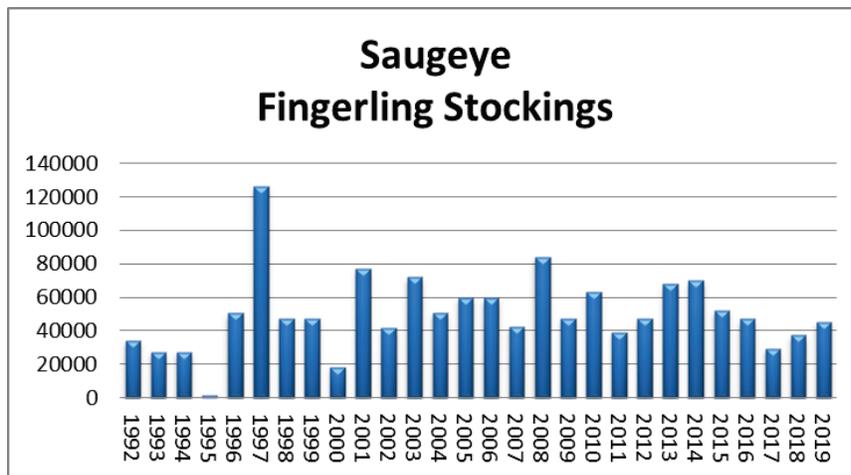


Evergreen Lake Saugeye

By Mike Garthaus, IDNR Fisheries Biologist, President, FOE

Saugeye were stocked into 21 Midwestern waters from 1992-1996. The goal was to evaluate stocking success and their ability to control panfish populations to produce more desirable fisheries. Evergreen Lake was one of six lakes in Illinois selected for the study. Even though the study ended in 1996, saugeye are still stocked and evaluated at Evergreen Lake. The duration of the study was relatively short for determining the impacts on panfish



populations, but the researchers concluded saugeye will survive in waters where walleye often will not, and that saugeye can effect changes in panfish populations that benefit anglers with larger fish.

In 1992, 34,300 1.5-inch saugeye were first stocked into Evergreen Lake. Since that time, the IDNR has stocked over 7.8 million fry, 2.3 million 1"-2" fingerlings, and over 250,000 2"+ fingerlings into Evergreen Lake.

Saugeye are better suited for more eutrophic waters than walleye and also have a greater tendency to feed on panfish when shad are absent or demonstrate low numbers.

What is a Saugeye?

IDNR collects female walleye each spring from the Fox Chain O' Lakes and male sauger from fishing tournaments on the Illinois River. Hatchery personnel at the LaSalle State Fish Hatchery cross the female walleye with male sauger to produce saugeye. The LaSalle Fish Hatchery produces all of the saugeye for the 17 lakes stocked with saugeye in Illinois.

In 2001, Dan Murphy caught a 9.68-pound saugeye on Bloomington's Evergreen Lake and that record still stands today. The IDNR conducts surveys to assess the saugeye fishery and several saugeye have been collected over the current state record during those surveys. The largest saugeye collected during an IDNR survey on Evergreen Lake was 12.7 pounds! That would shatter the current state record.



State record saugeye caught at Evergreen Lake by Dan Murphy on December 7th, 2001.

