**READ ME: National Park Service-Great Lakes Inventory and Monitoring Network (GLKN) R-Code for Calculation of Large River Index of Biotic Integrity.**

Richard Damstra, National Park Service GLKN Aquatic Ecologist

v0.1 (Beta) September 2024

R-code written to calculate Wisconsin large river index of biotic integrity (IBI), method published in :

Brian M. Weigel and Jeffrey J. Dimick "Development, validation, and application of a macroinvertebrate-based Index of Biotic Integrity for nonwadeable rivers of Wisconsin," Journal of the North American Benthological Society 30(3), 665-679, (31 May 2011). https://doi.org/10.1899/10-161.1

Link to paper: <https://www.jstor.org/stable/10.1899/10-161.1?item_view=read_online>

Built to work with NPS-GLKN Large River Macroinvertebrate data from NPS Data Store:

Damstra RA and Hester CM. 2023. Saint Croix National Scenic Riverway Invertebrate Data Package by the Great Lakes Inventory and Monitoring Network. National Park Service. Fort Collins CO https://doi.org/10.57830/2301852

Data Link: <https://irma.nps.gov/DataStore/Reference/Profile/2301852>

To Run:

Download the data from the NPS datastore (link above) make sure you are downloading the latest version of the data. Save the data to the location that you want to be your working directory. You will need to change the file path in the “setwd” function and make sure the .csv file name in the path matches that of the file you saved.

Additionally, you will need to change the “output\_dir” object, “ggsave” arguments, and “write.csv” paths to a path (or paths) that makes sense for your situation.

Contact Rick Damstra at [Richard\_damstra@nps.gov](mailto:Richard_damstra@nps.gov) or [damstra.richard.a@gmail.com](mailto:damstra.richard.a@gmail.com)