Summary of Fishery Surveys
Gile Flowage, Iron County, 2013

Survey Description

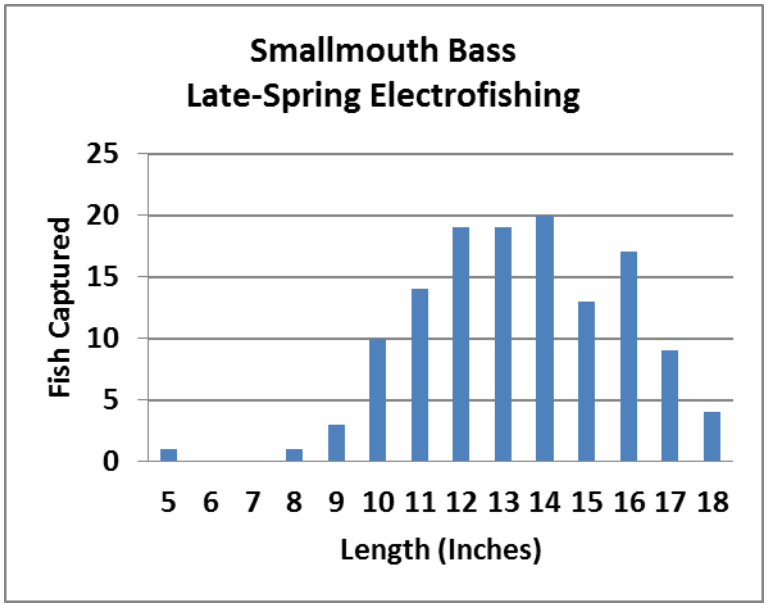
The Mercer DNR Fisheries Management Team conducted the following fishery surveys on Gile Flowage in 2013: a late-spring electrofishing survey (June 4 along 5.9 miles of shoreline) to assess the smallmouth bass and panfish populations, and an experimental fall fyke netting survey (October 8-10 using 9 fyke nets set overnight for 2 nights for a total of 18 net-nights) in an attempt to assess the black crappie population. Quality, preferred, and memorable sizes referenced in this summary are based on standard proportions of world record lengths developed for each species by the American Fisheries Society.

Habitat Characteristics

The Gile Flowage is a 3,384-acre drainage system (maximum depth of 25 feet) with medium brown-stained water and low to moderate water clarity (Secchi disk visibility 4 to 5 feet). The littoral zone (near-shore area where light is able to penetrate to the lake bottom) substrates are comprised primarily of sand, gravel/rubble, and silt with relatively sparse amounts of aquatic vegetation due primarily to significant (~7 feet) annual winter drawdowns. Nutrient analyses (e.g., phosphorus) have typically shown that the Flowage is moderately productive (mesotrophic in status). There are four public boat landings available. For more details, see the 2005 Gile Flowage Fishery Management Plan online at http://dnr.wi.gov/water/basin/upchip/.

Smallmouth Bass

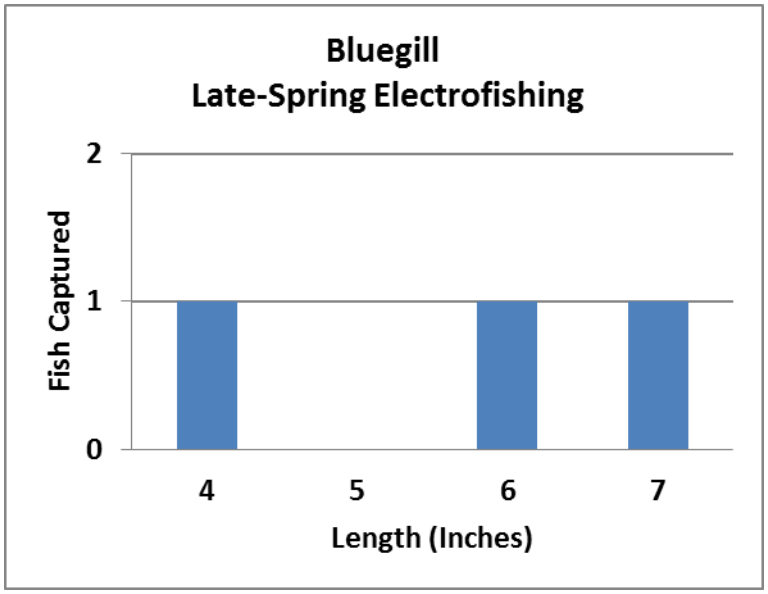
Captured 22 per mile ≥ 7”	
Quality Size ≥ 11”	89%
Preferred Size ≥ 14”	49%
Memorable Size ≥ 17”	10%



Smallmouth bass ≥ 7 inches were captured at a relatively high rate of 22 per mile or 48 per hour (target level 20-40 per hour in 2005 Management Plan) during the late-spring electrofishing survey. Size structure of our sample was very good, with all size classes represented, along with a notable increase in the proportion of memorable-size fish from 1% in 2011 to 10% in 2013. No largemouth bass were captured or observed during the 2013 survey.