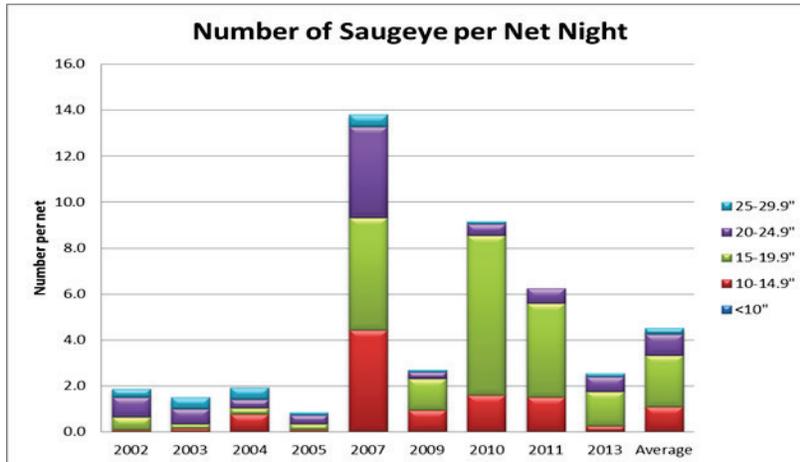
Why aren't there more large saugeye swimming in Evergreen Lake? The easiest answer is mortality. We can break that down into fishing mortality and natural mortality. Saugeye are stocked into Evergreen Lake as a bonus fish to anglers and allowing anglers to harvest saugeye is part of the plan.

Determining the ideal fish size and saugeye limits for anglers to keep are a difficult part of managing the saugeye fishery. Until April 1, 2015 the saugeye fishery was regulated with the statewide regulation of a 14" minimum length limit and a six per day harvest limit - the most liberal walleye/saugeye regulation in the state of Illinois. This regulation works on waterbodies where angling harvest is relatively low and/or the management objective is to allow high harvest of saugeye.

A 14" saugeye on Evergreen Lake is approximately 2 years old in the spring and weighs anywhere from 1.3 to 2.3 pounds. Male and female saugeye grow at different rates and this impacts their length and weight at a certain age.

Saugeye Surveys

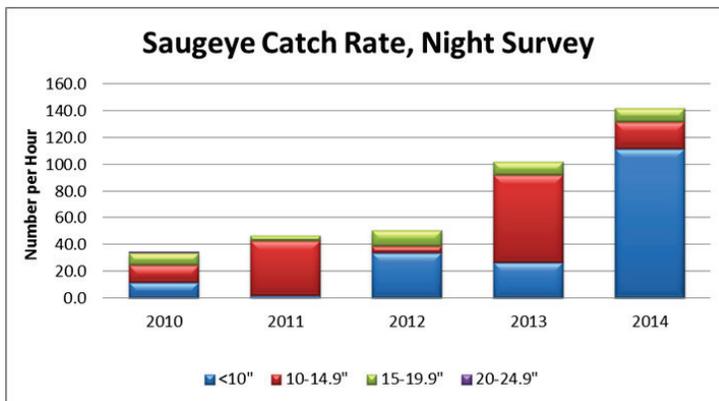
Saugeye fishing by anglers became more and more popular at Evergreen Lake. It increased so much that the number of saugeye collected during the spring netting survey



declined from almost 14 per net-night in 2007 to a little over 2 per net-night in 2013. The spring netting survey targets larger saugeye in the fishery than does the fall night electrofishing survey.) Water temperatures play a role in capturing saugeye in nets in

the spring. The timing of the survey was moved a few weeks earlier to increase catch rates and that is probably reflected in the large increase from 2005 to 2007. The reduction in numbers from 2007 to 2009 could have been due to water temperatures. There is clearly a declining trend in the catch rate of saugeye from 2007 to 2013.

The IDNR also conducts night electrofishing surveys in the fall for saugeye and the catch rate for saugeye in 2014 was an astounding 142 saugeye per hour of electrofishing, but the



catch rate for saugeye over 14 inches was only 21 per hour. No saugeye over 18 inches were collected in 2014. You might wonder why the catch rate in the netting survey was declining as the catch rate in the electrofishing survey was increasing. Remember that the

netting survey misses the smaller saugeye that are collected with electrofishing. The number of larger saugeye was declining while the number of smaller saugeye was increasing.

Even though catch rates were improving during the night electrofishing survey, it was obvious the quality of the saugeye fishery in Evergreen Lake was not improving overall. There

was almost no chance of catching a state record saugeye. Did anglers really care about that? Did anglers just want to harvest 2 year old saugeye? These questions are tough to answer. I do know that you can't please everyone and sometimes you just have to make the call.

