



Fishing in the Mebane-Burlington Area

April 2019



The Mebane-Burlington area has a high density of parks and lakes that provide a wide variety of fishing opportunities for every type of angler. Three popular lakes include Lake Cammack, an 850-acre lake located northeast of Burlington, Lake Mackintosh, a 1,150-acre lake located southwest of Burlington, and Graham-Mebane Lake, a 650-acre lake located between Burlington and Mebane (Figure 1). Biologists with the N.C. Wildlife Resources Commission (Commission) routinely monitor sportfish populations throughout the state to ensure that fish are healthy and the regulations in place are relevant. In the Piedmont, biologists survey Black and White Crappie, Largemouth Bass, Striped Bass, and hybrid Striped Bass, or Bodie Bass. Below are results from Black Crappie and Largemouth Bass surveys from these three Piedmont lakes.

Methods:

- Using boat electrofishing, biologists surveyed Largemouth Bass in Lake Cammack in spring 2017 and Graham-Mebane and Mackintosh lakes in spring 2018.
- Using trapnets, biologists surveyed Black Crappie in Lake Cammack in fall 2017 and Graham-Mebane and Mackintosh lakes in fall 2018. Nets were left to “soak” overnight and fish were collected each morning until a target number of fish were caught or a target number of nets were set.
- All fish were weighed and measured, and otoliths or ear bones were removed from a sub-set of fish to assess age structure and growth.
- There are many parameters used to assess the overall health of a population, but the following are important when planning fishing trips:
 - * CPUE (catch per unit of effort): For net surveys, CPUE means the number of fish caught per net, per night and for electrofishing surveys it means the number of fish collected per hour of electrofishing.
 - * Body Condition: This is an index of how much a fish should weigh relative to their length. Typically, fish with body conditions in the 90s are healthy, plump looking fish.
 - * The number of fish that are of harvestable size and/or the number of fish over a certain desirable weight.

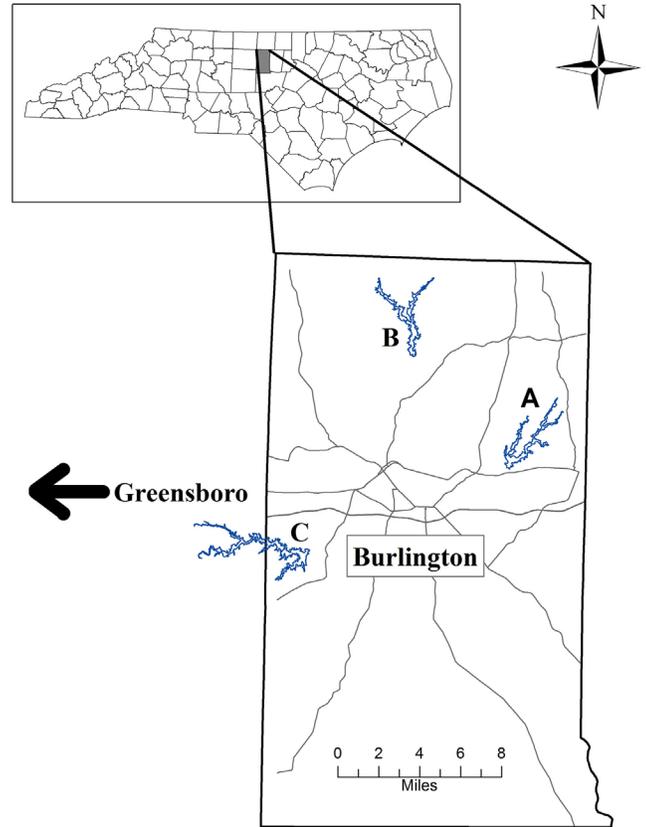


Figure 1. Map of Graham-Mebane Lake (A), Lake Cammack (B), and Lake Mackintosh (C) and their locations relevant to the City of Burlington within Alamance County. Lake Mackintosh is also located partially in Guilford County.



Black crappie caught in the Piedmont. The three lakes surveyed all have populations of Black and White Crappie, however, Black Crappie tend to be more prevalent in certain reservoir environments.



