

# Etobicoke Creek Watershed Plan Overview

City of Brampton, Committee of Council

September 4, 2024



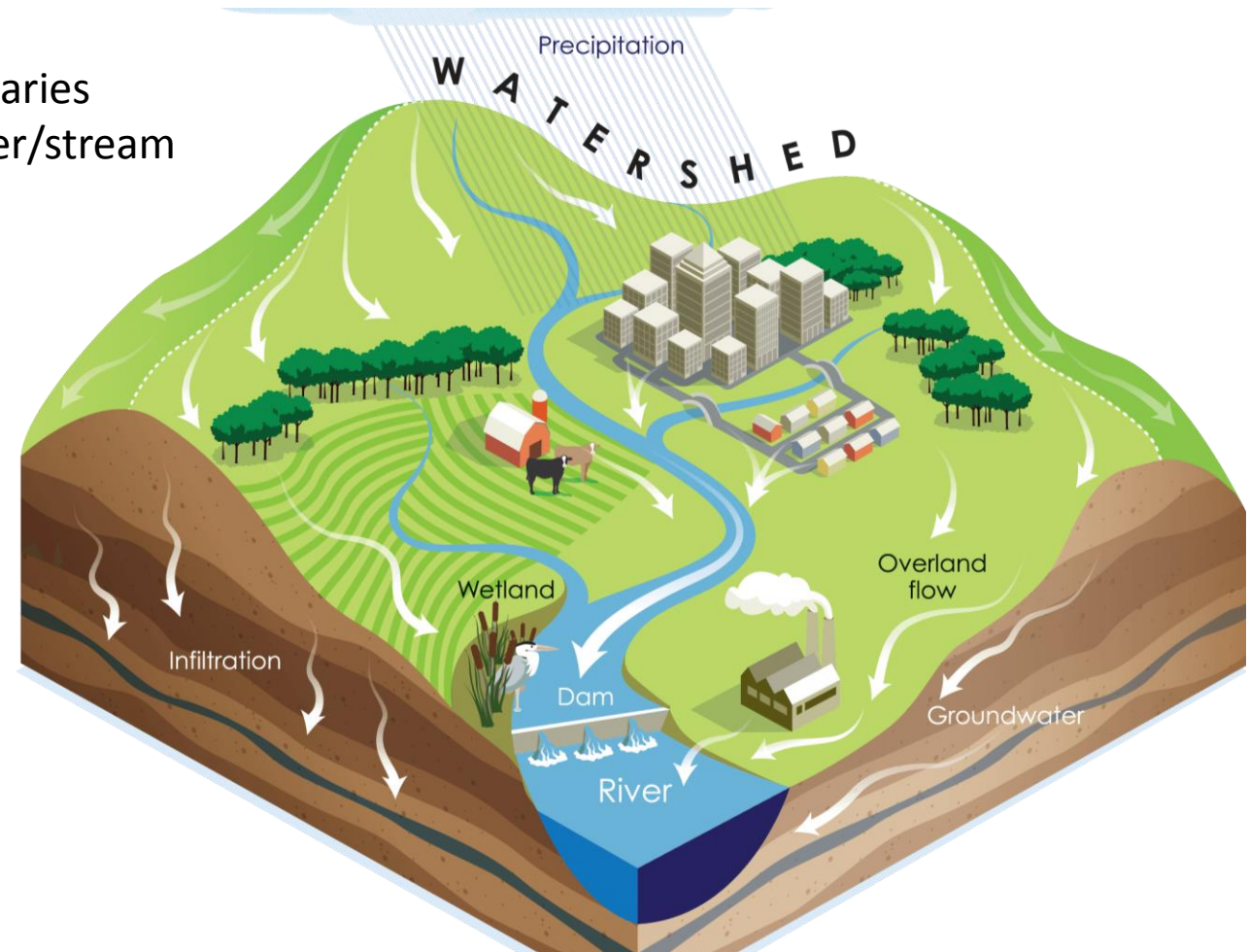
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# What is a watershed?

- Land area that is drained by a river or creek and its tributaries
- Tributaries are smaller streams that feed into a larger river/stream

## What are some benefits of healthy watersheds?

- Support ecosystems and biodiversity
- Reduce flood and erosion risks
- Provide clean drinking water and water for agriculture, industry, and homes
- Improve climate resiliency



# Integrated Watershed Planning

- Provides a systematic framework as per provincial guidance:
  1. Assesses current and potential future conditions of the watershed
  2. Identifies measures and actions to protect, restore, and enhance watershed health and build resiliency to land use and climate changes
- Informs various TRCA and municipal initiatives including land use and infrastructure planning, ecosystem restoration and management, land management, low impact development and green infrastructure implementation, and climate adaptation planning
- Provincial plans and policies require municipalities to complete watershed plans, in partnership with Conservation Authorities



