

RESTORATION OF BROOK TROUT HABITAT IN BAXTER CREEK

PURPOSE

To create a comprehensive restoration plan to support Brook Trout populations in Baxter Creek

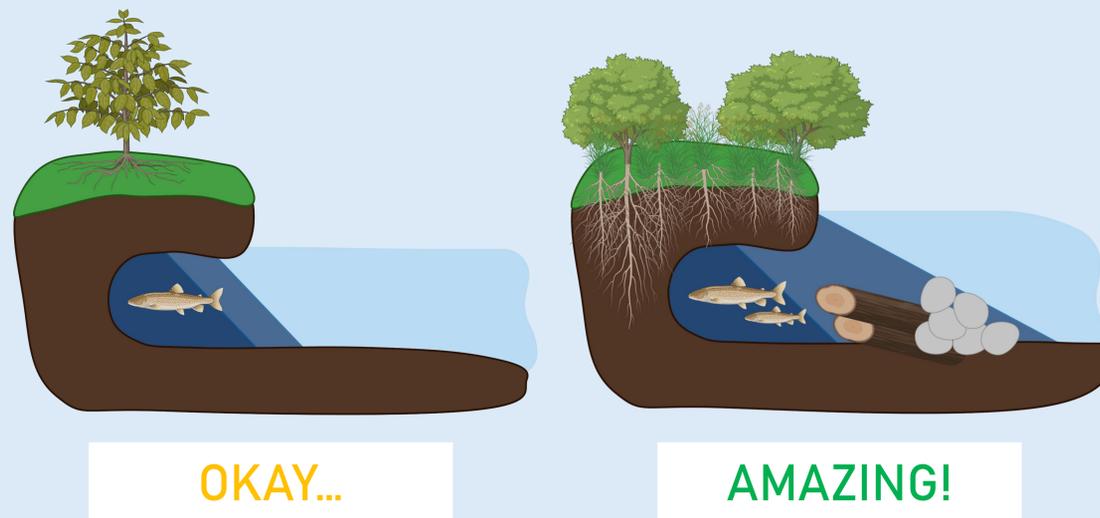
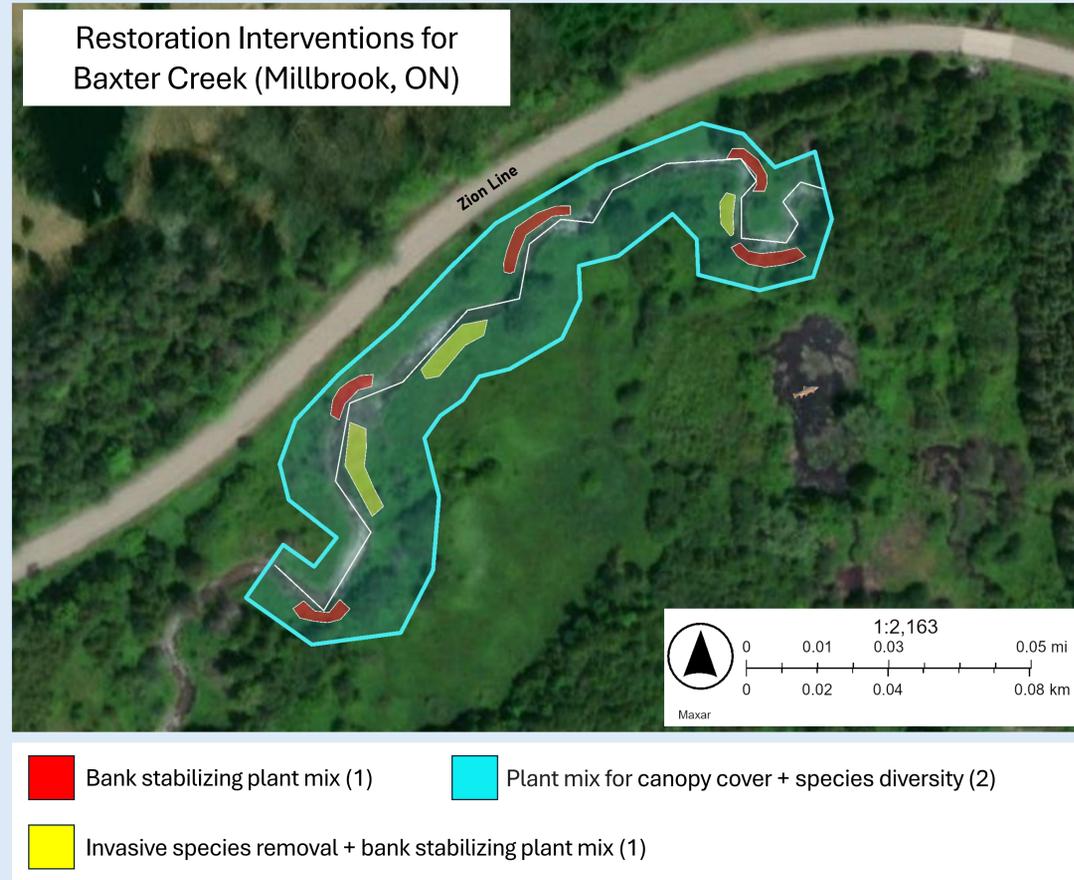
BACKGROUND

- Brook trout (speckled trout, brookies) are a sought-after game fish in Baxter Creek
- Brook trout are very picky in their habitats
- There is an established population upstream in Baxter Creek, but not many downstream
- Baxter Creek at Zion Line has potential to be great habitat area, but some key elements are missing...

LIMITING FACTORS FOR BROOK TROUT

Parameter	Ideal	Baxter Creek @ Zion Line
Temperature (°C)	< 19	14.6 <small>July average, 2024</small>
Food Availability	Benthic invertebrates (benthos)	Lots of benthos!
Shade Cover	Moderate (50-75% midday)	Very Low (0-25%)
Preferred Habitat Availability	Abundant Pool Area	Abundant Pool Area!
Spawning Habitat Availability	Groundwater inputs	Not here, but a lot upstream!

METHODS



RESTORATION RECOMMENDATIONS

While many parameters at Zion Line in Baxter Creek meet the requirements of Brook Trout, there are some aspects that do not. To fix this, we can:

- 1. Plant native species to prevent further bank erosion**
To address this, more native plants with deep, fibrous root structures will be planted (ex. serviceberries, willows, etc.) to keep soil from breaking apart further and keep any undercut banks stabilized.
- 2. Plant native species to increase canopy cover**
This issue will also be addressed by the planting of more native species, taking into consideration how large their canopy stretches (ex. shrubs/trees will be better than grasses due to their larger canopy). This will provide more shade, which is desirable to brook trout.

- 3. Adding cover objects to stream**
Cover objects provide protection from predators. Adding things like logs and large rocks into the stream will provide more areas for brook trout to hide

Once these aspects are addressed, this section of Baxter Creek will be much more suitable for brook trout and will be able to effectively support this species.

Researcher: Jessica Livingstone

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Faculty Supervisor: Dr. Autumn Watkinson

Host Supervisors: Freshwater Conservation Canada (Millbrook Chapter)

TCRC Supervisor: Matthew Walmsley



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