



Freshwater Conservation Canada: Final Report for “Cooling Squirrel Creek”

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In August 2025, Freshwater Conservation Canada was awarded funding in the amount of \$5,000 from the Ontario Wildlife Foundation for the project “Cooling Squirrel Creek”. The objective of the project is to rehabilitate a coldwater creek flowing through a recently retired cattle pasture, benefitting its Brook Trout population. This is being done through riparian plantings, wetland creation, and in-stream restoration. The project is located along Squirrel Creek, near Millbrook, ON.

We are pleased to provide this report, serving as both an interim and final for the project, highlighting the activities and successes of Cooling Squirrel Creek since being awarded this generous gift from Ontario Wildlife Foundation.

Project Activities

In-Stream Restoration

In September, Freshwater Conservation Canada’s field crew built several in-stream structures to improve fish habitat, sediment capture, and streambank stability. This included three sediment traps, one woody debris habitat structure, and one wing deflector. In the area most impacted, a wing deflector was used to restore a meander and induce scouring to expose the gravel bottom from the heavy layer of sediment that had accumulated. A woody debris habitat structure was installed in the deepest pool along the reach where Brook Trout are suspected to be present. The positive impact



Figure 1. FCC staff with a newly built wing-deflector that will help to restore channel processes at Squirrel Creek (September 2025)



Figure 2. FCC crew build a sediment trap along Squirrel Creek to restore sediment transport balance and improve habitat (September 2025)

of these structures was almost immediate with the gravel bottom being revealed after only a few weeks.

Native Plantings and Riparian Restoration

In October and November 2025, Freshwater Conservation Canada planted 4,680 trees and shrubs. Planted trees and shrubs varied from plugs to 1-gallon pot size, and included 20 different species, chosen for the various soil, moisture, and light conditions at the site. In addition, 15 kg of seed mix was sowed. Prior to planting, the landowner mowed down tall grasses to prepare the site for planting and field crew removed seed heads from invasive Wild Parsnip that is spreading from a nearby wetland. The area of riparian habitat improved is approximately 5 ha, helping to transition this

site from open pasture to a mixed riparian forest with sugar bush component. We are pleased to have set the site is on a trajectory of recovery, which will improve habitat for local fish and wildlife, while improving stream form and function.

Community Involvement

Approximately 95 participants were involved in the project. This included local community members and neighbors, members of Freshwater Conservation Canada's Millbrook Chapter, and students from Fleming College. This was accomplished during several workdays and events during Fall 2025.



Figure 3. Students from Fleming College getting hands-on experience with riparian restoration and tree planting at Squirrel Creek (November 2025)



Next Steps

While Freshwater Conservation Canada achieved all of its goals at this site for 2025, there remain several objectives we intend to address in the near future. This includes more instream restoration structures, the removal of a decrepit culvert, and the reconnection of the floodplain through bank terracing.



Figure 4. Newly planted trees will help to establish a healthy and functional riparian forest along Squirrel Creek (November 2025)

In addition to work occurring on this property, other stream rehabilitation opportunities with neighbouring landowners have arisen following the success of this project. For example, some are interested in installing exclusion fencing to protect the stream from damage from livestock. Another is looking to reduce the warming impacts of the creek from an online pond. These relationships have developed through social interactions between neighbours and community members, and we are encouraged by this local interest.

Freshwater Conservation Canada is exploring additional funding opportunities and partnerships to continue working along Squirrel Creek.

Summary

Freshwater Conservation Canada is grateful for the support provided by Ontario Wildlife Foundation, allowing us to accomplish our 2025 restoration goals along Squirrel Creek. The Cooling Squirrel Creek was initiated in late 2024 with support from the landowner and a grants from the federal 2 Billion Trees program and the provincial Great Lakes Local Action Fund. Ecosystem Management Technician students at Fleming College performed ecological land classification and produced conceptual restoration plans that have supported project design and implementation. These supports were critical in setting the stage for the work that was accomplished



in Fall 2025. Funding from Ontario Wildlife Foundation covered travel to and from the project area from our Guelph office, including overnight accommodation and per diem for staff, rental vehicles, fuel, and use of Freshwater Conservation Canada's truck. This support was absolutely critical as other funds did not cover these expenses, which were essential for completing this valuable work.



Figure 5. Squirrel Creek, facing upstream (July 2024)