



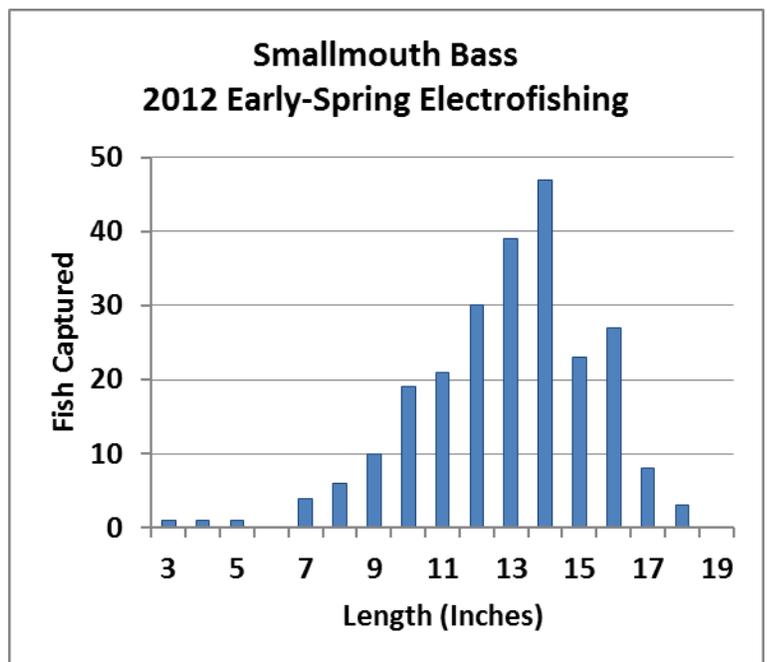
## Summary of Fishery Surveys Turtle-Flambeau Flowage, Iron County, 2012

The Mercer DNR Fisheries Management Team conducted the following fishery surveys on the Turtle-Flambeau Flowage in 2012: a late-spring electrofishing survey (May 15 – 17) to assess the bass community, and an early-summer fyke net survey (June 11 – 14) to assess the panfish community. Eight stations (covering over 17 miles of shoreline) throughout the Flowage were sampled during the late-spring electrofishing survey. Sampling conditions during the three nights of the survey were nearly ideal, with water temperatures in the low to mid 60s and little to no wind. As a result, our capture efficiency on bass was excellent and our survey results are considered to be very reliable. Thirty-six net-nights of effort (one net set overnight equates to one net-night of effort), spread out over two different areas of the Flowage, were used to assess the panfish community during the early-summer fyke netting survey. Fyke nets were set in habitats likely to be used by panfish species (i.e. shallow water with aquatic vegetation). Despite the fact that cold front conditions arrived during the middle of the survey, bluegill were noted to be spawning and/or staging to spawn. Water temperatures ranged between the upper 60s and lower 70s, and our bluegill and pumpkinseed catches are considered reliable indicators of current population status. 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.

### Smallmouth Bass



Captured 14 per mile $\geq 7''$	
Quality Size $\geq 11''$	84%
Preferred Size $\geq 14''$	46%
Memorable Size $\geq 17''$	5%

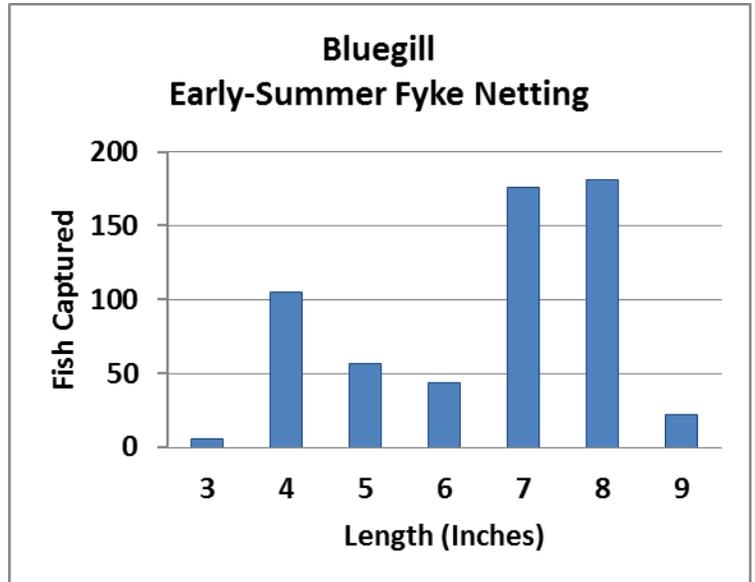


We captured smallmouth bass at a relatively high rate of 14 per mile (33 per hour) during the late-spring electrofishing survey. This catch rate puts the Turtle-Flambeau Flowage smallmouth bass population in the upper 89<sup>th</sup> percentile of statewide populations, but is comparable to smallmouth bass capture rates in some other northern Wisconsin reservoirs such as the east side of the Chippewa Flowage (14 per mile) and Dairyland Reservoir (14 per mile) in 2012, Gile Flowage (19 per mile) in 2011, High Falls Reservoir (20 per mile) in 2010, and Lake Mowahksin (13 per mile) in 2009. Size structure of the population is considered good; however, memorable-sized fish are at a fairly low proportion in relation to the population at large. Only one largemouth bass was captured during the survey, indicative of a population at extremely low abundance levels.