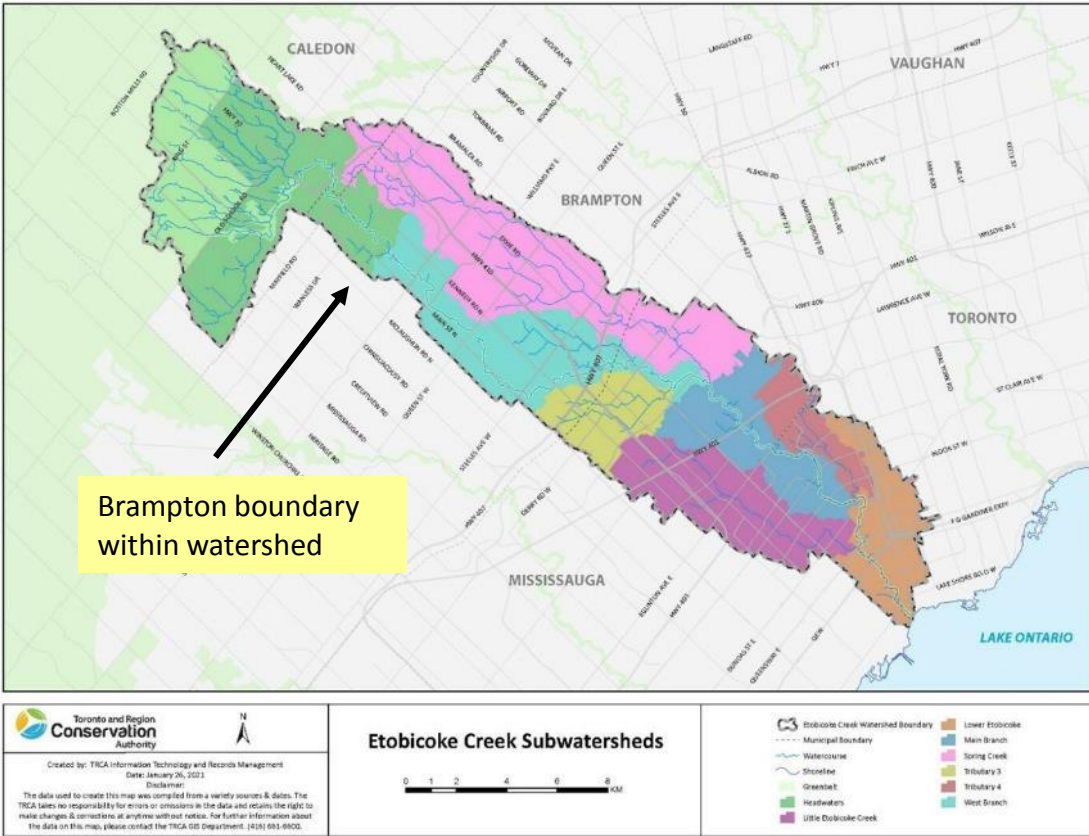
# Etobicoke Creek Watershed Plan

## Watershed Vision

Etobicoke Creek watershed is protected and restored to a cleaner, healthier, and more natural state, to sustain its waterways, ecosystems, and human communities.

