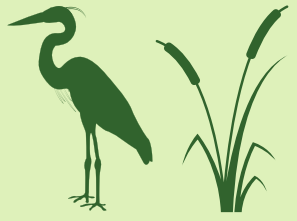


Learn about the Donnelly Ponds Restoration Project

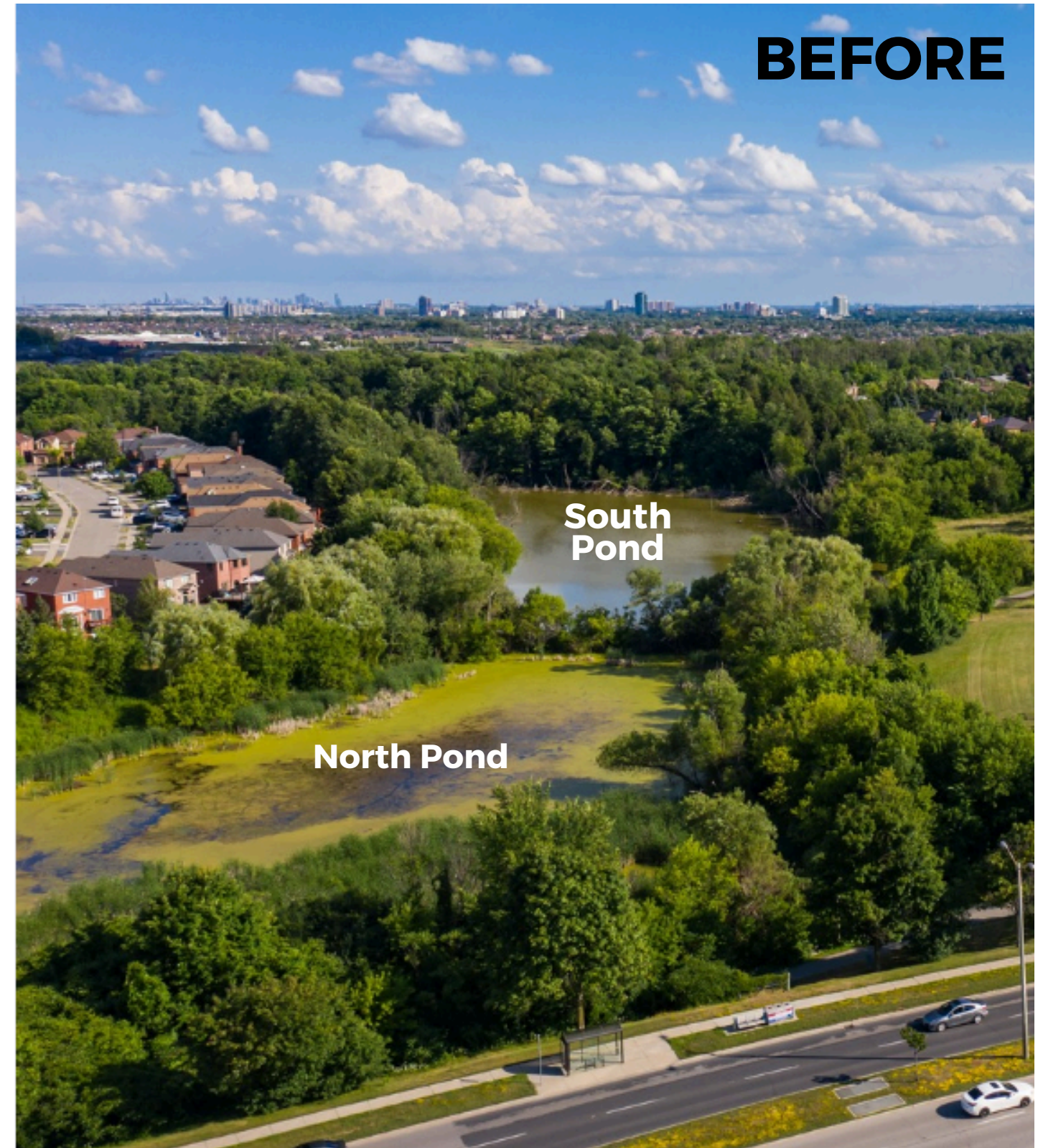


Overview

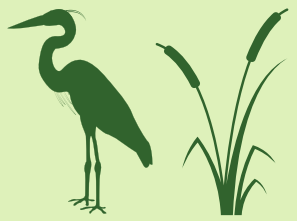
- The City of Brampton, in partnership with the Toronto and Region Conservation Authority (TRCA) and with funding from Environment Canada, **is restoring the Donnelly Ponds to improve wetland function, enhance wildlife habitat, and upgrade public access.**
- Protecting and restoring this wetland aligns with Brampton's Natural Heritage and Environmental Management Strategy (NHEMS) by supporting flood control, water filtration, and wildlife habitat.

Donnelly Ponds Site Conditions

- **Poor Water Quality** - While the ponds help regulate metals, bacteria, and algae, they suffer from elevated nutrient levels, low oxygen, and reduced water clarity. Sediment buildup has been confirmed in the north pond.
- **Frequent Flooding** - The trail between the ponds frequently floods due to a clogged culvert.
- **Invasive Species** - Invasive Buckthorn dominates the area, outcompeting native species.
- **Species at Risk** - Wildlife and species at risk, such as Snapping Turtles, rely on the ponds for habitat and food.
- **Poor Shoreline Quality** - The shorelines lack a healthy littoral wetland zone. A littoral zone is the shallow area along a pond or lake shoreline where aquatic plants grow, providing habitat, erosion control, and water filtration.



Learn about the Donnelly Ponds Restoration Project



Project Objectives

- Enhance wetland and shoreline functions
- Improve wildlife habitat and connectivity
- Increase public awareness and community involvement
- Strengthen climate resilience and ecosystem health

Project Activities

Restoring Wetland Health and Water Quality

- Remove excess sediment to restore natural water flow and improve aquatic habitats.
- Reshape wetland contours to create diverse water depths, reducing erosion and filtering nutrients.

Enhancing Wildlife Habitat:

- Install shoreline habitat features and create two turtle nesting beaches.
- Plant native wetland vegetation, trees, and shrubs to support biodiversity.
- Install wildlife exclusionary fencing to protect sensitive areas.

Improving Public Access and Park Features:

- Construct two new viewing nodes for wetland observation.
- Relocate a park bench and garbage receptacle for better accessibility.
- Resurface trails and parking lots to enhance visitor experience.

Stormwater Management and Infrastructure Repairs:

- Repair the berm and replace a blocked culvert and trail between the ponds.
- Install erosion control measures and construction fencing.
- Remove sediment buildup to improve water quality and conduct community outreach to prevent future sediment and polluted discharges.



