

MiCorps Volunteer Stream Monitoring Program Monitoring Fact Sheet



Organization Name: Grass River Natural Area, Inc.

Monitoring Program Name: Grass River Natural Area, Inc. Stream Watch

Watersheds Monitored: Elk River Chain of Lakes (specifically, Finch Creek, Cold Creek, and Shanty Creek)

County(ies): Antrim

Program Manager:
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Fact Sheet Updated: 12/6/21



PROGRAM DESCRIPTION:

The Grass River Natural Area, Inc. (GRNA, Inc.) Stream Watch project officially began in 2013 with a start-up grant from MiCorps. Since then, GRNA, Inc. staff and trained volunteers have been surveying the benthic macroinvertebrates on the three coldwater tributaries to Grass River each year. Site locations include four sites on Finch Creek, four sites on Cold Creek, and three sites on Shanty Creek. The creeks are rotated each year and are therefore surveyed twice (once in the spring and once in the fall) every three years. Each spring, in addition to macroinvertebrate sampling, staff and volunteers also conduct full stream habitat assessments, and after the discovery of invasive New Zealand mudsnails (NZMS) at the Shanty Creek Grass River site in May 2021, project personnel also conduct visual NZMS surveys each fall. The results of these macroinvertebrate, stream habitat, and NZMS surveys allow GRNA, Inc. to regularly evaluate the overall health of these three creeks, providing early detection of any measureable changes in water quality.

PROGRAM FAST FACTS

of Years Monitoring: 9

Volunteers participating annually: 10-25

Active Monitoring Sites: 11

Excellent Quality Sites:

Very Good Quality Sites: 2

Good Quality Sites: 3

Fair Quality Sites: 5

Fairly Poor Quality Sites: 1

Poor Quality Sites:

Very Poor Quality Sites:

Link to Monitoring Program:

<https://www.grassriver.org/research.html>

Link to Quality Assurance Plan:

<https://micorps.net/wp-content/uploads/2021/02/Grass-River-QAPP-2021-web.pdf>



RESULTS

Spring 2021

Shanty Creek Pinebrook: 44.9352, -85.1945
WQR: 3.47 Excellent
Comments: This site consistently scores well – either very good or excellent. It's also one of our only sites with a gravel substrate and fast-flowing riffles.

Shanty Creek Rail Trail: 44.9297, -85.2030
WQR: 6.2 Fair
Comments: Typical score for this site. We hypothesize that the presence of a large beaver dam immediately upstream of this site may be negatively affecting the macroinvertebrate assemblage here, possible via thermal pollution.

Shanty Creek Grass River: 44.9292, -85.2088
WQR: 6.4 Fair
Comments: New Zealand mudsnails found here for the first time ever in the Elk River Chain of Lakes! The habitat is a slow-moving, shallow run with lots of woody debris.

Fall 2021

Shanty Creek Pinebrook: 44.9352, -85.1945
WQR: 4.32 Very Good
Comments: New Zealand mudsnails found here for the first time, albeit at low densities, in the slower side channels. Their presence does not seem to be significantly impacting the macroinvertebrate community yet.

Shanty Creek Rail Trail: 44.9297, -85.2030
WQR: 7.0 Fairly Poor
Comments: Automatic score due to collecting fewer than 60 critters. We suspect this is due to lower than normal survey effort, as we usually are able to collect more than 60 insects here. We are working with these volunteers to review sampling protocols.

Shanty Creek Grass River: 44.9292, -85.2088
WQR: 4.46 Very Good
Comments: Improvement from typical scores, though a plethora of amphipods could have "driven up" the score. NZMS still present, but densities do not appear, at least qualitatively, to be substantially different than spring densities.