



HERMAN BROTHERS FISHERIES

Electrofishing Survey Results/Data/Recommendations

Oak Run

September 5, 2023

Oak Run Fish & Sports
1468 Knox Road 1725 N.
Dahinda, IL 61428

To Whom It May Concern:

Within this document you will find my report on the fishery survey which we completed on May 15th at Oak Run. The report will outline the entirety of our process collecting data, the analyzed data, the results, as well as my specific recommendations that will continue to take the lake in the direction of the specific goals of the lake. Please do not hesitate to contact me if you have any questions concerning the report.

Thank you!

Sincerely

Austin Bennett - Fisheries Biologist

Herman Brothers Fisheries - 3004 N Taylor Rd. Hanna City, IL

Introduction/Methods

On May 15th, 2023 we were out at Spoon Lake - Oak Run to conduct an electrofishing survey to check in on the fish population. We ran the survey as we have in the past, with the exception of tweaking the surveyed area like we did previously in 2022 in the main lake section to provide a better look at the largemouth bass population. We piece all this together to provide a full assessment of the overall fish health and balance in the lake and use the information to provide recommendations for future management (stocking, harvest, etc). We spent roughly 30 minutes using DC electrofishing equipment at each of the transects listed above as we have in the past. Following the collecting of fish, we weighed, measured, counted, and observed the fish population while recording this data.

Electrofishing Survey

We began the survey around 9:30 am with air temperatures around 75 degrees and water temperature right at the 72 degrees. The water clarity varied slightly across the three transects. The clearest water was found in the lower lake while the murkier water was found in the very upper lake near the main creek influx due to recent rain events. This year was less water clarity near the north end than in past years. Overall, the lake was very clear once you moved out past the shallow creek inlet areas. You could tell that the rooted plants had begun growing and are beginning to help filter the nutrients from the water column very well. The rooted plants had been harvested already but there were sections of weed beds that were helping tremendously.

While conducting the survey we were observing the types of vegetation growing throughout the lake. We observed the following aquatic plants during our survey: Coon-tail

(*Ceratophyllum demersum*), Curly-Leafed Pondweed (*Potamogeton crispus*), Eurasian Milfoil (*Myriophyllum spicatum*) and also observed a few patches of American Pondweed (*Potamogeton nodosus*) which is a very beneficial native plant.

We collected the following fish in our survey this year: Shad, Golden shiners, Bluegill, Redear Sunfish, Black Crappie, White Crappie, Largemouth Bass, Smallmouth Bass, Walleye, Yellow Perch, White Bass and Channel Catfish. Also, we collected a handful common carp. The catch rates of common carp were actually lower than they have been in the past.

Data Analysis/Breakdown

1. Upper Lake

The upper lake has always been a beautiful area for fish and wildlife of Oak Run. The water is very fertile, has great habitat and seems to always hold an exceptional number of quality fish. During our survey this year we observed an overall CPUE (catch per unit effort) of 3.97. This is considered a “good” level in regards of fish caught in the 30-minute survey. This helps us determine the abundance of fish found overall. Last spring we saw an increase in crappie numbers and this year we observed that size class beginning to reach harvest size and still in good numbers which is very exciting!

In the past we have collected good numbers of largemouth bass in this area, and this year was no exception. We collected a good number of largemouth bass over 14” with a few 17+” fish mixed in. The highest abundance of bass collected in this area was the 12-15” bass. Over the past few years, we have been tracking relative

weights of the largemouth bass in the lake. Overall, this year, the relative weights stayed about where they've been in the past in a very good range! This year the average largemouth bass relative weight in this tract was right at 98%.. The larger fish still averaged above 95% though. It seemed like the food was continuing to dwindle for the 15-17" fish though. I anticipate the addition of shad to make a tremendous difference on the relative weights of all bass, but especially the 16" + fish. I was very impressed by the health of the younger size classes of bass, and still expect their success to continue if we can keep the forage base in check. The forage base is doing well in the lake especially because of the vegetation that is creating great dense cover for the forage fish in the lake during the spring. The higher levels of aquatic vegetation has given the young of the year fish a chance to survive and turn into food for the next level of predator fish.

Walleye population is still holding very strong. Beginning to see more size classes in our surveys. It was great to see the fingerling fish thriving in this area as well! You can tell that the walleye stockings have been very successful when seeing these small fish in the spring. Additional good, rooted growth in the lake will help provide cover and refuge for the stocked fish.

The panfish population as whole was doing well. We collected higher than ever numbers of panfish including high numbers of crappie between 8-10".

Catfish were very healthy; we saw many sizes of catfish in the lake and collected good numbers of year old fingerlings that were stocked last fall along with good numbers of adult 3 Lb plus fish.

2. Main Lake (two sections)

This area of the lake is always very productive for all species of fish but especially (crappie, bluegill and redear due to the great spawning areas in this tract). We spent half of the time in the main channel area of the lake and the other half surveying the cove area. We were able to find good numbers of all fish in this transect with a total CPUE of 4.40. Panfish were definitely more grouped up this time so we hit pockets of very high abundance of fish. Due to spawning that was occurring around the time of the survey.

