HERMAN BROTHERS FISHERIES

# Lake Survey / Electrofishing Survey

# Results and Recommendations

## ***Oak Run - 2024***

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 3rd, 2024 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 3rd, 2024 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. 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 60 minutes using DC electrofishing equipment at each of the transects. Following the collection of fish, we weighed, measured, counted, and observed the fish population while recording this data.

## Electrofishing Survey

We began the survey around 5:00 am with water temperature right at 65 degrees. The water clarity varied slightly across the transects. The clearest water was found in the middle/lower lake while the murkier water was found in the very upper lake near the main creek influx due to recent rain events. 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.

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), 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 and Channel Catfish. Also, we collected a handful of common carp. The catch rates of common carp were still 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 4.05. This is considered a “good” level in regard to fish caught in the allotted time. 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 holding strong at harvest size and still in good numbers which is still very exciting for panfishing at Oak Run!

In the past we have collected good numbers of largemouth bass in this area, and this year was again without exception. We collected a good number of largemouth bass in the 12-14” range with a great number of 16+” fish mixed in. Some larger in the 19-20” range even which is incredible to see them still holding strong and maintaining a positive relative weight at that size! The highest abundance of bass collected in this area was the 12-14” bass with the average length over at 13.79” and the average weight at 1.79 lbs which is an exceptional average for length to weight ratio and shows the condition of the fish improving greatly. Over the past few years, we have been tracking relative weights of the largemouth bass in the lake. This year relative weights took a drastic jump upwards thanks to the shad spawn that has occurred. I am very pleased to see this improving body condition and relative weight of all of the fish especially the up

and coming size class that has historically had difficulty growing from 12-14” up to a larger “trophy” caliber in the 16-20”. This gives me a very positive outlook on the future of bass fishing for large bass in Oak Run!! This year the average largemouth bass relative weight in this tract was right at 98.01%.. The larger fish over 16” tend to show a lower relative weight but seems that may be changing soon with the introduction of shad as the shad build forage of all sizes through the first few years. I still 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 a 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 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 4.13. 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 it made the bluegill very easy to collect again.

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 overall higher than anticipated relative weight. Adults around the same relative weights here as well as the other section. 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**

- 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 am going to continue to promote protecting just a few sanctuary zones throughout the lake, especially in coves where recreational swimming/boating is already limited.

    - 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 of my time to help build and place some structures throughout the lake as always.

- 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 continue the harvest of 11-14" bass from the lake to reduce their numbers.. 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. When fishing it would be nice to focus on harvesting underweight skinny 11-14" bass.
    -
- 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 game fish 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 in 2024, I recommend the following:**

    - I would recommend stocking largemouth bass in the 7-10 inch range this summer/fall as a follow up stocking to keep helping with shad control. As much as we want the shad to explode and produce unlimited forage in the lake, it is actually better to control their explosion of spawning by increasing predator numbers of all sizes and the lake could benefit from more fresh bass coming up the ranks. I also want to keep up with numbers of bass for what I believe the lake will need in 2-5 years not just what we need in the lake right now.
        - There is a reality that some of these bass may get harvested within the 11-14” harvest suggestion I am giving you, but these newly stocked bass will grow past the 11-14” size class so quickly that there is a very small percentage of bass that will be harvested during this phase. Most of them will make it through and will grow very quickly. We have observed the bass that we have stocked last year grow at exceptional rates as compared to the bass that have been in the lake. The bass that are in the lake currently could be as old as 10 years old and the fact is some of those 10 year old bass may only be 11-14” due to a lack of food in their key years of growth. Those are the fish we want to harvest, but the fish we want to see grow into future trophies are the bass we are stocking as well as the offspring

from the bass we are stocking and the native bass that mix genetics.

- Secondly I would recommend a walleye stocking similar to the last few years. This lake continues to pump out some of the greatest walleye in the midwest! Stock 5-7” walleye in the fall as you have been.
- Third and final stocking recommendation will be smallmouth bass. Stock 4-6” or 6-8” smallmouth bass this fall to continue to boost their numbers. They take to the lake great and anglers love catching them. Stocking is required to sustain a sizable population in this lake.

**Final Thoughts/Conclusion**

The lake looks great and the fish populations are all thriving! Exciting to see the panfish numbers up and the quality of fish so impressive. Also the bass numbers/sizes seem to be improving and the introduction of shad is already a very positive change for the largemouth bass body condition. I am exciting to see how things continue to progress. 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,

**Austin Bennett**
**Fisheries Biologist**
**Abennett@hblakemanagement.com**

## Fish Data Tables

### Catfish

| | Inches | Pounds |
|---|---|---|
| | 25 | 7 |
| | 28 | 8 |
| | 16 | |
| | 16 | |
| | 16 | |
| | 23 | 6 |
| | 23 | 5.1 |
| **Average** | **21** | **6.53** |

### Smallmouth

| | Tag Number | Inches | Pounds |
|---|---|---|---|
| | 281 | 14 | 1.1 |
| | 298 | 12.25 | 0.86 |
| **Average** | | **13.13** | **0.98** |

