SOURCE TO STREAM 2025 Conference

Canada's Premier Stormwater and Erosion and Sediment Control Conference

Thank you to our sponsors!

EXECUTIVE SPONSORS

ADS – Our reason is water.
Aquafor Beech Limited
citygreen – Urban Landscape Solutions
CUPOLEX® – Engineering Solutions Inc.
ENVIROPOD™
NEXT STORM
Oldcastle Infrastructure – A CRH Company
PERMACON
Sustainable Technologies Evaluation Program
StormTrap – Modular Concrete Stormwater Management
terrafix geosynthetics inc.

MEDIA SPONSOR

Environmental & Science Engineering Magazine

HOSTS

Presented by:

Toronto and Region Conservation Authority

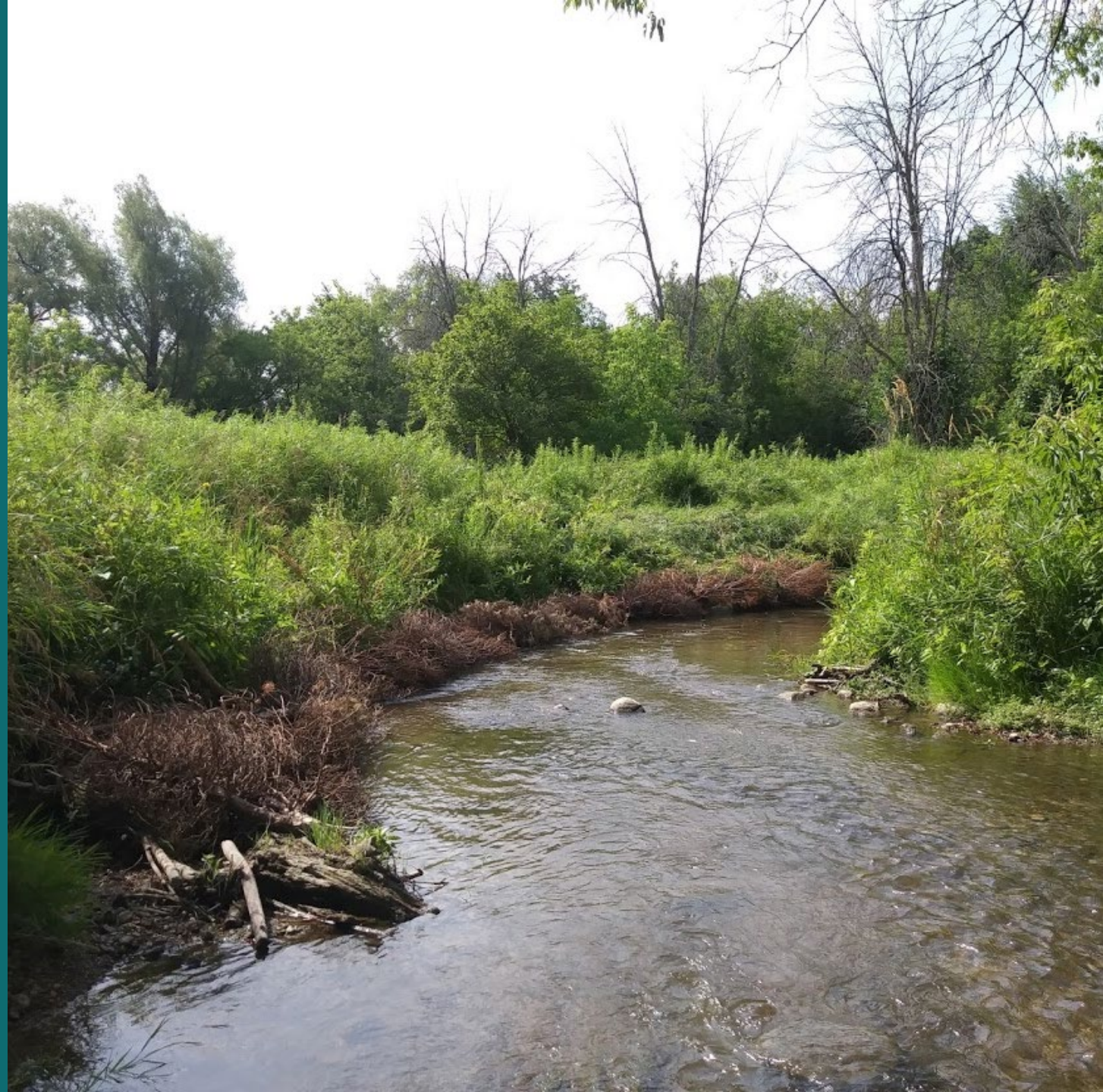
In association with:

Lake Simcoe Region conservation authority
Credit Valley Conservation – inspired by nature

Ontario Streams

30 Years of Stream Rehabilitation

Doug Forder
General Manager & Restoration Ecologist
Ontario Streams
March 26, 2025



Ontario Streams

Our mission is to promote the protection and rehabilitation of Ontario's streams, rivers, and wetlands through education and community action

WHY WE RESTORE HABITATS

Redside Dace

Clinostomus elongatus

Atlantic Salmon

Salmo salar

Brook Trout

Salvelinus fontinalis

Jefferson Salamander

Ambystoma jeffersonianum

30 YEARS OF REHABILITATION

These successes were made possible by our generous funders, like-minded partners, dedicated volunteers, and wonderful field staff.

3,975

Garbage Bags Full of Litter Removed from 462 Ha of Riparian Habitat

186,299

Native Trees and Shrubs Planted over 64.5 Ha

1,985

Habitat Enhancement Structures Built

18,881

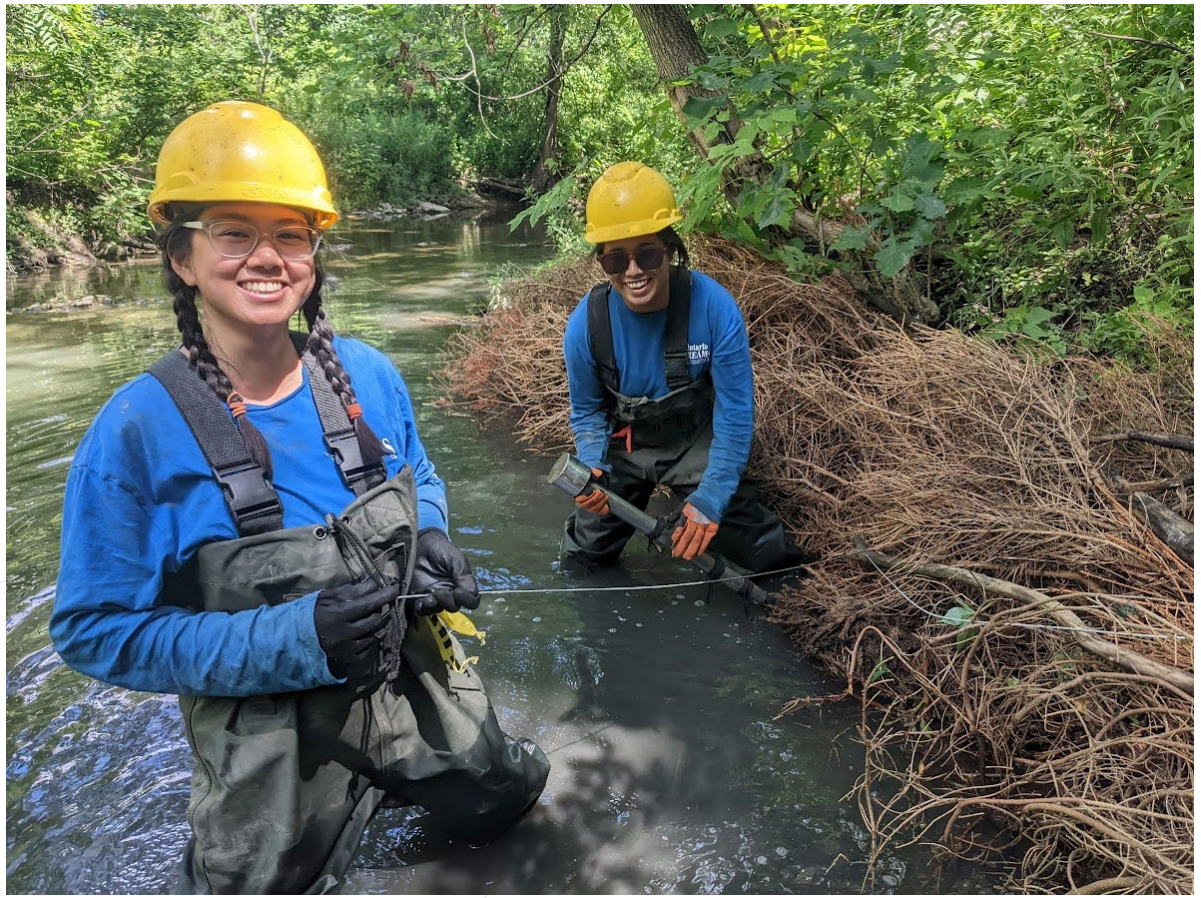
Community Members Engaged in Stewardship and Outreach

54,387

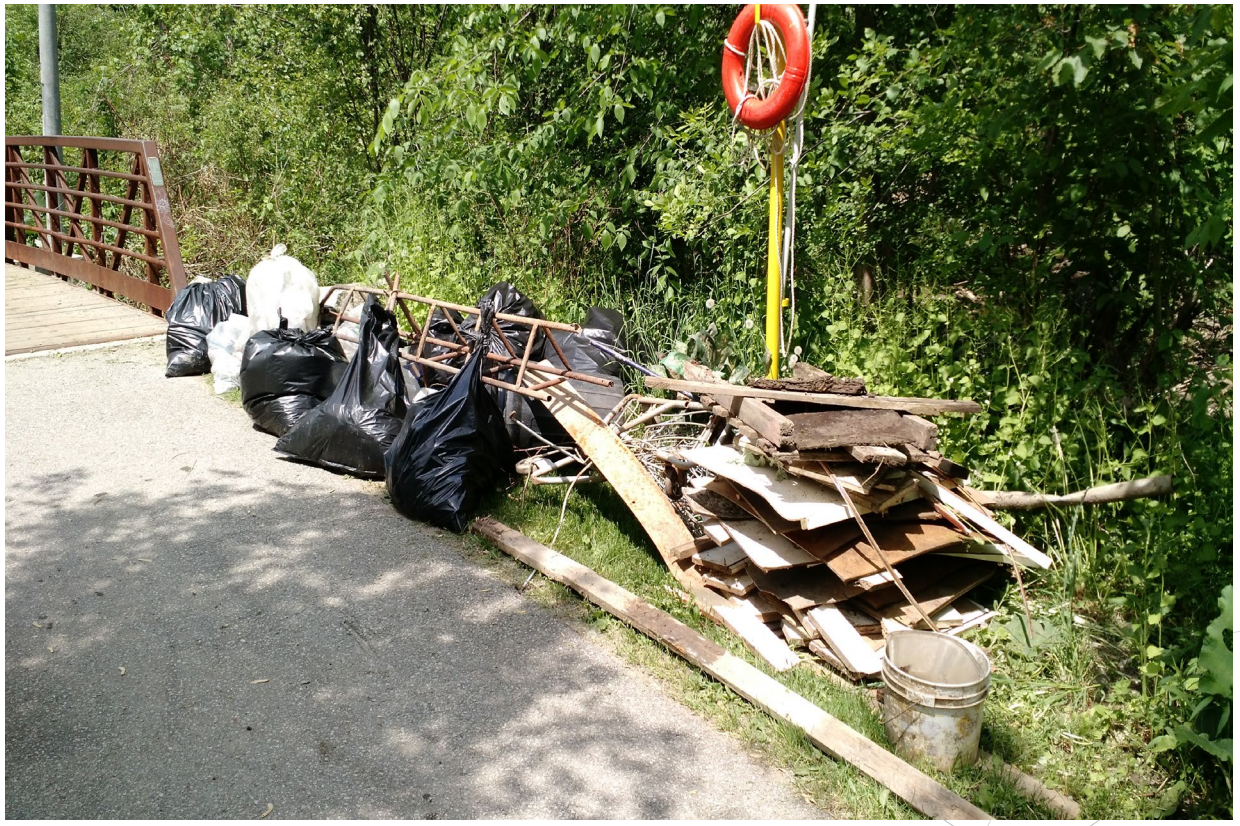
m^2 of Habitat Enhanced from Invasive Species Removal

