

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, Bureau of Fisheries, Region 7
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March 7, 2023

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 2022 diaries and are pleased to send you the annual summary. Your 2022 diaries and new diaries (if necessary) are included for your use with this distribution.

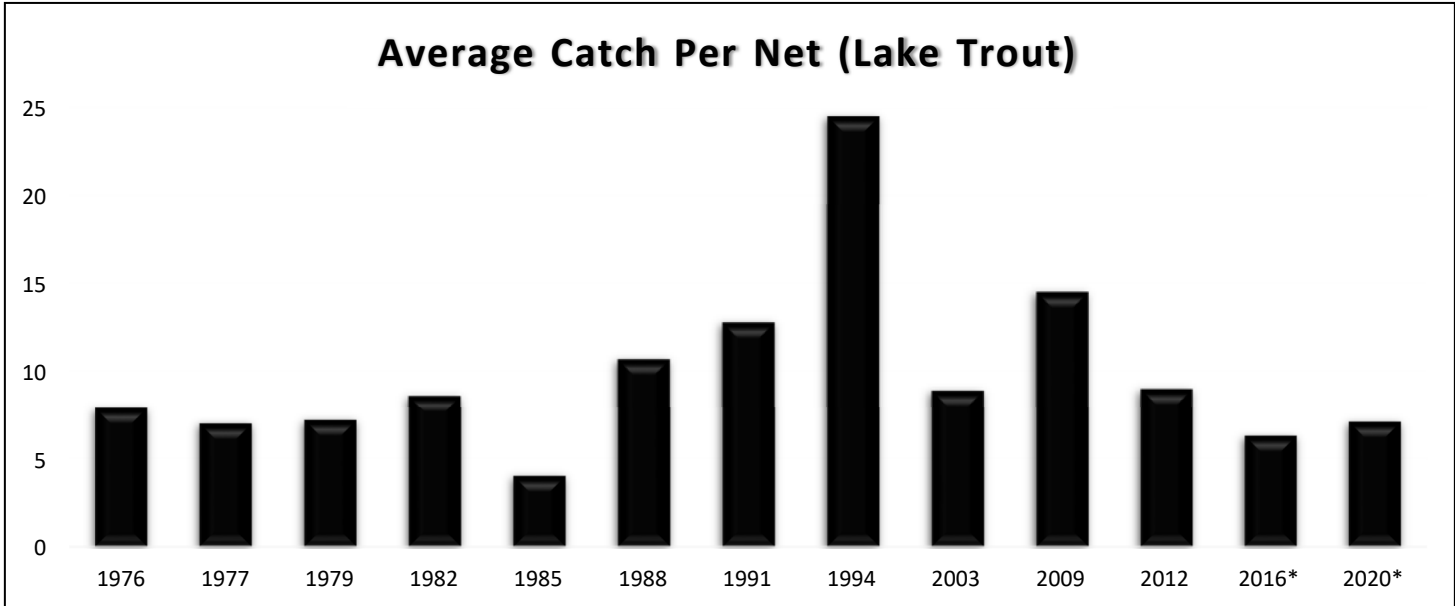
Open Water Trout and Salmon Fishing

In 2022, seven (7) Owasco Lake open water cooperators logged 201 legal salmonids in 57 trips for an average catch rate of 1.73 legal fish per trip. These cooperators had a catch rate for legal salmonids of 0.50 fish per hour and caught legal salmonids on 81% of their trips. Brief summary results by species are included below.

Lake Trout

Owasco Lake open water cooperators caught 181 legal lake trout, of which 39 were kept (78% release rate). Lake trout comprised 90% of the total open water legal salmonid catch. The largest lake trout reported in 2022 was a respectable 30.5 inches. The average length of all lake trout caught was 23 inches, on par with the average lengths reported over the last 10 years. Nearly half of all legal lake trout reported were caught around the north end in the month of July (49%). Most of the remaining reported legal lake trout (35%) were caught in the months of May/June and September/October, with the bulk of fish coming from the north end as well. In 2022, legal lake trout comprised 100% of the total reported lake trout catch.

Lake trout were last surveyed in the summer of 2020 (standardized index gillnet survey). Catch rates (fish per net, based on overnight sets) have stabilized following the latest stocking cuts, and have not affected angler catch rates for lake trout (and likely have contributed to intended effects of improved catch rates, survival, population size and growth rates of other salmonid species in the lake).



