



# EMIQUON PRESERVE

## THOMPSON LAKE

### FISHERIES STATUS SUMMARY

The Illinois Department of Natural Resources has the responsibility to provide diverse, outdoor recreation for the citizens of, and visitors to the State of Illinois. One means of providing for recreational opportunity has been to form cooperative fisheries management agreements with nongovernment organizations. Thompson Lake at The Nature Conservancy's Emiquon Preserve is one such area.

**LOCATION and DESCRIPTION:** The Nature Conservancy's Emiquon Preserve is adjacent to the Illinois River in Fulton County, Illinois, approximately 1 mile northwest of Havana and 3 miles southeast of Lewistown. Since 1996, the Conservancy has acquired nearly 8800 acres at the site and currently owns and manages approximately 7100 acres. Through the US Department of Agriculture's Wetland Reserve Program (WRP), the Natural Resources Conservation Service manages a 30-year conservation easement on a total of 6285 acres of the Conservancy's Emiquon Preserve. The Nature Conservancy's main goal for the Emiquon Preserve is the restoration and conservation of natural ecological processes and habitats that sustain native plant and animal communities of the Illinois River Valley.

Historically, what is now the Emiquon Preserve included two backwater lakes, Thompson Lake and Flag Lake, and was argued to have been one of the better hunting and fishing complexes in the Illinois River Valley if not the whole Midwest. From the early 1920s through the present, most of the property currently owned by the Conservancy was managed for agriculture, most recently primarily for intensive row-crop production. In 2007, the site pumps were shut off and the water level in the site was allowed to rise and reform the lakes. The current Thompson/Flag Lake covers approximately 4,000 surface acres. The lake topography is two large shallow basins with deep water ditches dissecting it. In midsummer, the lake basins can be 70% covered with aquatic vegetation.

Public access to the water bodies on the Emiquon Preserve is limited to registered boats. A free annual registration to access the site for all users is required and available at the adjacent Dickson's Mounds State Museum. Only electric trolling motors are allowed. No gas motors are allowed on the boats. No bank fishing is currently allowed. A concrete boat ramp with a gravel parking lot for 25 vehicle/trailers is present and a boardwalk, visitor area and canoe launch.

The site contains an inviolate refuge from public access. This refuge will attempt to serve as a limited disturbance area for all of the wildlife utilizing the Preserve. This refuge encompasses approximately the eastern half of the former Thompson Lake basin, all of the former Flag Lake basin and then to the Illinois River levee. This refuge area is designated with marked buoys and signs. The access time to the water bodies is sunrise to sunset. This access is year round, except during the Central Zone waterfowl hunting season. During the Central Zone waterfowl hunting season, no water access is allowed on hunting days. Currently waterfowl is allowed 3 days a week, thereby allowing fishing access 4 days a week. Ice fishing is allowed when practical on the entire lake basin.

**HISTORY & STATUS of the SPORT FISHERY:** In 2007, The Nature Conservancy entered into a cooperative fish management agreement with the Illinois Department of Natural Resources for the Emiquon Preserve. The water bodies on the site underwent an immediate fish rehabilitation project to remove exotic fish species. The IDNR initiated fish restocking in 2007 with brood fish that included: largemouth bass, white crappie, black crappie, bluegill, bowfin, spotted gar, channel catfish, brown bullhead, warmouth, orangespotted sunfish, pumpkinseed sunfish, golden shiner, brook silverside, and blackstripe topminnow. IDNR fish stockings and surveys have resulted in the potential of at least 43 fish species now present in the lake.

**Largemouth Bass:** In 2020, the largemouth bass population was sampled by 317 fish by electrofishing. The largemouth bass population was defined by a very poor year of recruitment with only 1 fish sampled from 2.8 to 6.0 inches.

The fall 2020 electrofishing survey indicated that a high density bass population is still present. The collection rate of stock size bass (over 8 inches) was still very good at 2.5 fish per minute and 246 pounds per hour of electrofishing in 2020. This was a rebound from the .9 fish per minute and 62 pounds per hour collected in 2019.

The bass population structure is currently skewed high due to the limited number of fish under 12 inches in length. The PSD value of 84 is above the typical objective of a PSD index rating of from 40 to 60. In other words, 84% of the Emiquon bass population was over 12 inches in length. The RSD15 value of 53, RSD18 value of 11 and RSD19 value of 5 were very high. The body Condition rating (Wr) did remain in the good level at an average of 99 in 2020. The previous 5 years had shown a trend of lower body condition values into the 80's for the bass from 16 to 19 inches. The 2020 largemouth bass data did not show that trend.

Overall, the largemouth bass population appears to be at a balance with the current forage and water conditions available in the Emiquon Preserve. The main concern will be the need for stronger year class production and recruitment over the next several years.

