

# 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,

The Seneca Lake angler diary program turned 50 this past year! Thank you for your participation and returning your 2022 diary. Although participation remains at an all-time low, data provided by the diary program provides important information toward management of the Seneca Lake fishery.

Enclosed is a summary of your personal catch information, referenced to the code number on the cover of your diary, a table depicting 50 years of catch statistics, your 2022 diary, and if needed, a new diary for 2023.

A REMINDER: Please follow the directions that are found in your diary book. Unfortunately, we had to delete various records because of incomplete trip 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 lake trout and 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.

Overall catch rates continue to improve in Seneca Lake, with anglers averaging 3.1 hours to catch a legal salmonid. Recent decisions to increase lake trout stocking numbers to pre-2012 numbers, and more importantly, a successful comprehensive lamprey treatment program in 2021, are likely contributing to angler success. However, we believe forage remains abundant and continues to impact angler success. Angler participation, and therefore total trip and catch statistics, remains low. Increasing participating cooperators remains a priority.

A total of 272 salmonids, of which 78% were legal sized, were caught by cooperators. Seventy-seven percent of the total catch were lake trout, of which 85% were legal-sized. Harvested lake trout averaged 19.7 inches and 3.1 pounds. Anglers released 46% of legal lake trout caught. Most lake trout were caught in May and July. Based on fin clips, 36% of lake trout were wild fish.

A total of 32 Atlantic salmon were caught, much lower than 2021 when, for the first time, they surpassed the catch of lake trout. Fifty-nine percent were legal sized. Anglers released 53% of the legal sized fish caught. Harvested Atlantic salmon averaged 18.9 inches and 3.4 pounds. Current stocking remains at 24,000 Atlantic salmon yearlings annually and has not changed since 1988. Cooperators caught a total of 15 brown trout of which 47% were legal sized. Although brown trout catch was higher than recent years, total numbers remain low. Both Atlantic salmon and brown trout lake populations are maintained almost entirely by stocking. Since Atlantic salmon have regularly been caught at a higher rate than brown trout, it is likely that management efforts will shift toward prioritizing Atlantic salmon over brown trout in Seneca Lake soon.

Rainbow trout management continues to focus on the spring fishery in Catharine Creek. Annual stocking of 10,000 Finger Lakes strain yearlings will continue as returns to the stream fishery remain around 15-20%. While total numbers of rainbow trout caught in the lake increased in 2022, numbers remain low with 15 reported. Of these, 60% were legal sized, all of which were released.

Overall, results suggest that the Seneca Lake fishery is trending in a positive direction. However, factors such as decreased natural recruitment rates in lake trout, continuous changes to the food web due to zebra and quagga mussels and other invasives, and increased forage abundance, primarily alewives, as well as negative effects from sea lamprey predation continue to impact the fishery.

Maintaining sea lamprey populations at minimal levels remains one of the most important factors for the successful management of the Seneca Lake salmonid fishery. Staff continue to monitor sea lamprey populations and work closely with the US Fish and Wildlife Service to develop strategies to increase treatment effectiveness. The next scheduled treatments will occur in Spring and Fall 2024.

The Department is planning on conducting a modified angler creel survey for one year beginning in April 2023. A creel agent will interview anglers at various access points around the lake. Interviews will be short with questions pertaining to the anglers' fishing trip. If you encounter an agent this year, please take the time to answer the questions as this information will help assess status of the angler component of the Seneca Lake fishery and aid in future management direction. It will also be an important recruiting tool to boost cooperation in the Angler Diary program which will increase the reliability of the results.

In addition to sea lamprey monitoring activities and the modified creel survey, in 2023 staff will be conducting several projects on Seneca Lake that will assist with the evaluation and management of various fish populations. Surveys will include our standard lake trout assessment netting, standard forage assessment netting, a black bass electrofishing survey, and, for the first time, a survey directed toward yellow perch population assessment. These projects will provide information on the status of these populations and determine if management strategies are feasible and/or warranted to improve population characteristics and enhance fishing experiences.

Thank you for your continued cooperation. We value your feedback and wish you much success during the 2023 season.