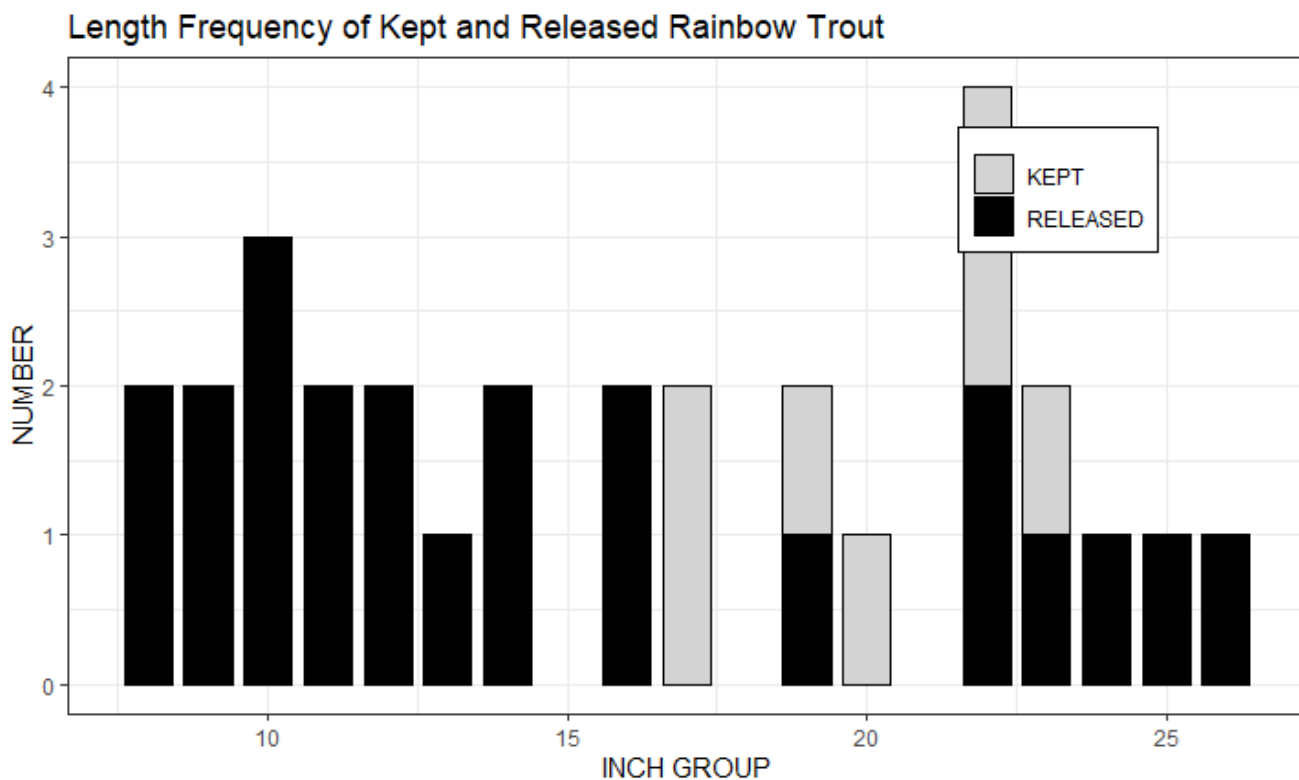
The above graph shows the catch rates (fish/net) of lake trout caught in standardized gillnet surveys in Owasco Lake over the last 45 years. The lake trout were not surveyed between 1994 and 2003. *Note recent surveys have switched gear types from multifilament gill nets to monofilament gill nets. Catch rates have been adjusted accordingly based on known capture efficiencies of the different gill net types.



This lake trout was captured in July 2020 during the lake trout standard netting survey. It was 36.7 inches total length, girth of 22.4 inches, and topped out our digital scale (well over 15 lbs).

