



A toothy muskie caught in Illinois

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Illinois Hooked on Muskie

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Muskellunge (muskie) *Esox masquingoy* are considered a valuable sportfish as they can reach sizes that make them a terrific trophy fish species. Muskie were historically found in the St. Lawrence and Hudson River drainages, the Great Lakes region, the upper Mississippi basin, and the Ohio basin. The popularity of muskie as a trophy fish has increased the desire to introduce them into many lakes and reservoirs beyond their native geographic range. The original native geographic range of muskie in Illinois was confined to Lake Michigan and some lakes in northeastern Illinois. Natural populations were extirpated from Illinois waters many years ago.

In 1975, 700 muskie fingerlings were purchased and stocked into Spring Lake in Tazewell county in an effort to establish muskie brood stock to be used towards the development of a fishery in select Illinois waters.

Originally 27 lakes were selected, ranging from 25 - 24,580, for inclusion in the muskie stocking program. As interest in the program increased, the need arose to expand the muskie fishery further. Completion of the Jake Wolf Memorial Fish Hatchery allowed further introduction of muskie into numerous waters in Illinois and now 66 known lakes - either state owned, public owned, or cooperatively managed privately owned - have been stocked with the much sought after muskie.

Distribution has also expanded into many river drainages in Illinois, mostly as a result of escapement over impoundment spillways. Muskie have been collected from numerous rivers and their tributaries, most notably including the Fox, Green, Kankakee, Kaskaskia, Rock, Kishwaukee, Pecatonica, Illinois, and Mississippi rivers.



Mike McClelland obtained a B.S. in Zoology and an M.S. in Biology from Western Illinois University. He previously worked at the IL Natural History Survey's Illinois River Biological Station for 14 years before coming to IDNR in 2011 in the Asian Carp Program. Mike now serves as the Rivers, Reservoirs, and Inland Waters Program Manager.

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Collecting eggs from female muskie

The Division of Fisheries only stocks muskie into waters that are deemed likely to be suited for a quality fishery. Muskie are stocked as fingerlings on an annual, bi-annual, or tri-annual basis depending on assessments of stocking success. Stocking rates for muskie are generally 1-2 fingerling fish per acre and waters are prioritized for stocking based on a number of criteria used to determine waters of greatest value for stocking.

Since 1993 we've stocked a total of 4,591,271 muskie of which 458,500 ten-inch or greater fingerlings, this appears to correlate closely with the data showing that more and bigger fish are being sampled. Approximately 70 females and 120 males are collected for brood each year on average. About 20 females are actually spawned for eggs each year on average. Over 810,000 eggs are collected each year to produce 15,000 to 20,000 fish at 10 to 11 inches in length for stocking.

The main goal of muskie management in Illinois is to establish populations, sustained by supplemental hatchery stockings and creative regulation in an effort to maintain populations which produce a few large fish for trophy angling. Therefore, management relies almost completely on stocking and regulation to maintain a quality fishery. Trophy fish are usually relatively few in number, therefore a low possession limit and a high minimum length limit are used to regulate angler harvest to allow fish to reach larger sizes. In Illinois we limit harvest of muskie to one fish per day with a minimum state-wide length limit of 36 inches. Many waters implement a site specific 40-inch minimum length limit to harvest which ultimately requires catch and release for most fish caught by anglers. Some of the best muskie lakes in Illinois impose an even greater minimum length limit of 48 inches in an effort to develop a higher end trophy fishery.



Muskie fingerlings ready to be stocked

The objectives of management are to develop and maintain fish that average 13 pounds at 36 inches, enhance trophy opportunities to provide fish in the 20 to 40-pound range at the best suited waters, and continue to stock muskie fingerlings at a rate of 1-2 per acre for 4 out of every 6 years at approved waters.



Muskie eggs after collecton

One of the biggest tasks for successful muskie management is population monitoring. Population assessments have used a number of methods over the years, currently we use electrofishing, trap netting, and volunteer creel reporting. One of our objectives is to evaluate survey data for all muskie lakes to better refine our knowledge of relative population characteristics (relative numbers, biomass, body condition, etc.).

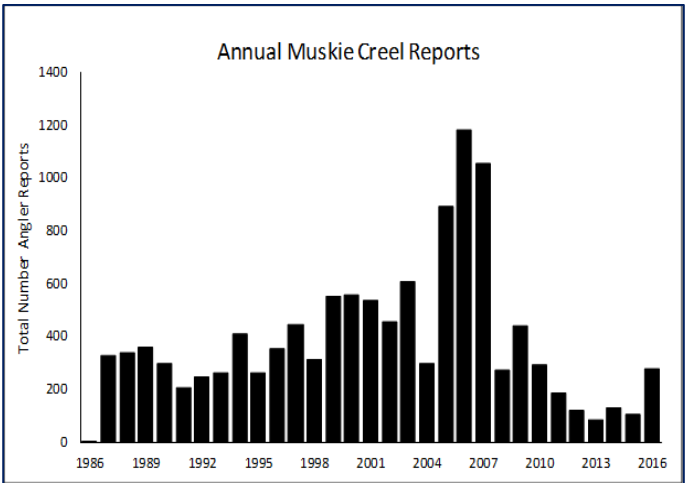
Population data may indicate a greater need for stocking in larger lakes and may also show need for changes to harvest regulations.



A 51.25 inch , 32 pound muskie collected during population survey

Overall, April, May, June, September, and October continue to be the most productive months to catch muskie as 70% are caught during these months. This also indicates that anglers are expending more fishing effort during these months. The monthly catch is higher April thru June at lakes located in the northern part of the state (Fox Chain O'Lakes, Heidecke Lake, Lake Carlton, and Shabbona Lake); whereas the monthly catch is as high or higher in September and October at lakes located in the southern part of the state (Kinkaid Lake and Lake Shelbyville). This is probably a function of anglers taking advantage of seasonal differences in climate that afford longer fishing opportunities in the fall for the southern lakes. Spring Lake North also appears to provide good late winter and early spring fishing opportunities as 50% of the muskie caught there were taken in January thru April.

In addition to field collection surveys, a volunteer creel survey was developed to gather angling information from anglers fortunate enough to catch a muskie in Illinois waters. The Muskie Creel Project was modeled after the very successful voluntary creel survey which Mike Sule, former District Fisheries Manager, designed and implemented on Pierce and Shabbona Lakes in 1985 and 1986. The Illini Muskie Alliance (IMA) partnered with IDNR on the creel survey and as the project gained traction, the IDNR and IMA implemented the program on a statewide basis in April of 1987. Funds for the project were originally provided by the IMA for the original printing of creel cards used to report muskie catches.



(Figure 1) Total annual reports of muskie catches to the muskie creel

From 1987 to 2016, a total of 11,636 muskies were reported caught from 68 water bodies (average of 404 muskies reported per year). The numbers of muskie increased over the years from 1987 to a peak of 1,181 reports in 2006 (Figure 1). Since then, catch reports have diminished with less than 200 muskie on average reported annually. The study also shows the largest maximum annual length of muskie increased from 1987 to 2011 before declining slightly as catch reports also declined. The average annual maximum size of reported muskie through 2016 is 49.2 inches. The largest muskie reported caught during this project is a 60-inch fish from Shabbona Lake in 2001.

Over the past 31 years, the Illinois muskie fishery has evolved into a great fishery in the Midwest and this could not have been accomplished without the dedication of IDNR fisheries biologists, hatchery managers and technicians, and without the ongoing support and assistance of the IMA, Illinois Muskies, Inc. Chapters, the Illinois Muskie Tournament Trail, and the muskie anglers who have participated in this project.

