

LAKE GEORGE

COLDWATER ANGLER DIARY

COOPERATOR SUMMARY

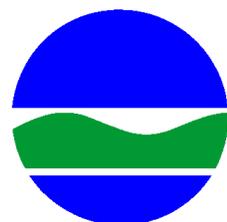
FOR THE 2011 FISHING SEASON



Photo by Ryan Coulter

Prepared by James Pinheiro
Biologist Region 5 Fisheries Unit
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NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WARRENSBURG, NEW YORK 12885



Introduction

Lake George is a 28,160-acre body of water bordered by Warren, Washington and Essex counties in the eastern Adirondacks. It is a two-story lake, meaning that it contains both coldwater and warmwater game fish. A program designed to monitor the lake's coldwater salmonid fishery, through the help of volunteer angler cooperators, was begun in the early 1970's. These volunteers have maintained detailed diaries of their open water salmonid fishing trips and have gathered a large amount of angler catch data. Beginning in 2009, we asked warmwater anglers to record their catches in separate warmwater diaries. These data will be compiled separately and a report distributed to participants.

This report summarizes Lake George landlocked salmon and lake trout angler diary data and landlocked salmon age and growth data collected during 2011.

If you were a cooperator during the 2011 fishing season, your results are listed beside your assigned angler number in the tables presenting individual catch and fishing effort statistics. Your angler cooperator number is located on the left hand side of the address label on the envelope in which this information was sent, and on your 2012 angler diaries. In order to facilitate comparison of data between years, angler diary cooperator numbers will not be changed, so be sure to keep your angler number confidential.

The angler diary program has been an extremely effective and worthwhile program. Those anglers who have participated should be proud of their effort knowing that their time has led to more effective management of Lake George.

If you maintained a diary, but find no reference to your angler cooperator number in any of the attached tables, it is possible that the data which you submitted was not used because an essential ingredient, (such as record of the starting and finishing times of unsuccessful trips, etc.) was lacking or the diary arrived too late to be included in the summaries. In order to be included in the report, diaries must be received by the end of February of the following year. Please contact James Pinheiro at the NYSDEC office in Warrensburg or phone (518) 623-1264 or send email to: jmpinhei@gw.dec.state.ny.us if you have questions.

When reading the tables, please be aware that the "Number of Angler Trips" and the "Number of Hours Fished" refers to the cooperator plus any fishing guests who accompanied that cooperator and have data recorded in his or her diary.

Results

Participating Angler Cooperators

During 2011, 17 cooperators, out of over 100 who were sent a diary, returned usable diaries. Thank You Very Much to all our active participants! For those of you who indicated they wanted their diaries returned, they were returned after data entry was completed. Many thanks to the following angler cooperators who returned diaries:

Name

<i>Glen Atchinson</i>	<i>Eric Guby</i>	<i>Richard Klinski</i>
<i>William Burke</i>	<i>Matthew Ellis</i>	<i>Pat Mannix</i>
<i>Myron Chamberlain</i>	<i>Walter Kendall Sr.</i>	<i>Robert Murray Jr.</i>
<i>Mike Como</i>	<i>Ron Langlais</i>	<i>Bill Petteruti</i>
<i>Edward Donoghue</i>	<i>Mike Strutz</i>	<i>Kenneth Smith</i>
<i>Peter LoPiccolo</i>	<i>Bill West</i>	

Anglers Exclusively Targeting Lake Trout or Landlocked Salmon

In this report catch and creel rates are calculated separately for lake trout and landlocked salmon. Excluding trips that targeted both lake trout and landlocked salmon creates tables that provide “exclusive” catch data. Thus, the angler was focused on catching one species during that trip. Anglers who did not indicate a species preference or who fished for both landlocked salmon and lake trout during the same fishing trip are included in the total catch tables.

Although “exclusive” reporting criteria reduce the number of angler trips used for certain calculations, it may be a more accurate representation of lake trout or landlocked salmon catch or creel rates. It also provides a consistent method to compare catch and creel rates with other waters.