Rainbow Trout

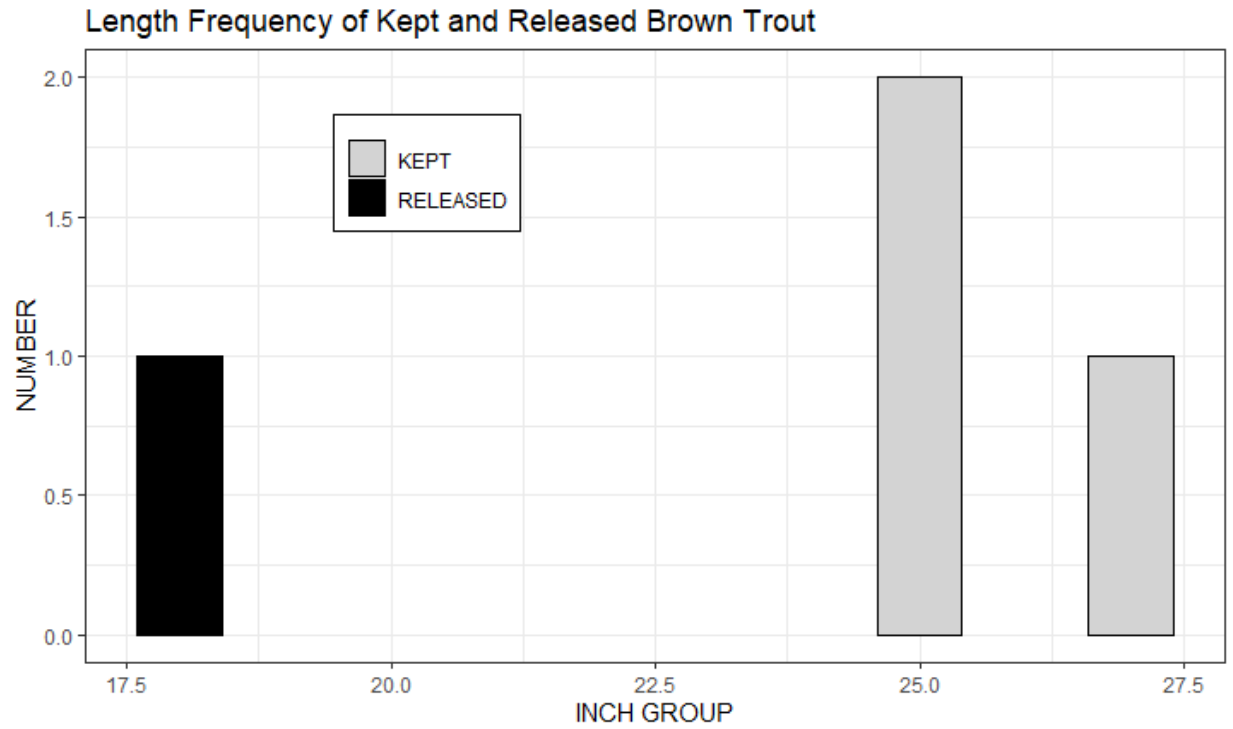
Owasco Lake open water cooperators reported catching 30 rainbow trout (16 of legal size) between 8 and 26 inches in 2022. The average length of the rainbows caught was 20.9 inches (trending upward). Most legal rainbows reported (56%) were caught around the north end and Long Point in June and October. Most legal rainbows reported in 2022 (81%) were caught by anglers targeting any coldwater gamefish or lake trout (not rainbows specifically). Hence, the total open water rainbow trout catch reported still likely understates the potential of the rainbow fishery in the lake, and we anticipate reported numbers increasing as anglers realize this and target them more specifically. Anglers released 56% of all legal rainbow trout caught.



Length frequency of rainbow trout reported by open lake coldwater cooperators in 2022.

