

## **An Assessment of the Huron River Walleye Population**

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*Abstract.*—The 1992, 1993, and 1994 walleye *Stizostedion vitreum* spawning runs in the lower Huron River, a Michigan Lake Erie tributary, were surveyed using DC electrofishing equipment. A total of 1,573 walleye were collected during 52.6 hours of shocking, for a catch per effort of 29.9 walleye per hour. Annual population estimates for 1992, 1993, and 1994 were 3,424, 7,821, and 5,180, respectively. These were generated using the Schnabel method based on recaptures of tagged walleye. Females predominated, accounting for 55% to 68% of the catch annually. Visible signs of lymphocystis infection ranged from 10.2% to 17.9% of the fish examined. No walleye have been stocked in the lower Huron River. Age distribution indicated strong walleye year classes in 1985, 1986, 1990, and a poor year class in 1992. This pattern closely reflected documented strength and weakness of walleye year classes in Lake Erie. Collection of previously tagged fish indicates a portion of this population returns annually, suggesting a discrete stock. The dam and weir in the city of Flat Rock prevent walleye movement upstream. Stock assessment efforts on small tributaries, such as this one, will provide a broader understanding of walleye population dynamics in Lake Erie.

The Huron River originates in Oakland County and flows southwest, then southeast approximately 218 km to Lake Erie. It is a highly fragmented river system with 98 known dams, 19 of which are located on the mainstem (Hay-Chmielewski et al. 1995). The first encountered barriers, traveling upstream approximately 16 km from the mouth, are located in the city of Flat Rock. Here a series of two barriers exist, a water level control dam for the Flat Rock Impoundment (head about 4 m) preceded first by a low head

weir (head about 1.3 m) that is subject to seasonal flooding. The low head weir may be a physical barrier to walleye movement upstream.

Anecdotal reports of spawning walleye in the lower Huron River have been common since the 1970s. Although walleye are stocked sporadically in some Huron River impoundments, no walleye have been stocked in the lower Huron River in recent times. In 1978, Merna and Schneider (Fisheries Division, Michigan Department of Natural Resources (MDNR) files) documented the