

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish, Wildlife & Marine Resources, Bureau of Fisheries, Region 7
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March 25, 2016

To: Owasco Lake Angler Cooperators

Dear Fellow Anglers:

Thank you for participating in the Finger Lakes Angler Diary Program!. We have summarized the data from your 2015 diaries, and are happy to send you the annual summary. Your 2015 diaries and new diaries (if necessary) are included for your use with this distribution.

Open Water Trout and Salmon Fishing

In 2015, 13 Owasco Lake open water cooperators landed 227 legal salmonids in 200 trips for an average catch of 1.1 legal fish per trip. The number of trips recorded is the highest since 2007. The open water cooperators had a catch rate for legal salmonids of 0.27 fish per hour, and caught legal sized salmonids in 74% of their trips. Summary results by species are presented below.

Lake Trout

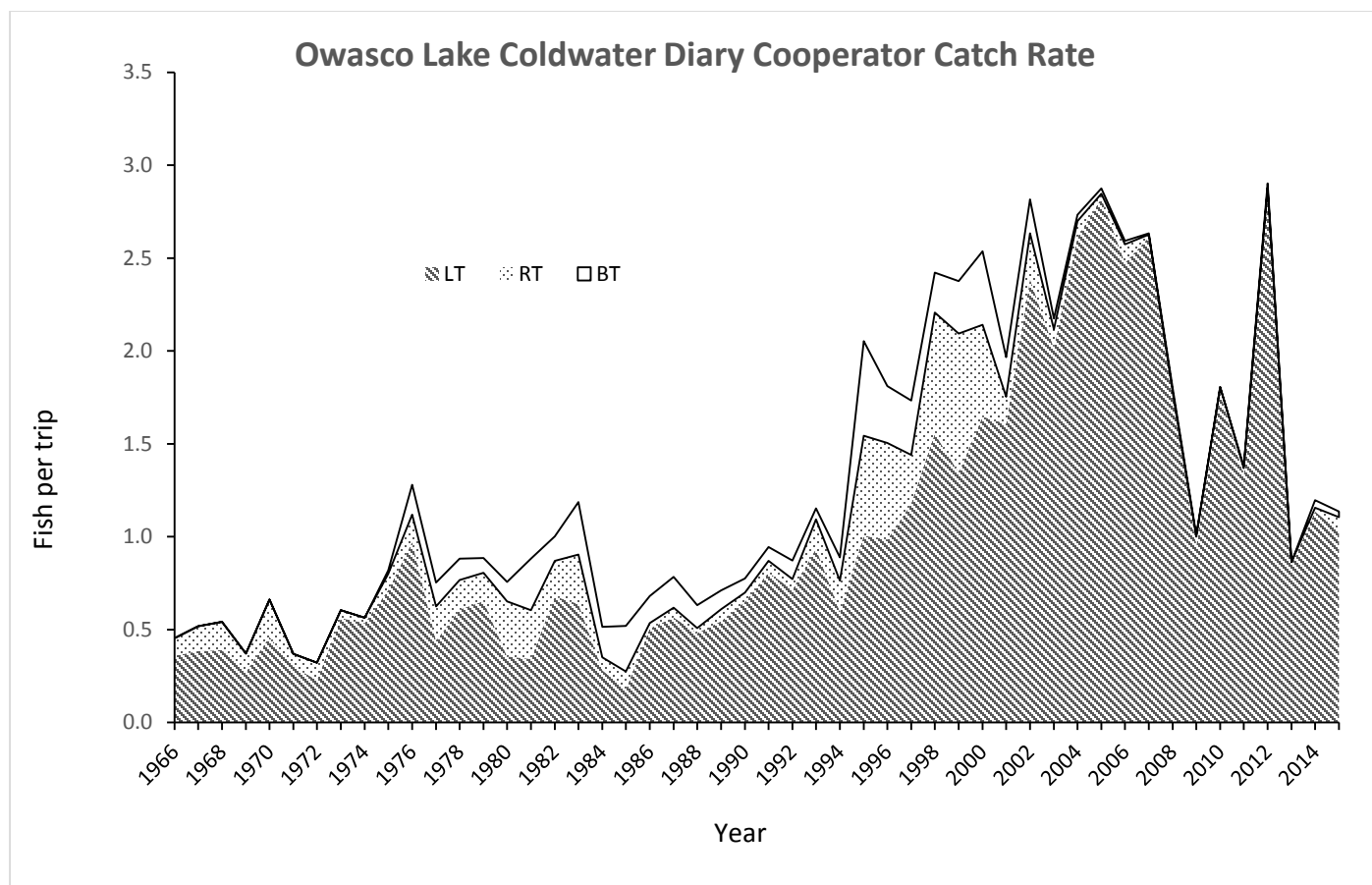
Owasco Lake open water cooperators caught 206 legal lake trout, of which 66 were kept (32%). The number of legal lake trout caught was slightly higher than the 2014 season, and much better than the recent past (2009-2013). Lake trout comprised 85% of the total open water salmonid catch. The largest lake trout caught in 2015 was a respectable 32 inch fish. The average length of all lake trout caught was 23.8 inches, almost an inch longer than 2014, and the highest average length observed in the last 10 years! The majority of lake trout (101) were caught in the early fall (September and October) in areas around the north end and in the vicinity of Ensenore Point. A good number of fish (39) were caught in June in the same areas. July and August yielded 47 lakers combined, and the majority of those fish were caught around the north end, Burtis Point and Long Point.

