



## Challenge #2: Macroinvertebrates of the Red River Basin

At a glance: In this activity you will be learning about macroinvertebrates, how to sample for them, and how to identify individual specimens. You will then use this knowledge to identify macros and estimate water quality at sampling sites throughout the basin.

You will begin by going through the *Introduction to Macroinvertebrates Presentation*. In the introduction you will be covering these questions:

- What is a macroinvertebrate?
- How do you identify a macroinvertebrate?
- Where do macroinvertebrates live?
- What is the purpose of macroinvertebrate sampling?
- How do you fill out a pollution tolerance index rating sheet?

Once you have completed the Introduction to Macroinvertebrates, you will begin working on identifying specimens collected from 5 sampling sites within the Red River Basin. You will find an interactive map at the end of the intro. For each sampling site you will be completing the following:

- Identify 4 specimens using a dichotomous key
- Complete a Pollution Tolerance Index (PTI) rating sheet
- Submit your PTI rating with the form included on the left side of the PTI section
- Submit a final review at the end of each site.
  - Make sure you complete each step for each sampling site:
    - Tewaukon NWR - Wild Rice River
    - Hawley, MN - Buffalo River
    - Fisher, MN - Burnham Creek
    - Red Lake Falls, MN - Clearwater River
    - Minto, ND - Forest River

***\*Complete each activity as an individual and then as a team. You will be asked to give an email address for each submission. You will receive a record of your answers, so that you can review and discuss your answers when you come together as a team. The correct answers will be released when the final Forum scores have been calculated.***

~ Continue on back ~

### How you are scored:

- Individual submissions
  - You will receive one door prize entry for each correct answer in the Reviews.
  - **DUE MARCH 21<sup>ST</sup>**
- Team submissions
  - Review scores from each site will be added to your final team tally that will be used to determine the winners of the 2021 River Watch Forum.
  - **DUE MARCH 26<sup>TH</sup>**
- The Final Forum Submission (**DUE MARCH 26<sup>TH</sup>**) includes a written portion related to the macroinvertebrate activity – take notes on your process and what you are learning during Challenge #2 to use during this final step.