Aquatic Habitat Rehabilitation

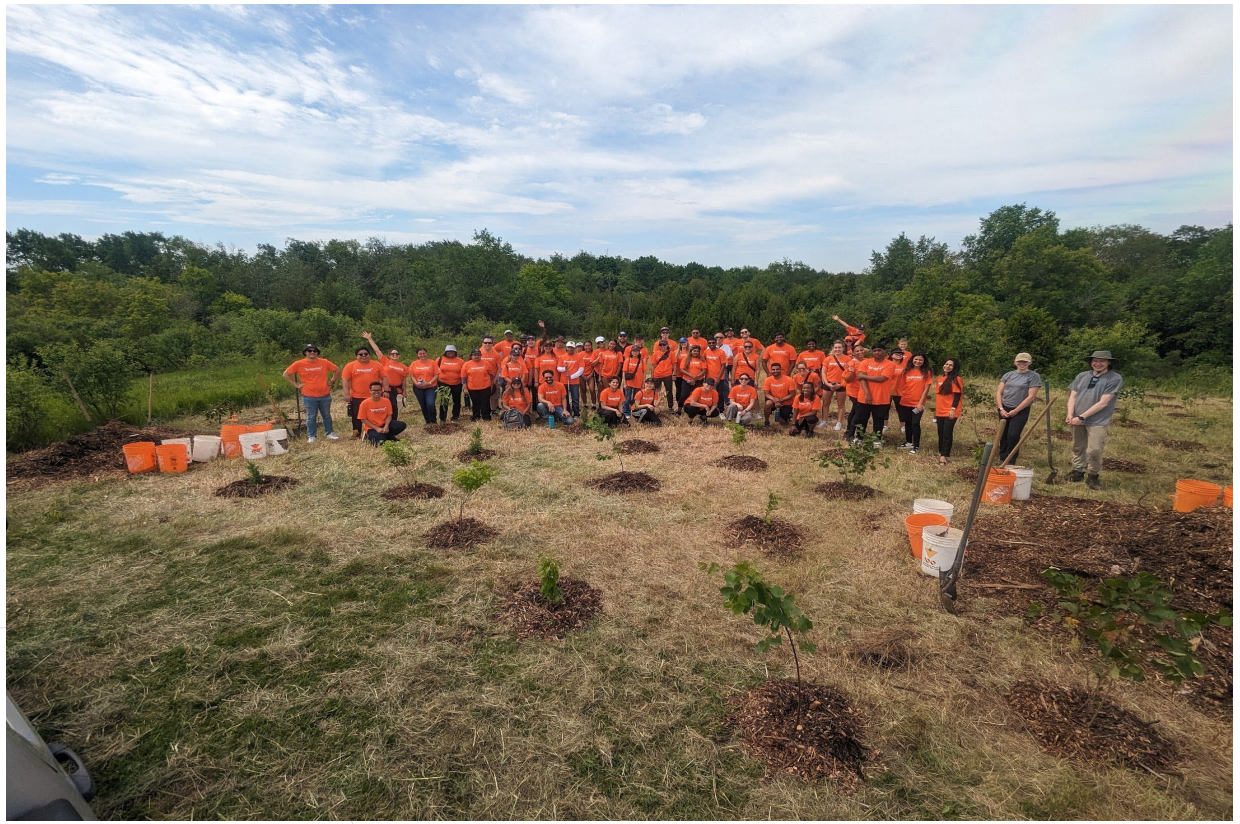
- Wetland creation and restoration
- In-stream habitat enhancement
- Removing detrimental blockages
- Improving fish passage
- Managing invasive species
- Planting native trees and shrubs
- Cleaning up litter
- Livestock exclusion
- Research and monitoring