Rainbow Trout

Owasco lake open water cooperators caught 15 rainbow trout in 2015, the highest number reported since 2006. This is still far below numbers observed in the 1990's, but is hopefully indicative of an uptick in their numbers in the lake. The average length of the rainbows caught was 22.2 inches, which is the highest recorded value in the last ten years. The largest rainbow reported was an impressive 30 inch fish! The majority of rainbows (10) were caught in August and September near the north end and Burtis Point.

Brown Trout

Open water cooperators caught eight brown trout in 2015, which, as with the rainbows, is far below numbers caught in the mid-1990's. However, it is the highest number reported since 2006. The average length of browns caught was 19.4 inches, which is similar to the average lengths over the last ten years. The biggest brown trout caught was 31 inches long. The majority of browns were caught in June and July in the vicinity of Burtis and Long Points.



The above graph shows the catch rates (fish/trip) of legal salmonids caught by our Owasco Lake open water cooperators from 1965 through 2015 and the relative contribution of each species in the catch over time. Catch rates are used to remove the effects of having varied numbers of cooperators and trips from year to year. Note the actual data are provided in the attached summary tables.

Management Considerations

Lake trout continue to provide a productive coldwater fishery in Owasco Lake. Rainbow and brown trout still appear to be present in relatively low, but potentially increasing numbers in the lake. Our stocking rates for browns and rainbows will remain the same for now. We are still confident that walleye and lake trout populations in the lake have been suppressing the rainbows and browns due to heavy predation on juvenile fish emigrating from the streams. The walleye population in the lake is steadily decreasing due to our cessation of stocking and lack of significant natural reproduction. The lake trout population is stabilizing at a lower level following significant stocking cuts in recent years. As the effect of walleye and lake trout predation on juvenile browns and rainbows decreases, we expect to see increasing recruitment of adult browns and rainbows in the lake. This is not a short term rapid change, but we should see fishing (both open water and tributary) improve hopefully again to the levels seen in the 1990's. We are also monitoring wild production of juvenile rainbow and brown trout in Owasco's tributaries, and are moving towards an annual or biennial monitoring program to assess reproductive success. We will be paying particular attention to the young of the year fish, spawning habitat and spawning habitat access/availability (e.g. beaver dams, perched culverts and other obstructions and habitat degradations). In addition, in 2016 we will be conducting a lake-wide gillnetting coldwater assessment on Owasco Lake, with emphasis on assessing the lake trout population, but will also be targeting rainbows and browns to get a better handle

