Lake Arthur

Butler County

Spring 2016 Trapnet and Night Electrofishing Surveys

A nice Lake Arthur Pike.

Fisheries Management Area 1 staff returned to Lake Arthur in spring of 2016 to continue our study of the Muskellunge population as part of the statewide study to evaluate the effects, if any, of the changes in size limit and creel limit adopted in 2007. This was our fourth consecutive year of a five year study. Our primary target was Muskellunge, but we continue to measure and count all other species we capture and provide those data to interested anglers.

Table 1. Species captured, number captured and the size range for fish captured in trapnets in Lake Arthur in 2016.

Species	Number caught	Size range (inches)
Muskellunge	19	23 – 51
Northern Pike	17	20 – 35
Hybrid Striped Bass	32	4 – 26
Walleye	127	12 – 29
Channel Catfish	909	8 – 30
Black Crappie	196	3 – 11
White Crappie	142	6 – 15
Bluegill	1559	2 – 9
Bullheads	191	6 – 14
Common Carp	23	22 – 36
Yellow Perch	47	6 – 9
Alewives	208	N/A
Gizzard Shad	80	N/A

As with many trapnet surveys, we see the rise and fall of trapnet catch rates as fish population levels vary each year. We saw substantial increases in some species and declines in others (Table 1). Bluegill, Channel Catfish, Walleye, Bullheads, Black Crappie and White Crappie all saw increases in 2016 over previous surveys. Northern Pike, Yellow Perch and Hybrid Striped Bass catches were similar to previous surveys and Muskellunge numbers were down compared to previous surveys.

An average Walleye from Lake Arthur

Muskellunge catch was below average for Lake Arthur, however, we caught more small Muskellunge than most of our previous surveys and we also caught some trophy size Musky, but there were gaps in the length frequency distribution, suggesting some of our stockings experienced poor survival or perhaps we recorded poor catches due to weather influences. Analysis of rule change outcomes will make use of average catch rates over multiple

years prior-to and after harvest rule change; to minimize the vagaries of assessment catch associated with weather and other influences. As in previous surveys, we recaptured some Musky we had tagged over the last 3 years and inserted Passive Integrated Transponder (PIT) tags in any Musky caught for the first time. The annual stocking of 3,300 Muskellunge fingerlings creates this fishery and stocking goals have been met or exceeded every year since 1990. Lake Arthur maintains a low density Northern Pike population through natural reproduction that also contains some quality size fish.

Table 2. Comparison of Muskellunge trapnet catch rates in Lake Arthur since 1981.

Year	Number Captured	Size Range (inches)	Catch per Trapnet Hour
2016	19	23 - 51	0.025
2015	47	26 – 47	0.063
2014	39	28 - 49	0.054
2013	53	27 - 52	0.074
2011	41	35 - 50	0.058
2007	85	29 - 48	0.151
2004	97	28 - 50	0.150
2001	38	33 - 47	0.059
1998	51	28 - 49	0.110
1993	15	16 - 44	0.038
1990	4*	32 - 44	0.009
1989	4*	28 - 39	0.009
1986	3*	12 - 35	0.011
1981	25*	28 - 48	0.047

* - Purebred and Tiger Muskellunge combined.

A 51 inch Musky from Lake Arthur, 2016.

Lake Arthur maintains excellent fisheries for Channel Catfish and Bluegill, which is why it is listed as a Best Fishing Water for these species. Seventy percent (70%) of the Channel Catfish we captured were 20 inches and larger. Forty six percent (46%) of the Bluegill we captured were 7 inches and larger. Other bright spots were our above average catches of Walleye, Black Crappie, and White Crappie.

With assistance from our Lake Habitat Section biologists, we returned to Lake Arthur on the evening of May 26, 2016 to perform some night electrofishing to evaluate the Large Scale Habitat Improvement project(s) that have been installed or are planned for the Lake Arthur shoreline. One project has been completed in the Watts Bay area and 4 more are planned over the long term. While panfish numbers were similar across all areas, the Watts Bay Habitat Improvement project held more Bass than any of the other projects sites awaiting improvement work.

Lake Habitat Conservation Field Rep Keith Beamer with a nice Largemouth Bass.

During our night electrofishing sampling we captured a large number of one year old Hybrid Striped Bass, which should translate into good Hybrid fishing in 2 to 3 years. During our sampling, the alewives were in the shallows and the night time Hybrid Striped Bass bite was in full swing with many anglers spread across the lake.

Fisheries Management Area 1