



Early-Spring Fyke Netting Survey Summary Turtle-Flambeau Flowage, Iron County, 2013

Survey Description

The Mercer DNR Fisheries Management Team conducted a fyke netting survey on the Turtle-Flambeau Flowage during May 10 - May 13, 2013 as part of our baseline monitoring program. The primary target species was walleye, however, samples of the northern pike and black crappie populations were also obtained. Netting locations during the survey were focused in the Townline Lake area of the Flowage. A total of 15 net-nights of effort occurred over the duration of the survey (one net set overnight equates to one net-night of effort). 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.

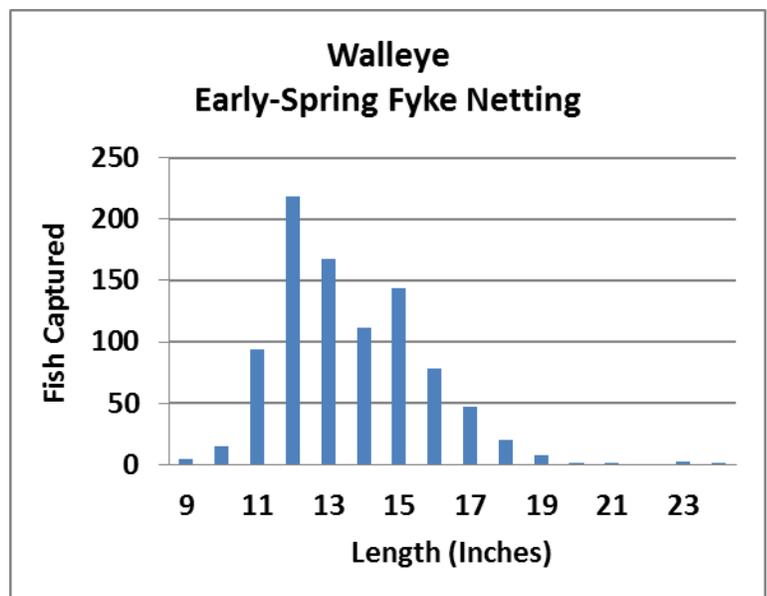
Habitat Characteristics

The Turtle-Flambeau Flowage is a 13,000 plus-acre drainage system (maximum depth of 50 feet) with light brown-stained water and low to moderate water clarity (Secchi disk transparency measurements averaging between 5 and 6 feet; WDNR citizen lake monitoring data 1998-2013). The littoral zone (near-shore area where light is able to penetrate to the lake bottom) substrates are comprised primarily of sand and gravel with areas of rubble and muck with limited amounts of aquatic vegetation. Nutrient analyses (e.g., phosphorus) have typically shown that the Flowage is moderately productive (mesotrophic to borderline eutrophic in status). There are seven public boat landings along with camping and lodging opportunities in the immediate area.

Walleye



Captured 67.5 per net-night $\geq 10''$	
Quality Size $\geq 15''$	33%
Preferred Size $\geq 20''$	1%

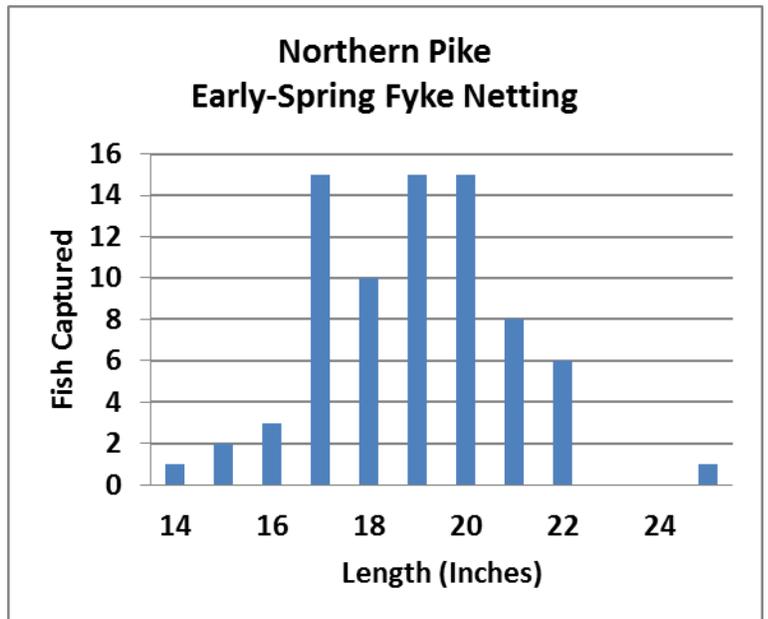


We captured walleyes at a relatively high rate (67.5/net-night) during the early-spring netting survey. The size distribution of the population sample was considered fair, and is indicative of a population that experiences strong recruitment of young fish into the adult population.