Length Frequency Distribution Sample Sizes

Sample sizes reported on length frequency distribution graphics in this report do not correspond with sample sizes in the catch summary tables. Sample sizes reported in length frequency tables are based on all fish caught that had recorded lengths. Sample sizes reported in the catch summary tables are based on the number of fish caught that could be associated with an angling effort (catch per hour). Some angler diary cooperators forget to record the time that fishing started or ended. Fishing trips with missing effort data are excluded from the catch rate summaries; however, fish captured during excluded trips are used in length frequency distributions and in mean length summaries. Fish without recorded lengths (to the nearest inch) are only included in the overall catch summaries, as they cannot be assigned to legal or not legal status or to a length category.

Overall Salmonid Catch and Creel Rates

Seventeen angler cooperators fished for salmonids at least once during 2011. They provided records for a total of 384 fishing trips totaling 2031 hours over 209 days (Table 1). The mean length of a fishing trip was 5.29 hours.

Cooperators landed a total of 570 lake trout and landlocked salmon in 2011 compared to 1,895

in 2010, 1,414 in 2009, 1,941 in 2008, 1,917 in 2007 and 3,154 in 2006. The salmonid catch rate was 0.28 fish/hour or one salmonid every 3.57 hours in 2011. Anglers creeled 52 (9.2%) of the lake trout and salmon caught in 2011 compared to 228 (12.0%) in 2010, 247 (17.4 %) in 2009, and 144 (9.3%) in 2005. The salmonid creel rate in 2011 was 0.04 fish/hour as compared to 0.07 fish/hour in 2010, and 0.02 fish/hour in 2003.

TABLE 1. Lake George angler diary cooperator fishing results 2011 fishing season, All salmonids actual creel rate.

Basin	Angler Number	Number Days Fished	Number Angler trips	Number Hours Fished	Mean Trip Length	Number Caught	Catch Per Hour	Number Creeled	Creeled Per Hour
North									
	155	17	21	239.00	11.38	29	0.12	0	0.00
	173	8	8	5.83	0.73	4	0.69	1	0.17
	234	5	8	31.00	3.88	0	0	0	0.00
	330	1	1	14.00	14	1	0.07	0	0.00
	331	26	61	328.25	5.38	101	0.31	2	0.01
	385	25	25	49.00	1.96	10	0.2	3	0.06
	409	26	48	167.00	3.48	65	0.39	12	0.07
	418	7	8	16.50	2.06	8	0.48	0	0.00
Subtotal		115	180	850.58	4.73	218	0.26	18	0.04
South									
	155	1	1	9.00	9	1	0.11	1	0.11
	330	5	8	50.00	6.25	6	0.12	0	0.00
	343	15	40	130.67	3.27	25	0.19	9	0.07
	351	12	33	250.83	7.6	19	0.08	0	0.00
	410	7	8	58.00	7.25	15	0.26	1	0.02
	415	8	11	57.92	5.27	25	0.43	8	0.14
	418	10	29	78.00	2.69	16	0.21	1	0.01
	419	3	3	37.00	12.33	34	0.92	2	0.05
	423	8	8	71.00	8.88	152	2.14	1	0.01
	424	11	34	244.25	7.18	4	0.02	2	0.01
	425	12	27	184.83	6.85	54	0.29	9	0.05
	426	2	2	9.50	4.75	1	0.11	0	0.00
Subtotal		94	204	1181.00	5.79	352	0.3	34	0.04
Total		209	384	2031.60	5.29	570	0.28	52	0.04

Lake Trout

Seventeen angler cooperators landed a total of 557 lake trout in 2011 and had a catch rate of 0.34 fish/hour (Table 2). Participating anglers creeled 47 (8.5%) of the lake trout caught in 2011. Mean length of lake trout creeled was 24.7 inches. In 2006, 18 cooperators caught 2,823 lake trout and had a catch rate of 0.62 fish/hour. Figure 1 illustrates the 2011 angler diary cooperator lake trout length frequency distribution. Of 524 lake trout caught and measured by all anglers, 179 were 23 inches or greater in length (35%) and 338 were 21 inches or greater in length (65%). The lake trout measured had a mean length of 21.3 inches.

Table 2. Lake George angler diary cooperator fishing results 2011 Fishing season, Anglers targeting lake trout.

