

March 10, 2015

**To: Owasco Lake Angler Cooperators**

Dear Fellow Anglers:

We have summarized the data from the 2014 diaries and are sending you the summary information, your 2015 diary and additional diaries for 2015 if needed. Thank you for your cooperation.

### **Open Water Trout and Salmon Fishing**

In 2014, thirteen Owasco Lake open water cooperators caught 176 legal salmonids in 147 trips (cooperator and party members combined) for an average catch of 1.2 fish per trip. The number of trips is up noticeably from the 66 recorded in 2013 and was the highest since 2007. Open water cooperators had a legal salmonid catch rate of 0.28 fish per hour and were successful in catching at least one legal salmonid in 76 percent of their trips. Below is a brief description of the angler cooperator results.

#### ***Lake Trout***

Owasco Lake open water cooperators caught 167 legal lake trout, of which 90 were kept. The numbers of lake trout caught increased noticeably in 2014 to levels not seen since 2008. Lake trout comprised 91 percent of the legal salmonid lake catch. Two sub-legal lake trout were also caught and released. The largest lake trout caught was 31 inches and the average length of kept lake trout was 22.7 inches which is on par with previous years. The area around Long Point (July) and the north end (June and August) yielded the most fish reported in the diaries (44 and 76 fish, respectively).

#### ***Rainbow Trout***

Owasco Lake open water cooperators caught three legal rainbow trout in 2014. This is far below the mid-1990's level of up to 500 fish from 33 cooperators, but is typical of the past 10 year's results. One rainbow trout came from the south end in August and two fish came from Long Point in July. In spite of the lack of success by the Owasco Lake open water cooperators, some nice rainbows were reportedly caught by non-participating anglers during the Owasco Lake derby and at other times during the year. Rainbow trout fishing on Owasco Lake continues to be slow compared to the mid- to late 1990s. We think there may be two factors that are likely having negative impacts on rainbow trout fishing:

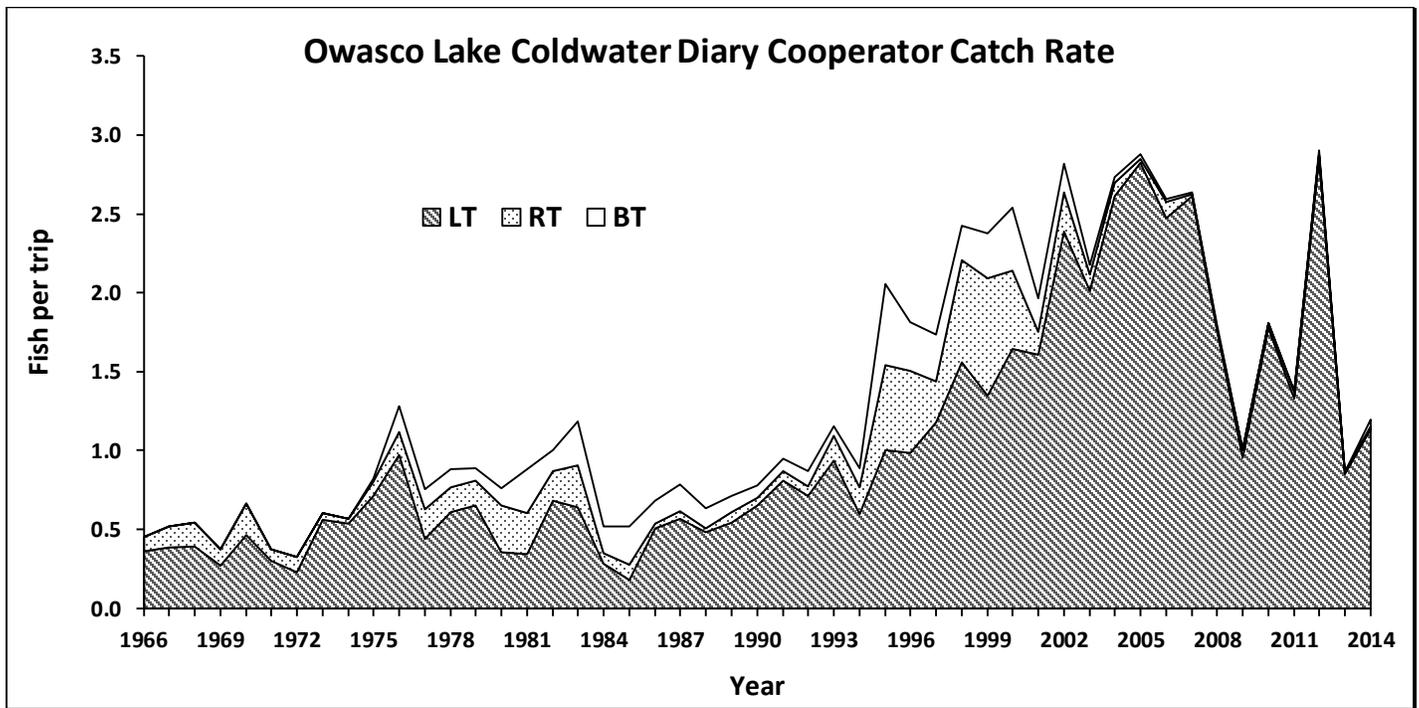
- Predatory pressure from lake trout and walleye. Lake trout are a very long lived species and with declining angler harvest rates there is a strong population in Owasco Lake. Walleye stocking has ceased therefore that population will slowly decline through harvest and natural mortality. Acknowledging that walleye were not the only likely source of rainbow and brown trout predation, the number of lake trout stocked in the lake was also reduced to less than half of the levels stocked in the late 1990's.
- Beaver activity on Owasco Inlet, Hemlock Creek and Dutch Hollow Brook may have increased to the point where beaver dams are possibly hindering access to headwater spawning areas or more likely significantly degrading juvenile trout habitat through siltation and increasing water temperature.

