

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish, Wildlife and Marine Resources, Bureau of Fisheries, Region 8  
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Dear Angler,

Thank you for returning your 2016 Keuka Lake angler diary. This is the 49th anniversary of our volunteer angler diary program on Keuka Lake, one of the longest programs in the state. Enclosed is a summary of your personal catch information, referenced to the code number on the cover of your diary, a summary of 1968 through 2016 catch statistics, your 2016 diary, and, if needed, a new diary for the 2017 season. If you need additional diaries throughout the year please contact our office.

**A REMINDER: Please follow the directions that are found in your diary book. Unfortunately, we have had to delete trip records because of incomplete information.**

- Remember to enter both your starting and ending time for each fishing trip. **We cannot use data from trips without start and end times.**
- Please indicate the target species you are primarily fishing for.
- Record the appropriate code “C” if you keep the fish and “R” if you release the fish in the column marked “C/R”.
- Only rainbow trout have fin clips. Please be sure to write no mark over the fin pictures to indicate that you observed the fins and none were clipped. Leaving it blank means that you did not observe the fish for fin clips.

In 2016, anglers caught a total of 1,352 salmonines, an increase of 300 fish over 2015. This occurred even though fishing trips were near an all-time low at 411 and around 250 less than in 2015. Only in 1972 did anglers record lower number of trips. Ninety-six percent of all salmonines caught were legal sized. As a result, catch rates also rebounded from 2015 with anglers taking 1.7 hours to catch a legal sized fish. For comparison, diary cooperators on Canandaigua and Seneca Lakes’ averaged 2.2 and 4.8 hours, respectively to catch one legal salmonine this past year. Similar to recent years, 97% of all salmonines caught were lake trout, indicating rainbow and brown trout, and Atlantic salmon contribute little to the overall cooperator catch. Additionally, 92% of these other species were caught by one angler.

A total of 1,316 lake trout were caught, with 96% being legal-sized. Length and weight of lake trout kept averaged 20.5 inches and 2.6 pounds. June, July and August accounted for 66% of all lake trout caught. Fifty percent of legal sized lake trout were released. The lake trout population in Keuka Lake continues to be sustained entirely by naturally reproduced fish.

Catch of both Atlantic salmon (N=15) and brown trout (N=15), although low, were the highest reported in over a decade. However, 14 brown trout and 13 Atlantic salmon were caught by one angler. Both species are maintained by stocking 22,300 yearling Atlantic salmon and 7,800 yearling brown trout annually. The original goal of the brown trout and Atlantic salmon stocking programs were to add diversity to angler catch. If the anglers in the diary cooperator program are representative of all Keuka Lake anglers, then the diversification goal is not being met. Serious consideration for discontinuing stocking is warranted and will be discussed below. Only six rainbow trout were caught. Five were legal sized and two were harvested. No fin clips were observed on the six rainbow trout that were observed, indicating all were naturally reproduced. Fingerling stocking, which began in 2010, does not appear to be contributing to the adult spawning population.

Keuka Lake was last surveyed in 2011. Most data, including the diaries, were suggesting an overabundant lake trout population and somewhat depressed forage population. This resulted in poor

growth and condition of lake trout and negative impacts to other salmonines, primarily rainbow trout, through predation. Additionally, anglers were catching fish, almost exclusively lake trout, at all-time high rates. This was likely the result of a lot of hungry fish more willing to strike an anglers' offering. It was common to hear from anglers catching 20 to 30 fish an outing. Other than size of fish, there were no complaints. Although fishing was considered excellent, we believed it would be difficult to maintain the existing fishery and enacted regulations in 2012 in an attempt to decrease the overabundant lake trout population.

In the five years since the last survey, the fishery appears to have been in a state of flux. During the winters of 2013-14 and 2014-15, all or significant portions of Keuka Lake had fishable ice. It was reported that anglers caught and harvested a lot of lake trout through the ice. In 2015 and 2016 reports from anglers were suggesting that forage, primarily alewives, were not being observed and catch of trout was down. Yellow perch were becoming more numerous, especially in lake trout stomachs. Diary catch rates were still high, but exceeded 2 hours to catch a legal salmonine in 2015 for the first time in over 13 years. Fortunately, we were able to survey Keuka Lake this past summer.

