PARRY SOUND AREA LAKE SUMMARIES

Brought to you compliments of:
Gord Pollock, Broker
Century 21 Granite Properties Ltd Brokerage
33 James Street, Parry Sound, Ontario P2A 1T6
Business: 705-746-2158 , Fax: 705-746-4746
Residence: 705-746-4816 , Cell: 705-774-0955
Website: www.gordpollock.com Email: gord@gordpollock.com

Pickerel River

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Revised:

Location:

MNR District:…….. Parry Sound
Geographic Township: …… McConkey, Blair and Mowat
Municipal Township: …… Unincorporated
Watershed: …….. Pickerel River
Angling Division: …… 15

Basin and Terrain Characteristics:

Lake Survey Year: ……. 1968
Surface Area:……. 2,629.3+ - Includes Lakes
Maximum Depth: ……. 18.3 meters
Mean Depth: ……. 5.5 meters
Perimeter: …….
Island shoreline: ……
Littoral Zone: …… 53%
Thermal Regime: ……... Cool
Shoreline Development: ……. 100 Cottages, 3 Resorts
Access Points: …… Road (Public)
Water Level: …….. Not Regulated
Crown Land: ……. 90% Shoreline

Water Quality:

(Parameters pertain to fisheries habitat only. For information on potability of water or contaminates, contact Min. of Health and Min. of Environment.)

Secchi reading: 2.7 meters
Colour: Yellow/Brown

Dissolved Oxygen:
Alkalinity: 17.1
pH: 8.0
Total Phosphorus:
M.E.I.:

"Guide to eating fish": Restrictions for Northern Pike and Walleye refer to the current "Guide to Eating Ontario Sport Fish"

Fisheries:

Game Fish Species: Walleye (1996), Smallmouth Bass (1996), Yellow Perch (1996), Black Crappie (1996), Northern Pike (1996), Muskellunge (1996), Largemouth Bass (1996)

Other species present: Pumpkinseed (1996), White Sucker (1996), Northern Redhorse Sucker(1990), Brown Bullhead (1996), Channel Catfish (1990), Bowfin (1990), Gizzard Shad (1990), Common Carp (1990), White Bass (1990), Rock Bass (1996), Alewife (1996), Lake Whitefish (1996), Herring (1996)

Exotic Species:

Stocking Record: 1974 Muskellunge 50,000 fry
1973 Muskellunge 50,000 fry
1971 Muskellunge 1,100 fingerling
1970 Muskellunge 20,000 fry
1969 Muskellunge 20,000 fry
1968 Muskellunge 20,000 fry
1967 Muskellunge 20,000 fry
1965 Muskellunge 10,000 fry
1964 Smallmouth Bass 2,250 fingerling
1964 Muskellunge 8,000 fry
1960 Smallmouth Bass 2,000 fingerling
1958 Muskellunge 20,000 fry
1954 Muskellunge 350 fingerling
1954 Walleye 400,000 eggs
1953 Smallmouth Bass 300 fingerling
1953 Walleye 200,000 eggs
1952 Smallmouth Bass 500 fingerling
1951 Walleye 300,000 eggs
1949 Walleye 600,000 fry
1948 Smallmouth Bass 500 fingerling
1947 Smallmouth Bass 500 fingerling
1947 Walleye 450,000 fry
1946 Smallmouth Bass 500 fingerling
1946 Walleye 375,000 fry
1945 Smallmouth Bass 400 fingerling
1944 Smallmouth Bass 5,000 fry
1943 Smallmouth Bass 5,000 fry
1942 Smallmouth Bass 5,000 fry
1942 Walleye 300,000 fry
(1941 Largemouth Bass 700(?)?)
1941 Walleye 200,000 fry
1940 Walleye 750,000 fry

1939 Walleye 250,000 fry
(1938 Smallmouth Bass 500 (?)?)
(1938 Walleye 100,000 (?)?)
(1935 Smallmouth Bass 10,000 (?)?)
(1935 Walleye 50,000 (?)?)
(1932 Smallmouth Bass 10,000 (?)?)
1931 Walleye 100,000
1931 Smallmouth Bass 1,000 fingerling
1931 Speckled Trout 10,000 fingerling
1929 Walleye 100,000
1926 Walleye 100,000
1924 Lake Trout 10,000 fry

Stress Type:

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Use Type: Recreational Fishing, Tourism Based Industry

Summary of Fisheries Studies / Reports:

Henvey Inlet First Nation, 1999 **Walleye Assessment** (**Index spawners trapnet survey** conducted on the Pickerel River downstream of "North Pickerel Road" bridge site during the spring of 1999)

- Redhorse sucker comprised the largest proportion of fish netted
- The peak of walleye spawning was most likely missed
- age class distribution indicates reproduction and recruitment is occurring
- 71 walleye were tagged, 2 muskellunge were tagged

McIntyre, E. 1998 1998 Annual CFIP Report for the Pickerel River **Walleye Spawning Population Monitoring and Egg Culture Project**

- An early and warm spring resulted in record run-off and water levels. Pickerel river experienced flash flooding. Weather conditions may have contributed to an unusual spawning run and poor success at collecting walleye eggs.
- High water temperatures at the time of netting suggest the peak of spawning activity had been missed
- A walleye catch per unit effort was 9.6 ±5.5 (c 95%)
- The sex ratio was 1.27 females to 1 male which is unusual as the males generally outnumber females

McIntyre, E. 1997 **Walleye egg collection and "index spawners" netting** Project Pickerel River (Blair Township)

- A walleye catch per unit effort was 18.7 ±11.5 (c. 95%). This data can be compared with subsequent years of consistent data.
- Redhorse suckers were the predominant species trapped
- Walleye age class distribution was typical. Age classes 4 to 6 (1993 to 1991) are somewhat

weak but the 1994 (3 year old) appeared strong.