### Bluegill



Captured 16 per net-night $\geq 3''$	
Quality Size $\geq 6''$	72%
Preferred Size $\geq 8''$	34%

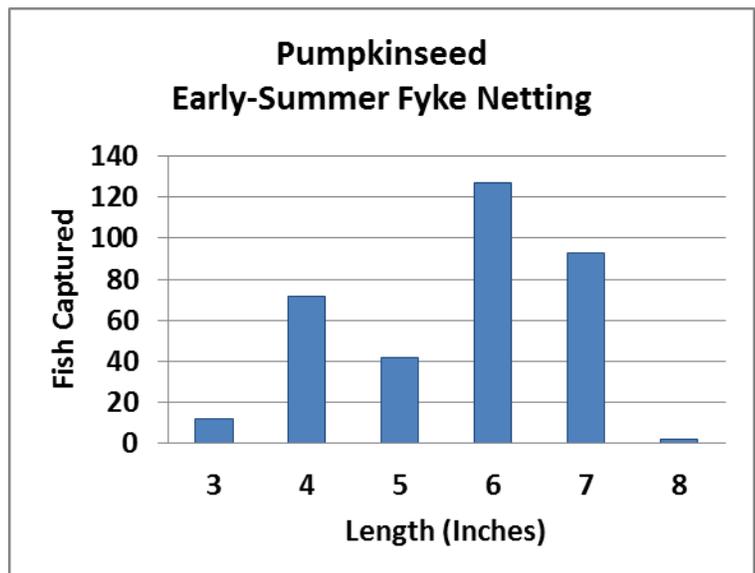


Bluegill  $\geq 3$  inches were captured at a relatively low rate of 16 per net-night during the early-summer fyke netting survey. The size structure of the population was very good, with a very high proportion of fish being of a preferred size to anglers.

### Pumpkinseed



Captured 10 per net-night $\geq 3''$	
Quality Size $\geq 6''$	64%
Preferred Size $\geq 8''$	1%

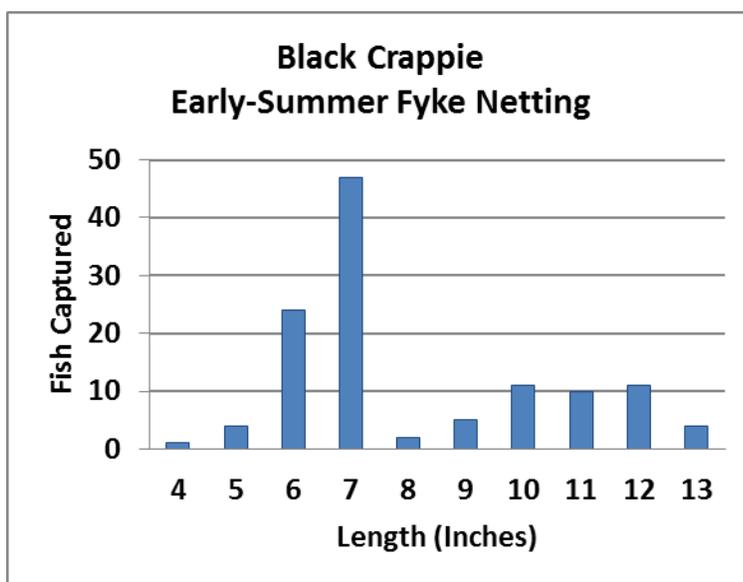


Pumpkinseed sunfish  $\geq 3$  inches were captured at a relatively low rate of 10 per net-night during the early-summer fyke netting survey. The size structure of the population was good, with a fair proportion of fish being at an acceptable size to anglers.

### Black Crappie



Captured 3 per net-night $\geq 5''$	
Quality Size $\geq 8''$	36%
Preferred Size $\geq 10''$	31%
Memorable Size $\geq 12''$	13%



Black crappies  $\geq 5$  inches were captured at a low rate of 3 per net-night during the early-summer fyke netting survey. Early-summer netting may not be the most appropriate time to obtain a representative sample of the crappie population, but our sample does reveal that there are some nice-sized crappies in the Flowage.

### Interpretation of Results

Capture rate of smallmouth bass seven inches and longer (14 per mile or 33 per hour) was very similar to our capture rate in 2008 (14 per mile or 38 per hour), and it was slightly above the target range of 15-30 per hour as identified in the Turtle-Flambeau Flowage Fishery Management Plan. Though size structure of smallmouth bass is considered good, the proportion of fish 17 inches and longer (5%) was below the management plan target range of 10-15%. A regulation strategy designed to lower smallmouth bass abundance levels while improving size structure will be proposed in order to better align regulations with management plan objectives.

Bluegill and pumpkinseed were captured at relatively low rates, which matched expectations based upon the Flowage being a walleye-dominant system. Low abundances of panfish are typical in lakes like the Flowage with moderate to high walleye density and limited aquatic vegetation, resulting in effective predation on juvenile panfish. As is expected with species at relatively low abundance levels, size structure of the bluegill and pumpkinseed populations was impressive. The proportion of preferred-length bluegill (34%  $\geq 8$  in.) was slightly above the management plan target range of 10-30%. Because of low density, presumably fast growth rate (analyses not yet completed), and good size attainment, panfish (bluegill, pumpkinseed, black crappie, and yellow perch) within the Flowage are managed under a 10-fish (in aggregate) daily bag limit along with a 10-inch minimum length limit on crappie.

We are not convinced that catch statistics for black crappie accurately represent that population; therefore, a more targeted black crappie survey is currently planned for 2014. Other species captured during these surveys include: yellow perch, rock bass, walleye, muskellunge, northern pike, shorthead redhorse, white sucker, burbot, yellow bullhead, bluntnose minnow, golden shiner, troutperch, logperch, spotfin shiner, and spottail shiner.

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