



Biologist Report: Ice fishing creel survey at Norton Pond and South Bay of Lake Memphremagog

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Northern pike are becoming an increasingly popular target for anglers fishing Vermont waters. The 1991, 2000, and 2010 statewide angler surveys have shown an increasing trend in the percentages of anglers listing northern pike as their most preferred species. In the 2000 and 2010 surveys, pike were the second most popular target for ice anglers (yellow perch were #1).

Growing interest in northern pike over the past three decades has led some anglers to introduce the species illegally to new waters. Norton Pond and Lake Memphremagog are two of the many lakes around the state where northern pike have been illegally introduced. While these illegal introductions have certainly altered the existing fisheries in these waters through the addition of a new top predator, popular pike fisheries have developed at Norton Pond and South Bay of Lake Memphremagog, and both of these waters now have a reputation for producing trophy-sized pike.



Norton Pond
1/21/2012
19.6 lbs
David Reen

In an effort to better understand the changes in the fish populations and angling activity where northern pike have recently become established, Vermont Fish & Wildlife Department (VTFW) fisheries biologists conducted a creel survey at Norton Pond and South Bay of Lake Memphremagog to measure fishing effort, catch rate, total catch, and total harvest and to gauge pike angler opinions about VTFW's management of these popular, yet controversial, fisheries. Previous creel surveys demonstrated that the majority of pike fishing and harvest occurs in the winter, so the 2012 creel survey occurred only during the ice fishing season, starting in late December 2011, when ice first became safe.



South Bay
2/25/2012
24.4 lbs
Jason Driver

Creel Survey Results

Two primary pieces of information are collected during a creel survey: the total amount of fishing effort (actual hours spent fishing by anglers) and the average catch rate (number of fish caught per hour of fishing by each angler surveyed). These two values are multiplied to estimate the total catch for the season.

VTFW fisheries biologists estimated the total fishing effort on Norton Pond and South Bay of Lake Memphremagog by counting the number of anglers fishing at randomly selected times throughout the ice

fishing season. The biologists estimated catch and harvest rates by interviewing anglers to determine the number of fish they had caught, the number kept (harvested), and the amount of time they had spent fishing.

Table 1 provides a summary of some of the data collected. The amount of fishing effort was much higher at South Bay than at Norton, as were the resulting total catch and harvest. The majority of the anglers fishing Norton and South Bay said that they were targeting pike, but some anglers said that they were targeting perch or “anything that will bite.” The catch rate for pike was also higher at South Bay, mostly due to a higher catch rate of small pike. For pike over 20” in length, the catch rates were nearly identical: 0.094 pike per hour at Norton and 0.099 pike per hour at South Bay.

These catch rates imply that an angler could expect to catch approximately one pike over 20” long for every ten hours of fishing, on average. Interestingly, the majority of the pike were released, with only 81 pike harvested at Norton and only 376 at South Bay.

Table 1. Summary of data from the 2012 ice fishing creel survey at Norton Pond and South Bay of Lake Memphremagog.

Water	Season	Effort (total hours fished)	Catch rate (pike/hr)	Total pike caught (released + harvested)	Total pike harvested
Norton	1/21/12 to 3/15/12	3,176	0.118	374	81
South Bay	12/24/11 to 3/19/12	11,672	0.171	1,990	376

The high rate of catch and release fishing was related to the anglers’ motivations in fishing for pike on these waters. When asked by biologists, fewer than 25 percent of pike anglers at both waters said their main motivation was to catch pike to eat (Figure 1). The majority of pike anglers said they were seeking a trophy fish or that they just wanted to have a lot of action.

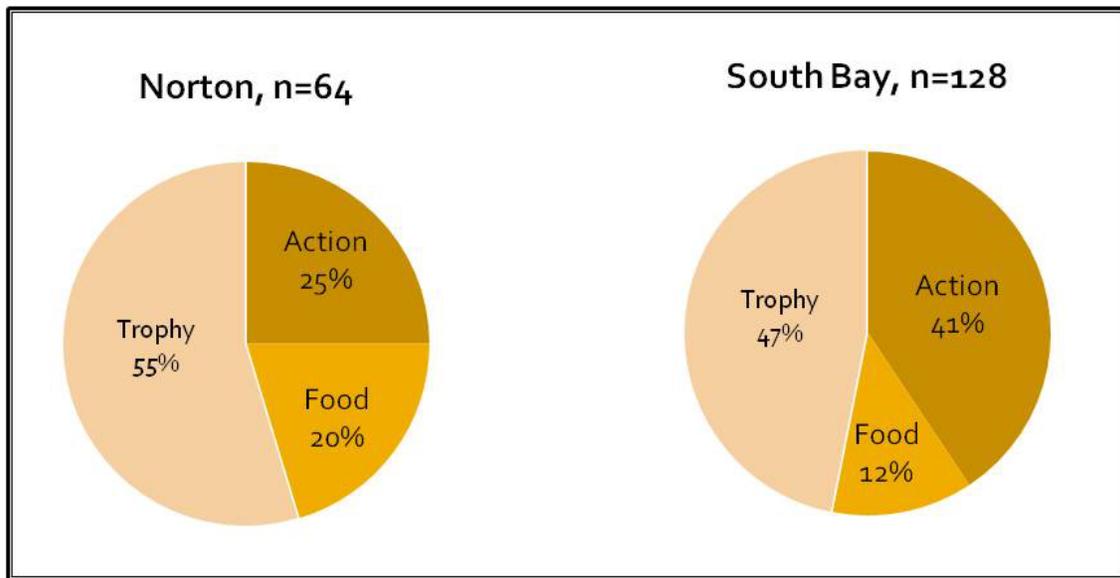


Figure 1. Angler responses to the question, “What best describes your main motivation for fishing for pike here today?” (n = the number of anglers interviewed)

As noted, both waters continue to produce large pike. The largest pike observed during the creel survey at Norton Pond weighed 19.6 pounds. South Bay produced a 19.7 pound pike and one that weighed 24.4 pounds. In addition to these fish, which department fisheries biologists actually observed, other large pike were reportedly caught that winter.

Despite the growing popularity of pike fishing across Vermont, anglers should not introduce this species, or any other species, to new waters. Moving live fish from one water to another is illegal. And, introducing new fish species to a water can have serious negative consequences for the fish community and fishing in the receiving water.

Pike, which are a large predatory species, can prey upon many other species that anglers like to target including trout, bass, and perch. Furthermore, moving fish from one water to another can result in the spread of fish diseases or other aquatic nuisance species such as zebra mussels.

If you have any questions about this creel survey or about pike fisheries in the Northeast Kingdom, contact Jud Kratzer at 802-751-0486 or jud.kratzer@state.vt.us.

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