

Upper Twelve Mile Creek 10 Year Action Plan Update

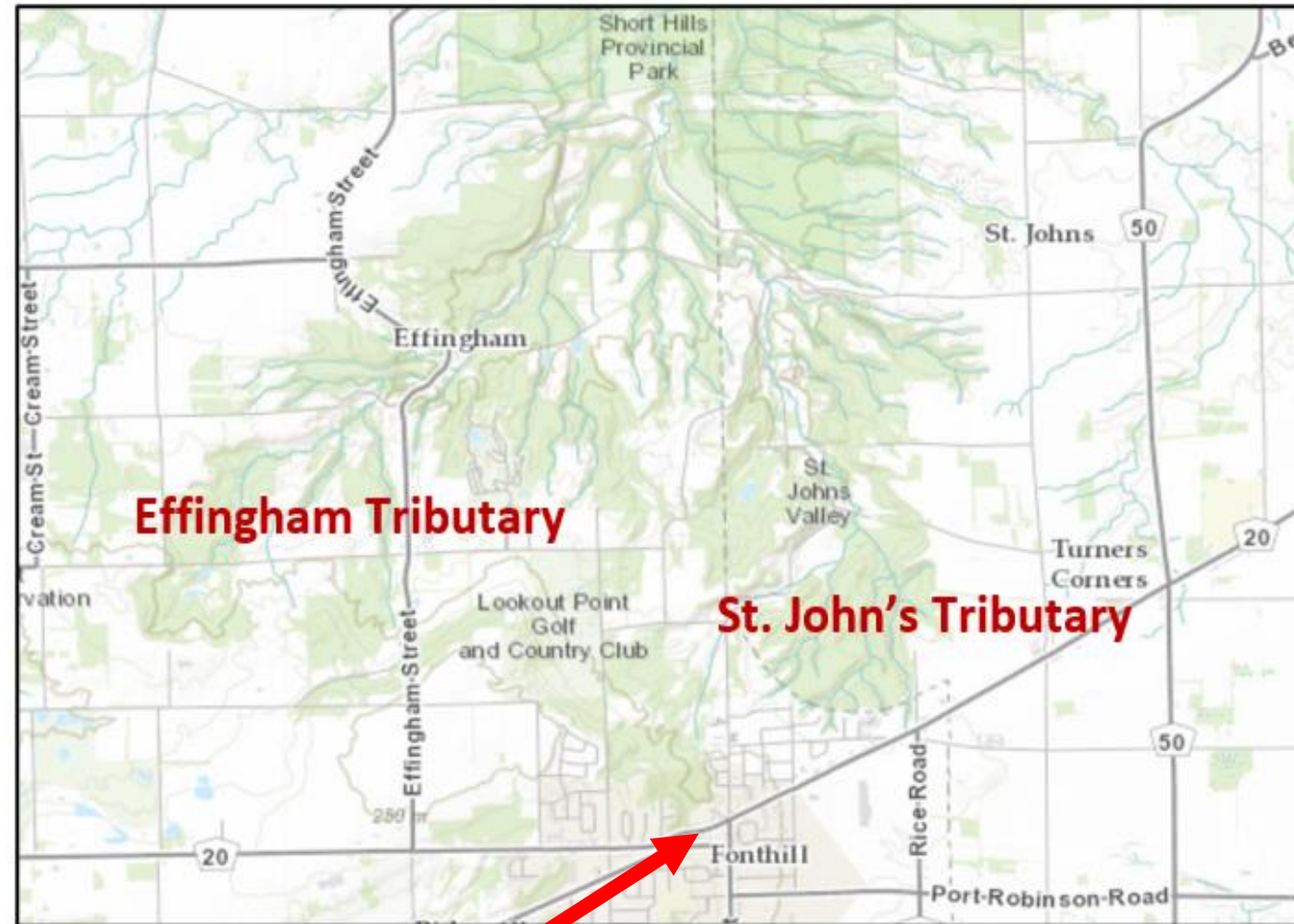
Ensuring the Twelve Mile Creek we need for the future we want



Funding and support for this project provided by
the Niagara Peninsula Conservation Authority (NPCA)

Jocelyn L. Baker, PMP, MS





Fonthill Kame Headwaters – where the system starts

Why this 2021 – 2031 Action Plan Update?