COMMUNITY INVOLVEMENT



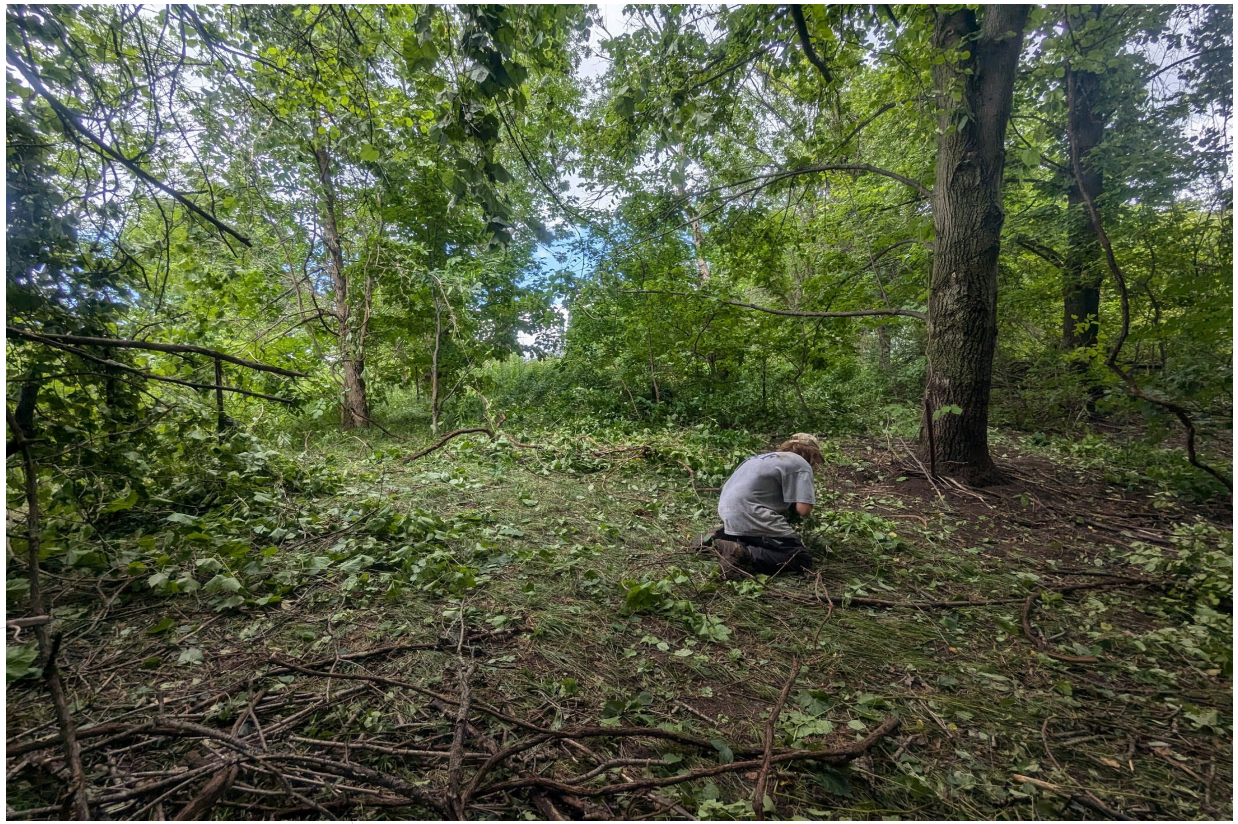
Litter Collection



Tree Planting

INVASIVE SPECIES MANAGEMENT

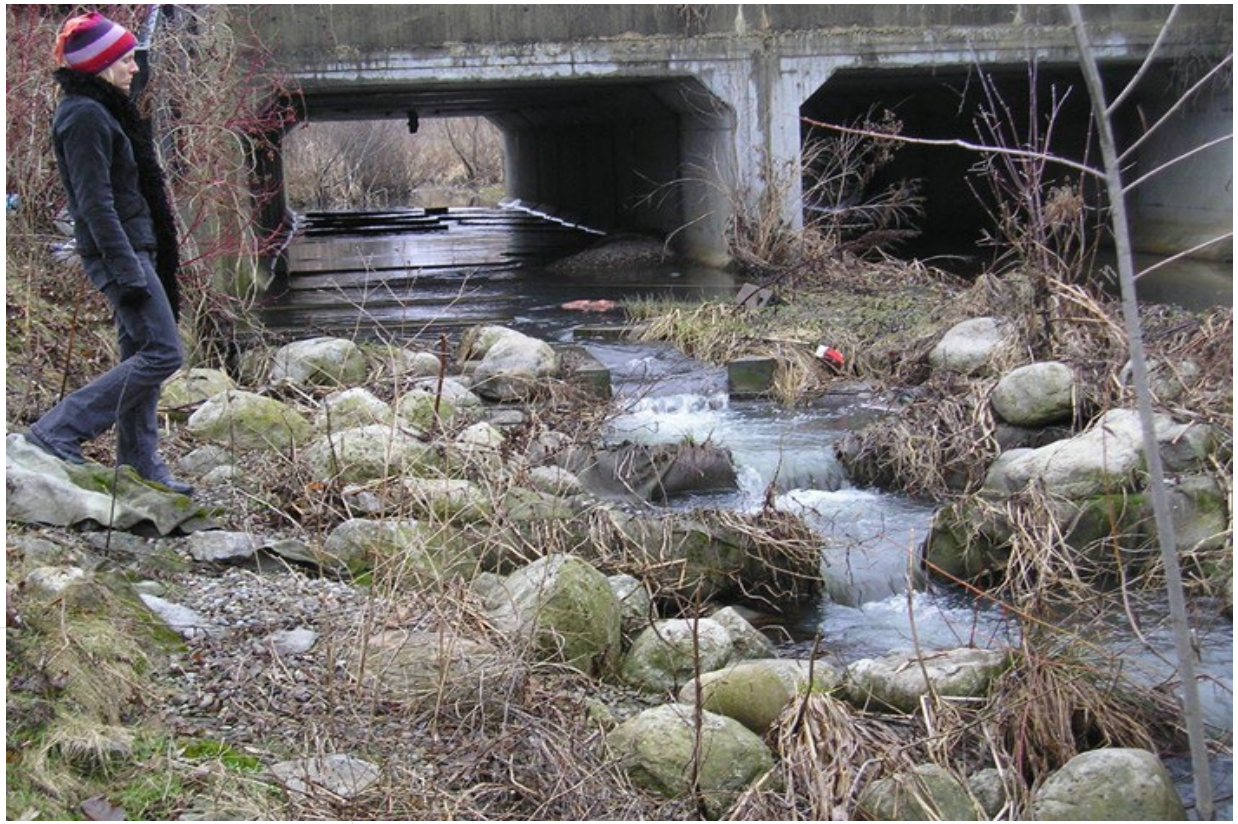
Purple Loosestrife



European Buckthorn

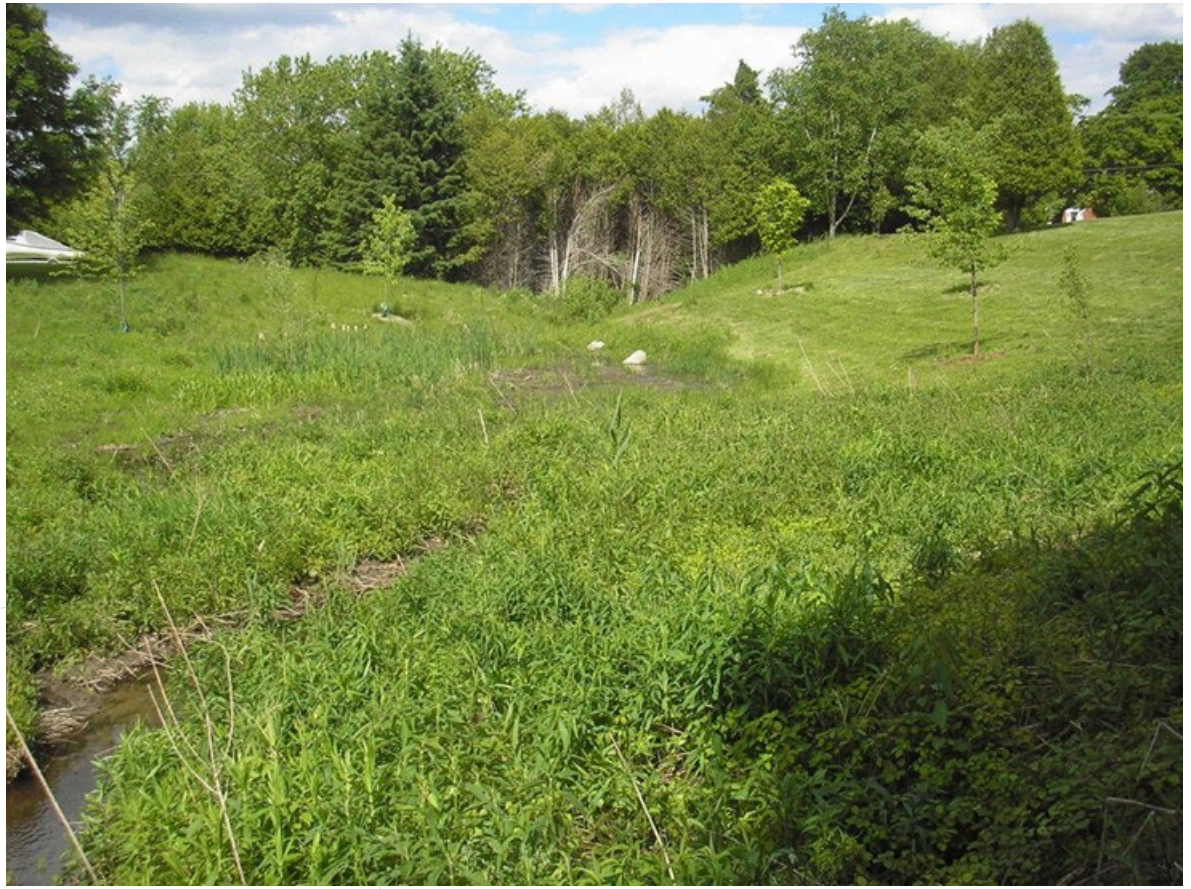
BARRIER MITIGATION

Dual Barrier



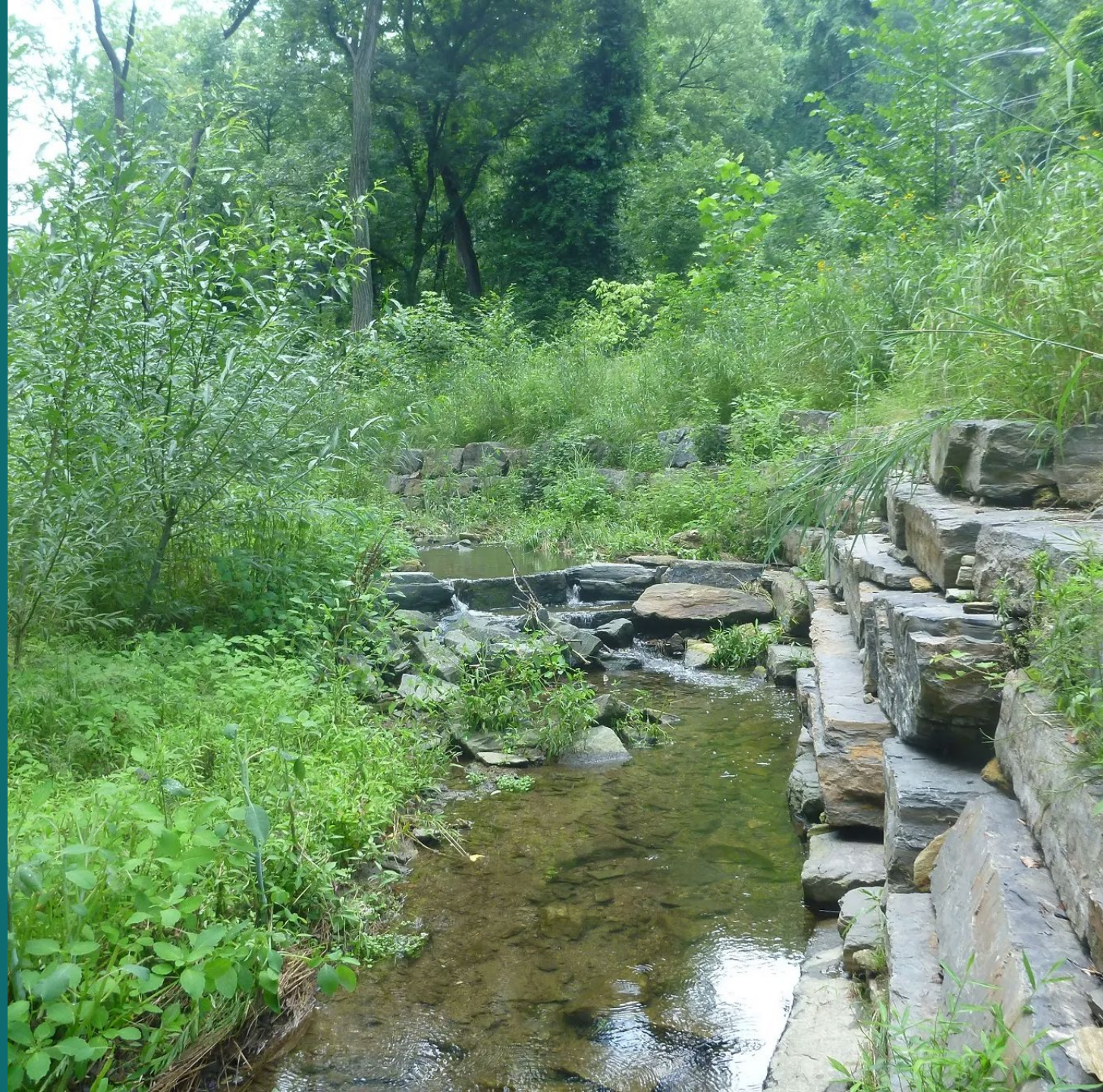
Baffles

ONLINE POND DECOMMISSIONING



Ontario Streams

Moving Away From Hardened Stream Bank Stabilization Techniques



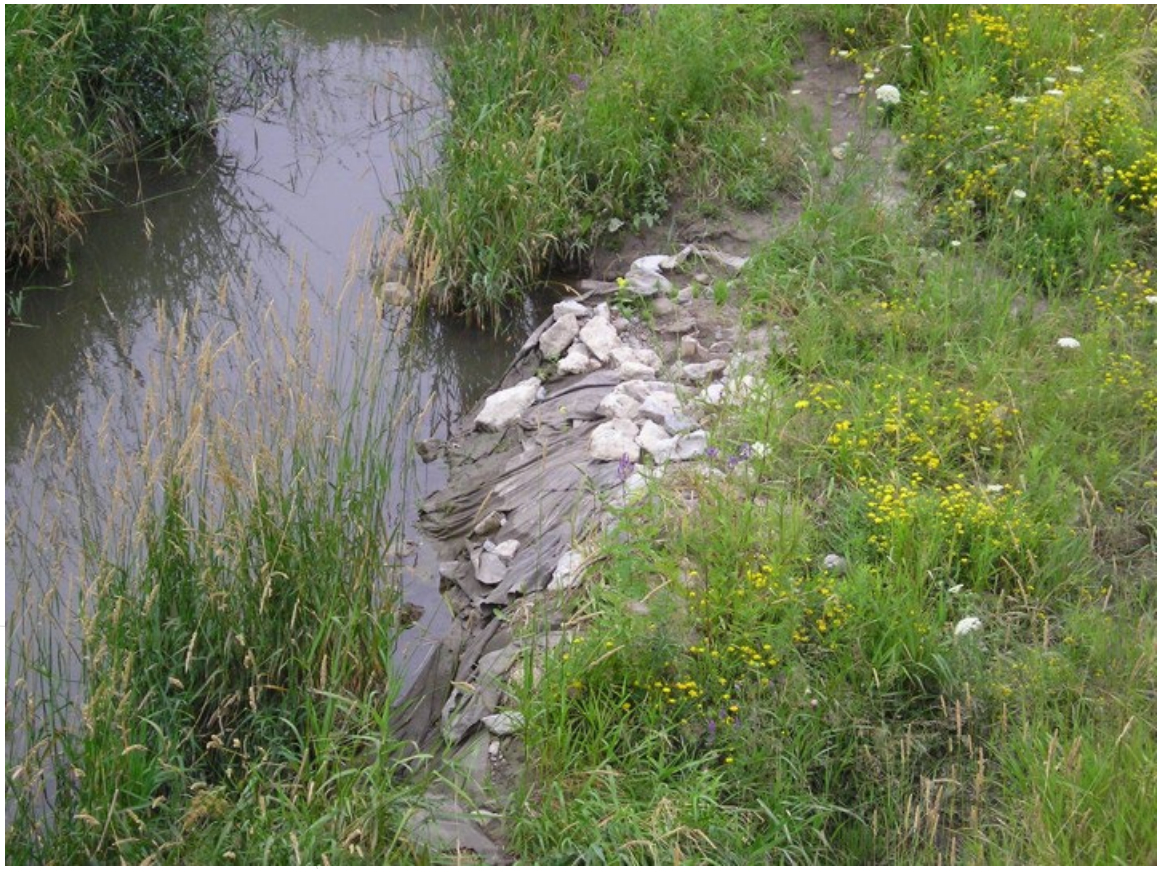
HARD ARMOURING OF ERODING BANKS… BETTER SOLUTIONS?

Wooden Walls