### Perch

| | Inches |
|---|---|
| | 11 |
| | 12 |
| | 7 |
| **Average** | **10** |

## Walleye

| | Tag Number | Inches | Pounds |
|---|---|---|---|
| | 282 | 18 | 2.18 |
| | 287 | 15 | 1.32 |
| | 291 | 9.5 | |
| | 256 | 27 | 5.64 |
| | 257 | 25 | 5.4 |
| | 201 | 15.5 | 1.38 |
| | 202 | 20.5 | 3.2 |
| | 203 | 14 | 0.92 |
| | 204 | 20.25 | 3 |
| | 205 | 19.25 | 2.34 |
| | 206 | 17 | 1.78 |
| | 207 | 14 | 1.2 |
| | | 11.75 | |
| **Average** | | **17.44** | **2.58** |

## Largemouth

| | Tag Number | Inches | Pounds |
|---|---|---|---|
| | 283 | 17 | 2.2 |
| | 284 | 15.5 | 1.9 |
| | 285 | 12 | 0.75 |
| | 286 | 19.5 | 3.82 |
| | 288 | 13 | 1.14 |
| | | 11.5 | 0.7 |
| | 289 | 14.5 | 1.42 |
| | 290 | 15 | 1.88 |
| | | 12.5 | 1 |
| | | 11.5 | 0.72 |

| | | | |
|---|---|---|---|
| | 292 | 14.75 | 1.52 |
| | 293 | 16.5 | 2.14 |
| | | 8.75 | |
| | 294 | 16.5 | 2.5 |
| | 295 | 17.5 | 2.64 |
| | | 9 | |
| | | 9 | |
| | 296 | 14.5 | 1.62 |
| | | 12.5 | |
| | | 12.75 | 1.08 |
| | | 12 | 0.82 |
| | | 13 | 1 |
| | 297 | 14.25 | 1.6 |
| | | 9.75 | |
| | 299 | 14 | 1.36 |
| | 300 | 12.5 | 0.98 |
| | | 9 | |
| | | 11.5 | 0.74 |
| | 252 | 12 | 1.12 |
| | | 8.5 | |
| | | 10 | |
| | 253 | 16 | 2.18 |
| | 254 | 13 | 1.1 |
| | | 13.25 | 1.18 |
| | | 12.5 | 1.04 |
| | 255 | 12.75 | 0.98 |
| | 258 | 16 | 2 |
| | 259 | 19.75 | 3.96 |
| | 260 | 18 | 2.98 |
| | 261 | 12 | 0.84 |
| | 262 | 12.25 | 0.9 |
| | 263 | 16.5 | 2.2 |
| | 264 | 14.5 | 1.54 |
| | 265 | 14.5 | 1.5 |
| | | 9 | |

| | | | |
|---|---|---|---|
| | 267 | 14.75 | 1.56 |
| | | 13 | 1 |
| | 268 | 14.75 | 1.8 |
| | 269 | 12.25 | 0.98 |
| | | 12.5 | 0.98 |
| | 270 | 18.5 | 3.24 |
| | | 12.5 | |
| | 271 | 16.25 | 2.3 |
| | 272 | 16 | 2.08 |
| | | 12.75 | 1.04 |
| | | 15.25 | 1.64 |
| | | 12.75 | 1.06 |
| | | 11.5 | 0.7 |
| | | 12.25 | 0.96 |
| | 273 | 14.5 | 1.06 |
| | 274 | 12.75 | |
| | | 12.75 | |
| | 275 | 17 | 2.58 |
| | 208 | 16 | 2.32 |
| | 209 | 16.25 | 2 |
| | 210 | 16 | 2.26 |
| | 211 | 16.8 | 2.4 |
| | 212 | 17 | 2.54 |
| | | 12.5 | 9.8 |
| | | 13.5 | 1.2 |
| | 213 | 15.25 | 2.06 |
| | 215 | 16 | 2 |
| | 216 | 13 | 1.18 |
| | 217 | 12.5 | 0.96 |
| | | 13.25 | 1.16 |
| | 218 | 18 | 3 |
| **Average** | | **13.79** | **1.76** |

## Crappie

| | Inches |
|---|---|
| | 9.75 |
| | 7.5 |
| | 10.5 |
| | 10.25 |
| | 11 |
| | 10.25 |
| | 10 |
| | 10.5 |
| | 10.25 |
| | 10.25 |
| | 10.5 |
| | 10.25 |
| | 11.75 |
| | 9.75 |
| | 10.5 |
| | 10.5 |
| | 10.25 |
| | 7 |
| | 9.5 |
| | 10.5 |
| | 8 |
| | 12.25 |
| | 11 |
| | 10.25 |
| | 10.75 |
| | 12.25 |
| | 2.5 |
| | 8.25 |

| | |
|---|---|
| | 10.75 |
| | 9.75 |
| | 2.5 |
| | 8.25 |
| | 10.75 |
| | 9.75 |
| **Average** | **9.64** |

## Redear

| | **Inches** | **Pounds** |
|---|---|---|
| | 10.25 | 0.9 |
| | 6 | |
| | 10.5 | 0.94 |
| | 10.25 | |
| **Average** | **9.25** | **0.92** |

## Bluegill

| | **Inches** |
|---|---|
| | 8.25 |
| | 8 |
| | 8.5 |
| | 7.5 |
| | 8 |
| | 7.5 |
| | 8.5 |
| | 8 |
| | 8.25 |
| | 8 |
| | 8.5 |
| | 8.75 |
| | 7.25 |

| | |
|---|---|
| | 8.25 |
| | 8.25 |
| | 8.25 |
| | 7.25 |
| | 8 |
| | 8 |
| **Average** | **8.05** |