- Twelve Mile Creek (upper tributaries) form a unique watershed unlike anywhere else in Canada. Located in the most ecologically diverse life zone in Canada (Carolinian), the upper watershed is on the verge of losing the very attributes that make the system unique – most notably the cold water, brook trout population.
- As a restoration priority since the late 1990s, the most current watershed plan (NPCA, 2006) is dated.
- Working in partnership with the NPCA, the implementation component of the watershed plan is being updated by the Niagara Chapter of Trout Unlimited through the development of this 2021 -2031 Action Plan.
- An essential component of this work is setting up an agreed upon framework for ensuring the upper Twelve Mile Creek watershed contributes to an improved quality of life for all living things (human and non-human).
- The **GOAL** is for project partners including the Town of Pelham council, staff, and watershed residents to be inspired to take action toward improving the ecosystem health of the Upper Twelve Mile Creek.

“The urgent timing of this update and the recommended actions can not be overstated”

Dennis Edell, President, Niagara Chapter Trout Unlimited Canada



Why the Niagara Chapter of Trout Unlimited?

Trout Unlimited Canada (TUC) is a registered Canadian not-for-profit organization with the mission to conserve, protect and restore Canada's freshwater ecosystems and their cold-water resources. TUC has been working for over 40 years to protect and improve Canadian resources. The Niagara Chapter of Trout Unlimited Canada has been working within the upper Twelve Mile Creek watershed for the past 10 years, with a focus on habitat and water quality restoration to help conserve Niagara's only cold-water systems and brook trout population.

The purpose of this action plan is to create a "road map" to guide the remediation efforts of the Niagara Chapter of TUC and their partners, and help secure funding to implement the restoration work required.



CANARY IN A COAL MINE

SOMETHING OR SOMEONE WHO, DUE TO SENSITIVITY TO HIS, HER, OR ITS SURROUNDINGS, ACTS AS AN INDICATOR AND EARLY WARNING OF POSSIBLE ADVERSE CONDITIONS OR DANGER

Expertise of the Niagara Chapter of Trout Unlimited Canada

- Landowners living and working in the watershed
- Environmental Engineer
- Fluvial Geomorphologist
- Project Management Professional
- Ecologist
- Biologist
- Horticulturist
- Farmers
- Small business owners
- Water Quality specialists
- GIS specialists
- Land Surveyor
- Water Resources and Compliance expertise
- Financial expertise
- Communications expert
- Marketing, public relations, media expert
- Graphic designer
- Academic researcher
- Analysts.....and much more