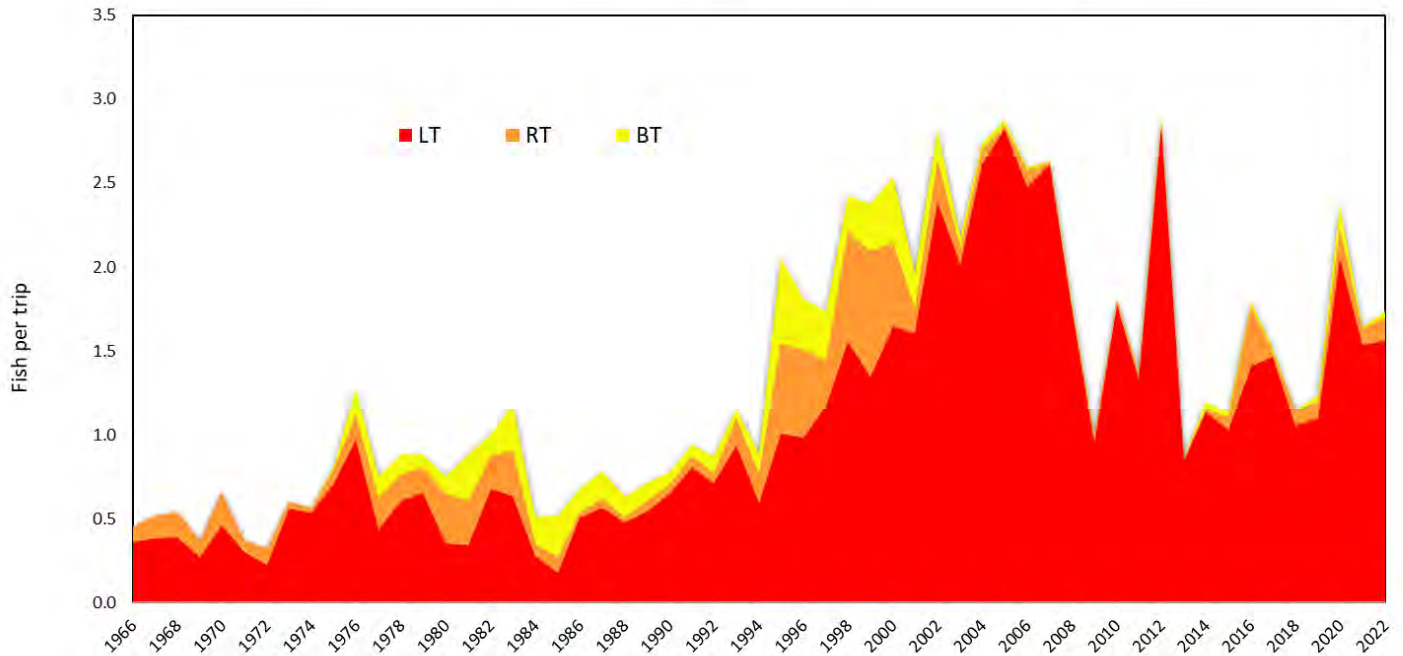
Brown Trout

Only four brown trout (100% of legal length) were reported by our coldwater open lake anglers in 2022, measuring between 18-27 inches. The average length of browns reported was 23.75 inches. Given the relatively low number of open water cooperators, this relatively low reported catch is not entirely surprising. As with the rainbows, this fishery is largely underutilized as it is still on the rebound in the lake following a crash in the late 2000's. Brown trout have been caught in recent mid-summer lake surveys with fish running upwards of 12-14+ pounds – they may be sporadic but there are trophy fish swimming around out there!



Length frequency of brown trout reported by open lake coldwater cooperators in 2022.

