

STUDY PERFORMANCE REPORT

State: Michigan

Project No.: F-80-R-3

Study No.: 696

Title: Comparison of the recreational fisheries produced by stocking of spring and fall yearling brown trout, Lake Huron.

Period Covered: October 1, 2001 to September 30, 2002

Study Objectives:

- (1) To test the hypothesis that yearling brown trout stocked in fall will contribute more to angler harvest than smaller yearlings stocked in spring in Thunder and Tawas bays, Lake Huron;
- (2) Determine whether the return to creel of fall-stocked brown trout is sufficient to compensate for their higher cost;
- (3) To examine food habits and distribution of yearling brown trout during their first 30 days after stocking.

Summary: This was the first year of funding for this project. The two study groups were stocked with inconsequential departures from the stocking plan at Tawas and Thunder bays. Netting was conducted as planned after stocking in 2002. Creel census was conducted, however, few brown trout from either study group were observed in the harvest. Creel census observations were supplemented with biological data collections from angler harvest during the 2002 annual Alpena Brown Trout Festival. Data from stocking, spring netting, creel survey, and Festival survey are being entered into a database. Analysis of results from 2002 will be presented in next year's report.

Findings: Jobs 1, 2, 3, and 4 were scheduled for 2001-02, and progress is reported below.

Job 1. Title: Stock test groups of brown trout during spring and fall.—Stocking began in 2001, a year prior to the initiation of this study, in anticipation the work would be funded. Stocking to date is summarized below:

Location	Test group	Fin clip	2001	2002
Tawas	Spring	Left ventral	60,000	Approx 60,000
	Fall	Right ventral	33,415	Approx. 30,000
Thunder Bay	Spring	Left ventral	72,967	Approx. 60,000
	Fall	Right ventral	35,417	Approx. 30,000

The study plan called for stockings of 30,000 fall yearlings and 60,000 spring yearlings at each site annually for three years. The actual numbers of fish in 2001 were somewhat higher than requested. The study documents called for right-ventral fin clips for spring plants and left-ventral fin clips for fall plants; however, the fin clip allocation was reversed by the hatchery. The study plan calls for weighting results for number of each study cohort stocked. The reversal of fin clips will be maintained for all three years of the study. Thus, neither change in stocking will affect the outcome of the study in any way.

Stocking in 2002 was conducted according to the study plan. Numbers for 2002 are approximations until the stocking data base is updated with final numbers by the Fish Production Section.

Job 2. Title: Assess conditions of the receiving water in Thunder Bay.—Six graded-mesh gillnets were fished in Thunder Bay according to study plan in June 2002 immediately prior to stocking. The objective was to assess relative abundance of alewives in spawning condition, and to index numbers of piscine predators at time of stocking. Alewives are thought to be an important buffer during the spring stocking period against predation by avian and piscine predators on newly stocked trout. Brown trout return to their stocking sites as they reach maturity in fall; thus, fall netting near the stocking site is being used to index relative abundance at sexual maturity of the two study groups. The data from spring 2002 have been entered and most of the catch has been aged. Fall 2002 netting is beginning at time of this report. Results of 2002 netting will be presented in next year's progress report.

Job 3. Title: Determine return to creel of stocked fish.—Creel census was conducted as per the study plan. Biological data were recorded from all brown trout observed during creel census activities. Few brown trout of either study group were observed in the angler catch, however. To augment creel observations of brown trout, Alpena Station personnel were assigned to monitor recreational catch during the annual Alpena Brown Trout Festival during July 2002. This additional effort may, in combination with observations during scheduled creel census periods, provide sufficient numbers of observations to permit comparison of the two study groups in the recreational fishery. Analysis of creel census data will be done by Study 427 personnel at the Charlevoix Fishery Station. The Alpena Station is entering the Brown Trout Festival data into a database. Results from both data sources will be summarized in next year's progress report.

Job 4. Title: Data analysis, preparation of annual and final reports, and presentation of findings at technical and public meetings.—Data from jobs 1-3 are presently being entered into a database and analyzed. The annual progress report was prepared as per study documents. The Project Leader presented the study plan and solicited support of the study by making presentations to local recreational fishing groups and the Alpena City Council.

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Date: September 30, 2002