



HERMAN BROTHERS FISHERIES

Electrofishing Survey Results/Data/Recommendations

Oak Run

July 5, 2021

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 11th at Spoon Lake (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

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Introduction

On May 11th, 2021 we were out to 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 but substituted lakeview bay for lower lake this year (split into sections of upper lake, middle lake, and lakeview bay). We piece all of 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 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 1 pm with air temperatures around 64 degrees and water temperature right at the 61 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 upper lake near the main creek influx due to recent rain events.

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: Bluegill, Redear Sunfish, Black Crappie, White Crappie, Largemouth Bass, Smallmouth Bass, Walleye, Yellow Perch, White Bass, Channel Catfish. Also, the common carp are still as abundant as ever so they are causing some uprooting of this vegetation, but they have always been a factor in this lake. We saw the nets out during the survey actively removing carp which is great. Continue this practice!

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 3.33. 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. One downfall in this area is the very high number of common carp. I would highly recommend the continued goal of removing as many of these as possible each year as you have been.

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 11-13” 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 have been continuing along the upward trend line we have seen for the past 3 years. This year the average largemouth bass relative weight in this tract was 99.1%. There were more healthy young fish than anything. The larger fish still averaged above 95% though. I was very impressed by the health of the 10-14” bass, and still expect their success to continue if we can keep the forage base in check and can reduce the number of the 11-13” bass in the next year. The forage base is doing exceptionally 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 have given the young of the year fish a chance to survive and turn into food for the next level of predator fish.

As always I was impressed by the quality of walleye in the survey. We collected 4 walleye up here this year. The largest walleye collected was 24” long and weighted 4.86 pounds. This is a world class walleye especially for central Illinois. We also collected a few 16-20” walleye. We collected one small walleye that we stocked last year. It was great to see the fingerling fish thriving in this area as well!

The panfish population as whole was doing very well. We collected higher than ever numbers of panfish including a fantastic number of 10"+ crappie. One panfish to note is the redear sunfish. Their population is doing very well as it has been since being stocked. I have seen a major increase in average size of redear this year with some world class 9-10" redear collected. These fish forage on the Zebra Mussels and are clearly taking advantage of that additional food source currently.

Catfish were very healthy, but most of the catfish we have been collecting for the past 3 years have been large adults, but this year we collected one small catfish 8 inches long that we stocked last fall. This tells me that the stocking was successful and should certainly be continued.

2. Main Lake

This area of the lake is always very productive for panfish (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 3.69. We also were able to collect smallmouth bass as we have in the past around some of the large rock structures in this area of the lake. They seem to really congregate around this section of your lake.

In regards to relative weights, we saw an average of 98.39% relative weights in this area of the lake.. The bass at the 11-13" size are doing very well currently, but the lake does not provide enough forage to allow this large size class to grow and make it to their full potential size without some selective harvest of the fish as they're going up through the ranks. As the bass get larger, their need for larger prey increases as well. We have seen relative weights of the larger bass decreasing due to the smaller bass consuming the forage before it can grow to the size that the larger (15"+ bass require to continue their growth).

The white bass are also working against us here. Another reason I am emphasizing the importance of harvesting those fish as well.

There has always been a good number of bluegill in this area, but this year we noticed a very high number of bluegill and the overall size was exceptional. This year was even more impressive than last year. The crappie were also exceptional! This is great to see!!

I am still very happy with the walleye health in the lake. This lake grows walleye like no other lake in central Illinois can! The number of smaller fish collected has continued to decrease and we will continue to overcome that by stocking walleye fingerlings.

3. Lakeview Bay

This area was a new section that we surveyed so we were able to get a baseline for what is produced in this bay area of the lake. The results from this section were very similar to those from the middle lake section. Again, in this area we saw many of the largemouth averaging around 13-14". This is a great average for the bass especially when they are actively growing. We saw more channel catfish in this section than anywhere else in the lake.

This area of the lake had been treated with chemical recently and therefore the fish abundance here was far lower than the other sections of the lake. Fish will move out of areas when the vegetation is treated because of the loss of cover as well as the loss of oxygen as the plants begin to decompose.

Recommendations

- My number one priority in moving forward this year with recommendations is to express how great the lake looked this spring when we conducted the survey in areas that had not been treated for aquatic vegetation. 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 just a few sanctuary zones throughout the lake especially in coves where recreational swimming/boating is limited already.
 - We really need to come to terms with how beneficial the aquatic plants are in certain areas. I strongly recommend establishing 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 introduction of 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.
- 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!

- We checked back in on the zebra mussels this year as we have been doing each year. 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 of these fish overall sizes. The redear observed in this years survey were, again, exceptional size and overall health.
- 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. Put 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 regards to stocking I recommend the following:
 - Stock 8,000 walleye 5-8" this fall. I strongly recommend keeping this stocking going. The lake is producing very healthy walleye and I believe it will continue to with the abundance of food here. Herman Brothers would be happy to provide these fish for you guys as we have in the past! These fish will cost \$2 each.
 - Stock 4,000 channel catfish 8-10" this fall. This is a fish that we have not seen great recruitment out of in the lake and so supplemental stocking will be our best bet to overcoming this. These fish are great to have in the lake as they will provide a great fish for kids to catch frequently and also make for a good fish to fish for from docks around the lake. We would be happy to supply these fish as well. These will cost you \$1 each

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! We are happy to help answer any questions you may have. Feel free to reach out anytime! We look forward to coming back to check back in this next spring! I would love to conduct a nighttime walleye survey at some point to give a better representation as to how great the walleye are performing in the lake!

Sincerely,



Austin Bennett

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