Oastler Lake (Foley Geographic Township) Rainbow Trout Stocking Assessment Report Spring and Summer, 2001

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Executive Summary:

In an effort to provide high quality, artificial angling opportunities, the Ministry of Natural Resources planted over 45,000 'catchable size' (8 – 11") rainbow trout in 16 area lakes in 1999 and 2000. This stocking assessment project was intended to utilize Oastler Lake as an 'indicator lake' to represent the survival of rainbow trout from these plantings and their contribution to creating angling opportunities.

In the spring of 2001, we utilized a combination of two netting gear types (gillnets and trapnets) and methodologies to assess the abundance of rainbow trout and indirectly their survival in Oastler Lake. No rainbow trout were captured in 15 short duration (90 minute) gillnet sets using the Ministry's 'Spring Littoral Index Netting' (SLIN) protocol. Nor was any rainbow captured in 8' trapnets using the Ministry's 'Synoptic Trapnet Survey' protocol. One rainbow trout was reported caught in the voluntary creel survey conducted at Oastler Lake Provincial Park during the summer of 2001.

Although the intensity of these surveys was not comprehensive enough to draw definitive conclusions, they do suggest that planted rainbow trout are very scarce in Oastler Lake and recent plantings have not provided much in the way of artificial angling opportunities. This conclusion is further supported by other surveys cited in the report.

We recommend that planting of rainbow trout already scheduled to the year 2004 be conducted, but no further stocking be made beyond this unless substantial evidence arises which indicates that planted rainbow trout are surviving and providing angling opportunities to justify the cost of stocking.

1.0 Introduction:

In an effort to provide high-quality, artificial angling opportunities, the Parry Sound Area of the Ministry of Natural Resources planted 22,400 "catchable size" rainbow trout (8 – 11") into 12 area lakes during the spring of 1999. Oastler Lake was one of 12 lakes where these plantings were made.

In an attempt to assess the success of this initial rainbow trout planting, the Ministry of Natural Resources conducted two assessment projects the following summer (2000). One was a voluntary creel survey on Three Legged Lake (Foley Tp.), Otter Lake (Foley Tp.), Trout Lake (McDougall Tp.) and Oastler Lake (Foley Tp.). The public made no submissions and this creel project was a failure. The second project was a summertime, synoptic trapnet survey conducted on Rankin Lake (McIntyre, 2001). It was intended that Rankin Lake would be assessed as an *'indicator lake'* and represent the other 11 lakes also planted. From twelve overnight trapnet sets, no rainbow trout were captured.

These results suggested that the 1999 rainbow planting may have initially suffered high mortality, but this conclusion was very dubious. Perhaps the rainbow trout were not susceptible to capture by trapnets during the summer but were still present in Rankin Lake in good numbers. We therefore opted for an additional assessment project to assess the initial 1999 planting as well as additional plantings of rainbow trout that subsequently occurred during the fall of 2000.

For this assessment project we selected Oastler Lake. We were aware from personal experience that previous rainbow trout plantings conducted in 1987 and 1988 had initially met with good success. The author personally caught a number of these planted fish shortly after stocking. However, the long-term survival of these fish and their impact on the sport fishery is unknown. Nonetheless, their initial survival suggested that environmental conditions in Oastler Lake may be suitable for this species. We therefore considered Oastler Lake a good prospect for high survival of planted rainbow trout and an ideal candidate lake for this assessment survey. This survey consists of a combination of two types of netting gear (overnight trapnet sets and short duration gill net sets) as well as a voluntary creel survey.

Prior to the assessment survey, Oastler Lake received a planting of 2,000 rainbow trout in the spring of 1999 and 3,000 in the fall of 2000. Both plantings were of "catchable size" (8 – 11"), domesticated rainbow trout purchased from a private supplier. The fish were observed to be in excellent condition when they were planted.

