

**Evaluation of the Fish Community and Related Ecological Features
of the Middle Branch River, Osceola County**

Richard P. O'Neal

*Michigan Department of Natural Resources
Fisheries Division
Muskegon DNR Office
7550 E. Messenger Road
Twin Lake, MI 49457*

Abstract.—An evaluation of the Middle Branch River was conducted between 1998 and 2001 to assist in developing resource management decisions. Fish species composition, fish abundance, fish biomass, water temperatures, and water discharge and yield were evaluated. Water quality habitat was degraded downstream of Marion Impoundment. The fish community of the river changed from primarily cold-coolwater species upstream of Marion Impoundment to primarily cool-warmwater species downstream of the impoundment. Coldwater habitat could be restored in approximately 16 miles of the Middle Branch River by removing the detrimental water quality effects of Marion Dam and Impoundment.