Bluegill

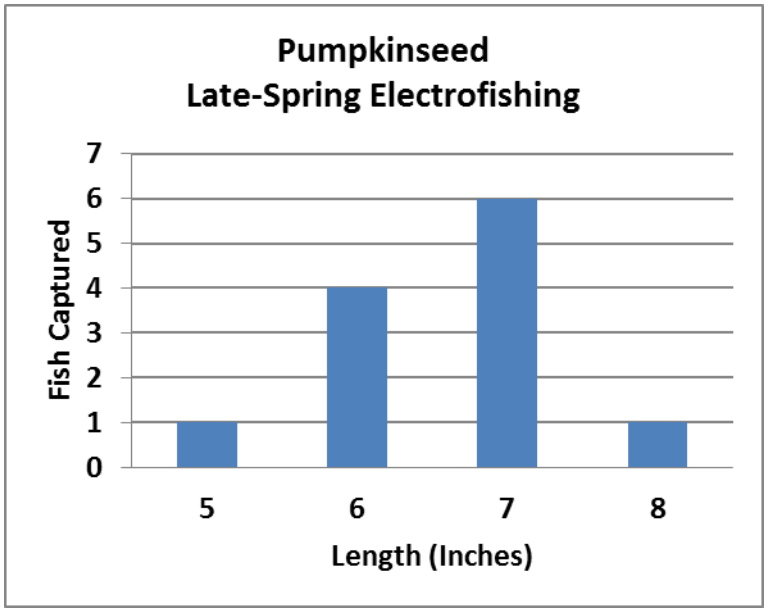
Captured 2 per mile ≥ 3”	
Quality Size ≥ 6”	67%
Preferred Size ≥ 8”	0%



Bluegills ≥ 3 inches were captured at a very low rate of 2 per mile during the late-spring electrofishing survey, reflecting very low density. This sample was too small to accurately estimate population size distribution.

Pumpkinseed

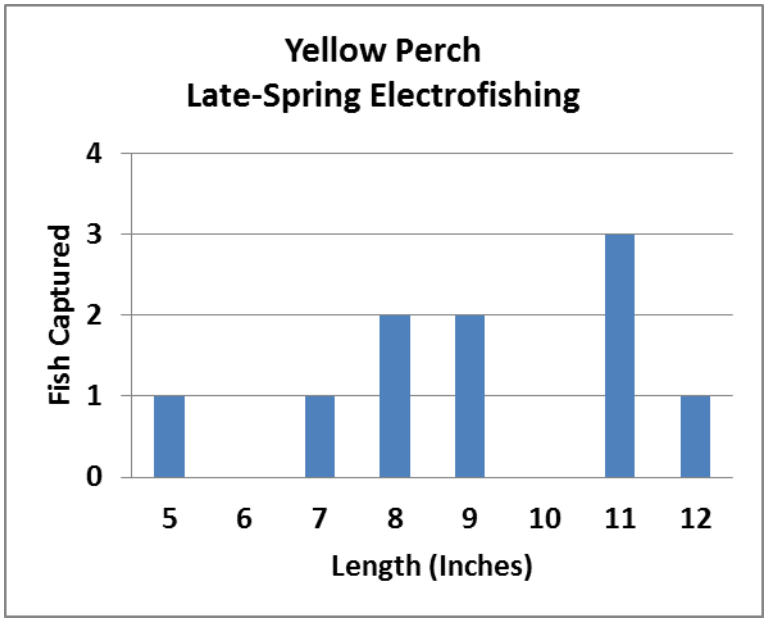
Captured 8 per mile ≥ 3”	
Quality Size ≥ 6”	92%
Preferred Size ≥ 8”	8%



Pumpkinseeds ≥ 3 inches were captured at a low rate of 8 per mile during the late-spring electrofishing survey. Size structure of the population sample was good, with the majority of fish being of an acceptable size to anglers.