Basin	Angler Number	Number Days Fished	Number Angler Trips	Number Hours Fished	Mean Trip Length	Number Caught	Catch Per Hour	Number Creeled	Creeled Per Hour	Mean Length Caught	Mean Length Creeled
North											
	173	8	8	5.83	0.73	4	0.69	1.00	0.17	23.08	24.50
	234	1	2	8.00	4.00	0	0.00	0.00	0.00	0.00	0.00
	330	1	1	14.00	14.00	1	0.07	0.00	0.00	20.00	0.00
	331	26	61	328.25	5.38	101	0.31	2.00	0.01	20.07	27.00
	385	12	12	23.50	1.96	9	0.38	2.00	0.09	22.44	28.00
	409	19	36	128.67	3.57	61	0.47	10.00	0.08	21.28	24.50
Subtotal		67	120	508.25	4.24	176	0.35	15.00	0.06	21.37	26.00
South											
	343	6	14	48.50	3.46	18	0.37	5.00	0.10	20.55	23.60
	351	9	25	150.33	6.01	15	0.10	0.00	0.00	20.34	0.00
	410	7	8	58.00	7.25	15	0.26	1.00	0.02	21.00	28.00
	415	8	11	57.92	5.27	25	0.43	8.00	0.14	22.55	28.84
	419	2	2	20.50	10.25	32	1.56	0.00	0.00	0.00	0.00
	423	8	8	71.00	8.88	152	2.14	1.00	0.01	22.17	24.00
	425	10	23	119.83	5.21	37	0.31	6.00	0.05	21.27	24.33
Subtotal		50	91	526.08	5.78	294	0.56	21.00	0.05	23.23	25.75
Total		117	211	1034.30	4.90	470	0.45	36.00	0.05	22.30	25.88

Anglers Exclusively Targeting Lake Trout

Thirteen cooperators exclusively targeted lake trout in 2011. The exclusive catch rate was 0.45 fish/hour versus the overall rate of 0.34 fish/hour, and the exclusive creel rate of 0.05 fish/hour was slightly higher than the overall creel rate of 0.03 fish/per hour.

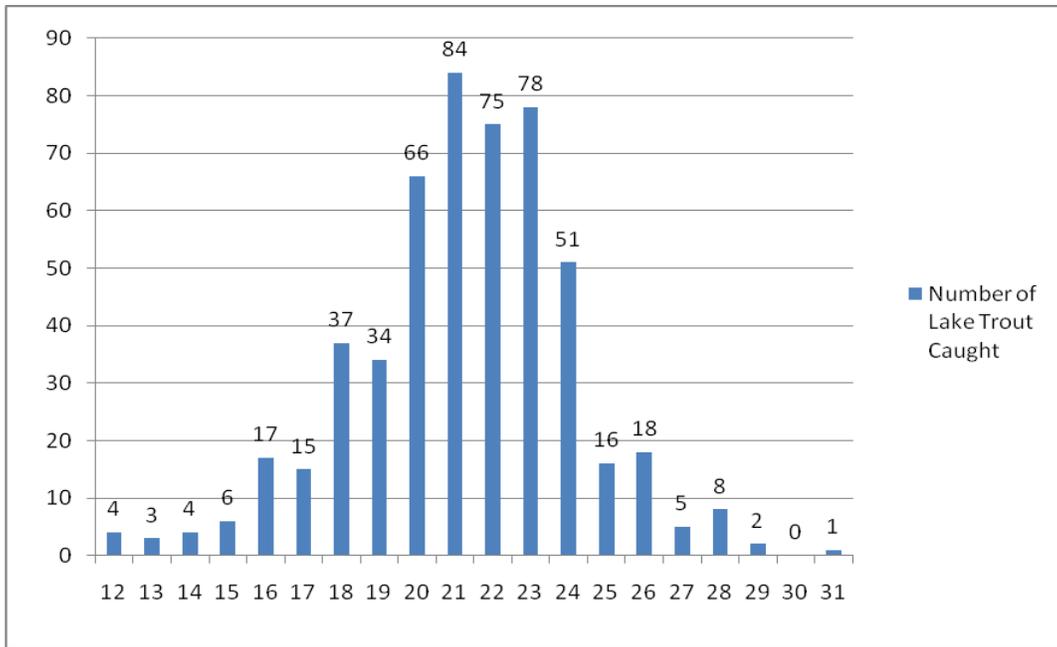


Figure 1. Length frequency distribution of lake trout caught by anglers in Lake George, 2011.

