Decades of dedication have yielded a unique walleye fisheries at the Fox Chain O'Lakes.

Creating a Walleye Fishery

Story and Photos
By Frank Jakubicek

(Photo by Frank Jakubicek, Sr.)

Just outside of Chicago in Lake and McHenry counties is a full-season recreational hotspot and one of the busiest water bodies in the nation. And during a significant portion of the year, it is walleye that lures visitors. But that wasn't always the case.

The Fox Chain O'Lakes system starts at the Wisconsin state line and encompasses some 7,100 acres above the Stratton Lock and Dam in McHenry and another 1,100 acres south to a second dam in Algonquin. More than 30 miles of navigable river exist from the Wisconsin line south to Algonquin—providing a lot of water and untold numbers of places for toothy fish to hide.

Since originally impounded in 1916, the Chain has drawn outdoor enthusiasts searching for a retreat from the grind of daily life. From a fishing perspective, the Chain offers some of the finest fishing opportunities in the state. More than 40 fish species are present, ranging from threatened and endangered minnows to spotfin shiners, common carp, channel catfish, trophy-sized muskie, crappie to 12 inches, bluegill to 8 inches—and large numbers of walleye.

The Chain O'Lakes is a public system, with more than 28,000 registered boaters plying its waters in 2005, where a lot of fishing takes place. The Chain supports school kids with night crawlers, multi-species tournaments between friends and co-workers, bass tournaments, crappie tournaments, guide services, retired folks finally fishing the water they grew up next to and two of the biggest tournaments in the nation—the Professional Walleye Tour and PMTT Professional Muskie Tournament Trail.

How can a system support such diverse recreational use and survive? One of the reasons is because the lake is "hyper."

The Chain O'Lakes is a hypereutrophic system, meaning there is an over abundance of nutrients—and where there are nutrients there's food.

Providing Chain O'Lakes anglers abundant walleye fishing opportunities means fisheries biologists set and haul in trap nets each spring to catch fish as they move near shore to spawn.

After eggs are stripped from a female walleye at the Spring Grove Hatchery, milt (sperm) is added and the fertilized eggs placed in incubating jars until they hatch.

Nutrients come from both point and non-point sources within the 1,248-square-mile watershed. Because hypereutrophic water is generally stagnant, ponds can be deadly but flowing systems have nutrients feeding the food chain and providing abundant food supplies.

Managing a system to provide a quality fishing experience is a balancing act between what Mother Nature throws out and intensive fisheries management. Usually some type of stocking is involved, generally as a short-term management tool to keep lakes from reverting to less diverse systems dominated by stunted crappie, bluegill, bullhead and carp. Stocking usually involves introducing predators to help control prolific species, and to supplement their population so larger numbers of adults mature thus increasing the chance of successful natural reproduction.

Managers generally strive to balance unbalanced fisheries. Supplemental stocking of predators, such as largemouth bass, channel catfish, northern pike, muskie and walleye, is a tool that may help balance a system and enhance recreation by providing popular sport fish.

Releasing walleye within the protective slot limit (18-24 inches) helps ensure numerous productive females are available each year for egg-take purposes.

A fisheries needs time to develop, diversify and balance, and often natural reproduction isn't enough to maintain a population over time if a lake has good public access and heavy recreational pressure. The walleye population in the Chain is a good example of this concept.

Walleye were relatively rare in the Chain in the 50s, 60s and 70s and often considered more of a fluke than a target species. State fisheries biologists working on the Chain cut their teeth on the complexities of the system, concentrating on improving largemouth bass populations until the 1980s when biologists were ready to move forward with a grand plan: Collecting walleye brood stock from the Chain and developing a fishery.

The idea was simple: Use local fish adapted to the conditions of the lake to benefit the local fishery.

By 1982, biologists had located good spawning locations and eggs were collected for the first time in 1984. The process has remained relatively the same for 22 years: The ice leaves. Nets are set. Walleye are collected. Fish are spawned. Fry and fingerlings are stocked. Fish grow. It freezes, thaws and the process is repeated.

Survival in the Chain is tough for a fish—it is one of the most heavily used water bodies in the nation, shallow (for a walleye lake), turbid and has a lot of organic muck on the lake bottom which depletes oxygen below the thermocline during summer. These factors create an environment opposite of the typical walleye lake where big fish escape hot water and find thermal relief at depths

During the production process, Spring Grove Hatchery technicians adjust the water flow and check jars of walleye eggs for fungi.

beneath 14 feet. But, as tournament pros and local fishermen now know, Chain walleye are often caught in less than 5 feet of water.

The Chain is evidence that all it takes to produce a fantastic fishery is time—and dedicated fisheries biologists.

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