**Watershed:** 22,404 ha - 60% urban, 28% rural, 12% natural

**Brampton:** 7432 ha (~33% of watershed) - 24% urban, 5% rural, 4% natural

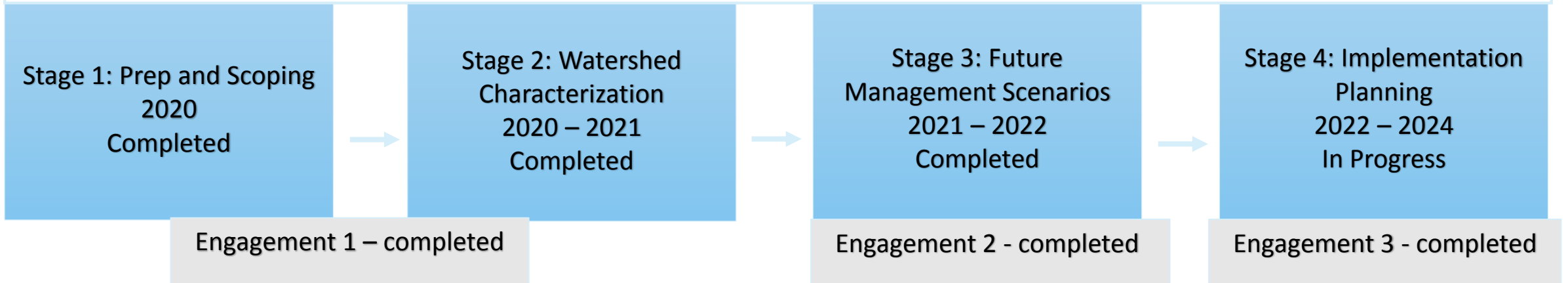


# Etobicoke Creek Watershed Plan

## Multi-year collaborative process between:

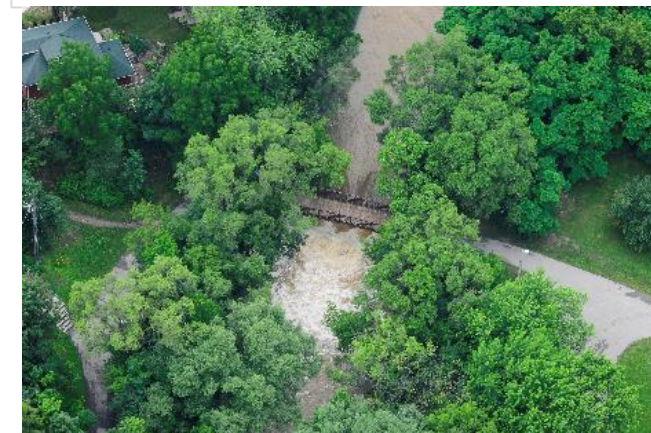
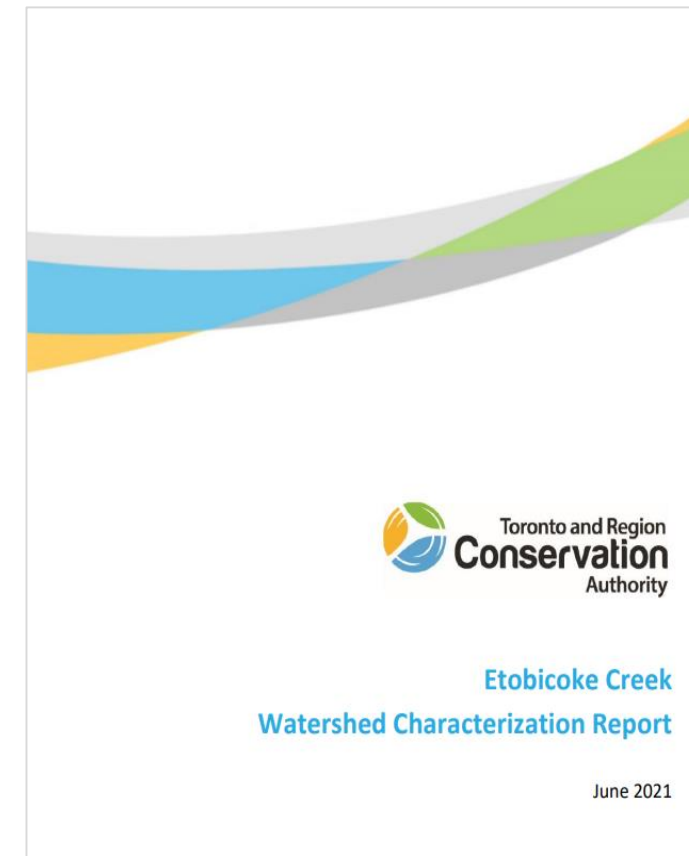
TRCA, City of Toronto, Region of Peel, City of Mississauga, City of Brampton, Town of Caledon, Mississaugas of the Credit First Nation, and the Greater Toronto Airports Authority.

### ECWP Process and Timeline



# Key Findings: Watershed Characterization

Key Components	Watershed Characterization Key Findings
<b>Water Resources</b>	<ul style="list-style-type: none"> <li>• Aquatic ecosystem is sensitive &amp; poor aquatic habitat</li> <li>• High amount of runoff and in-stream barriers which prevent the movement of species</li> </ul>
<b>Natural Heritage &amp; Urban Forest</b>	<ul style="list-style-type: none"> <li>• Low natural cover and urban forest canopy cover</li> <li>• Degraded terrestrial habitat quality</li> </ul>
<b>Water Quality</b>	<ul style="list-style-type: none"> <li>• Surface water quality is generally poor compared to other TRCA watersheds</li> <li>• Contaminants of concern include chlorides, Phosphorus, E.coli bacteria, and metals (copper &amp; zinc)</li> </ul>
<b>Natural Hazards</b>	<ul style="list-style-type: none"> <li>• Six Flood Vulnerable Clusters (two in Brampton)</li> <li>• Medium/high erosion sensitivity</li> </ul>