Wetlands: The Earth's Kidneys

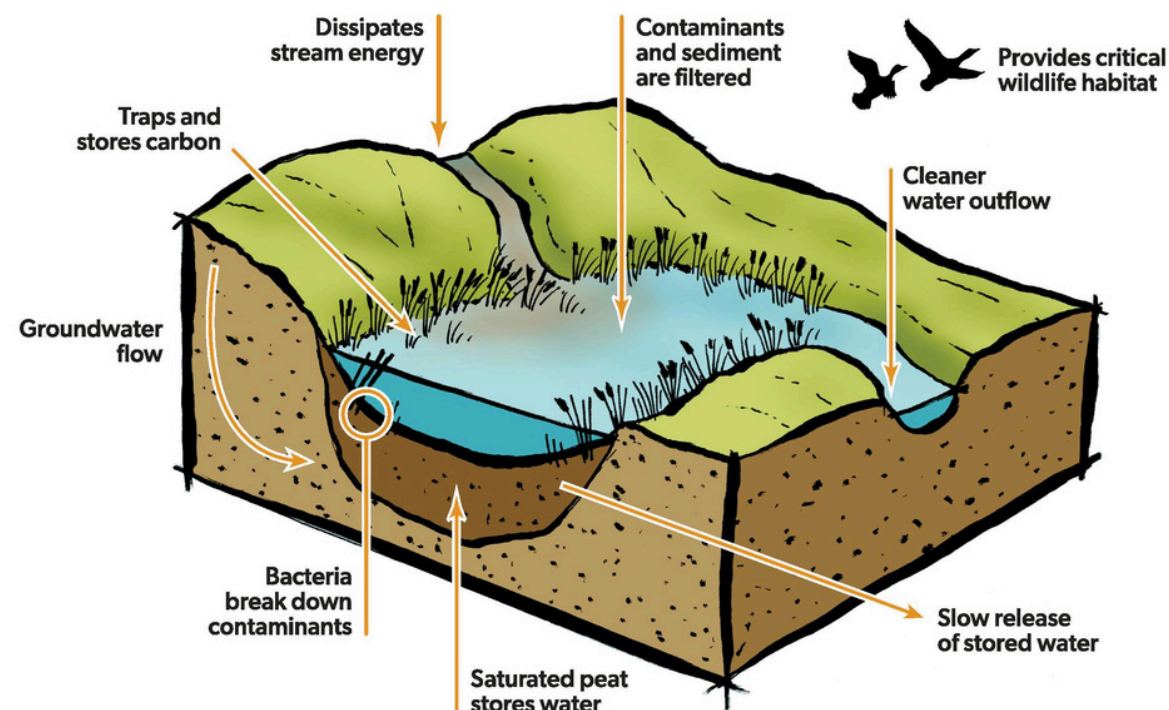


What is a Wetland and how do they work?

Wetlands are areas that are seasonally or permanently covered by shallow water or have a water table close to the surface. A wetland can be a marsh, swamp, fen, or bog. By retaining water and releasing it slowly, wetlands help reduce flooding and facilitate groundwater recharge. The vegetation in this area is predominantly comprised of water-tolerant plants, indicating their adaptation to the abundant water conditions.

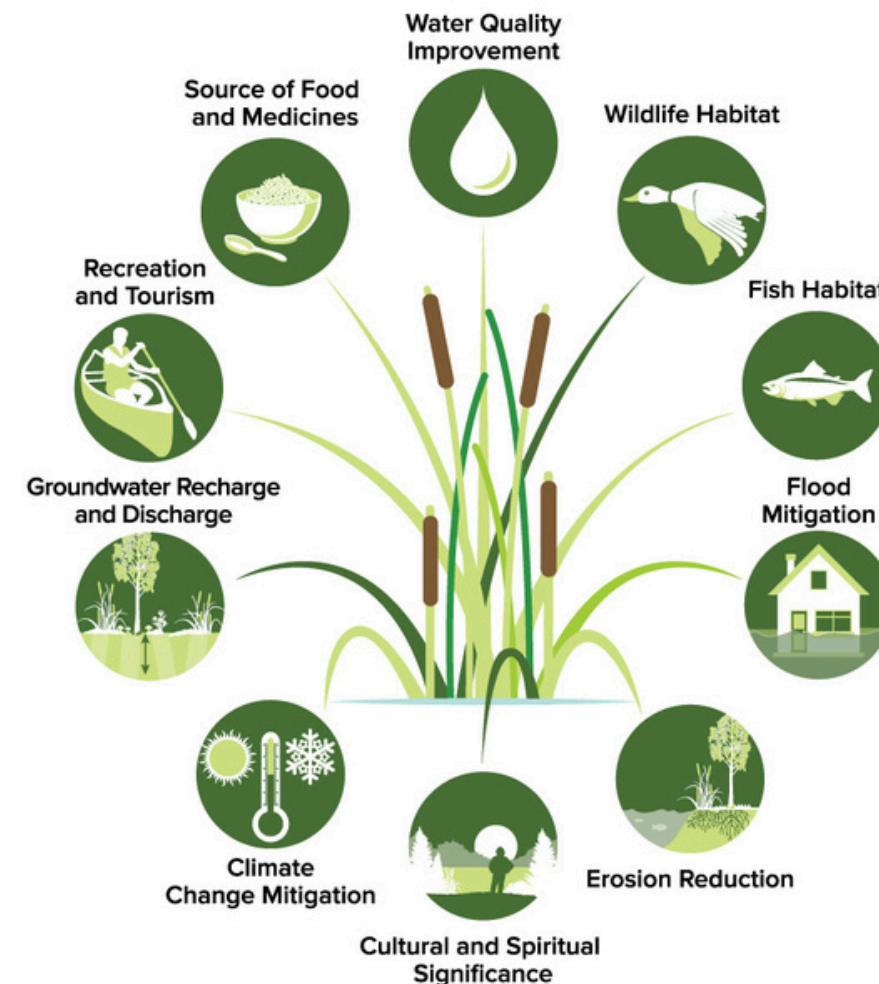
Wetlands serve as temporary storage and filtration systems for runoff water, ensuring it undergoes purification before flowing into watercourses. This process contributes to the creation of healthier and cleaner sources for our drinking water.

