

**Gull Lake as a Broodstock Source for  
Landlocked Atlantic Salmon, 1991-96**

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*Abstract.*—During the early 1980s Fisheries Division embarked on a program to establish a limited trophy fishery for landlocked Atlantic salmon *Salmo salar*. In order to maintain such a program, Gull Lake in Barry and Kalamazoo Counties was selected as the primary broodstock lake. Broodstock landlocked Atlantic salmon were collected from Gull Lake during 1991-1996. Gametes from mature salmon were first collected from Gull Lake in 1988. Salmon were collected during the same week each year in November. Sufficient numbers of broodstock salmon were collected each year except 1994, 1995, and 1996 in order to maintain the desired level of statewide program needs. Population estimates of age 2 and 3 salmon during the fall of 1991 were estimated at nearly 6.5 adults per acre. Fall returns of salmon to netting were variable. It was apparent that our stocking rate of 12 yearlings per acre was excessive based on a drastic reduction in growth rates. The switch to stocking fall fingerlings to avoid hatchery mortalities (due primarily to bacterial gill disease) was a complete failure, most likely due to predation. Fall fingerlings were also stocked at 12-13 per acre. It is recommended that future stocking rates for yearling landlocked Atlantic salmon be 1-2 per acre for sport fisheries, and 2-4 per acre annually for broodstock water. Because salmon are easy to catch, bag limits should remain low (1 per day in season).