Broad-scale Monitoring Bulletin
LAKE ROSSEAU – ZONE 15

Lake Rosseau Facts

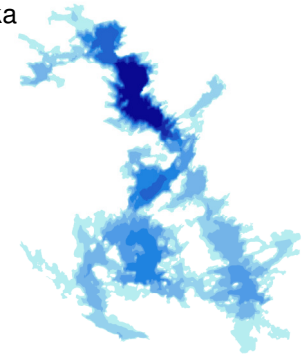
District Municipality of Muskoka

Surface Area: 6390 ha

Maximum Depth: 90 m

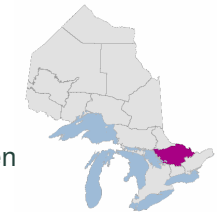
Average Depth: 23 m

Water Clarity: 4.8 m



Monitoring Activities

- ✓ Fish netting
- ✓ Fish contaminants
- ✓ Zooplankton
- ✓ Water chemistry
- ✓ Bathymetry
- ✓ Water temperature/dissolved oxygen
- ✓ Invasive Species



Netting Summary

Netting dates: July 3 – 9, 2008 (small mesh)
July 25 – Aug 10, 2011 (large mesh)

Netting days: 4 (small mesh), 10 (large mesh)

Number of net sets: 21 (small mesh), 36 (large mesh)

Number of fish species caught: 17

About the Program

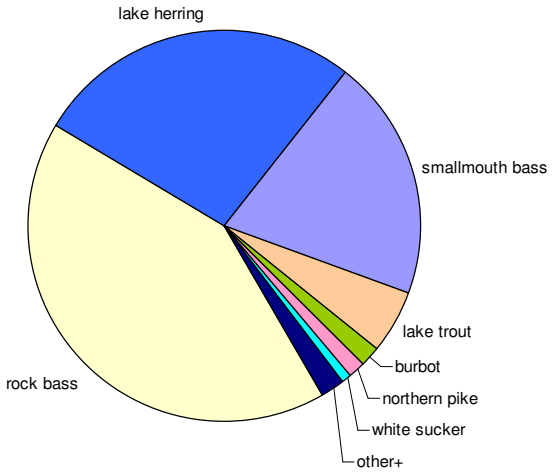
The Broad-scale Monitoring Program provides information for managing our fisheries effectively. This bulletin provides **a snapshot of the recent monitoring activities and netting results.** Netting is conducted using large and small mesh nets. Large mesh nets contribute information about fish species and small mesh nets describe the fish community. To learn more about the sampling program read *Broad-scale Monitoring Program: Monitoring the Health of Ontario Inland Lakes* or visit ontario.ca/fishing.

Fish Netting Results

Fish populations were surveyed using large and small mesh nets to provide information on fish species present and their characteristics, such as growth, age and abundance. The catch data below show that 12 species were surveyed in large mesh nets. Additional fish species that were caught in small mesh nets are golden shiner, logperch, margined madtom, spottail shiner, and yellow perch. Lake Rosseau is also part of a province wide evaluation of the Broad-scale Monitoring method and will be surveyed at a higher intensity and interval than other lakes. The additional data will collectively be used to refine the methods and improve interpretations made from results.

Fish species	Total Catch %	Maximum Length cm	Minimum Length cm	Average Length cm
rock bass	42	27.8	9.4	16.5
lake herring	27	46.2	18.0	30.2
smallmouth bass	20	65.1	24.7	46.0
lake trout	5	84.7	20.4	47.3
burbot	2	65.4	43.8	53.4
northern pike	1	99.1	60.4	81.1
white sucker	1	54.4	42.5	47.6
lake whitefish+	<1	64.7	49.4	58.8
walleye+	<1	62.4	28.8	40.2
brown bullhead+	<1	27.4	25.9	26.6
rainbow smelt+	<1	17.9	17.9	17.9
pumpkinseed+	<1	15.2	15.2	15.2

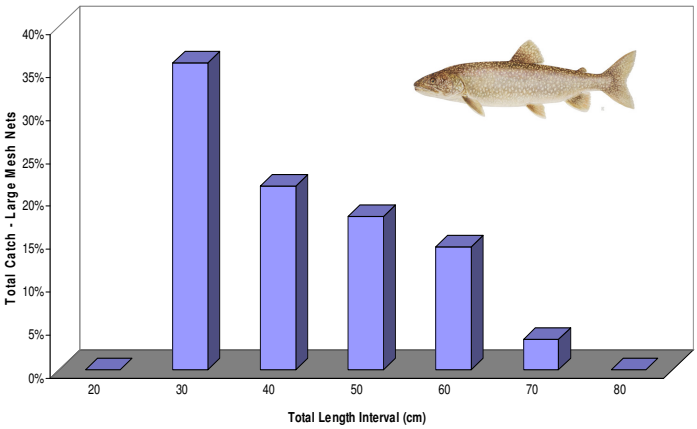
Proportion of Fish Caught in Large Mesh Nets



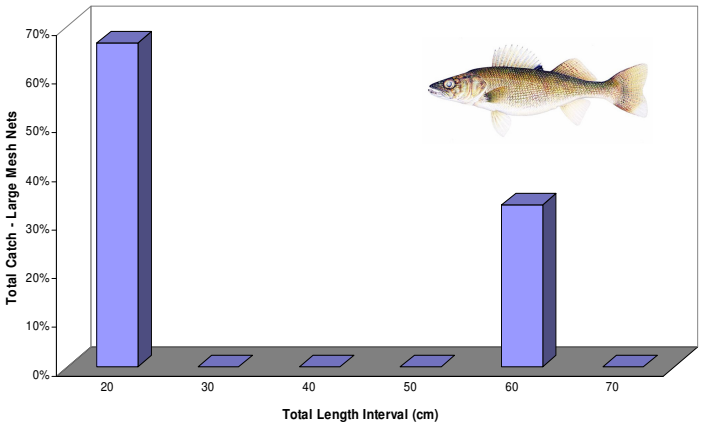
ontario.ca/fishing

Ontario

Length Distribution of Lake Trout



Length Distribution of Walleye



20 cm = 20 to 30 cm, 30 cm = 30 to 40 cm, etc.

The size of lake trout ranged from 20 to 85 cm (from a total of 28 fish) and the size of walleye ranged from 29 to 63 cm (from a total of 3 fish) in large mesh nets.

Water Chemistry and Temperature

Water samples were collected in May 2008 and sent to the Ministry of Environment for analysis. Water temperature, oxygen levels and water transparency were measured in July 2011. Lake Rosseau is considered a cold-water lake that can support cold and cool-water fish species such as lake trout, lake herring and whitefish.

Invasive Species

Invasive species were monitored using plankton nets and observations made by field crews. Spiny water flea, zebra mussel and rainbow smelt have already been detected in Lake Rosseau. Samples are currently being processed to determine if any new invasive species were detected through this sampling program. Any species new to Ontario or an invasive species that is a new record for a waterbody is reported to the Invading Species Hotline www.invadingspecies.com.

Fish Contaminants

Levels of contaminants in fish flesh (e.g. mercury, PCB's, mirex, organochlorine pesticides and other organic chemicals) will be reported in the *Guide to Eating Sport Fishing in Ontario* or visit ontario.ca/fishguide.

For more information please contact Ministry of Natural Resources at 1-800-667-1940, send an email to mnr.nric.mnr@ontario.ca or visit ontario.ca/fishing.