

*Natural. Valued. Protected.*

## Lake Fact Sheet – Parry Sound District

# Doe Lake

### Location

*Official Name:* .....Doe Lake      *Local Names:* .....Little Doe Lake, Big Doe Lake  
*County/District:* ..... Parry Sound      *Geographic Twp:*.....Ryerson, McMurrich, Armour, Perry  
*Municipality:*..... Township of Ryerson,      *MNR Admin. Area:* ..... Parry Sound  
 ..... Township of McMurrich/Montieth,  
 ..... Township of Armour, Township of Perry  
*Lat./Long:* ..... 45.531 N 79.417 W      *UTM (NAD83):* ..... 17 623590 5043147  
*Topographic Map (1:50,000):* .....31E/11      *Drainage Basin:* ..... Magnetawan River

### Physical Features

*Surface Area (ha):* ..... 1187      *Maximum Depth (m):* ..... 23      *Mean Depth (m):*..... 5.9  
*Elevation (m asl):*.....295      *Perimeter (km):*..... 34.3      *Island Shoreline (km):*..... 1.4  
*Volume (10<sup>4</sup> m<sup>3</sup>):*..... 7003      *Watershed (km<sup>2</sup>):*..... 133      *Water Clarity (m):* ..... 2.5  
 (excludes area of lake)

### Land Use and Development

*Crown Land (%):* .....1      *Provincial Parks:*..... None  
*Shoreline Development:*.....Moderate; Shoreline Residential, Commercial  
*Access:*..... Public; Boat Launch; Almaguin Drive, Katrine  
*Water Level Management:* ..... Regulated; water level is controlled by MNR-owned and operated dam  
 ..... located on Magnetawan River. Flows and levels are governed by the Magnetawan River Operating Plan.

### Fish Species

*Major Fish Species:*.....Smallmouth Bass (I), Walleye (I), Northern Pike, Largemouth Bass (I 2017)  
 ..... Black Crappie (I 2017), Lake Whitefish  
*Other Fish Species:*.....Burbot, White Sucker, Brown Bullhead, Cisco, Yellow Perch Pumpkinseed, Rock Bass  
 ..... Bluntnose Minnow, Common Shiner, Emerald Shiner, Rainbow Smelt (I), Trout-perch  
*Other Species:*.....Spiny Water Flea (2008)

Notes: E: extirpated, I: introduced – intentional or accidental, O: occasional, R: remnant, S: currently stocked, ?: status uncertain, 2009: year of first record or introduction if known, blank: presumed native

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## Fisheries Management

*Fisheries Management Zone:* ..... 15  
*Designation for Lake Trout Management:* ..... Not designated  
*Fishing Regulation Exceptions* ..... No lake-specific exceptions  
*Current Stocking:* ..... None  
*Historic Stocking (last year stocked):* ..... Walleye (1939-1955), Smallmouth Bass (1940-1971),  
..... Lake Trout (1951-1963)  
*Contaminants (species tested):* ..... Northern Pike, Walleye, Smallmouth Bass, Burbot, Yellow Perch

## Summary of Fisheries Studies / Reports:

### 2017 Smallmouth Bass Population Estimate

The MNR Science section conducted a mark-recapture study to estimate the size of the Smallmouth Bass population in order to calibrate the provincial Broad-scale Monitoring sampling protocol. In the first part of the study, a total of 573 bass were tagged. In the second phase, 134 additional bass were caught, of which 31 were tagged. This indicated that 23% of the population had been tagged. Applying statistical measures sampling variability, the estimate is that there are between 1800 and 3200 bass greater than 250 mm (10" long) in the lake.

Black Crappie was captured in the survey, the first documented occurrence for the lake. Several extremely large Pumpkinseeds were also caught. The largest, 260 mm, was the ninth largest of over 8,000 records in the Broad-scale Monitoring database.

### 2013 Broad-scale Monitoring

Doe Lake was sampled in 2013 as a "trend" lake for Cycle 2 of the provincial Broad-scale Monitoring program. Results will be reported through that program. Three species not previously documented in the lake were captured; Emerald Shiner, Large-mouth Bass and Trout-perch.