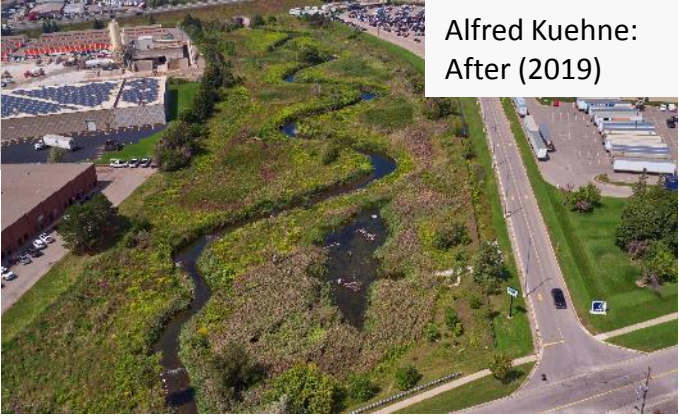


# Key Findings: Future Management Scenarios

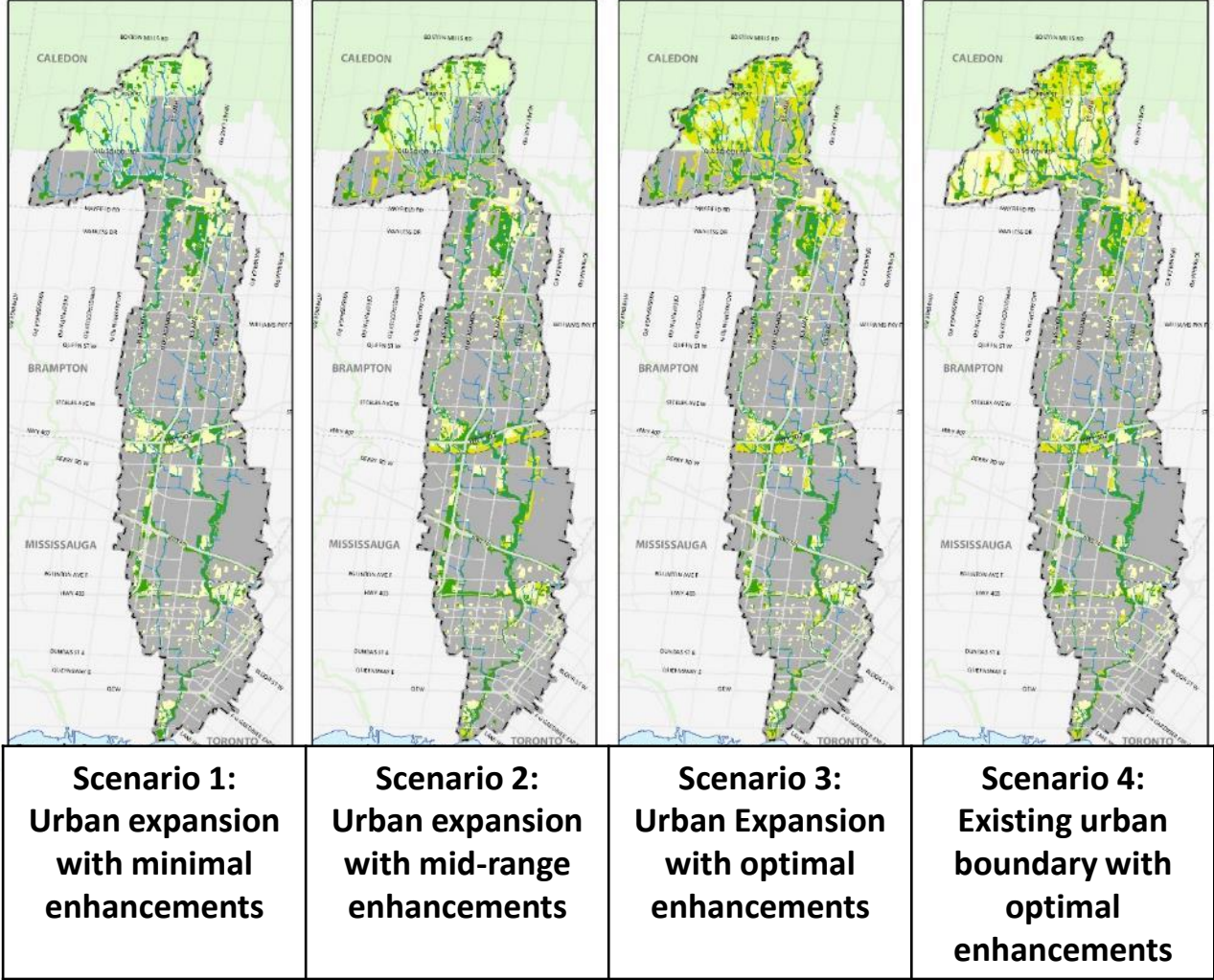
- Urbanization and climate changes negatively affected all four components of watershed health.
- However, the increasing levels of natural cover enhancements and stormwater management seem to help mitigate these impacts and increase climate resiliency.



Alfred Kuehne:  
Before (2010)



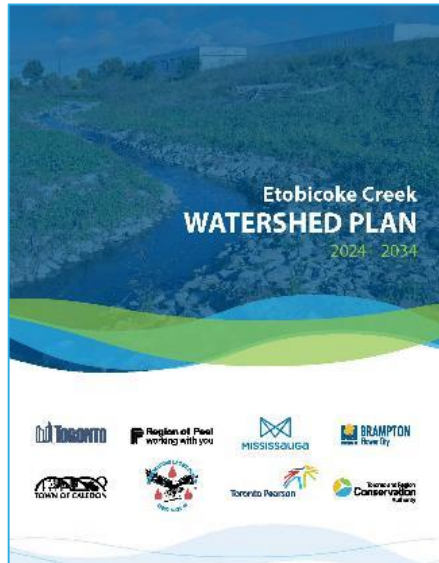
Alfred Kuehne:  
After (2019)



# ECWP Management Framework

## ECWP Alignment with City of Brampton's Policies, Plans, Strategies, and Programs

- Brampton Plan (City Council adopted November 2023)
- Lake Enhancement Strategy (adopted 2021)
- Our 2040 Energy Transition: Community Energy and Emissions Reduction Plan (adopted 2020)
- Brampton Eco Park Strategy (adopted 2019)
- Brampton One Million Trees Program (adopted 2019)
- Natural Heritage and Environmental Management Strategy (adopted 2015)
- Brampton Grow Green Environmental Master Plan (adopted 2014, refresh 2020)



## Management Framework Components

3 Goals

8 Objectives

10 Indicators

36 Management Actions

## Overview of Management Framework

### GOAL 1

#### Land Use

Achieve sustainable land use and infrastructure development patterns to improve watershed conditions and enhance climate resiliency.

#### OBJECTIVE 1

Minimize the impacts of human land uses through the adoption and implementation of sustainability policies, low impact development (LID), and green infrastructure.

#### Indicator:

Complete LID or green infrastructure projects in the recommended areas that would benefit most from LID or green infrastructure implementation ([Map 1](#)).

#### OBJECTIVE 2

Retrofit, upgrade, and install stormwater infrastructure using best available technologies to reduce the impacts of untreated runoff entering receiving waters.

