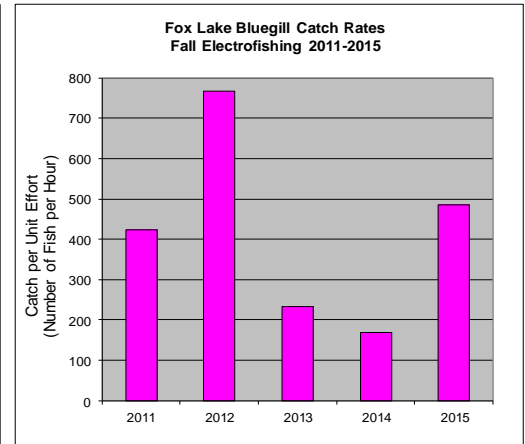
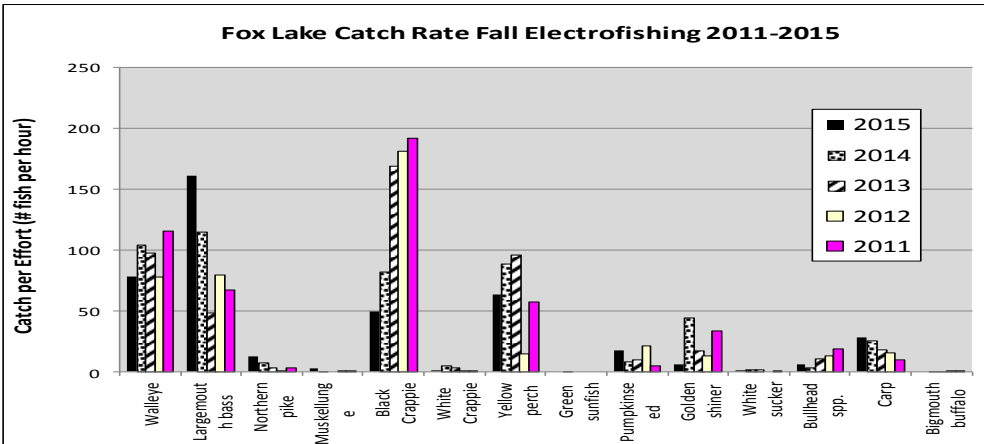


Fox Lake Fall Electrofishing Summary Report – 2015

Fall Electrofishing - Defined

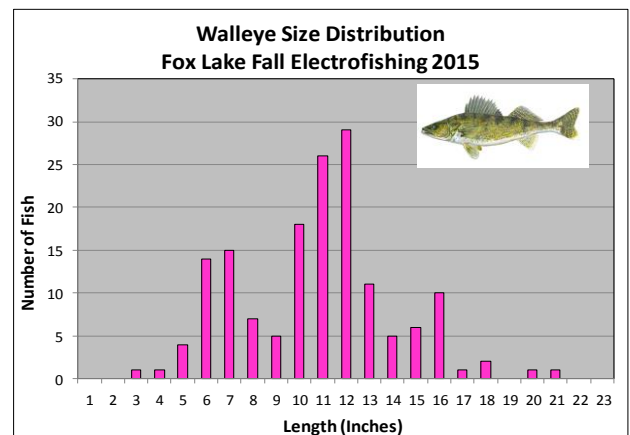
Fall electrofishing was conducted on Fox Lake in Dodge County on October 6, 2015. Fall electrofishing is conducted using a large boom-shocker boat allowing for the collection of young-of-the-year (YOY) and adult bass and walleye that are often under-sampled by other gear types. Fall electrofishing sampling provides an indication of the health of the fishery through estimates of gamefish and panfish relative abundance (catch rate or catch per effort), gamefish population size-structure (length-frequencies) and gamefish recruitment (young-of-the-year catch per effort). In order to standardize fisheries data, total effort in the form of time spent shocking and/or miles of shoreline shocked is recorded and presented as catch rates or catch-per-unit effort (CPUE). For this survey, the total effort expended was 2 hours covering 3.8 miles of shoreline including: 1.) Inlet of Cambria Creek south (25 minutes), 2.) North side of Chief Kuno Trail (15 minutes), 3.) South side of Chief Kuno Trail (20 minutes), 4.) South shore of The Jug to outlet (20 minutes), 5.) Elmwood Island (20 minutes), 6.) Fish 'n Fun tavern to Maple Point (20 minutes). Length measurements were taken from a subset of fish and all fish were returned to the lake. Average water temperature was 60° F and water clarity was variable with high algae density and poor visibility at several sampling sites. This report highlights the results of 2015 fall electrofishing with comparisons to previous fall surveys. Compiled by: Laura Stremick-Thompson, DNR Fisheries Biologist, N7725 Hwy 28, Horicon WI 53032, 920-387-7876 Laura.StremickThompson@wisconsin.gov

