Plan.

**Watershed Climate Resiliency Plan** – This plan describes the implications of climate change on the effectiveness of CH's programs and services and describes various actions that can be implemented by CH to improve these programs and services to better adapt to or mitigate climate change impacts.

**Biodiversity Report** – Entitled Effects of Climate Change on Biodiversity within Conservation Halton's Watersheds, this report identifies the effects of climate change on the habitats, animals, and plants that inhabit CH's watersheds and recommends mitigation and adaptation measures for CH and others that can be undertaken to sustain biodiversity.

Based on the analysis and assessments contained in the above reports, natural resource conditions and trends tracked through the collection and analysis of monitoring data, staff expertise and input from municipal staff and others, 13 key watershed-scale natural resource issues were identified within CH's watersheds.



## Key Resource Issues – Definitions and Descriptions

A watershed is an interconnected system that constantly interacts and adjusts to shifts in biophysical characteristics, water cycle processes, and human activities. Human activities (including those that drive climate change) disturb physical, biological, and chemical properties, and alter water cycle and natural processes. The magnitude of change determines the extent to which natural resource processes become natural resource issues.

Natural resource issues, in turn, can constrain human activities or increase risk to life and property. For example, human activity may aggravate existing or create new hazards such as flooding or erosion or can cause water quality impairments and risk to human health and well-being. These impacts create substantial and costly environmental, social, and economic consequences.

The 13 key watershed-scale natural resource issues identified relate to riverine flooding, drought, valley erosion, surface water quality (chlorides, suspended solids, sedimentation, total phosphorus, and temperature), groundwater quantity and quality, degradation, fragmentation, and loss of natural features such as forests and wetlands, invasive species, and biodiversity loss. Tables 1 to 13 summarize vulnerable localities or creek reaches within CH's watershed where these issues are evident or emerging and highlight some of the key impacts that have or may occur as a result.





## Flooding – Riverine

Flooding occurs when water overtops the banks of creeks and flows onto adjacent lands. Flooding results from intense rainfall over short periods of time, long periods of rainfall, heavy snow melt, or channel constrictions such as ice jams, debris, or undersized infrastructure. Other factors can worsen flood risk including the loss or degradation of natural features such as wetlands, increased impermeability of soils due to urbanization, illegal dumping of fill in creek valleys, physical alterations to creek banks which may cause waters to spill beyond the natural floodplain, and climate change.

Table 1 describes locations within CH’s watershed that have experienced historic flooding and areas that are high-risk and vulnerable to flooding. Flooding puts life and property at risk and results in many environmental, social, and economic impacts to individuals and communities.

**Table 1: Flooding Riverine**

Historic Flooding	Vulnerable Areas	Key Impacts
<ul style="list-style-type: none"> <li>• 2024, localized areas in Hamilton and Halton Region</li> <li>• 2000, Oakville (Fourteen Mile Creek)</li> <li>• 1980, 2009, 2022, Lowville (Bronte Creek)</li> <li>• 1954, Hurricane Hazel (watershed-wide)</li> <li>• 1950, Milton (Sixteen Mile Creek)</li> </ul>	<ul style="list-style-type: none"> <li>• Southeast Oakville: Morrison-Wedgewood Diversion Channel Spills, Lower Wedgewood, Lower Morrison and Joshua’s Creeks</li> <li>• Southwest Oakville: Sheldon Creek Spill to Bronte Creek, Fourteen Mile and McCraney Creeks</li> <li>• Southeast Burlington: Tuck, Shoreacres, Appleby and Sheldon Creeks</li> <li>• Southwest Burlington: Grindstone, Falcon and Roseland Creeks, and Hager-Rambo Creek and Diversion Channel System</li> <li>• Urban Milton: Sixteen Mile Creek</li> <li>• Lowville, Carlisle, Progreston and Cedar Spring Community: Bronte Creek</li> <li>• Millgrove and Hidden Valley Community: Grindstone Creek</li> <li>• Highway 6 Corridor, Flamborough: Grindstone Creek, including spill from Bronte Creek</li> </ul>	<ul style="list-style-type: none"> <li>• Risk to life and property</li> <li>• Risk of slope failure, bank and overland erosion</li> <li>• Degraded water quality (e.g., increase in sedimentation, nutrients, etc.)</li> <li>• Degraded and/or loss of habitat</li> <li>• Damage to farmland</li> <li>• Cost of maintenance, repair and replacement</li> <li>• Cost and availability of insurance</li> <li>• Cost of and accessibility to emergency services</li> <li>• Short response time to high intensity storms</li> <li>• Infrastructure damage, repair</li> </ul>



## Drought

Drought occurs when there is a water shortage. It results from a period of persistent drier-than-normal conditions with below normal precipitation and high temperatures. Other factors that can worsen drought include the loss and fragmentation of forests and wetlands, an increase in the use of surface and groundwater, and climate change.

Table 2 identifies years where drought was experienced in CH's watersheds, pinpoints areas that are vulnerable to drought, and lists some of the key impacts of drought on natural resources, biodiversity, and watershed residents.

**Table 2: Drought**

Historic droughts	Vulnerable Areas	Key Impacts
<ul style="list-style-type: none"> <li>• 2022</li> <li>• 2016</li> <li>• 2012</li> <li>• 2007</li> <li>• 1998-1999</li> </ul>	<ul style="list-style-type: none"> <li>• Tributaries that flow through fine till plains (e.g., tributaries of Indian, Lowville, Mount Nemo, and lower Bronte Creek)</li> <li>• Urban creeks including upper reaches of Roseland and Rambo Creeks, east branch of Hager Creek, Falcon Creek upstream of Hwy 403, LaSalle Creek, and upper reaches of Wedgewood and Joshua's Creeks in Oakville</li> <li>• Grindstone Creek tributaries either near their upstream end, along their entire length or between their point of origin and outlet</li> <li>• Tributaries north-west of Scotch Block reservoir, primarily in the northern reaches of Sixteen Mile Creek</li> <li>• Areas with private shallow wells</li> <li>• Areas above the Niagara Escarpment where groundwater aquifers are typically shallow</li> </ul>	<ul style="list-style-type: none"> <li>• Surface and groundwater supply shortages (e.g., shallow wells and creek water levels decrease or dry up)</li> <li>• Degraded water quality (e.g., increase in creek temperatures, concentration of contaminants and nutrients)</li> <li>• Degraded and/or loss of habitat</li> <li>• Release of carbon (e.g., from wetland soils)</li> <li>• Crop stress and/or failure and associated costs</li> <li>• Lack of sufficient water for irrigation and domestic supply</li> <li>• Cost of importing water</li> </ul>



## Valley Erosion

Valley erosion occurs when there is an excessive loss of soil due to natural creek processes. Valley erosion results from periodic increases in peak creek flow, changes in channel form, unstable and steep slopes, loss of riparian vegetation (a strip of vegetation along the edge of a creek or waterbody), sediment load levels, ice jams, or soil type. This can cause bank slumping, scouring, undercutting, and ultimately slope failure. Other factors can worsen valley erosion including vegetation removal, construction activities in proximity to the slope (e.g., illegal dumping or excavation of fill in creek valleys, soil compaction, inadequate drainage, and new structures), poorly maintained infrastructure such as culverts and bridges, and climate change.

Table 3 identifies locations within CH's watersheds prone to valley erosion. These areas present a risk to life and property and may result in other detrimental impacts to communities and landowners.

**Table 3: Valley Erosion**

Vulnerable Areas	Key Impacts
<ul style="list-style-type: none"> <li>• Areas with steep exposed slopes (e.g., North Oakville, Sixteen Mile Creek), and/or clay/shale and sand/gravel soils (e.g., Hidden Valley, Burlington, Grindstone Creek)</li> <li>• Areas exposed to intense periods of high creek flow (e.g., downstream reach of Indian Creek below Hager-Rambo Diversion Channel, Burlington, North Shore; Sixteen Mile Creek downstream of concrete channel in downtown Milton; and small western tributaries of Grindstone Creek south of Highway 5)</li> </ul>	<ul style="list-style-type: none"> <li>• Risk to life and property due to instability and slope failure</li> <li>• Loss of land</li> <li>• Degraded water quality due to increased suspended sediments and contaminants</li> <li>• Accumulation of contaminated sediment and debris in creeks, especially behind dams, weirs and at the mouths of creeks</li> <li>• Changes in channel form (e.g., creek deepens and/or widens creating barriers for aquatic species, thermal pollution, further land loss)</li> <li>• Degraded and/or loss of habitat</li> <li>• Infrastructure exposure due to undercutting and scouring</li> <li>• Costs for repair, realignment, or replacement</li> </ul>



## Surface Water Quality – Chloride

Chloride is released through natural processes such as bedrock weathering and precipitation. There have been significant increases in chloride concentrations in surface water over the last 50 years throughout the watershed. At least one sample taken from most monitoring sites over a recent five-year period exceeds the provincial guideline (e.g., Fourteen Mile Creek at Lakeshore Rd, Oakville; Sixteen Mile Creek Main Branch at Speers Rd; and Sheldon Creek at Shell Park, Oakville). Other factors can increase chloride concentrations including use of road salt and water softening salt, degraded and/or loss of natural features that filter water, stormwater management ponds, and wastewater treatment plant effluent.

Table 4 indicates where chloride has been detected within CH's watersheds and the impact the compound can have on plants and animals and built infrastructure.

**Table 4: Surface Water Quality – Chloride**

Vulnerable Areas	Key Impacts
<ul style="list-style-type: none"> <li>• Creeks downstream of or in urban areas, especially creek mouths (e.g., Indian Creek, tributary of Bronte Creek; West and East Branches, Sixteen Mile Creek; and Fourteen Mile Creek at Lakeshore Rd)</li> </ul>	<ul style="list-style-type: none"> <li>• Degraded surface water quality resulting in increased toxicity to fish and other aquatic life</li> <li>• Degraded habitat (e.g., harms vegetation and can change the plant community structure)</li> <li>• Increased rates of corrosion of infrastructure</li> <li>• Increased cost to repair infrastructure</li> </ul>



## Surface Water Quality – Suspended Solids

Suspended solids are materials such as silt, clay, plankton, and microscopic organisms that remain suspended in the water column. They typically carry pollutants and nutrients. Concentrations are variable throughout the watersheds depending on weather conditions (e.g., high during storm events and low during dry periods) and are influenced by erosion and the decomposition rate of organic materials. Other factors can increase suspended solids concentrations including loss of riparian vegetation, runoff from urban and agricultural areas, illegal dumping of fill in creek valleys, wastewater treatment plant effluent, and climate change.

Table 5 describes areas within CH’s watershed where suspended solids in creeks are high and identifies the harmful effects suspended solids have on creek systems.

**Table 5: Surface Water Quality – Suspended Solids**

Vulnerable Areas	Key Impacts
<ul style="list-style-type: none"><li>• Creeks downstream of or in urban and agricultural areas (e.g., East Branch, Sixteen Mile Creek; Main Branch, Bronte Creek)</li><li>• Creek mouths flowing into Lake Ontario (e.g., Fourteen Mile, Sixteen Mile, Bronte, Grindstone Creeks)</li></ul>	<ul style="list-style-type: none"><li>• Degraded water quality due to reduced light penetration, thermal changes, increased nutrients, and sediment plumes</li><li>• Degraded aquatic habitat</li><li>• Damaged fish gills</li><li>• Higher water treatment costs</li><li>• Reduced creek aesthetics</li></ul>



## Surface Water Quality – Sedimentation

Sedimentation occurs when solid particles settle out of suspension to the creek or pond bottom. Factors that increase sedimentation include runoff from poorly managed fields and construction sites with inadequate erosion and sediment controls, illegal dumping of fill in creek valleys, dams, weirs, and climate change.

Table 6 shows where sedimentation is most likely to occur within CH's watersheds and itemizes how sedimentation impacts the environment and infrastructure.

**Table 6: Surface Water Quality – Sedimentation**

Vulnerable Areas	Key Impacts
<ul style="list-style-type: none"> <li>• Some stormwater management ponds, numerous online ponds and dug out channels, behind dams and weirs throughout the watersheds</li> <li>• Bronte and Hamilton Harbours</li> </ul>	<ul style="list-style-type: none"> <li>• Increased flood risk resulting from reduced capacity of the creek system to carry high flows</li> <li>• Weir/dam breach or failure and release of contaminants causing aquatic habitat damage</li> <li>• Degraded water quality (e.g., increased nutrients and contaminants)</li> <li>• Physical alteration of creeks and the near shore (e.g., decreased water depth or narrowing of creeks, decreased flood storage, formation of barriers to aquatic species, thermal pollution)</li> <li>• Smothered aquatic habitat</li> <li>• Cost of repeated dredging of harbours, online ponds, and stormwater management ponds</li> <li>• Disposal of dredged material</li> <li>• Infrastructure damage and repair</li> </ul>





## Surface Water Quality – Total Phosphorus

Phosphorus is a nutrient released into the environment naturally through bedrock weathering and erosion processes. It binds to suspended sediment and causes increased plant growth, including algae. Total phosphorus is a measure of all phosphorus, whether dissolved or particulate. Average annual concentrations have exceeded the provincial guideline at almost all the watershed monitoring sites at least once over a recent five-year period (e.g., Fourteen Mile Creek at Lakeshore Rd; Bronte Creek upstream of Mountsberg Reservoir and Grindstone Creek at Hamilton Harbour). Concentrations are influenced by erosion and soil type. Other factors that can increase concentrations include fertilizer application, runoff from poorly managed fields, increased impermeability of soils in urban areas that increase stormwater runoff, loss of riparian vegetation that filter and store nutrients, municipal wastewater, and climate change.

Table 7 describes creek reaches where total phosphorus levels are high and lists some of the key impacts caused by this occurrence.

**Table 7: Surface Water Quality – Total Phosphorus**

Vulnerable Areas	Key Impacts
<ul style="list-style-type: none"> <li>• Creeks downstream of or in urban and/or agricultural areas (e.g., Indian Creek and Main Branch, Bronte Creek above the Niagara Escarpment; West and East Branches, Sixteen Mile Creek)</li> <li>• Creek mouths flowing into Lake Ontario (e.g., Fourteen Mile, Sixteen Mile, Bronte, Grindstone, Hamilton Harbour)</li> </ul>	<ul style="list-style-type: none"> <li>• Increased growth in nuisance and harmful algal blooms</li> <li>• Risk to human health and wildlife (e.g., toxins released by algal blooms)</li> <li>• Degraded water quality</li> <li>• Degraded/loss of aquatic habitat and species (e.g., lowered dissolved oxygen stresses fish and aquatic life)</li> <li>• Near shore recreational opportunities adversely affected by toxic and nuisance algae</li> <li>• Increased costs to upgrade wastewater treatment plants</li> <li>• Costs to remove/clean-up algae</li> <li>• Healthcare costs for humans and pets</li> <li>• Adversely affected aesthetics (e.g., look and smell)</li> </ul>



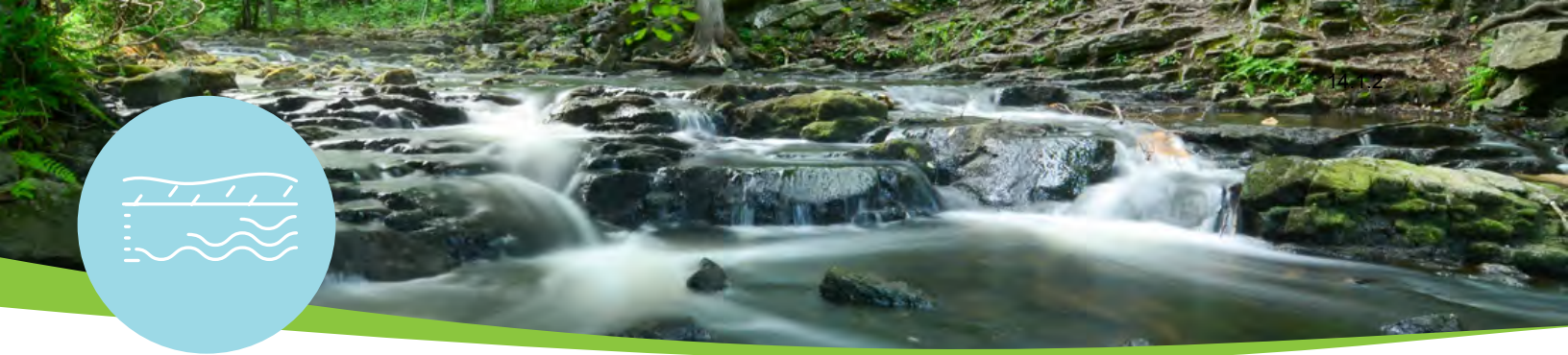
## Surface Water Quality – Temperature (Thermal Pollution)

Thermal pollution occurs when surface water temperatures increase. Widespread increases in surface water temperatures have been recorded in central and downstream reaches across the watershed over the last 20 years. Surface water temperature is influenced by yearly and seasonal weather (e.g., wet versus dry, air temperature, etc.), sun exposure, creek channel form, groundwater discharge, and erosion (e.g., wider, shallower creeks with more surface area). Other factors can increase surface water temperature including increased impermeable surfaces and reduced natural shade in urban areas, loss of forests and riparian vegetation, use of dams and on-line ponds which increase surface exposure to sunlight, surface water takings which temporarily reduce water depth, and climate change.

Table 8 identifies creek reaches where water temperatures are increasing and how rising water temperatures negatively alter aquatic habitats.