#### Indicator:

Evaluate improvements to stormwater management across the watershed through municipal tracking and reporting on stormwater assets, drainage areas (i.e. sewersheds), and service levels.

#### OBJECTIVE 3

Reduce the risks associated with natural hazards through enhanced flood and erosion mitigation.

#### Indicators:

**Flooding:** implement risk reduction measures in 50% of Flood Vulnerable Clusters.

**Erosion:** continue monitoring and remediating infrastructure hazard sites for participating municipal partners, implementing the assessment and maintenance of erosion control asset systems.

#### OBJECTIVE 4

Encourage the use of agricultural best management practices to minimize agricultural runoff and improve rural land stewardship.

#### Indicator:

Track the number of landowners that implement best management practices.



### GOAL 2

#### Water Resource System

Protect, enhance, and restore the areas and features that comprise the Water Resource System (including aquatic habitat) for ecosystem resilience and sustainability.

#### OBJECTIVE 1

Implement appropriate policies and programs that identify, protect, enhance, and restore the areas and features that comprise the Water Resource System.

#### Indicator:

Complete restoration projects at 75% of identified priority aquatic sites ([Maps 3A and 3B](#)).

#### OBJECTIVE 2

Improve aquatic habitat connectivity and reduce the impacts of pollutants on aquatic health.

#### Indicator:

Maintain, or improve, aquatic health rankings.



### GOAL 3

#### Natural Heritage System and Urban Forest

Protect, enhance, and restore the Natural Heritage System and urban forest within the watershed to improve ecosystem resilience and sustainability.

#### OBJECTIVE 1

Improve the quality and quantity of the Natural Heritage System through ecosystem and biodiversity protection, enhancement, and restoration.

#### Indicators:

**Habitat Quantity:** increase total natural cover in the watershed.

**Habitat Quality:** maintain, or improve, terrestrial ecosystem quality rankings.

#### OBJECTIVE 2

Increase urban forest canopy cover throughout the watershed to improve social and environmental well-being.

#### Indicator:

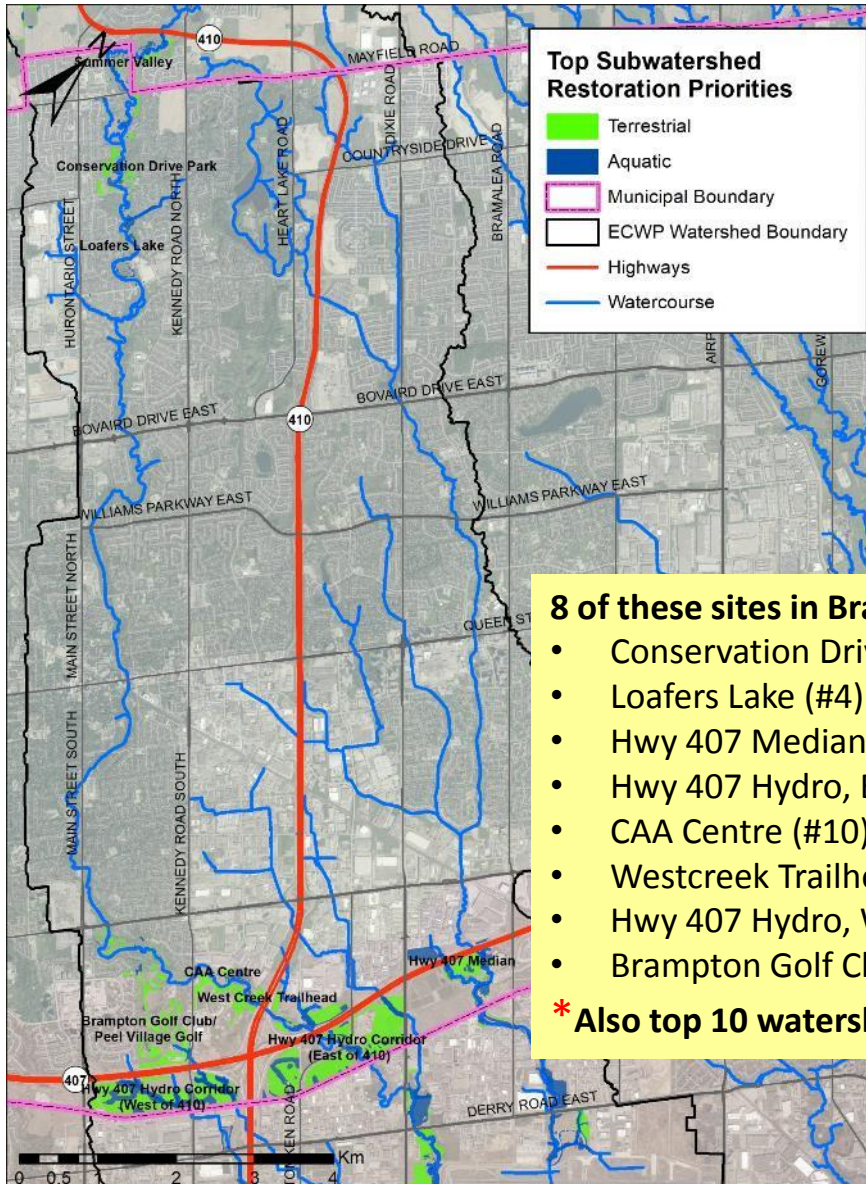
Increase canopy cover in the watershed to achieve a minimum target of 16%.