Regards,

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Table 1. Summary of 2022 Seneca 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
223	5	5	3.25	0.65	0	0	0	0	0	0	0	0	0	
460	10	18	57.00	3.20	11	0	0	0	3	0	0	0	11	5.18
471	5	9	43.50	4.55	5	0	0	0	2	0	0	0	5	8.70
472	11	15	27.25	1.89	30	1	0	0	13	0	0	0	21	1.30
475	1	1	2.00	2.00	0	0	0	0	0	0	0	0	0	
485	3	3	10.75	3.58	10	0	0	0	10	0	0	0	10	1.08
487	12	16	79.50	5.00	28	3	0	5	10	3	0	2	36	2.21
510	37	41	114.25	2.55	79	0	1	1	7	0	0	0	74	1.54
516	1	2	6.00	3.00	1	0	0	0	0	0	0	0	1	6.00
528	11	11	11.00	1.00	3	0	3	3	2	0	0	0	2	5.50
559	2	2	9.00	4.50	0	0	9	6	0	0	0	1	10	0.90
564	4	8	44.00	5.50	1	0	0	0	0	0	0	0	0	
565	3	9	39.00	4.33	3	6	1	1	3	1	0	0	5	7.80
584	3	3	13.00	4.33	1	0	0	0	0	0	0	0	1	13.00
586	3	3	9.50	3.17	0	0	0	0	0	0	0	0	0	
629	1	1	1.50	1.50	0	0	0	0	0	0	0	0	0	
646	2	2	3.50	1.75	0	0	0	0	0	0	0	0	0	
654	4	4	9.25	2.31	6	0	0	0	5	0	0	0	5	1.85
687	4	4	7.50	1.88	5	0	0	0	3	0	0	0	3	2.50
846	7	7	12.50	1.79	25	0	0	0	14	0	0	0	14	0.89
924	19	50	150.50	3.00	2	5	1	16	2	1	0	5	15	10.03
968	3	3	2.00	0.67	0	0	0	0	0	0	0	0	0	
<b>22</b>	<b>151</b>	<b>217</b>	<b>655.75</b>	<b>2.82</b>	<b>210</b>	<b>15</b>	<b>15</b>	<b>32</b>	<b>74</b>	<b>5</b>	<b>0</b>	<b>8</b>	<b>213</b>	<b>3.08</b>