Gamefish Summary



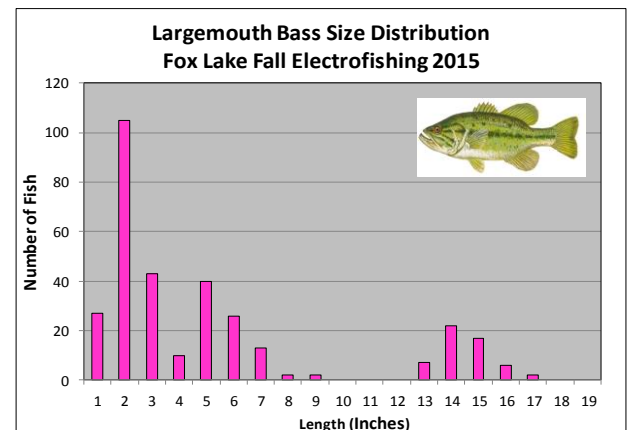
Walleye	2015	2014	2013	2012
Total Catch:	157	215	631	162
Catch Rate (fish per hour):	79	103	98	78
Length Range (inches):	7.1-25.3	5.4-25.1	6.5-25.3	5.6-27.1
Average Length (inches):	15.2	15.0	14.7	13.4

2015 walleye catch rate was 79/hour, compared to 103/hour in 2014, 98/hour in 2013, 78/hour in 2012 and the 10-year average of 94/hour. Catch rate of young-of-the-year (YOY) was 3/hour in 2015, compared to 13/hour in 2014, 12/hour in 2013, and 11/hour in 2012. In 2015, 17% of the walleye sampled were over 18-inches (current minimum length limit), compared to 18% in 2014, 11% in 2013, and 9% in 2012. The DNR state fish hatchery system stocked 94,965 (1.2-inch) walleye into Fox Lake in 2015.



Largemouth bass	2015	2014	2013	2012
Total Catch:	323	238	311	165
Catch Rate (fish per hour):	161	114	48	79
Length Range (inches):	2.5-18.3	2.1-17.9	2.6-20.0	2.3-17.6
Average Length (inches):	6.6	6.1	12.8	11.0

2015 largemouth bass catch rate was 161/hour, compared to 114/hour in 2014, 48/hour in 2013, 79/hour in 2012, a high of 123/hour in 2010 and above the 10-year average of 75/hour. Evidence of good natural reproduction was present, as the majority of bass sampled in 2015 were young-of-the-year (YOY), likely due to increased water clarity and the presence of submerged aquatic plants in 2015.



Northern pike	2015	2014	2013	2012
Total Catch:	25	15	19	2
Catch Rate (fish per hour):	13	7	3	1
Length Range (inches):	10.4-31.4	12.9-32.9	11.5-36.0	11.7-26.1
Average Length (inches):	19.5	19.2	22.9	18.9

Electrofishing is not an effective gear for sampling northern pike (best data from fyke nets set during spring spawning). In 2015 the DNR state hatchery system stocked 26,264 (2.8-inch) northern pike and the Fox Lake Property Owners stocked 350 (13-inch) pike into the lake.

Muskellunge	2015	2014	2013	2012
Total Catch:	5	1	0	1
Catch Rate (fish per hour):	2	.5	0	.5
Length Range (inches):	11.2-14.1	N/A	N/A	N/A
Average Length (inches):	12.7	N/A	N/A	N/A

Electrofishing is not effective gear to sample muskellunge. Musky are present but at low density. The musky sampled in fall electrofishing were likely a portion of the 150 (12-inch) musky stocked by the Fox Lake Property Owners in 2015.

Panfish Summary

Fox Lake's panfish community is comprised of bluegill, black crappie and yellow perch. Smaller populations of white crappie, pumpkinseed and green sunfish are also present. Bluegill was the most abundant panfish species sampled during 2015 fall electrofishing, followed by yellow perch, black crappie, and pumpkinseed (35 fish, 17/hour).

Bluegill	2015	2014	2013	2012
Total Catch:	971	352	415	1596
Catch Rate (fish per hour):	485	169	234	767
Length Range (inches):	1.6-8.6	1.3-8.8	1.2-8.3	1.1-7.8
Average Length (inches):	4.5	3.6	4.7	3.6

2015 bluegill catch rate was 485/hour, compared to 169/hour in 2014, 234/hour in 2013, 767/hour in 2012, and the 10-year average of 333/hour. In 2015, 8% of the bluegill sampled were greater than 6-inches in length, compared to 18% in 2014, 32% in 2013, and 16% in 2012. A large year-class of 4.0-4.9-inch bluegill was sampled in 2015.

Black crappie	2015	2014	2013	2012
Total Catch:	99	170	298	376
Catch Rate (fish per hour):	50	82	168	181
Length Range (inches):	2.6-11.6	2.6-11.6	1.9-10.9	2.5-11.6
Average Length (inches):	8.2	5.7	7.4	8.3

2015 black crappie catch rate was 50/hour, compared to 82/hour in 2014, 168/hr in 2013, and compared to the 10-year average of 112/hour. The majority of black crappie (41%) sampled in 2015 were between 10.0-10.9-inches in length.

Yellow perch	2015	2014	2013	2012
Total Catch:	127	183	164	31
Catch Rate (fish per hour):	64	88	93	15
Length Range (inches):	3.1-8.4	2.9-10.4	2.2-9.2	3.3-8.8
Average Length (inches):	5.4	5.1	3.1	6.1

2015 yellow perch catch rate was 64/hour, compared to 88/hour in 2014, 93/hour in 2013, 15/hour in 2012, and the 10-year average of 59/hour. The majority of yellow perch (35%) sampled in 2015 were between 6.0-6.9- inches in length. In 2015, the Fox Lake Property Owners stocked 4,400 (7-inch) yellow perch.

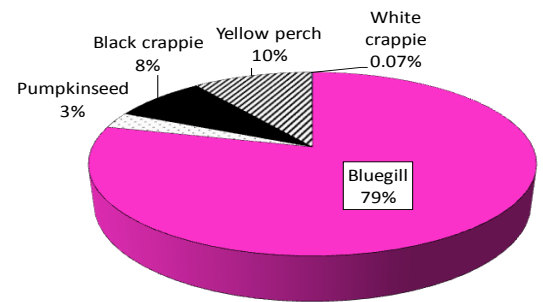
White crappie	2015	2014	2013	2012
Total Catch:	1	10	5	1
Catch Rate (fish per hour):	.6	5	3	.5
Length Range (inches):	N/A	8.3-10.8	7.7-10.0	N/A
Average Length (inches):	N/A	10.1	8.8	N/A

White crappie was once the more abundant crappie species in Fox Lake, although they have been nearly absent from fall electrofishing for over a decade. Their decline may indicate positive changes in the lake's water clarity and aquatic vegetation, as white crappie prefer turbid water and inhabit areas of sparse vegetation. Studies conducted on Fox Lake have shown white crappie to be a major predator of large Cladoceran zooplankton, which feed on planktonic algae and help maintain good water clarity.

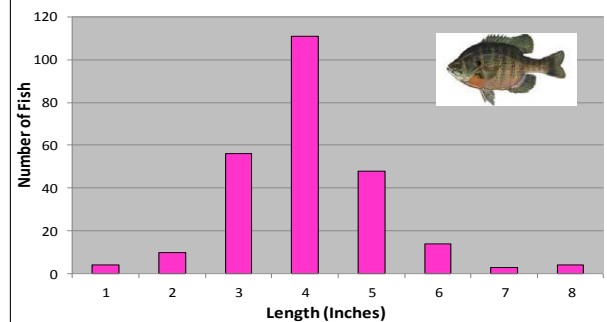
Other Species

White sucker (2 fish, 1/hour), golden shiner (12 fish, 6/hour), yellow, black and brown bullhead (12 fish total, 6/hour, average length = 8.8 inches) and central mudminnow (1 fish, .6/hour) were also sampled during 2015 fall electrofishing. 2015 total carp catch rate was 57/hour, compared to 25/hour in 2014, 18/hour in 2013, and 15/hour in 2012. Young-of-year (YOY) carp catch rate was 8/hour in 2015 compared to 14/hour in 2014.

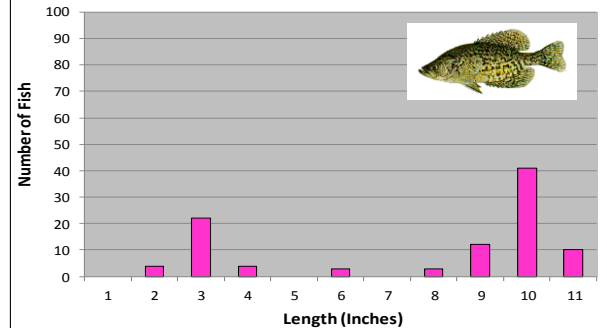
Panfish Relative Abundance
Fox Lake Fall Electrofishing 2015
(number of fish sampled = 1233)



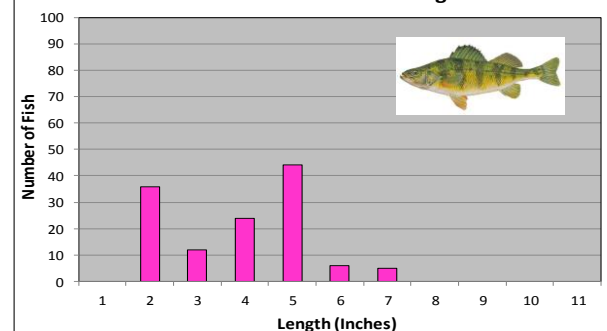
Bluegill Size Distribution
Fox Lake Fall Electrofishing 2015



Black Crappie Size Distribution
Fox Lake Fall Electrofishing 2015



Yellow Perch Size Distribution
Fox Lake Fall Electrofishing 2015



Relative Abundance of Other Species
Fox Lake Fall Electrofishing 2015
(number of fish sampled = 84)