While data analyses are incomplete, observations suggest that alewife abundance has significantly decreased, lake trout are feeding primarily on mysis or freshwater shrimp, lake trout abundance is at its lowest level in 30 years, and brown and rainbow trout and Atlantic salmon continue to be a minor component of the fishery. We know that invasive mussel species and their impacts to the base of the food chain and abundant lake trout population have negatively impacted alewives for some time now. It is possible that back to back cold winters may have further impacted the already stressed alewife population. Without forage, predators are being impacted. Diary catch rates seem to conflict with recent reports from anglers concerning poor fishing. However, some studies have shown that for various reasons, high diary catch rates may continue for a short time period after populations decline and this may be what happened in Keuka Lake. Harvest through the ice and regulations enacted in 2012 to reduce lake trout are a couple of reasons for a decline in lake trout abundance. However, they are likely not the only reason. The overall productivity of the lake appears to be declining and it is likely that the lake may not be able to support the numbers of predators it once did. Several options including reintroduction of native forage fish, reducing and/or eliminating brown trout and Atlantic salmon stocking numbers, alewife stocking, and wait and see approach are being investigated to determine the best course forward under existing lake conditions.

We are planning to have a Keuka Lake State of the Lake meeting in June at Keuka College to update conditions of Keuka Lake since our meetings held in 2012. At that time I hope to present what we know, the various options we have going forward, what we think is the best approach, and get feedback from the public concerning what we have presented. Additionally, we are planning to hold two meetings for angler diary cooperators; the evening of May 15 at Avon Office and morning of August 12 at the Chemung County Fairgrounds. We plan to have a short presentation on the diary program followed by an open discussion on the Finger Lakes. We will mail additional details to all diary cooperators once details have been finalized.

Thank you for your continued cooperation and good luck fishing during the 2017 season.

Good Fishing,

Brad E. Hammers  
Senior Aquatic Biologist  
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Table 1. Summary of 2016 Keuka Lake angler diary trips

Angler	Days Fished	Angler Trips	Angler Hours	Avg Trip (hrs)	Caught				Kept			Legal Salmonids Caught	Hrs to Catch Legal	
					LTC	BTC	RTC	LLS	LTK	BTK	RTK			LLS
203	6	6	15.50	2.58	14	0	0	0	14	0	0	0	14	1.11
264	1	2	14.00	7.00	2	0	0	0	2	0	0	0	2	7.00
352	14	25	118.00	4.50	47	0	0	0	31	0	0	0	47	2.51
355	15	15	25.50	1.70	16	0	0	0	16	0	0	0	16	1.59
371	8	10	22.25	2.25	9	0	0	0	5	0	0	0	5	4.45
386	16	16	31.00	1.94	9	0	0	0	8	0	0	0	9	3.44
388	2	2	3.50	1.75	2	0	0	0	2	0	0	0	2	1.75
391	16	19	48.25	2.47	39	0	0	0	0	0	0	0	39	1.24
435	4	6	8.75	1.44	1	0	0	0	0	0	0	0	1	8.75
486	11	14	50.50	3.64	68	0	0	0	45	0	0	0	59	0.86
487	2	3	13.25	3.63	6	0	0	0	3	0	0	0	6	2.21
547	2	6	36.00	6.00	16	0	0	0	9	0	0	0	11	3.27
564	1	4	16.00	4.00	2	0	0	0	1	0	0	0	2	8.00
591	1	3	18.00	6.00	10	0	0	0	9	0	0	0	10	1.80
595	2	6	36.75	6.13	30	0	0	0	12	0	0	0	29	1.27
702	31	35	69.00	1.93	80	0	0	0	28	0	0	0	80	0.86
713	17	17	73.25	4.31	67	0	0	0	32	0	0	0	62	1.18
714	36	38	83.00	2.14	28	0	0	0	2	0	0	0	28	2.96
720	7	7	43.17	6.17	32	0	0	0	19	0	0	0	30	1.44
721	123	310	1082.25	3.36	662	14	6	13	280	9	2	12	692	1.56
722	5	7	28.50	4.00	2	0	0	0	2	0	0	0	2	14.25
725	6	9	21.92	2.53	19	0	0	1	13	0	0	1	20	1.10
730	6	8	21.00	2.67	4	0	0	0	0	0	0	0	3	7.00
734	1	2	8.00	4.00	0	0	0	0	0	0	0	0	0	
738	1	1	1.00	1.00	1	0	0	0	1	0	0	0	1	1.00
<b>34</b>	<b>411</b>	<b>689</b>	<b>2254.33</b>	<b>3.48</b>	<b>1316</b>	<b>15</b>	<b>6</b>	<b>15</b>	<b>632</b>	<b>10</b>	<b>2</b>	<b>13</b>	<b>1303</b>	<b>1.73</b>

