

Natural. Valued. Protected.

Lake Fact Sheet – Parry Sound District

Blackstone Lake

Location:	
MNR District:	Parry Sound
Geographic Township:	Conger
Municipal Township:	Archipelago
Watershed:	Blackstone River (to Georgian Bay)
Fisheries Mgmt Zone:	15

Basin and Terrain Characteristics:	
Lake Survey Year:	1973
Surface Area:	516 hectares
Maximum Depth:	58.0 meters
Mean Depth:	20.1 meters
Perimeter:	34.9 km
Littoral Zone:	23%
Shoreline Development:	102 Cottages, 2 Resorts @ 20 units, 42 undeveloped lots (1999)
Access Points:	Public Road (via above resorts)
Water Level:	Regulated – OMNR operated Crane Lake Dam constructed 1930
Crown Land:	40% Shoreline

Water Quality:	
Secchi reading:	5.5 meters
Colour:	Yellow/Brown
Alkalinity:	27.4 mg/l - Level 3 Moderately Sensitive (MOE, 1989)
pH:	7.1 (2001)
Total Phosphorus:	Average 0.01 µg/l (MOE “Lake Partner Program” 1998)
M.E.I.:	1.4 (1973)
<p>“Guide to eating fish”: No Information available. (However, we recommend using Crane Lake information as surrogate for Blackstone Lake. Consumption restrictions apply due to mercury contamination from natural, background sources.</p> <p>The Guide is available at all Government Information Centers and electronically at: www.ene.gov.on.ca</p>	

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Fisheries:

Game Fish Species: Lake Trout (stocked), Smallmouth Bass, Largemouth Bass, Walleye, Yellow Perch, Northern Pike, Muskellunge, Black Crappie.

Other species present: Cisco, Rainbow Smelt, Log Perch, White Sucker, Emerald Shiner, Bluntnose Minnow, Brown Bullhead, Golden Shiner, Pumpkinseed, Burbot, Rock Bass, Johnny Darter, Mottled Sculpin and Common Shiner.

Introduced Species:

The Lake Trout population is maintained by bi-annual plantings for artificial Put-Grow-Take (PGT) angling opportunities. Black Crappie were first observed in 2005; origin unknown, but suspected to be via an unauthorized planting. It is unsure – but likely, that smelt are an introduced species.

Stocking Record: 2006 Walleye 9500 fall fingerling
2005 Lake Trout 3000 yearling
2003 Lake Trout 4,300 yearling
2001 Lake Trout 4,300 17 month
1999 Lake Trout 4,300 17 month
1997 Lake Trout 4,300 17 month
1995 Lake Trout 4,300 yearling
1993 Lake Trout 3,200 yearling
1991 Lake Trout 4,300 yearling
1989 Lake Trout 4,300 yearling
1988 Walleye 40,000 summer fingerlings and 277 adult
1987 Lake Trout 4,300 yearling
1986 Walleye: 85 yearlings; 1,600 summer fingerlings; 700,000 fry
1986 Lake Trout 2,500 yearling
1985 Walleye 655,000 fry and 27,500 fingerling
1984 Lake Trout 3,000 yearling
1982 Lake Trout 2,500 yearling
1978 Lake Trout 1,000 2+
1976 Walleye 2,000,000 egg
1976 Lake Trout 3,750 2+
1974 Lake Trout 10,000 yearling
1973 Lake Trout 9,000 yearling
1972 Lake Trout 6,000 yearling
1971 Lake Trout 12,000 yearling
Prior stocking record available upon request.

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Summary of Fisheries Studies / Reports:

McIntyre, E. 2005. Blackstone Lake **2005 Spring Littoral Index Netting (SLIN) Survey Report**. 15 p.

Executive Summary:

In April of 2005, a Spring Littoral Index Netting (SLIN) survey was conducted on Blackstone Lake in the Geographic Township of Conger, now the Municipality of The Archipelago. The primary purpose of the survey was to assess the status of the stocked lake trout population in the lake. A secondary purpose was to contribute to the Parry Sound Area and Provincial SLIN reference datasets, which track the long-term trends of lake trout population status on a broad-scale or landscape basis.