on their current populations. This will be a continuation of our standard index gillnetting surveys that have been carried out periodically on the Finger Lakes for years. It will be interesting to see whether the results of the rainbow and brown trout netting are indicative of what our diary data shows or instead paint some entirely different picture of what is going on in the open lake. Results of this coming summer's netting and fall tributary assessments will be posted on our website for public viewing in 2017. Some of the fish caught in the survey will be tested to evaluate the amount of mercury in their flesh. Mercury levels in Owasco Lake fish were last tested in 2012 and were relatively low. The average concentration in the ten lake trout samples was 0.345 parts per million (ppm) with the single highest level being 0.498 ppm. For perspective, the NYS Dept. of Health generally uses 1.0 ppm as the level at which a more stringent advisory may be warranted for mercury. Results from this testing will not be available for at least one year.

Owasco Lake Tributary Fishing

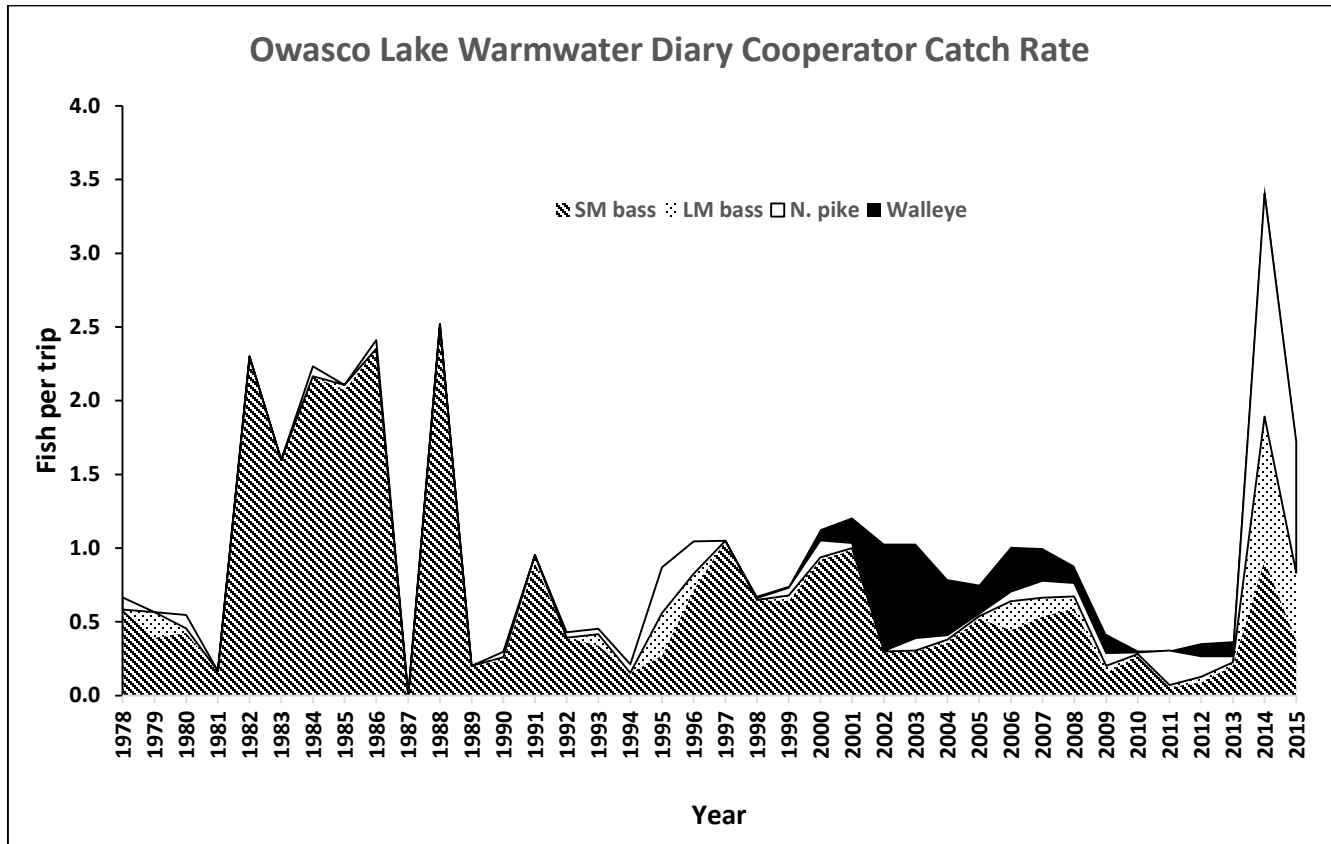
In 2015, five Owasco Lake tributary cooperators caught 22 legal rainbow trout (plus an additional 37 sub-legal fish) and 24 legal brown trout during 38 trips. The number of cooperators and trips in 2015 was slightly lower than 2014, but fairly typical of the last decade. Anglers released 92% of all rainbows caught and 67% of all brown trout. The largest rainbow trout caught was an impressive 25.5 inches, and the largest brown landed was 17 inches. The majority of rainbows (38 of 59) were caught in October and December in the Owasco Inlet and Dresserville Creek. All the brown trout were caught in the Owasco Inlet and Dutch Hollow Brook scattered throughout the year. The number of legal rainbow trout caught (22) was on par, or slightly better, than the last ten years. The number of legal brown trout caught (24) is about average when compared to the last decade. It is important to note that the 37 sublegal rainbows caught (all 5-9 inches in length) indicate successful reproduction and reinforce the results of our juvenile electrofishing surveys in the Owasco Inlet and Hemlock Creek in the fall of 2014.