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Results so far:

- Largemouth Bass:** Overall, the CPUE for Cammack and Mackintosh lakes were above average (when compared to other Piedmont reservoirs), whereas Graham-Mebane Lake had an average CPUE. Often with Largemouth Bass fisheries, there are tradeoffs between catching a lot of smaller fish or catching fewer, yet larger fish. For instance, while Lake Cammack had the highest CPUE, most of the fish were less than 14 in and exhibited average body conditions (Table 1; Figure 2). Conversely, Graham-Mebane Lake had the lowest CPUE, but the highest percentage of fish larger than 14 in, and fish exhibited above average body conditions. Lake Mackintosh CPUE was in the middle and appeared to have a balanced size distribution, where one could expect to catch many healthy harvestable-sized fish.
- Black Crappie:** The CPUE for Mackintosh and Graham-Mebane lakes were average for Piedmont reservoirs and Lake Cammack had an above average CPUE (Table 2). Even though Lake Cammack had the highest CPUE, the Black Crappie in this population appeared to be stunted and exhibited average, but less than ideal body conditions. In contrast, Graham-Mebane Lake had a lower CPUE, but had the highest percentage of fish that weighed over 1 lb. Lake Mackintosh had the lowest CPUE, but fish were in good condition and the population appeared to be balanced.
- Bottom Line:** Lake Cammack is a great lake to catch a high number of fish, Graham-Mebane Lake offers larger fish if you are willing to put in the time, and Lake Mackintosh provides a well-balanced population where anglers can expect to catch a lot of fish in a variety of sizes.

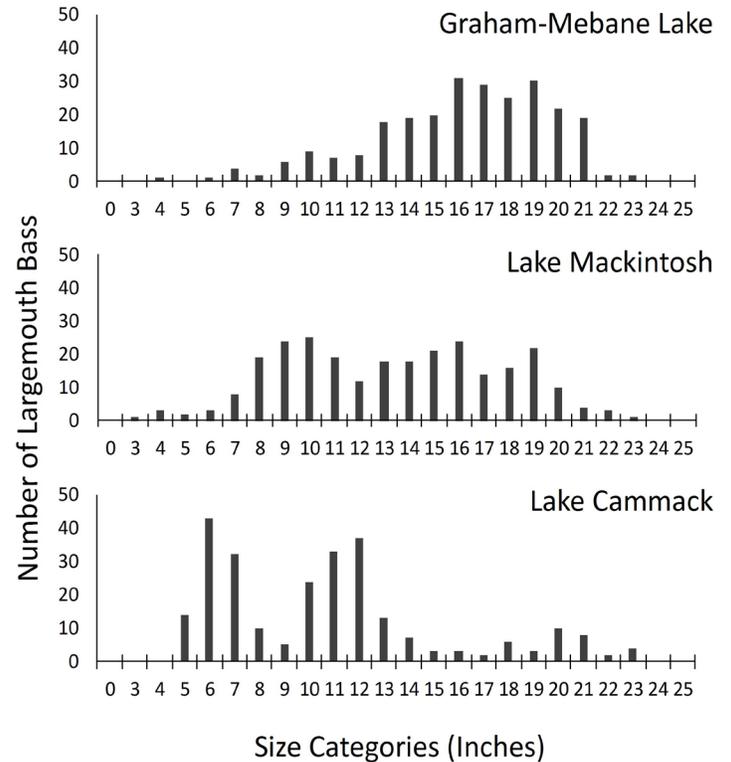


Figure 2: Shown here are the length distributions for all three lakes, where the x-axis labels are length categories in increments of 1 inch. For example, fish in the column labeled 5 in are fish that fell into the length range of 5 to 6 in. The y-axis is how many fish were collected in each length category.

What's next?:

- Biologists recommend promoting harvest of crappie in all three lakes and increasing Largemouth Bass harvest in Lake Cammack. Harvest can be a useful tool to help thin out stunted populations and allow remaining fish in the lake an opportunity to grow bigger and faster with less competition. As regulations already exist to promote harvest, no regulation changes were proposed.

For more information, please contact:

Kelsey Lincoln, District 5 Fisheries Biologist
 (336) 290-0052; kelsey.lincoln@ncwildlife.org

	CPUE	Body Condition	% >14 in.	% >5 lbs	Largest Fish (lbs)
Gra. -Meb.	44	95	76	10	7.5
Mackintosh	76	90	48	3	7.4
Cammack	113	88	15	3	7.7

Table 1. This table lists the key parameters for Largemouth Bass populations.

	CPUE	Body Condition	% >10 in.	% >1 lbs	Largest Fish (lbs)
Gra. -Meb.	16	83	21	7	2.6
Mackintosh	11	90	4	<1	1
Cammack	29	83	6	<1	1.6

Table 2. This table lists the key parameters for Black Crappie populations.