Wetland Functions



Source: Ducks Unlimited Canada. *How Wetlands Work* [Graphic], www.ducks.ca.

Wetland Benefits



Source: Ontario Ministry of Natural Resources and Forestry. 2017. A Wetland Conservation Strategy for Ontario 2017-2030. *Wetland Benefits* [Graphic].

Why are Wetlands so important?

Wetlands provide increased biodiversity and wildlife habitat. They also provide improved habitat connectivity, water quality, hydrologic function, base flow for watercourses, and recreational opportunities. Wetlands are home to many native plant and animal species like Cattail, Cardinal Flower, Snapping Turtles, and Leopard Frogs.

Donnelly Ponds Overview



History of the Donnelly Ponds

- The Donnelly Ponds sit within the Brampton Esker, a glacial landform shaped by meltwater from the Laurentide Ice Sheet. The esker's sand and gravel formed the area's rolling hills, kettle lakes, and wetlands. The Brampton Esker has been a significant landscape feature to Indigenous Peoples since time immemorial.
- These human-made ponds drain into tributaries of Etobicoke Creek, supporting water filtration, flood control, and wildlife habitat.

Water Quality & Characteristics

- Less than 2 meters deep, these former aggregate pits were purchased by the City and re-naturalized.
- The ponds are “perched” on an impermeable soil layer, meaning water levels rely on **storm runoff** and **snowmelt**.
- 2006 water quality testing reported that the ponds had moderate levels of metals, bacteria, and algae, but poor nutrient levels, water clarity, and oxygen content.

Wildlife & Vegetation

- The Donnelly Ponds are part of the Heart Lake Provincially Significant Wetland Complex
- Fish Species:
 - Includes fathead minnows, brown bullhead catfish, and domestic goldfish (invasive)
- Vegetation:
 - North Pond: Dominated by Common Duckweed, Water-meal (a rare species), and Sago Pondweed. Cattail marsh and shrub thickets surround the shoreline.
 - South Pond: Features less aquatic vegetation but is bordered by cattail marsh, forest, and old field meadow.