Northern Pike



Captured 5.4 per net-night $\geq 14''$	
Quality Size $\geq 21''$	20%
Preferred Size $\geq 28''$	0%

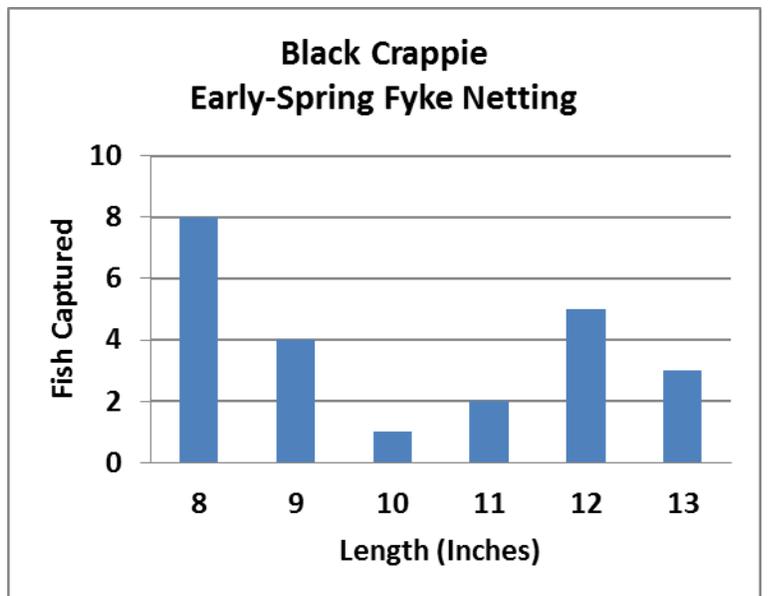


Although our nets were not set specifically to target northern pike, we caught them at a moderate rate (5.4/net-night) during the early-spring netting survey. Size distribution in our sample was considered poor, with a low proportion of quality-size fish and none of preferred size.

Black Crappie



Captured 2.6 per net-night $\geq 5''$	
Quality Size $\geq 8''$	100%
Preferred Size $\geq 10''$	48%
Memorable Size $\geq 12''$	35%



Although our nets didn't target crappie specifically, early-spring netting can be an effective technique for obtaining a representative sample of the adult crappie population. We caught crappies at a relatively low rate (2.6/net-night), but the size distribution of our sample reveals there are some very nice-sized crappies in the Flowage.

Conclusions

Turtle-Flambeau Flowage walleyes continue to exhibit characteristics of a very strong and healthy population. The Flowage has some of the most consistently high levels of natural walleye reproduction in northern Wisconsin. Variation in year-class strength (e.g., one strong year-class followed by one or two weak year-classes) is typical even within healthy walleye populations; however, the Flowage seldomly experiences “weak” year-classes that don’t contribute much to the fishery. As a result of consistently high natural reproduction and recruitment of young fish into the fishery, angler catches tend to be dominated by relatively smaller fish during much of the season. Younger fish tend to be more aggressive and less selective when it comes to deciding whether or not to feed (or bite).

The proportion of quality-size walleye (≥ 15 inches) captured during our survey was 33%, which falls within the management plan objective range of 30-50%, and is therefore considered acceptable. The proportion of quality-size fish during early-spring netting surveys in 2011, 2009, and 2006 was 57%, 35%, and 36%, respectively. As the proportion of quality-size fish decreases, it suggests that strong recruitment of young fish into the population is occurring, fish are growing at a slow rate, and/or excessive mortality may be a problem. However, we believe that the lower proportion of quality-size fish observed in 2013 is primarily the result of one or two relatively strong year-classes that are now contributing to the adult walleye population. As was discussed in the 2011 early-spring fyke netting report, strong year-classes of young walleyes were observed in 2009 and 2011. Walleye age analyses from this year’s sample indicate that the majority of the fish around the abundant 12-inch length class are 4 years of age, which assigns them to the 2009 year-class.

Pike on the Flowage continue to exhibit characteristics of a relatively abundant population; exemplified by moderate to high capture rates (even when they’re not being targeted) and a poor size distribution (due assumedly to a slow rate of growth and high natural mortality; a common phenomenon for many relatively shallow, warmwater systems in northern Wisconsin). Flowage pike can grow to larger sizes (> 30 inches), however, those fish are generally rare.

During this survey, we were not specifically targeting habitats in which we would expect to see large numbers of crappies. So, as expected, our sample of crappies was quite small. Nonetheless, the size distribution of the fish we did sample was impressive (typical of the Flowage’s crappie population).

Muskellunge, smallmouth bass, yellow perch, bluegill, pumpkinseed, rock bass, yellow bullhead, burbot, redhorse, and white sucker were other species captured during the survey.

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