**Table 8: Surface Water Quality – Temperature**

Vulnerable Areas	Key Impacts
<ul style="list-style-type: none"> <li>• Central and downstream reaches of creeks that are not fed by cooler groundwater discharges and springs</li> <li>• Urbanized creeks (e.g., creeks that receive warmer runoff from stormwater management ponds and overland runoff)</li> <li>• Creeks with limited to no riparian vegetation or with additional human impacts (e.g., on-line ponds)</li> <li>• Creeks with intermittent water flow that typically become warmer before drying up</li> </ul>	<ul style="list-style-type: none"> <li>• Degraded water quality (e.g., increased water temperature causes lower dissolved oxygen levels and helps release nutrients from soil)</li> <li>• Degraded/loss of aquatic habitat</li> <li>• Potential loss of aquatic species sensitive to warmer water temperatures (e.g., brook trout)</li> </ul>



## Groundwater Quantity

Groundwater is the water that infiltrates the soil, is stored, and moves underground. Private and municipal groundwater wells serve approximately 12% of CH’s watershed population. The number of municipal drinking water system users is increasing. Groundwater quantity is influenced by the size of aquifers which are bodies of rock and/or sediment that hold groundwater, the ability of the materials in the ground to transmit water, and the loss and gain of water (water balance). Other factors can decrease groundwater quantity, including increased groundwater demand and excessive pumping, increased impermeability of soils due to urbanization, and climate change.

Table 9 identifies where groundwater resources are stressed within CH’s watersheds and the impacts of declining groundwater water tables.

**Table 9: Groundwater Quantity**

Vulnerable Areas	Key Impacts
<ul style="list-style-type: none"> <li>• Subwatersheds that are stressed based on monthly and/or annual groundwater demand (e.g., Upper West Branch, Sixteen Mile Creek, and Willoughby Creek (Bronte Creek))</li> <li>• Areas with shallow aquifers (e.g., some locations below the Niagara Escarpment where overlying shale is close to or at the surface)</li> <li>• Areas where soil permeability is reduced due to land use change</li> </ul>	<ul style="list-style-type: none"> <li>• Depleted groundwater sources due to overextraction</li> <li>• Reduced discharge rates that supply base flow and cold-water inputs to surface water features such as creeks and wetlands</li> <li>• Reduced survival and reproduction of aquatic species, including fish that rely on cool or cold-water habitats</li> <li>• Land subsidence (i.e., loss of support below ground due to the removal of water)</li> <li>• Risk to drinking water supplies where there is reliance on groundwater</li> <li>• Dry or unusable shallow wells</li> <li>• Increased cost to drill a deeper well</li> <li>• Increased cost to pump water from a lower water table</li> </ul>



## Groundwater Quality

Groundwater quality is the physical, chemical, biological, and radiological characteristics of water under the earth’s surface. Water quality is described by measuring key characteristics or indicators such as chloride, sodium, nitrate, sulphate, arsenic, iron, lead, and manganese. Groundwater quality varies across the watersheds but is generally of good quality. However, some areas show trends of increasing chloride and sodium concentrations in well supplies. Groundwater quality is influenced by the permeability and chemical properties of the rocks and sediments through which it moves, the depth from ground surface, and natural climatic variations (e.g., rainfall and evaporation rates). Other factors can worsen water quality including the use of road salt and water softening salt, application of fertilizers, runoff from poorly managed fields, septic system effluent, and climate change.

Table 10 describes the general areas within CH’s watersheds where groundwater quality concerns have been detected and lists the key impacts of declining groundwater quality.

**Table 10: Groundwater Quality**

Vulnerable Areas	Key Impacts
<ul style="list-style-type: none"> <li>• Sizeable areas above the Niagara Escarpment, two large areas along the Lake Ontario shoreline in Burlington and Oakville, one large area near Ashgrove where contaminants above the ground surface infiltrate into shallow aquifers where the water table is shallow and surface materials are permeable</li> <li>• Significant areas above the Niagara Escarpment where permeable soils or fractured bedrock at surface facilitate increased recharge; recharge water can contain dissolved contaminants from runoff</li> <li>• Clusters of unused, improperly abandoned wells identified in the Campbellville area, resulting in preferential pathways for contaminants to enter groundwater</li> <li>• Unidentified potential clusters of unused wells may exist in other areas that have not yet been studied, resulting in preferential pathways for contaminants to enter groundwater</li> <li>• Some urbanized areas where trends show increasing chloride and sodium concentrations</li> </ul>	<ul style="list-style-type: none"> <li>• Degraded groundwater drinking water sources</li> <li>• Reduced availability of potable groundwater due to contamination</li> <li>• Degraded surface water quality due to contaminated groundwater discharging into creeks and wetlands</li> <li>• Degraded creek and wetland habitats leading to increased toxicity and degraded habitats for flora and fauna</li> <li>• Degraded soil and land quality (e.g., increased soil salinity)</li> <li>• Increased costs to treat drinking water sources</li> <li>• Risk to human health</li> <li>• Healthcare costs for humans and pets</li> </ul>



## Degradation, Fragmentation, and Loss of Natural Features

Natural features include forests, wetlands, valleys, and watercourses. They provide benefits and services such as flood attenuation, erosion control, carbon storage, filtration of contaminants, wildlife habitat, recreation, and more. In CH's watersheds, over 70% of wetlands have been lost or fragmented; remaining wetlands are located primarily in the upper watershed reaches. Riparian habitat coverage is variable but poor overall, especially in highly urbanized areas. Forest cover is poor overall. Large tracts of forest are rare (mostly above the Niagara Escarpment) and urban forests are small. Degradation, fragmentation, and loss of natural features are influenced by yearly and seasonal weather patterns, natural hazards (e.g., erosion, flooding, and drought), and disease. Other factors can worsen degradation and loss including the removal of natural features and wildlife corridors, urban encroachment, invasive species (e.g., Emerald Ash Borer), linear infrastructure (e.g., roads, utilities, etc.), and climate change.

Table 11 describes the locations experiencing the degradation, fragmentation, and loss of natural features and identifies associated key impacts.

**Table 11: Degradation, Fragmentation and Loss of Natural Features**

Vulnerable Areas	Key Impacts
<ul style="list-style-type: none"> <li>• Urban areas below the Niagara Escarpment</li> <li>• Areas sensitive to human disturbance (e.g., Waterdown Woods, Hamilton, home to the Jefferson Salamander and Fourteen Mile Creek, home to the Redside Dace (fish))</li> <li>• Rural areas above the Niagara Escarpment in central and eastern Grindstone Creek watershed</li> </ul>	<ul style="list-style-type: none"> <li>• Increased natural hazard risk</li> <li>• Reduced resiliency to impacts of climate change</li> <li>• Degraded water quality (e.g., increased suspended solids, nutrients, and contaminants)</li> <li>• Increased habitat fragmentation causing further degradation (e.g., limits species movement and spread to new locations)</li> <li>• Loss of biodiversity due to lack of suitable habitat and increased disturbance</li> <li>• Loss of access to nature</li> <li>• Risk to mental health</li> <li>• Loss of First Nations peoples' cultural, spiritual, and medicinal practices</li> <li>• Loss of outdoor recreational opportunities</li> <li>• Increased cost of remedial/engineered measures to compensate for loss or damage to natural features</li> </ul>



## Invasive Species

Invasive species (e.g., Emerald Ash Borer, Garlic Mustard) are organisms that are not native to an area, adapt easily, reproduce quickly, and have a broader tolerance for a range of environmental conditions than native species. Natural features across CH's watershed, such as forests and wetlands, are negatively affected by invasive species. They are spread naturally by vectors such as wind, animals, insects and birds, and extreme weather events (e.g., hurricanes and flooding). Other factors can increase the spread, including human activity (e.g., deliberate or accidental introduction of invasive species such as zebra mussels, goldfish, and purple loosestrife), and climate change.

Table 12 identifies areas within CH's watersheds that are susceptible to invasive species. The key concerns with the introduction and spread of invasive species are also listed.

**Table 12: Invasive Species**

Vulnerable Areas	Key Impacts
<ul style="list-style-type: none"> <li>• Natural areas used for human activity (e.g., trail users bringing invasives into interior habitats and spread through fishing, boating, etc.)</li> <li>• Natural areas adjacent to urban or agricultural areas</li> <li>• Creeks that empty into Lake Ontario</li> <li>• Ditches and natural areas adjacent to roads (e.g., invasive species spread through ditch maintenance)</li> </ul>	<ul style="list-style-type: none"> <li>• Degraded or fragmented habitat and decreased biodiversity (e.g., invasive species often out-compete native species, become parasites and spread diseases)</li> <li>• Species loss or impairment; life cycles impacted</li> <li>• Impaired ecosystem functions (e.g., loss of natural benefits and services)</li> <li>• Risk to human health (e.g., toxic sap of giant hogweed and wild parsnip)</li> <li>• Risk to property (e.g., damaged water pipes from zebra mussels)</li> <li>• Reduced crop production and foraging space</li> <li>• Adversely affected recreation and aesthetics</li> <li>• Reduced property values</li> <li>• Increased land management, removal, and operational costs</li> </ul>



## Biodiversity Loss

Biodiversity loss is the decrease or disappearance of species. The status, health, and range of many species is shifting in CH's watersheds (e.g., decline of some tree species due to pests/pathogens). Biodiversity loss is influenced by yearly and seasonal weather patterns, natural hazards (e.g., erosion, flooding, and drought), and disease. Other factors that worsen biodiversity loss include loss of natural features and habitat, habitat degradation and fragmentation, spread of invasive species, and climate change.

Table 13 identifies the types of areas within CH's watersheds that are susceptible to biodiversity loss and the likely outcomes of biodiversity loss.

**Table 13: Biodiversity Loss**

Vulnerable Areas	Key Impacts
<ul style="list-style-type: none"> <li>• Natural areas fragmented by adjacent urban or agricultural areas (e.g., Bronte-Burloak Woods, Town of Oakville)</li> <li>• Natural areas sensitive to human use (e.g., Waterdown Woods, Hamilton)</li> <li>• Areas with species that have highly specialized requirements (e.g., Redside Dace, Fourteen Mile Creek)</li> </ul>	<ul style="list-style-type: none"> <li>• Impaired ecosystem functions (e.g., loss of natural benefits and services)</li> <li>• Reduced resiliency to impacts of climate change</li> <li>• Species loss, impairment or shifts in range</li> <li>• Risk to life and property (e.g., aggravation of natural hazards)</li> <li>• Increased management and operational costs for remedial measures and infrastructure</li> <li>• Reduced crop production and foraging space due to decline in pollinators</li> <li>• Loss of First Nations peoples' cultural, spiritual, and medicinal practices</li> <li>• Adversely affected recreation and aesthetics</li> </ul>



## Localized Natural Resource Issues

Other more localized natural resource issues related to natural hazards may jeopardize the health or safety of persons or result in the damage or destruction of property. CH's jurisdiction includes natural hazards such as shoreline flooding and erosion, dynamic beaches and unstable soils and bedrock. These areas are subjected to naturally occurring processes that only become a problem when human activities and structures intrude on those processes.

The approximately 51 kilometres of shoreline along Lake Ontario, Hamilton Harbour and Cootes Paradise are subjected to fluctuating water levels and wave action that create hazard risks to life, property, and infrastructure.

Burlington Beach, a barrier bar that separates Lake Ontario from Hamilton Harbour, is a dynamic beach that undergoes continuous change due to the natural processes of erosion and accretion. This poses a risk to property owners in this area.

In addition, there are areas of unstable soils within CH's watersheds that can shift and threaten the stability, security, and safety of structures and damage, degrade, or destroy structures such as buildings, bridges, and roads. There are four factors that can contribute to unstable soils, including:

- erosion that destabilizes soil or rock that can lead to sinkholes and landslides;
- poor soil compaction caused by an imbalance of mineral pieces, organic matter, air and water like clays and sand;
- freeze-thaw processes that accelerate erosion and break down rock and sediment; and
- decomposition of organic materials such as topsoil and plant matter that rapidly change form and mass as they decompose.

Similarly, unstable bedrock like karst, which can be found within the Niagara Escarpment, poses risk because it dissolves and erodes over time and creates unstable conditions that can lead to sink holes and collapse.



# PROGRAMS AND SERVICES ASSESSMENT

## Compliance Review

CH delivers programs and services in compliance with Section 40 (1) (b) of the CA Act that address mandatory programs and services as prescribed by the legislation. They are also aligned with the various MOUs for the delivery of Category 2 and 3 programs and services approved by the CH Board and signed between CH and its participating municipalities including Halton Region, Peel Region, the City of Hamilton, and the Township of Puslinch.

These high-level MOUs, signed in 2023, support “*the organization and delivery of programs and services that further the conservation, restoration, development and management of natural resources,*” in accordance with CH’s statutory purpose as stated in the CA Act. The Watershed Strategy addresses the full range of programs and services required by legislation as well as those supported in the MOUs. It also aligns with CH’s existing strategic plan, *Momentum*.

## Gap Analysis and Risk Identification

The existing programs and services delivered by CH play an important role in managing the key watershed natural resource issues. However, the effective delivery of these programs and services can be substantially improved by:

- enhancing the scope and reach of existing programs and services;
- renewing outdated watershed management plans and strategies;
- improving scientific and technical knowledge about natural hazards and drivers of key watershed natural resource issues;
- modernizing data collection techniques by testing and incorporating new digital technologies, sensors, and platforms;
- updating and expanding the use of analytical and predictive modelling tools;
- identifying and prioritizing management options for addressing key watershed natural resource issues; and
- building additional partnerships to pool resources and fund programs and services that meet mutual resource management objectives.

These opportunities were considered in defining the future actions that are included in the Watershed Strategy to improve the delivery and outcomes of CH’s programs and services in addressing the key natural hazard and natural resource issues.

# ACTIONS TO ADDRESS ISSUES AND MITIGATE RISKS

As part of the development of the Watershed Strategy and its component reports, CH identified and evaluated gaps, vulnerabilities, and risks that hamper effective program and service delivery. This assessment process included discussions with municipal staff, First Nations, and other individuals and organizations that provided valuable insight. This process led to 27 actions that 1) enhance the effectiveness of CH's existing programs and services in addressing key watershed natural resource issues and reducing or mitigating identified risks and vulnerabilities, and 2) advance the overall goal and guiding principles and objectives that underpin the Watershed Strategy.

These actions have been grouped using the same categories applied to the programs and services inventory. The following pages identify each action by category, the guiding principles and objectives the action supports, and the issues it targets. While high-level actions for CH lands are included, these are described in more detail in the Conservation Area Strategy. These actions form the core of the Watershed Strategy.

Most actions are fully or partially underway and are integrated into the current 2025 budget process. Those which are not integrated are proposed to be phased in through the 10-year budget forecast. The actions do not extend beyond the scope of the programs and services defined under the legislation or as agreed to through the MOUs with participating municipalities or other agreements. Any potential increase in program costs for participating municipalities will be offset to the extent possible through other revenue sources such as grants, fee-for-service, and other funding sources. CH has a clear and transparent budgeting process to assign costs to programs and services which follows the approach and methods of apportionment prescribed by legislation. All actions along with their anticipated costs and duration will be discussed and confirmed with participating municipalities during the annual budget review process before implementation.

# Actions to Address Key Natural Resource Issues and Risks

\*Actions are partly/fully funded in the 2025 budget or included in the 10-year forecast

## Funding Sources

- M Municipal Funding
- S Self-generated Revenues
- G Grants, Donations & Others

## Natural Hazards & Watershed Management (Categories 1, 2 & 3)

**NHWM (a)** - To better predict, forecast and respond to extreme weather and low flow events and appropriately respond to climate change impacts, CH should 1) modernize and enhance the network of stream gauges and weather and climate stations, 2) upgrade analytical tools and hydrologic and hydraulic models, and 3) renew the low water response program.

**Natural Resource Issue Focus:** Riverine Flooding; Valley Erosion; Drought

**Funding Sources:** M G

**Program Category:** 1

**Principles Supported:** I, II, III, IV

**Objectives Supported:** 1, 2, 3, 4, 5

**NHWM (b)** - To optimize water management infrastructure and operations, CH should 1) continue to regularly assess the design and capacity of CH's infrastructure, 2) explore options for improvements including re-naturalization, and 3) incorporate up-to-date climate data to improve operations.

**Natural Resource Issue Focus:** Riverine Flooding; Valley Erosion; Drought

**Funding Sources:** M G

**Program Category:** 1

**Principles Supported:** I, III, IV

**Objectives Supported:** 1, 5, 6

**NHWM (c)** - To protect life and property from flooding and erosion hazards, CH should support and collaborate with municipalities to explore flood mitigation opportunities.

**Natural Resource Issue Focus:** Riverine Flooding; Valley Erosion

**Funding Sources:** M G

**Program Category:** 1

**Principles Supported:** I, II, III, IV

**Objectives Supported:** 1, 5, 6

**NHWM (d)** - To better understand hazard risk along the Hamilton Harbour and Lake Ontario shorelines, CH should undertake a technical assessment of the impacts of changing water levels and climate change on lakeshore flooding, erosion, and nearshore biophysical processes.

**Natural Resource Issue Focus:** Riverine Flooding; Drought; Valley Erosion; Invasive Species; Biodiversity Loss

**Funding Sources:** M G

**Program Category:** 1

**Principles Supported:** I, II, IV

**Objectives Supported:** 6

**NHWM (e)** - To better discern the possible effects of climate change on natural hazards, wetlands, watershed hydrology, biodiversity, species at risk and invasives and avoid or proactively address adverse watershed impacts, CH should develop analytical tools such as predictive computer models and scenarios.

**Natural Resource Issue Focus:** Riverine Flooding; Drought; Valley Erosion; Invasive Species; Biodiversity Loss

**Funding Sources:** M G

**Program Category:** 1

**Principles Supported:** I, II, IV

**Objectives Supported:** 2

# Actions to Address Key Natural Resource Issues and Risks

\*Actions are partly/fully funded in the 2025 budget or included in the 10-year forecast

## Funding Sources

- M Municipal Funding
- S Self-generated Revenues
- G Grants, Donations & Others

## Natural Hazards & Watershed Management (Categories 1, 2 & 3)

**NHWM (f)** - To detect climate change effects on and risks to drinking water sources, CH should identify and assess risks and vulnerabilities for drinking water wells and intakes.