To address the second concern we surveyed Owasco Inlet in summer 2014 to determine the level of natural rainbow trout reproduction. We completed electrofishing surveys on three sections of the Inlet. Site 1 was at the Route 222 bridge in the Village of Groton and it yielded an estimate of 117 juvenile rainbows per 100 feet of stream. Site 2 was downstream of Groton, at the Walpole Road bridge where 127 fish were estimated in a 100 foot stretch. The most

downstream site was at the Booth Road bridge producing an estimated 17 rainbow and 31 brown trout per 100 feet. We also surveyed one site on Hemlock Creek which is a very high quality tributary to Owasco Inlet and was assumed to hold significant numbers of "wild" rainbow trout. This proved to be absolutely true when we surveyed upstream of the Bird Cemetery Road bridge and found an estimated 251 juveniles per 100 feet of stream. This is the first time a population estimate has been completed on these streams. Because of a lack of past data we cannot say if the large numbers of juvenile trout found in the tributaries to Owasco Lake in 2014 is a normal condition or not. But it does give reason for optimism that at least a portion of those young rainbows will migrate to the lake and contribute to and hopefully improve that fishery. Additionally their potential return as adults to the tributaries could spark renewed interest in that component of the fishery as well. Subsequent surveys will be done on a more regular basis to track the level of natural reproduction as the Owasco Lake rainbow trout population responds to the end of walleye stocking.

**Brown Trout**

Eight brown trout were caught by diary cooperators in 2014, which as with rainbow trout is far below the levels caught in the mid-1990's, but is typical of the past 10 years. Six were legal fish and two of those were kept. The largest brown trout caught was 23 inches, with an average size of 17.6 inches. Five of the eight fish were caught at the north end, followed by the south end and Burtis Point with two and one fish respectively. The fish were caught evenly between June and August. As with rainbow trout there were also numerous brown trout caught by non-participating anglers during the Owasco Lake derby and at other times during the year. We are fairly certain that predatory pressure from lake trout and walleye that has impacted rainbows is also having a negative impact on browns.