**Draft ECWP Engagement:** 60-day public review period (Aug. 1 to Sept. 29, 2023)



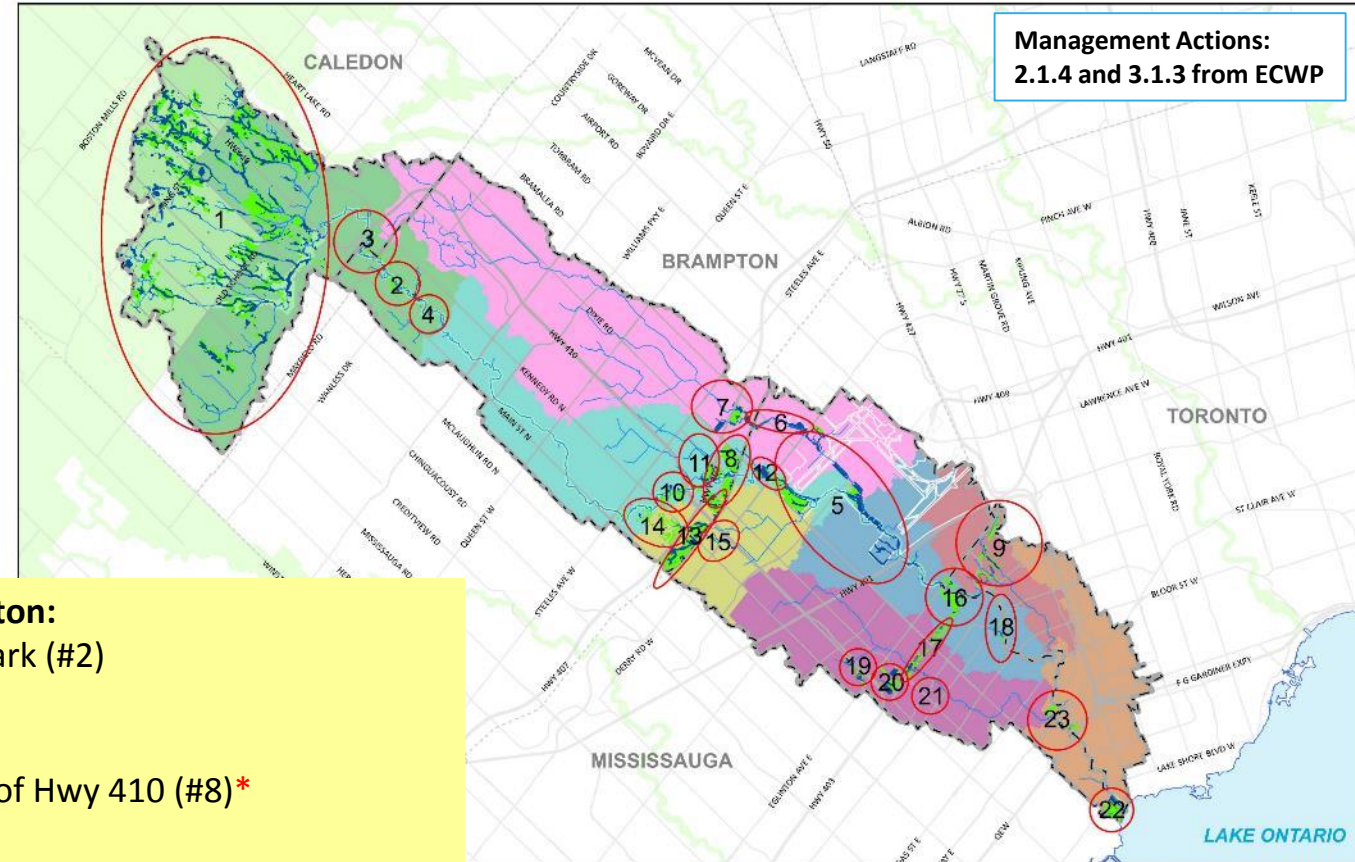
# ECWP Priority Areas – Priority Restoration Sites



## 8 of these sites in Brampton:

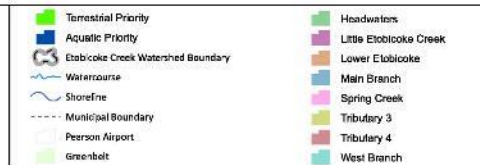
- Conservation Drive Park (#2)
- Loafers Lake (#4)
- Hwy 407 Median (#7)
- Hwy 407 Hydro, East of Hwy 410 (#8)\*
- CAA Centre (#10)\*
- Westcreek Trailhead (#11)
- Hwy 407 Hydro, West of Hwy 410 (#13)\*
- Brampton Golf Club/Peel Village Golf Club (#14)\*