**Natural Resource Issue Focus:** Surface Water Quality; Groundwater Quantity & Quality

**Funding Sources:** G

**Program Category:** 1

**Principles Supported:** I, II, III, IV

**Objectives Supported:** 7

**NHWM (g)** - To temper the effects of climate change on flooding and erosion hazards and improve resiliency against drought and extreme heat, CH should identify, quantify, and prioritize the benefits and opportunities for restoring and enhancing creek reaches, wetlands, and other key natural areas.

**Natural Resource Issue Focus:** Riverine Flooding; Drought; Valley Erosion; Surface Water Quality; Degradation, Fragmentation, & Loss of Natural Features; Invasive Species; Biodiversity Loss

**Funding Sources:** M G

**Program Category:** 1 2

**Principles Supported:** I, II, III, IV

**Objectives Supported:** 1, 2, 3, 5, 6

**NHWM (h)** - To characterize and quantify the state and benefits of natural assets in moderating the impacts of climate change and providing essential services such as flood and erosion control and storm water management, CH should undertake watershed assessments and watershed management plans.

**Natural Resource Issue Focus:** Riverine Flooding; Drought; Valley Erosion; Surface Water Quality; Degradation, Fragmentation, & Loss of Natural Features; Invasive Species; Biodiversity Loss

**Funding Sources:** M G

**Program Category:** 1 2

**Principles Supported:** I, II, III, IV

**Objectives Supported:** 1, 2, 3, 4, 5

**NHWM (i)** - To understand the complex interactions between surface and groundwater and water gains and losses within CH's watershed, CH should renew the watershed water budget last calculated in 2010.

**Natural Resource Issue Focus:** Surface & Groundwater Water Quantity & Quality

**Funding Sources:** M

**Program Category:** 1

**Principles Supported:** I, II, III

**Objectives Supported:** 1, 2, 3, 4, 5, 6

**NHWM (j)** - To appropriately characterize key watershed resource issues, trends, and risks, CH should evaluate the watershed monitoring program to ensure that data collected is complete, relevant, dependable, and valid and incorporate traditional knowledge.

**Natural Resource Issue Focus:** All issues

**Funding Sources:** M

**Program Category:** 1 2

**Principles Supported:** I, III, IV

**Objectives Supported:** 2, 3, 4

# Actions to Address Key Natural Resource Issues and Risks

\*Actions are partly/fully funded in the 2025 budget or included in the 10-year forecast

## Funding Sources

- M Municipal Funding
- S Self-generated Revenues
- G Grants, Donations & Others

## Natural Hazards & Watershed Management (Categories 1, 2 & 3)

**NHWM (k)** - To enhance data interpretation and evaluation, CH should implement new robust and applicable analytical tools.

**Natural Resource Issue Focus:** All issues

**Funding Sources:** M

Program Category: 1 2

Principles Supported: III, IV

Objectives Supported: 2, 3, 4, 5

**NHWM (l)** - To enhance scientific understanding of the 1) drivers of resource issues, 2) resource conditions, trends, and risks, 3) climate change effects on the water budget, natural hazards, biodiversity, invasives, and species at risk, CH should increase collaboration with scientific and research institutions and Indigenous communities.

**Natural Resource Issue Focus:** All issues

**Funding Sources:** M

Program Category: 1 2

Principles Supported: I, IV

Objectives Supported: 2, 3, 4, 5

**NHWM (m)** - To provide monitoring results that inform programs and services and support decision making, CH should provide timely reporting using clear messaging and appropriate communication tools and digital platforms.

**Natural Resource Issue Focus:** All issues

**Funding Sources:** M

Program Category: 1 2

Principles Supported: IV

Objectives Supported: 1, 5

**NHWM (n)** - To increase accessibility to CH data sets and analyses, CH should explore and implement new digital technologies and platforms that better meet the needs of partners and the public.

**Natural Resource Issue Focus:** All issues

**Funding Sources:** M G

Program Category: 1 2

Principles Supported: III

Objectives Supported: 2, 3, 4, 5

**NHWM (o)** - To build resiliency to climate change impacts and enhance natural system benefits, CH should 1) strengthen the landowner assistance program to support restoration activities within the farming community and on private lands, and 2) direct restoration efforts towards projects that contribute to addressing the key watershed natural resource issues.

**Natural Resource Issue Focus:** Riverine Flooding; Valley Erosion; Surface Water Quality; Degradation, Fragmentation, & Loss of Natural Features; Invasive Species; Biodiversity Loss

**Funding Sources:** S G

Program Category: 1 2

Principles Supported: I, III, IV

Objectives Supported: 1, 5, 6

# Actions to Address Key Natural Resource Issues and Risks

\*Actions are partly/fully funded in the 2025 budget or included in the 10-year forecast

## Funding Sources

- M Municipal Funding
- S Self-generated Revenues
- G Grants, Donations & Others

## Natural Hazards & Watershed Management (Categories 1, 2 & 3)

**NHWM (p)** - To effectively manage invasive species, CH should develop and implement a watershed-wide invasive species strategy in collaboration with municipalities.

**Natural Resource Issue Focus:** Invasive Species

**Funding Sources:** G

**Program Category:** 2 3

**Principles Supported:** I, II, III, IV

**Objectives Supported:** 1, 2, 3, 5, 6

## Permitting and Planning (Category 1)

**PP (a)** - To support more precise identification of potential risks to life and property from natural hazards and to develop appropriate policies for implementing the CA Act and O. Reg. 41/24, CH should continue to update regulatory and hazard mapping and undertake flood risk mapping in flood vulnerable areas to 1) support technical review and assessment of CH permits and municipal planning applications, 2) identify potential risks to property damage and public safety, and 3) support municipal flood preparedness and emergency planning.

**Natural Resource Issue Focus:** Natural hazards (flooding, erosion, dynamic beaches, unstable soils, and unstable bedrock)

**Funding Sources:** M S G

**Program Category:** 1

**Principles Supported:** I, II, III, IV

**Objectives Supported:** 1, 5

**PP (b)** - To improve public access to and awareness of CH's regulatory mapping, CH should enhance community education and outreach tools.

**Natural Resource Issue Focus:** Natural hazards (flooding, erosion, dynamic beaches, unstable soils, and unstable bedrock)

**Funding Sources:** M

**Program Category:** 1

**Principles Supported:** I, III, IV

**Objectives Supported:** 1, 5

**PP (c)** - To improve public awareness and understanding about CH's roles and responsibilities regarding 1) the technical review and issuance of regulatory permits, and 2) municipal plan input and review, CH should develop effective public communications (including social media messaging) that are shared using a broad range of tools and platforms.

**Natural Resource Issue Focus:** Natural hazards (flooding, erosion, dynamic beaches, unstable soils, and unstable bedrock)

**Funding Sources:** M

**Program Category:** 1

**Principles Supported:** I, III, IV

**Objectives Supported:** 1, 5

# Actions to Address Key Natural Resource Issues and Risks

\*Actions are partly/fully funded in the 2025 budget or included in the 10-year forecast

## Funding Sources

- M Municipal Funding
- S Self-generated Revenues
- G Grants, Donations & Others

## Conservation Lands and Recreation (Categories 1, 2, & 3)

**CLR (a)** - To reduce the risk of forest fires on CH lands, CH should identify and assess forest fire risks and vulnerabilities and develop a management strategy and emergency response plan in collaboration with municipal emergency services to avoid, reduce, and mitigate them.

**Natural Resource Issue Focus:** Conservation Areas Management

**Funding Sources:** M

**Program Category:** 1

**Principles Supported:** I, II, III, IV

**Objectives Supported:** 1, 8

**CLR (b)** - To manage the impacts of extreme weather events, CH should design, create, and maintain sustainable infrastructure (both passive and active) to withstand these forces.

**Natural Resource Issue Focus:** Conservation Areas Management

**Funding Sources:** M S G

**Program Category:** 1 3

**Principles Supported:** III, IV

**Objectives Supported:** 8

**CLR (c)** - To improve community access to CH lands while protecting environmentally sensitive sites and providing a range of societal benefits (e.g., connection to nature, relief from heat stress, and availability of recreational opportunities), CH should update its master plans and land acquisition and land management policies and strategies.

**Natural Resource Issue Focus:** Conservation Areas Management

**Funding Sources:**

M

**Program Category:**

1

**Principles Supported:** II, IV

**Objectives Supported:** 8

**CLR (d)** - To integrate CH lands and trails systems with adjacent municipalities or other publicly accessible lands and trails, CH should work collaboratively with other public agencies.

**Natural Resource Issue Focus:** Conservation Areas Management

**Funding Sources:** M S

**Program Category:** 1 3

**Principles Supported:** I, II, III, IV

**Objectives Supported:** 8

# Actions to Address Key Natural Resource Issues and Risks

\*Actions are partly/fully funded in the 2025 budget or included in the 10-year forecast

## Funding Sources

- M Municipal Funding
- S Self-generated Revenues
- G Grants, Donations & Others

## Conservation Lands and Recreation (Categories 1, 2, & 3)

**CLR (e)** - To augment the protection and value of natural heritage on CH lands, CH should 1) educate visitors about the importance of natural features, 2) direct active uses away from environmentally sensitive areas, 3) detect and manage invasive species, and 4) collaborate with participating and partner municipalities to support natural asset management, biodiversity, and climate change adaptation.

**Natural Resource Issue Focus:** Degradation, Fragmentation, & Loss of Natural Features; Invasive Species; Biodiversity Loss

**Funding Sources:** S G

**Program Category:** 1 3

**Principles Supported:** I, II, III, IV

**Objectives Supported:** 6, 8

**CLR (f)** - To improve environmental awareness and understanding and promote sustainable community and individual actions, CH should enhance its community outreach and educational program.

**Natural Resource Issue Focus:** All issues

**Funding Sources:** M S

**Program Category:** 2 3

**Principles Supported:** III, IV

**Objectives Supported:** 8

## Corporate Administration and Operations (Category 1)

**CAO (a)** - To integrate social, environmental, and economic sustainability into all aspects of CH's business, CH should develop a corporate sustainability plan.

**Natural Resource Issue Focus:** All issues

**Funding Sources:** M S G

**Program Category:** 1

**Principles Supported:** III, IV

**Objectives Supported:** 8

**CAO (b)** - To decrease CH's carbon footprint and greenhouse gas emissions, CH should adopt new business practices and processes (e.g., such as those relating to energy consumption, building and facility retrofits, fleet management, procurement policies, etc.).

**Natural Resource Issue Focus:** All issues

**Funding Sources:** M S G

**Program Category:** 1

**Principles Supported:** III, IV

**Objectives Supported:** 8



# CONSULTATION AND ENGAGEMENT APPROACH

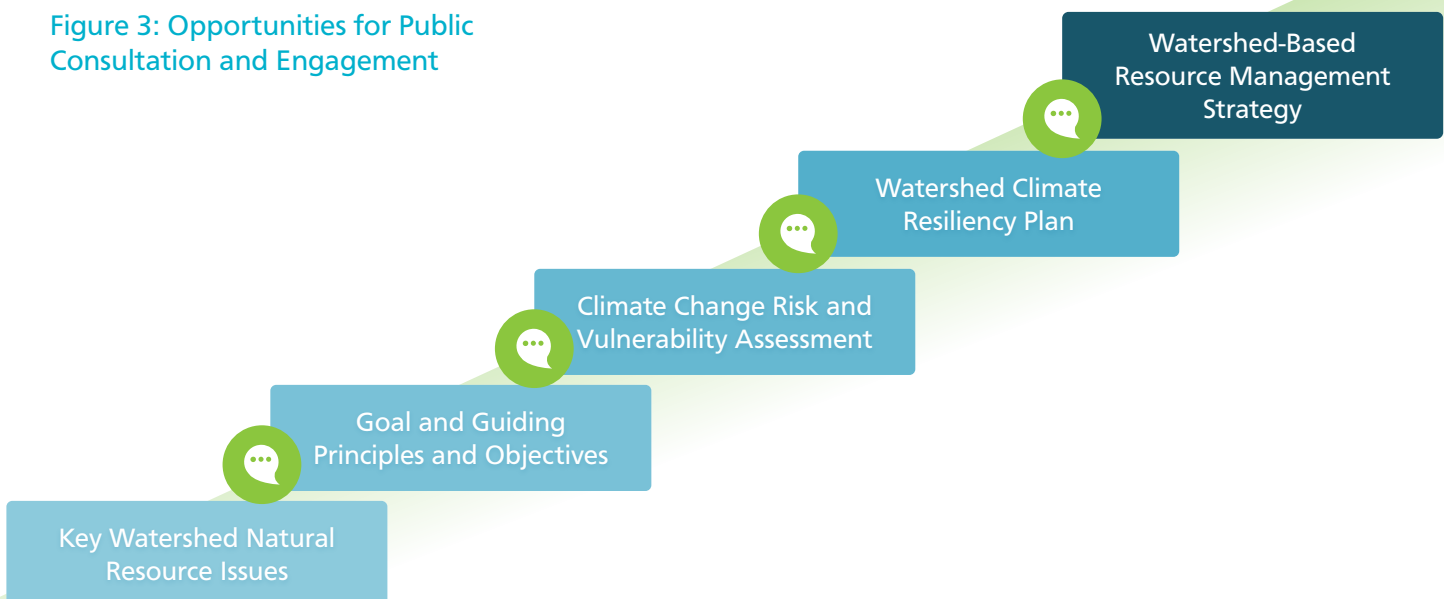
O. Reg. 686/21 directs conservation authorities to ensure stakeholders and the public are consulted during the preparation of the Watershed Strategy in a manner that the authority considers advisable. It also requires the CAs to outline their public consultation process and procedures for the periodic review and updating of the Watershed Strategy. The following describes the public consultation and engagement approach CH followed in developing the Watershed Strategy and the process proposed for its periodic review and update.

## Developing the Watershed Strategy

CH engaged with the public, municipalities, farmers, First Nations, agencies, and other stakeholders as the various components of the Watershed Strategy were developed, described in Figure 3.

Public input for the natural resource issues and goal and guiding principles and objectives was solicited through a public survey process. Both surveys were available on CH's website and promoted on social media as well as through targeted local outreach to municipalities, agencies, First Nations, CH Board members, and others.

**Figure 3: Opportunities for Public Consultation and Engagement**



The survey inviting public input on the key natural resource issues was available from October 27 to December 8, 2023. The 159 responses received confirmed that respondents felt that all issues listed were important to be addressed on a watershed basis. Based on the input received, the descriptions of the key natural resource issues within CH's watersheds were clarified and expanded.

The goal and guiding principles and objectives that steer the Watershed Strategy were developed to align with legislation, the recently signed MOUs with participating municipalities, and CH's strategic plan, *Momentum*. Draft statements were posted on the CH website for public review and comment between January 15 and February 13, 2024. Thirty-three completed surveys were submitted. Based on the feedback received, revisions were made and subsequently endorsed by the CH Board on April 18, 2024 (CH 03 06).

The Climate Change Vulnerability and Risk Assessment was completed by an external consultant. A wide range of experts and stakeholders were engaged throughout the process. The Climate Change Vulnerability and Risk Assessment provides strategic recommendations for targeted actions that build on existing CH programs and services.

The recommendations from the assessment report were used to identify management gaps, challenges, and opportunities for incorporating climate change resiliency considerations into the draft Watershed Strategy. This draft was released for public review and comment from July 12 to September 13, 2024. Invitations to provide comment through a short on-line survey were extended to municipal staff, First Nations, and environmental groups. Notices were placed in CH's newsletter and social media channels. Based on the additional input received during the commenting period, the draft was updated to provide additional context and clarity. The final version was approved by the Board on October 31, 2024.

## Public Consultation Process for Periodic Review and Update

The Watershed Strategy will be reviewed every five years, or as necessary, to reflect any legislative changes or provincial directives. Prior to reviewing and updating the Watershed Strategy, municipalities, First Nations, and other partners and stakeholders will be actively engaged as CH deems advisable.

