



# POWERTON LAKE

## FISHERIES STATUS SUMMARY

**Location** - Located in west-central Illinois, two miles southwest of Pekin Illinois in Tazewell County.

**Description**- Powerton Lake was constructed and filled in 1971 by Commonwealth Edison Company. Its' purpose was to provide cooling water for a fossil fuel fired electric generation facility. Powerton Station was constructed in the 1930's, but greatly expanded in 1971. Water quality law made it necessary for the plant to construct a cooling lake, rather than using the Illinois River for cooling the heat exchanger. Powerton Lake was built in a drainage district adjacent to the Illinois and Mackinaw Rivers and encompasses 1426.0 acres of water. The Lake was built in the shape of an extended rectangle and has very little structure. The maximum depth is 18 feet with an average depth of about 8 feet. Water flow is from the plant discharge on the East side and flow is directed toward the west by a series of baffles. Water turn-over is about every 48 hours through the plant intake at maximum cooling flow capacity. The Illinois Department of Natural Resources signed a cooperative agreement with Commonwealth Edison Company in 1984 to open Powerton for fishing and waterfowl hunting. That lease was renewed in 2010 to extend another 10 years. There is a double concrete ramp and parking for 90 cars at the access which is located along the Manito Blacktop on the south side of the lake. In late 2018 or 2019 a new access facility is planned to be constructed. The lake will be closed to all public access while this facility is being constructed.

**STATUS OF THE FISHERY** - Powerton Lakes' fish population is influenced greatly by the elevated temperature of the water. Fish growth is very fast but reproduction is negatively affected. Many threadfin shad were sampled during the fall fish population survey in 2015. The power plant was shut down from October until late December in 2015. The result of this shut down was extremely cool ambient temperature of water. The result was a tremendous threadfin shad die-off. None were collected during our Fall population survey in 2016. Threadfin shad were moved into Powerton from Lake Springfield in April of 2017. Threadfin shad were collected in the fall 2017 surveys.

The recent history of thermal fish kills at Powerton has not been severe for blue catfish and other sportfish in the main lake. The fish kills have been focused primarily on the silver and bighead carp in the intake canal that enters the plant. This canal has no access from the public for fishing due to plant security concerns. In 2010, 2012 and 2013, the estimates of fish mortality were over 100,000 pounds each year in this intake canal, and primarily silver carp. Since 2014, the thermal stress mortality on the sportfish population has been very low in the main section of Powerton Lake.

**Smallmouth Bass:** The population of smallmouth bass at Powerton Lake has declined in both number and condition over the past several years. They were minimally present in 2014 and did not represent a good fishery for anglers. The sudden decline of this fishery had not been anticipated as they have been present since 1987 at Powerton Lake. As a measure to supplement smallmouth bass reproduction, 41,156 smallmouth bass, 1.0 inches long, were stocked into Powerton from surplus smallmouth bass stocks at Jake Wolf Fish Hatchery in June of 2014. We were, once again, able to stock surplus smallmouth from the Jake Wolf hatchery in 2015. We were able to stock a total of 217,410 fish or 152 smallmouth per acre of water. This stocking resulted in a YAR of 0.1 for the fall population sample. It is hoped that these fish will recruit and provide a shot in the arm for the smallmouth bass fishery at Powerton Lake in the

coming years. We were able to stock a total of 155 brood smallmouth bass from our brood source at Jake Wolf Hatchery in 2016.

The 2017 fall electrofishing survey did show some improvements in the size range of the smallmouth bass population in Powerton. The collection of 21 stock size fish still shows a low density population. The RSD18 was up to 19 and the body condition was at 94. Future smallmouth bass stockings will be requested for Powerton Lake in an effort to establish a more stable and dense population.

**Largemouth Bass:** The 2017 fall electrofishing survey collected 8 stock size largemouth bass. These fish ranged from 8.7 to 16.5 inches in length. The average body condition was excellent at a 107 value. Future largemouth bass stockings will be requested for Powerton Lake in an effort to establish a more stable and dense population.

