



**Kayla Bowyer**

*Assessing the Effects of Land Use on the Little Beaver Creek Water Quality using Macroinvertebrates.*

Little Beaver Creek in Columbiana County, Ohio, is a State and Federal Scenic River and home to many wildlife species (Ohio EPA 2019). The purpose of this study was to monitor the health of the stream using macroinvertebrates. Three stream sites were selected based on the surrounding human land use: agriculture, urban, and forested state park. In fall 2019, macroinvertebrates from each site were collected using a Surber Sampler and Hester Dendy traps and preserved in 70% alcohol. Samples were identified, counted, and used to calculate biodiversity indices and determine the water quality. The Cumulative Index Value indicated that the water quality of the sites ranged from fair to excellent. The three sites vary in macroinvertebrate diversity according to the Shannon Wiener Index and Simpson's Index. The results of this study indicate there is little to no impact of land use on the water quality of Little Beaver Creek.