### 2008 Broad-scale Monitoring

Doe Lake is a long-term monitoring lake for the provincial Broad-scale Monitoring Program (BsM). Assessment is planned to occur on a 5 year cycle to monitor long term trends in water quality, fish community and angling effort within Zone 15. Summaries of assessments are available in BsM Bulletins. Data analysis and interpretation will be available in FMZ 15 reports.

### McIntyre, E. 1998. 1998 Doe Lake Synoptic Trap-net Survey Report

A synoptic, trap-net survey consisting of 33 - 8' trap-net sets was conducted on Doe Lake during the late summer of 1998. Similar surveys have previously been conducted in 1982 and '88. Over-all fish productivity (35.8 kg. of fish per net night) was exceptionally high relative to similar surveys which have been conducted in the Parry Sound Area. The fish community is dominated by walleye and smallmouth bass which comprised 35

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and 31% of the total catch biomass respectively.

All indices (CUE number and biomass; size and age class distribution; growth rate) point to an exceptionally healthy and robust walleye population; largely similar to results observed in previous studies. Smallmouth bass have experienced considerable expansion between this and previous studies. Catch -per-unit-effort (CUE), in terms of both number and biomass for smallmouth bass is up substantially. As with walleye, all smallmouth bass indices point to a healthy and robust population. Indices of northern pike population indicate that the population has remained stable between surveys.

### **Sober, L.L. 1989 Results of the Doe Lake Creel May 21 – Sept. 28, 1988**

- Intensive, random, roving, stratified creel design – 5 areas
- Estimated total angling effort: 33,152 angler hours. This represents very intense fishing pressure of 27.9 angler hours per hectare for only a 4-month period.
- Estimated catch: walleye 6564, smallmouth bass 765, northern pike 561
- Estimated harvest: walleye 2,964, smallmouth bass 246, northern pike 279
- Observed EUC (effort per unit catch): walleye 5.4, smallmouth bass 3.6, n. pike 8.4
- Observed EUH (effort per unit harvest): walleye 10.7, smallmouth bass 10.7, pike 18.1
- Walleye harvest estimate of 1,636 kg exceeded recommended annual yield by 1.6 times. Annual mortality estimated at 42.6%. Both parameters (and fishing pressure) point to high potential of over-exploitation.

### **Sober, L.L. 1988 Results of a trap netting project conducted on Doe Lake August 9-31 1988**

- Trapnet survey consisting of 60-overnight sets using 4, 6 and 8' trapnets.
- Total catch weight of 1,556 kg. comprised of: 29% brown bullhead, 26% walleye, 16% common white sucker, 12% smallmouth bass, 7% pumpkinseed, 5% northern pike and 5% other.
- Walleye abundance was exceptionally high. Size class structure of walleye sample indicates good recruitment with sustainable levels of mortality.
- CUE - no values for 33-8' trapnet sets: walleye 13.4, smallmouth bass 7.1, northern pike 0.7, brown bullhead 31.5, common white sucker 5.3, pumpkinseed 10.0, rock bass 6.2
- There was no significant change in species abundance between this and the 1982 trap net survey.

### **MacMillan, M.A. 1985 Results of a trap and gillnetting program conducted on Doe Lake (McMurrich, Ryerson, Armour Townships), August 8 to 20, 1982.**

- Trapnet survey consisting of 27-overnight sets using 4, 6 and 8' trapnets; also 4-overnight gillnet sets using 'standard lake survey gill nets'
- From trapnets: Total catch weight of 343.7 kg comprised of 37.1% walleye, 21.9% brown bullhead, 19% smallmouth bass, 11.6% common white sucker, 5.2% northern pike, other 5%.
- CUE - no values for 10-8' trapnet sets: walleye 12.3, smallmouth bass 6.2, northern pike 0.8. These indices of relative abundance suggest Doe Lake supports a good population of walleye and smallmouth bass.
- Walleye mean age 3.8 years. Age class structure of walleye and northern pike indicates these populations are largely comprised of young fish and these populations may be subject to heavy exploitation.

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

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