\* Also top 10 watershed site



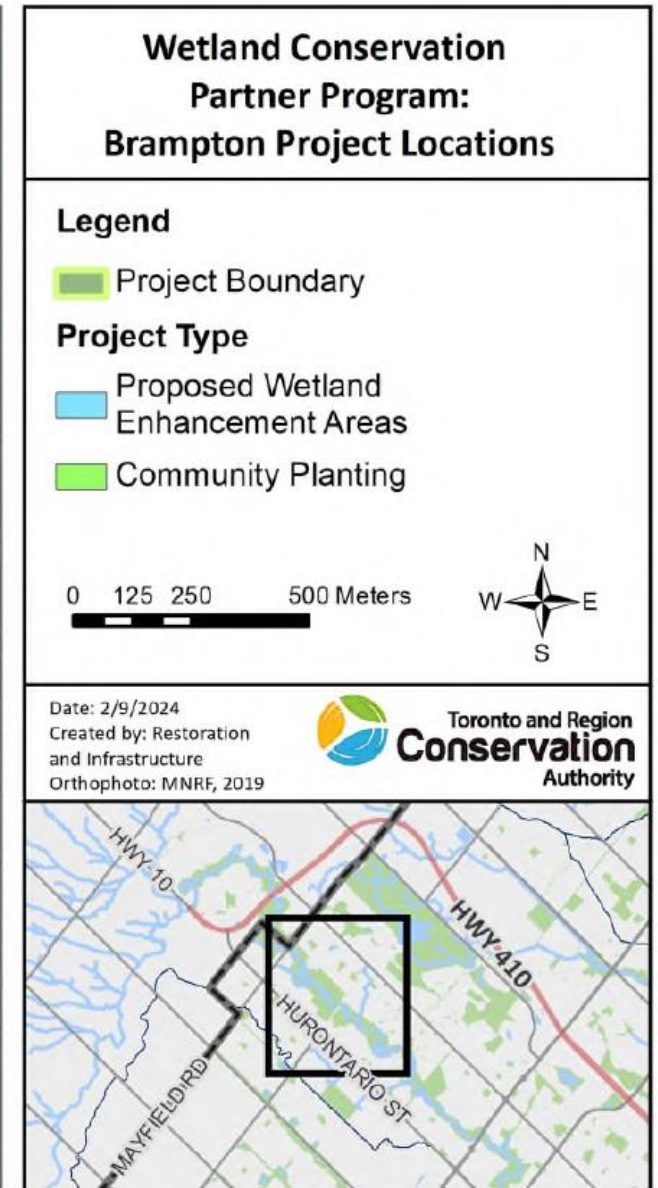
Management Actions:  
2.1.4 and 3.1.3 from ECWP