Angler	Days Fished	Angler Trips	Angler Hours	Avg Trip (hrs)	Caught					Kept			Legal Salmonids Caught	Hrs to Catch Legal
					LTC	BTC	RTC	LLS	LTK	BTK	RTK	LLS		
741	3	6	24.00	4.00	0	0	0	1	0	0	0	0	1	24.00
743	25	27	66.75	2.49	37	0	0	0	18	0	0	0	36	1.85
755	6	6	13.50	2.25	4	1	0	0	1	1	0	0	5	2.70
776	7	14	35.50	2.71	3	0	0	0	0	0	0	0	2	17.75
878	22	40	142.75	3.53	72	0	0	0	56	0	0	0	57	2.50
891	2	4	15.00	3.75	2	0	0	0	0	0	0	0	2	7.50
901	1	2	8.00	4.00	0	0	0	0	0	0	0	0	0	
903	1	1	5.50	5.50	8	0	0	0	1	0	0	0	8	0.69
908	10	18	55.00	3.00	24	0	0	0	22	0	0	0	22	2.50
<b>34</b>	<b>411</b>	<b>689</b>	<b>2254.33</b>	<b>3.48</b>	<b>1316</b>	<b>15</b>	<b>6</b>	<b>15</b>	<b>632</b>	<b>10</b>	<b>2</b>	<b>13</b>	<b>1303</b>	<b>1.73</b>