We captured 23 lake trout for a *Catch-Per-Unit-Effort-by-number* (CPUE-no) of 0.77 ± 0.52 ($p < 0.05$) trout per net set. This was similar to that observed in the Parry Sound reference dataset (0.83) and the Provincial reference dataset (1.20). Consequently, we consider Blackstone Lake to have an “average” or moderate abundance of lake trout. We consider such abundance to be indicative of good survival of planted lake trout. All but one of the 23 lake trout captured were from the 1999 and 2001 plantings. We believe past and future plantings are indeed providing additional angling opportunities for this species.

McIntyre, E. 2005. Blackstone Lake **Synoptic Trapnet Survey, 2005**.

Executive Summary:

In June of 2005, a synoptic trapnet survey was conducted on Blackstone Lake. This survey partially duplicated a similar survey conducted in 1993. The primary purpose of our survey was to ascertain the current status of the walleye population relative to that observed in 1993, in order to make appropriate recommendations for new walleye regulations scheduled to be implemented in 2007. (The implementation of new walleye regulations is pursuant to the Ministry’s “*New Ecological Framework For Fisheries Management In Ontario*” initiative.) A secondary purpose of the survey was to assess the over-all status of the near-shore fish community and the individual fish species that comprise it.

The over-all fish productivity as measured by Catch-Per-Unit-Effort by weight (CPUE-wt) for all species combined was 11.223 kg per nets set; approximately average for Parry Sound Area lakes. Our catch was dominated by muskie, smallmouth bass and walleye. They respectively comprised 50.5%, 24.0% and 16.2% of the total catch weight of 101.01 kilograms. All other remaining species (northern pike, white sucker, rock bass, pumpkinseed and black crappie) comprised only 9.3% of the total catch weight.

Although walleye CPUE by number was much lower in 2005 (0.9 ± 0.7 ; $p < 0.05$) than 1993 (4.6 ± 2.6 ; $p < 0.05$), the two were not statistically different (t-test @ $p < 0.05$). We cite biosampling and catch data from this and other recent surveys on Blackstone Lake that indicate chronically poor levels of walleye spawning and recruitment success.

Smallmouth bass abundance as measured by CPUE-no was essentially unchanged between surveys. We caught more muskie and fewer pike in this survey relative to 1993, but the numbers were too small between surveys to formulate any conclusions about relative abundance. Rock bass were much more frequently caught in 2005. We also caught one black crappie; a species that was not present in 1993.

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McIntyre, E. 2005. Blackstone Lake **Index Walleye Spawners Survey, Spring 2005.**

Executive Summary:

During the spring of 2005, an *Index Walleye Spawners Survey* was conducted on Blackstone Lake. This survey was largely a duplicate of a similar one conducted in 1996, and was intended to monitor the current status of the spawning population and assess changes that have occurred in the intervening time period.

The walleye catch rate (CPUE) for this survey was 7.0 fish per net set \pm 5.6 ($p < 0.05$); down considerably from 17.3 ± 10.3 walleye per set observed in 1996. However, walleye CPUE is not a reliable indicator of spawning population abundance for reasons discussed in the report.

The most significant indicator of spawning population health was contained in the Biosampling data. Mean length and size distribution of male and female walleye in the spawning population has shifted alarmingly to larger fish in 2005 relative to 1996. This is clearly indicative of several recent years of poor or negligible recruitment to the spawning population.

We were also perplexed by the highly unusual sex ratio in our walleye sample. Sex ratio of male to female walleye was 1 : 7.4. In 1996, it was almost 1 : 1. To what extent this may be contributing to several absent or poor year-classes in recent years, is unknown.

This survey also represents the first confirmed documentation of black crappie being present in the lake. We presume this is probably due to an unauthorized planting and consider it a negative development with respect to walleye management for the lake.