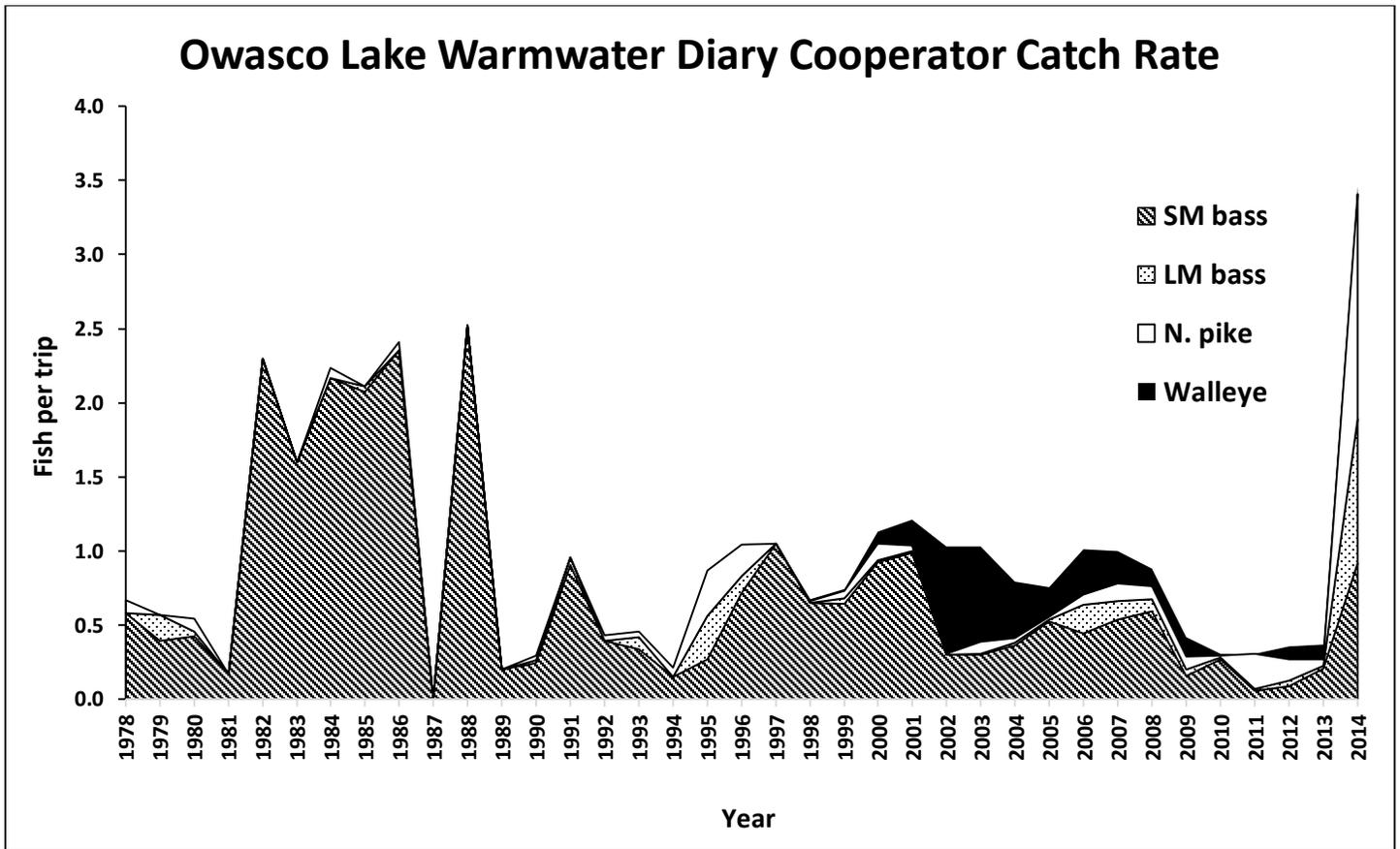
The graph above shows the catch rates (catch/trip) of legal salmonids caught by our Owasco Lake open water cooperators from 1985 through 2014 and the relative contribution of each species in the catch over time. Catch rates are used to remove the effects of having varying numbers of cooperators and trips from year to year. Note that the actual data are still provided in the attached summary as usual.