Owasco Lake Coldwater Diary Cooperator Catch Rate

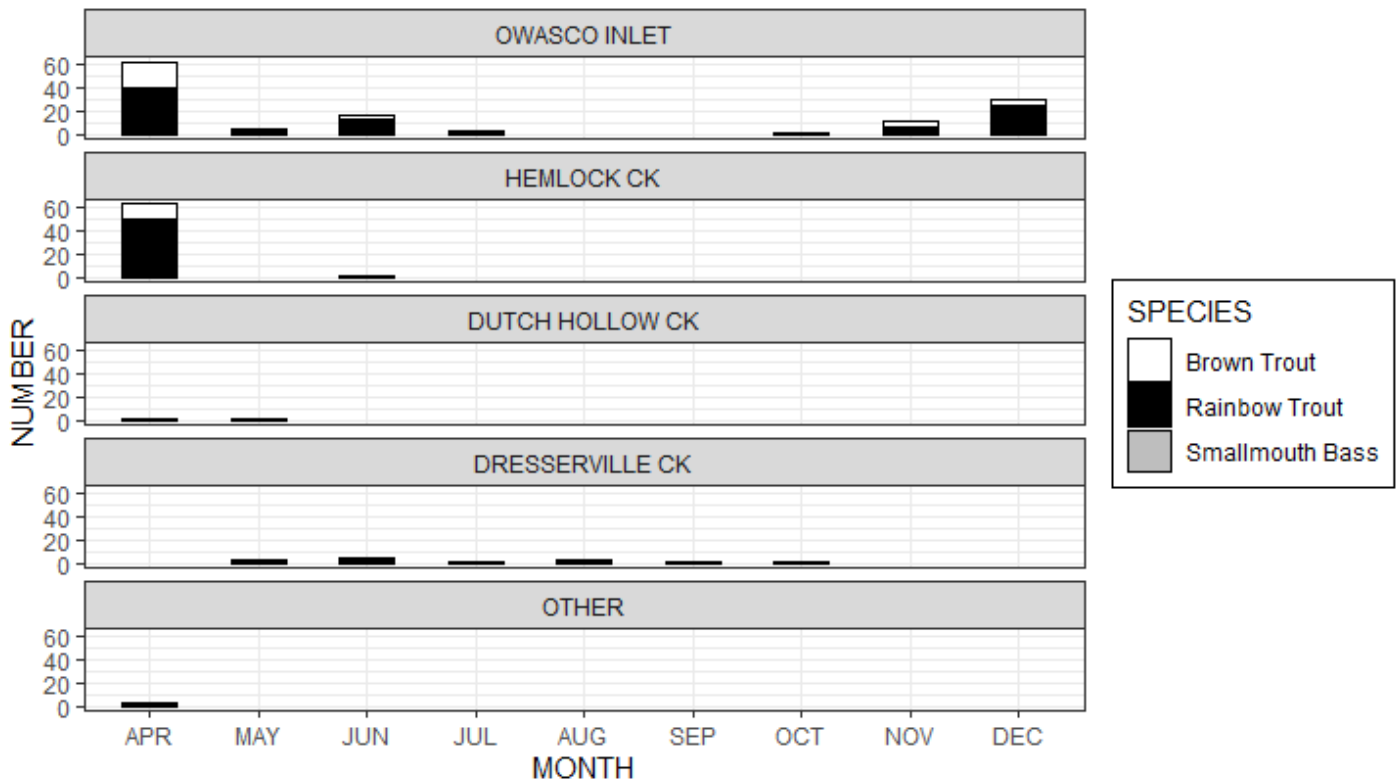


The above graph shows the catch rates (fish/trip) of legal salmonids caught by our Owasco Lake open water cooperators from 1966 through 2022 and the relative contribution of each species in the catch over time. Catch rates are used to remove the effects of having varied numbers of cooperators and trips from year to year. Note the actual data are provided in the attached summary tables.

Owasco Lake Tributary Fishing

In 2022, six (6) Owasco Lake tributary cooperators caught 24 legal rainbow trout and 31 legal brown trout during 66 trips and were successful in catching at least one legal fish in 42% of their outings (down from 71% in 2021). The number of cooperators and trips in 2022 was typical of the last decade and is still holding at a relatively low level. Anglers released 87.5% of the legal rainbows caught and 79% of all legal brown trout. The largest rainbow trout reported from the tributaries was 27 inches (a hefty 8.5 lbs!), and the largest brown caught reported was 22 inches. Most legal rainbows were caught in April and December in the Owasco Inlet, and in Hemlock Creek in April. Dutch Hollow also produced some legal rainbows in 2022 (April and May). Most legal brown trout were caught in the Owasco Inlet and Hemlock Creek in April, and sporadically throughout the late summer and early fall in Dutch Hollow Creek. It is important to note that low flows and high late summer temperatures likely led to poor fall runs from the lake and associated low catch rates of legal tributary salmonids in the latter half of 2022. These conditions also contributed to relatively low estimates of natural juvenile production of brown trout and rainbow trout observed in early fall surveys in Owasco's tributaries. This past year was a rough year for stream trout throughout the state!