Owasco Lake Warmwater Fishing

In 2015, five Owasco warmwater cooperators made 72 trips on the lake. Those anglers caught 75 northern pike, 34 largemouth bass, 27 smallmouths, and two walleye. Anglers were successful in catching at least one legal warmwater gamefish on 77% of their outings, with it taking, on average, 2.0 hours to catch one legal fish. Overall, this catch rate is similar to 2014, and is very good compared to the prior ten years. Specific catch rates (fish per trip, regardless of target species) for legal largemouth bass and smallmouth bass were on par with the last several years, and catch rates (fish per trip) for legal northern pike were actually the highest observed to date. The numbers of largemouth bass and northern pike caught were quite high compared to the last few years. With only five warmwater cooperators reporting, these results are likely indicative of the anglers' growing skillsets in targeting these species in this lake. The smallmouth bass catch remained steady in 2015. The largest reported fish caught of each species was as follows: largemouth bass – 22 inches, smallmouth bass – 22 inches, northern pike – 39 inches, walleye – 28 inches. The size ranges of largemouths, smallmouths and northern pike caught were all indicative of healthy populations. Only two large walleyes were caught (27 and 28 inches), and their large size and lack of relative abundance in the warmwater catch reflect either the fact that their population is still in decline due to the cessation of stocking, a lack of anglers specifically targeting walleye, or a combination of both factors.

The majority of northern pike were caught in September and October at the south end of the lake. Smallmouth bass were caught throughout the year, and the majority were landed in the south end of the

lake. Largemouth bass were also caught throughout the year, and catches were predominately at the north and south ends of the lake. The two walleyes were caught mid-lake in June.



The graph above shows the catch rates (fish/trip) of legal warmwater species caught by Owasco Lake warmwater cooperators from 1978 through 2015 and the relative contribution of each species in the catch over time. Catch rates are used to remove the effects of having varying numbers of cooperators and trips from year to year. Note the actual data are provided in the attached summary tables.

Thank you again for your participation in the Owasco Lake Angler Diary Program! I wish you continued success on the water in 2016, and look forward to seeing how you all make out this season!. Please encourage other Finger Lakes anglers that you might know to participate in this very valuable diary program.