## Etobicoke Creek Watershed Plan: Top Subwatershed Priority Restoration Sites

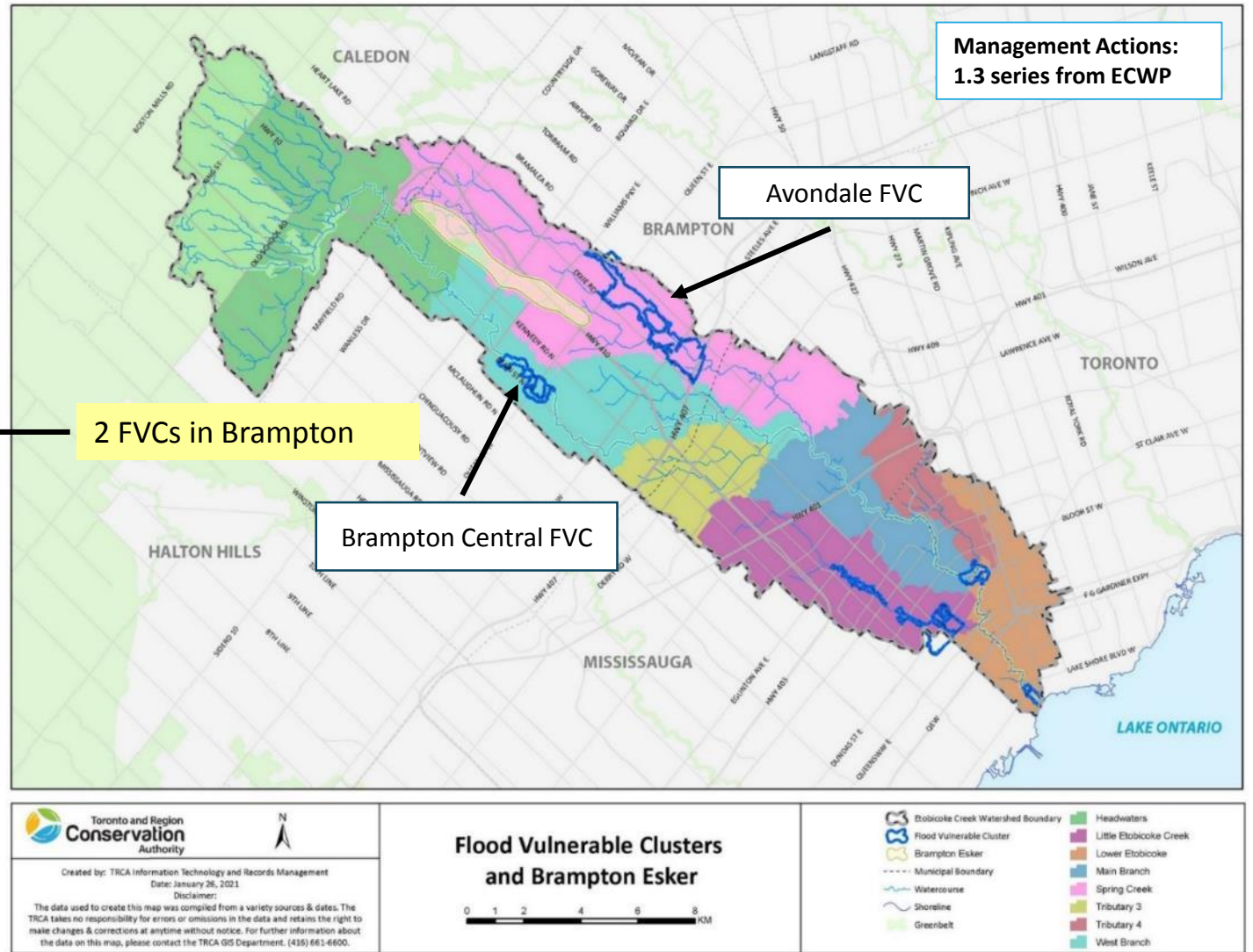
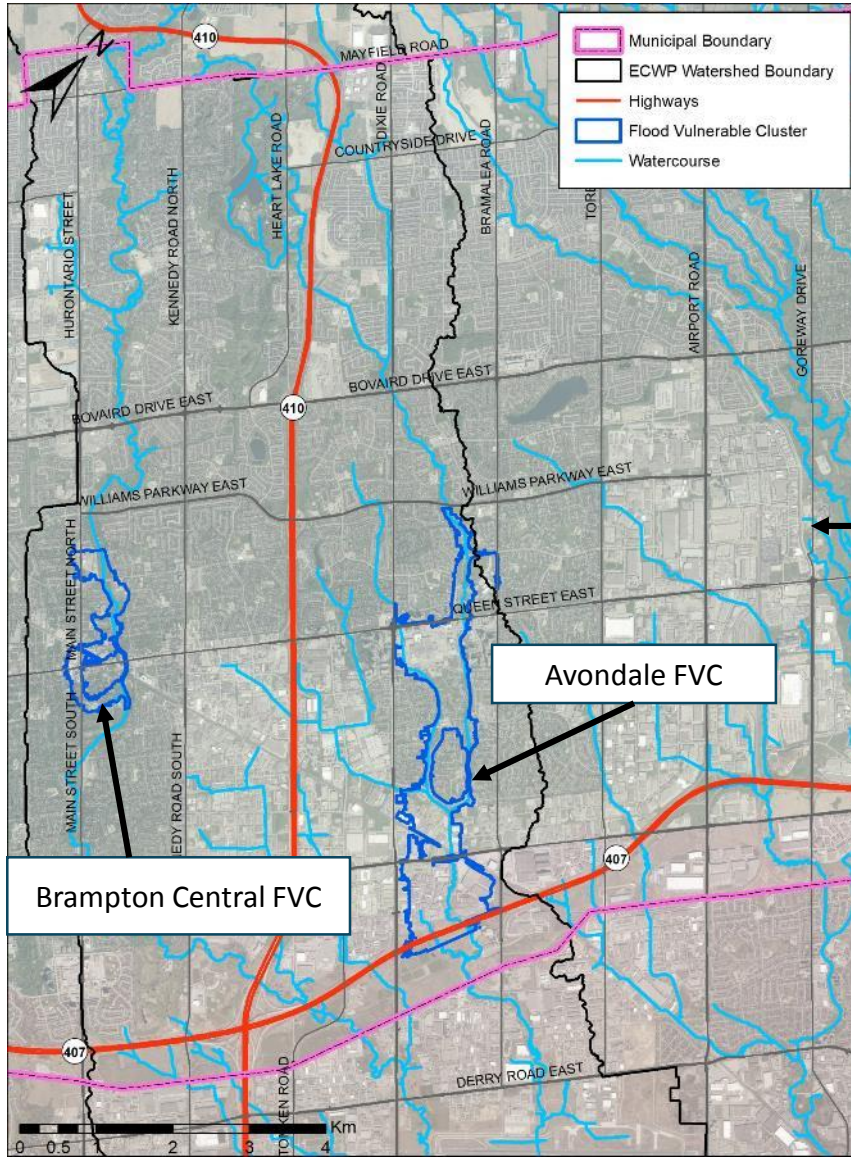


# ECWP Priority Areas – Loafers Lake and Conservation Dr.

- Funding is supported by the Government of Ontario's Wetland Conservation Partnership Program
- March 2024, the City of Brampton was awarded \$2.5 million for the Etobicoke Creek Wetlands Enhancement Project
- Enhancements as outlined in Brampton's Lake Enhancement Strategy, including improved shoreline and wetland habitat, viewing platforms, a bio-swale, and trail realignment
- Over 6,500 native trees, shrubs, and aquatic plants will be planted within the project area



# ECWP Priority Areas – Flood Vulnerable Areas



# ECWP Next Steps

- TRCA will be seeking approval/endorsement of ECWP from the Town of Caledon in Fall 2024; already received approval/endorsement from Peel, Toronto, and Mississauga earlier in 2024
- Recommending Council endorse the ECWP and support on-going implementation of the watershed plan
- Obtain final approval from TRCA's Board of Directors and release final ECWP – Fall 2024
- Establish ECWP Implementation Steering Committee and implementation tracking mechanisms/tools – Q4 2024 / Q1 2025
- ECWP Implementation – 2024-2034

## ECWP Links

- [Project webpage](#)
- [Updated ECWP](#)
- [Online interactive ECWP](#)
- [Engagement Summary 3](#)



Thank you!

[www.trca.ca](http://www.trca.ca)

