



# Update Stormwater Management Pond Outlet Erosion Issue





The Niagara Chapter of Trout Unlimited Canada is a registered charitable organization made up of volunteers who care about the last remaining cold water aquatic system in Niagara: Twelve Mile Creek.

With our partners and the community, we work to preserve, protect, and enhance the Twelve for this and future generations.



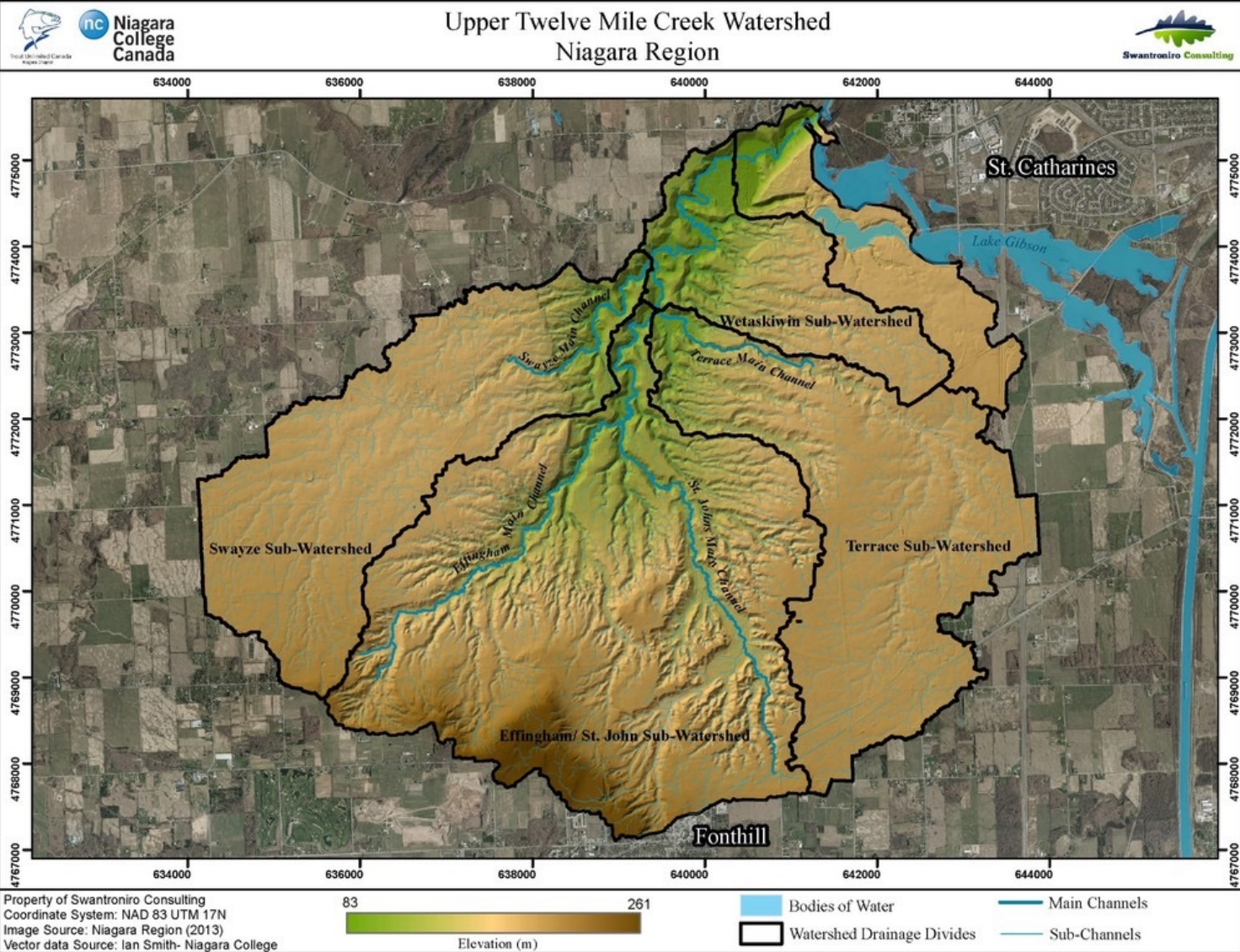
We are one of the pre-eminent environmental organizations in Niagara winning several awards for our work.





Our volunteers undertake robust community outreach programs including our annual Healing Waters Program for ill or injured Canadian Soldiers.





Upper Twelve Mile Creek is Niagara's most significant watershed and home to the Region's only year-round population of native Brook Trout, an indicator of a healthy watershed. Brook Trout populations are dwindling due to habitat loss from climate change, development (erosion) and invasive species.