Total Tributary Catch by Month and Area



2022 Owasco tributary salmonid catches by month and stream.

Owasco Lake Warmwater Fishing

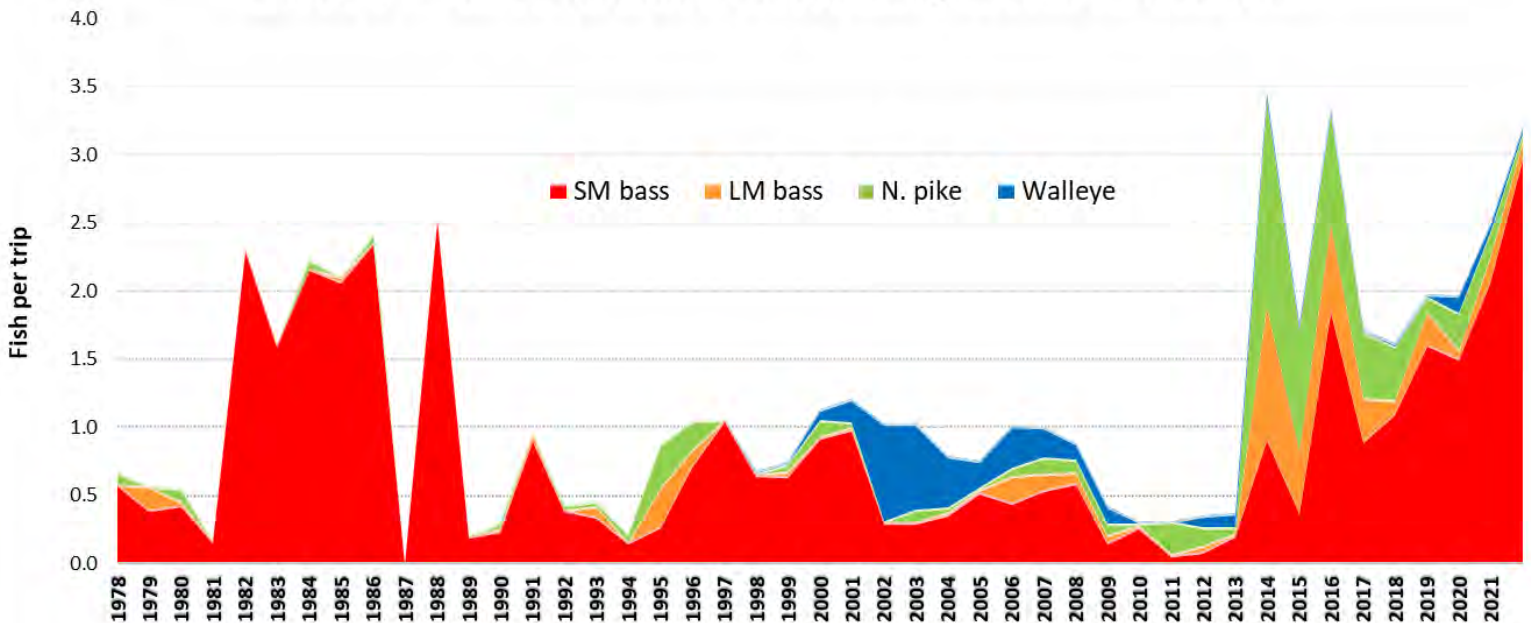
In 2022, four (4) Owasco warmwater cooperators made 50 trips on the lake. Those anglers caught 149 legal smallmouth bass, 3 legal northern pike, 6 legal largemouth bass and 2 legal walleyes. Anglers were successful in catching at least one legal warmwater gamefish on 78% of their outings, with it taking on average 1.4 hours to catch one legal fish (much improved over 2021 at 2.2 hours per legal warmwater gamefish). Overall, this excellent catch rate is on par or better than the last seven (7) years and is very good compared to the years 2003-2013. Northern pike catches were down in 2022, but with only four (4) reporting warmwater cooperators, it may be more reflective of angler preferences than actual abundance in the lake.

Anglers specifically targeting bass logged 40 trips for a total of 120 hours. They caught 124 legal bass (118 smallmouths and 6 largemouths). The overall targeted catch rate for legal bass was 1.03 legal bass per hour. This is excellent compared to the statewide average of around 2.3 hours per legal bass. The catch rate for all smallmouths (fish per trip) was the highest in recent history (slightly higher again than 2021 and 2020), and the catch rate in 2019 and 2020 exceeded those of the heyday of the smallmouth fishery in Owasco in the late 90's and early 2000's. This again bodes well for another banner year in 2023 should the trend continue.

The largest reported fish caught of each species was as follows: largemouth bass – 19 inches, smallmouth bass – 21.25 inches (5.8lbs), northern pike – 30 inches, walleye – 26 inches. Only 2 walleyes were caught by warmwater cooperators (24 and 26 inches), indicating either difficulty in catching this species due to population decline in the wake of a stocking moratorium in place since 2006, or lack of targeting (or both). The relatively low walleye catch (akin to 2019-2021) may also be attributable to an increase in forage (smelt/alewives) in the lake, which was indicated during our most recent lake trout netting surveys in 2016 and 2020. Creel studies such as those conducted on Oneida Lake have shown that a strong forage population typically lowers the catchability of walleyes, *i.e.* if the fish are well fed, their tendency to take an offering from an angler decreases and they become harder to catch.

Northern pike were caught in May and June around the north end and Long Point. Smallmouth bass were caught in good numbers from May through July, with most fish being caught around the north end. The largemouth bass were caught sporadically from June through September and catches were distributed lake wide (mostly in areas of good vegetation cover such as the north and southends of the lake). There were not enough walleye reported to discern any clear pattern.

