

Good morning Mike!

Thanks so much for having me out to survey y'all's lake! It was a lot of fun, and I think we learned a lot too. I've attached the data we collected as a PDF file for you to view, please feel free to share the data and the remainder of this email with anyone who may like to have it. What you'll see first is a graph of the numbers and different sizes of Bluegill and Redear we collected. What's encouraging about this data is that we collected lots of forage of various sizes, and Bluegill is the dominant forage. Though we did collect lots of forage, ideally, we would see more small forage than medium and large size forage. This could be a result of many small bass, less available dense habitat to protect small forage, or we just couldn't get to some parts of the lake that may have had more small forage.

Next you'll see a graph where I plotted the bass lengths and weights against a curve of standard. In other words, the blue dots represent actual bass we measured (that were at least 10 inches), and the red line represents what those bass should weigh if they were perfectly healthy. All bass we measured were underweight, some more than others. We collected 57 bass total, most of those were too small to weigh and are most likely less than 1 year old. The majority of weighable bass we collected were between 10-12" in length.

Here are the water test results:

pH- 7.5 (We want between 6.5-9, but this will fluctuate some throughout the day.)

Alkalinity- 20.52ppm (We want at least 20 for pH buffering, 30-40 for phytoplankton development, and 50-150 is the ideal range.)

The aquatic plant that has been creeping in from the banks on y'all is called **Giant Cutgrass**. **It can be controlled with an aquatic herbicide containing the active ingredient Glyphosate, Imazapyr, or a combination of the 2.** The herbicide can be applied from spraying from a boat (to spray what you can't reach from the shore), or a drone application would be quick and effective. Here's a link to our AquaPlant page on Giant Cutgrass- [How to Control Giant Cut Grass - AquaPlant: Management of Pond Plants & Algae](#)

I'll discuss the rest of my recommendations based on the 5 fundamentals of fish management:

- 1. Water-** This is the most important aspect of managing your lake because the water affects every single thing that grows in that lake. Y'all's water isn't bad, but **could be improved by applying about 6,500-7,000lbs of ag lime to raise the alkalinity to 40ppm.** I attached our factsheet on liming ponds that has more info on the benefits of liming. If y'all want to lime the lake in the near future, I'd recommend trying to get it done by February-March. Some form of aeration would also be optimal for the lake, but is probably not absolutely essential.
- 2. Habitat-** As goes the habitat, so goes what lives in it. Y'all's lake has a lot of underwater trees, which is awesome, however most of those trees seem to have very little foliage or small branches left, which could be part of the reason that we didn't see more small forage except areas that had aquatic plants or other dense habitat where these small fish can hide. I'm not 100% sure y'all need more habitat, but if you did, it would be dense habitat like fresh tree foliage, stumps with the root ball attached, aquatic plants, etc. I attached a document that discusses habitat development as well as spawning habitat.

- 3. Food Chain-** The Bluegill and Redear appear to be holding up the food chain pretty well, but stocking additional baitfish would take some of the pressure off the Bluegill and Redear, and occupy other available niches in the lake. For putting weight on bass, I'd put Threadfin Shad (likely would last a few years) at the very top of the list. However, you may consider stocking Tilapia, which eat the filamentous algae everyone complains about, and just before the Tilapia die out in Winter, they become sluggish swimmers and very easy prey for bass and/or any other predatory fish in the lake. More info on Tilapia attached. And then you can always consider Golden Shiner minnows, Fathead minnows (will quickly get eaten), Crawfish, or more Bluegill and/or Redear.
- 4. Genetics-** This mainly refers to stocking the right genetics for your part of the world. Florida bass do not perform well in New York, for example. There's not much y'all can do about the genetics of your bass now. If y'all have tried everything and those bass just will not grow, they could be genetically stunted and may benefit from stocking some pure Florida bass fingerlings or bass fingerlings that are a hybrid of Florida and Northern bass. But I would consider stocking additional bass somewhat of a last resort.
- 5. Harvest-** Much like a garden, at some point, you're going to have to harvest. What happens in most poor-quality fishing ponds is people neglect or refuse to harvest any small bass because they're too small to filet, and they don't want to just throw them on the bank. As those bass reproduce, there becomes too many mouths to feed for the amount of available food in the lake, and then none of the bass have enough food to get "fat n happy". **A general rule of thumb for just about every bass fishing lake is to harvest 8-12" bass at a rate of 10 per acre per year. That means taking 100 small bass out of y'all's lake every year. You may or may not hit that goal annually, but I'd just recommend**

making it a new rule for fishing the lake that any 8-12" bass caught must be harvested (unless the look fat n' healthy).

I know that's a lot of info, but to summarize, if this were my lake, the first thing I'd do is get it limed. Then I'd start harvesting small bass, and if there's money in the budget in the Spring, I'd stock Tilapia or Threadfin Shad or both.

I hope this has been helpful for now, and please let me know if y'all have any questions.

Thanks so much,
-Tyson Keese

Tyson Keese | Pond Management Extension Program
Specialist

Department of Rangeland Wildlife and Fisheries
Management | Texas A&M AgriLife

1710 FM 3053 N | Overton, TX 75684-2322

ph: (903) 847-0592 | tyson.keese@ag.tamu.edu

TEXAS A&M AGRILIFE EXTENSION SERVICE