## ADDITIONAL READING

Conservation Halton. Effects of Climate Change on Biodiversity within Conservation Halton's Watersheds, September 2023. [https://www.conservationhalton.ca/wp-content/uploads/2023/09/CC\\_Biodiversity\\_MainReport\\_FINAL.pdf](https://www.conservationhalton.ca/wp-content/uploads/2023/09/CC_Biodiversity_MainReport_FINAL.pdf)

Conservation Halton. Conservation Halton's Programs and Services Inventory, December 21, 2023. <https://www.conservationhalton.ca/wp-content/uploads/2023/12/Conservation-Authorities-Act-Programs-Services-Inventory-Explanatory-Document-December-21-2023.pdf>

Conservation Halton. Memoranda of Understanding for Watershed Programs and Services, December 2023. <https://www.conservationhalton.ca/governance/>

Conservation Halton. Watershed Characterization Report, July 2024. [https://www.conservationhalton.ca/wp-content/uploads/2024/07/Watershed-Characterization-Report\\_FINAL\\_Web.pdf](https://www.conservationhalton.ca/wp-content/uploads/2024/07/Watershed-Characterization-Report_FINAL_Web.pdf)

Conservation Halton. Watershed Monitoring Programs Summary, June 2024. <https://www.conservationhalton.ca/wp-content/uploads/2024/07/Summary-of-Monitoring-Programs.pdf>

Conservation Halton. Watershed Climate Resiliency Plan, June 2024. [https://www.conservationhalton.ca/wp-content/uploads/2024/06/Watershed-Climate-Resiliency-Plan\\_v2\\_Web.pdf](https://www.conservationhalton.ca/wp-content/uploads/2024/06/Watershed-Climate-Resiliency-Plan_v2_Web.pdf)

Matrix Solutions Inc. Conservation Halton Watershed Climate Vulnerability and Risk Assessment Final Report, February 2024, prepared for Conservation Halton, Mississauga, Ontario, <https://www.conservationhalton.ca/wp-content/uploads/2024/03/36679-CH-CC-Vulnerability-and-Risk-Assess-R.pdf>

Province of Ontario. Conservation Authorities Act, R.S.O. 1990, c. C.27, April 1, 2024 (e-Laws currency date). <https://www.ontario.ca/laws/statute/90c27>

Province of Ontario. O. Reg. 686/21: Mandatory Programs and Services, June 6, 2024 (e-Laws currency date). <https://www.ontario.ca/laws/regulation/210686>

Province of Ontario. O. Reg. 687/21: Transition Plans and Agreements for Programs and Services under Section 21.1.2 of the Act, January 1, 2023 (e-Laws currency date). <https://www.ontario.ca/laws/regulation/210687>

Province of Ontario. O. Reg. 41/24: Prohibited Activities, Exemptions and Permits, April 1, 2024 (e-Laws currency date). <https://www.ontario.ca/laws/regulation/240041>



Conservation  
**Halton**



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October  
2024

**REPORT TO:** Conservation Halton Board

**REPORT NO: #** CHB 06 24 06

**FROM:** Craig Machan, Director, Parks & Operations

**DATE:** October 31, 2024

**SUBJECT:** Land Inventory & Conservation Area Strategy

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### Recommendation

THAT the Conservation Halton Board **approves the Conservation Area Strategy (2024) as presented;**

And

THAT the Conservation Halton Board **directs staff to post the Conservation Area Strategy to the corporate website as required by Ontario Regulation 686/21;**

And

THAT the Conservation Halton Board **directs staff to advise participating municipalities and neighbouring Conservation Authorities that the approved Conservation Area Strategy has been completed and posted.**

### Executive Summary

In 2021, changes to the *Conservation Authorities Act, R.S.O. 1990, c. C.27* (CA Act) prescribed mandatory programs and services for conservation authorities (CAs), which included programs and services related to the conservation and management of lands owned or controlled by the conservation authority. These programs and services are further defined in *Ontario Regulation 686/21* (O. Reg. 686/21) and require the preparation of a land inventory and a conservation area strategy. Both deliverables are due by December 31, 2024.

Conservation Halton's (CH) Land Inventory is a collection of information about CH-owned or controlled parcels that will ensure the knowledge and background information on each parcel is summarized in a single location to support the informed management of CH landholdings. The Land Inventory is well underway, with nine (9) of the twelve (12) mandatory fields populated. The remaining three (3) fields will be completed by the end of 2024.

CH's Conservation Area Strategy (2024) (Attachment 1) has been completed and meets all legislated requirements. Given that the objectives from the Conservation Area Strategy are to be established by the authority to inform decision making related to CH's land management, staff is seeking approval of the Conservation Area Strategy and its goals, objectives, and actions.

## Report

### *Land Inventory*

The Land Inventory is a compilation of information about each parcel of land that CH owns or controls. This information supports the characterization of CH lands, which contributed to the completion of the Conservation Area Strategy. In addition, these key details ensure that the knowledge and background about each parcel is summarized in a single location, which will support the informed and efficient management of CH landholdings.

The requirements for the Land Inventory are defined in section 11 of O. Reg. 686/21. The following table summarizes the required information and the status of the data assembly to be completed by December 2024.

<b>Table 1: Status of Completion of Land Inventory Regulatory Requirements</b>	
<b>Required Information</b>	<b>Status</b>
The location of the parcel	Complete
The identification of any information in respect of the parcel (including any surveys, site plans, other maps)	Ongoing
When the parcel was acquired	Complete
Whether the parcel was acquired using a grant made under section 39 of the CA Act	Ongoing
Whether the parcel was acquired through expropriation	Ongoing
The type of legal interest in the parcel	Complete
Land use categories that apply to the parcel	Complete
To ensure a program or service is not included as a mandatory program or service, identification of whether: <ul style="list-style-type: none"> <li>- active recreation occurs on the parcel</li> <li>- commercial logging occurs on the parcel</li> </ul>	Complete
Identify if the parcel is suitable for housing and housing infrastructure development, including identifying: <ul style="list-style-type: none"> <li>- applicable zoning by-laws</li> <li>- if the parcel (or a portion) augments any natural heritage located within the authority's area of jurisdiction</li> <li>- if the parcel (or a portion) integrates with other provincially- or municipally-owned lands or other publicly accessible land and trails</li> </ul>	Complete



Given the nature of the Land Inventory, there is no requirement for consultation, engagement, approval, or submission. However, the Land Inventory must include a process for periodic review and updating. Given that the inventory will be a resource to support CH's land management and operations, it will be reviewed and updated on an ongoing basis.

In addition to supporting the characterization of CH lands for the completion of the Conservation Area Strategy, information in the Land Inventory, such as each parcel's land use category, role in the natural heritage system, and integration with other publicly owned lands or trails is connected to the Conservation Area Strategy. This information supports the development and implementation of the plans, policies, strategies, and procedures resulting from the goals, objectives, and actions in the Conservation Area Strategy, which will guide the management of CH's landholdings.

### *Conservation Area Strategy*

CH's Conservation Area Strategy will shape how CH lands will be used and managed in the future and includes all mandatory components from section 10 of O. Reg. 686/21, listed below.

- Objectives, established by the authority, to inform decision-making related to CH lands, including decisions related to policies governing land acquisition and disposition.
- Identification of mandatory and non-mandatory programs and services offered on land owned or controlled by CH and sources of financing.
- The establishment of land use categories that allow CH to effectively classify lands based on types of activities on each parcel and other matters of significance.
- Process for periodic review and updates, including procedures to ensure stakeholders and the public are consulted during the review and update process.

Where advisable to achieve the objectives, a conservation area strategy may also include a natural heritage and connectivity assessment to show how the lands augment natural heritage and integrate with other publicly owned or accessible lands and trails. This assessment has been included in CH's Conservation Area Strategy.

In addition, if it is deemed advisable for a CA to achieve its objectives, they may provide the programs and services listed below, in the context of lands they own or control.

- Secure land interests to prevent unlawful entry and minimize risk of liability (e.g., fencing, signage, patrolling, etc.).
- Maintain passive recreation facilities, trails, and other amenities.
- Make applications or comment on matters under the *Planning Act*.
- Conserve, protect, rehabilitate, establish, and manage natural heritage and plant trees (excluding tree planting that supports commercial logging).
- Develop policies governing land acquisitions and dispositions.

CH's Conservation Area Strategy (2024) (Attachment 1) provides its audience with background and context and includes sections to address all legislated requirements as well as the components that are advisable for CH to provide programs and services to achieve its objectives.




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 October  
 2024

CH partners, stakeholders, and the public were consulted during the preparation of the strategy. Given that the focus of the strategy was the development of objectives for CH's future land management, CH's public consultation and partner engagement focused on ten (10) draft goals that, with the feedback received, formed the basis for the development of objectives and actions. In addition, consultation and engagement for the visionary goals, objectives, and actions will be ongoing as they are implemented, particularly for those relating to land management plans and master plans for CH-owned properties.

It is proposed that CH's Conservation Area Strategy will guide CH's conservation land management for a period of five (5) years. After five (5) years, if significant revisions are anticipated, CH will again engage with partners, stakeholders, and the public to solicit feedback on the proposed revisions.

Following Board approval, CH's Conservation Area Strategy (2024) must be made public and will be posted on CH's website.

### Impact on Strategic Priorities

This report supports the Momentum priority of "Nature and Parks" as it supports the strategic management of CH's conservation landholdings.

### Financial Impact

There are no resulting financial impacts to the current operating budget.

As noted in CH's Programs & Services Inventory (2022) and Conservation Area Strategy, based on the findings of the initial programs and services assessment, CH is positioned to sustain programs and services under the conservation and management of lands without a significant change in municipal funding. However, this will require the continued and effective engagement of municipal partners in discussions relating to long-term vision and goals for the conservation and management of CH lands, with a focus on program and service areas such as passive recreation opportunities, securing CH land interests, addressing risk on CH lands, greenspace connectivity, and the long-term rehabilitation and protection of natural features.

Signed & respectfully submitted:

Craig Machan  
 Director, Parks & Operations

Approved for circulation:

Chandra Sharma  
 President & CEO/Secretary-Treasurer





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October  
2024

**FOR QUESTIONS ON CONTENT:**

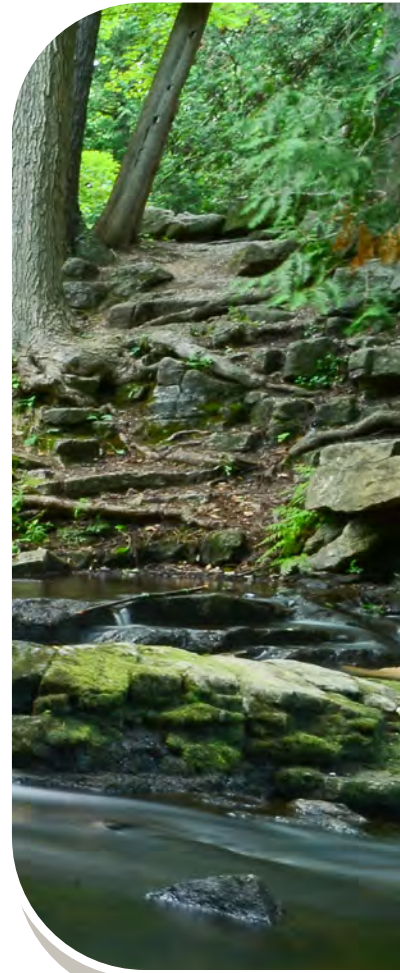
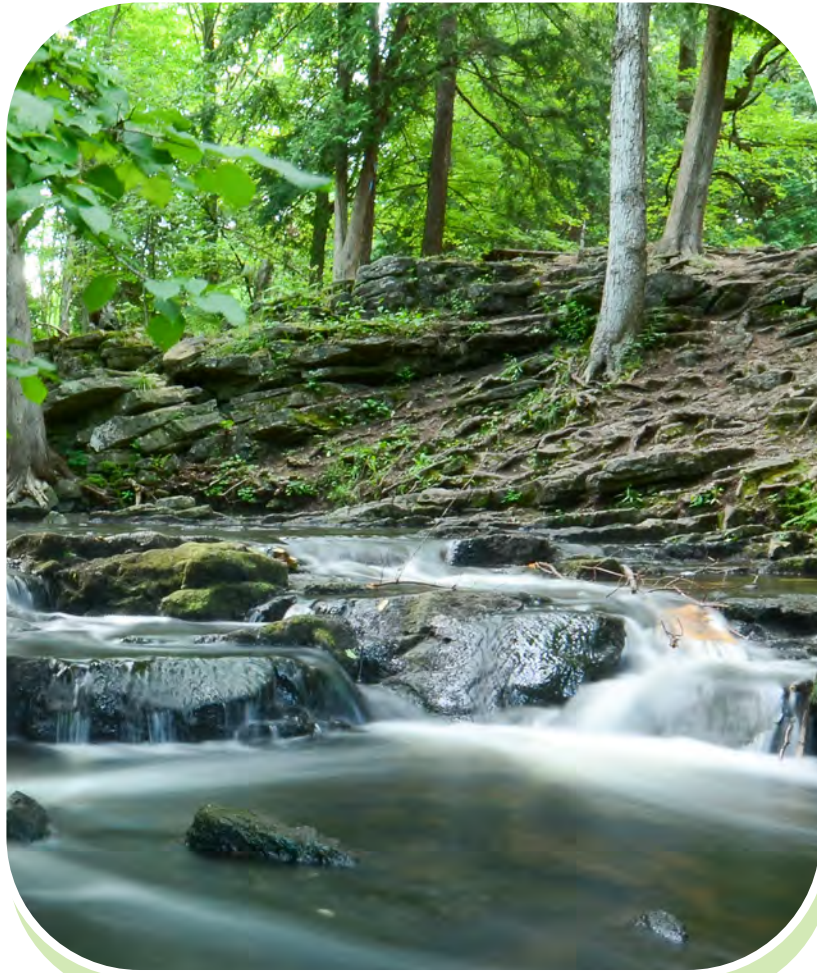
Craig Machan, Director, Parks & Operations  
cmachan@hrca.on.ca, 905-878-5011 x 1244

**PREPARED BY:**

Trina Seguin, Lands Manager

**Attachments:**

Attachment 1: Conservation Area Strategy (2024)



# 2024

Conservation Area Strategy

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# HONOURING THE LAND AND TERRITORY

We acknowledge that our work, and the land that we steward in Conservation Halton's watersheds, are on traditional First Nations territories. Our watersheds, as we know them today, are rich in the history and modern traditions of many First Nations. From the lands of the Anishinaabe to the Wendat, Attawanderon, and the Haudenosaunee, these lands are steeped in First Nations history.

We are thankful for the opportunity to work in solidarity with First Nations partners and treaty holders to honour and respect the four directions, lands, waters, plants, animals, and ancestors that walked before us and together ensure the stewardship of the land for future generations.

## BACKGROUND AND PURPOSE

### Conservation Authorities

Conservation Authorities (CAs) were created in the 1940s in response to poor water quality, deforestation, sedimentation, erosion, and fluctuating river flows. In 1954, Hurricane Hazel further highlighted the importance of managing natural resources collaboratively, based on watershed jurisdictions. CAs are legislated under the Conservation Authorities Act, R.S.O. 1990, c. C.27 (the CA Act) and were established by municipalities and the province to deliver local, watershed-based resource management programs on their behalf.

The membership of CA Boards is appointed by participating municipalities. Their membership is determined through the CA Act. This collaborative model has allowed municipalities in Ontario to work together towards common goals for the greater benefit of all watershed residents.

The purpose of a CA is to provide for the organization and delivery of programs and services that further the conservation, restoration, development, and management of natural resources in watersheds in Ontario.<sup>1</sup> The landholdings of CAs play a significant role in achieving this purpose.

### CA Landholdings

Collectively, CAs own a total of 150,000 hectares.<sup>2</sup> These properties vary in use and purpose and provide broad public benefits, including reducing risks to life and damage to property resulting from natural hazards (e.g., flood and erosion control infrastructure); supporting the conservation, protection, rehabilitation, and management of natural heritage features and functions; and providing recreational opportunities. Historically, the province and municipalities contributed financially towards the acquisition and development of these lands.

Although provincial funding was significantly reduced in the mid-1990s, CAs have continued to receive funding for specific programs; however, this funding can only be used for dams, channels, reservoirs, flood forecasting, regulations and other functions of watershed management and its

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<sup>1</sup> CA Act, s. 0.1

<sup>2</sup> <https://conservationontario.ca/conservation-authorities/conservation-lands>

support services. As a result, many CAs fund their active recreation lands and programs solely through park entrance fees, program fees and annual park membership purchases.

Along with active recreation lands, CAs manage many properties that are not directly funded by user fees. These properties are either passively managed for public use, or public access is not supported. Like other private landowners, CAs must take reasonable measures to either prohibit access, or where access is permitted, see that visitors are reasonably safe.<sup>3,4</sup>

In 2021, through amendments to the CA Act, the province implemented a standardized approach to CA service delivery and funding that identifies mandatory programs and services, including the management of conservation authority lands. This approach recognizes the importance of, and the responsibility associated with, the conservation and management of CA-owned lands.

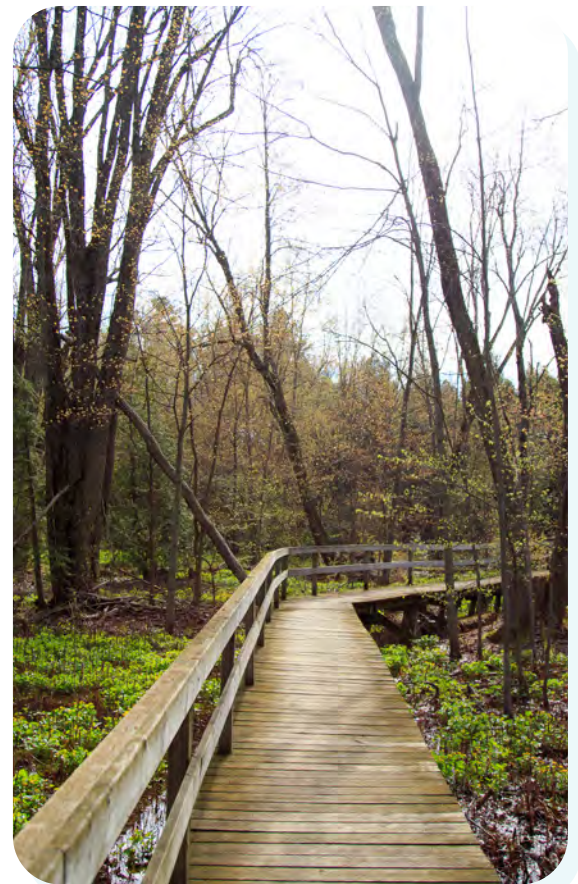
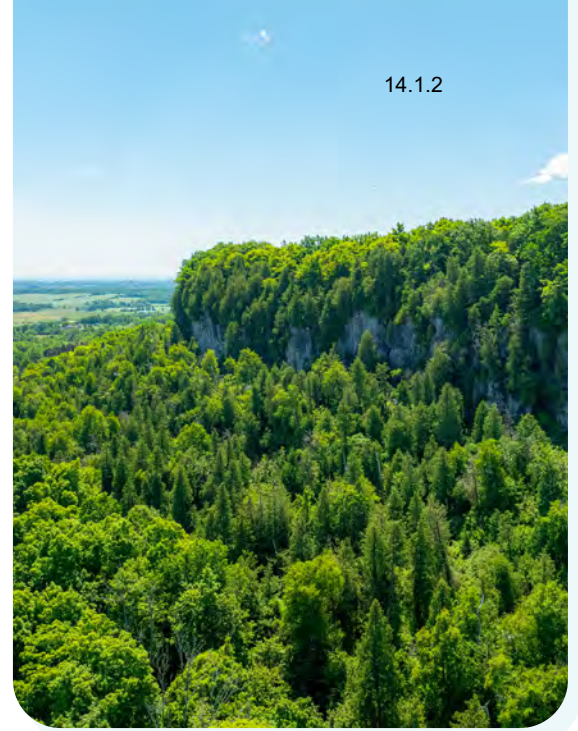
## About Conservation Halton

Conservation Halton (CH) formed more than 60 years ago in partnership with municipalities and the province to manage watershed resources and protect our communities from natural hazards, such as flooding and erosion.<sup>5</sup>

Today, in addition to addressing natural hazards, it is our responsibility to help prepare our communities for the impacts of climate change, support our partners in creating more sustainable communities, manage natural areas and resources within our watersheds, monitor and enhance the environmental health of CH's watersheds, and create opportunities for people to connect with nature through recreation and education.