2.0 Methods:

2.1 Spring Littoral Index Netting (SLIN) Survey Methodology:

We initially attempted to capture planted rainbow trout by using Provincially standardized "spring littoral index netting" (SLIN) survey techniques. Nets were set on May 8th and May 9th when surface waters temperature was 15° Celsius. Three, 300 foot standard SLIN monofilament gillnets were used. Mesh sizes for individual nets were 38-mm (1½") for one, 51-mm (2") for another and 64-mm (2½") for the third net. Nets sets were of 90-minute duration. Where

possible nets were set perpendicular to shore with an orientation as depicted in Figure 1. Netting sites were randomly selected.

Complete catch enumeration was conducted for all net sets (Appendix A) and biosampling (fish attribute) data collected for all fish captured (Appendix B).

2.2 Synoptic Trapnet Survey Methodology:

When the above use of gillnets failed to capture any rainbow trout we opted to try 8' trapnets. Although this technique had failed to capture any rainbow trout when tried on Rankin Lake (McIntyre, 2001) during the summer of 2000, we wondered if this was attributable to the time when the survey was conducted.

Our 8' trapnets were equipped with 150' leads, although we often shortened them in order that our nets fished in optimal water depths of less than 16'.

Due to severe limitations that the gear imposes on net set location, netting sites were not pre-determined. Site selection was at the discretion of the field crew. However, site selection was based on the following guidelines:

- The site had to be suitable for the net to fish effectively. (Consequently – factors such as: contours of the lake bottom, absence of obstructions, depth, sufficient lead length, etc. were to be considered.)
- Nets were to fish all habitat types in approximate proportion to their abundance on the lake in order that the catch would reflect the 'whole lake' as accurately as possible.
- Nets were to be set far enough apart such that they were not competing with each other.
- Nets were to be approximately randomly distributed throughout the study area.

We completed 5 over-night, trapnet sets that met the above guidelines. Nets set locations are indicated in Figure 1.

Field operations commenced May 13th and terminated May 15th, 2000. In this report the unit of effort is recorded as a "net set", which approximates a set of 24 hours duration. Nets were relocated daily.

Complete catch enumeration was conducted for all sets (Appendix C) and biosampling data collected for all fish captured (Appendix D).

2.3 Voluntary Creel Survey:

Oastler Lake Provincial Park is located adjacent to Highway 69 that passes by the southern extremity of the lake. In May of 2001, we posted numerous signs throughout the park requesting that anglers report any rainbow trout they may catch to Park staff. Data record sheets were provided to Park Staff at the Park Office.

Insert Figure 1 on this page.

3.0 Results

3.1 Spring Littoral Index Netting (SLIN) Results:

A meagre total of 9 northern pike, 4 smallmouth bass, 3 yellow perch, 2 pumpkinseed, 1 cisco and 1 smelt were captured in 15 SLIN net sets (Appendix A). No rainbow trout were captured.

Biosampling data for the above fish is provided in Appendix B.

3.2 Trapnet Catch Results:

Similarly, a meagre total of 20 common white sucker, 5 black crappie, 4 smallmouth bass, 4 northern pike and 1 walleye were captured in 5 overnight trapnet sets (Appendix C). No rainbow trout were captured.

Biosampling data for the above fish is provided in Appendix D.

3.3 Voluntary Creel Results:

Only one person responded to our request to report catching a rainbow trout. On August 10th, Mr. Ed Marvin reported catching a rainbow trout that was approximately 8" in length.

4.0 Discussion

Our assessment project resulted in but a single rainbow trout being reported caught by an angler in Oastler Lake. Our netting attempts in Oastler Lake as well as the synoptic trapnet survey conducted on Ranking Lake in 2000 (McIntyre, 2001) has not resulted in a single planted rainbow trout being captured. We strongly suspect that the absence of rainbow trout in these surveys is probably symptomatic of high mortality of planted fish resulting in very few angling opportunities being created.

Surveys conducted for other purposes also tend to support this conclusion. A "Fall Walleye Index Netting" (FWIN) survey conducted on McKellar Lake in September of 2001 failed to capture a single rainbow trout from the fall, 2000 planting of 2,000 fingerlings (Jeremy Holden, pers. comm.). Also, an intensive winter creel survey conducted on Trout Lake (McDougall Township) during the winter of 2001 reported a single rainbow trout being captured (OMNR, 2001). This would have been from either the spring, 1999 or fall, 2000 planting of 2,000 'catchable' rainbow for each stocking event. We've made many requests to anglers and cottage associations to report any rainbow trout that they are aware of having been harvested by sport fishermen. Other than those mentioned above – there have only been a couple of unconfirmed reports of rainbow trout having been caught throughout the Parry Sound Area.