Community Photos: Wildlife of the Donnelly Ponds



Painted Turtle



Black crowned Night Heron



Great Blue Heron



American Red Squirrel



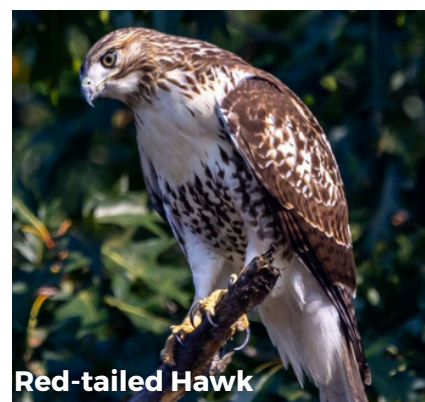
Tree Swallow



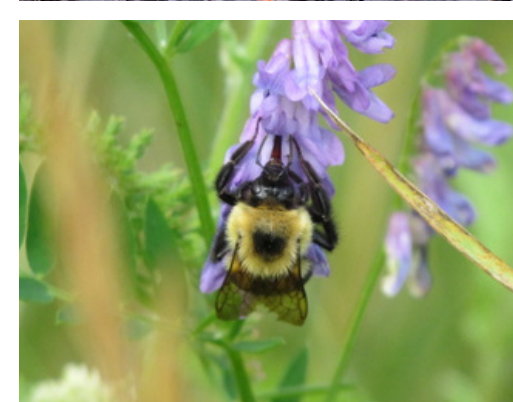
Trumpeter Swans



Raccoon



Red-tailed Hawk



Yellow-rumped Warbler

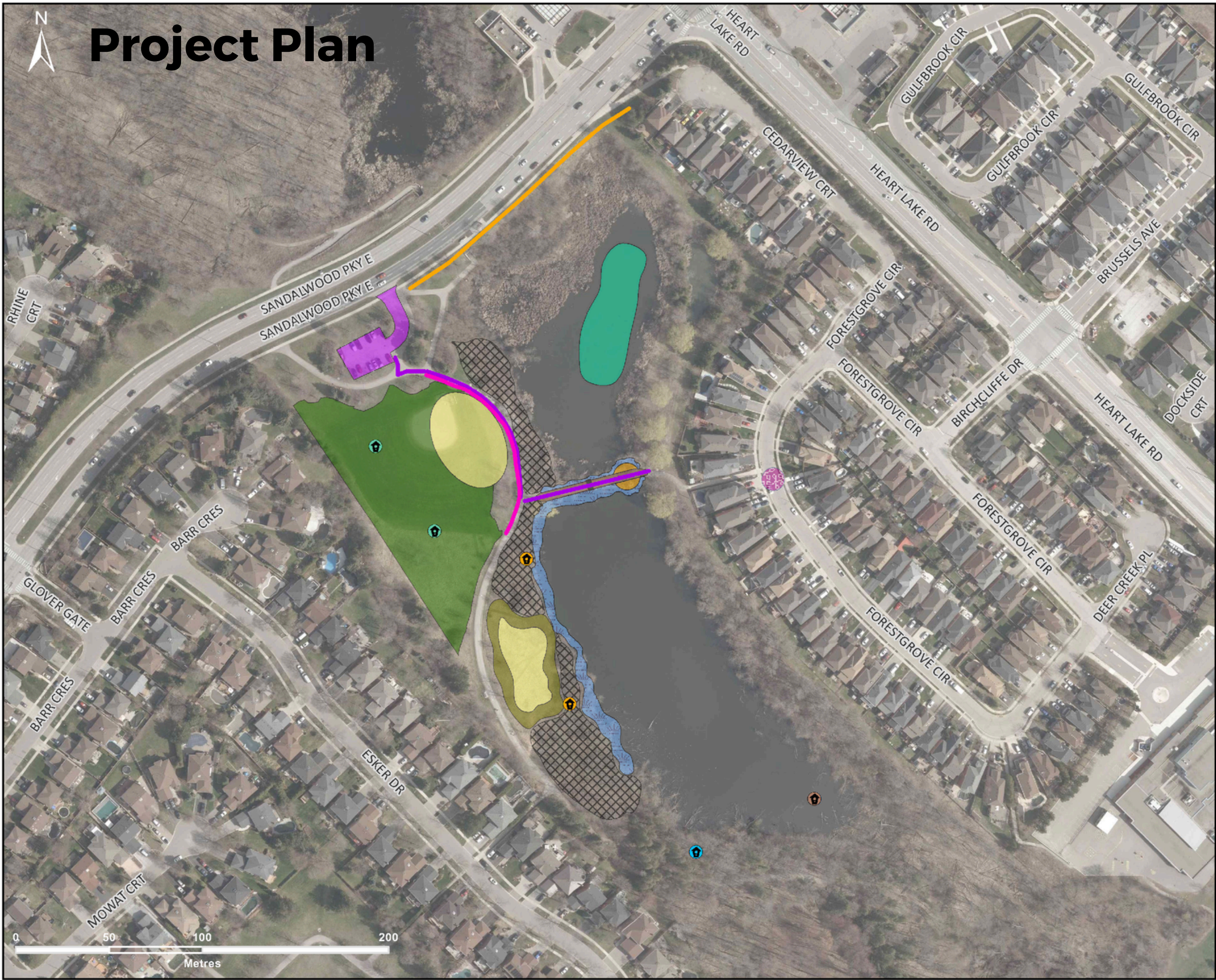


Beaver



Snapping Turtle

Thank you to the residents of Brampton that have shared these photos: Bob Noble, Shilpa Choksi, Aidan Germain



Project Plan

Donnelly Ponds Restoration 2025

Sandalwood Pkwy E & Heart Lake Rd
Brampton

Legend

- Wood Duck Nest Box
- Bat Rocket Box
- Songbird Nest Box
- Eastern Screech Owl Nest Box
- Turtle Exclusion Fencing (150 m)
- Post & Paddle Fence (112 m)
- Trail Resurfacing (185 m)
- Turtle Nesting Habitat (0.2ha)
- Shoreline Restoration (250m)
- Shrub Nodes (0.1ha)
- Terrestrial Restoration (0.7ha)
- Viewing Node, Interpretive Signage and Seating
- Catch Basin Art Painting