CH's watersheds cover approximately 100,000 hectares (1,000 square kilometres) and include Burlington and parts of Milton, Oakville, Hamilton, Halton Hills, Puslinch, and Mississauga. They include three major watersheds—Sixteen Mile Creek, Bronte Creek and Grindstone Creek—and 18 smaller urban creeks. Also included within CH's watersheds are almost 51 kilometres of Lake Ontario shoreline and more than 80 kilometres of the Niagara Escarpment Biosphere.

As one of Ontario's 36 CAs, our purpose is to provide for the organization and delivery of programs and services that further the conservation, restoration, development, and management of natural resources in our watersheds. CH landholdings play a significant role in achieving our purpose and supporting our ambition for a green, resilient, connected tomorrow.



Top: Escarpment view at Mount Nemo Conservation Area. Bottom: Hiking trail at Robert Edmondson Conservation Area.

<sup>3</sup> *Trespass to Property Act, R.S.O. 1990, c. T.21*

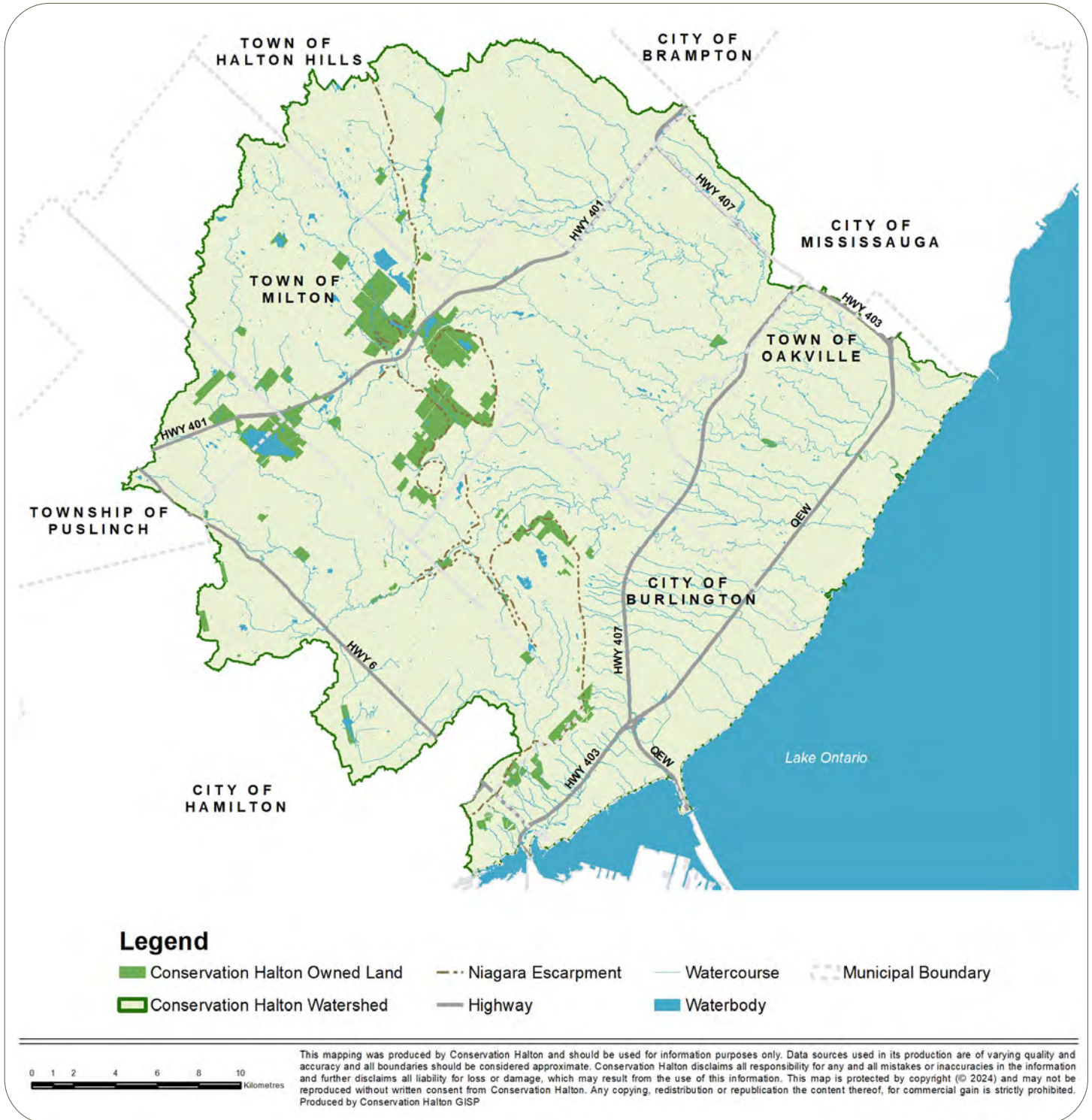
<sup>4</sup> *Occupiers' Liability Act, R.S.O. 1990, c. O.2*

<sup>5</sup> *Twelve Mile Creek Conservation Authority and Sixteen Mile Creek Conservation Authority merged in 1963 to form the Halton Region Conservation Authority, known today as Conservation Halton.*

# Our Conservation Areas

CH owns approximately 3,994 hectares (9,870 acres) of lands from lake to escarpment. These lands include eight conservation parks and other natural lands such as passive recreation areas and natural areas that CH manages across its jurisdiction. CH-owned lands are comprised of over 500 parcels, which are categorized based on their use, and classified based on their characteristics, such as natural features, ecological significance, and purpose.

Figure 1: Conservation Halton-Owned Lands





# LEGISLATIVE CONTEXT

## Conservation Authorities Act

Administered by the Province of Ontario, the CA Act governs the activities of CAs. It gives CAs the power, subject to the requirements in Section 21, to acquire any land that it may require and to sell, lease or otherwise dispose of land.

Until the mid-1990s, the province contributed financially towards the acquisition and conservation of CA lands. These lands were acquired, conserved and developed for the purposes of recreation, natural heritage and ecological protection, restoration, and flood and erosion mitigation and control. Section 21 of the CA Act includes requirements that must be followed for lands that were acquired with provincial funding (CA Act, Section 39).

Recent amendments to the CA Act resulted in the standardization of CA programs and services. Section 21 of the CA Act lists the mandatory programs and services that CAs provide. The province also prepared regulations (such as *Ontario Regulation 686/21* and *687/21*) to support the application of these CA Act amendments.

## Ontario Regulation 687/21

*Ontario Regulation (O. Reg.) 687/21, Transition Plans and Agreements for Programs and Services Under Section 21.1.2 of the Act*, requires that CAs develop an inventory of their programs and services based on the updated CA Act. This includes identifying costs and funding sources for those programs and services, developing transition plans, and entering into agreements with municipalities, as necessary, for the provision of non-mandatory programs and services. CH's inventory ([Conservation Halton Programs & Services Inventory](#)) was completed on December 21, 2023.

As described in [CH's Programs & Services Inventory](#), all programs and services are classified based on **three categories** established under Section 6.(3) of O. Reg. 687/21.

## Ontario Regulation 686/21

*Ontario Regulation (O. Reg.) 686/21* provides further details regarding the mandatory programs and services that CAs must provide. The conservation and management of lands owned or controlled by CH is a mandatory program and service.

Figure 2: Conservation Authority Program and Service Categories

### CATEGORY 1 – Mandatory

Funded through municipal funding, user fees or grants.

### CATEGORY 2 – Municipal

Programs and services provided at the request of, and through an agreement with, a municipality. Funded through municipal funding, user fees or grants.

### CATEGORY 3 – Other

Programs and services that the Board considers advisable to further the purposes of the CA Act. Funded through user fees, self-generated revenue, government and other agency grants, donations, etc. Use of municipal funding requires an agreement and is subject to cost apportioning.

Section 9 of O. Reg. 686/21 addresses the conservation and management of lands. It provides direction regarding the required components for this mandatory program and service. These components include a Conservation Area Strategy (Subsection 1), a Land Inventory (Subsection 3), programs and services to administer regulations made under section 29 of the CA Act (Subsection 4), and, where the CA considers it advisable to achieve the objectives in the Conservation Area Strategy, Subsection 2 includes programs and services to:

- i. secure their interest in lands using measures such as fencing, signage, and patrolling to prevent unlawful entry and protect the CA from liability;
- ii. maintain any facilities, trails or other amenities that support public access and recreational activities that can be provided without the direct support or supervision of staff;
- iii. enable the CA, in its capacity as an owner of land, to make applications or comment on matters under the *Planning Act*;
- iv. conserve, protect, rehabilitate, establish, and manage natural heritage within lands owned or controlled by the CA;
- v. plant trees on lands owned or controlled by the CA; and,
- vi. develop one or more policies governing land acquisitions and dispositions.

Section 11 of O. Reg. 686/21 provides details regarding the Land Inventory requirement, while Section 10 provides details regarding the Conservation Area Strategy.

### ***Land Inventory***

Section 11 of O. Reg. 686/21 requires that each CA prepare a Land Inventory that contains specific information for every parcel of land the CA owns or controls. The inventory is a compilation of information that will support and inform CH's conservation land management. The inventory must be completed by December 31, 2024. Information from the inventory, such as each parcel's land use category, is tied to the Conservation Area Strategy.

For CH's Land Inventory, a parcel has been defined as the smallest area based on known boundaries. Therefore, parcels may be based on an acquisition survey, Property Identification Number (PIN) boundary, or Assessment Roll Number (ARN) boundary. Each parcel is given a unique identification number. Often, many parcels together make up a larger conservation landholding.

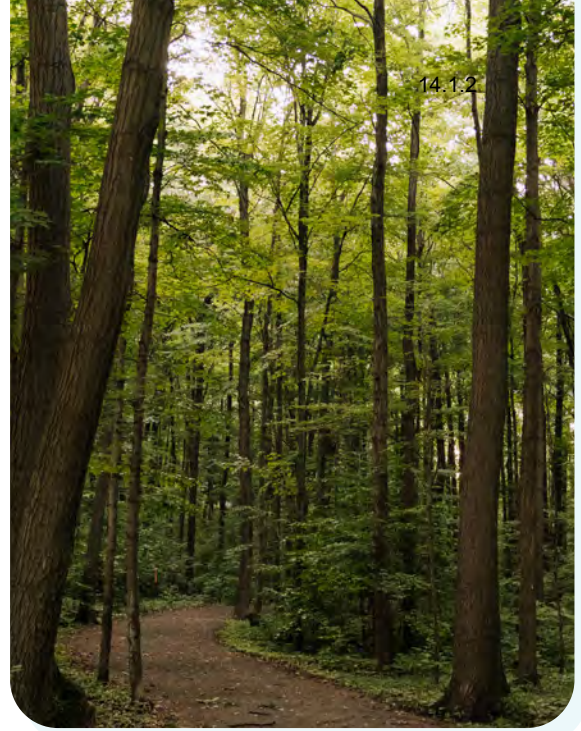


## Conservation Area Strategy

Section 10 of O. Reg. 686/21 provides components for the Conservation Area Strategy. The following describes these components in the context of CH:

1. Objectives established by CH that will inform CH's decision-making related to the lands it owns or controls, including decisions related to policies governing the acquisition and disposition of such lands. The objectives may also include programs and services from O. Reg. 686/21 Section 9.2.
2. Identification of the mandatory and non-mandatory programs and services that are provided on land owned and controlled by CH, including the sources of financing for these programs and services.
3. Where CH considers it advisable to achieve the objectives referred to in paragraph 1, an assessment of how the lands owned and controlled by CH may:
  - i. augment any natural heritage located within CH's area of jurisdiction; and
  - ii. integrate with other provincially or municipally owned lands or other publicly accessible lands and trails within CH's area of jurisdiction.
4. The establishment of land use categories for the purpose of classifying lands in the Land Inventory described in Section 11 based on the types of activities that are engaged in on each parcel of land or other matters of significance related to the parcel.
5. A process for the periodic review and updating of the Conservation Area Strategy by CH, including procedures to ensure stakeholders and the public are consulted during the review and update process.

CH's Conservation Area Strategy combines the requirements in Sections 9 and 10 of O. Reg. 686/21 to fully address the requirements of the CA Act, is aligned with the guiding principles and objectives identified in the [Watershed-Based Resource Management Strategy](#) (Watershed Strategy) for the delivery of mandatory programs and services, and supports the priorities and values of [CH's strategic direction](#).



Top: Rattlesnake Point Conservation Area.  
Bottom: Hilton Falls Conservation Area.

# GOALS, OBJECTIVES, AND ACTIONS

CH has identified the following goals, objectives and actions to inform decision-making related to the lands it owns and controls.

CH's goals and objectives will lead to actions and outcomes that are **administrative**, **visionary**, or **foundational** in nature. Administrative outcomes may include the implementation of operational policies and procedures that guide our day-to-day work. Visionary outcomes may include the development of management plans, which involve public consultation and partner engagement to help us shape the future of a specific area. Other outcomes will be foundational, informing the core principles we apply to all aspects of land management.

1

## *Pursue purposeful land ownership that enables natural heritage preservation and the delivery of high-quality programs and services*

**OBJECTIVE:** Acquire land and land interests that support and enhance programs and services and augment natural heritage connectivity.

**ACTION:** Develop and implement plans, policies, strategies, and procedures, as necessary, pertaining to the acquisition of land to support programs and services, including working with partner agencies to identify opportunities to connect greenspaces to support ecological connectivity, passive recreation, natural heritage protection, and climate resilience.

**OBJECTIVE:** Dispose of land and land interests that are surplus and do not support or contribute to goals, objectives, programs, and services.

**ACTION:** Develop and implement plans, policies, strategies, and procedures, as necessary, pertaining to the disposition of land, including evaluating and ensuring that landholdings contribute to programs and services and support an integrated watershed management approach.

2

## *Serve as a leader in providing exceptional outdoor recreational and educational opportunities*

**OBJECTIVE:** Provide high quality, accessible, affordable, innovative, and sustainable outdoor recreational opportunities in active and passive conservation areas.

**ACTION:** Develop and implement plans, policies, strategies, and procedures, as necessary, to maintain facilities, trails and other amenities that support public access and recreation activities in active and passive conservation areas.

**OBJECTIVE:** Provide high quality, accessible, affordable, innovative, and sustainable outdoor education and recreation programs and events.

**ACTION:** Develop and implement plans, policies, strategies, and procedures, as necessary, to maintain facilities and other amenities to support outdoor recreation and education programs and events.

3

## *Enable safe and sustainable site access and site protection*

**OBJECTIVE:** Where public access is permitted, identify and implement measures for ongoing visitor safety.

**ACTION:** Develop and implement plans, policies, strategies, and procedures, as necessary, to enhance visitor experience, simplify and standardize operations, and enable safe public access.

**OBJECTIVE:** Where public access is not permitted, identify and implement measures for site protection.

**ACTION:** Develop and implement plans, policies, strategies, and procedures, as necessary, to secure and protect land interests, including measures for fencing, signage and patrolling, and any other measures to prevent unauthorized and unlawful entry.

4

## *Balance public access and land use with the long-term protection of natural features*

**OBJECTIVE:** Understand uses and user groups to help balance recreation with the preservation of natural features.

**ACTION:** Determine current uses and user groups and identify opportunities and actions to preserve natural features while considering population growth, the increased need for public greenspace, and visitor impact management.

**OBJECTIVE:** Manage conservation lands based on long-term visioning, strategies, and plans.

**ACTION:** Develop strategies, visioning and implementation plans, and policies, as necessary, for the management and use of CH-owned or controlled lands that balance park development, social demand, cultural heritage, and the environment.

5

### *Build an engaged and educated community that supports and participates in conservation land stewardship*

**OBJECTIVE:** Communicate and engage with the public to strengthen understanding, appreciation and support for conservation land stewardship and management.

**ACTION:** Develop and implement strategies and plans for education, communication, outreach, and engagement, as necessary, that will help CH promote and build community awareness of land use categories and permitted uses and gain support for conservation land management objectives.

6

### *Cultivate strong partnerships that promote knowledge-sharing, collaboration, and efficiencies in land management*

**OBJECTIVE:** Foster partnerships that share knowledge and enhance collaboration.

**ACTION:** Identify opportunities to build relationships based on mutual understanding, trust, respect, and support with watershed stakeholders and partners, and to enhance collaboration and connectivity where possible.

**OBJECTIVE:** Identify opportunities for coordination of services.

**ACTION:** Identify and implement opportunities for cooperation and coordination of services within CH and with external partners to identify efficiencies, improve productivity, and maximize resources.

7

### *Deliver programs and services that reduce natural hazard risks, build climate resiliency, and conserve, rehabilitate, and manage natural heritage*

**OBJECTIVE:** Undertake and support the collection and analysis of data to inform programs and services pertaining to natural hazards and natural heritage.

**ACTION:** Identify and implement opportunities for information and data collection, provision, analysis and management to support the development and implementation of programs and services that conserve, protect, rehabilitate, establish, and manage natural heritage and support resource management and natural hazard decisions and actions.

**OBJECTIVE:** Undertake and support activities that conserve, protect, rehabilitate, establish, and manage natural heritage and that reduce natural hazard risks.