Gabion Baskets

HARD ARMOURING OF ERODING BANKS

Crib Walls



????

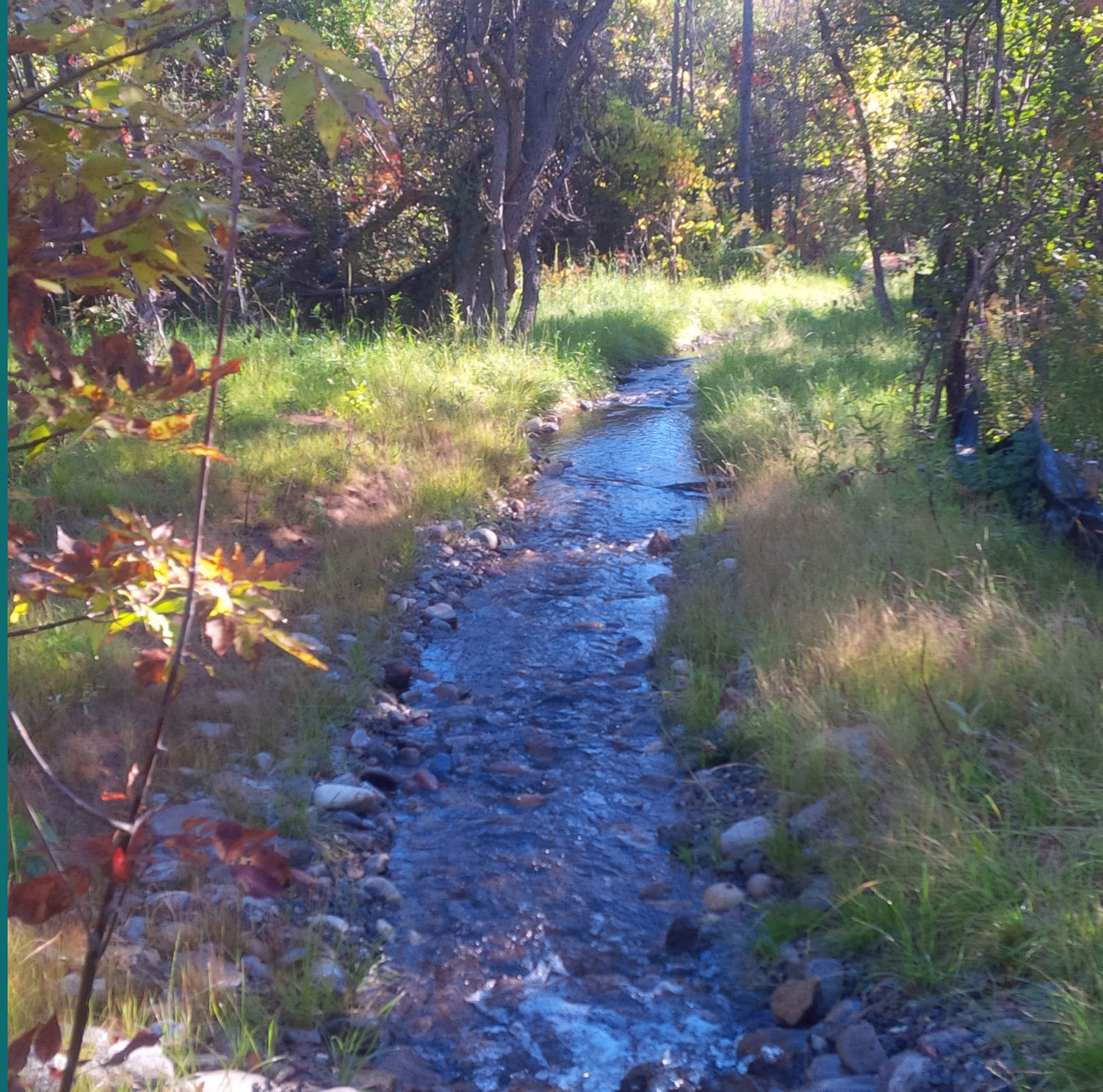
Ontario Streams

WAS THERE A BETTER WAY?

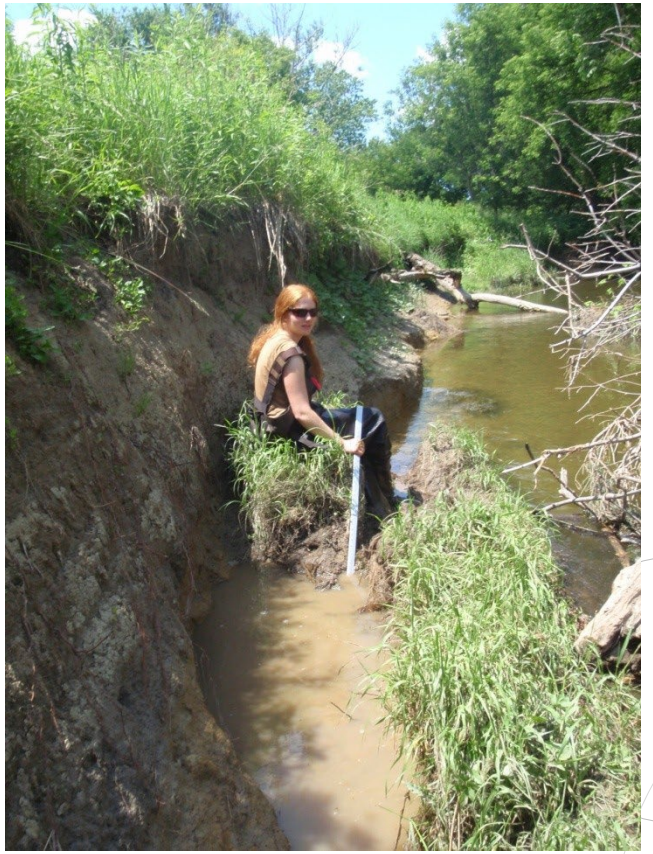
Our goal was to stabilize eroding slopes with vegetation, while providing in-stream and riparian habitat.

Needed to be:

- Low cost
- Low-impact: no machinery, avoid disturbing soil
- Made of mostly natural materials
- Eestore form and function of stream, promote deposition of excess sediments, create fish habitat, install buffer against future erosion

