

## **ABSTRACT**

**THESIS:** Long-Term Changes in Benthic Macroinvertebrate Assemblages of the West Fork White River (1979-2015)

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We examined long-term benthic macroinvertebrate data from the West Fork White River in Muncie, Indiana, for temporal and spatial variation. Collections were annual from 1979-2015 by the Muncie Sanitary District Bureau of Water Quality. Spatial, functional, and sensitivity traits of macroinvertebrates were analyzed for temporal trends. We hypothesized that macroinvertebrate assemblage structure changed following the Clean Water Act of 1972. Significant temporal and spatial variation were detected that corresponded with improvements in water quality. Macroinvertebrates upstream of Muncie had different temporal assemblage structure than in Muncie and downstream from Muncie.