**ACTION:** Identify, evaluate, develop, and implement programs and services, such as tree planting, to conserve, protect, rehabilitate, establish, and manage natural heritage on CH lands, as well as to reduce the risk of natural hazards, improve ecosystem services and watershed functions, enhance biodiversity, and increase climate resiliency.

8

### *Integrate historical and traditional Indigenous knowledge into conservation land management*

**OBJECTIVE:** Visioning and land management plans and strategies that integrate historical and traditional Indigenous knowledge to help guide conservation land management.

**ACTION:** Learn, understand, appreciate, and integrate historical and traditional Indigenous knowledge in visioning and implementation plans and strategies to support sustainable ecosystem management, protection of Indigenous place-keeping, and ensure the protection of cultural heritage assets.

9

### *Use innovative tools and technologies that support effective land management and administration*

**OBJECTIVE:** Technology and business tools that streamline conservation land management and administration.

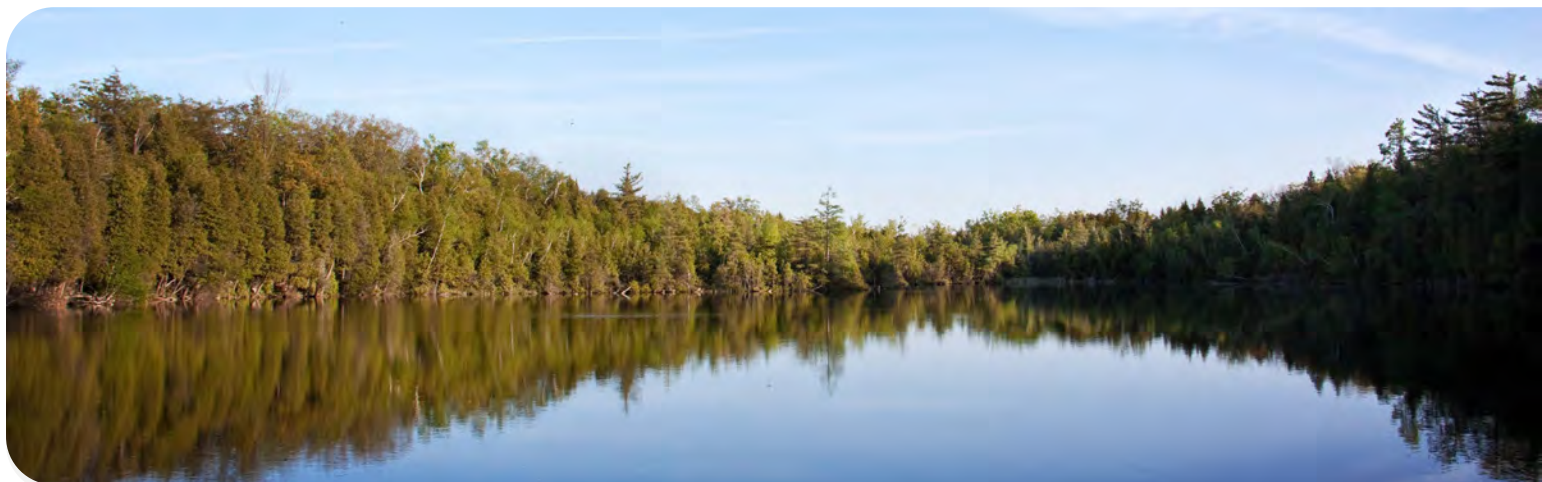
**ACTION:** Develop and implement new business solutions, technology, and tools for the storage, use and updating of land data, plans, policies, and strategies to support land management and administration.

10

### *Participate in land use planning to advance conservation land management objectives*

**OBJECTIVE:** Land use planning processes that support CH's ability as a landowner to review and make applications or comments on matters under the *Planning Act* and *Niagara Escarpment Planning and Development Act* to support conservation land management objectives.

**ACTION:** Develop and implement plans, policies, strategies, and procedures, as necessary, that will allow CH, as a landowner, to make applications or comment on matters under the *Planning Act* and *Niagara Escarpment Planning and Development Act*.



*Crawford Lake Conservation Area protects a rare, meromictic lake that formed over 10,000 years ago.*

# PROGRAMS, SERVICES, AND SOURCES OF FUNDING

Under O. Reg. 687/21, all CAs are required to develop an inventory of programs and services. This inventory applies to all three levels (Mandatory, Municipal and Other) of programs and services and identifies related costs and funding sources. As part of this inventory, CAs have classified their programs and services according to the three categories established under the CA Act. Under O. Reg. 686/21, CAs are now assessing these categorized programs and services to pinpoint gaps and opportunities. For programs and services that fall under the conservation and management of lands, this assessment includes the development a Land Inventory as well as a Conservation Area Strategy.

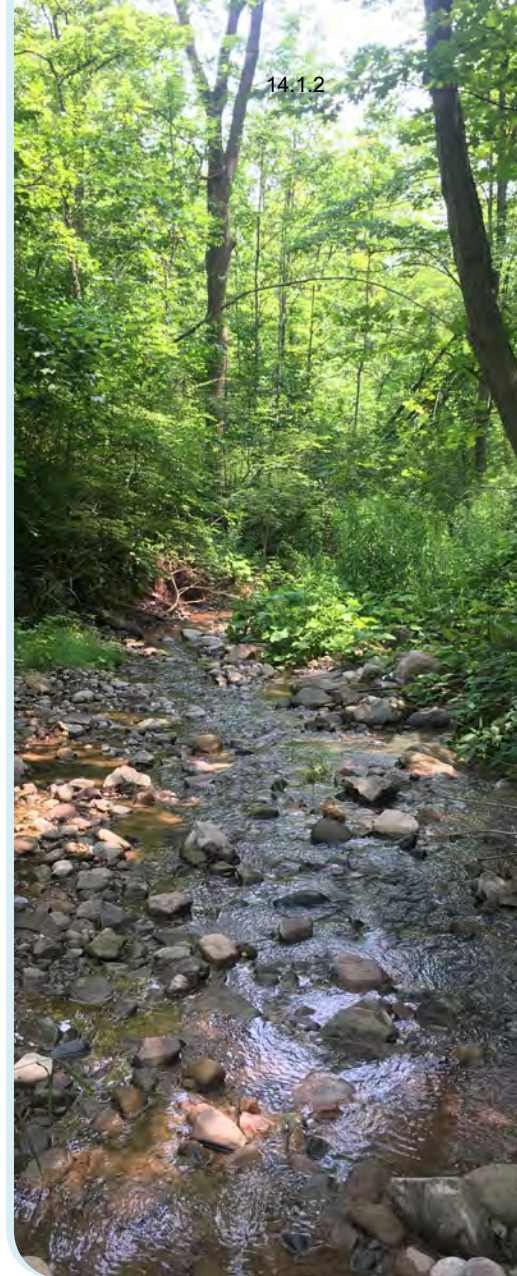
Under section 10(1) 2. of O. Reg. 686/21, CAs are required to identify in their Conservation Area Strategy the “mandatory and non-mandatory programs and services that are provided on land owned and controlled by the authority”, excluding any “lands where the authority has no legal interest in the lands registered on title and has entered into an agreement with another person or body to manage the lands on the person’s or body’s behalf” (O. Reg. 686/21 s. 9(2)). CAs must also include in their Conservation Area Strategy the sources of financing for these programs and services (O. Reg 686/21 S. 10.(1)2.). **The following sections fulfil these requirements.**

## Conservation and Management of Lands

At CH, the conservation and management of lands includes a wide variety of recreational and educational programs and services provided to over 1,000,000 annual visitors. These programs and services and their associated operations are funded through self-generated revenue from the sale of annual and seasonal passes, daily access fees, education program fees, and lesson and camp registration fees. In addition to active recreation, programs and services under the conservation and management of lands include the following:

- Management and securement of natural hazard and environmentally significant lands;
- Provision of passive recreational uses, such as trails;
- Long-term planning and management of all CH properties from an administrative perspective (e.g., master and management plans, leases, agreements, permits to enter, title searches and records); and
- Maintenance and security requirements for lands that do not have direct staff support or supervision.

Based on the findings of an initial programs and services assessment, CH is positioned to sustain programs and services under the conservation and management of lands without a significant change in municipal funding. However, this will require the continued and effective engagement of municipal partners in discussions relating to long-term vision and goals for the conservation and management of CH lands, with a focus on program and service areas such as passive recreation opportunities, securing CH land interests, addressing risk on CH lands, greenspace connectivity, and the long-term rehabilitation and protection of natural heritage features.



*Top: Hopkins Tract creek valley.  
Bottom: Robert Edmondson  
Conservation Area.*



## CATEGORY 1 – Mandatory

Mandatory programs and services may be funded through municipal funding, self-generated revenue (including program and user fees), or grants, donations and other sources of funding (including reserve funding).

Mandatory programs and services for recreation may include the maintenance of any facilities, trails or other amenities that support public access and recreational activities in conservation areas where the programs and services are provided without direct support or supervision (passive recreation).

*Table 1: Category 1 Programs, Services, and Sources of Financing for the Conservation and Management of Lands*

Programs & Services	Sources of Financing		
	Municipal Funding	Self-Generated Revenue	Grants, Donations & Other
Land Management			
Master Planning	✓	✓	✓
Inventory Monitoring & Audit (includes applications or comments on matters under the <i>Planning Act</i> )	✓		
Land Acquisition & Disposition	✓		✓
Risk Management <ul style="list-style-type: none"> <li>• Securing land interests including fencing, signage, patrolling and other measures to prevent unlawful entry</li> </ul>	✓		
Administrative Operations and Management	✓	✓	
Resource Management <ul style="list-style-type: none"> <li>• Conserve, protect, rehabilitate, establish, and manage natural heritage</li> <li>• Reforestation &amp; tree planting</li> <li>• Programs that reduce natural hazard risks</li> </ul>	✓	✓	✓
Visitor Impact Management	✓	✓	✓
Recreation			
Passive Recreation	*	✓	

✓ Current funding sources \* Other funding options

## CATEGORY 2 – Municipal

At the request of a municipality, through a memorandum of understanding or service agreement, Category 2 programs and services may be funded through municipal funding. Other sources of financing may include user fees and grants.

*Table 2: Category 2 Programs, Services, and Sources of Financing for the Conservation and Management of Lands*

Programs & Services	Sources of Financing		
	Municipal Funding	Self-Generated Revenue	Grants, Donations & Other
Public Programs	✓	✓	✓
School Programs	✓	✓	✓
Workshops & Events	✓	✓	✓

✓ Current funding sources \* Other funding options



*From left to right: Staff tree planting at Hilton Falls (Category 1); Students participating in CH forest stewardship program From the Ground Up (Category 2); Recreational skiing at Glen Eden (Category 3).*

## CATEGORY 3 — Other

Programs and services that the CH Board considers advisable to further the purposes of the CA Act may be funded through self-generated revenue, government and other agency grants, donations, and other sources of funding. The use of municipal funding requires a memorandum of understanding or service agreement and is subject to cost apportioning.

*Table 3: Category 3 Programs, Services, and Sources of Financing for the Conservation and Management of Lands*

Programs & Services	Sources of Financing		
	Municipal Funding	Self-Generated Revenue	Grants, Donations & Other
Land Acquisition		✓	✓
Recreation			
Active Recreation		✓	✓
Operations to support active recreation		✓	✓
Visitor Impact Management		✓	
Visitor Experience			
Business Development & Marketing		✓	
Events & Festivals		✓	✓
Retail & Food Services		✓	
Equipment Facility Rentals		✓	
Education & Awareness			
Public Programs		✓	✓
School Programs		✓	
Workshops & Events		✓	✓

✓ Current funding sources \* Other funding options

# LAND USE CATEGORIES AND LAND CLASSIFICATIONS

Historically, CAs acquired land to build flood infrastructure, protect floodplains, create recreational areas, and protect natural features. Land use categories and classifications allow CAs to communicate the purpose and features of authority-owned lands, as well as the risk control and operational context of land management activities. While CAs have used different land categorization and classification systems, Conservation Ontario (CO) proposed a standardized approach to **land use categories** in 2022 to support CAs in developing the Land Inventory and Conservation Area Strategy. CH has adopted CO's standardized categories as well as a series of **land classifications** to further characterize the features, ecological significance, and purposes of CH-owned properties.

## DEFINITIONS:

**Land Use Category:** *Defines a parcel's permitted use and operations.*

**Land Classification:** *Characterizes features that influence land use and management within a parcel.*

Prior to 2017, CH used a land classification system focused on the original purpose of acquired properties—Conservation Areas, Resource Management Areas, Floodplain, Water Control, and Other (Administration). When CH lands were re-classified in 2017, Resource Management Areas were separated into two subcategories: Conservation Reserves and Natural Areas. Each CH land classification was then sub-categorized, distinguishing between managed and non-managed lands. CH's updated land use category and land classification system, which will be implemented in 2025, generally aligns with CH's historical system as well as the land use categories developed by CO.

In CH's Land Inventory, the Land Use Categories are used to define each parcel of land; the inventory also identifies whether active recreation is occurring on any parcel. Parcels (also referred to as conservation lands or areas) may be assigned multiple categories of use based on dominant area features and functions. For example, a parcel defined as CA Active Recreation may also be categorized as a Management Area if it includes within its boundaries other significant assets, such as zones with high ecological value or flood control infrastructure.

To further describe each parcel's assets and attributes, CH's Land Inventory uses a series of Land Classifications. As with the broader land use categories, multiple land classifications may be applied to a CH-owned parcel. In some cases, a conservation area may have no assigned classification if the land use is designated active recreation or administration and there are no notable natural features or characteristics.

**Table 4: Land Use Category & Classification Terminology Changes Since 2017**

Previous Terms Used by CH (2017)	Terms Proposed by Conservation Ontario (2022)	New Terms Used by CH (2025)	
		Land Use Categories	Land Classifications
Conservation Area	CA Active Recreation CA Passive Recreation	CA Active Recreation CA Passive Recreation	Natural Heritage Lands
Resource Management Area <ul style="list-style-type: none"> <li>Natural Area</li> <li>Conservation Reserve</li> </ul> Floodplain Water Control	Management Area Natural Heritage Lands Environmentally Sensitive Lands Forest Management Lands Natural Hazard Lands Water Management Areas	Management Area	Environmentally Sensitive Lands Forest Management Lands Natural Hazard Lands Water Management Areas
Other (Administration)	CA Administration Area	CA Administration Area	

## Land Use Categories

CH's Land Use Categories, defined below, describe an area's permitted uses and related operations.

### CA Active Recreation

Most often referred to as conservation parks, **CA Active Recreation** areas are tracts of land that have a variety of public-use purposes. These parks include large areas where the public can enjoy a range of recreational opportunities. Features such as lookouts, reservoirs, well-developed trails, and educational and recreational programming help to attract visitors and establish these areas as local outdoor destinations. Generally, CH's Active Recreation areas include:

- Gated access to provide the public with entry during set operating hours;
- Fees for entry to support the park's recreational infrastructure and operations;
- Program fees to participate in selected recreational activities (e.g., downhill skiing, archery) and educational programs (e.g., tours, workshops); and
- Washrooms and other amenities to support public use.

CH's Active Recreation lands are primarily funded by user fees and managed in a way that balances public use with conservation priorities. CH strives to maintain each of these areas as a well-managed resource that both benefits the public and protects spaces of natural and cultural significance. This management philosophy guides operations, programming and management activities to help minimize disturbance to natural areas and promote public learning and engagement.

Some CH properties categorized as CA Active Recreation offer visitors a wide variety of *active* recreational experiences such as boating, camping, downhill skiing and snowboarding, archery, disc golf, rock climbing, swimming, and aerial courses. Recreational activities defined as *passive*, such as hiking and dog-walking among many others, are also generally supported. Whether participating in active or passive recreation (or educational programming), it is important for park visitors to remain on marked and managed trails and in gathering areas designated for public use to minimize disturbance to natural spaces and for general safety.

CH-owned lands that are categorized as CA Active Recreation may have other categories assigned; however, the area's dominant use will be as a conservation park that the public can access through gated entry, and where active recreation occurs with the support or supervision of CH staff (or a licensed third-party).

CH develops **master plans** to guide the planning and management of any properties categorized as CA Active Recreation.



Top: Aerial course at Kelso Conservation Area. Bottom: Canoeing at Kelso Reservoir.

## CA Passive Recreation

Outdoor activities that visitors can partake in at CA properties without requiring the support or supervision of CA staff are typically referred to as passive recreation. Areas defined as **CA Passive Recreation** allow for activities such as birding, dog-walking, hiking, fishing, mountain biking, picnicking, photography, nature appreciation, and cross-country skiing. At CA Passive Recreation areas, public use is permitted where marked, and provided funding is available to manage the area for safe public access. While fees are not required for these properties to operate, funding may be allocated to area management through sources such as municipal funding, user fees, and donations.

Like CA Active Recreation areas, the management philosophy of CA Passive Recreation properties is to provide a well-managed resource that supports public use while minimizing disturbance to natural areas and protecting ecologically or environmentally significant features. Many Passive Recreation lands include areas with sensitive ecologies as well as unmarked, informal trails that are not managed by the CA for public use. Therefore, it is critically important that visitors remain on marked and managed trails at these sites to protect their personal safety and the integrity of surrounding habitats.

CH develops **management plans** to guide the long-term planning and ongoing management of CA Passive Recreation areas.

