

Sportfishing Angler Surveys on Michigan Inland Waters, 1993-99

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Abstract.—Estimates of sport fishery angling harvest, catch and release, and effort were made using direct contact angler surveys for 50 inland lakes or rivers between spring 1993 and spring 1999. Purposes for angler creel surveys varied: 28% evaluated fish stockings, 24% estimated catch or harvest of a particular species of interest, 22% characterized the fishery, 22% both characterized the fishery and determined angler residency, and 4% estimated angling effort only. Thirty-five separate sites were surveyed, 30 lakes and 5 rivers. Some sites were sampled in multiple years and 1-14 surveys were conducted each year. Multiple fishing modes were sampled for a total of 69 mode-site surveys. Of these mode-specific surveys (MSS), 72% used indirect counts of anglers and 28% used direct counts. Most MSS counts (59%) used a roving count method, 22% used the progressive method, 16% used the proportional method, and 3% used aerial surveys. Most MSS indirect counts were of boats (40%). Trailer-vehicle counts represented 25%, and counts of ice shanties 8%, of MSS. Three percent of MSS collected counts only; catch or harvest was not estimated. Four interview types were collected: access angler party interviews (42%), voluntary-access party interviews (27%), roving party interviews (16%), and roving individual angler interviews (12%). Count and interview data were collected by Fisheries Division employees or employees of cooperating agencies at some locations, and by volunteers at others. Sources of data and specific methodology, or appropriate references, are given for each reported survey to allow duplication at a later date and to clarify limitations of each. In addition to harvest, catch-and-release, and effort estimates, many surveys collected angler residency, bait type used, targeted effort, number of fishing trips taken per day, and angler gender. Where possible, these data were summarized by month and season. To more thoroughly compile existing Michigan sport angler survey estimates, reference sources for additional surveys are given.

Introduction

Angler creel surveys are conducted on Michigan waters to estimate angling effort and catch or harvest by species. These surveys may be conducted for specific purposes such as to: characterize the fishery (Herman 1989), evaluate fish stocking (Wagner et al. 1994), or evaluate fishing regulations (Lockwood et al. 1995). Different goals lead to different survey frequencies. For example, Fisheries Division has surveyed selected Great Lake ports annually since 1985 to measure long-term trends in angling effort and harvest (e.g., Rakoczy and Svoboda 1995b). These surveys provide essential information necessary to manage Great Lake stocks (e.g., Schorfhaar and Schneeberger 1997). However, surveys of smaller inland fisheries vary in frequency, purpose, and location (e.g., Ryckman and Lockwood 1985).