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
KEUKA LAKE TROUT AND SALMON FISHING DIARY SUMMARY**

YEAR	TOTAL FISHING TRIPS	AVE HOURS/ TRIP	TOTAL SALMONIDS <sup>1</sup> KEPT				AVE LENGTH OF FISH KEPT (IN.) <sup>2</sup>				AVE WEIGHT OF FISH KEPT (LBS.) <sup>3</sup>				# HOURS TO CATCH LEGAL SALMONID <sup>4</sup>	COOPERATORS
			LT	RT	BT	LLS	LT	RT	BT	LLS	LT	RT	BT	LLS		
1968	1521	3.7	2088	3	3	-	17.9	-	-	-	2.0	-	-	-	2.6	45
1969	1545	3.1	1919	11	-	-	18.2	-	-	-	1.8	-	-	-	2.3	44
1970	1231	3.4	1306	2	-	-	18.3	-	-	-	1.9	-	-	-	3.1	38
1971	953	3.1	974	6	-	-	19.2	-	-	-	2.4	-	-	-	2.9	31
1972	396	3.3	378	2	-	-	19.5	-	-	-	2.7	-	-	-	3.5	21
1973	626	3.3	590	12	-	-	20.8	19.3	-	-	3.1	3.1	-	-	3.4	22
1974	823	3.4	724	23	-	-	22.4	21.0	-	-	3.7	4.0	-	-	3.7	42
1975	1383	3.6	1356	73	3	-	21.6	17.3	-	-	3.7	2.4	-	-	3.4	48
1976	1294	3.8	1293	81	1	-	21.5	18.9	-	-	3.5	3.0	-	-	3.5	49
1977	1218	3.5	702	78	3	-	21.0	19.8	-	-	3.3	3.8	-	-	5.1	42
1978	1211	3.4	893	166	4	-	20.4	17.8	-	-	3.0	2.6	-	-	3.8	45
1979	1265	3.4	921	194	4	-	20.6	18.4	-	-	3.3	2.9	-	-	3.4	43
1980	1609	3.6	1307	144	2	2	20.0	17.6	-	-	2.9	2.7	-	-	3.3	48
1981	2118	3.3	1498	211	59	22	20.0	17.7	14.7	18.7	2.9	2.6	2.0	2.6	3.1	70
1982	2677	3.1	1913	135	147	55	20.8	18.3	17.7	18.1	3.3	3.0	3.1	2.6	3.3	72
1983	2246	3.2	1313	128	200	100	21.8	19.1	18.8	20.3	3.9	3.1	3.9	3.4	3.5	61
1984	1772	3.4	1070	142	132	41	20.4	19.2	18.0	18.7	3.1	3.1	3.2	2.6	3.8	60
1985	1578	3.3	1359	71	82	114	21.5	19.0	17.5	17.5	3.8	3.3	2.7	1.8	2.8	54
1986	1229	3.2	1027	36	36	61	21.3	17.1	18.3	17.4	3.5	2.0	3.2	1.6	2.9	44
1987	1194	3.1	1125	31	25	40	20.9	17.7	19.2	18.4	3.3	2.8	3.8	2.8	2.6	41
1988	1574	3.0	1410	36	132	212	20.5	18.6	17.8	18.6	3.2	2.9	3.1	2.5	1.9	48
1989	1789	3.4	1490	86	339	146	20.8	18.2	18.1	21.6	3.4	2.6	3.0	3.8	2.0	70
1990	1814	3.0	1572	43	183	17	20.5	19.0	17.8	18.7	3.1	2.9	2.8	3.0	1.9	70
1991	1887	3.2	1503	57	102	58	20.6	19.4	19.1	18.3	3.1	3.2	3.3	2.4	2.1	64
1992	1895	3.2	1174	37	87	31	20.7	19.1	17.8	17.9	3.2	2.8	2.6	2.1	3.1	73
1993	1722	3.4	1273	32	62	29	19.8	19.5	17.4	17.3	3.0	3.3	2.6	1.8	2.6	68
1994	2160	3.2	2215	23	164	68	19.5	17.2	17.8	16.2	2.7	2.1	2.6	1.4	1.5	76
1995	2342	3.5	2285	28	158	95	19.7	19.7	18.7	18.3	2.7	3.3	3.3	2.2	1.7	81
1996	1633	3.2	1564	19	46	7	19.8	19.6	19.7	20.3	2.7	3.5	4.2	3.5	1.7	73
1997	1627	3.0	1789	9	48	22	20.7	20.3	19.5	17.6	3.0	3.0	3.6	2.1	1.7	74
1998	1510	3.3	1459	37	76	65	21.2	16.8	19.9	18.9	3.2	1.9	4.0	2.5	2.1	60
1999	1214	3.1	1031	12	28	20	21.1	18.9	18.7	18.8	3.2	2.8	3.7	2.5	2.3	62
2000	1065	3.1	994	8	15	17	21.1	19.3	20.6	18.9	3.1	3.3	3.4	2.5	2.0	54
2001	1271	4.0	1461	6	22	17	21.9	19.7	20.2	19.9	3.4	2.0	3.4	2.6	2.1	51
2002	919	3.8	1188	11	12	28	20.7	16.7	19.0	20.8	3.0	1.8	2.4	3.5	1.7	43
2003	797	2.9	731	0	10	13	19.9	-	24.1	22.7	2.6	-	6.7	4.5	1.3	43
2004	556	2.8	476	1	3	5	19.6	-	-	22.2	2.4	-	-	4.2	1.2	37
2005	461	3.1	566	5	5	11	20.6	22.4	17.2	18.3	2.6	4.6	1.3	2.0	1.3	31
2006	462	3.0	376	2	7	8	19.9	24.0	21.6	20.1	2.5	-	5.4	3.1	1.3	23
2007	516	3.1	443	0	0	3	19.8	0	0	23.0	2.6	0	0	5.5	1.7	24
2008	440	3.0	405	1	4	1	20.6	21	19.0	18.0	2.6	-	3.0	2.5	1.7	22
2009	731	3.9	720	2	2	4	19.7	-	24.3	19.0	2.5	-	7.8	2.9	2.0	28
2010	632	3.1	746	7	1	11	20.9	22.6	17.0	19.4	2.9	3.1	2.5	2.5	1.3	29
2011	663	3.3	741	5	3	3	20.3	24.2	26.0	21.0	2.7	-	6.8	-	1.4	36
2012	671	3.7	1008	9	1	1	20.6	23.1	27.5	20.5	2.7	6.5	12.5	-	1.1	35
2013	910	3.4	1280	12	0	1	20.1	20.1	-	18.0	2.6	2.3	-	2.0	1.2	36
2014	783	3.2	849	9	1	4	20.6	21.8	22	18.5	2.8	3.5	-	1.6	1.6	36
2015	678	3.7	459	2	9	1	20.3	21.5	18.4	21.0	3.1	-	2.1	-	2.5	36
2016	411	3.5	632	2	10	13	20.5	23.5	22.5	21.3	2.6	-	5.0	3.3	1.7	34

- 1 Salmonids = Lake Trout – LT; Rainbow Trout – RT; Brown Trout – BT; Landlocked Salmon – LLS
- 2 Average Length of Fish with Recorded Weights;
- 3 Average Weight of Fish with Recorded Lengths;
- 4 Includes Legal Salmonids Released