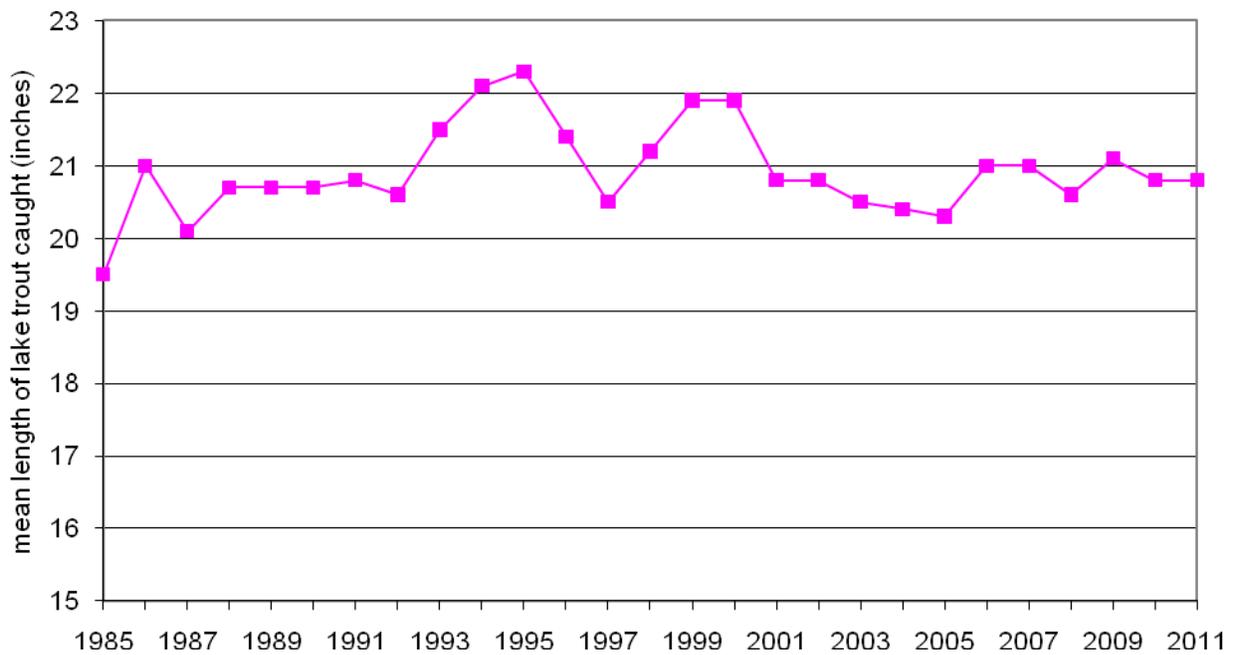


Figure 2. Mean length of lake trout caught by anglers in Lake George 1985-2011.

Catch Rate for Legal Sized Lake Trout

An additional analysis was performed to discover the lake trout creel rate if every fish over the

minimum size limit of 23 inches were kept. For 2011, the theoretical maximum creel rate would have been 0.11 fish/hour versus the 0.03/hour actually kept by cooperators. Thus, 3 times more lake trout could have been harvested than really occurred. Of the 179 fish over 23 inches caught, 47 were creeled, or about 26% of the lake trout which could have been creeled were kept. Legal lake trout comprised 32.2% of the total catch (179 of 557) in 2011, this is the second highest percentage next to 33.6% of the angler catch in 2007 (603 of 1794). In 2003, legal lake trout comprised only 14% of the total catch. If the lake trout size limit were lowered to the statewide size limit of 21 inches, 338 lake trout (60%) or 0.21 fish/hour, could have been harvested.

Landlocked Salmon

Five angler cooperators exclusively targeted landlocked salmon in 2011, catching a total of 13 landlocked Atlantic salmon (Table 3). Cooperators spent approximately 274 hours pursuing salmon, which translates to a catch rate of 0.05 salmon/hour. Thus, it took an average of 20.0 hours to catch a salmon on Lake George in 2011. Of the 13 salmon caught, the mean length was 18.50 inches. Five of the 13 salmon caught by all anglers (38%) were creeled and these fish had an average length of 19.80 inches. This yielded an exclusive creel rate of 0.02 fish/hour, the creel rate in 2010 was 0.03 fish/hour. Due to the extremely small sample size no other statistical analysis was completed.

TABLE 3. Lake George angler diary cooperator fishing results 2011 fishing season, Actual creel rate of anglers targeting Landlocked Salmon.

Basin	Angler Number	Number Days Fished	Number Angler trips	Number Hours Fished	Mean Trip Length	Number Caught	Catch Per Hour	Number Creeled	Creeled Per Hour	Mean Length Caught	Mean Length Creeled
North											
	155	17	21	107	6.29	6	0.06	0	0.00	18.1	0
	234	4	6	23	3.83	0	0.00	0	0.00	0	0
	385	13	13	25.5	1.96	1	0.04	1	0.04	23	23
	409	7	12	38.33	3.19	0	0.00	0	0.00	0	0
Subtotal		41	52	193.83	3.8175	7	0.04	1	0.01	17.5	23
South											
	155	1	1	9	9	0	0.00	0	0.00	0	0
	343	8	24	71.25	3.19	6	0.08	4	0.06	18	19
Subtotal		9	25	80.25	6.095	6	0.07	4	0.05	0	19
Total		50	77	274.08	4.95625	13	0.05	5	0.02	18.45	19.8

Salmon Stocking

Approximately 37,000 yearling salmon were stocked in Lake George during 2011. A total of 34,000 salmon yearlings were stocked in May 2011. These spring yearlings were not marked with any fin clip. However about 3,000, 10.0 inch fall yearlings (Left ventral fin clip– bottom rear on left side) reared at the Warren County Hatchery were stocked in October. The hypothesis is that salmon stocked at a larger size in October may experience less mortality than salmon stocked in May. These fish are dispersed in deeper areas of the lake with the help of angler cooperators and the Lake George Fishing Alliance. Many thanks to those who participated!

Lake Trout

Anglers Exclusively Targeting Lake Trout

North Basin creel rates were stable from 1987 through 1994 at 0.07 to 0.12 fish per hour, respectively, but remained below 0.10 per hour from 1996-2010 (Figure 5). It is known, however, that anglers are releasing legal size lake trout, which lowers the creel rate. For example, in 1995 participating North Basin cooperators targeting lake trout released about 59% of the legal lake trout they caught, while in 2004 anglers released about 75% percent of the legal lake trout they caught. In 2011, the creel rate in the North Basin was 0.03 lake trout per hour and anglers released 70% of the legal lake trout that were caught. The North Basin exclusive lake trout catch/hour in 2011 was 0.35 lake trout/hour (Figure 5).