**Hybrid Striped Bass:** As part of an effort to insure survival of stocked cool-water species, a change in the cool-water stocking priority list was made to allow for the stocking of hybrid striped bass. The reproduction and recruitment of white bass has been minimal over the past six years. White bass have almost entirely disappeared from the creel and population survey samples. None were collected in 2013 and only 4 were collected in 2014. None were collected in 2015, 2016 or 2017. It is hoped that hybrid striped bass stockings will create another trophy fishery over time and eventually replace the white bass population. The 2017 fall electrofishing survey collected 52 stock size hybrid striped bass. These fish ranged from 10.6 to 22 inches in length and had a very good body condition value of 101. Future hybrid striped bass stockings will be requested for Powerton Lake in an effort to maintain this population.

**Blue Catfish:** An initial stocking of blue catfish (35,000) was made in October of 1999 from stocks received from Arkansas and reared at the Little Grassy Hatchery to 4.5 inches in length. We have stocked a total of over 100,000 blue catfish in the past 5 years. This stocking program has created a sport fishery that anglers enjoy for both harvest and trophy size fish. Shoreline fishing in the warmwater discharge area is a prime destination at the start of January.

The 2017 fall electrofishing survey collected 50 stock size blue catfish. These fish ranged in size from 16.5 to 45.3 inches in length. The body condition has been exceptionally good for these fish in Powerton. The population indices showed 64 percent of the fish were over 28 inches and 16 percent were over 34 inches in length. In conjunction with the fall survey, a contaminate sample was completed on 2 sizes of blue catfish. Results from the IEPA on these samples should be received in the next year. The current harvest regulation is 6 fish per day for blue catfish and/or channel catfish.

**Channel Catfish:** The channel catfish population was poorly sampled in the 2017 fall survey. Historically it has been a high density population of fish under 16 inches in length in average to poor body condition. A PCB advisory for channel catfish was lifted in 2012 as three years of testing resulted in levels below the action limit.

**Bluegill:** The 2017 fall electrofishing survey collected 49 stock size bluegill. The largest bluegills in the survey were up to 8.3 inches in length and had an average body condition of 90. This fish population has been providing another opportunity for shoreline anglers.

**Alligator Gar:** On 8/7/2017, a total of 12 alligator gar were collected with an average length of 1354 mm and 18,725 grams each. 11 fish were collected with the 3" and 4" alligator gar gill nets, and 1 more with DC electrofishing. These are the 8 year old fish that Trent Thomas and Rob Hilsabeck came down to Tupelo and picked up from Mr. Campbell. All of them are PIT tagged and were stocked as 2 year old fish on 6/9/2011. In 4 sampling trips over 4 years, we have collected 30 of the original 78 stocked fish. These fish had moved to an interior intake canal at this warm water power plant lake (coal fired). This interior canal has no fishing access, and a constant supply of forage of gizzard shad and silver carp. In 2016, 549 Alligator Gar from 6 to 8 inches were stocked into the main lake.

**Other Fish Species:** The following species have been historically collected in limited numbers: common carp, grass carp, silver carp, gizzard shad, bigmouth buffalo, smallmouth buffalo, flathead catfish, shortnose gar, freshwater drum, white crappie, black crappie, white bass, yellow bass and green sunfish.

**Fishing Regulations:**

<u>Species</u>	<u>Size Limit</u>	<u>Creel Limit</u>
Large or Smallmouth Bass	18" minimum size	1 fish/day
Channel catfish & Blue catfish	None	6 fish/day
Striped bass hybrid & White bass	No more than 3 fish Greater than 17"	10 fish/day
Walleye, sauger or Hybrid	18" minimum size	3 fish/day

All fish 2 Pole and line fishing only.

Boats: unlimited HP

Recreational Use Restriction: Powerton Lake shall be closed to boat traffic except for legal waterfowl hunters from one week prior to regular waterfowl season to February 15, and closed to all unauthorized entry during the regular Canada goose and duck season.

**CONTACT INFORMATION:**

Spring Lake State Fish and Wildlife Area: (309) 968-7135.

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

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