Thurston, L. 1992 **Acidity measurements taken during the walleye spawning period** in the upper Pickerel River system spring 1990.

- pH readings were taken at 14 sites on the Upper Pickerel River (between Wilson & Dollars Lake) from April 10 - May 27, 1990.
- None of the pH measurements were low enough to affect the survival of incubating Walleye eggs

Thurston, L. 1991 Note to File: Raw Data relating to **fishing results of 10 anglers** who fished the lower Pickerel R. during the Victoria Day Weekend in 1990.

- 49 walleye caught ranging from 2 - 8 lbs.
- EUH 4.9 hours per walleye
- 25 samples - good age distribution with some indication of heavy exploitation

Thurston, L.D.W. 1991 Summary of the 1990 **trap net survey** on the lower Pickerel River (Blair, Mowat and Henvey Townships)

- 15 - 4', 15 - 6' and 45 - 8' trap net sets were conducted from Aug. 7-27/90
- Relative Abundance (Catch per unit effort - 8' net night): brown bullhead - 23.7; black crappie - 12.5; northern redhorse sucker - 10.5; smallmouth bass - 4.0; walleye - 1.8; northern pike - 0.8; largemouth bass - 0.25 (4' net night); perch, rock bass, pumpkinseed, white sucker, muskellunge - CUE < 1.0
- fish community primarily dominated by coarse fish
- walleye: (109 samples) good reproduction as indicated by an even distribution of young fish (<6 yrs); older age classes fairly well represented
- smallmouth bass: (199 samples) good reproduction (lots of 2 & 3 yr olds) but few beyond that age - probable heavy exploitation
- northern pike: (85 samples) good reproduction (lots of 1 - 3 yr old); quite a drop in older age classes suggesting heavy exploitation
- black crappie: (148 samples) good reproduction (lots of 2-4 yr old); few older fish suggesting heavy exploitation

Thurston, L. 1990 Summary of the **1990 Angler Survey on the Upper Pickerel River**

- out of the 126 day fishing period an estimated 63,111 rod hours had occurred
- 37.9% of angling effort was directed at walleye while 19.2 and 15.9% of effort was directed at smallmouth bass and “anything”
- 15% of the walleye sampled were assessed as planted fish

Thurston, L. 1988 Results of the 1986 **Trap Net Survey on the Pickerel** River watershed

- 144 sites were netted from June 2nd to July 26th on the **Upper Pickerel River**
- Walleye and smallmouth bass were moderately abundant
- Low numbers of northern pike and largemouth bass captured are indicative of the lack of good spawning and nursery habitat for these species

- The biomass of the netted sport fish indicates a fairly healthy community
- Sport fish age class distribution indicates good recruitment and that the populations are subjected to moderate fishing pressure
- Walleye and smallmouth bass appear to be subject to moderately high exploitation
- Planted walleye fingerling appear to be making a very small contribution to the walleye population
- Recommends discontinuing walleye stocking, monitor walleye spawning and inspect walleye spawning grounds

- 144 sites were netted from July 28th to August 29th on the **Lower Pickerel River**
- Walleye and smallmouth bass were not abundant
- Largemouth bass and northern pike were not abundant
- These waters contain low levels of sport fish. Walleye, smallmouth bass, largemouth bass northern pike and muskellunge comprised only 8.2% of the biomass captured
- Age class distribution for walleye and smallmouth bass indicate recruitment has been poor in most years.
- Effort will have to be directed at finding the factors adversely affecting spawning success for walleye and smallmouth bass
- The fish community below Dollars Dam is more diverse than above most likely due to the access to Georgian Bay waters
- The percentage of sport fish caught is indicative of an unhealthy and unbalanced fish community
- A large population of coarse fish exists below the dam
- Recommends planting walleye fingerling in the short term, commence coarse fish removal to remove redhorse sucker, channel catfish, brown bullhead gar, bowfin and possibly black crappie and initiate surveys to determine the factors adversely affecting reproduction of walleye and smallmouth bass

Kujala, K.H. 1979 Bailey bridge **pickerel spawning bed improvement** Pickerel River, Blair Township the Parry Sound district.

- Prior to 1968, the north side of the island (between Squaw Rapids and Kidd's Landing) on the Pickerel River was a spawning site for a large number of walleye. In 1967 and/or '68, Ontario Hydro built a road across the river at this site. A bridge was constructed on the south side of the island and the north side was filled in with rock which acted as a "spill dam" during the spring freshet. Walleye continued to spawn here, but as the spring freshet receded eggs were left exposed.
- In 1978, the Ministry upgraded the old Hydro road to a forest access road. At this time, work was undertaken to enhance the site for walleye spawning. A 4' culvert was sunk in the fill on the north side to provide a continuous flow of water during the walleye incubation period. Rock and large boulders were set downstream to provide appropriate spawning substrate.
- The site was inspected during the walleye spawning period of 1979 however no walleye were seen. This was attributed to the extremely high water that spring.
- Mr. Kujala contended that the physical features of the rehabilitated site were quite conducive to successful walleye spawning and incubation.

Management Prescription: