

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish, Wildlife & Marine Resources, Bureau of Fisheries, Region 7  
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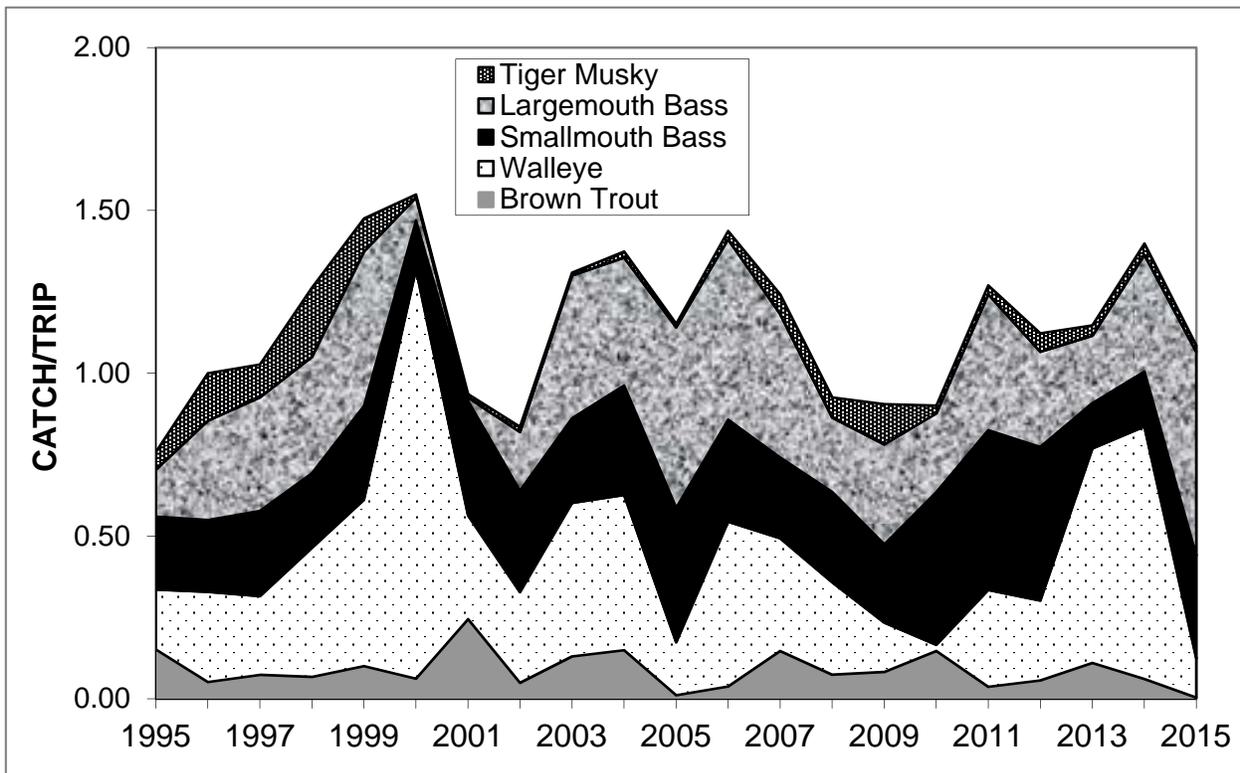
Tuesday, April 05, 2016

To: **Otisco Lake Volunteer Angler Diary Cooperators**

Dear Fellow Anglers:

I would like to begin by thanking you for your time and effort for recording your fishing trips in 2015. We had 16 Otisco Lake cooperators in 2015; which is the same number as 2014. Cooperators recorded 149 outings (an outing is a record of a cooperator's trip not including members of their party), which amounted to 259 angler trips (includes all participants) totaling 950 hours of fishing effort. On average, it took 3.4 hours to catch one legal gamefish in 2015 (see summary table). Anglers targeting any warm water species comprised 36% of the total cooperator effort (344 out of 950 hours) in 2015, followed by anglers targeting walleye at 29% (271 hours) and tiger musky at 23% (219 hours). Details on species specific catch rates and effort are included in the discussion below.

The following graph shows the long term species composition of the overall catches for all legal sized gamefish. This includes all reported trips regardless of what anglers were fishing for.



The report from the 2014 Full Lake Assessment is still being reviewed, so it is currently not available for viewing on the DEC web page. When completed, the report will be available to view at: <http://www.dec.ny.gov/outdoor/36552.html> A few interesting findings from the survey that were not mentioned during last year's angler diary report are discussed below.

### **Walleye**

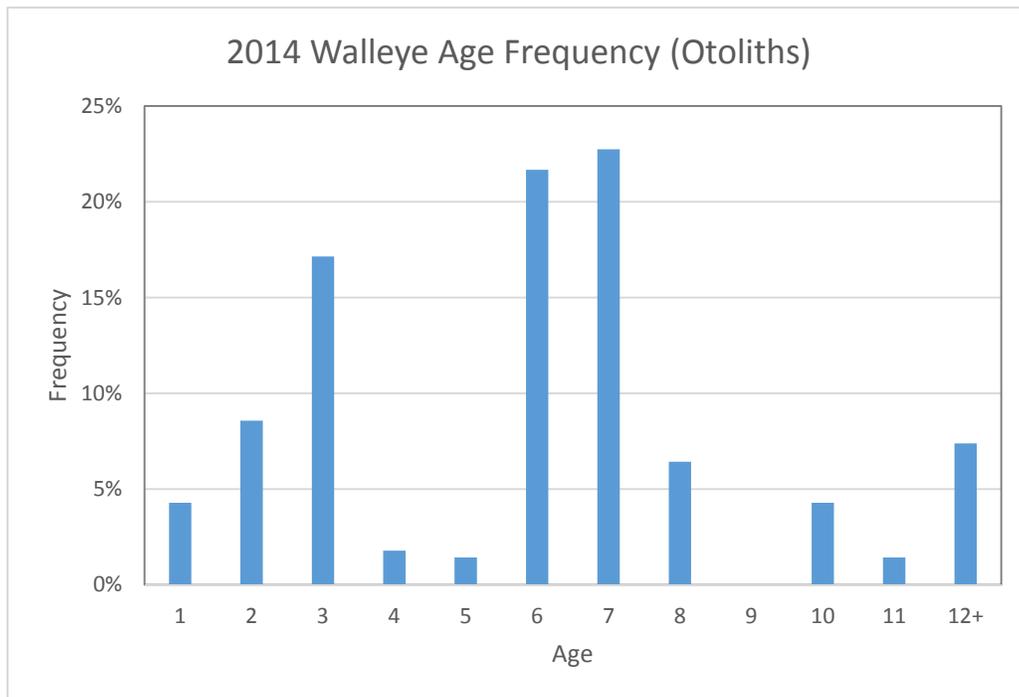
Cooperators caught 32 walleye in 2015. Of those, 31 were of legal length (18-inches or greater). This drastic drop in the number of walleye caught, compared to the past few seasons, is largely due to a few highly successful walleye cooperators deciding not to return their diaries in 2015. In the last few years, 68% and 70% of the reported walleye catch has come from these cooperators. Walleye are highly prized table-fare and cooperators harvested the majority (93%) of the legal fish caught. The largest walleye caught in 2015 was 26 inches, while the average length was 21.4 inches; none of the walleye were weighed in 2015. Areas 2, 3 and 4 accounted for all of the walleye catch, with 9, 20 and 3 fish respectively. Fishing in May produced 23 of the 32 walleye caught. Shore anglers did slightly better than boat anglers during May tallying 12 of the 23 walleye. Overall shore and boat anglers caught equal numbers of walleye, with 16 each.

Anglers specifically targeting walleye caught all but four of the 32 walleye recorded. The resulting targeted catch rate was 0.10 walleye per hour (1 every 10 hours) which was much lower than last year's 0.38 walleye per hour (1 every 2.6 hours). That 2014 catch rate was the third highest targeted walleye catch rate recorded for Otisco in the last seventeen years. As mentioned in the past, targeted catch rates of 0.2 fish per hour and above are considered to be "very good" for New York walleye fisheries while those approaching 0.5 fish per hour are considered "excellent."

Otisco Lake was stocked on June, 9 2015 with 44,000 pond fingerling (1.5 inch) walleye. We assess early survival of the stocked walleye by night electrofishing in the fall. We managed to collect 26 young-of-year (YOY) walleye south of the causeway in early October that showed good growth rates with an average length of 6.8 inches. The population estimate, based on the 26 YOY, came to 1,160 YOY walleye south of the causeway; an estimated 2.6% survival rate based on the 44,000 stocked in that area. Strong winds created difficult sampling conditions during part of the survey, due to increased wave action and more turbid water. Sampling was also cut short because of mechanical issues with the work lights on the boat. This, along with the lake being approximately three feet below normal pool level, most likely negatively biased our catch. Given these biases the actual YOY walleye population and survival rate for the 2015 year class was probably higher. No walleye are scheduled to be stocked in Otisco Lake in 2016. However, if surplus walleye do become available, we will recommend that up to 44,000 are stocked into Otisco Lake.

During the 2014 survey scale samples were taken from all walleye collected, we also took otoliths (ear bones) from walleye that were collected during our gill netting survey. Otoliths tend to allow more precise aging of walleye that are eight years or older. No YOY were captured in 2014, which was not too surprising as no walleye were stocked in 2014. Walleye ages using otoliths ranged from 2 to 22; the 22 year old fish was only 24 inches long. Age-7 walleye were the most numerous in 2014 followed by age 6 (see figure

below). These walleye were from the 2007 and 2008 year classes, which was very interesting, as no walleye were stocked by the DEC in 2007. So, there appears to have been significant natural reproduction of walleye in Otisco Lake in 2007. Walleye stocked into Otisco from 2009 through 2013 have been marked with oxytetracycline (OTC) to allow us to differentiate between wild and stocked walleye. A random sample of YOY walleye collected during our fall electrofishing surveys was sent to Cornell University to determine if they were OTC marked. Otoliths from a total of 48 walleye were examined and OTC marks were observed on 69% of them. While some OTC marks were almost certainly missed, it would appear that wild production is occurring in the lake in some years. With this new information from the OTC marked fish and our 2014 sampling we may consider conducting fall walleye surveys on non-stocking years to see if we can document some natural reproduction. Although wild production is likely highly variable and low in most years due to alewife predation on walleye fry, Otisco Lake does appear capable of producing a strong year class of wild walleye on occasion as evidenced by the 2007 year class.



### ***Tiger Muskellunge***

In 2015, cooperators landed 43 tiger muskies with reported lengths ranging from 19 to 40 inches and an average of 28.8 inches. Of the 43 caught in 2015, five were legal length (36-inches or greater) and 15 were between 30 and 35 inches. Prior to 2013 the minimum legal length limit had been 30-inches. Once again, no tigers were kept by cooperators, a 100% release rate. Those specifically targeting tigers caught 9 of the 43 reported (21%), no legal length tigers were caught by this group. While anglers targeting any warm water gamefish caught 17 tigers (40%), one of which was legal length. Anglers targeting bass accounted for 9 tigers (21%), with two being of legal length. Trout anglers caught 3 tigers of which 1 was legal length.

Cooperators specifically targeting tiger muskies put in 37 trips and logged 219 angler-hours. The targeted catch rate for tiger musky in 2015 was 0.04 per hour (1 every 25 hours). This was well below the five year average of 0.11 per hour (1 every 9.1 hours), and was somewhat surprising as we heard numerous anecdotal reports of anglers having very good luck catching tigers in 2015. Anglers targeting any warm water species had a tiger musky catch rate of 0.05 per hour (1 every 20 hours). This is just the 3<sup>rd</sup> time in the diary program that the any warm water combo anglers had a better tiger musky catch rate than the anglers actually targeting them. While anglers targeting bass had a catch rate of 0.10 tigers per hour (1 every 10 hours). Trout anglers had the best catch rate of tigers in 2015, with 0.13 per hour (1 every 7.7 hours). Diary data on catch rates are lacking for tiger musky but catch rates of muskellunge from diary programs in Ontario, Canada and the St. Lawrence River, New York range from 0.04 to 0.12 fish per hour (1 every 25 to 8.3 hours). The Otisco Lake angler success rate for tiger musky appears to be in the same league as some other renowned muskellunge fisheries.

The majority (60%) of tigers caught in 2015 were landed by boat anglers, while ice fishing accounted for 28% (12 of 43), and shore anglers caught 5 tigers (12%). Tigers were caught in Areas 2, 3 and 4; no tigers were caught south of the causeway in 2015. Areas 2, 3 and 4 accounted for 11, 8 and 24 fish, respectively. Ice fishing in Area 4 during January was the most productive for tigers, accounting for 11 of the 43 (26%).

Since tiger muskellunge are sterile hybrids (cross between muskellunge and northern pike), the fishery is supported entirely by stocking. Otisco Lake received the target stocking rate of 11,000 fall fingerling (9.5 inches) in mid-September. Tiger musky are highly vulnerable to predation by bass, walleye and other tigers during their first 6-8 months in the lake. Although there is no formal assessment, survival following stocking is believed to be low but variable. Despite this, a good number of tigers ultimately do well in Otisco, as evidenced by the ice fishing world record six seasons ago. This, coupled with the fact that many anglers choose to release a large portion of legal tigers they catch in hopes of letting them grow even larger indicates that we have a quality fishery for these fish in Otisco.

### ***Black bass***

Overall, a total of 90 smallmouth and 193 largemouth bass were caught by cooperators in 2015. The majority of fish recorded were, again, at or above the legal 12-inch length limit (91% of smallmouth and 84% of largemouth). The harvest rate was below the five-year average of 10%, with just 17 of the 244 legal bass harvested (7%). Two 21-inch largemouth bass were caught along with five 20 inch smallmouth bass. Based on the standard length/weight tables found on our website at: <http://www.dec.ny.gov/outdoor/9222.html>, the two largemouth would have been pushing 5.5 pounds each, and the smallmouths would have weighed around 4 pounds apiece.

Cooperators specifically targeting bass took 33 trips for a total of 92 angler-hours. Those targeting bass caught 85 overall, 67 of which were of legal length (79%). This equates to a targeted catch rate of 0.92 bass per hour (1 bass every 1.1 hours) and a targeted legal catch rate of 0.73 legal bass per hour (1 legal bass every 1.4 hours). These bass catch

rates compare favorably with observed catch rates of diary cooperators from other waters in New York State. Those fishing for a combination of any warm water gamefish did much better in 2015 than in 2014 when it came to catching bass. They caught 106 bass, of which 93 were legal length (88%). This equates to catch rates of 0.31 bass per hour overall (1 bass every 3.2 hours), and 0.27 legal bass per hour (1 legal bass every 3.7 hours). The 2014 bass catch rate for these anglers was just 0.18 bass (1 bass every 5.6 hours) and 0.16 legal bass per hour (1 legal bass every 6.3 hours). Typically, these "any" warm water gamefish anglers have bass catch rates similar to those for anglers targeting bass but this is the third consecutive year that their catch rates were lower. The improved 2015 "any gamefish" catch rate is a move in the right direction that will hopefully continue since we have no reason to believe that there is anything wrong with the lake's bass populations.

Overall, the average length of smallmouth bass caught was 15.1 inches and 14.2 inches for largemouth bass. The majority of bass were caught by boat anglers in 2015, unlike 2014 when shore anglers caught the majority of the largemouths. Boat anglers accounted for 83% of smallmouth bass and 77% of the largemouth. The most productive locations for smallmouth bass were Areas 2 and 3 with 35 and 42 bass, respectively. Area 1, south of the narrows, accounted for six of the smallmouths reported. Once again, the most productive region for largemouth bass was Area 3, with 77 caught, while Area 4 was close behind with 75. Traditionally, Area 4 (The Narrows) is usually the "hot" area for largemouth bass, but this is the fourth consecutive year that Area 3 has had better fishing. For smallmouth bass, May was the top producer (44 bass) followed by June (23 bass). July was the big month for largemouth bass (56), with June a close second with 54.

### ***Brown trout***

In 2015, anglers specifically targeting brown trout made just 5 trip totaling 23 hours of effort. This is well below the 5-year average of 13.8 trips and 44 hours of effort. Only one brown trout was caught by cooperators in 2015, a 17-inch fish that was caught by anglers targeting walleye. This fish was caught and harvested during July in Area 3. 2015 was the third complete season with the 12-inch legal size limit. The size was reduced from 15-inches because of Otisco Lake's limited ability to support trout through the summer. The change was implemented to maximize the harvest potential of stocked trout and reduce the numbers which are likely lost to temperature stress in late summer.

In closing I want to again thank all of the cooperators who work so hard to maintain the diaries for us. As always, I encourage anyone who fishes any of our Finger Lakes to consider becoming a diary cooperator. If you know of someone who fishes any of these lakes, please let them know about our program. **Good luck fishing in 2016!**

Sincerely,

James Everard  
Biologist 1 (Aquatic)



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Otisco Lake  
Fishing Diary Summary

Year	Total # Fishing Trips	% of Successful Outings	Ave Hours/ Angler Trip	Total Legal					Average Length (in.) of Fish Kept (# kept in Parentheses)					# Hours to Catch 1 Legal Gamefish	# of Coop.
				Gamefish <sup>1</sup>		Caught <sup>2</sup>			BT	WAE	SMB	LMB	TGR		
				BT	WAE	SMB	LMB	TGR							
1979	174	63	4.0	2	165	26	--	--	16.8 (2)	23.1 (165)	14.3 (26)	--	--	6.0	8
1980	43	32	4.6	--	17	18	--	--	--	22.4 (17)	13.3 (18)	--	--	11.8	4
1981	40	43	4.2	--	--	17	5	--	--	--	14.5 (17)	14.9 (5)	--	9.1	7
1982	27	33	3.1	--	3	13	--	--	--	24.0 (3)	13.0 (13)	--	--	8.1	4
1983	36	55	7.3	7	13	9	1	--	13.9 (7)	24.0 (13)	13.2 (9)	14.0 (1)	--	7.3	9
1984	40	18	4.0	5	1	8	--	--	19.9 (5)	26.0 (1)	13.1 (8)	--	--	29.6	8
1985	18	22	4.9	5	--	--	--	--	19.1 (5)	--	--	--	--	20.6	5
1986	6	84	5.6	1	--	3	--	--	23.3 (1)	--	13.7 (3)	--	--	14.2	2
1987	21	38	2.8	--	9	--	--	--	--	23.6 (9)	--	--	--	4.5	4
1988	10	29	3.4	--	2	--	--	--	--	24.4 (2)	--	--	--	6.3	2
1989	9	50	3.3	--	2	1	--	--	--	25.8 (2)	16.5 (1)	--	--	7.4	2
1990	96	21	5.8	11	2	--	--	1	20.7 (11)	26.3 (2)	--	--	32.0 (1)	30.1	7
1991	506	27	4.1	19	6	19	15	6	20.0 (19)	25.8 (6)	15.1 (19)	14.7 (15)	35.0 (6)	24.0	15
1992	434	49	3.1	80	2	9	8	7	18.4 (80)	20.8 (2)	16.4 (9)	14.1 (8)	35.0 (7)	5.5	21
1993	328	45	3.9	27	13	12	13	10	20.2 (27)	24.9 (13)	17.2 (12)	15.5 (13)	33.8 (10)	9.6	19
1994	397	34	4.0	35	7	14	7	3	14.9 (35)	24.7 (7)	17.0 (14)	15.6 (7)	33.7 (3)	11.9	27
1995	277	45	3.7	26	6	13	9	3	17.1 (26)	23.8 (6)	14.6 (13)	15.5 (9)	33.0 (3)	4.9	23
1996	213	48	4.0	11	59	47	65	31	17.5 (10)	22.4 (15)	14.2 (8)	--	37.2 (2)	4.0	15
1997	149	50	4.5	11	36	39	52	15	19.8 (9)	22.1 (8)	--	15.5 (1)	34.7 (3)	4.4	11
1998	179	62	4.9	12	71	41	64	38	19.0 (4)	21.2 (31)	13.2 (2)	--	43.5 (3)	3.9	11
1999	139	71	5.0	14	71	40	66	14	20.4 (10)	21.0 (34)	15.3 (15)	17.0 (2)	37.4 (3)	3.3	14
2000	113	71	5.0	7	142	17	8	1	17.6 (6)	21.3 (131)	15.8 (6)	17.0 (1)	36.0 (1)	3.3	6
2001	94	65	5.4	23	30	33	1	1	18.8 (8)	20.3 (12)	17.5 (1)	--	--	5.7	10
2002	61	53	4.6	3	17	19	11	1	20.5 (2)	21.5 (16)	--	16.0 (1)	--	5.5	8
2003	123	71	3.9	16	58	32	54	1	16.1 (4)	20.7 (51)	13.1 (6)	14.8 (3)	--	3.0	11
2004	107	72	4.3	16	51	36	42	2	22.8 (2)	21.6 (39)	14.7 (7)	12.0 (1)	--	3.0	11
2005	92	63	4.2	1	15	38	51	1	--	21.3 (13)	14.7 (15)	14.9 (6)	--	3.6	11
2006	316	69	3.5	12	160	99	175	8	18.4 (16)	21.6 (107)	15.4 (14)	14.3 (6)	31.7 (1)	2.3	16
2007	367	71	4.2	54	127	91	162	22	19.3 (7)	21.7 (88)	14.5 (10)	13.0 (1)	33.3 (5)	3.4	18
2008	162	71	3.5	12	46	46	37	10	22.4 (5)	21.6 (38)	15.4 (10)	--	32.4 (2)	3.8	13
2009	316	68	4.1	26	48	76	97	39	21.1 (5)	21.4 (36)	--	21.0 (1)	36.4 (8)	4.6	16
2010	211	76	3.8	31	4	99	51	5	19.3 (7)	21.5 (1)	15.0 (2)	--	34.0 (1)	4.2	10
2011	326	72	3.9	12	97	160	136	9	18.1 (6)	21.1 (86)	17.0 (1)	19.3 (2)	35.0 (2)	3.1	19
2012	106	65	3.7	6	26	50	31	6	--	22.1 (25)	17.5 (5)	13.5 (8)	31.0 (1)	3.3	12
2013	381	62	3.5	42	251	53	79	12	15.5 (6)	22.8 (237)	17.0 (14)	13.3 (3)	40.0 (1)	3.1	18
2014	379	60	3.6	23	294	64	136	13	--	23.2 (259)	13.6 (22)	13.0 (4)	--	2.6	16
2015	259	52	3.7	1	31	82	162	5	17 (1)	21.4 (29)	16.3 (13)	13.3 (4)	--	3.4	16

1979 was the first year for this summary.

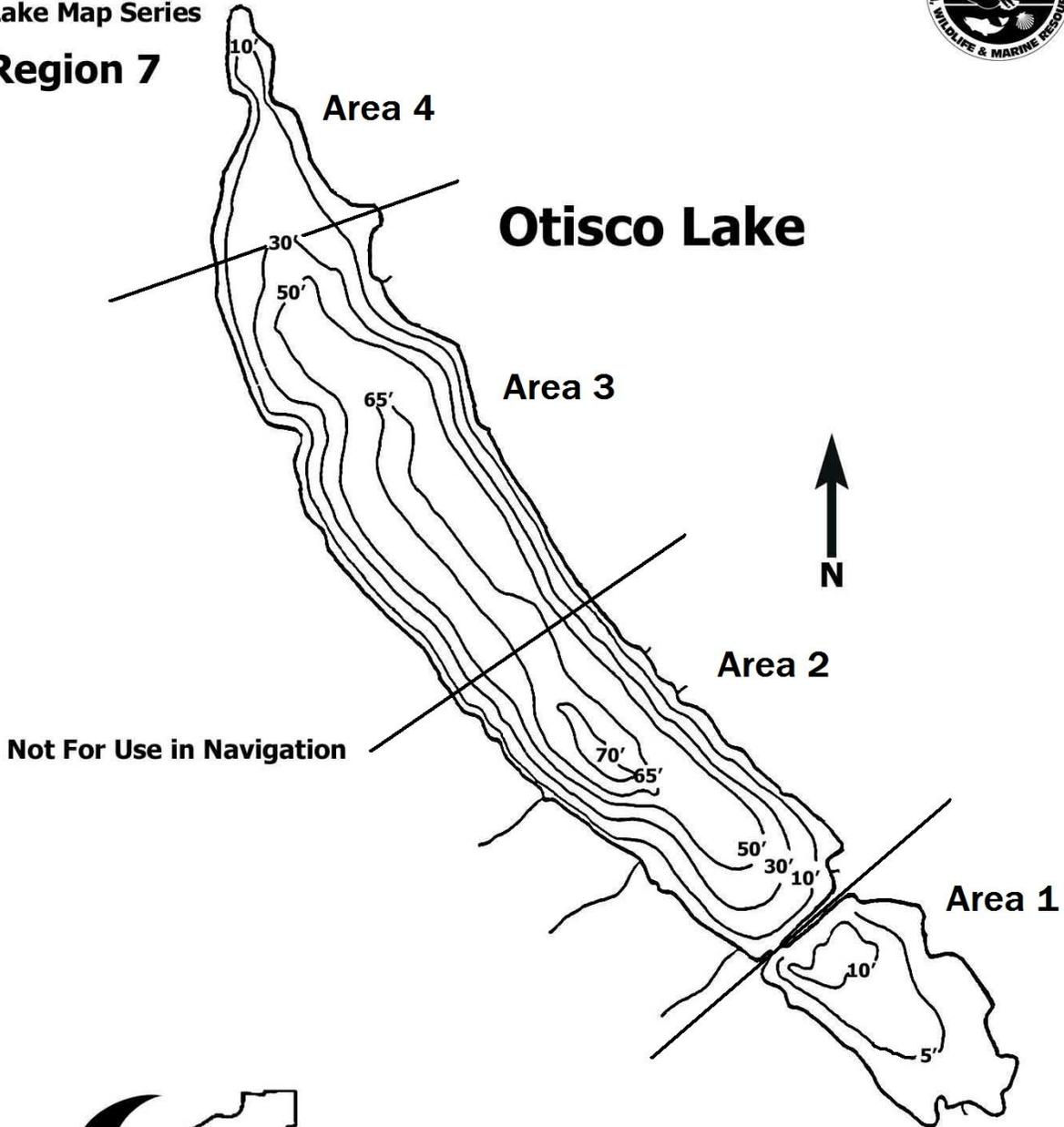
1 - Gamefish = BT-Brown Trout, WAE-Walleye, SMB-Smallmouth Bass, LMB-Largemouth Bass, TGR-Tiger Musky.

2 - Beginning with 1996, the record includes all legal fish caught. Prior years data include only those legal fish that were kept.

3 - Success = One or more legal target fish caught. An outing can include more than one "trip" (i.e., two anglers fishing and one legal fish caught between them).



**Region 7**



**Otisco Lake**

**County:** Onondaga      **Town:** Otisco, Spafford

**Surface Area:** 2,236 Acres

**Fish Species Present:** Tiger Muskellunge, Smallmouth Bass, Largemouth Bass, Yellow Perch, Black Crappie, Walleye, Common Carp, White Sucker, Bluegill, Pumpkinseed

**Scale:** 0 3655 ft