Regulation Changes Helped Rebuild Saugeye Population

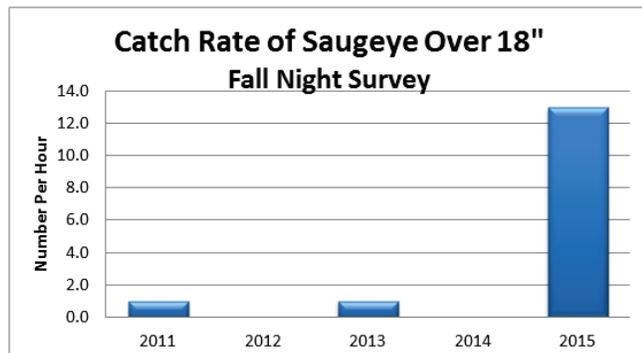
On April 1, 2015 the saugeye regulation at Evergreen Lake was changed to an 18" minimum length limit and a 3 per day harvest limit. Wow, 18 inches! Really?! (Many anglers questioned such a high length limit.) Let's go back to the growth rate topic. The bass in Evergreen Lake are regulated with a 15" minimum length limit and it takes a bass 4 to 5 years to reach that size. A 9" black crappie on Evergreen Lake is over 3 years old. It takes a saugeye approximately 3.5 years to reach 18 inches.

The theory was that changing the regulation from a 14" minimum length limit to an 18" length limit would protect the saugeye for at least one more year. Reducing the harvest limit from six to three would reduce angling mortality, meaning there would be more saugeye to go around.

In the fall of 2015, the catch rate of saugeye 18 inches and larger, collected during the night survey, went from 0 in 2014 to 13 per hour. It took less than 7 months of protecting the saugeye population to increase the number of saugeye over 18 inches.

The first saugeye over 27 inches since 2007 was collected during the spring

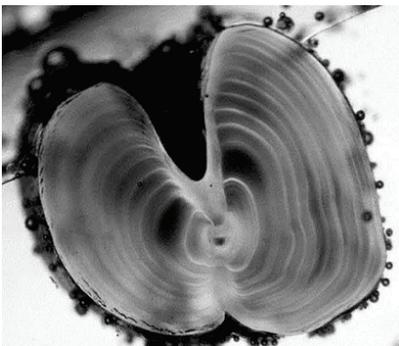
netting survey in 2017. In 2018, there were two saugeye collected over 27 inches! The highest catch rate for saugeye over 22" during the spring netting surveys was in 2017. The IDNR has been conducting spring netting surveys at Evergreen Lake since 2002 and three of the top five catch rates for saugeyes over 22" have been since 2017.



In 2018, the IDNR contracted with the Illinois Natural History Survey (INHS) to determine growth rates of saugeye, walleye, and sauger across Illinois. The INHS has been assisting the IDNR in collecting saugeye in several Central Illinois lakes, including Evergreen Lake. The INHS is in the process of aging 275 saugeye from Evergreen Lake. The data collected will provide valuable information for the management of saugeye at Evergreen Lake and also other saugeye fisheries in the state.



Some of the fish were removed from Evergreen Lake to remove structures from the fish



Walleye Dorsal Spine used for aging

for aging. Part of the research project is to determine if dorsal spines can be used from saugeye for aging so that we can release the fish and still get an accurate age.

Research from Wisconsin showed that spines work well for walleye less than 18 inches. Growth rates are an important part of fisheries management.

Saugeye Future

Only time will tell if Evergreen Lake can produce another state record saugeye. It takes time to build a strong fishery and one survey can give you false hope of big fish right around the corner or it can hide the true potential of the fishery. Unfortunately, no spring netting survey was conducted in 2020 so we will have to wait until next year to see if the fishery is still improving.

There's more to the saugeye fishery at Evergreen Lake than trying to produce large fish but, wouldn't you like to see another state record saugeye be caught at Evergreen Lake? It has been almost 20 years!