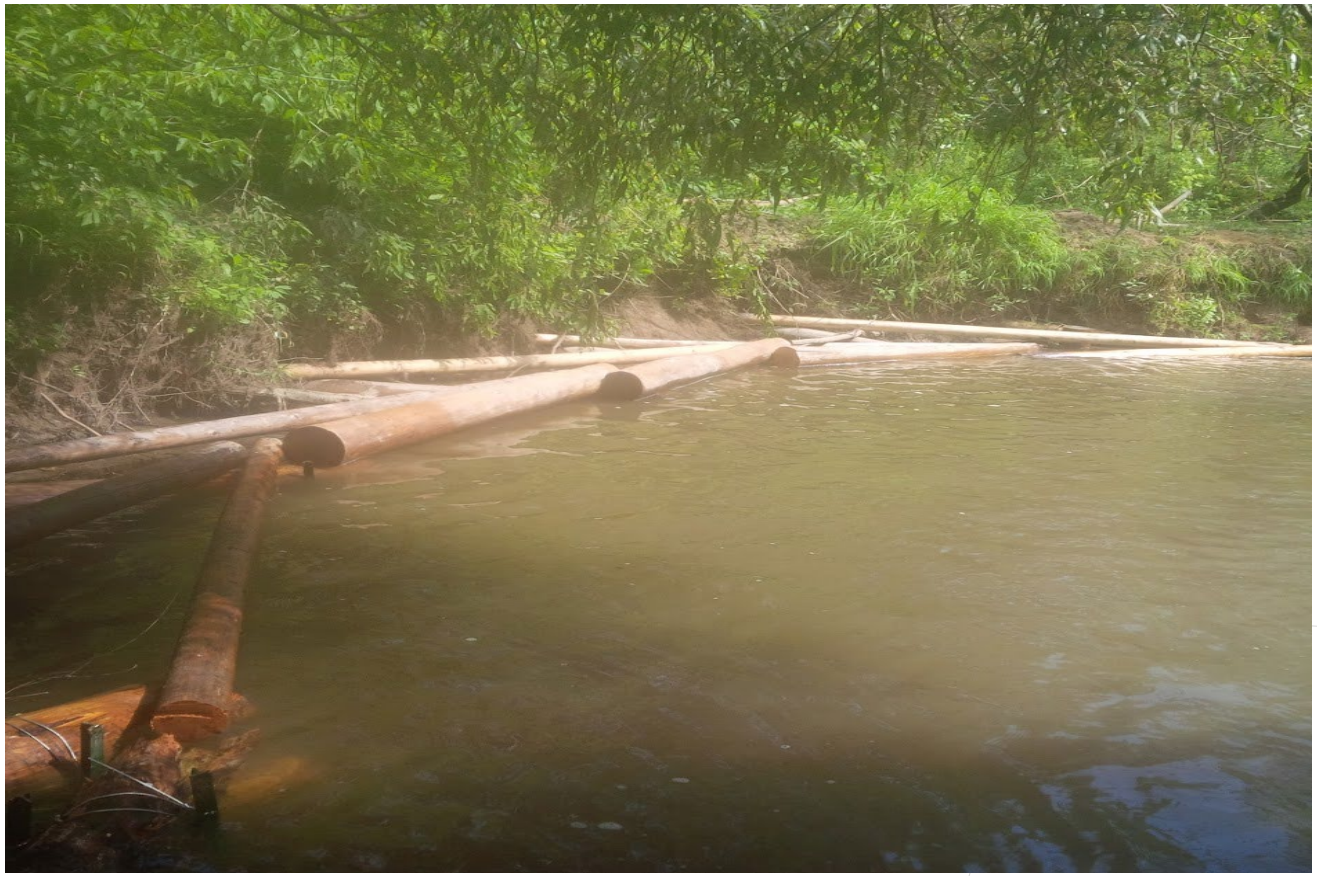


CABLED LOG JAMS

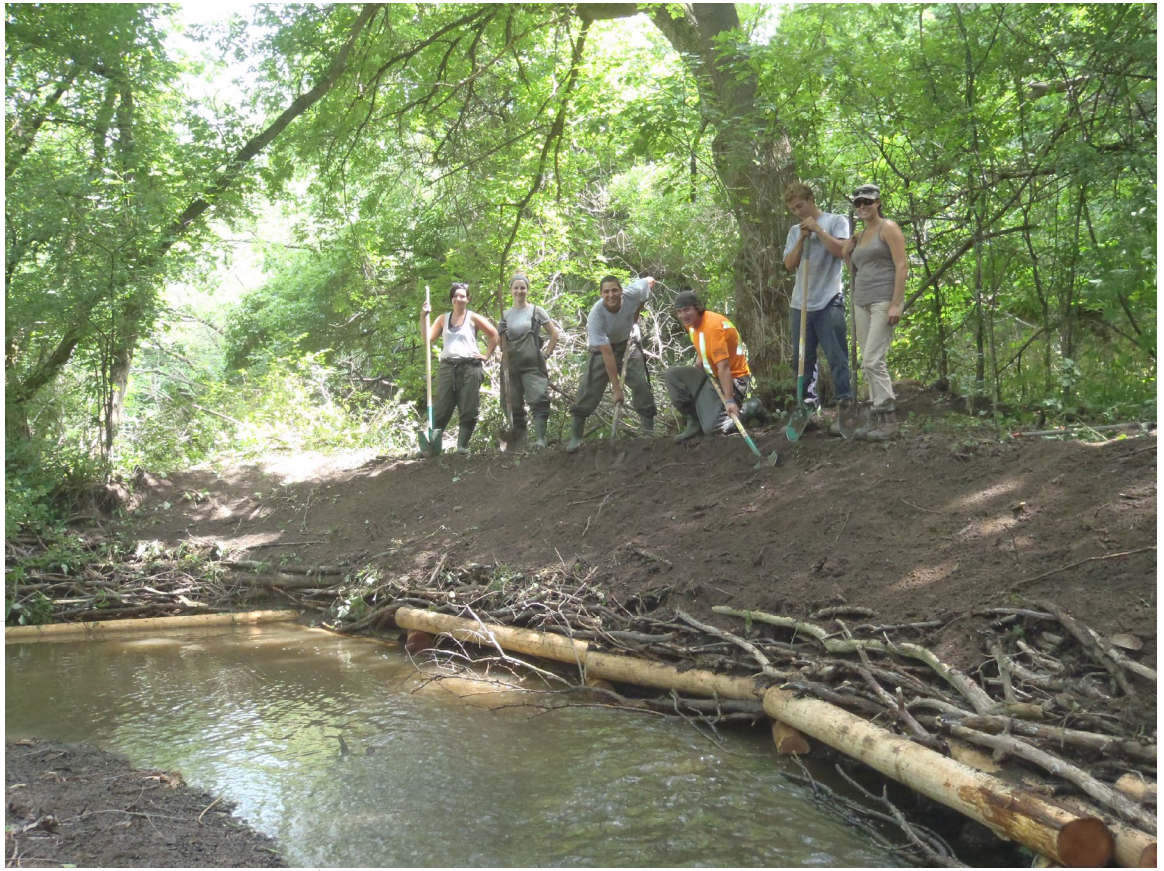


Erosion due to deforestation, high storm flows, and entrenchment

CABLED LOG JAMS

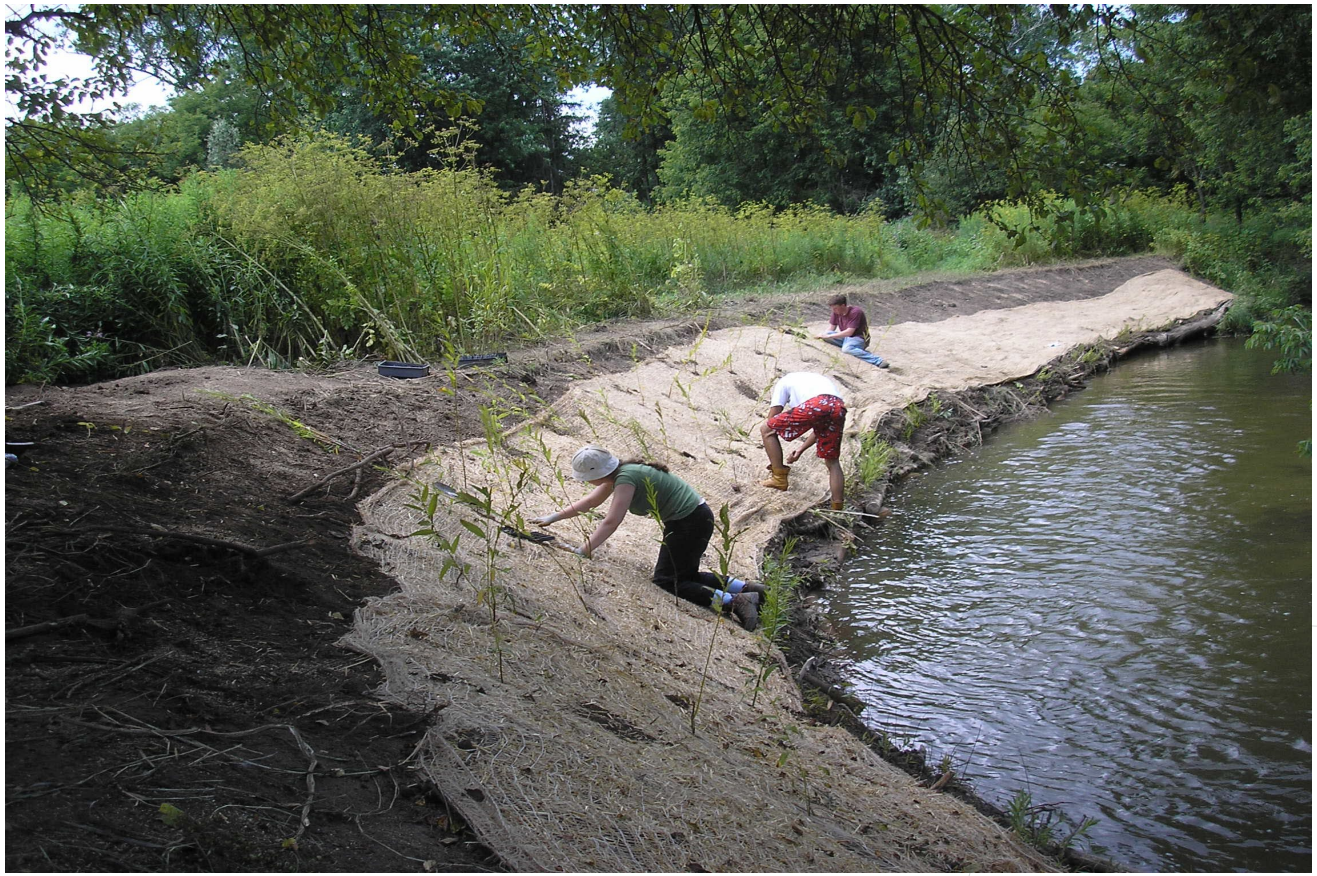


Base or Spine Construction

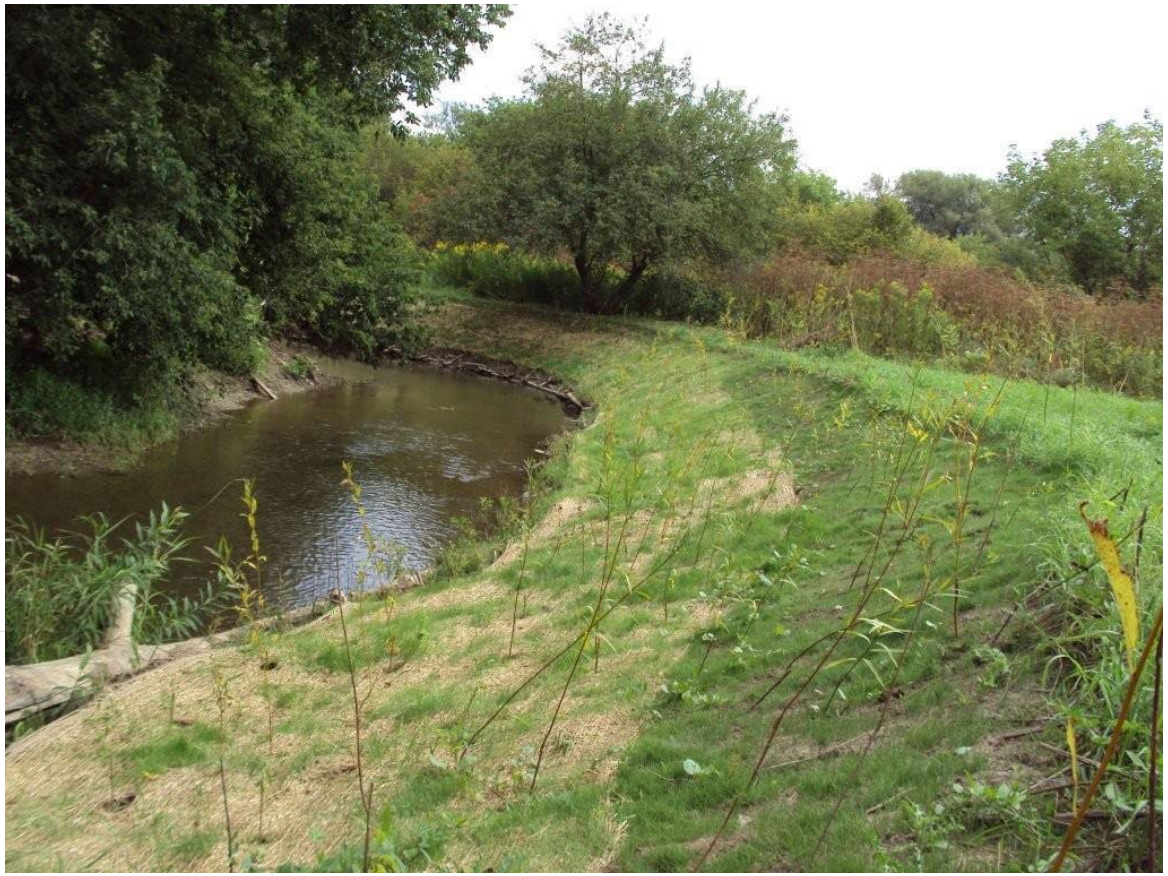


Re-grading of slope

CABLED LOG JAMS CONTINUED



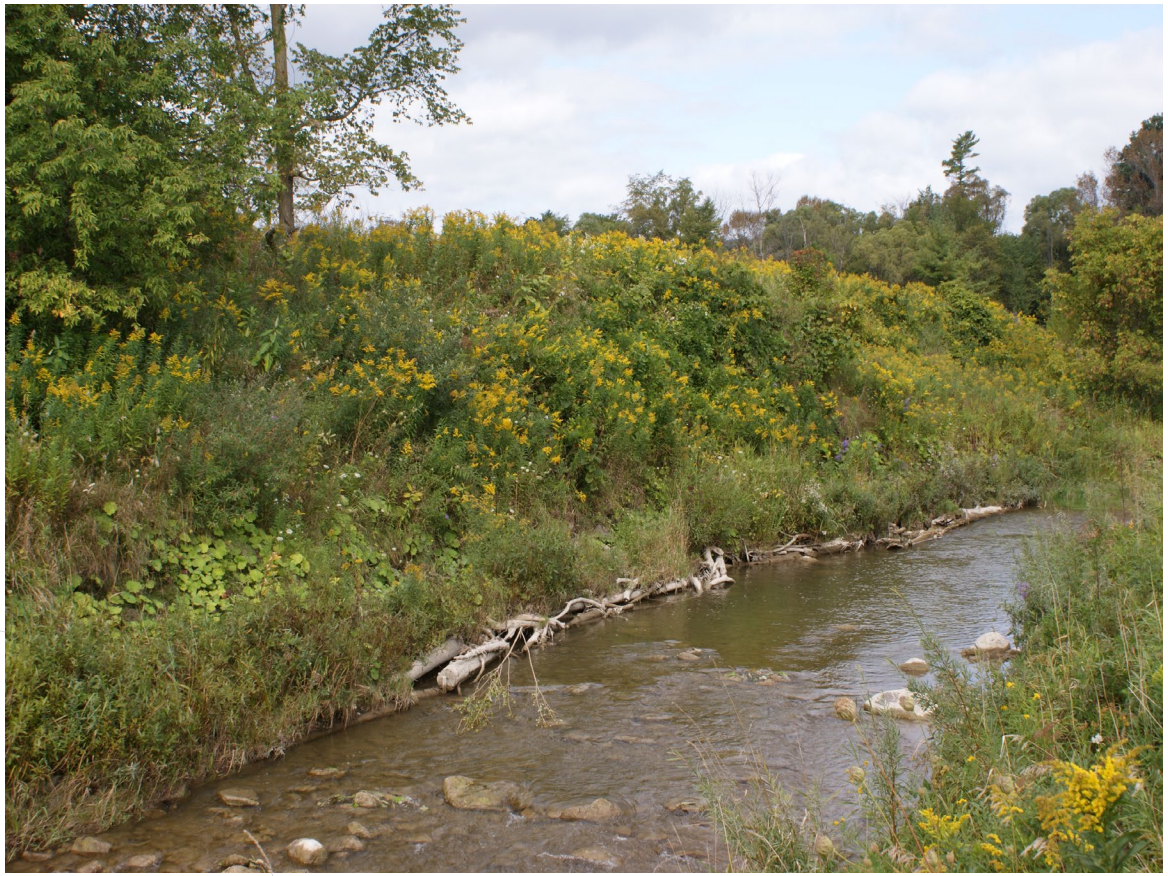
Slope seeded with grass seed, covered with coir and shrubs planted



