



# LAKE MCMASTER SNAKEDEN HOLLOW STATE FISH AND WILDLIFE AREA FISHERIES STATUS SUMMARY

## **LOCATION:**

Lake McMaster is situated within the 2,500 acre Snakeden Hollow State Fish & Wildlife Area. It is located 2 miles southeast of Victoria in Knox County. Access to the lake is 1.7 miles south of State highway 167 on Knox County Highway 28.

## **DESCRIPTION :**

Lake McMaster is the largest impoundment at Snakeden Hollow State Fish and Wildlife Area. It is 165 acres in size and has a maximum depth of 65 feet. The shoreline length is 7.5 miles and a centerline length of 1.4 miles. The narrow east arm of the lake has a centerline of .9 mile. Lake McMaster is the only impoundment at Snakeden Hollow State Fish and Wildlife Area with an improved boat ramp.

Lake McMaster was built in 1978 by Midland Coal Company as their water supply reservoir. The lake has a diverse habitat which is characterized by very deep water, shallow bars, numerous bays and points, abrupt drop-offs, islands, flooded timber and extensive shallow flats of submerged and immergent aquatic plants.

## **MANAGEMENT ACTIVITIES:**

The lake and its sport fishery are evaluated annually by spring trapnetting and electrofishing surveys which direct fish stocking, fishing regulations and other types of fish management.

## **Largemouth Bass:**

In 2019, spring trapnetting and spring D.C. electrofishing were used to survey the fish population. The largemouth bass population was evaluated by 299 bass from electrofishing.

The largemouth bass population appears to be defined by a high percentage of fish from 4.5 to 18 inches in length with good average Relative weights. In 2017, the bass regulation for McMaster Lake was changed from a 3 fish daily harvest limit with only 1 fish greater than or equal to 15 inches, to a protected slot length limit from 14 to 18 inches with 3 fish daily harvest limit. The goal of the new bass regulation is to increase the density of the bass population from 14 to 18 inches.

The 5 year averages from 2011 to 2015 were RSD15 of 23, RSD16 of 15, and RSD18 of 5. And a 5 year average CPUE 1.6 fish per minute over 8 inches with pulse D.C. electrofishing.

The 2019 electrofishing survey showed a decline in the RSD15 through RSD 18 values. The 2019 values were: PSD of 47, RSD15 of 16, RSD16 of 12 and the RSD18 of 4. The average body condition was at a Wr of 95. Future surveys will need to evaluate further why the bass population has not started to restructure into the 14 to 18 inch size range.

The goal of the protected slot length limit is to create a high density bass population that is composed of fish large enough to be efficient predators upon the panfish and gizzard shad population. The benefit to bass anglers will be more fish surviving past 15 inches to catch, and for the anglers wanting to harvest bass will be the opportunity to still harvest fish under 14 inches.

**Bluegill:**

The bluegill population was sampled by 57 fish in spring trapnets and 115 fish in spring electrofishing survey. The current bluegill population is rated as average with the larger fish up to 7.9 inches in length. This population is of moderate density and in average body condition with a Wr average of 88.

**Redear Sunfish:**

The redear sunfish population was sampled by 34 fish in spring trapnets and 18 fish in spring electrofishing survey. The current redear population is rated as average with the larger fish up to 9.8 inches in length. This population is of very low density and in good body condition with a Wr average of 94.

In 2017, the bluegill and redear sunfish regulation was changed from a 10 fish daily harvest limit to a 25 fish daily harvest limit. This change will allow anglers the ability to harvest more bluegill and redear sunfish per daily visit to Snakeden Hollow SFWA waters.

**Black Crappie:**

The black crappie population has had an average rating in recent years. The 5 year averages from 2011 to 2015 were an RSD10 of 14 for black crappie. In 2017, the crappie regulation was changed from a 5 fish daily harvest limit, to a 25 fish daily harvest limit with no more than 10 fish greater than or equal to 10 inches. The goal of the new regulation is to allow the harvest of more of the slower growing black crappie, while maintaining and promoting the population structure of crappie over 10 inches in length.

In 2019, the black crappie population was sampled by 31 fish in spring trapnets and 39 fish in the spring electrofishing survey. 69 stock size black crappie were sampled with a PSD of 77, RSD9 of 35, RSD10 of 19 and RSD11 of 10. The average WR value was 89. These indices have all been steady the last 6 years with a slight rise beginning in 2017. The new regulation will be evaluated to these indices.