Sincerely,

Ian R. Blackburn
Aquatic Biologist

Owasco Lake Coldwater Fishing Survey Summary By Year

				Total legal gamefish caught			Average length (in.)				
Year	Total # fishing trips	% successful outings	Average hours/trip	Brown trout	Rainbow trout	Lake trout	Brown trout	Rainbow trout	Lake trout	# hours to catch legal gamefish	# cooperators
1966 *	187	37	3.5		18	67		15.1	20.1	7.8	13
1967 *	255	47	4.3		34	98		15.8	18.5	7.5	15
1968 *	395	47	3.6		60	154		15.3	20.4	6.3	23
1969 *	232	38	3.5		23	63		15.9	19.9	8.9	19
1970 *	579	54	3.6		116	267		15.5	21.1	5.1	37
1971 *	600	36	3.1		41	181		15.5	21.7	8.5	30
1972 *	344	32	3.3		33	78		15.5	21.8	9.9	27
1973 *	578	47	3.3		24	325		15.6	20.6	5.3	21
1974 *	661	50	3.7		19	354		17.3	20.9	6.2	25
1975 *	1169	69	3.7	22	102	834	17.8	16.8	22.0	4.2	40
1976 *	761	70	3.8	123	111	740	16.8	17.0	22.1	3.6	40
1977 *	757	58	4.7	97	140	333	17.0	16.0	23.2	6.2	44
1978 *	858	52	4.0	98	136	522	19.6	17.3	23.1	6.3	53
1979 *	823	50	3.8	66	125	538	16.1	15.0	22.0	5.0	56
1980 *	490	54	3.8	52	145	174	15.7	14.6	21.0	5.3	44
1981 *	499	60	3.5	138	131	171	15.9	14.5	21.9	4.2	46
1982 *	807	60	4.1	106	154	548	17.9	15.1	21.5	4.9	61
1983 *	544	62	5.1	153	145	347	13.3	13.4	21.9	4.3	45
1984 *	770	71	3.9	127	54	216	15.5	13.8	21.1	5.4	52
1985 *	728	57	3.5	178	70	130	16.2	15.4	20.7	4.3	52
1986 *	438	61	3.7	64	12	222	15.2	14.6	20.6	3.8	33
1987 *	635	68	3.8	106	33	359	16.2	15.2	20.3	3.0	44
1988 *	851	62	3.7	104	24	409	18.0	16.4	21.1	3.8	48
1989 *	1287	68	3.8	132	83	701	18.9	18.3	21.9	3.4	50
1990 *	1195	63	3.8	91	60	776	22.3	18.5	20.7	3.1	58
1991 *	1087	72	3.9	82	68	877	21.8	16.3	22.1	2.9	64
1992 *	781	71	4.0	78	45	558	21.4	18.3	21.3	3.1	64
1993 *	850	79	3.7	51	133	796	22.8	14.6	21.3	2.2	55
1994 *	1093	68	3.7	136	183	652	22.5	16.3	21.7	2.8	55
1995 *	785	79	3.9	401	422	789	21.4	16.2	23.3	2.2	55
1996	663	72	4.0	204	344	653	17.4	16.3	22.7	2.2	43
1997 *	566	75	3.8	166	148	667	19.9	18.1	23.7	2.2	37
1998	509	79	4.0	110	331	792	17.9	14.4	21.6	1.6	31
1999	680	78	3.6	193	508	915	15.9	14.7	20.6	1.5	33
2000	438	81	4.2	173	217	721	15.6	17.2	20.1	1.6	28
2001	449	82	3.8	96	65	722	19.3	15.9	19.8	1.9	34
2002	576	88	4.6	105	143	1374	19.5	17.1	21.2	1.6	36
2003	452	81	3.9	26	46	911	21.4	17.3	20.4	1.8	39
2004	348	84	4.0	12	30	909	20.2	18.2	20.2	1.4	32
2005	338	79	4.3	10	8	954	25.1	20.1	20.6	1.5	37
2006	314	82	4.7	6	31	777	18.5	21.6	21.4	1.8	36
2007	254	76	4.7	2	4	663	17.3	21.3	22.4	1.8	24
2008	139	75	4.5	3	2	245	26.1	21.5	23.1	2.5	19
2009	124	64	5.0	1	6	118	19.5	18.7	21.4	4.9	13
2010	67	70	4.5	0	2	119		20.0	22.0	2.5	11
2011	100	53	4.2	1	4	133	16.5	15.5	21.4	3.0	13
2012	41	95	5.0	1	1	117	20.3	10.0	23.0	1.7	9
2013	66	66	3.7	0	1	56		18.0	20.7	4.3	12
2014	147	76	4.2	6	3	167	17.6	19.0	22.7	3.5	13
2015	200	74	4.1	8	15	206	19.4	22.2	23.8	3.6	13