After 1 Month

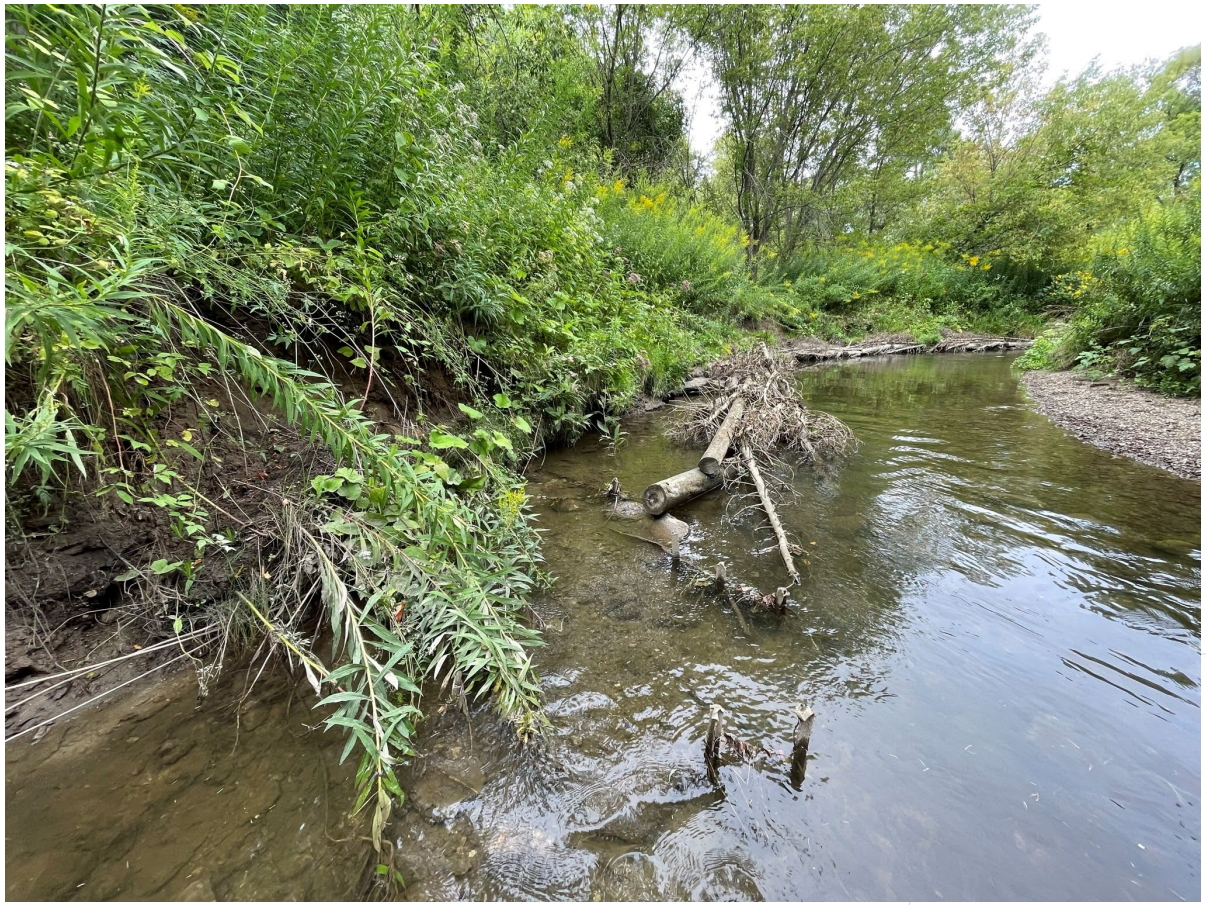
CABLED LOG JAMS CONTINUED

1997

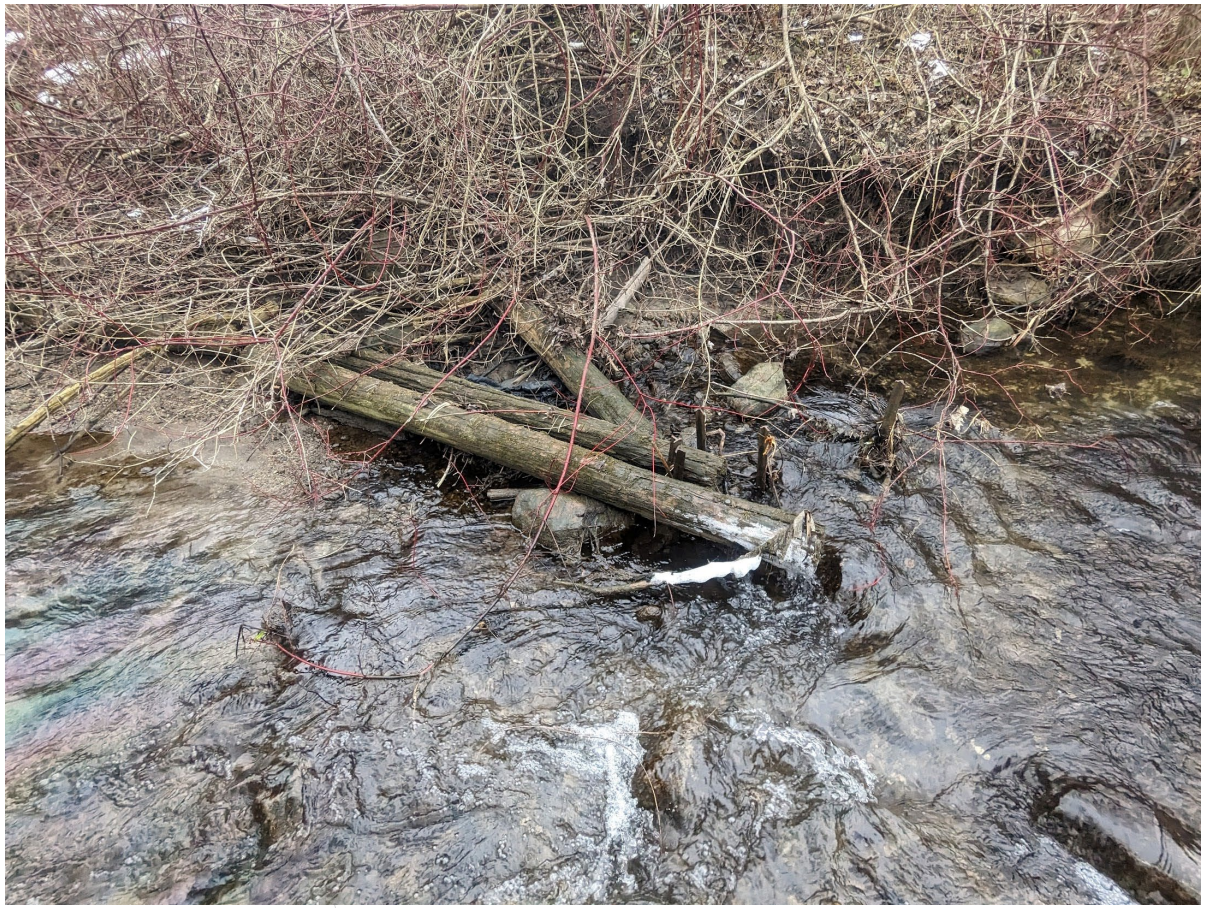


2009

CABLED LOG JAM



Failure can result in T-bars and structure in centre of river



Removal of old structures may be necessary, but goal achieved

ROOT WADS AND LIVE BRUSH BUNDLES

Eroded Slope

Root Wads

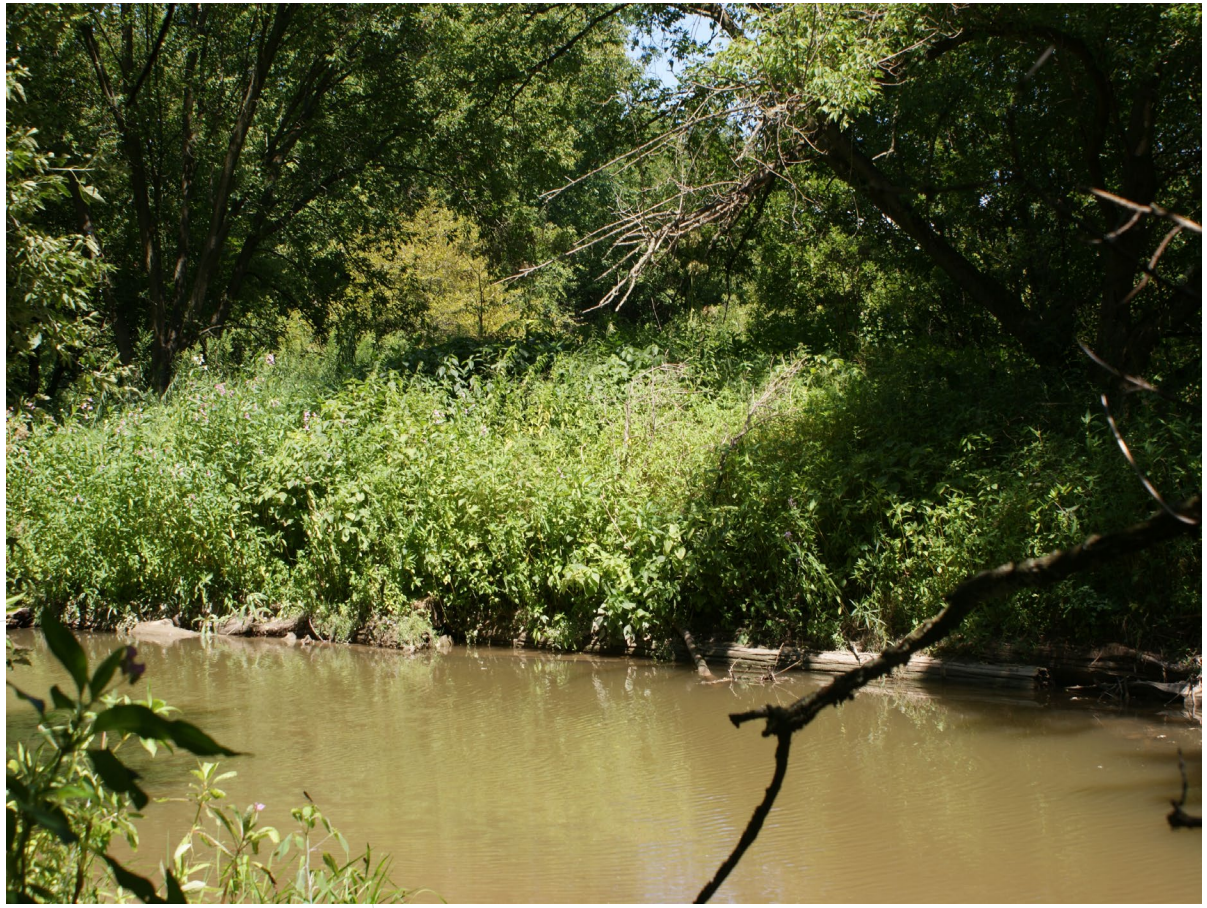
ROOT WADS AND LIVE BRUSH BUNDLES

First Spring

Year 1

ROOT WADS AND LIVE BRUSH BUNDLES

LOG DEFLECTORS

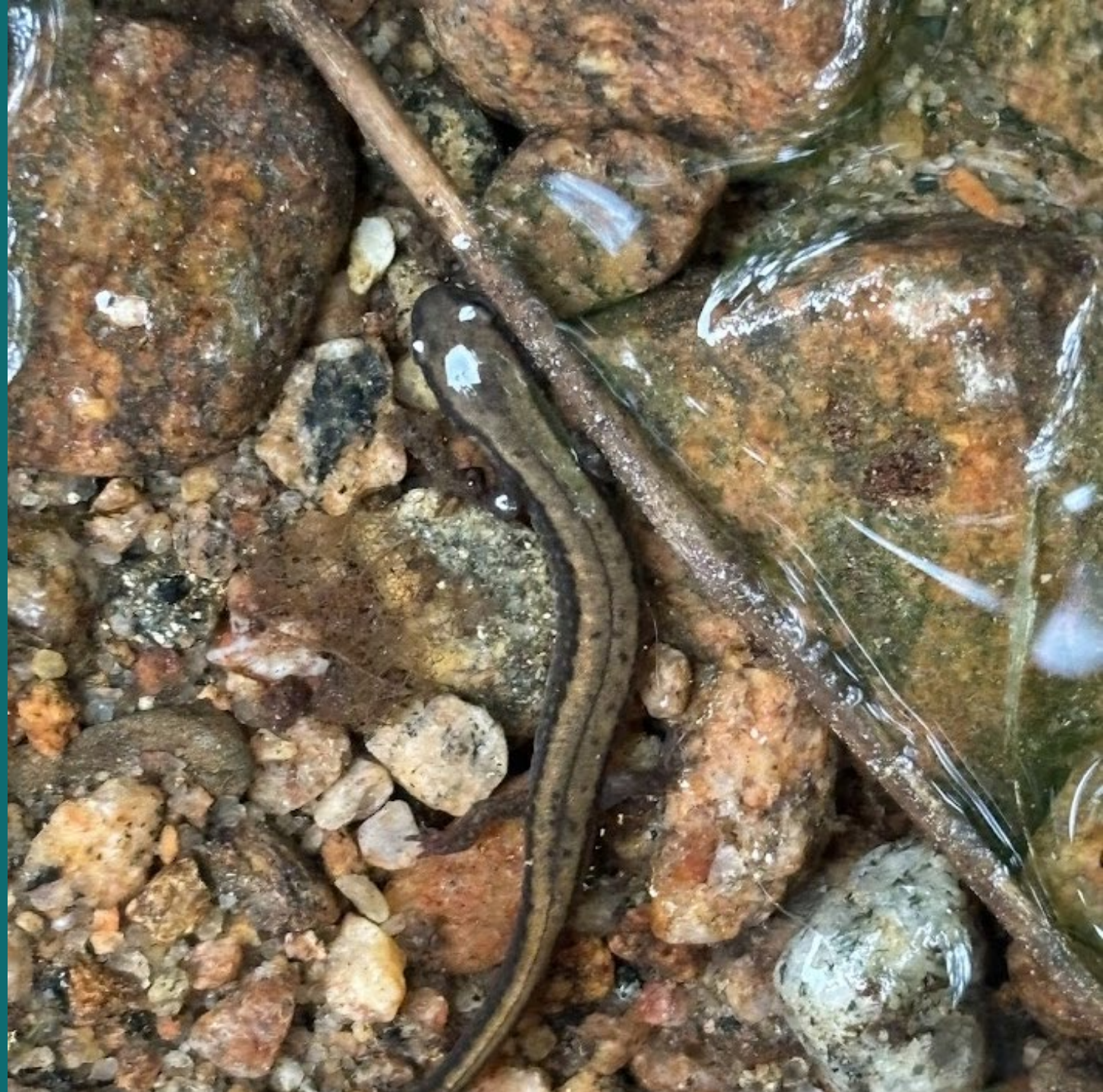


Ontario Streams

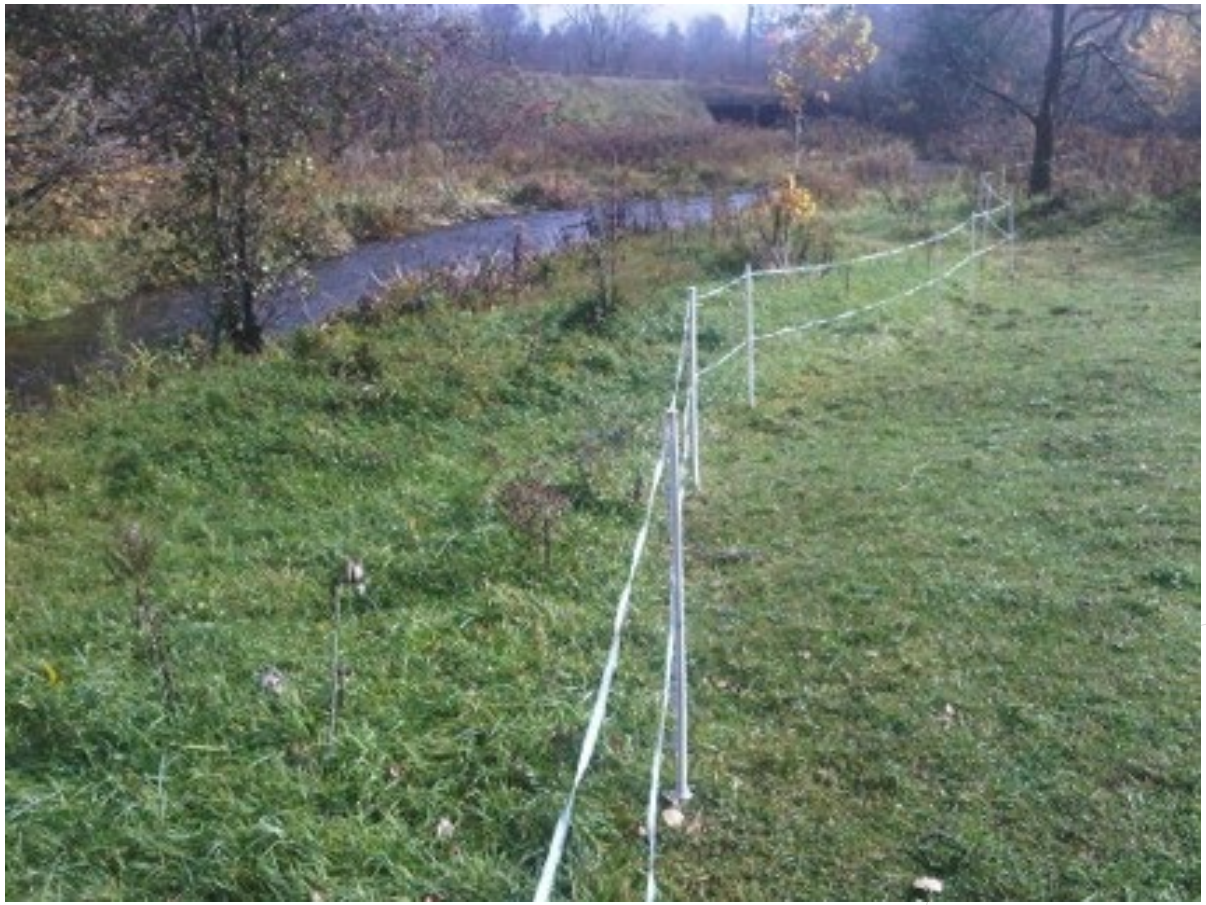
Revisiting our goals…

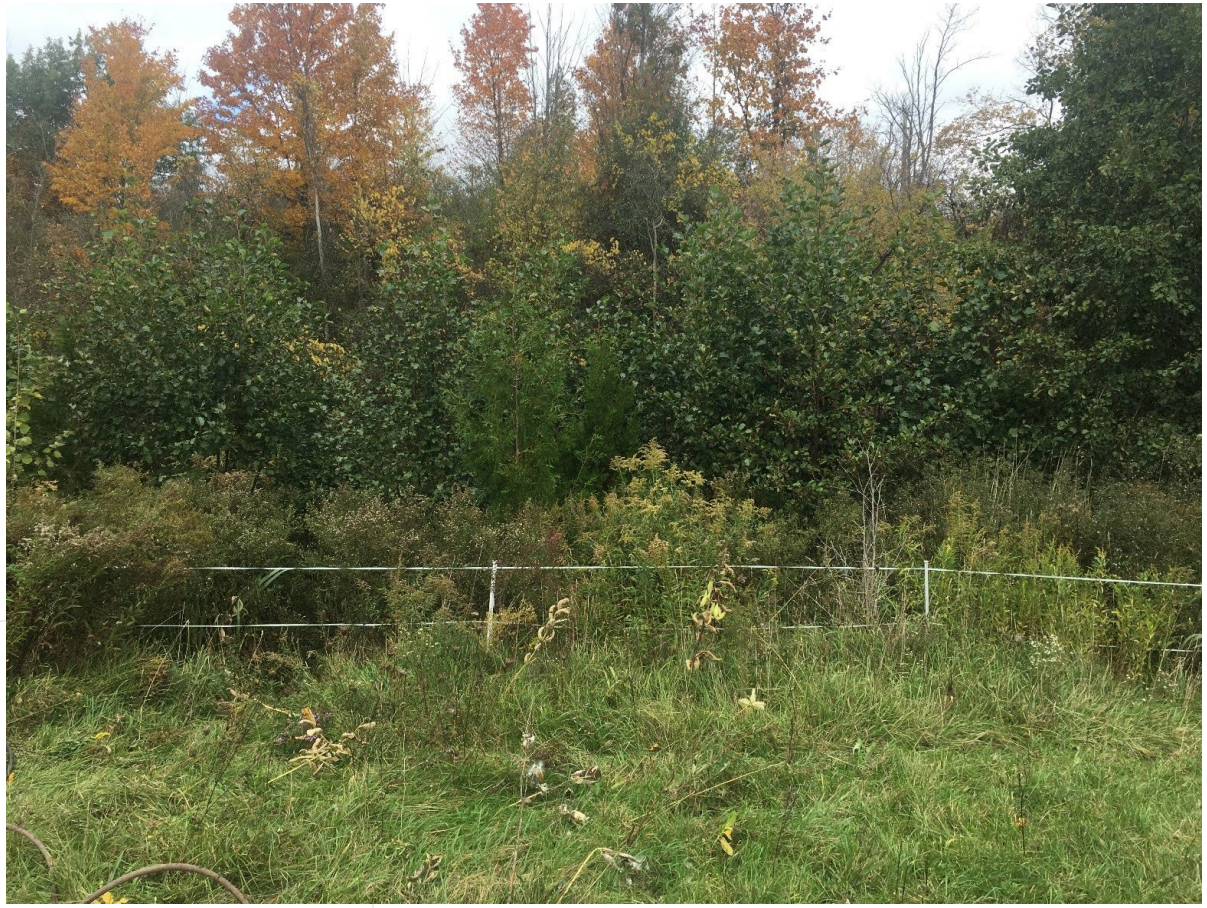
- Our goal was to stabilize eroding slopes with vegetation, while providing instream and riparian habitat.

  Needed to be
  - Low cost
  - Low-impact: no machinery, avoid disturbing soil
  - Made of mostly natural materials (t-bars)
  - Restore form and function of stream, promote deposition of excess sediments, create fish habitat, install buffer against future erosion