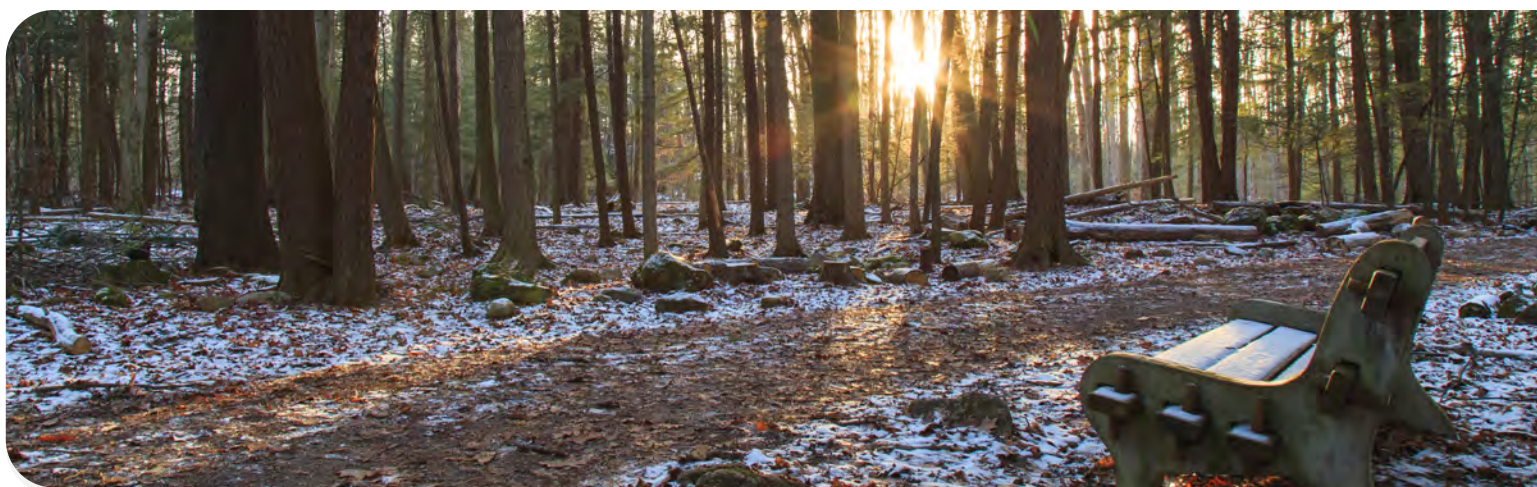
## Management Areas

The purpose of **Management Areas** is to provide broader watershed benefits. These benefits may include reducing risks to life and damage to property resulting from natural hazards (e.g., flood and erosion control infrastructure), and supporting the conservation, protection, rehabilitation, and management of natural heritage features and functions.

While the primary purpose of Management Areas is not public access or recreation, these properties may be considered for this use. Subject to funding, adding recreational use to a Management Area may be considered if it can be demonstrated through a management planning process that opening the area for public access will not impact the purpose or function of natural hazard lands and infrastructure, will not compromise important ecological or natural heritage features and functions, and can be done safely.

## Administration Areas

Lands categorized as **Administration Areas** support the administration and operations of CH. These properties generally have few special attributes or recreational uses. While they may support small-scale conservation projects, they have limited broader watershed benefits and are primarily used for the administration of CH's programs and services. The public may be permitted to access Administration Areas for related administrative purposes. Administration Areas may also include agreement lands, where there is an agreement for exclusive use of an area; public access is not permitted in agreement areas.



*Hiking trail at Crawford Lake Conservation Area.*

Table 5: Land Use Category Matrix

Land Use Category	Land Uses and Functions	Details
<i>CA Active Recreation</i>	<ul style="list-style-type: none"> <li>Active recreation</li> <li>Education</li> </ul>	Public Access: Yes
		Fee for Use: Yes
		Onsite Recreation Staff Support: Yes
		Infrastructure to Support Public Access and Recreation: Yes
		Public Attraction/Feature: Yes
		Education/Recreation Programs: Yes
<i>CA Passive Recreation</i>	<ul style="list-style-type: none"> <li>Passive recreation</li> </ul>	Public Access: Yes
		Fee for Use: Potential
		Onsite Recreation Staff Support: No
		Infrastructure to Support Public Access and Recreation: Minor
		Public Attraction/Feature: Potential
		Education/Recreation Programs: No
<i>Management Areas</i>	<ul style="list-style-type: none"> <li>Protection from natural hazards</li> <li>Water management</li> <li>Forest management</li> <li>Ecological protection</li> </ul>	Public Access: Potential
		Fee for Use: N/A
		Onsite Recreation Staff Support: N/A
		Infrastructure to Support Public Access and Recreation: N/A
		Public Attraction/Feature: Potential
		Education/Recreation Programs: No
<i>Administration Areas</i>	<ul style="list-style-type: none"> <li>Administration</li> </ul>	Public Access: Yes*
		Fee for Use: No
		Onsite Recreation Staff Support: No
		Infrastructure to Support Public Access and Recreation: No
		Public Attraction/Feature: No
		Education/Recreation Programs: No

\* With exceptions

# Land Classifications

CH's Land Classifications characterize the features found on CH-owned lands, which influence their use and management.

## ***Natural Heritage Lands***

Natural Heritage Lands contain a variety of natural and ecological features such as wetlands, forests, valleylands, meadows, watercourses, and lakes that contribute to the broader natural heritage and biodiversity in an area. These lands provide cumulative watershed benefits such as flood damage reduction, conservation of biological diversity, maintenance of ecological functions, and support for climate adaptation and resilience. In addition to policies that protect the larger natural heritage system (NHS), conservation authority ownership provides an added layer of protection for these important lands. The characteristics of Natural Heritage Lands generally align with the provincially and municipally designated NHS.

Recreational use of these properties may be permitted through an effective, long-term management plan that balances public access with the ongoing protection of ecological features.

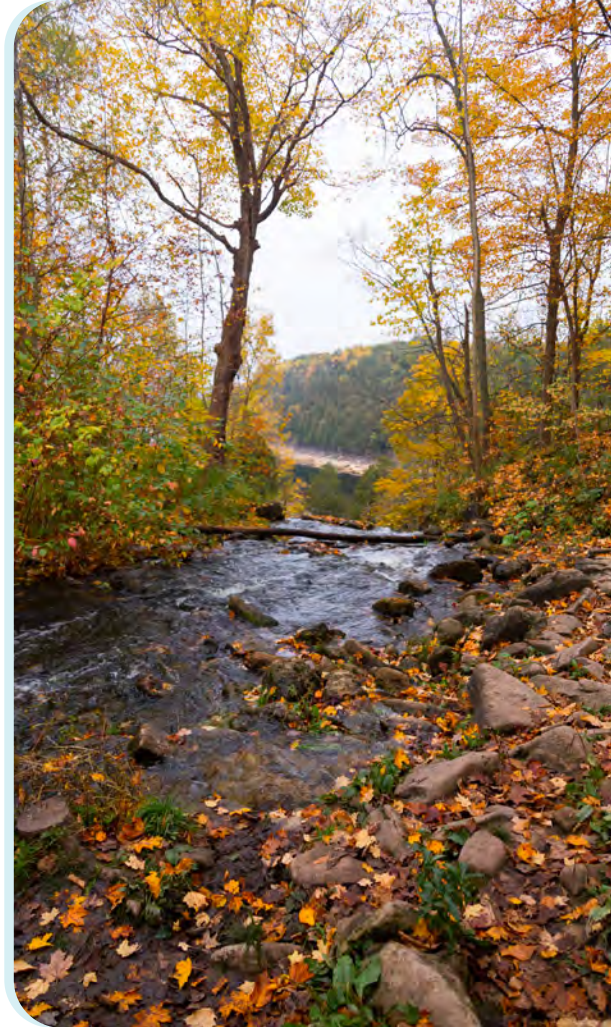
## ***Environmentally Sensitive Lands***

Environmentally Sensitive Lands meet the criteria of Natural Heritage Lands but have ecological features that warrant additional recognition for protection and preservation, as determined by CH ecology staff. These lands are protected and regulated by existing policy frameworks. CH ownership and the land use classification of Environmentally Sensitive Lands provides an added layer of protection.

Recreational use of these properties is not generally supported but may be permitted through an effective, long-term management plan that both balances public access with the ongoing protection of ecological features.

## ***Forest Management Lands***

Forest Management Lands are primarily wooded properties that are managed following a strategic forest management plan based on good forestry practices, as defined in the *Forestry Act*. These properties may not meet all requirements of the Managed Forest Tax Incentive Program (MFTIP) (e.g., size of parcel); however, CH's Forest Management Lands meet most of the MFTIP requirements, including the minimum density requirements.



Top: View of Hilton Falls Conservation Area following tree protection work. Bottom: Staff surveying at Sixteen Mile Creek.



The management philosophy of these lands is to maintain and enhance the natural ecosystems found on the property through a variety of management activities, based on ecosystem type and requirements.

Recreational use of these properties is not generally supported but may be permitted through an effective, long-term management plan that both balances public access with the protection of natural features, and takes into consideration forest management plans and requirements of the MFTIP program, if applicable.

### ***Natural Hazard Lands***

Natural Hazard Lands includes lands that could be unsafe for development due to naturally occurring processes, including flooding, erosion and dynamic beach hazards. These properties have land that may be flooded during a major storm or have unstable slopes, soils, and bedrock, and dynamic beach movement. These properties are owned primarily to ensure that development is directed away from areas of natural hazards where there is an unacceptable risk to public health or safety or of property damage, and to ensure that new hazards are not created and existing hazards are not aggravated.

Passive recreation may be permitted, depending on the attributes of the property; however, there are minimal, if any assets, or infrastructure to support recreational use.

### ***Water Management Areas***

Water Management lands are associated with infrastructure designed to collect, hold, or redirect water, including dams and channels. Access to channel lands is limited, although depending on the attributes of the property and nature of the infrastructure, some may be used for CA Passive Recreation. Reservoirs resulting from dams may support recreational opportunities such as swimming, fishing, or boating in CA Active Recreation areas.



*Top: Hilton Falls Dam & Reservoir*

## NATURAL HERITAGE AND CONNECTIVITY ASSESSMENT

Natural heritage features and greenspaces such as forests, wetlands, valleys, meadows and creeks provide a wide range of environmental, social, and economic benefits. They help to reduce pollution and prevent contaminants from reaching our sources of drinking water, absorb rainwater during severe weather events to reduce flooding and erosion, and release water during prolonged droughts. Greenspaces and natural heritage features also help to lower air temperature during heat waves, capture and store carbon to mitigate the impacts of climate change, support important natural processes needed to sustain biodiversity and healthy ecosystems, and provide mental and physical health benefits for the people who live and work in our communities.

As natural heritage features function as systems on the landscape, their degradation or fragmentation can drastically reduce (or eliminate) the benefits they provide. It is important to conserve, protect, rehabilitate, establish and manage these resources at a watershed or systems level and to ensure that natural heritage connectivity is maintained and enhanced.

Both CH-owned and other publicly owned and accessible lands provide additional protection for natural heritage features and systems and provide opportunities for connectivity and collaboration when maintaining the functions and benefits of natural heritage features in CH's watersheds.

### Natural Heritage Augmentation

CH owns approximately 3,994 hectares (9,870 acres) of conservation land, which covers roughly 4% of our jurisdiction. Approximately 3,828 hectares (9,460 acres) of these lands are part of the provincial natural heritage system area in CH's watersheds, which means that CH is responsible for 10% of the provincial NHS area found within our watersheds. The ownership and management of these natural heritage lands plays a key role in providing connectivity and maintaining the functions and benefits of the NHS.



The goals, objectives, and actions included in CH's Conservation Area Strategy (see pp. 11–14) support purposeful land ownership as well as programs and services that conserve, protect, rehabilitate, establish, and manage natural heritage features on lands we own, to help augment the NHS. Our strategy also describes goals, objectives and actions that will guide CH in permitting land access and use in safe and sustainable ways that allow for the long-term protection of the environment and natural features.

In addition, the natural heritage features found on CH lands provide habitat to many different species, including Species at Risk (SAR). From among the 200 SAR in Ontario<sup>6</sup>, 24 are found in CH's watersheds, including 21 terrestrial species and three aquatic species.

As the owner and steward of 10% of the provincial NHS in its jurisdiction and other environmentally significant lands (as detailed at right), CH is uniquely positioned to support the ongoing and long-term conservation and protection of ecosystems in its watersheds. Following the goals, objectives and actions outlined in this strategy—and through strong partnerships and collaboration—CH will continue to take a watershed- and systems-level approach to improve the health of the natural heritage features, manage natural hazards, and augment NHS connectivity.

The following values highlight several types of environmentally significant lands found in our watersheds, indicating the portion within our jurisdiction that CH owns.

Environmentally Significant Area (ESA)	<b>18%</b>
Wetland (PSW)	<b>13%</b>
Wetland (non-PSW)	<b>7%</b>
ANSI (Earth Science)	<b>26%</b>
ANSI (Life Science)	<b>30%</b>
Significant Woodlands	<b>12%</b>

**Table 6: Natural Heritage System, CH Regulated Area, and Environmentally Significant Areas on CH Landholdings**

Designation, Feature or Area	# Parcels	Acres	Hectares	% CH Lands with Designation, Feature, or Area
Natural Heritage System (Provincial)*	240	9,460	3,828	96%
Natural Heritage System (Municipal)	421	8,713	3,526	88%
CH Regulated Area**	463	6,340	2,566	64%
Wetland (PSW)	88	2,145	868	22%
Wetland (non-PSW)	146	703	284	7%
ANSI (Earth Science)	48	1,582	640	16%
ANSI (Life Science)	113	4,683	1,895	47%
Significant Woodlands	214	6,088	2,464	62%
Environmentally Significant Areas (ESAs)	278	7,022	2,842	71%

\* Includes areas defined in provincial plans such as the Greenbelt Plan and Niagara Escarpment Plan

\*\* Includes watercourses, valleylands, wetlands, Lake Ontario and Hamilton Harbour shoreline, and hazardous lands as well as lands adjacent to these features

<sup>6</sup> <https://www.ontario.ca/page/how-species-risk-are-protected>

Figure 3: Conservation Halton-Owned Lands in the Natural Heritage System





## Integration with Publicly Owned and Accessible Lands and Trails

Connectivity and integration with publicly owned lands and trails was considered as part of the Land Inventory, by assessing whether a parcel or a portion of the parcel integrates with other provincially or municipally owned lands or other publicly accessible lands and trails. This detailed connectivity assessment will support goals and objectives such as purposeful landownership, providing exceptional recreational opportunities, cultivating strong partnerships, and delivering programs and services that conserve, protect, rehabilitate, establish and manage natural heritage.

In addition, CH has many existing partnerships that support the integration of CH's landholdings with other publicly owned and accessible lands and trails.

### ***Provincially Owned Lands***

CH currently manages in its watersheds several provincially owned conservation lands. Although these properties are not owned and controlled by CH, these lands do contribute to NHS connectivity, integrating with other publicly owned lands and trails.

### ***Municipally Owned Lands***

Municipalities and conservation authorities have a long history of working together on projects that deliver local, watershed-based resource management programs. As a result of ongoing partnership, many municipally owned lands in CH's jurisdiction are well connected to and integrated with CH-owned properties. These connections and integrations can be found in areas of flood risk reduction, such as around channels, and in natural parks and open spaces where trails may lead from one parcel to another.

### ***Bruce Trail Conservancy***

The Bruce Trail is a publicly accessible trail that winds from Niagara to Tobermory. Through an agreement with CH, the Bruce Trail crosses 76 of 511 (15%) of CH-owned parcels. The Bruce Trail Conservancy also owns land adjacent to or in the vicinity of many CH-owned properties, which contributes to an integrated system of publicly accessible lands and trails in CH's jurisdiction.



### ***Niagara Parks and Open Space System (NEPOSS)***

The NEPOSS is a collection of public lands owned and/or managed by federal, provincial and municipal bodies as well as conservation organizations, including conservation authorities, Royal Botanical Gardens, the Bruce Trail Conservancy, and Ontario Heritage Trust. NEPOSS lands are managed as parks and open spaces for the purposes of protecting the Niagara Escarpment's significant resources. CH owns 2,523 hectares (6,235 acres) of land within this network and 70% of NEPOSS lands within CH's watersheds. CH is a member of the NEPOSS Council, which meets regularly to advance common objectives and provide advice on related policies, programs and issues.<sup>7</sup>

The integrated landholdings and trail infrastructure of NEPOSS allow for greater natural area connectivity, supporting the conservation, protection, rehabilitation and management of the NHS and natural heritage areas and the provision of passive recreation opportunities. In turn, these landholdings benefit both environmental health and human health and wellbeing, while also providing opportunities for knowledge-sharing and collaboration with partners, which contributes to effective conservation land management.

### ***Cootes to Escarpment EcoPark System***

The Cootes to Escarpment EcoPark System is a voluntary collaboration between nine landowning agencies, including government and not-for-profit organizations. These agencies share the responsibility of protecting approximately 2,200 hectares (5,436 acres) of open space and nature sanctuary between Cootes Paradise Marsh, Hamilton Harbour, and the Niagara Escarpment.<sup>8</sup> CH owns approximately 300 hectares (742 acres), or 14% of the land owned by partner agencies within this expansive network, and works in collaboration with Royal Botanical Gardens, City of Hamilton, Bruce Trail Conservancy, City of Burlington, Halton Region, Hamilton Naturalists' Club, McMaster University and Hamilton Conservation Authority to contribute to the ongoing protection of the Cootes to Escarpment EcoPark System.

CH will continue to seek opportunities to improve conservation land integration and connectivity and extend cooperation among federal, provincial and municipal governments, as well as neighbouring conservation authorities and other agencies whose lands together make up this extensive greenspace system in Ontario.

<sup>7</sup> <https://escarpment.org/planning/niagara-escarpment-parks-and-open-space-system/>

<sup>8</sup> <https://cootestoescarpmentpark.ca/>

# CONSULTATION, REVIEW AND UPDATES

## Public Consultation and Partner Engagement

Conservation authorities own land to support their purpose, which is to provide for the organization and delivery of programs and services that further the conservation, restoration, development, and management of natural resources in watersheds in Ontario. These programs and services are generally developed and delivered with partners. By engaging with our partners, as well as with broader stakeholders and the public, CH is able to gather feedback that helps staff better understand the values and priorities of groups and individuals in the communities we serve.

