



# CANTON LAKE

## FISHERIES STATUS SUMMARY

**LOCATION:** Canton Lake is located 1 mile northeast of the town of Canton in Fulton County.

**DESCRIPTION :** Canton Lake is a 250 acre lake constructed in 1939 and was the primary potable water source for the city of Canton. Canton Lake has a maximum depth of 35 feet and an average depth of 14 feet. This water reservoir holds approximately 3,500 acre feet of water with 7.2 miles of shoreline. The 9,728 acre watershed is 82% agricultural, 12% woodland, and 6% municipal and residential. Historical water quality samples revealed a secchi disk average of 23 inches, a pH of 8.3, and total alkalinity of 135 mg/L. Conductivity readings averaged 375 umhos.

No submerged rooted aquatic vegetation is present in Canton Lake.

**MANAGEMENT ACTIVITIES:** In September of 1964, the lake was rotenoned and restocked with largemouth bass, bluegill, and fathead minnows. Due to a combination of intentional, unintentional and unauthorized fish stocking the fish community of the lake has changed over time.

The overall sport fishery of Canton Lake has been at an average level over the last 20 years. The high density carp population and sedimentation problem have a direct negative effect of the rooted, submerged aquatic plants. With turbid water conditions the carp thrive and continue the poor water quality, thus, affecting the food chain and sport fish population. The addition of gizzard shad and yellow bass have made Canton Lake very difficult to manage for quality largemouth bass and bluegill.

Conduct annual surveys to measure trends in fishery population dynamics, angling regulations and progress toward management goals. In the spring continue the annual population surveys, utilizing trapnets and boat electrofishing. The flathead catfish, blue catfish and channel catfish populations will be evaluated as time permits utilizing D.C. electrofishing .

**Status of the Sport Fishery:** The sport fishery in Canton Lake has developed into a quality location for flathead, blue and channel catfish. In 1997, 1998 and 1999 a total of 990 flathead catfish were stocked into Canton lake from the Illinois River periodically from June until January. In 1999 and 2001, blue catfish were stocked into Canton Lake in three stockings with a total of 15,200 fish stocked. All three species have established naturally reproducing populations in Canton Lake with quality fish present.

Starting in 2000, pure muskie have been stocked semiannually in Canton Lake.

Supplemental largemouth bass stocking has occurred when surplus fish are available from the state hatchery. Food competition and/or lack of desirable food (aquatic insects, larval fish) for young bass under nine inches is probably a major factor in poor recruitment of young bass to larger sizes in Canton Lake. Once reaching approximately nine inches the bass are able to eat larger food (small fish) and not have the food source competition with yellow bass, crappie, bluegill and carp.

**Largemouth Bass:** In 2019, the electrofishing catch per unit for bass over 8 inches was at 1.4 fish/minute which is at the goal of at least 1 fish per minute. Maintaining a stable bass population density will require consistent recruitment at least every other year. The size distribution and the percentage of bass over 15 and 18 inches maintained a very good level in 2019. 35% were over 15 inches and 5% were over 18 inches. The body condition of bass at all sizes has remained good with the introduction of the gizzard shad. However the recruitment of bass to the population is still low and this is probably the main factor limiting the bass density. In 2003, Jake Wolf Hatchery was able to supply a stocking of 7,000 largemouth bass at an average length of 2.2 inches on August 1 and in 2004 a stocking of 5,000 fish at 2.9 inches occurred on August 8. This is a rate of 20 to 28 fish per surface acre. No bass were stocked in 2005. In 2006, 1 million bass fry were stocked on June 1<sup>st</sup>. In 2007, 36,012 bass at 2.2 inches were stocked on July 6 and then 6,250 bass at 4.5 inches were stocked on August 20. No bass were stocked in 2008 or 2009. In 2010, 25,000 bass at 2.7 inches were stocked on 7/23/2010. In 2011 through 2013, no bass were stocked. In 2014, 208 bass at 8 inches long were stocked. In 2016, 2242 bass at 4.1 inches long were stocked on 8/22/2016. In 2017, no bass stocking occurred. In 2018, 236,250 largemouth bass at .3 inches were stocked on 6/1/2018. In 2019, no largemouth bass were stocked into Canton Lake.

Food competition and/or lack of desirable food (aquatic insects, larval fish) for young bass under nine inches is probably a major factor in poor recruitment of young bass to larger sizes in Canton Lake. Once reaching approximately nine inches the bass are able to eat larger food (small fish) and not have the food source competition with yellow bass, crappie, bluegill and carp. With the introduction of the gizzard shad, the larger bass over 9 inches may benefit, but research has shown that the overall population and recruitment will probably not improve.