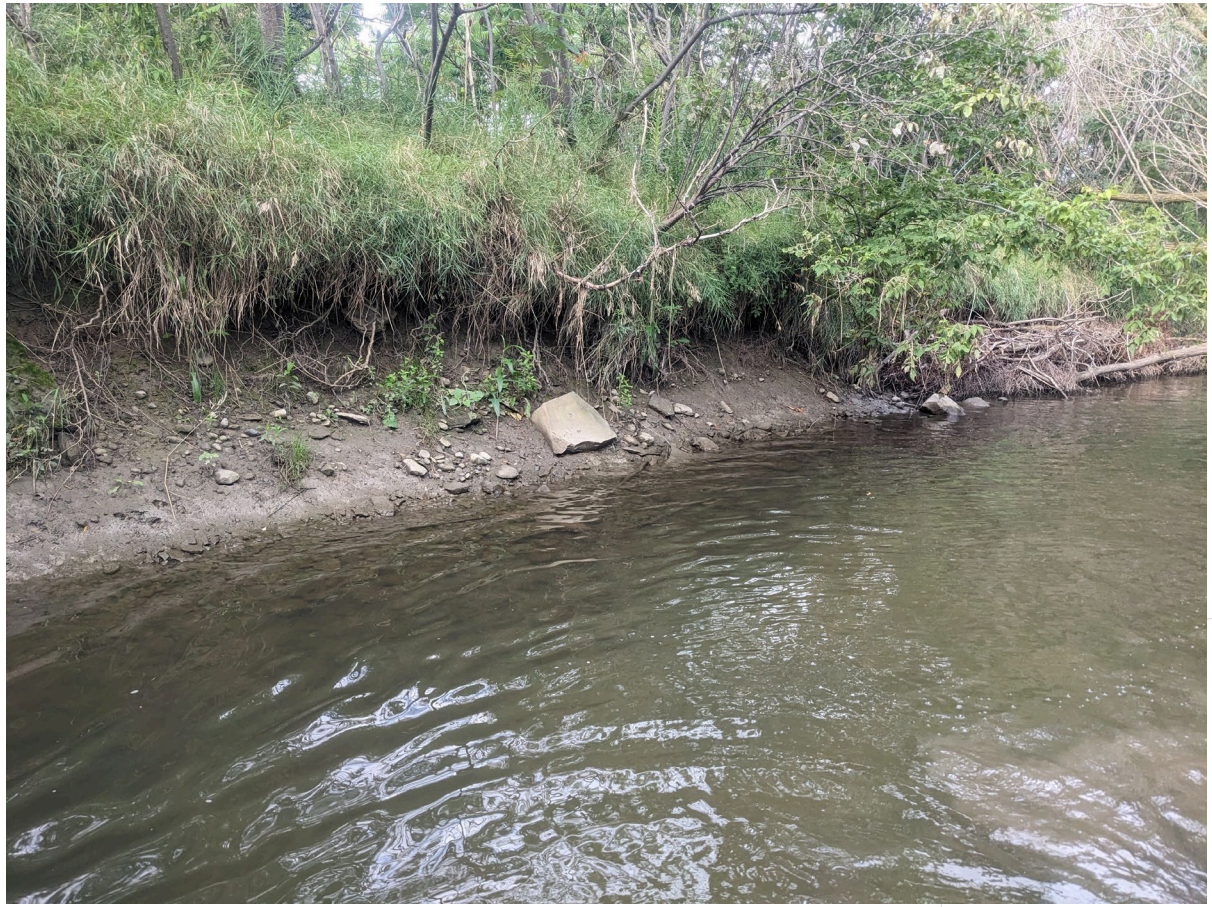


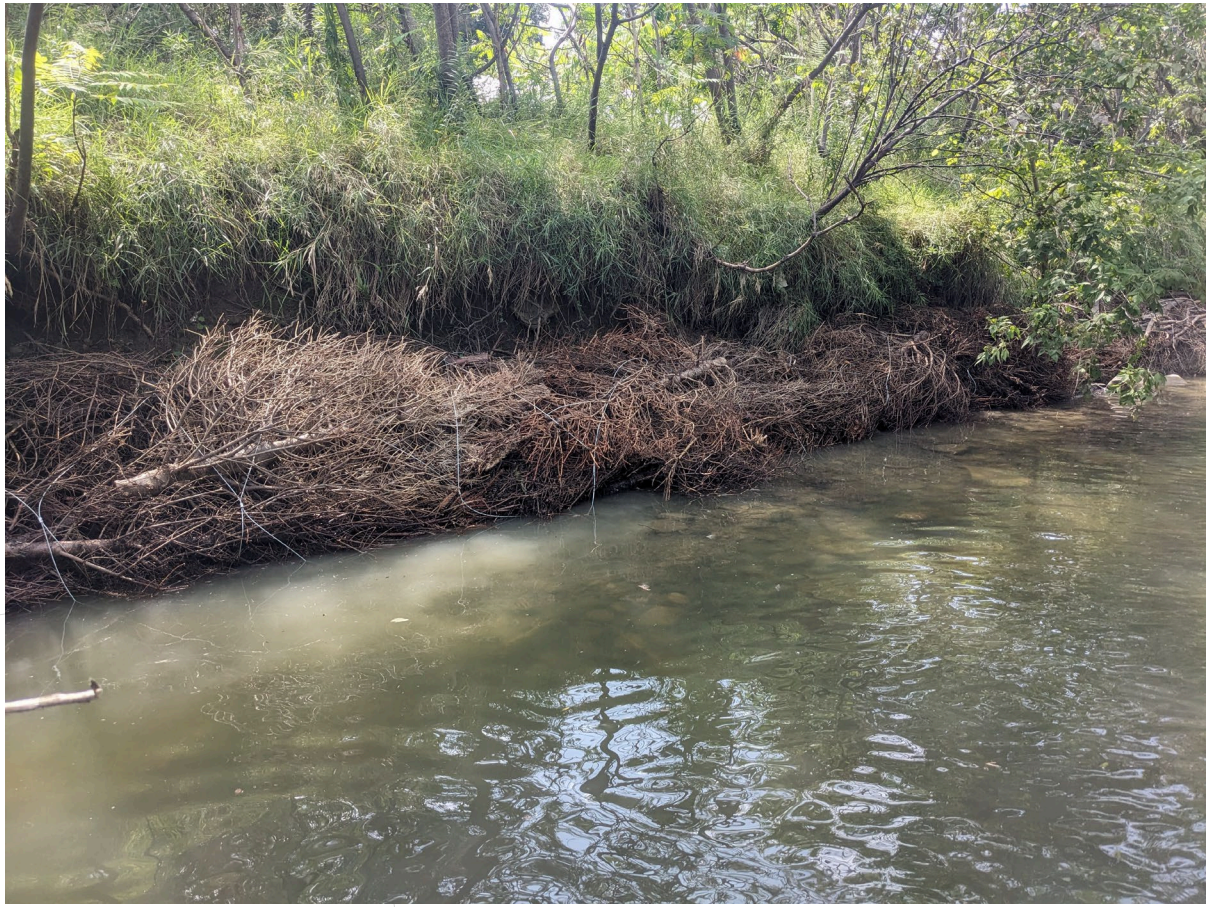
LIVESTOCK FENCING



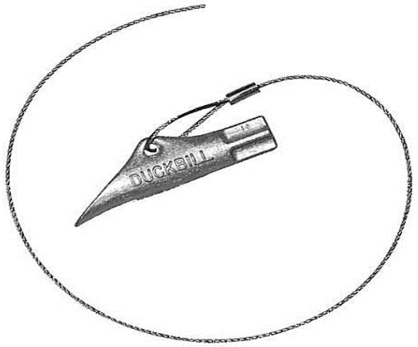


CHRISTMAS TREE BRUSH BUNDLES



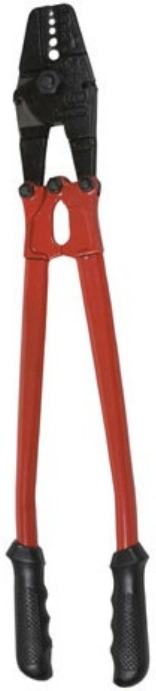


Equipment

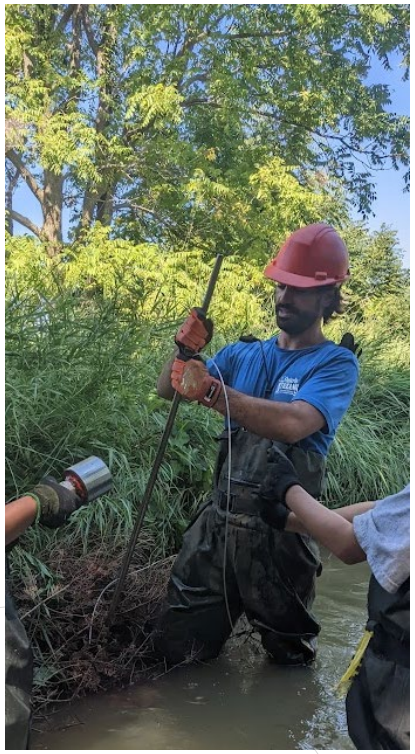


Earth Anchors

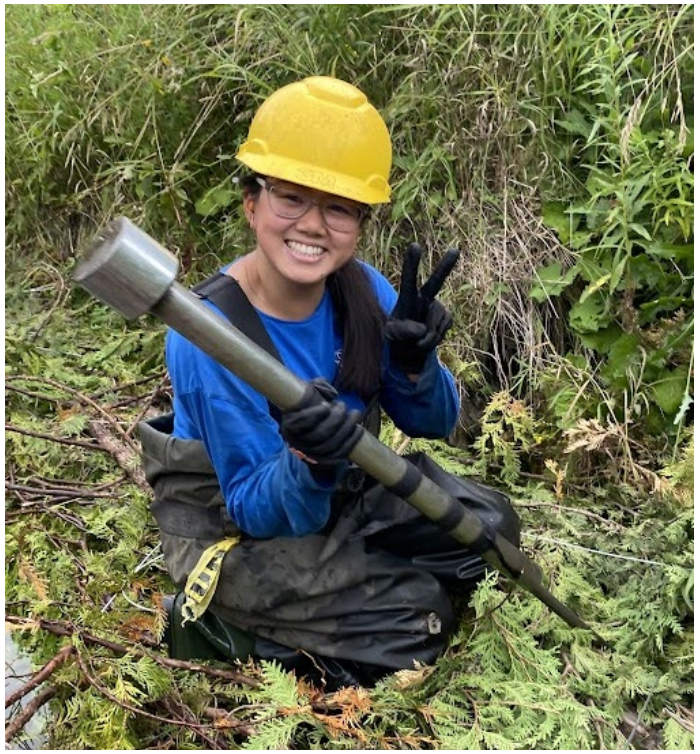
Metal Crimps



Swag Tool

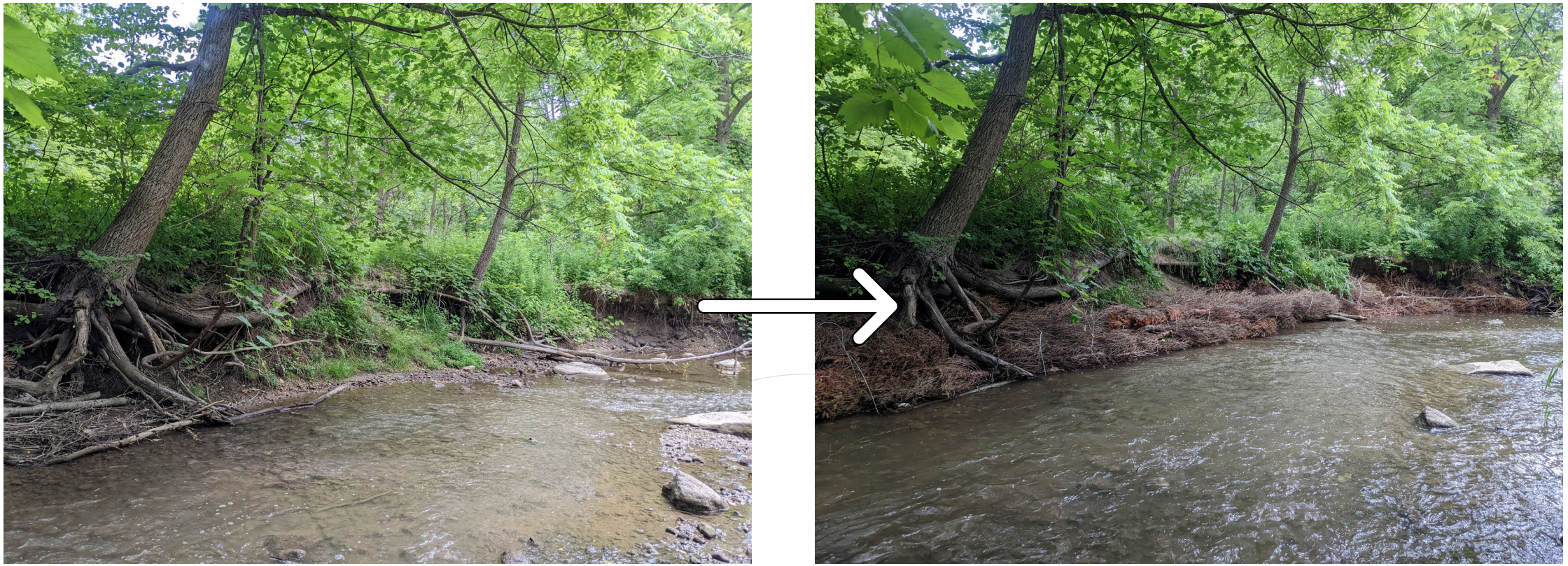


Insertion Rod

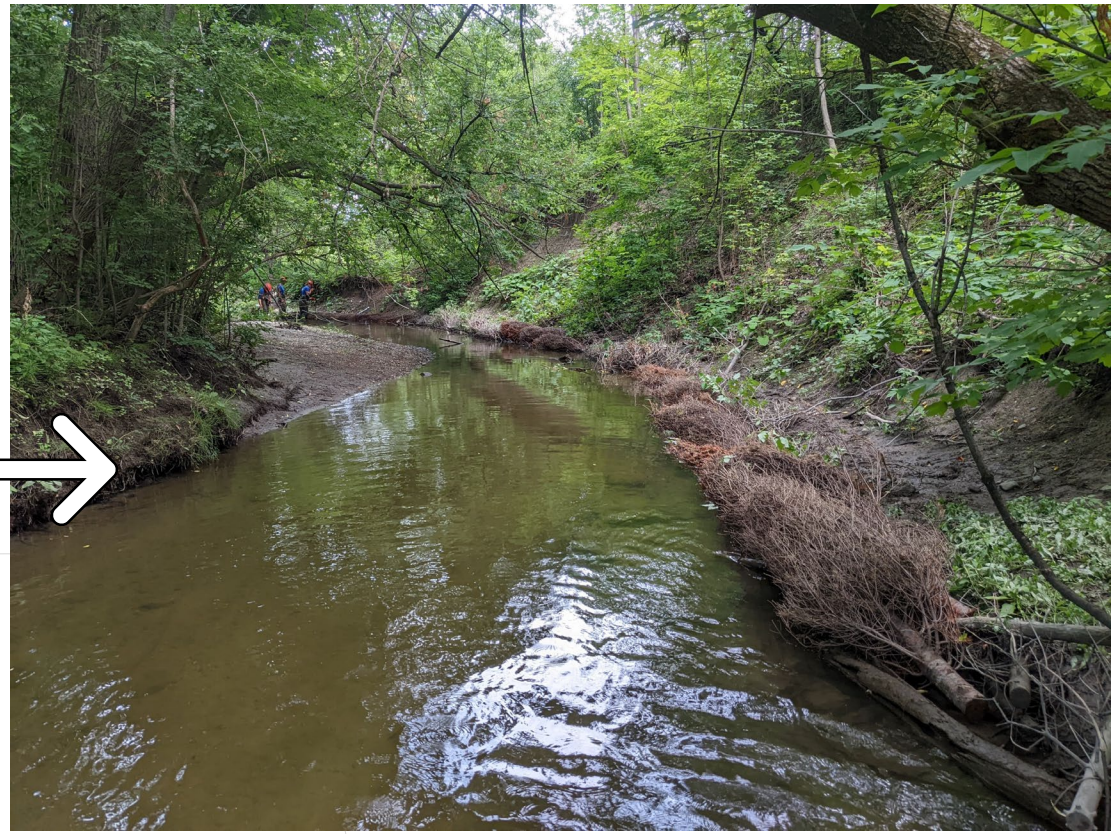


Slide Hammer

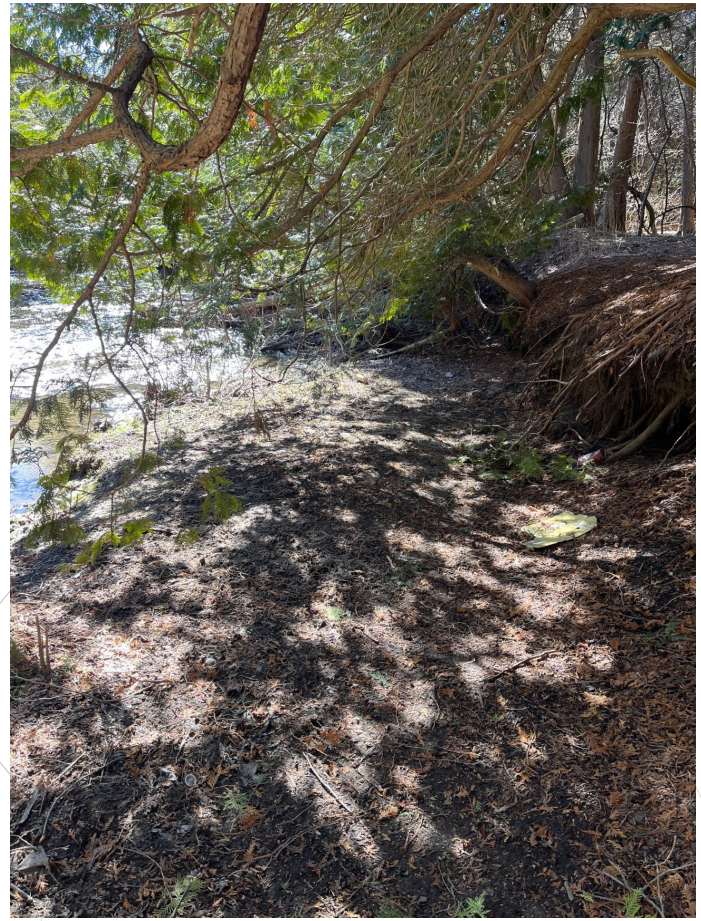
Brush Bundling



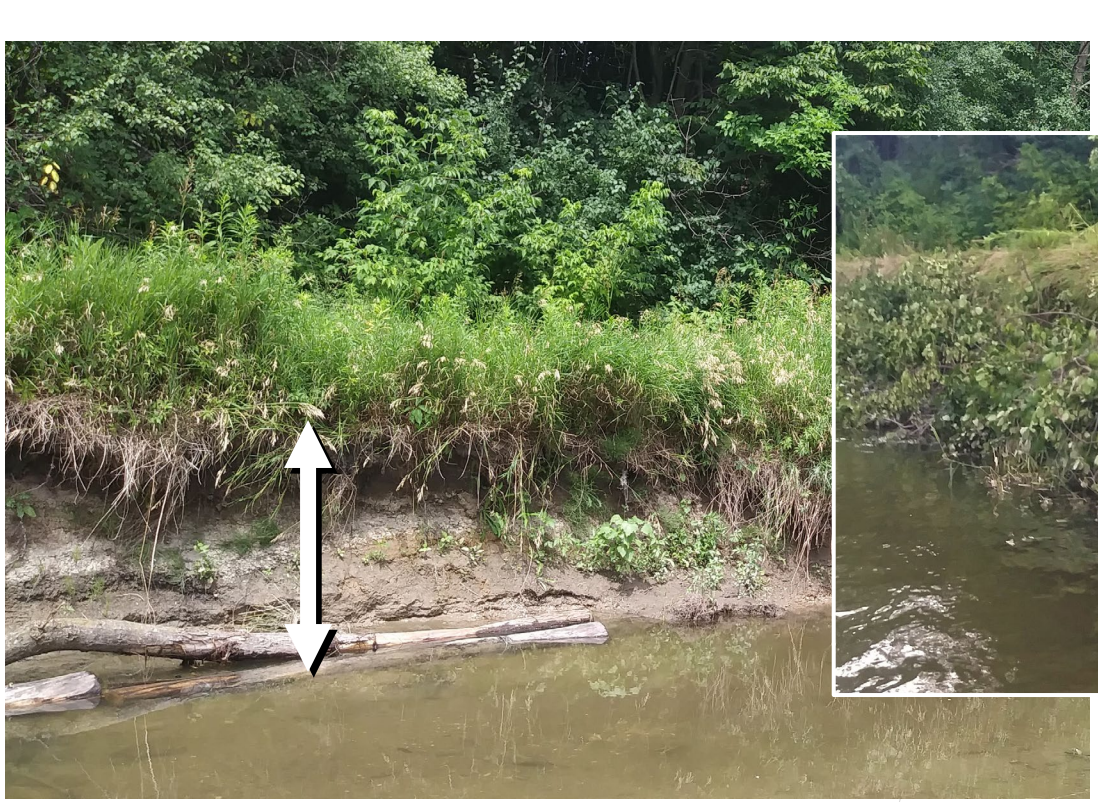
Sweeps

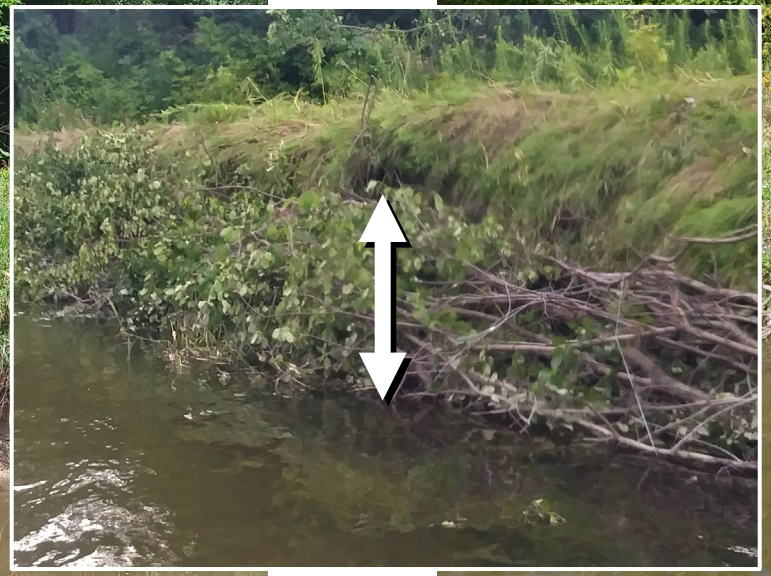


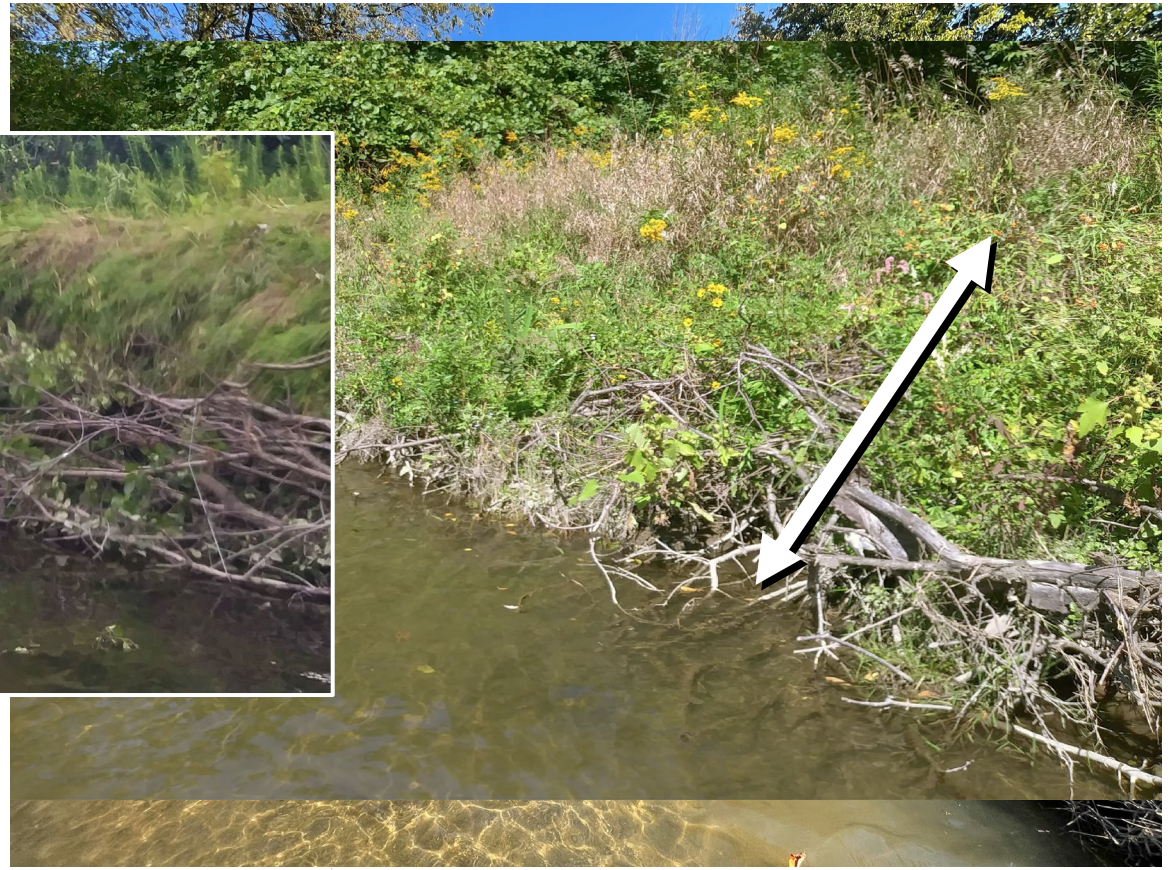
Life Cycle of In-Stream Structures

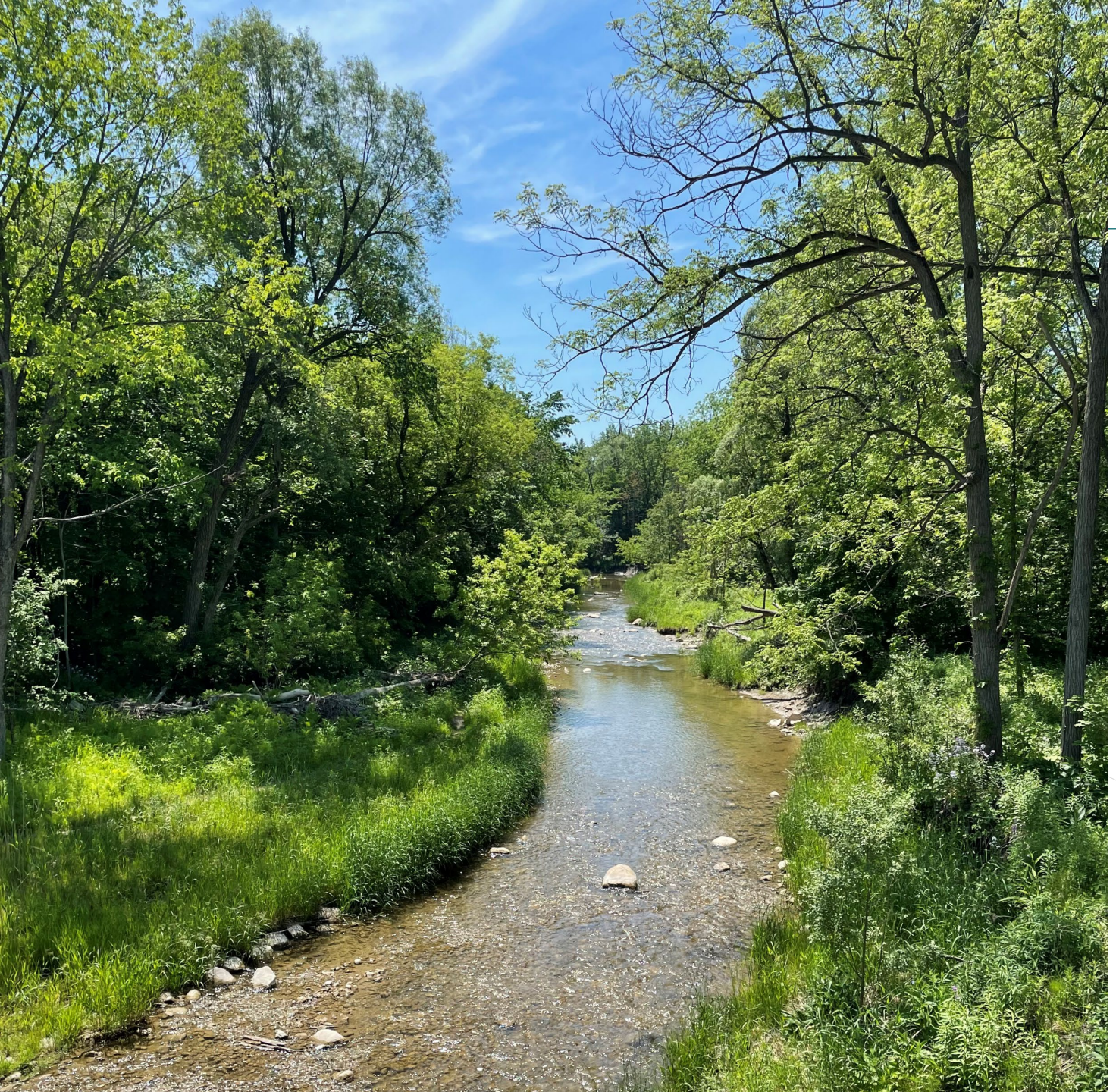


Life Cycle of In-Stream Structures









Ontario Streams

Thank you!

@OntarioStreams

doug.forder@ontariostreams.on.ca

www.ontariostreams.on.ca

SOURCE TO STREAM 2025 Conference

Canada's Premier Stormwater and Erosion and Sediment Control Conference

Thank you to our sponsors!

EXECUTIVE SPONSORS

ADS – Our reason is water.
Aquafor Beech Limited
citygreen – Urban Landscape Solutions
CUPOLEX® – Engineering Solutions Inc.
ENVIROPOD™
NEXT STORM
Oldcastle Infrastructure – A CRH Company
PERMACON
Sustainable Technologies Evaluation Program
StormTrap – Modular Concrete Stormwater Management
terrafix geosynthetics inc.

MEDIA SPONSOR

Environmental & Science Engineering Magazine

HOSTS

Presented by:

Toronto and Region Conservation Authority

In association with:

Lake Simcoe Region conservation authority
Credit Valley Conservation – inspired by nature