*Lengths are from kept fish only

Owasco Lake Tributary Fishing Survey Summary By Year

				Total legal gamefish caught		Average length (in.) of fish			
Year	Total # fishing trips	% successful outings	Average hours/trip	Brown trout	Rainbow trout	Brown trout	Rainbow trout	# hours to catch legal gamefish	# cooperators
1978 *	127	65	2.9	26	192	17.3	13.4	2.6	14
1979 *	190	72	3.2	46	329	11.3	12.6	1.6	15
1980 *	152	68	3.4	71	186	12.2	14.0	2.5	16
1981 *	186	83	3.3	101	393	12.7	13.4	1.6	21
1982 *	169	71	3.1	49	270	14.6	14.2	1.9	23
1983 *	124	80	3.4	88	255	16.8	12.9	2.2	22
1984 *	243	58	2.9	90	234	13.4	12.8	1.7	21
1985 *	285	87	2.7	218	197	15.6	13.3	1.3	24
1986 *	257	69	2.6	122	136	15.2	14.2	1.9	14
1987 *	181	74	2.7	61	154	16.8	14.3	1.5	13
1988 *	199	71	2.5	27	153	18.0	13.6	1.4	17
1989 *	111	71	2.8	54	68	15.3	14.6	1.5	17
1990 *	108	81	2.5	55	35	20.0	14.2	1.0	9
1991 *	72	78	3.4	16	41	15.5	14.6	1.6	11
1992 *	139	81	3.1	61	85	13.1	14.2	1.4	14
1993 *	99	77	2.6	45	53	13.3	14.5	1.3	15
1994 *	110	52	2.6	30	25	17.5	14.5	2.2	15
1995 *	108	58	2.7	35	85	15.5	16.2	2.4	19
1996	191	68	2.8	127	181	13.3	16.1	1.7	21
1997 *	141	74	2.9	167	120	13.1	16.4	1.4	17
1998	159	74	3.2	136	171	28.0	22.0	1.6	19
1999	117	82	3.3	91	256	14.4	16.7	1.1	15
2000	105	72	3.0	104	160	18.3	16.8	1.2	11
2001	82	53	2.8	48	62	17.5	16.6	2.1	15
2002	75	71	3.7	66	104	13.8	17.7	1.6	11
2003	66	67	3.3	48	69	17.1	16.8	1.8	10
2004	44	61	2.2	31	29	15.3	16.0	1.6	10
2005	51	26	3.9	17	18	19.0		5.7	10
2006	45	14	3.7	12	7	15.3	21.5	8.7	12
2007	25	54	3.0	23	12	14.1	19.0	2.1	9
2008	24	68	2.9	24	15	13.2	11.5	1.8	5
2009	23	80	3.0	32	10	13.4	11.5	1.7	6
2010	39	71	3.2	34	25	12.5	13.6	2.1	8
2011	28	61	2.6	18	16	15.9	15.3	2.1	6
2012	21	53	2.8	12	12		21.8	2.5	8
2013	39	62	1.8	30	22	12.6	16.5	1.3	6
2014	49	50	1.8	55	9	14.1	17.5	1.4	8
2015	38	50	1.9	24	22	13.6	16.7	1.6	5