Upper Twelve Mile Creek Action Plan 2021 - 2031 Update

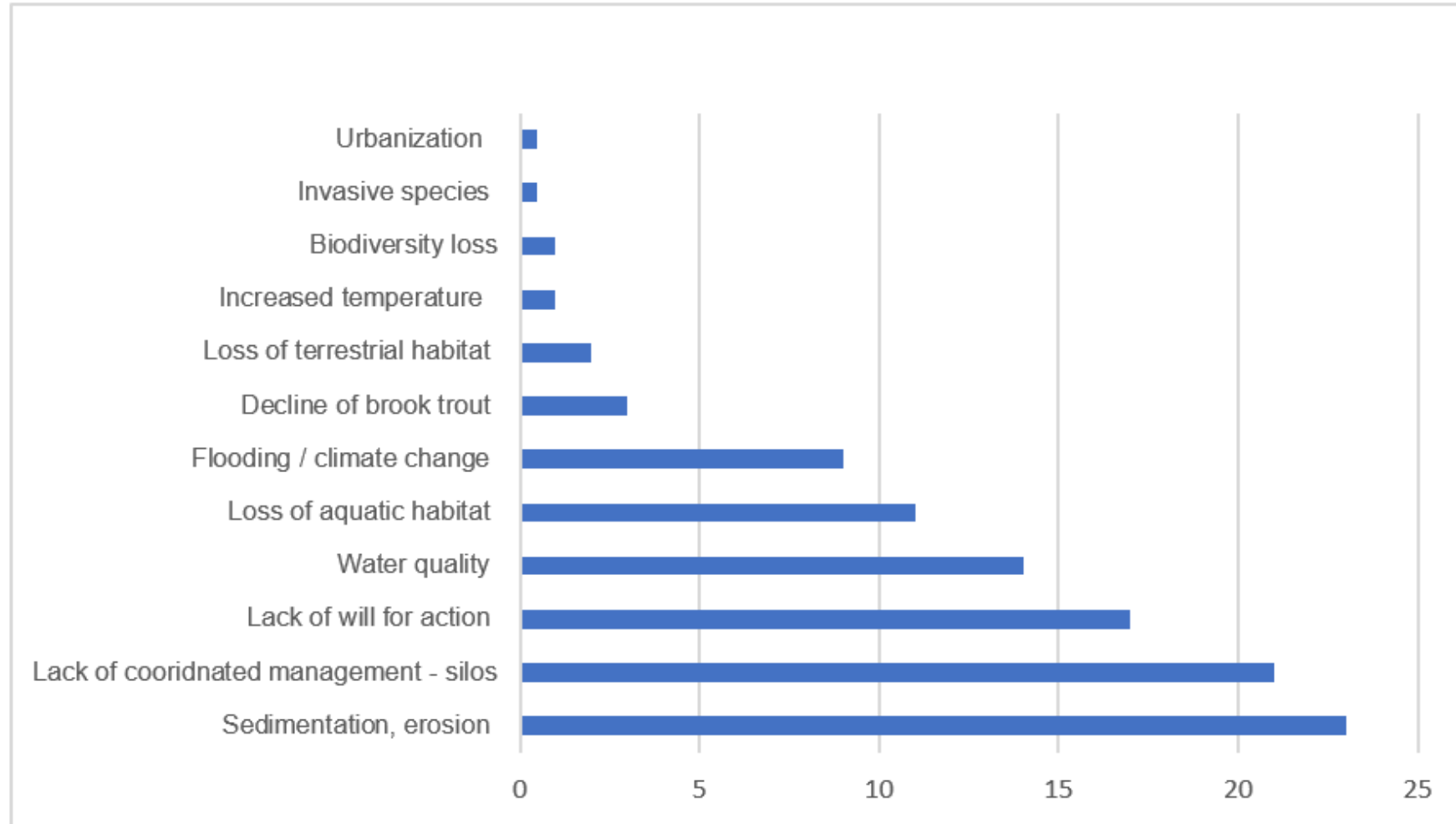
The 12 Mile Creek Watershed Strategy (NPCA, 2000), the Twelve Mile Creek Watershed Plan (NPCA, 2006), and the work of the Niagara Chapter of Trout Unlimited Canada provided the foundation for this action plan.

Action Plan Update Scope of Work

1. Literature review
2. Issue identification
3. Partner engagement
4. Issues and opportunities synthesis
5. Draft Action Plan development
6. Draft Action Plan review
7. Final Action Plan
8. Town of Pelham delegation