The goal of the initial 18 inch minimum size limit was to create a high density bass population. The predation exerted by this population is necessary to control the exotic and invasive fish reproduction and recruitment that may occur. This predation is also the key to maintain the native species balance within the habitat.

**Bluegill:** In 2020 the bluegill population was sampled by 463 fish by Electrofishing. The survey samples represent a bluegill population with a good distribution from 1.6 to 9.4 inches long. The bluegill recruitment was lower in 2020 than over the past 10 years. The body condition remained good with a Wr of 99 for the fish over 5 inches. The bluegill electro fishing collection rate for stock size fish (over 3.1 inches) was 3.5 fish per minute and 26 pounds per hour. This is a high point since the 2.4 fish per minute in 2012.

The bluegill PSD value of 68 for electrofishing was well above the objective range of 20 to 40 in 2020. And it is a reflection of the population being dominated by fish over 6 inches in length. The bluegill RSD7 was at 21 which is close to the objective range of 5 to 20, and close to 5 year average of 25. The RSD8 value of 11 is very good and consistent for the quality bluegill population that exists at Emiquon.

The dense stands of submerged aquatic vegetation is the key to allow the current bluegill population the potential for an excellent spawn and recruitment. These large areas of vegetated habitat would also provide a preferred niche for the *Lepomis sp.* in competition with the expanding gizzard shad and common carp population.

The current bluegill (*Lepomis sp.*) regulation is a maximum harvest of 25 fish per day per angler. The main scope of this regulation is to prevent wanton waste by anglers.

**Pumpkinseed:** In 2020 the pumpkinseed population was sampled by 16 fish by Electrofishing. The survey appears to represent 7 YOY fish up to 3.5 inches in length and several year classes up to 7.9 inches in length. The body condition was an average Wr of 93 for the adult fish. The pumpkinseed electrofishing collection rate for stock size fish (over 3.1 inches) was .07. This is consistent with the collection range since 2011.

The dense stands of submerged aquatic vegetation will be a key to allow the current pumpkinseed population the potential for an improved spawn and recruitment in 2021.

**Crappie:** The black crappie population was sampled by 285 fish with electrofishing in 2020. The black crappie electrofishing collection rate was 2.2 fish per minute for all sizes in 2020. This rate was above the 5 year average of 1.3 fish per minute of electrofishing.

The black crappie sample shows a low number fish in the YOY class from 2.4 to 5.9 inches long and multiple year classes from 7.9 to 14.6 inches long. The body condition was still a very good Wr of 103 for the fish over 8 inches.

The white crappie population was again sampled at a low density at .07 fish per minute. The size range was from 8.7 to 13.8 inches in length. The body condition average was very good at a Wr of 113.

This dense crappie population with large fish will feed on the gizzard shad population and also provide additional predation upon potential exotic fish species reproduction. The future emergence of the white crappie population to a common occurrence will probably depend upon the water clarity. In a lake habitat with both species of crappie, the black crappie dominate in clearer water, while the white crappie tend to succeed with more turbid conditions.

The current crappie regulation is a 9 inch minimum size limit and a maximum harvest of 25 fish per day per angler. The goal of this regulation is to maintain a dense crappie population and allow a sustainable high, yearly harvest.

**Bowfin:** The bowfin population was sampled by 99 fish from 14.2 to 29.1 inches in 2020. Several year classes appear to be present. The body condition of these fish was extremely good. The bowfin population has seen a steady increase in density and biomass in the sampling. In 2020 the electrofishing rates were .77 fish per minute and 96.5 lbs per hour. This is the historical high collection rate for the Emiquon Preserve.

**Channel Catfish:** 31 channel catfish were sampled in 2020 by electrofishing. This is the highest rate and number since their consistent sampling that started in 2014. In 2020, the size ranged from 9.8 to 28.3 inches in length. The body condition was good with an average Wr of 95. If turbid water conditions exist in the future, channel catfish recruitment will be very likely. In 2020, 13 of the channel catfish were less than 18 inches.

The current channel catfish regulation is a maximum harvest of 6 fish per day per angler. The main scope of this regulation is to prevent wanton waste by anglers.

<b>FISHING REGULATIONS:</b> Site specific angling regulations. Two pole and line fishing only, no live minnows for fishing bait, all other statewide regulations apply.	<b>Daily Creel Limit</b>	<b>Minimum Length Limit</b>
<b>All Fish</b>	<b>2 pole and line only</b>	
<b>Largemouth Bass</b>	<b>1</b>	<b>18"</b>
<b>Bluegill</b>	<b>25</b>	<b>None</b>
<b>Channel Catfish</b>	<b>6</b>	<b>None</b>
<b>Walleye, Sauger or Hybrid Walleye</b>	<b>6</b>	<b>14"</b>
<b>White and Black Crappie</b>	<b>25</b>	<b>9"</b>