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
SENECA LAKE TROUT AND SALMON FISHING DIARY

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>	NUMBER OF COOPERATORS
			LT	RT	BT	LLS	LT	RT	BT	LLS	LT	RT	BT	LLS		
1973	1762	4.7	2120	75	6	-	20.6	21.2	-	-	3.8	3.4	-	-	3.0	76
1974	2394	4.7	2018	64	2	-	21.2	20.2	-	-	3.2	3.6	-	-	4.6	74
1975	2584	4.3	2176	134	3	-	20.2	18.2	-	-	3.0	2.7	-	-	4.4	100
1976	2190	4.6	2088	72	1	-	21.5	20.2	-	-	3.5	3.8	-	-	4.6	91
1977	1984	4.8	1422	31	1	-	21.7	21.4	-	-	3.6	4.4	-	-	6.0	83
1978	1817	4.4	1168	112	3	-	21.9	17.4	-	-	3.8	2.1	-	-	5.6	85
1979	2095	4.2	859	244	5	-	22.1	16.1	-	-	4.0	2.1	-	-	6.9	96
1980	1901	4.0	987	429	40	-	22.7	17.3	15.2	-	4.3	2.1	1.6	-	4.5	84
1981	2438	3.8	1132	797	163	-	21.6	17.4	16.2	-	3.9	2.3	2.2	-	3.7	97
1982	1774	3.8	1333	170	89	1	21.6	18.7	15.8	-	3.8	2.9	1.9	-	3.6	100
1983	2151	3.8	1866	202	133	5	22.1	17.1	16.6	19.1	4.1	2.4	2.2	3.1	3.1	100
1984	2749	3.9	1602	385	188	6	20.6	18.5	17.0	20.0	3.5	2.8	2.6	3.6	3.6	119
1985	2377	3.5	2232	250	176	5	20.7	19.7	16.6	19.7	3.4	3.4	2.4	3.7	2.7	100
1986	2518	3.4	2216	246	169	5	21.8	19.5	17.9	16.8	3.8	3.2	3.0	1.8	2.7	102
1987	2931	3.5	2927	317	232	7	21.8	16.9	17.9	16.5	3.8	2.2	3.0	1.8	2.5	119
1988	3205	3.5	2647	563	281	5	21.6	18.7	18.9	-	3.7	2.9	3.7	-	2.6	132
1989	3948	3.4	3671	335	273	37	22.0	19.3	20.0	18.0	3.8	3.0	4.4	2.1	2.3	142
1990	3819	3.6	3428	298	233	101	21.7	19.7	18.7	17.8	3.6	3.1	3.3	2.1	2.7	141
1991	4120	3.5	3765	233	188	49	22.2	19.6	19.1	19.3	3.8	3.1	3.2	2.8	2.7	143
1992	2844	3.5	2316	244	135	131	21.1	19.7	21.3	18.4	3.3	3.2	4.6	2.3	2.7	139
1993	2895	3.5	2532	98	127	60	20.1	19.2	18.6	19.0	3.2	2.8	3.2	3.0	2.6	132
1994	3520	3.8	2849	107	182	97	20.6	18.5	18.8	17.7	3.2	2.6	3.5	2.3	3.0	152
1995	3235	3.5	3132	79	92	128	21.6	19.5	20.6	18.0	3.4	3.1	4.2	2.1	2.2	130
1996	2761	3.4	2641	163	68	133	21.8	19.3	21.3	18.6	3.6	2.9	4.6	2.3	1.9	121
1997	3154	3.1	3490	61	38	59	21.2	20.5	22.0	20.9	3.3	3.3	5.5	3.3	1.5	120
1998	2309	3.1	2507	38	46	48	20.6	22.7	21.0	21.8	2.9	4.6	4.2	4.0	1.4	106
1999	1622	3.1	1679	42	7	40	20.1	18.7	19.5	18.4	2.8	2.5	3.4	2.4	1.6	93
2000	1433	2.7	1612	32	12	17	20.0	20.0	20.3	19.4	2.6	3.8	3.4	2.7	1.3	89
2001	1451	2.8	1830	17	12	23	20.4	19.4	18.9	16.8	2.8	3.2	4.1	2.0	1.2	68
2002	1697	3.3	1896	27	40	69	21.0	20.4	19.7	18.9	3.1	3.3	3.7	2.4	1.6	76
2003	1199	2.8	1184	19	26	50	21.1	20.9	20.0	18.9	3.1	3.6	4.2	2.4	1.5	67
2004	1121	2.9	1072	7	21	48	21.2	-	22.4	21.4	3.2	-	4.7	3.4	1.4	62
2005	1038	3.4	846	5	9	10	21.4	20.1	20.2	17.6	3.2	3.6	3.5	2.4	1.4	65
2006	937	3.4	770	48	12	48	21.8	19.3	18.1	19.0	3.5	2.9	2.9	2.4	1.7	55
2007	1110	3.0	1108	12	20	16	21.6	22.1	19.7	20.9	3.5	4.3	3.3	2.9	1.3	53
2008	1088	2.9	1108	13	10	15	22.1	20.8	22.0	19.0	3.7	3.8	5.2	2.0	1.2	52
2009	992	3.2	877	11	4	120	21.5	19.2	24.0	16.9	3.3	2.6	6.0	2.6	1.8	46
2010	951	3.6	536	18	25	186	22.5	20.5	19.8	18.7	4.0	2.8	3.6	2.8	2.3	61
2011	964	3.7	644	40	47	180	22.0	19.8	19.5	18.8	3.8	3.0	3.7	3.3	1.8	59
2012	905	3.6	570	23	50	65	22.7	22.2	22.4	19.9	4.2	4.1	4.9	3.8	2.2	56
2013	887	3.3	508	15	99	124	22.1	19.1	22.8	18.9	4.2	4.1	5.0	3.2	2.2	53
2014	843	3.7	606	22	42	82	22.4	20.3	24.1	20.0	4.4	3.2	5.8	3.6	2.2	53
2015	696	3.8	401	21	18	26	22.8	21.5	23.0	20.6	4.5	3.6	5.9	2.9	2.5	52
2016	548	3.8	195	2	13	48	22.8	21.0	21.1	21.2	4.3	3.0	2.0	3.9	4.8	48
2017	394	4.3	152	16	14	32	20.9	17.8	19.6	19.1	3.5	2.6	4.2	2.6	5.0	43
2018	352	3.9	146	8	8	38	19.7	19.0	19.9	19.5	3.7	2.7	4.3	2.4	4.5	34
2019	261	3.5	113	3	0	14	21.0	19.0		18.8	3.7	2.2		3.0	4.7	26
2020	236	3.4	7	0	0	18	22.5	-	-	19.3	4.4	-	-	4.9	5.0	22
2021	222	3.0	51	1	4	55	20.5	18.0	19.3	18.0	3.0	-	3.6	2.6	4.0	22
2022	217	2.8	74	0	5	8	20.0	-	17.9	18.9	3.1	-	3.0	3.4	3.1	22

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