However, since the 2017 survey, a good distribution of sizes and age groups, has been present. The big improvement since 2010 was the much higher number of bass from 4 to 8 inches and then 9 to 13 inches. This indicates recruitment and maybe stocking was very beneficial to the bass population. This trend will be followed to help evaluate the opportune bass stockings that have and may occur. Supplemental largemouth bass stocking may occur when surplus fish are available from the state hatchery.

**Muskellunge:** Starting in 2000, pure muskie were stocked in Canton Lake. And in 2001, Pure muskie were available and 650 fish at 10 inches long were stocked on 4/20/2001. No muskie were stocked in 2005. The 2006 muskie stocking involved 3 events: 135,000 fry on 4/14, 750 five inch fish on 7/17 and 1,521 eleven inch fish on 9/21. In 2007, 500 muskie at 11.2 inches long were stocked on 9/11. In 2008, 750 muskie at 10.8 inches long were stocked. In 2009, 1275 muskie at inches long were stocked. In 2010, 500 muskie at 11 inches were stocked. In 2011 2 stocking events, 59,723 muskie at 2 inches and 500 fish at 11 inches were stocked. In 2012, 250 muskie at 11 inches were stocked. No muskie stocking in 2013 and 2014. And in 2015, 252 muskie at 11.9 inches were stocked. In 2017, a stocking of 255 muskie at 12.5 inches occurred. In 2018, a stocking of 250 fish at 12.5 inches occurred. And in 2019, a stocking of 257 muskie at 13.5 inches occurred.

In 2019, 18 muskie were sampled in the spring trapnet survey. They ranged from 16.5 to 38 inches in length and were in excellent body condition with an average Wr of 100. The shad forage base will provide fast growth in Canton Lake. The main mortality in Canton Lake for muskie will probably be escapement over the spillway during annual high water events.

**Bluegill:** The bluegill population, catch per unit of effort, was low in 2019 (1.8 fish per minute). The recent introduction of the gizzard shad has had a negative effect on the bluegill body condition due to food competition.

The WR (Relative Weight) average had improved dramatically in 2010 and 2011 to Wr values of 101 and 95, but declined to low 90's from 2012 to 2019. The 2019 Proportional Stock Density (PSD) value was very low at 7. The Relative Stock Density 7 (RSD7) value was at 0 which indicates very few bluegill over 7 inches at this time.

**White and Black Crappie:** These populations were represented by 28 and 18 fish respectively in 2019. The quality of the crappie population has improved dramatically over the past 10 years. A quality size population is now present at a low density.

The current population is present at a moderate density of fish from 7.5 to 14 inches. The white crappie are present in a much higher density of quality fish. The white crappie population values showed 100% of the fish over 10 inches and the black crappie values showed 33% of the fish over 10 inches. The WR (Relative weight) values were at 96 and 90.

In summary, the crappie populations have improved substantially in condition and growth rate since the 1999 survey. The bacterial fish kill of crappie and yellow bass in the late winter of 1998 and spring of 1999 may have greatly reduced the population level of the crappie. And with reduced competition, the surviving fish had very good growth rates. In 2020, a moderate density of the fish will be available from 9 to 12 inches in length and in good body condition. The crappie population will be sampled with trapnets and electrofishing in the spring of 2020.

**Channel Catfish:** The population has continued to improve in body condition and population levels since 1992. The Relative weight (WR) has improved from poor condition in 1992 to excellent condition by 1999. The gizzard shad forage base is probably responsible for the body condition improvement. In 2019, 23 fish were collected by trap nets and the electrofishing survey. The body condition was excellent and 61% of the fish were over 18 inches in length. The turbid water conditions have permitted natural reproduction and recruitment to maintain the channel catfish population.

**Flathead Catfish:** In 2019, 49 flathead catfish were sampled by D.C. electrofishing. The size range was from 13 to 41 inches in length. The turbid water conditions and riprap shoreline areas have permitted natural reproduction and recruitment to maintain the flathead catfish population.

**Blue Catfish:** In 2019, 4 fish were sampled from 15 to 37.8 inches long. The turbid water conditions have permitted natural reproduction and recruitment to maintain the blue catfish population.

**Other Fish Species:** The following species have been historically collected in limited numbers: Golden Shiner, Black Bullhead, White Sucker, Green Sunfish, Yellow Bullhead, Northern Pike and White Catfish.

**Fishing Regulations:**

<u>Species</u>	<u>Size Limit</u>	<u>Creel Limit</u>
Large or Smallmouth Bass	15" minimum size	3 fish/day
Muskie	42" minimum size	1 fish/day
Channel catfish & Blue catfish	None	6 fish/day

All fish 2 Pole and line fishing only.

Recreational Use Restriction: All live bait greater than 8 inches must be rigged with a quick set rig.

**CONTACT INFORMATION:**

Canton City Hall: (309) 647-0020.

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

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