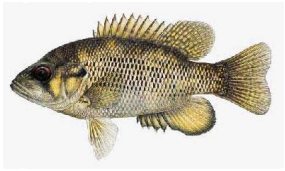
Yellow Perch

Captured 7 per mile ≥ 5”	
Quality Size ≥ 8”	80%
Preferred Size ≥ 10”	40%
Memorable Size ≥ 12”	10%

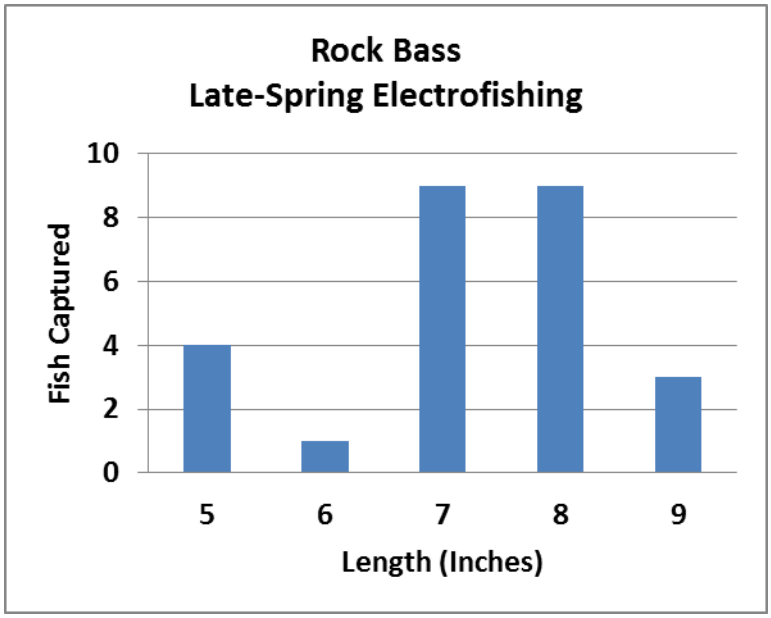


Yellow perch ≥ 5 inches were captured at a low rate of 7 per mile during the late-spring electrofishing survey. Although electrofishing is not the best way to document the relative abundance of perch, our sample does reveal there is a higher proportion of preferred-size perch in the Gile Flowage than in most nearby waters.

Rock Bass



Captured 17 per mile ≥ 4”	
Quality Size ≥ 7”	81%
Preferred Size ≥ 9”	12%



Rock bass ≥ 4 inches were captured at a moderate rate of 17 per mile during the late-spring electrofishing survey. Size structure of our sample was good, with over 80% being of quality size or better.

Conclusions

The Gile Flowage currently contains one of the most robust smallmouth bass fisheries in Wisconsin. Survey results indicate that our capture rate of smallmouth bass ≥ 7 inches falls within the upper 93rd percentile amongst statewide populations. Gile Flowage bass are managed under a three-fish daily bag and no minimum length limit, however, 14- to 18-inch fish must be released, and only one fish over 18 inches may be kept. This regulation was implemented at the start of the 2008 angling season, and it appears that the smallmouth bass population is starting to respond favorably in terms of size structure. In 2013, 10% of bass ≥ 7 inches were also ≥ 17 inches; whereas in similar surveys conducted in 2006, 2008, and 2011, the proportion of memorable-size bass ≥ 17 inches ranged between 1% and 3%. Despite the fact that smallmouth bass < 14 inches long may be harvested in the Gile Flowage, numbers remain at slightly higher levels than the target range identified in the 2005 Gile Flowage Fishery Management Plan. We don't suspect that smallmouth are hindering other Flowage fish species, but anglers should be aware that harvesting a few smallmouth bass under the 14-18 inch protected slot would provide a good meal and do no harm from a fishery management perspective.

Panfish populations within the Gile Flowage continue to display characteristics of a panfishery that is dominated by predatory gamefish (e.g. walleye, northern pike, etc.). Relatively low numbers, but quality size, characterizes Gile Flowage panfish due primarily to high predation levels. Panfish that do make it past the large numbers of predators tend to experience fast growth (due to abundant food) which results in the quality size observed commonly by anglers and in our fish surveys. Anglers fortunate enough to experience some of the quality panfishing the Gile Flowage occasionally offers are encouraged to practice selective harvest (i.e., voluntarily refrain from harvesting the daily bag limit or the largest fish) in order to help sustain quality fishing opportunities.

The experimental fall fyke netting survey on the Gile Flowage resulted in an extremely low catch and did not provide meaningful insight into the black crappie population as hoped. Therefore, no results from that survey are presented. A 2014 early-spring fyke netting survey to assess the muskellunge population may provide a representative sample of the crappie population at that time if the adult crappies are in the shallows preparing to spawn.

Other species captured during these surveys, but not reported here due to low abundance and/or sampling bias, included: walleye, northern pike, muskellunge, black crappie, yellow bullhead, white sucker, and golden shiner.

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