Owasco Lake Warmwater Diary Cooperator Catch Rate



The graph above shows the catch rates (fish/trip) of legal warmwater species caught by Owasco Lake warmwater cooperators from 1978 through 2022 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.

Fisheries Management in the Owasco Lake Watershed

NYSDEC's Bureau of Fisheries is in our final extended review of Fisheries Management Plans that will address and guide management of the fisheries over the next 10 years in all of New York's Finger Lakes. Once Agency review is complete, these plans will be released for public review and comment, so keep your eyes peeled in the upcoming months and please provide feedback should you wish to do so! The Owasco Lake management plan is multifaceted, and addresses several major items, including (but not limited to) a. restoring a more balanced lake fishery for lake trout, brown trout and rainbow trout, b. continued restoration of the once very popular migratory spawning runs of fish from the lake in area tributaries and maximizing the success of natural reproduction in these tributaries, c. monitoring the status and quality of Owasco Lake's warmwater gamefish species, d. monitoring the status and population dynamics of forage species in the lake (especially alewife and rainbow smelt), and e. assessing and monitoring the lake's panfish populations.

Ongoing Recruiting Call!!!!

Please help us recruit new anglers to the Finger Lakes Angler Diary Cooperator Program – while we have some extremely diligent and regularly contributing cooperators, we need participating anglers now more than ever. The diary program is an excellent tool to help inform our management decisions on the Finger Lakes. We encourage our current members to seek out prospective participants and refer them in our direction. As you can see from some sections of this report (especially warmwater and tributary fishing), the catch data obtained from such a small group of anglers can hinder our understanding of what may be happening in the fishery. I am always happy to discuss the ins and outs of the program with new members and can be reached via the phone number or email below.

Thank you again for your participation in the Owasco Lake Angler Diary Program, your contributions are greatly appreciated! I wish you continued success on the water in 2023!

Sincerely,



Ian R. Blackburn

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Owasco Lake Coldwater Fishing Survey Summary By Year

Year	Total # fishing trips	% successful outings	Average hours/trip	Total legal gamefish caught			Average length (in.)			# hours to catch legal gamefish	# cooperators
				Brown trout	Rainbow trout	Lake trout	Brown trout	Rainbow trout	Lake trout		
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
2016	123	91	5.1	2	26	169	17.8	16.6	23.6	3.2	12
2017	58	52	3	1	2	85	--	20.5	22.6	2	4
2018	113	85	2.9	0	11	119	--	19.3	20.3	2.5	5
2019	137	69	2.8	5	13	151	14.1	18.2	21.3	2.3	9
2020	118	71	2.8	16	21	242	17.7	17.7	22.8	2.3	11
2021	92	77	3.6	3	17	289	20	21.2	23.2	2.2	9
2022	57	81	3.4	4	16	181	23.8	20.9	23	2	7

*Lengths are from kept fish only

Owasco Lake Tributary Fishing Survey Summary By Year

Year	Total # fishing trips	% successful outings	Average hours/trip	Total legal gamefish caught		Average length (in.)		# hours to catch legal gamefish	# cooperators
				Brown trout	Rainbow trout	Brown trout	Rainbow trout		
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
2016	44	78	2.2	64	48	11.8	12.9	0.9	9
2017	20	59	2.7	13	8	14.0	14.2	2.5	6
2018	76	62	3.8	65	94	11.6	9.1	1.8	6
2019	73	61	2.7	51	57	10.8	11.0	1.8	7
2020	57	50	3.0	47	22	10.3	15.7	2.5	6
2021	43	71	2.3	15	13	11.7	17.9	1.5	6
2022	66	42	1.9	31	24	13.7	20.6	2.3	6