To inform CH's Conservation Area Strategy, we solicited feedback from municipal partners, Indigenous partners, non-government partners and members of the public, including conservation area visitors and watershed residents.

### *Public and Stakeholder Consultation*

Public and stakeholder consultation was completed through a survey that could be accessed online using a QR code or by entering the website address. The survey was available from June 21 to August 16, 2024, and was promoted via signage at conservation areas, social media outreach, newsletters and CH's website. The survey provided respondents with relevant background and context, and it presented a series of 10 questions that sought to (a) better understand public and stakeholder perspectives, including values, priorities and familiarity with CH lands, and (b) obtain feedback on CH's overarching land management goals.

Our analysis of the 190 stakeholder and public survey responses received led to key findings, including the following:

- Respondents valued CH lands most for the physical and mental benefits that come with connecting with nature, opportunities for recreation and exercise, views and vistas, and biodiversity and habitat for plants and wildlife;
- Favourite activities on CH properties included hiking, nature appreciation, birding and special events; and
- Concerns about CH's land management were primarily focused on impacts to wildlife and habitats by users, invasive species, off-leash dogs, and insufficient wayfinding.

The following Conservation Area Strategy goals resonated the most with respondents:

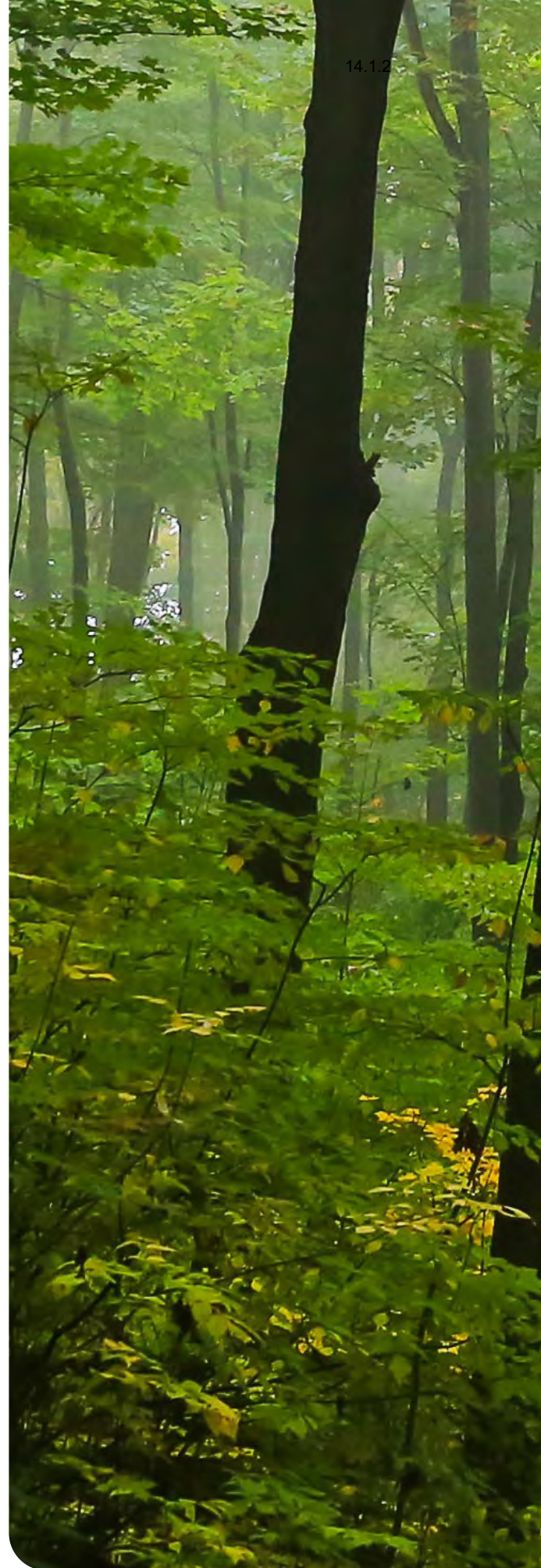


## **Partner Engagement**

CH solicited feedback directly from partners through email outreach. Partners were presented with information including relevant background, legislative context, the proposed land use categories and land classifications, and CH's proposed Conservation Area Strategy goals. Partners were asked to review this information and provide their feedback through written comments or via a virtual or in-person meeting. Partner feedback included the following comments and recommendations:

- Consider cross boundary/cross watershed connectivity;
- Encourage cross-referencing and, where possible, consideration of categories and classifications between CAs, management plans, NEPOSS, and land use planning designations and zoning;
- Work with partners to ensure updated mapping and policy directives for the NHS are considered for land management objectives;
- Include public education as a component of building a community that supports and participates in conservation land stewardship;
- Promote collaboration and alignment with partners to achieve the protection, maintenance, restoration or, where possible, improvements and linkages of natural heritage and biodiversity;
- Consider local climate change projections for CA programs and services that conserve, protect, rehabilitate, establish, and manage natural heritage;
- For objectives relating to trespassing and safety issues, consider a specific action about developing a safe access and enforcement plan;
- Related to safe access, consider safety signage pertaining to invasive and noxious species (hogweed, poison ivy), ticks and tick-related diseases;
- Continue to consult when developing management plans;
- Encourage research and innovation partnerships; and
- Include an objective pertaining to acquisitions to address gaps or opportunities to grow and connect the NHS.

All feedback received through public consultation and partner engagement has been considered and addressed in this strategy where applicable.





## Process for Review and Updating

This strategy will inform and guide CH’s conservation and management of lands over a period of five years and will be made available on CH’s website. Throughout this five-year period, revisions that do not alter the strategy in any significant way may be completed as necessary. Subsequently, every five years the strategy will be reviewed in its entirety. If this formal review results in minor changes, consultation may not be undertaken, and the revised strategy will be made available online. If the review process leads to significant changes, CH will engage with partners, stakeholders and the public to solicit feedback; an updated Conservation Area Strategy will then be presented to the CH Board with a summary of changes and posted online.

CH will continue to leverage all suitable tools and platforms (e.g., targeted outreach via email, broad engagement via public surveys) to gather feedback from partners, stakeholders and the public. Ongoing feedback will be especially important to the more visionary goals, objectives, and actions described in CH’s Conservation Area Strategy, particularly those relating to land management plans and master plans for CH-owned properties.



## ADDITIONAL READING

Conservation Halton's Strategic Plan. <https://www.conservationhalton.ca/about-us/strategic-plan/>

Conservation Halton's Programs and Services Inventory. <https://www.conservationhalton.ca/wp-content/uploads/2023/12/Conservation-Authorities-Act-Programs-Services-Inventory-Explanatory-Documents-December-21-2023.pdf>

Conservation Halton's Watershed Strategy. <https://www.conservationhalton.ca/watershed-strategy/>

Conservation Ontario, History of Conservation Authorities. <https://conservationontario.ca/conservation-authorities/about-conservation-authorities/history-of-conservation-authorities>

Conservation Ontario, Conservation Lands. <https://conservationontario.ca/conservation-authorities/conservation-lands>

Cootes to Escarpment EcoPark System. <https://cootestoescarpmentpark.ca/>

Niagara Escarpment Commission, Niagara Escarpment Parks and Open Space System. <https://escarpment.org/planning/niagara-escarpment-parks-and-open-space-system/>

Province of Ontario. How species at risk are protected. <https://www.ontario.ca/page/how-species-risk-are-protected>

Province of Ontario. Conservation Authorities Act, R.S.O. 1990, c. C.27. <https://www.ontario.ca/laws/statute/90c27>

Province of Ontario. O. Reg. 686/21: Mandatory Programs and Services. <https://www.ontario.ca/laws/regulation/210687>

Province of Ontario. O. Reg. 687/21: Transition Plans and Agreements for Programs and Services Under Section 21.1.2 of the Act. <https://www.ontario.ca/laws/regulation/210686>

Province of Ontario. Trespass to Property Act, R.S.O. 1990, c. T.21. <https://www.ontario.ca/laws/statute/90t21>

Province of Ontario. Occupiers' Liability Act, R.S.O. 1990, c. O.2. <https://www.ontario.ca/laws/statute/90o02>





Conservation  
**Halton**



## Conservation Halton Board Meeting Minutes

Conservation Halton

October 31, 2024, at 1:00 PM EDT

@ 2596 Britannia Road, Burlington, ON L7P 0G3

### 1. Roll Call

Members Present	Sameera Ali Sara Bailey Rob Burton John-Paul Danko Cathy Duddeck (Vice-Chair) Jane Fogal Chantal Garneau Dave Gittings Gordon Krantz Cameron Kroetsch Marianne Meed Ward Rory Nisan Gerry Smallegange (Chair) Shawna Stolte Kristina Tesser Derksen Alex Wilson
Absent with Regrets	Allan Elgar Sammy Ijaz Sue McFadden
Absent	Alvin Tedjo
Staff Present	Chandra Sharma, President & CEO/Secretary-Treasurer Barbara J. Veale, Senior Director, Watershed Management Climate Change Garner Beckett, Executive Director, Conservation Halton Foundation Adriana Birza, Senior Advisor, Office of the President & CEO Craig Machan, Director, Parks & Operations Kellie McCormack, Director, Planning & Regulations/Strategic Initiatives & Partnerships Marnie Piggot, Director, Finance Plezzie Ramirez, Director, Human Resources Martin Keller, Senior Manager, Watershed Planning and Source Protection Justin Wei, Senior Manager, Finance Ilona Feldmann, Resource Planning Coordinator Declan Kelly, Senior Communications Advisor Trina Seguin, Lands Manager Robyn Koutrouliotis, Administrative Assistant, Office of the President & CEO

The Chair called the meeting to order at 1:07 p.m.



## 2. Disclosure of Pecuniary Interest

There were **no disclosures of pecuniary interest.**

## 3. Acceptance of Amended Agenda

**CH 06 01**

Moved by: Sara Bailey  
Seconded by: Rory Nisan

THAT the Conservation Halton Board **approves the agenda as amended.**

***Carried***

## 4. President & CEO Verbal Update

Chandra Sharma, President & CEO, provided an update on various areas of the organization, including meetings with key stakeholders; highlights from the National Climate Adaptation Summit on October 22, 2024; the Federal government's investment in the Crawford Lake Visitor Centre project through the Green and Inclusive Community Buildings (GICB) program; Glen Eden season start preparations; CH's third-annual staff Wellness Fair; and Parks visitation numbers.

## 5. Foundation Verbal Update

The Executive Director, Conservation Halton Foundation, provided an update on fundraising for the Connected Campaign.

The Foundation's 2025 Blue Gala will take place on June 2, 2025, at Area 8 Conservation Area in Milton.

## 6. Presentations

- 6.1 2025 Budget & Business Plan (Chandra Sharma, President & CEO/Secretary Treasurer) (Item 8.8)

## 7. Consent Items

- 7.1 Approval of DRAFT September 19, 2024, Conservation Halton Board Meeting Minutes
- 7.2 Approval of DRAFT October 9, 2024, Conservation Halton Governance & Risk Committee Meeting Minutes
- 7.3 Approval of DRAFT October 25, 2024, Conservation Halton Finance & Audit Committee Meeting Minutes
- 7.4 Purchasing Activity – May 1, 2024, to August 31, 2024 (CHB 06 24 01)
- 7.5 Conservation Halton Sustainability Plan Update (CHB 06 24 02)
- 7.6 Permits Issued under *Ontario Regulation 41/24* from July 1 to September 30, 2024 (Q3 2024) (CHB 06 24 03)



- 7.7 Update on Regulatory Deliverables: *Ontario Regulation 686/21* under the *Conservation Authorities Act* (CHB 06 24 04)

The consent items **were adopted**.

## 8. Action Items

- 8.1 Watershed-Based Resource Management Strategy (CHB 06 24 05)

**CH 06 02** Moved by: Shawna Stolte  
Seconded by: Marianne Meed Ward

THAT the Conservation Halton Board **approves the Watershed-Based Resource Management Strategy;**

And

THAT the Conservation Halton Board **directs staff to post the Watershed-Based Resource Management Strategy to the corporate website as required by *Ontario Regulation 686/21*;**

And

THAT the Conservation Halton Board **directs staff to advise participating municipalities and neighbouring Conservation Authorities that the approved Watershed-Based Resource Management Strategy has been completed and posted.**

***Carried***

- 8.2 Land Inventory & Conservation Area Strategy (CHB 06 24 06)

**CH 06 03** Moved by: Chantal Garneau  
Seconded by: Alex Wilson

THAT the Conservation Halton Board approves **the Conservation Area Strategy (2024) as presented;**

And

THAT the Conservation Halton Board **directs staff to post the Conservation Area Strategy to the corporate website as required by *Ontario Regulation 686/21*;**

And

THAT the Conservation Halton Board **directs staff to advise participating municipalities and neighbouring Conservation Authorities that the approved Conservation Area Strategy has been completed and posted.**

***Carried***

- 8.3 Amendments to the Halton Region Conservation Authority General Membership By-law No. 2018-01 (CHB 06 24 07)

**CH 06 04** Moved by: Gordon Krantz  
Seconded by: Rob Burton



THAT the Conservation Halton Board approves **the proposed amendments to the Halton Region Conservation Authority General Membership By-law No. 2018-01 (rev. April 20, 2023).**

*Carried*

- 8.4 Proposed construction of retaining walls and an underground parking garage located 4.6 metres from the flood plain associated with East Morrison Creek, 3065 Trafalgar Road, Town of Oakville (CHB 06 24 08)

**CH 06 05** Moved by: Dave Gittings  
Seconded by: Kristina Tesser Derksen

THAT the Conservation Halton Board approves **the issuance of a permit for the construction of retaining walls and an underground parking garage located 4.6 metres from the flood plain associated with East Morrison Creek, 3065 Trafalgar Road, Town of Oakville.**

*Carried*

- 8.5 Proposed 2025 Planning and Permit Review Fees (CHB 06 24 09)

**CH 06 06** Moved by: Cameron Kroetsch  
Seconded by: John-Paul Danko

THAT the Conservation Halton Board approves **the Proposed 2025 Planning and Permit Review Fees, with an effective date of January 1, 2025;**

And

THAT the Conservation Halton Board **directs staff to provide appropriate notice of the Board-approved 2025 Planning and Permit Review Fees to watershed municipalities and neighbouring conservation authorities;**

And

THAT the Conservation Halton Board **directs staff to post the Board-approved 2025 Planning and Permit Review Fee Schedules to the Conservation Halton website.**

*Carried*

- 8.6 Budget Variance Report for the Period Ended August 31, 2024, and 2024 Projected Year End Amounts (CHB 06 24 10)

**CH 06 07** Moved by: Jane Fogal  
Seconded by: Cathy Duddeck

THAT the Conservation Halton Board approves **a transfer of \$450,000 to the Land Securement Reserve for a donation received from an estate settlement that named Conservation Halton as a beneficiary;**

And



THAT the Conservation Halton Board **receives for information the staff report dated October 31, 2024, on the Budget Variance for the period ended August 31, 2024, and 2024 Projected Year End Amounts.**

***Carried***

8.7 Facilities Asset Management Plan (Update 2024) (CHB 06 24 11)

**CH 06 08** Moved by: Kristina Tesser Derksen  
Seconded by: Alex Wilson

THAT the Conservation Halton Board approves **the Facilities Asset Management Plan (Update 2024) as presented.**

***Carried***

8.8 2025 Budget & Business Plan (CHB 06 24 12)

**CH 06 09** Moved by: Sameera Ali  
Seconded by: Marianne Meed Ward

THAT the Conservation Halton Board approves **municipal funding of \$12,215,375 in the 2025 budget by a weighted majority vote by members based on the 2025 budget municipal apportionment;**

And

THAT the Conservation Halton Board approves **the \$106,000 benefit-based municipal funding for Halton Region related to the Sixteen Mile Creek Watershed studies;**

And

THAT the Conservation Halton Board **approves the \$12,746,540 Developer Contribution Reserve (DCR) funding request included in the 2025 Budget for the Crawford Lake Interpretive and Education Centre and Kelso/Glen Eden Revitalization projects.**

And

THAT the Conservation Halton Board **approves transfers to and from Reserves in the 2025 Budget as outlined in the staff report entitled “2025 Budget & Business Plan”;**

And

THAT the Conservation Halton Board **approves the 2025 Budget & Business Plan as presented.**

*All in Favour*

Sameera Ali  
Sara Bailey  
Rob Burton  
John-Paul Danko  
Cathy Duddeck  
Jane Fogal

*All Opposed*

*Absent*

Allan Elgar  
Sammy Ijaz  
Sue McFadden  
Alvin Tedjo





Chantal Garneau  
 Dave Gittings  
 Gordon Krantz  
 Cameron Kroetsch  
 Marianne Meed Ward  
 Rory Nisan  
 Gerry Smallegange  
 Shawna Stolte  
 Kristina Tesser Derksen  
 Alex Wilson

*Carried*

## 9. Other Business

There was **no other business.**

## 10. In Camera

### CH 06 10

Moved by: Shawna Stolte  
 Seconded by: Rob Burton

THAT the Conservation Halton Board **moves In Camera.**

*Carried*

10.1 Legal Matter (CHB 06 24 13)

10.2 Legal Matter (CHB 05 24 14)

### CH 06 11

Moved by: Shawna Stolte  
 Seconded by: Rob Burton

THAT the Conservation Halton Board **reconvenes in public forum;**

And

THAT the Conservation Halton Board **directs staff to proceed as directed In Camera.**

*Carried*

## 11. Adjournment

### CH 06 12

Moved by: Sameera Ali

THAT the Conservation Halton Board meeting **be adjourned at 2:25 p.m.**

*Carried*



Signed by: Chandra Sharma, President & CEO/Secretary-Treasurer

Date: December 5, 2024

DRAFT