**Walleye:**

The walleye population was sampled by 33 fish in spring trapnets and 15 fish in the spring electrofishing survey. The current walleye population is rated as good with the larger fish up to 27.5 inches in length. The CPUE for trapnets was at 2.1 fish per net night in 2019. This population is of low density and in good body condition with a Wr average of 91. No walleye were stocked in 2015 or in 2016, but 8,032 were stocked in 2017, 11,160 were stocked in 2018, and 8,351 walleye at 1.5 inches were stocked on 6/1/2019 from Jake Wolf hatchery.

**Muskie:**

A total of 7 muskie were sampled by the spring trapnet survey in 2019. These fish ranged from 33.6 to 44.1 inches long. The body condition of these fish was low at an average Wr of 86. The sample was composed of 5 males and 2 females. 1 of the females had a PIT tags from a historical tagging event. She was originally tagged on 4/3/2006 at a length of 37 inches and 13.5 pounds. On 4/16/2019 she was recaptured at a length of 43.7 inches long and 21.9 pounds. She grew approximately .5 inches and .65 pounds per year over those 13 years.

In 2017, the muskie harvest regulation was changed from a 1 fish daily harvest limit over 48 inches, to a harvestable slot from 36 to 42 inches, and 48 inch minimum length limit with 1 fish daily harvest limit. This regulation is an attempt to allow anglers to reduce the density of very slow growing male muskie in McMaster Lake. The following data helps explain the current male and female muskie growth rate in McMaster Lake.

Muskie have been PIT tagged since 2002 in Lake McMaster.

The 2015 fish recaptures showed that males grew on average .52 inches per year and .5 lbs per year which was based on 3 fish at least 13 years old each. Females grew on average .84 inches per year and .78 lbs per year which was based on 4 fish at least 13 years old each.

The 2016 fish recaptures showed that males grew on average .53 inches per year and .42 lbs per year which was based on 16 fish at least 13 years old each. Females grew on average .3 inches per year and .58 lbs per year which was based on 2 fish at least 13 years old each. In 2016 the average Wr for male muskie(29) over 36" was 77 and the average Wr for female muskie(7) over 36" was 85. From 16 PIT tagged male muskie, the length range was 37.5 to 42.3 inches long for fish 13 to 17 years old. 58% (22/38 fish) of the males were from 36 to 40 inches in length. While only 11% (1/9 fish) of the females were from 36 to 40 inches in length. In 2017, only 3 male recaptures were collected.

137 muskie at 11.9 inches in length were stocked in 2015. No muskie were stocked in 2016, 2017 or 2018. Jake Wolf hatchery stocked 136 muskie at 13.5 inches on 9/18/2019. A triennial stocking is now scheduled to maintain a moderate density of healthy muskie.

#### **Channel Catfish:**

The channel catfish population was sampled by 3 fish in spring trapnets and 4 fish in spring electrofishing survey. The current channel catfish population is rated as good with the larger fish up to 22 inches in length. This population is of moderate density and in good body condition with a Wr average of 108. Jake Wolf hatchery stocked 2100 fish at 8.7 inches in 2019. An annual stocking of non-vulnerable channel catfish has occurred in the recent past. These stockings have established a moderate density population, and the stocking can be adjusted to an every other year stocking starting in 2020.

#### **Other Fish Species:**

8 bluegill x redear hybrids and were also sampled in 2019. They are present in low density populations in McMaster Lake.

#### **Fishing Regulations:**

All Fish - 2 pole and line fishing only.

##### **Large or Smallmouth Bass:**

- **Protected Slot Length Limit from 14 to 18 inches with 3 fish daily harvest limit.**

##### **Bluegill or Redear Sunfish:**

- **25 fish Daily Harvest Limit.**

##### **White, Black, or Hybrid Crappie:**

- **25 Fish Daily Harvest Limit with no more than 10 fish greater than or equal to 10 inches.**

##### **Pure Muskellunge:**

- **Harvestable slot from 36 to 42 inches, and 48 inch minimum length limit with 1 fish daily harvest limit.**

Channel Catfish:

- 6 fish daily harvest limit.

Walleye, Sauger, or Hybrid Walleye:

- 3 fish daily harvest limit.

Recreational Use Restrictions:

- Waterfowl Refuge or Hunting Area (all use other than waterfowl hunting prohibited from 14 days prior to duck season through the end of the central zone Canada goose season). All live bait greater than 8 inches must be rigged with a quick set rig.

-10 hp limit on gasoline motors to propel watercraft.

-Swimming is not permitted.

#### **CONTACT INFORMATION –**

**Snakeden Hollow State Fish & Wildlife Area: (309)879-2607**

IDNR Fisheries County Fish Biologist: (309) 446-9143.

Illinois Fishing Information booklet and IFISHILLINOIS website <http://www.ifishillinois.org/>