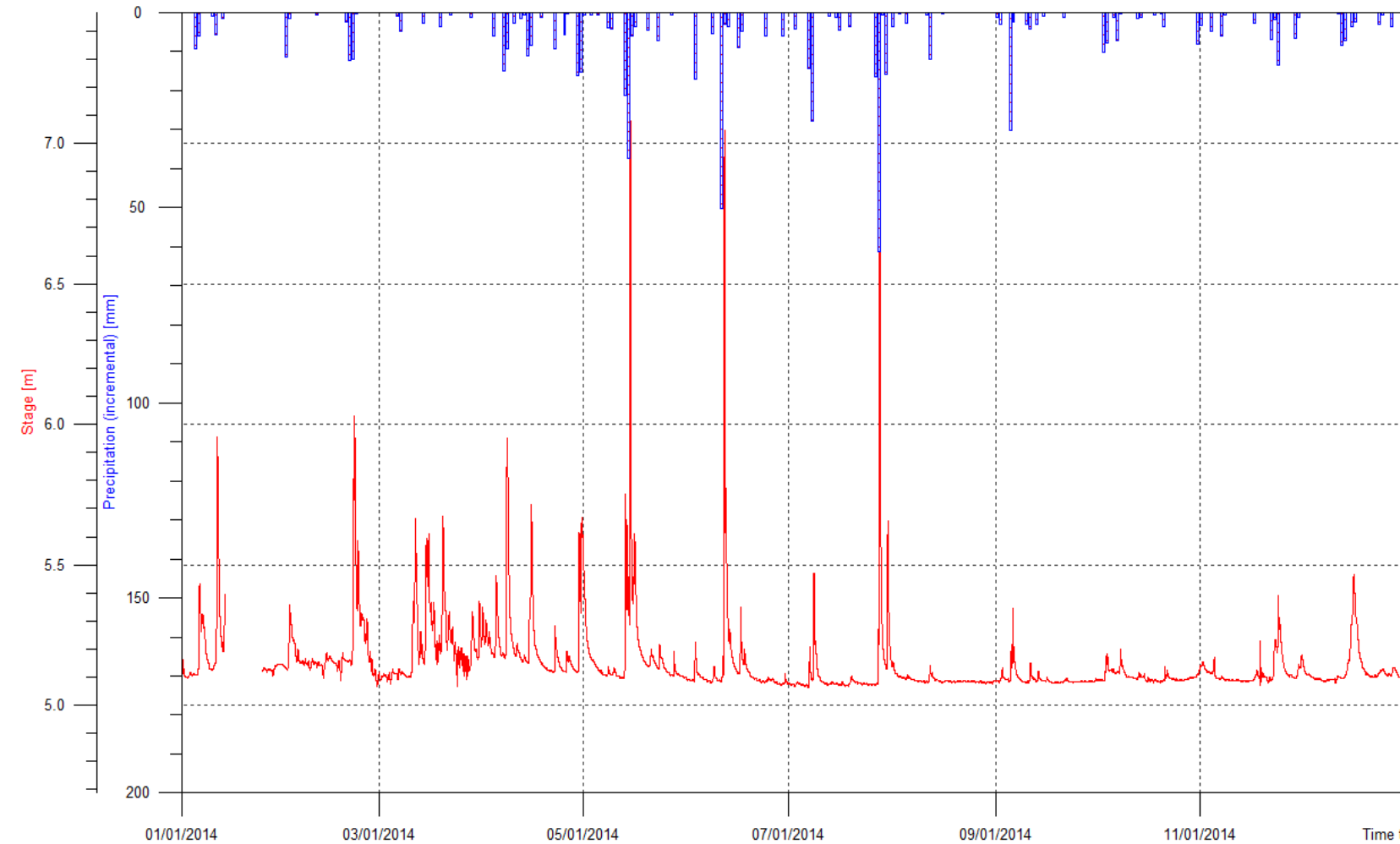
Upper Twelve Mile Creek Issues Identified by Partners & Community



Engagement: TUC, Niagara Chapter of TUC (executive, projects, membership), NPCA, Niagara Region, Town of Pelham, City of Thorold, City of St. Catharines, Niagara College, Brock University, Friends of Short Hills Park, Land Care Niagara, Niagara Restoration Council, Hamilton Naturalists' Club, Agape Valley, Nature Conservancy of Canada, business owners, landowners.

March Public Meeting - 171 registered participants

Accelerated climate change (severe flooding, drought / heat)



Twelve Mile Creek Hydrograph at DeCew Road showing multiple 2014 severe storm events where the UTMCRose several meters in less than half a day [NPCA].

Governance / Management

(Collaborative Framework)



Source Controls

Capture the water at the lot or property level



Conveyance Controls

Minimize and slow runoff (& pollution) before it gets to the creek



Brick = high bulk density,
low pore space



Sponge = low bulk density,
high pore space

End of pipe

Last chance before runoff and pollution gets to the creek



Community Engagement / Environmental Awareness



Habitat Restoration

Frenchman's Creek, Fort Erie, 1999 online pond remediation example



We need to address our changing landscape through good policy



Next Steps

The following are proposed Town of Pelham actions and areas for participation as part of the 10 year action plan update

- Participation on a 2021 – 2031 Action Plan Update oversight committee
- Participation on a stormwater management and green infrastructure working group
- The development and adoption of a Town of Pelham Erosion Control By-law
- The development and adoption of a low impact development (LID) guideline and policy



Get Involved

tucniagara@gmail.com

[Niagara Chapter of Trout Unlimited Canada Facebook Page](#)

[Niagara Chapter of Trout Unlimited Canada Website](#)

[Healthy Twelve Mile Creek Program – Niagara Chapter of Trout Unlimited Canada](#)

TUC Niagara Chapter enjoys broad outreach to the community via its partners and funders

Trout Unlimited
CANADA



**NIAGARA
CHAPTER**

Niagara Peninsula Conservation Authority
Niagara College Environmental Restoration Program
Niagara Community Foundation
Green Belt Foundation
STEP Partnership
Great Lakes Community Action Fund
Ontario Trillium Fund
Ontario Power Generation
Enbridge
La Farge
TD Bank
Walker Industries
Royal Canadian Legion, Fonthill
Sassafras Farms
Land Care Niagara
Scouts Canada (Niagara Councils)
Nature Conservancy of Canada