Cumulatively, the above results strongly suggest that rainbow trout planted in 1999 and 2000 on surveyed lakes are very scarce. We suspect that this conclusion is equally applicable to non surveyed lakes for which Oastler Lake and Rankin Lake were meant to be representative of.

We do have one contrary piece of anecdotal information that is noteworthy. At the Rankin Lake Cottage Association meeting this past summer, a cottage resident reported catching

approximately 20 rainbow trout – all of which he released. We have requested that he submit photographs of any rainbow trout that he might capture in the future. To date we have received none.

Historical assessment of rainbow trout plantings in the Parry Sound Area is very sparse with only one report being available. In 1976 and '77, Thurston (1977) conducted a gillnet assessment survey of rainbow trout plantings on Boy Lake (McDougall Twp.), Tabor Lake (McMurrich Twp.) and Rainy Lake (Ryerson Twp.). Mono and multi-filament gillnets, 350' in length with mesh sizes ranging from 1 ½" to 4 ½" in ½" increments were presumably set overnight on the above lakes. On Boy Lake, 9 rainbow trout were caught in 10 net sets over a two-year period. Only one was caught in Tabor Lake from 3 net sets and 4 caught in Rainy Lake from 6 net sets. Thurston considered these results to be indicative of poor survival for planted rainbow trout.

Over-all, we'd have to concede that past and present rainbow stocking assessment projects conducted in the Parry Sound Area indicates low stocking success both in terms of survival (as indicated by netting results) and angling opportunities (as indicated by creel data). We would also have to concede however that these assessment studies were not comprehensive enough to be definitively conclusive. Nonetheless, we have no substantial evidence to suggest otherwise.

5.0 Recommendations:

The Ministry's stocking program runs on a four-year cycle and the Parry Sound Area currently has rainbow trout 'on order' until 2004. This consists of planting 20,000 fall fingerling rainbow trout each year from 2001 to 2004. We recommend that these plantings go ahead as planned, but no additional stocking to be planned beyond this. Should the Ministry receive some evidence in the future – either substantiated anecdotal accounts or from its own assessment program that rainbow are indeed surviving and providing good angling opportunities, then it will revise its stocking program for rainbow trout accordingly at that time.

6.0 Literature Cited:

McIntyre, E. 2001. Rankin Lake (Geographic Township of Foley) synoptic trapnet survey report, Summer 2000. OMNR Parry Sound District fisheries file report. 12 p.

OMNR, 2001. As yet unreported, raw creel data from the winter 2001 intensive creel survey of Trout Lake (McDougall Twp.). OMNR Parry Sound District fisheries files, raw data.

Thurston, L.D.W. 1977. Evaluation of plantings of brook and rainbow trout within the Parry Sound District. OMNR Parry Sound District fisheries file report. 7 p.

Appendix A

Spring Littoral Index Netting (SLIN) Catch Record
Oastler lake Rainbow Trout Assessment Project, 2001

Date 2001	Set Number	Catch (Number) Smallmouth Bass	Northern Pike	Yellow Perch	Pumpkin-seed	Cisco	Smelt
May-08	1	1	1	0	0	0	0
May-08	2	0	1	0	0	0	1
May-08	3	1	0	1	0	0	0
May-08	4	0	0	0	2	0	0
May-08	5	0	0	0	0	0	0
May-08	6	1	2	0	0	0	0
May-09	7	0	1	0	0	0	0
May-09	8	0	1	0	0	1	0
May-09	9	0	1	0	0	0	0
May-09	10	0	0	1	0	0	0
May-09	11	0	0	0	0	0	0
May-09	12	1	1	0	0	0	0
May-09	13	0	0	1	0	0	0
May-09	14	0	0	0	0	0	0
May-09	15	0	1	0	0	0	0
Total		4	9	3	2	1	1
Catch-Per-Unit-Effort		0.3	0.6	0.2	0.1	0.1	0.1
Standard Error		0.12	0.16	0.11	0.13	0.07	0.07
Standard Deviation		0.46	0.63	0.41	0.52	0.26	0.26
Confidence Level(95.0%)		0.25	0.35	0.23	0.29	0.14	0.14
Count		15	15	15	15	15	15

Appendix B

Biosampling Data for all Species Captured in SLIN Net
Oastler Lake Rainbow Trout Stocking Assessment Project, 2001

Species	Set No.	Total Lg. (cm.)	Fork Lg. (cm.)	Weight (grams)
Northern Pike	1	40.3	38.7	500
Northern Pike	2	69.5	66.3	2500
Northern Pike	6	62.5	60.4	1800
Northern Pike	6	60	56.7	1700
Northern Pike	7	52.5	49.5	1000
Northern Pike	8	53.5	50.5	1000
Northern Pike	9	64.5	62	2000
Northern Pike	12	72	68.1	2700
Northern Pike	15	72	67.7	2900
Species Total Catch wt.				16100
Smallmouth Bass	1	23.4	22.2	160
Smallmouth Bass	3	44.2	42.3	1400
Smallmouth Bass	6	33.9	32.3	600
Smallmouth Bass	10	27.1	25.5	300
Species Total Catch Wt.				2460
Yellow Perch	3	15.3	14.4	40
Yellow Perch	10	nr	nr	20
Yellow Perch	13	nr	nr	30
Species Total Catch wt.				90
Pumpkinseed	4	nr	nr	20
Pumpkinseed	4	nr	nr	25
Species total Catch Wt.				45
Smelt	2	18	16.6	25
Cisco	8	29	26.5	250

nr - denotes not recorded

Appendix C.

Trapnet Catch Record
Oastler Lake Rainbow Trout Stocking Assessment Project, 2001

Set No.	Date Set 2001	Date Lifted 2001	Effort (Net-nights)	Catch (No.) S.Mouth Bass	Northern Pike	Walleye	Black Crappie	C.White Sucker	Total
1	May-14	May-15	1				1	1	2
2	May-14	May-15	1				2	2	4
3	May-15	May-16	1					3	3
4	May-15	May-16	1	4	1	1		12	18
5	May-15	May-16	1		3		2	2	7
	Total			4	4	1	5	20	34
	Total Catch Weight			2200	15150	2000	400	33500	53250
	% of Total Catch Wt. by Species			4.13%	28.45%	3.76%	0.75%	62.91%	100.00%

Appendix D.

Biosampling Data for All Species Captured in Trapnets
Oastler Lake Rainbow Trout Stocking Assessment Project, 2001

Species	Set No.	Total Lg. (cm.)	Fork Lg. (cm.)	Weight (grams)
Smallmouth Bass	4	32.4	30.7	500
Smallmouth Bass	4	42.9	40.5	1050
Smallmouth Bass	4	30.2	28.9	350
Smallmouth Bass	4	26.7	25.4	300
Tot. Species Catch Wt.				2200
Northern Pike	4	84.1	80.1	4350
Northern Pike	5	81.5	75.8	4500
Northern Pike	5	76	72.1	3400
Northern Pike	5	78.1	67.5	2900
Tot. Species Catch Wt.				15150
Black Crappie	1	17.7	16.9	90
Black Crappie	2	17.4	16.7	80
Black Crappie	2	16.5	15.8	60
Black Crappie	5	n/r	n/r	80
Black Crappie	5	n/r	n/r	90
Tot. Species Catch Wt.				400
Walleye	4	57.8	54.9	2000
C.White Sucker	1	n/r	n/r	1700
C.White Sucker	2	n/r	n/r	1300
C.White Sucker	2	n/r	n/r	2000
C.White Sucker	3	n/r	n/r	1500
C.White Sucker	3	n/r	n/r	2200
C.White Sucker	3	n/r	n/r	2000
C.White Sucker	5	n/r	n/r	1300
C.White Sucker	5	n/r	n/r	1400
Tot. Species Catch Wt.				13400

n/r - denotes 'not recorded'