*Lengths are from kept fish only

Owasco Lake Warmwater Fishing Survey Summary By Year

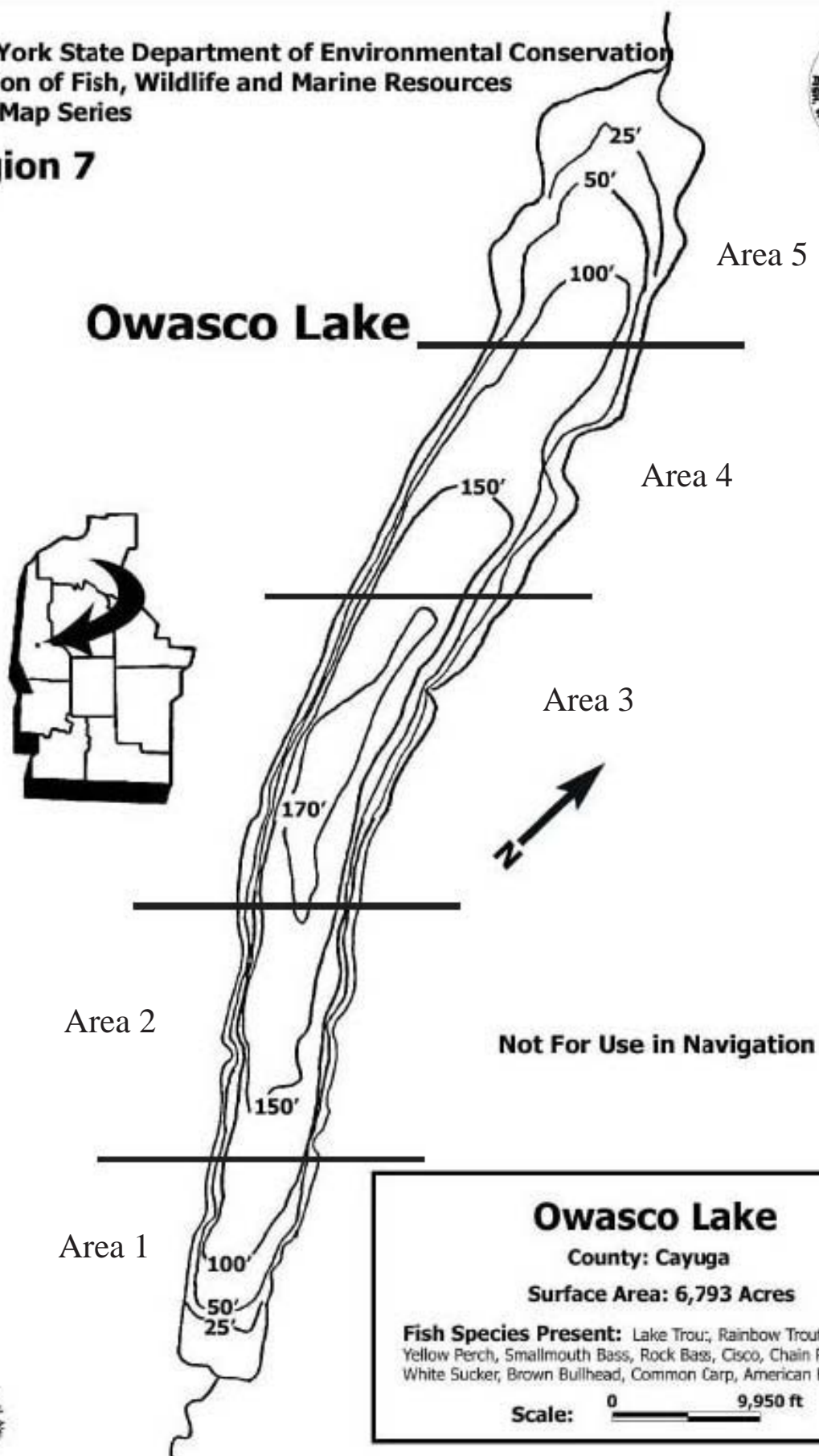
				Total legal gamefish caught				Average length (in.) of fish					
Year	Total # fishing trips	% successful outings	Average hours/trip	SM bass	LM bass	N. pike	Walleye	SM bass	LM bass	N. pike	Walleye	# hours to catch legal gamefish	# cooperators
1978 *	36	39	4.1	21		3		14.4		26.0		9.7	6
1979 *	23	48	2.8	9	4			15.9	20.8			8.0	4
1980 *	33	82	3.1	14	1	3		15.3	19.0	23.0		2.7	5
1981 *	18	17	2.6	3				15.7					2
1982 *	30	70	3.3	69				14.9				3.1	3
1983 *	10	90	3.6	16				15.9				2.3	4
1984 *	30	83	2.5	65		2		14.3		25.2		1.9	6
1985 *	28	86	2.9	58	1			14.8	15.0			1.4	3
1986 *	17	100	2.7	40		1		14.5		30.0		2.0	1
1987 *													
1988 *	25	93	4.0	63				14.1				1.6	2
1989 *	10	29	1.9	2				13.3				9.4	1
1990 *	54	56	2.7	13	1	2		18.2	17.0	23.2		5.7	6
1991 *	21	46	3.3	19	1			16.4	17.0			1.5	5
1992 *	28	57	1.8	11		1		14.3		25.0		2.5	4
1993 *	53	57	2.2	18	4	2		16.2	16.5	23.0		4.7	7
1994 *	151	57	3.6	23		9		14.7		26.7		4.0	9
1995 *	100	61	3.8	27	29	31	0	14.9	15.0	31.8		4.4	6
1996	110	56	3.2	79	12	24	0	13.5	16.5	25.4		3.0	6
1997 *	61	64	3.3	64	0	0	0	16.5				3.1	6
1998	74	50	3.4	48	0	1	1	13.2		27.5	18.5	5.1	7
1999	78	53	3.3	50	3	4	1	114.0	13.0	26.6	11.5	4.6	7
