

STUDY PERFORMANCE REPORT

State: Michigan

Project No.: F-81-R-8

Study No.: 230484

Title: Population dynamics of yellow perch stocks in Michigan waters of Lake Michigan.

Period Covered: October 1, 2006 to September 30, 2007

Study Objectives: (1) To summarize pertinent existing data from state, federal, commercial, sport, university, and private sources; (2) to conduct assessment netting to establish baseline data and determine whether lack of recruitment and declining yellow perch numbers are problems in Michigan waters; (3) to determine whether factors of fish health might be affecting abundance or recruitment of yellow perch; (4) to reestablish a program of biological data collection for sport-caught yellow perch; (5) to investigate discreteness of yellow perch populations in Lake Michigan; and (6) to develop information and mathematical models from these data that will allow managers to predict, with some predetermined level of certainty, the outcome of various yellow perch management strategies.

Summary: Results of yellow perch research were summarized for various MDNR and external committee reports and publications. Assistance was provided to a decision analysis model development project, coordinated through the Lake Michigan Yellow Perch Task Group (Bence and Jones 2004). Presentations were also made at various scientific and public meetings.

Findings: Job 7 was scheduled for 2006-07, and progress is reported below.

Job 7. Title: Evaluate results, write 5-year report.—Results of yellow perch research were evaluated, and summaries were prepared for MDNR and external committees and for publication in peer-reviewed journals. “Biophysical model of larval yellow perch advection and settlement in Lake Michigan” is in press at the Journal of Great Lakes Research. “Yellow perch stock structure in Lake Michigan: an analysis using mark-recapture data” is in review at the Canadian Journal of Fisheries and Aquatic Sciences. “Characterization of the Lake Michigan recreational fishery for yellow perch, 1985–2002: using creel survey data in yellow perch management” is in preparation. The following publications are complete and included with this report:

Clapp, D. F., and J. M. Dettmers. 2004. Yellow perch research and management in Lake Michigan: evaluating progress in a cooperative effort, 1997-2001. *Fisheries* 29(11):11-19.

Fitzgerald, D. G., D. F. Clapp, and B. J. Belonger. 2004. Characterization of growth and winter survival of age-0 yellow perch in southeastern Lake Michigan. *Journal of Great Lakes Research* 30:227–240.

Makauskas, D., and D. Clapp. 2006. Status of Yellow Perch in Lake Michigan, and Yellow Perch Task Group Progress Report. Minutes of the Lake Michigan Committee. Windsor, Ontario. 23 pages.

Makauskas, D., and D. Clapp. 2007. Status of Yellow Perch in Lake Michigan, and Yellow Perch Task Group Progress Report. Minutes of the Lake Michigan Committee. Ypsilanti, Michigan. 22 pages.

Wilberg, M. J., J. R. Bence, B. T. Eggold, D. Makauskas, and D. F. Clapp. 2005. Yellow perch dynamics in southwestern Lake Michigan during 1986-2002. *North American Journal of Fisheries Management* 25:1130–1152.

References:

Bence, J. R., and M. Jones. 2004. Evaluating harvest policies for yellow perch in Lake Michigan. Michigan Sea Grant College Program, Integrated Assessment Project.