

**Project Name** | Brown's Creek Biological Assessments

**Date** | 5/9/2023

**To / Contact info** | BCWD Board of Managers

**Cc / Contact info** | Karen Kill, BCWD Administrator

**From / Contact info** | Mike Majeski, Conservation Biologist

**Regarding** | 2023 Macroinvertebrate Assessment Proposed Scope of Services

## Background

The BCWD has been conducting routine fish and macroinvertebrate assessments since 2015 to monitor changes in the biological community of Brown's Creek following implementation of numerous water quality projects in the watershed (see implementation activity under Stream Management, Goal A of the 2017-2026 Watershed Management Plan). The goals of BCWD's routine fish and macroinvertebrate assessments are to develop a more robust understanding of the variability of species composition over time and to develop a long-term trend analysis of changes to the biological community in Brown's Creek in response to on-going water quality projects implemented in the watershed. Macroinvertebrate assessments have been conducted annually as populations and species diversity can change quickly due to changes in their environment, in part due to their short life spans and sensitivities to changes in water quality. Conversely, fish have longer lifespans and populations are generally slower to respond to changes in their environment compared to macroinvertebrates. Fish surveys were conducted by Saint Mary's University in 2017 and 2019, and historically, the MNDNR has been conducting fish surveys on a 5-7 year cycle, with the last survey conducted in 2021.

## Scope of Services

This scope of services is to continue annual sampling of macroinvertebrates at the three historical sites along Brown's Creek (Headwaters, Middle Reach and Gorge). Macroinvertebrate sampling will occur in September of 2023, and specimens will be sent to RMB Labs for taxonomic identification. The results of the assessments will be summarized in a brief technical memo that will include a comparison of the 2023 data to previously collected data (2015-2022).

## Deliverables

- Macroinvertebrate assessment technical memorandum and data submission to MPCA

## Estimated Hours and Cost

EOR - 16 hours: \$2,567

EOR - mileage and sample shipments: \$60

RMB - macroinvertebrate specimen ID & report: \$1,170

Total: \$3,797

## Board Action

1. Approve this Scope of Services in the amount of \$3,797 from account number 947-0018 to conduct the 2023 Macroinvertebrate Assessment as outlined above.