- Woody Invasive Management & Planting (0.5ha)
- Berm Repair (50m)
- New Culvert (Approx 6m)
- Parking Lot Resurfacing (761 m2)
- Extent of Dredging

Date: 2025-02-25
Created by: Restoration and Infrastructure
Orthophoto: TRCA 2022



CONCEPT EXAMPLES



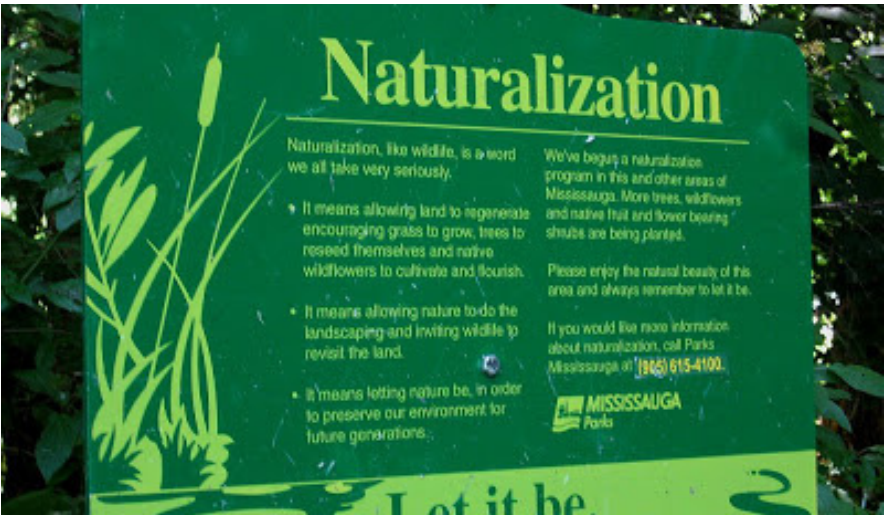
Interpretive Signage



Habitat Box



Post & Paddle Fencing



Shoreline restoration



Lookout Area



Wildlife Habitat Signage



Turtle Habitat



Turtle Nesting Beach



Wildlife Fencing

WETLAND RESTORATION & STORMWATER MANAGEMENT



Historically, southern Ontario boasted abundant wetlands, but **urbanization** and **agriculture** have significantly depleted them. The remaining urban wetlands need periodic maintenance to keep them healthy. Wetland restoration, including stormwater management upgrades, is crucial for watershed health and community well-being. At Donnelly, restoration efforts include restoring the North Pond to support wetland function and improve water quality.

