

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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

6274 East Avon-Lima Road, Avon, NY 14414-9516

P: (585) 226-2466 | F: (585) 226-6323

www.dec.ny.gov

Dear Angler,

Thank you for returning your 2017 Keuka Lake angler diary. This is the 50th 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 2017 catch statistics, your 2017 diary, and, if needed, a new diary for the 2018 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 2017, anglers caught a total of 1,095 salmonines, a 257 fish decrease from 2016, but similar to totals from 2015. The decrease occurred even though fishing trips increased slightly from 2016. Ninety-one percent of all salmonines caught were legal sized, slightly lower than recent years. As a result, it took longer to catch a legal size salmonine (2.3 hours) compared to 2016. This catch rate was similar to 2015. For comparison, diary cooperators on Canandaigua and Seneca Lakes’ averaged 1.4 and 5.0 hours, respectively to catch one legal salmonine this past year. Although it takes longer to catch a legal sized salmonine, this catch rate is more in line with what should be expected from a balanced fish population. Unfortunately, 97% of all salmonines caught were lake trout, indicating rainbow and brown trout, and Atlantic salmon contribute little to the overall cooperator catch. Therefore, although catch rate is closer to what we would like to see, species composition remains unbalanced toward lake trout.

A total of 1,066 lake trout were caught, with 91% being legal-sized. Length and weight of lake trout kept averaged 19.9 inches and 3.5 pounds. June, July and August accounted for 61% of all lake trout caught. Forty-eight percent of legal sized lake trout were released, similar to recent years. The lake trout population in Keuka Lake continues to be sustained entirely by naturally reproduced fish.

After a slight increase last year, the catch of both Atlantic salmon (N=9) and brown trout (N=8), dropped to levels experienced the previous decade. Both species have been 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. Considering the current forage conditions in Keuka Lake, we are temporarily discontinuing these stocking programs. This will be addressed below.

Only 12 rainbow trout were caught. Eleven were legal sized and seven were harvested. Only one fin clip was recorded of the 10 rainbow trout that were observed, however it was a clip that did not correspond to known rainbow trout clips in Cold Brook. Therefore, all rainbow trout caught were naturally reproduced. Fingerling stocking, which began in 2010, does not appear to be contributing to the adult spawning population. In Catharine Creek, there has been an approximately 25% return on stocked yearlings. Therefore, we plan to stock yearling Finger Lakes strain rainbow trout in place of fingerlings. They will be larger and should avoid predation better than the smaller fingerlings.



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I hope you were able to attend last years' Keuka Lake State of the Lake meeting. We discussed current lake conditions and status of the coldwater fishery and the management options that were available to address these concerns. In summary, it appears that the primary forage fish sustaining the coldwater lake fishery, the alewife, has experienced a significant population collapse. This was confirmed this past summer when sampling, using identical gear and effort, yielded 2,466 alewives in Seneca Lake and only 14 in Keuka Lake. Smelt, another primary forage species, have also declined. Stressors include a decline in lake productivity resulting from both nutrient reduction programs begun in the 1970's within the watershed along with the introduction of zebra mussels in 1994 and later introduction of quagga mussels. These mussel invasions altered the food web by limiting the amount of energy (phytoplankton and zooplankton) available to forage species. At the same time, lake trout populations were extremely abundant during this time frame and exerted high predatory pressure on the forage base. The final straw was likely the recent two back to back cold, long winters. Alewives are not tolerant of extremely cold weather and, with stress from both reduced productivity and high predatory pressure, the population appears to have collapsed.

Given the current status of the lake and its' fishery, we are proposing several management actions to address the concerns regarding forage and its subsequent impacts on the coldwater fishery. As mentioned before, we plan to temporarily eliminate the stocking of brown trout and Atlantic salmon. The recent returns to anglers were minimal and this will alleviate some predatory pressure on the forage base. We are pursuing plans to reintroduce cisco, a native forage species better suited to the current nutrient poor lake conditions, into Keuka Lake. Currently Bath Fish Hatchery is experimentally raising cisco and plans are to stock whatever they raise into Keuka Lake this fall. It is anticipated to be approximately 10,000 fingerlings. We are also developing a forage assessment plan to build off the work that was completed in 2017. Yearling rainbow trout will be stocked this spring in hopes that the larger sized fish will avoid predation either in the stream from brown trout or in the lake from hungry lake trout. We will continue to monitor the lake and its' fishery in order to develop management strategies that will provide the best fishing opportunities given the current lake conditions.

A Seneca Lake State of the Lake meeting, similar to the one held for Keuka Lake last year, will be held in September. A specific date, time and location have not been determined. All diary cooperators will be notified once details have been finalized.