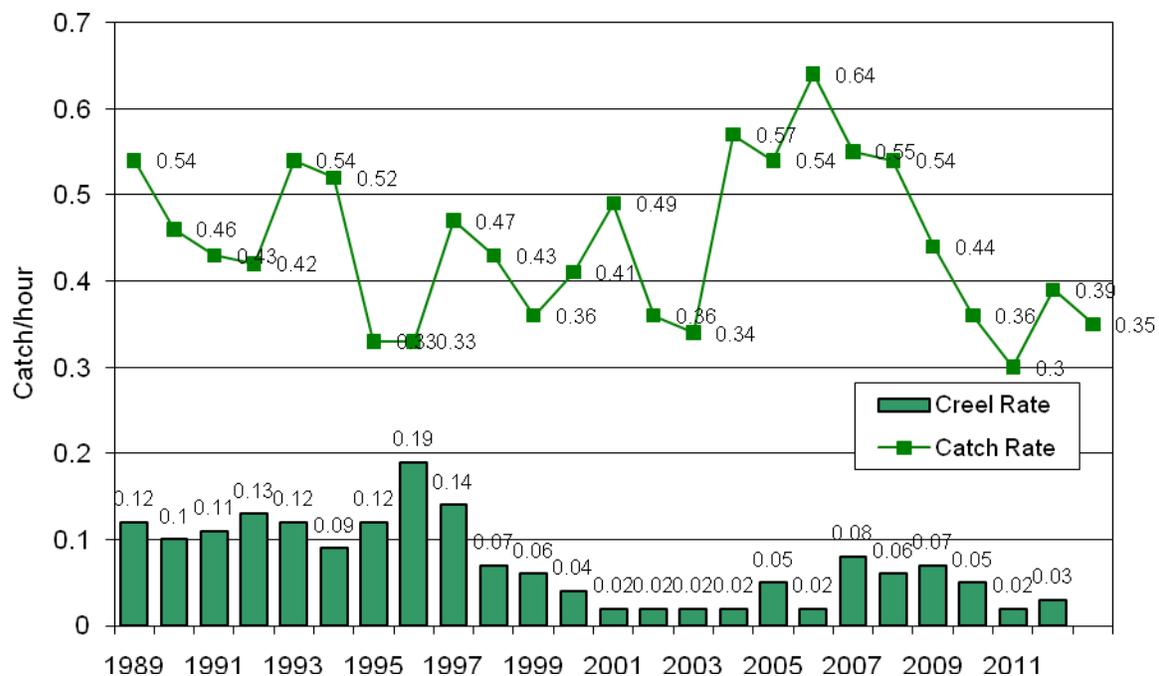


Figure 5. North Basin exclusively targeted lake trout catch and creel rates between 1987 and 2012.

South Basin creel rates were relatively stable from 1987 through 1999 at 0.02 to 0.18 fish per hour (Figure 6). It is known, however, that anglers are releasing legal size lake trout, which lowers the creel rate. It is apparent that the lower creel rate was due to a change in angler habits. In 2011, seven diary cooperators fished the South Basin exclusively for lake trout. The creel rate in the South Basin was calculated at 0.04 lake trout per hour, with an exclusive lake trout catch rate of 0.56 lake trout/hour (Figure 6). These figures are comparable with previous catch and creel rates in the South Basin.