## **Owasco Lake Tributary Fishing**

In 2014, eight Owasco Lake tributary cooperators caught 55 legal brown trout and nine legal rainbow trout during 49 trips. The number of cooperators and trips in 2014 is typical of the previous 10 years. Of the 64 legal trout caught, two rainbow and 16 brown trout were kept. The largest rainbow caught was 18 inches while the largest brown caught was 17.5 inches. The size of harvested trout of both species was typical compared to previous results. Our tributary cooperators caught 2/3rds of their rainbows in Owasco Inlet (20), followed by Dresserville Creek (10), with December being the highest catch month (17). The brown trout were caught in Owasco Inlet (44) Dutch Hollow Brook (11) and Dresserville Creek (2) throughout the season, with peaks in December (11) and April (33). Brown trout catches in 2014 were this highest since 2002 when there were twice as many cooperators reporting. Rainbow trout do not appear to have rebounded like the brown trout, but with the high natural reproduction described above that hopefully will change soon.

## **Owasco Lake Warmwater Fishing**

Last year, five Owasco Lake warmwater cooperators caught the following legal fish during 49 trips; 92 northern pike, 43 smallmouth bass, 40 largemouth bass, and three walleye. The catches of largemouth bass and northern pike are noticeably higher than in past years and there were relative few cooperators in 2014. Of the 128 legal fish caught, only one walleye was kept. The largest smallmouth bass, largemouth bass, walleye, and northern pike caught were 21, 19, 26, and 33 inches, respectively. These average lengths are comparable to past results with the exception of walleye which were the longest on record. This pattern of increasing average walleye length is likely a result of an aging population since stocking has ceased. One walleye was caught near Burtis Point in June with two being landed at the south end (one each in June and August). Catches of smallmouth bass were spread across the lake with the south end having the highest catch (17 fish) and June the best catch month. The catch rate of legal smallmouth (by those anglers targeting bass) was 0.32 fish per hour, which compares to 0.21 and 0.60 fish per hour for Otisco and Skaneateles lakes, respectively. The south end also had the highest catch of largemouth bass (28), followed by the north end (12). The largemouth catch was fairly spread out over the open water season with July and August being top producers. The targeted largemouth bass catch rate for legal fish was 0.33 fish per hour, compared to 0.26 and 0.02 fish per hour for Otisco and Skaneateles lakes, respectively. As a comparison the 1977-1980 New York State Bass Study collected smallmouth and largemouth bass information from 12 popular bass fishing waters across the state through the use of an angler diary program. The nearest bass study water to Skaneateles Lake was Tully Lake in Preble. The statewide bass study targeted catch rates were 0.26 legal bass per hour ( $\Rightarrow$  12 inches), compared to the 2014 Owasco combined bass catch rate of 0.65 legal fish per hour. The vast majority of northern pike were caught at the south end of the lake (85 of 92 caught), with May and August as the top producing months. The catch rate for anglers targeting pike was 0.44 legal fish per hour in 2014. The warmwater fish catch increased after a five year period of lower catches. The largemouth bass and northern pike catch in 2014 was higher than years with twice the number of cooperators. The number of hours to catch a legal gamefish was a very low 1.4, especially compared to 2010 to 2012 when it was over 10 hours per fish.



The graph above shows the catch rates (catch/trip) of legal warmwater species caught by Owasco Lake cooperators from 1985 through 2014 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 that the actual data are still provided in the attached summary as usual.

### Owasco Lake Fisheries Management Survey

A summary report of the results of the survey we conducted to determine angler preferences regarding the fisheries management of Owasco Lake will be available shortly.

Again, thank you and good fishing in 2015.

Sincerely,

Scott Prindle  
Aquatic Biologist

**Coldwater survey**

				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
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

\* = Lengths are from kept fish only

## Warmwater Survey

				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
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

\* = Lengths are from kept fish only

**Tributary Survey**

Year	Total # fishing trips	% successful outings	Average hours/trip	Total legal gamefish caught		Average length (in.) of fish		# hours to catch legal gamefish	# cooperators
				Brown trout	Rainbow trout	Brown trout	Rainbow trout		
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

\* = Lengths are from kept fish only



# Region 7

## Owasco Lake



Area 2

Area 1

Area 5

Area 4

Area 3



Not For Use in Navigation

### 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