We are initiating a Warmwater Diary Program for Seneca, Keuka, and Canandaigua Lakes. Historically, the warmwater fishery in these lakes has not received much attention. We are interested in anglers fishing for either largemouth and smallmouth bass, northern pike, chain pickerel, walleye, yellow perch, and panfish species. If you target these species and are interested in participating in the program or know other anglers that may be interested, please contact us at 585-226-5343. Initially we would like to record trips targeting warm/coolwater species in a separate diary. Other facets of the program remain the same.

Thank you for your continued cooperation and good luck fishing during the 2018 season.

Good Fishing,

Brad E. Hammers
Senior Aquatic Biologist
brad.hammers@dec.ny.gov

Table 1. Summary of 2017 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		
264	1	1	7.50	7.50	0	0	0	0	0	0	0	0	0	
280	1	1	8.50	8.50	2	0	0	0	2	0	0	0	2	4.25
352	14	26	149.50	4.89	62	0	0	0	32	0	0	0	62	2.41
355	21	21	39.38	1.88	14	0	0	0	14	0	0	0	14	2.81
386	20	19	31.67	1.68	23	0	0	0	20	0	0	0	22	1.44
423	3	3	4.00	1.33	0	0	0	0	0	0	0	0	0	
437	3	3	12.00	4.00	1	0	0	0	1	0	0	0	1	12.00
444	10	34	138.00	3.70	27	0	0	0	23	0	0	0	26	5.31
446	8	18	73.00	4.06	68	0	0	0	31	0	0	0	68	1.07
447	9	9	16.53	1.84	3	0	0	0	3	0	0	0	3	5.51
462	20	20	29.50	1.48	0	0	0	0	0	0	0	0	2	14.75
481	33	33	46.00	1.39	17	0	0	0	17	0	0	0	17	2.71
486	1	1	3.00	3.00	3	0	0	0	2	0	0	0	2	1.50
487	1	1	1.50	1.50	0	0	0	0	0	0	0	0	0	
526	20	28	55.75	1.90	17	0	0	0	16	0	0	0	16	3.48
547	2	6	38.25	6.38	17	0	0	0	12	0	0	0	14	2.73
564	1	5	25.00	5.00	5	0	0	0	0	0	0	0	5	5.00
565	1	3	21.00	7.00	4	0	0	0	4	0	0	0	4	5.25
576	1	1	4.00	4.00	3	0	0	0	3	0	0	0	3	1.33
595	2	6	33.00	5.50	20	0	1	2	9	0	1	1	19	1.74
626	1	3	16.50	5.50	4	0	0	0	0	0	0	0	4	4.13
699	2	5	30.00	6.00	2	0	0	0	2	0	0	0	2	15.00
702	16	18	41.50	2.05	22	0	1	0	2	0	0	0	23	1.80
713	21	21	49.67	2.37	45	0	0	0	29	0	0	0	45	1.10
714	46	46	77.50	1.68	31	0	2	0	0	0	0	0	33	2.35
720	4	4	17.58	4.40	15	0	0	0	12	0	0	0	14	1.26
37	449	722	2266.50	3.48	1066	8	12	9	500	6	7	4	997	2.27

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		
721	112	280	996.75	3.46	570	8	6	6	217	6	5	3	518	1.92
722	3	3	6.50	2.17	2	0	0	0	1	0	0	0	1	6.50
725	8	10	25.17	2.40	19	0	0	0	12	0	0	0	18	1.40
730	3	3	7.00	2.33	1	0	0	0	0	0	0	0	1	7.00
741	3	6	19.00	3.17	3	0	0	0	0	0	0	0	2	9.50
743	23	24	60.50	2.51	28	0	2	1	12	0	1	0	25	2.42
755	4	4	7.00	1.75	8	0	0	0	5	0	0	0	7	1.00
776	11	19	47.75	2.39	7	0	0	0	2	0	0	0	7	6.82
878	14	25	93.00	3.57	14	0	0	0	9	0	0	0	9	10.33
891	1	2	8.00	4.00	0	0	0	0	0	0	0	0	0	
908	5	10	26.00	2.60	9	0	0	0	8	0	0	0	8	3.25
37	449	722	2266.50	3.48	1066	8	12	9	500	6	7	4	997	2.27

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

YEAR	TOTAL FISHING TRIPS	AVE HOURS/ TRIP	TOTAL SALMONIDS ¹ KEPT				AVE LENGTH OF FISH KEPT (IN.) ²				AVE WEIGHT OF FISH KEPT (LBS.) ³				# HOURS TO CATCH LEGAL SALMONID ⁴	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	689	3.5	632	2	10	13	20.5	23.5	22.5	21.3	2.6	-	5.0	3.3	1.7	34
2017	722	3.5	500	7	6	4	19.9	23.4	24.0	22.3	3.5	2.6	4.2	2.6	2.3	37

- 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