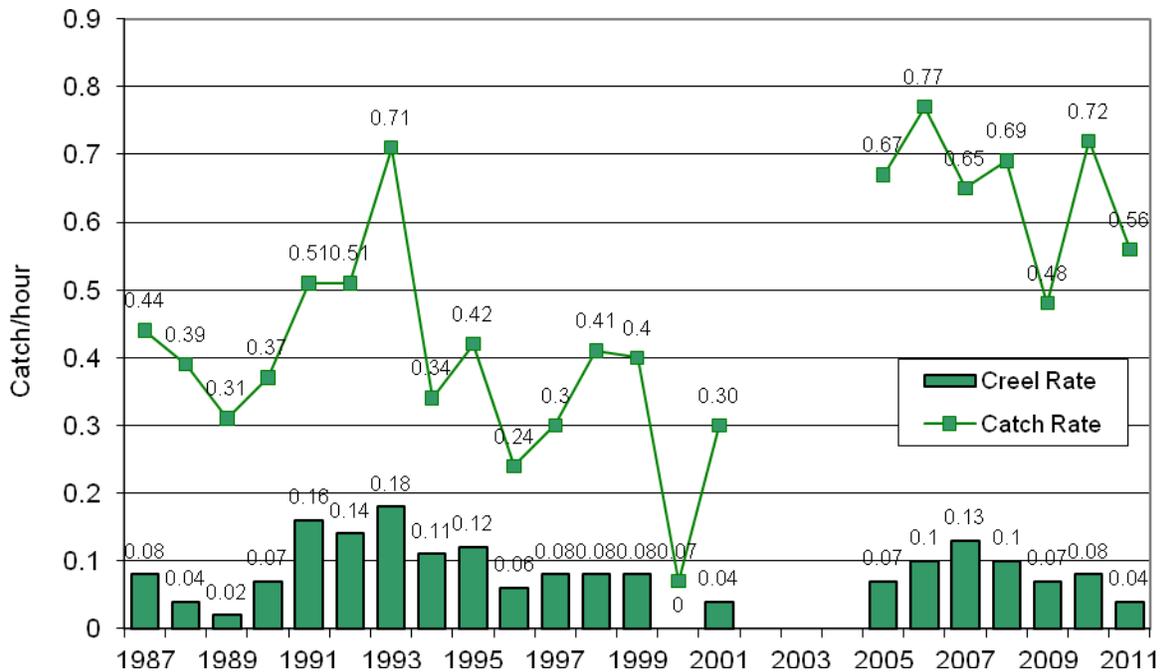


Figure 6. South Basin exclusively targeted lake trout catch and creel rates between 1987 and 2012. Data for 2002- 2004 omitted due to lack of data.

Conclusion

Natural Recruitment

Naturally recruited lake trout dominate the population in Lake George. Lake trout were last stocked in Lake George in 1998. Due to the decreasing percentage of stocked fish in the lake trout population, it is no longer necessary to track clipped lake trout in Lake George.

Landlocked Salmon

The Lake George salmon program has a long tradition and history. Good growth is vital to maintain the quality of the landlocked salmon fishery. Salmon have a relatively short life span up to age four, but typically live to age three. The most abundant age class for the fishery is age two. To provide the best angling, salmon must reach 18 inches by fall at age two. Salmon are quickly harvested during years when two-year-old and older salmon are present as a result of good year class survival.

In 2011, the exclusive catch rate for legal salmon was 0.02 fish/hour. That rate is far below the catch rate objective of 0.12 - 0.18 fish per hour established in 1998, and is comparable to the 2003 catch rate of 0.01 fish/hour.

At this time we have no definitive explanation for the poor salmon recruitment & survival of the current salmon stocking efforts. There are a number of contributing factors to be considered ranging from forage base problems, predation from other fish species, and the condition at the time of stocking. The intent to improve the Lake George salmon fishery through various efforts has evolved in many ways. Such as stocking larger fall yearling salmon and changing the broodstock source to Sebago strain landlocked salmon for the Adirondack Hatchery. It may take several years to see the results of these changes to the salmon program. We thank every participant in our Angler Diary program, the data they collect aids the DEC in monitoring changes to the Lake George fishery.

Lake Trout

Lake trout catch rates were down slightly in both basins in 2011, with a declining trend developing over the last several years in the North Basin. The South Basin catch rate appears to be moderately stable between 0.50 and 0.80 fish per hour. Juvenile lake trout recruitment appears to be satisfactory in both basins of the lake without the aid of stocking. Further study may be required to determine if growth rates are on similar tracts to what they have been in years past.

Diary Cooperator Program

Declining participation in the angler diary program is a great concern. Only one cooperator fished exclusively for lake trout in the South Basin from 2002-2004. This low sample size made comparisons between the basins unreliable and as a consequence, statistics from each basin were not computed for those years. However, in recent years, more anglers are reporting fishing for lake trout exclusively in the southern zone which makes these comparisons possible. We appreciate the assistance of these anglers and continue to seek means to increase the number of participating diary cooperators. If you know an angler that is interested in participating in the angler diary program please have them contact James Pinheiro at (518) 623-1264.

Recommendations

1. Actively seek new angler cooperators to increase the number of active participating angler diary cooperators to 75 or more.
2. Encourage angler cooperators to pay particular attention to which target species check boxes they check on the diary pages. If you are a cooperator that fishes for landlocked salmon you should check the landlocked salmon (LLS) check box even though you may occasionally catch a lake trout while fishing for salmon. If you are fishing for lake trout you should check the lake trout (LT) check box even though you may occasionally catch a landlocked salmon while fishing for lake trout.
3. Improve accuracy of data collected. Please be sure to enter both start and end times for your

trip. Also be sure to indicate if you kept or released the fish, yes is not a useable answer, you must indicate which option you chose. Please be sure to indicate the length of the fish caught to the nearest inch. If you are unsure how to fill out the diary, check the example at the front of the book or call or email with your questions.