*Lengths are from kept fish only

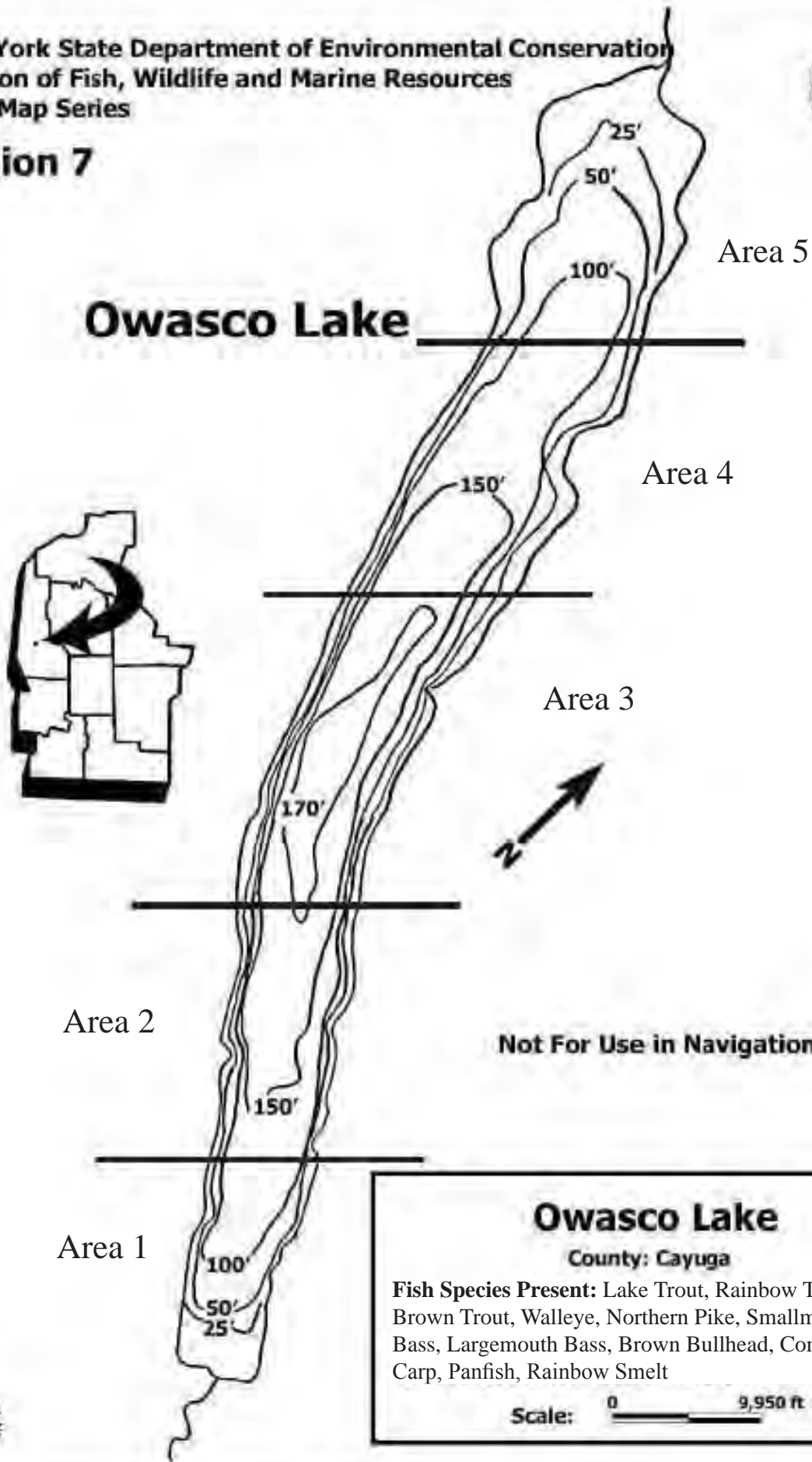
Owasco Lake Warmwater Fishing Survey Summary By Year

Year	Total # fishing trips	% successful outings	Average hours/trip	Total legal gamefish caught				Average length (in.)				# hours to catch legal gamefish	# cooperators
				SM bass	LM bass	N. pike	Walleye	SM bass	LM bass	N. pike	Walleye		
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
2016	56	93	4.8	104	36	45	6	15.6	15.5	24.1	24.9	1.4	5
2017	128	92	4.1	131	41	82	3	15.9	16.5	24.9	20.3	2.4	6
2018	123	81	3.7	136	11	49	3	15.3	16.2	26.2	25.3	2.3	6
2019	128	68	4.0	206	31	14	2	16.1	16.7	26.5	21.9	2.0	8
2020	138	89	4.4	208	8	38	18	15.6	18.2	27.4	24.7	2.2	9
2021	72	92	5.4	149	13	13	7	16.3	17.3	27.8	25.9	2.2	4
2022	50	78	3.7	149	6	3	2	16.1	17.0	28.5	25.0	1.4	4

*Lengths are from kept fish only



Region 7



Owasco Lake
County: Cayuga

Fish Species Present: Lake Trout, Rainbow Trout, Brown Trout, Walleye, Northern Pike, Smallmouth Bass, Largemouth Bass, Brown Bullhead, Common Carp, Panfish, Rainbow Smelt

Scale: 0 9,950 ft

