

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 2020 Seneca Lake angler diary. This is the 48th anniversary of our volunteer angler diary program on Seneca Lake. Data provided by you has been important to our efforts to manage the salmon and trout fisheries in Seneca Lake.

Enclosed is a summary of your personal catch information, referenced to the code number on the cover of your diary, a summary of 1973 through 2020 catch statistics, your 2020 diary, and, if needed, a new diary for the 2021 season. If you need additional diaries, please contact our office.

A REMINDER: Please follow the directions that are found in your diary book. Unfortunately, we have 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.

Unfortunately, not much has changed since the 2019 annual diary report. The 2020 fishing season once again showed a declining trend in both cooperators (22) and total trips (236), both all-time lows. It is understandable that with angler success being better in adjacent waterbodies, that trip numbers in Seneca would to continue decrease.

As angler trips decline and catch rates remain low, the total catch of salmonines continues to decrease. A total of 186 salmonines were caught by diary cooperators. Of these, 88% were legal sized resulting in 5.0 h to catch a legal salmonine, similar to recent years. Recent low catch rates are slightly better than those experienced in 1977-79, just prior to the start of lamprey control.

Lake trout comprised 76% of all salmonines caught. Average length and weight of lake trout kept were 22.5 inches and 4.4 pounds. Lake trout catch was spread out, though May and August accounted for 55% of the total lake trout catch. Anglers released 46% of legal lake trout caught. Based on fin clips, 44% of lake trout caught were wild, similar to last year.

Atlantic salmon were the only other salmonine reported comprising 24% of the total catch. Seventy-seven percent of Atlantic salmon were legal sized with anglers releasing 49% of these fish. Currently, 24,000 Atlantic salmon yearlings are stocked in Seneca Lake, a number that hasn't changed since 1988. However, since returns of Atlantic salmon appear to be much better than brown trout in the recent past, efforts to increase their stocking numbers are being considered.

No rainbow or brown trout were reported in the 2020 angler diary. 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%. The brown trout population has been maintained almost entirely by annual stockings of 43,000 fingerlings and 21,600 yearlings. As discussed in the past, recent poor returns of brown trout to the angler, consideration is being given to reducing/eliminating brown trout stocking and increasing stockings of other species that anglers catch, such as Atlantic salmon.

Fortunately, Covid-19 issues did not prevent surveys of both the lake trout and forage fish populations in 2020. Although data has yet to be analyzed, observations indicate that lake trout gillnet catch rates were similar to our recent surveys. Overall, fish appeared to be in good condition and average size seemed to be larger. Surprisingly, sea lamprey wounding/scarring did not appear to be excessive. Lake trout were mostly feeding on alewives. Forage assessment show that alewives continue to be abundant and spread throughout the lake. Several year classes were collected. No smelt were observed in lake trout stomachs or collected in forage nets, indicating that they remain at undetectable levels within the lake or have disappeared.

In general, we continue to believe several factors are impacting recent angler success in Seneca Lake. Most notably is the negative impact resulting from excessive sea lamprey predation. We anticipate treating both Catharine Creek and Keuka Outlet in June 2021, as well as the canal from Montour Falls Marina to Clute Park in fall of 2021. The delta off Keuka Outlet in Dresden was assessed in summer 2020 and is currently being reassessed this spring before aquatic plant growth gets too dense to determine if treatment is necessary. Other factors negatively impacting angler catch rates include abundant forage populations, decreased lake trout natural recruitment, and lake trout stocking reductions in 2012. We are addressing these issues by increasing lake trout stocking numbers to pre-2012 levels, with initial increased stocking numbers occurring in 2020. Increased stocking along with effective, regularly scheduled sea lamprey control should begin to produce positive responses in the Seneca Lake fishery. Please be assured that our goal is to provide the anglers with a fishery that is balanced with the current conditions in the lake.

DEC is close to finalizing our proposed Finger Lakes Management Plan which will outline the overall management direction for the Finger Lakes as well as lake specific goals and objectives, including Seneca Lake. Once finished, public meetings detailing the Plan and soliciting public feedback will occur.

Participation in our warmwater diary program remains very low. We are interested in anglers fishing for either largemouth and smallmouth bass, northern pike, chain pickerel, and yellow perch. 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. We would like to record trips targeting warmwater species in a separate diary.

Thank you for your continued cooperation during difficult angling conditions. We value your feedback and wish you much success during the 2021 season.

Good Fishing,

Brad E. Hammers
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Table 1. Summary of 2020 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 |
| 471 | 8 | 12 | 72.75 | 5.69 | 1 | 0 | 0 | 10 | 1 | 0 | 0 | 7 | 9 | 8.08 |
| 472 | 8 | 12 | 23.25 | 1.91 | 21 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 16 | 1.45 |
| 479 | 19 | 20 | 22.00 | 1.05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 485 | 11 | 11 | 44.50 | 4.05 | 30 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 28 | 1.59 |
| 487 | 8 | 12 | 59.50 | 4.66 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 2 | 12 | 4.96 |
| 492 | 6 | 9 | 33.00 | 3.46 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 16.50 |
| 510 | 39 | 39 | 77.25 | 1.98 | 32 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 29 | 2.66 |
| 513 | 9 | 17 | 109.00 | 5.78 | 20 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 20 | 5.45 |
| 554 | 2 | 6 | 27.00 | 4.50 | 3 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 7 | 3.86 |
| 564 | 3 | 9 | 47.00 | 5.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 584 | 4 | 5 | 19.00 | 3.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 586 | 4 | 5 | 13.00 | 2.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 595 | 2 | 6 | 33.00 | 5.50 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 5.50 |
| 629 | 6 | 6 | 8.00 | 1.33 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2.67 |
| 666 | 2 | 2 | 2.25 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 687 | 10 | 10 | 22.25 | 2.23 | 12 | 0 | 0 | 1 | 10 | 0 | 0 | 1 | 13 | 1.71 |
| 699 | 2 | 3 | 6.25 | 2.13 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 6.25 |
| 923 | 3 | 6 | 15.50 | 2.58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 924 | 6 | 21 | 110.50 | 5.00 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 2 | 2 | 55.25 |
| 963 | 6 | 11 | 54.50 | 4.71 | 11 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 11 | 4.95 |
| 965 | 1 | 4 | 22.00 | 5.50 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 3.67 |
| 968 | 9 | 10 | 6.00 | 0.58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 22 | 168 | 236 | 827.50 | 3.41 | 141 | 0 | 0 | 45 | 70 | 0 | 0 | 18 | 165 | 5.02 |

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

| 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 | 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 |

- 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