

## Abstract

The potential effects of delaying the opening of fishing season from the end of April to the beginning of July were studied in a small lake. Fingerling rainbow trout (Salmo gairdneri) were planted each fall for 5 years. No public sportfishing was actually allowed in the lake, but sportfishing was simulated by harvesting a quota of fish with gill nets from July-September of each year. Mortality, growth, and harvest of trout were monitored, and total annual biomass of trout produced in the lake was estimated. In addition, the seasonal growth and natural mortality rates found in the lake were used to estimate what yield and production would have been for two other regulations: (1) a 10-inch minimum size limit with a late April opening date (current statewide regulation), and (2) no size limit with a late April opening date. The weight of trout harvested under the delayed season was 33% higher than that estimated for the present statewide regulation (10-inch size limit) and 24% higher than that estimated for no size limit. Also, the average size of individual trout harvested was larger under the delayed season regulation. Annual biomass production for the delayed season was 7% higher than for the statewide regulation and 19% higher than for an early season opener with no size limit. Delaying the start of fishing season appeared to be a useful management option for diversifying the kinds of trout fishing opportunities available in small lakes. It could also be combined with catch-and-release fishing during the April-July period if the use of artificial lures was required to minimize hooking mortality.