- **Why do the ponds need restoration?** Over time, stormwater has carried sediment into the North Pond, reducing its depth and affecting aquatic habitat. Removing this sediment buildup will help restore natural water flow, enhance habitat for wildlife, and improve water quality within the ponds and downstream.
- **How will they remove sediment?** Via dredging, which is the removal of sediments and debris from the bottom of lakes, rivers, harbors, and other water bodies. At Donnelly North Pond, the water level will be lowered and sediment will be removed using mechanical methods.
- **What will Dredging achieve?**
 - Dredging restores the original depth, enabling a healthier ecosystem.
 - This increase in depth supports a wider range of aquatic organisms, from fish to invertebrates, and encourages biodiversity.

*Dredging, followed by treatment and disposal of the removed material, has become one of the most widely implemented methods for sediment remediation in North America.



WHAT YOU SHOULD KNOW

Construction Impacts and Timeline



Construction Activities & Park Closure

- Work Hours: 7 AM – 5 PM
- Mobilization: Site setup, fencing, staging area, equipment arrival
- Demobilization: All equipment removed
- Park Access at Donnelly East Park & White Spruce Valley: Closed April 1 – September 2025
- Detour: Maps will be available at park access points & online at brampton.ca/donnellyponds

Trees Removals & Protection

- Invasive species (Buckthorn) will be removed along the shoreline
- All trees that can be protected around the Donnelly Ponds will be preserved. Trees deemed in poor health or unavoidable will be removed to accommodate shoreline restoration.
- Most removed trees will be repurposed for habitat features.

Wildlife

- **Turtles:** TRCA, City Staff and the Heart Lake Turtle Troopers are on call to protect the turtle population during construction
- **Bats & Birds:** Trees will be removed during permitted periods
- **Fish:** Fish Rescue will take place where required by the TRCA

Project Timeline 2025



Spring

- Detailed Design, permitting and approvals
- Tree Removals
- Park Closure/Construction Staging