Township of Archipelago, 2001 **Water Quality and Aquatic Assessment for Blackstone Lake – August 2000**

- Recommends no further building lots nor road extensions.
- Recommends all residents practice a high level of lake stewardship on their property.

McIntyre, E. 1996 **Walleye (Spawning Adults) Index Netting Progress Report**

- Walleye CUE of 17.3 ± 9.7 ($p < 0.05$) at Blackstone Creek Site (#1)
- Mean Fork Length for females: 61.5 cm. (N=49)
- Mean Fork Length for males: 48.4 (N=44)
- The report identifies a possible concern with walleye reproduction and recruitment; especially amongst females.

OMNR, 1994 **Winter Creel 1994**

- Estimate total fishing effort: 1190 angler hours; 2099 rod hours
- Estimated C.U.E. for walleye (species anglers) – 0.051 /Ag-Hr
- Estimated walleye catch (all anglers) – 38 fish
- Estimated C.U.E. for Lake trout (species anglers) – 0.076 /Ag-Hr
- Estimated lake trout catch (all anglers) – 79 fish
- (Only a one-page Creesys report exists for this project. It would appear to have been an intensive, random, roving creel design.)

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Thurston, L., 1993 **Walleye Rehabilitation Chronological Events**

- 1974 - 60 cubic yards of rock rubble added to spawning beds below bridge.
- 1983 - Junior Rangers added rock rubble to Blackstone Creek.
- 1989 - 121 tons of limestone rip-rap added to spawning beds.
- 1991 - 45 cubic yards of rip-rap deposited in Rat Creek.

Thurston, L., Pepper, R., Janoki, K., 1993 **Trapnet Survey**

- (4, 6 and 8' trapnets were used in the survey, but only data from the 8' nets was used to compute the catch-per-unit-effort statistic (CPUE) as an index of species abundance)
- Walleye CPUE: 2.5 fish per net set \pm 1.4 ($p < 0.05$)
- Smallmouth bass CPUE: 8.3 fish per net set \pm 2.1 ($p < 0.05$)
- Northern Pike CPUE: 0.4
- Muskellunge CPUE: 0.2
- (20 8'-trapnet sets made)
- 82 walleye sampled during the survey. Range of ages: 2 – 7 years; mean age: 4.0 yrs (concluded that walleye reproduction has been good in recent years).

Thurston, L. 1991 **Summary of Electrofishing Surveys 1987 – 1991**

- 24 electrofishing runs.
- Yielded seven 0+ walleye of which 3 were assessed as planted fish and 2 – 2-year old walleye assessed as planted fish.

Rusk, M., 1975 Blackstone Lake **Spawning Grounds Improvement Project**

- Spawning area of 240 square feet enhanced at Blackstone Creek (inlet from Third Lake).

Thurston, L., 1975 **Summer and Winter Creel Census** on Selected Lake Trout Lakes in the Parry Sound District

- Date presented for summer of 1974. Non-intensive, roving creel design.
- Number of days checked in June, July and August = 10
- Fishing Effort Observed: 57.5 angler hours (72 anglers)
- Catch: 12 largemouth bass; 19 smallmouth bass

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Management Prescription:

- Manage as a natural, self-sustaining walleye, bass, pike and muskellunge fishery.
- Investigate feasibility of establishing self-sustaining lake trout population; in the interim maintain coldwater, artificial angling opportunities with bi-annual planting of lake trout on a Put-Grow-Take (PGT) basis.
- Regulation Exceptions:
 - Lake trout season – open all year (except Dec. 24th)
 - Blackstone Lake and Creek - Conger Twp Lots 12, 13, and 14 in Conc XII – Fish sanctuary, no fishing from Apr. 1 – Fri. before 3rd Sat. in May
- See *Recreational Fishing Regulations Summary* for Zone 15 standard regulations that apply to Blackstone Lake for other species.

Updated: January 2010

Refer to Lake Fact Background Information document for explanation of content.

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