In regard to relative weights, we saw similar relative weights here of all classes. The bass at the 11-14" size are doing very well currently with higher than anticipated relative weight. Adults around the same relative weights here as well.

There has always been a good number of panfish collected in this area as well due to the spawning areas present in these transects. We collected good numbers of bluegill and crappie.

Largemouth bass were dispersed throughout the weed beds here which was very exciting to see them utilizing the natural cover and feeding areas left in the lake!

Recommendations

- My number one priority in this year is to recommend a fall electrofishing survey before finalizing stocking to harvest suggestions for the lake. I really would like to see the current state of the fishery (primarily the shad population) before recommending any changes or fish stockings.
- As always I want to point out the amazing condition of the lake with the presence of the weed beds this spring. These areas (particularly in the upper lake) that were left

untouched so far held far more fish because they allowed for natural cover for young of the year fingerling fish. The lack of aquatic vegetation and shallow water dense cover always been the largest factor that has limited the lake from producing fish at its highest capacity. I truly do understand that the need to keep areas around property owners' docks as well as the main lake channel clear of aquatic plants is vital to the recreation in the lake. I am proposing continuing to protect just a few sanctuary zones throughout the lake especially in coves where recreational swimming/boating is limited already.

- We need to come to terms with how beneficial the aquatic plants are in certain areas. I strongly recommend establishing and maintaining a few sanctuary zones throughout the entire lake specifically to act as nurseries for the young of the year fish, we will see the overall average of the fish species increase rapidly over the next few years. This management and protection of good, rooted vegetation throughout the year will not only help recruitment (survival of fry stage fish to adult stage) of the fish, but will also increase the predator fish foraging efficiency. Overall, I believe that moving forward establishing a well-balanced vegetation treatment plan that includes leaving certain areas untouched will turn these areas into wildlife sanctuaries across the lake.
- One more major point with aquatic vegetation is that it will help tremendously at reducing nutrient levels in the water and can help reduce

algae blooms that can end up becoming cyanobacteria blooms as these become more prominent as the lake ages.

- As I have recommended in the past, each year we should be focusing on adding additional habitat to the lake. Not only because this structure is necessary for the fish but needs to be freshened up every year or two. One thing to overcome this need to add habitat every year is by adding artificial habitat to the lake. I am a huge proponent of creating homemade fish crates to provide the exact habitat that the fish need exactly where they need it! We can get creative with these structures if this is ever something you guys want to do. I would be happy to volunteer some time to help build and place some structures throughout the lake as always
- We checked back in on the zebra mussels this year as we have been doing each year. Seems that their abundance has been declining and you're on the back end of this cycle. I am still not concerned that there have been any major negative changes with the fishery in the past year; therefore do not have any major changes to make in our management strategy besides taking them seriously and doing our best to make sure these are not spread due to our negligence. Continue to check boats, trailers, etc. when moving from lake to lake and do not keep water in live wells when moving from one lake to another. I still believe that the mussels are providing an incredible food source for the redear sunfish as well as the smallmouth and we have been seeing a great increase in both fish overall sizes. The redear observed in this year's survey were, again, exceptional size and overall health. I would consider a stocking

of these within the next year though to keep them going as the spawning seems to be minimal.

- I suggest keeping the largemouth harvest recommendations/slot limit numbers the same this year. No need to change this up right now, BUT I would strongly encourage the harvest of 11-14" bass from the lake to reduce their numbers. Based on the fish survey data, as well as angler reports, the population of 11-14" bass has increased and catch rates of these fish have increased significantly due to the lack of harvest. Harvesting these fish at this size will allow the forage to build up to grow the 15" + fish even larger and make them reach that trophy size quicker.
 - One efficient method of bass removal would be hosting a bass harvest tournament where the goal is not to catch the largest bass, but rather the highest quantity of bass between 11-14 inches in length.
- I would recommend harvesting as many white bass as possible. Keep this on your creel limit cards to encourage the harvest of white bass.
 - We saw a very high number of large adults in our survey this spring. Anytime these are caught, encourage people to keep them. They compete with other gamefish in the lake very aggressively. I would consider having a white bass tournament in the future. The fish are great size to eat and will benefit everybody by removing as many as possible.
- **In regard to stocking I recommend the following:**
 - I'd likely recommend walleye again this fall if budget allows.

- Second would be largemouth bass depending on results of shad abundance this fall.
- Third priority would be channel catfish.
- Fourth priority would be redear sunfish.

I am very impressed by the numbers we collected during our spring survey this year and am even more impressed with how some of the lake looks that has not been treated!

I am confident that the lake is producing some very quality fish and this trend is very clear. This set of stocking recommendations will certainly keep things heading in the right direction and the introduction of shad will be a very positive change for the largemouth bass fishing in the lake as well as a positive change for many other species in the lake! We

are happy to help answer any questions you may have. Feel free to reach out anytime! We look forward to coming to check back next spring!

Sincerely,



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