Summer

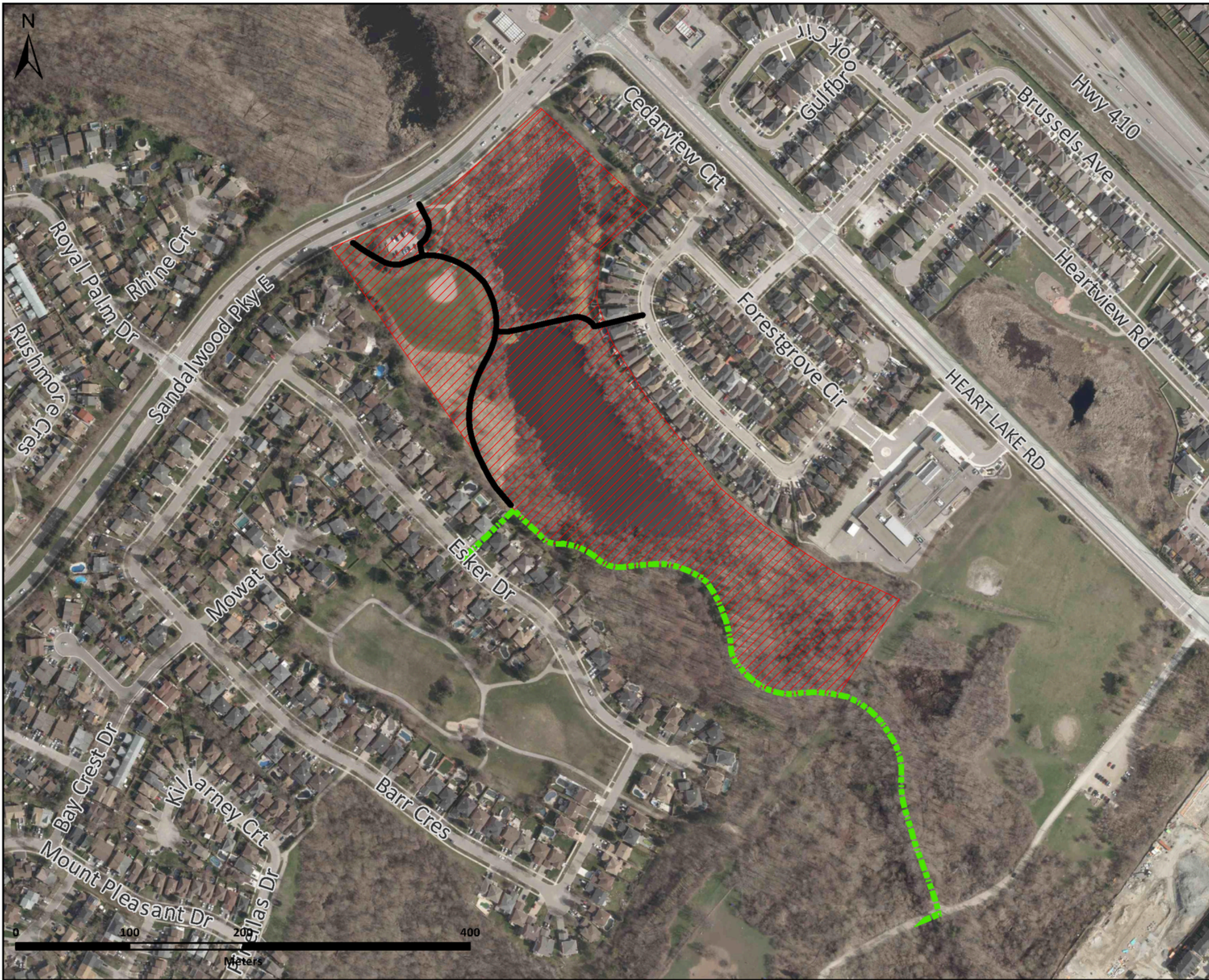
- Construction
- Planting



Fall

- Planting
- Community Tour & Ponds Re-open
- Project Complete

Timeline dates are tentative and are subject to change



Donnelly Ponds Restoration Project

Closures and Detours
April 1, 2025 - Fall 2025

Legend

- Open Trails
- Closed Trails
- Closure Area

Date: 2025-02-11
Created by: Restoration and Infrastructure
Orthophoto: MNRF, 2022



Post a sticky note with any comments, questions, or ideas.

Tell us your
thoughts!

WE NEED YOUR INPUT!

**What do you think
of the project
concept design
plan?**



**What information
would you like to
see on interpretive
signage?**

WHAT ELSE SHOULD WE KNOW?

Post a sticky note with any comments, questions, or ideas that you might have.

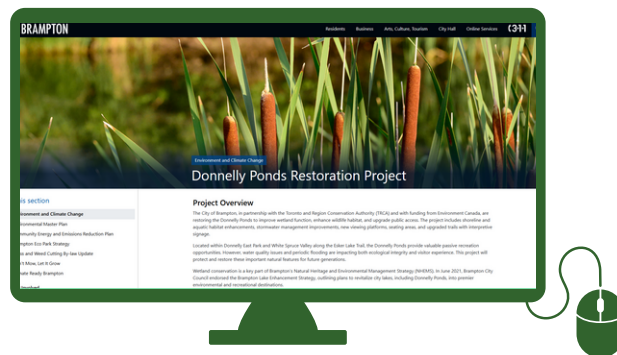


PARTICIPATION OPPORTUNITIES



Project Updates and Wetland Info

Head to [Brampton.ca/donnellyponds](https://brampton.ca/donnellyponds) or scan the QR code below to learn more about the project and wetlands.



Wetland Book Collection

Stop by Cyril Clark Library, next to the Paul Palleschi Recreation Centre, to find a book collection on wetlands!

Wetland Walking Tour

We will be hosting 1 community walking tour this Fall to showcase the finished project. Join the Grow Green Network to stay informed for event details.

Heart Lake Turtle Troopers

Join the Heart Lake Turtle Troopers to support the protection and monitoring of the Brampton's local turtle population through a citizen science volunteer program.

Have a question? Let's Connect!

Karley Cianchino

Supervisor, Wetlands & Environmental Projects
Environment & Development Engineering
Email: Karley.Cianchino@brampton.ca

Follow @BramGrowGreen on social media for project updates