2000	78	63	3.3	72	1	9	6	14.5	13.0	23.4	14.6	2.9	7
2001	177	70	3.8	174	3	6	31	15.5	18.0	23.0	16.0	3.1	12
2002	171	71	2.9	51	0	1	124	13.7		14.4	19.1	2.8	11
2003	131	65	3.0	39	1	11	84	14.6	15.0	22.4	19.7	3.0	13
2004	100	48	3.0	36	2	3	38	14.0	15.7	29.4	21.1	3.8	9
2005	117	52	3.8	61	2	2	23	14.3	11.4	21.1	21.2	5.1	10
2006	108	59	3.7	48	21	7	33	15.5	14.9	23.5	21.8	3.6	12
2007	86	49	3.9	46	11	10	19	15.6	14.4	24.3	22.2	3.9	13
2008	76	54	3.4	45	6	7	9	15.0	16.7	23.8	23.1	3.8	10
2009	129	34	3.7	20	6	11	17	14.1	15.0	23.8	22.9	8.8	10
2010	82	20	3.3	22	1	1	1	13.9	11.0	20.5	27.0	11.0	6
2011	85	14	3.2	5	1	20	0	12.6	13.0	23.5		10.5	5
2012	79	19	4.0	7	3	11	7	12.4	13.0	24.7	22.8	11.2	6
2013	49	28	2.0	10	1	2	5	14.3	20.0	29.0	25.1	5.6	3
2014	37	79	4.9	34	36	56	2	15.5	14.6	22.4	27.5	1.4	5
2015	72	77	3.4	27	34	75	2	17.3	17.7	27.3	27.5	2.0	5

*Lengths are from kept fish only

New York State Department of Environmental Conservation
Division of Fish, Wildlife and Marine Resources
Lake Map Series



Region 7



Owasco Lake

County: Cayuga

Surface Area: 6,793 Acres

Fish Species Present: Lake Trout, Rainbow Trout, Walleye, Yellow Perch, Smallmouth Bass, Rock Bass, Cisco, Chain Pickerel, White Sucker, Brown Bullhead, Common Carp, American Eel, Panfish

Scale: 0 9,950 ft