The tributary outlet at the Stormwater Management Pond is an area of Concern:

- A – Stormwater Management Pond (Town of Pelham)
- B. Outlet at Hwy 20 Niagara Region
- C. Pelham Cares Building
- D. Fonthill Lions Club
- E. Thorold/Pelham line



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## Why is this happening?

- SWMP and outlet design exceeded by increased pace of development above the SWMP and unique weather events related to Climate Change
- = Excessive water volume and energy at the outlet causing:
  - Scouring
  - Sediment washing downstream
  - Property Damage
  - Habitat Destruction



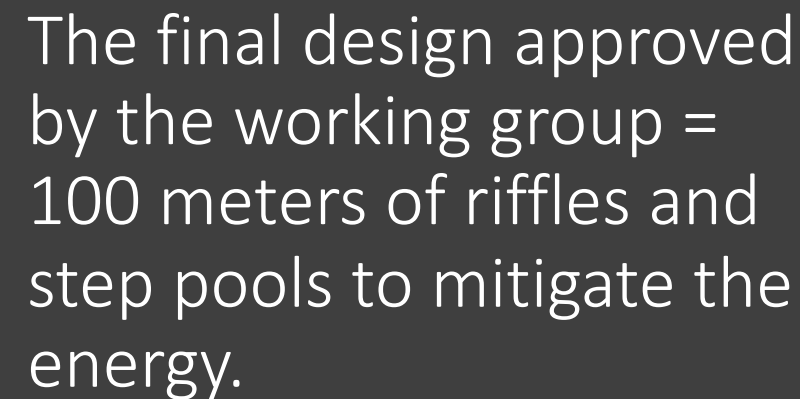


As a first step towards a solution, the Town approved funding of \$70K for the design engineering of a solution. TUC volunteered to manage this process.

A working group chaired by TUC Niagara was formed to review all aspects of this project including Pelham, Thorold, NPCA. Property owners Fonthill Lions Club, Pelham Cares and TUC stream remediation experts.

Water's Edge was vetted and hired for the design engineering stage.





This design has DFO and NPCA technical approval.

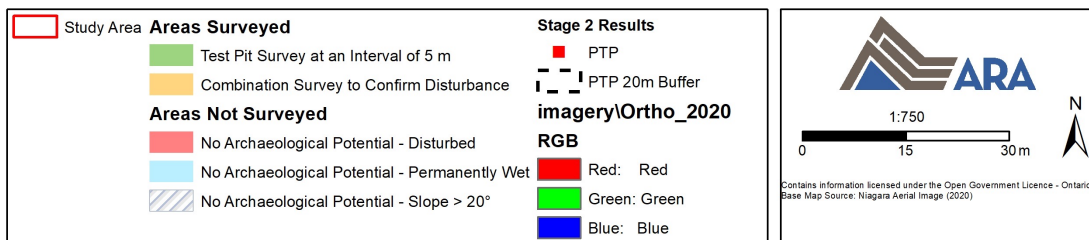
A Nature Park will be part of the site rehabilitation.





A stage one archaeology study is required and was built into the cost of the design phase. However, a new requirement is to have First Nations observers on site. This cost of \$7,340 was not anticipated.





The initial research did not indicate any sign of First Nation activity. However, the onsite investigation turned up one 'flake' which requires a second field trip with observers. This has resulted in a cost overrun of \$19, 400.



Cost item	Total	Raised	Funding source	New Funds Required
Contract to Water's Edge Design/Engineering to include Archaeology study	\$ 70,000	\$70,000	Town of Pelham	
Site visit and inspection by First Nations*	\$ 7,340.			
ARA Supplementary inspection	\$ 4,600			
First Nations 2nd Inspection	\$ 7,500			
SAR Survey	\$ 30,000	\$30,000	NPCA (in-kind)	
Project management	\$34,320	\$34,320	TUCN (in-kind)	
Permits	\$1,000			
Total Pre Construction	\$ 154,760	\$134,320.		\$ 20,440

We are asking the Town to allocate an additional \$20,440 so that we can complete the design phase of the project this year.

\*  
Haudenosaunee Development Institute  
Mississaugas of the Credit First Nation  
SIX NATIONS OF THE GRAND RIVER



Project Supervision (TUC)	\$ 82,000
Design Contract	\$ 70,000
Archaeology additional	\$ 19,400
Construction	\$ 161,250
Contingency	\$ 40,312
Contract management – Water’s Edge	\$ 20,000
Total	\$ 393,962
Received from Pelham	\$ (70,000)
TUC In-Kind	\$ (82,000)
Funds Required	\$ 241,962
Funding in Negotiation	\$ (105,000)
Shortfall	\$ 136,962

Financial Snapshot  
We are looking for at least \$140,000 – \$150,000

Sources of funding being pursued:

- Federal and Provincial - Programs
- Private Partners
- Niagara Region





Questions?