

## Broad Scale Monitoring Summary for Little John Lake 2010

Broad scale monitoring (BsM) has adopted a new provincial standard gill netting protocol designed to sample representative walleye, lake trout and brook trout lakes within each Fisheries Management Zone (FMZ) to provide a state of the resource report for the zone. Little John Lake has been chosen to represent lakes 20-100 hectares in size within FMZ 18. The BsM program began in 2008 with the first five-year cycle planned for completion in 2012. It will take at least one full cycle (five years) to complete assessments for most FMZ's which will produce a state of the resource report.

The following is simply a summary of sampling and is not intended to provide a FMZ state of the resource report.

Little John Lake was assessed between September 7<sup>th</sup> and September 10<sup>th</sup>. A total of 18 gill nets were set at various depths at randomly chosen sites around the entire lake. Two types of gill nets were employed:

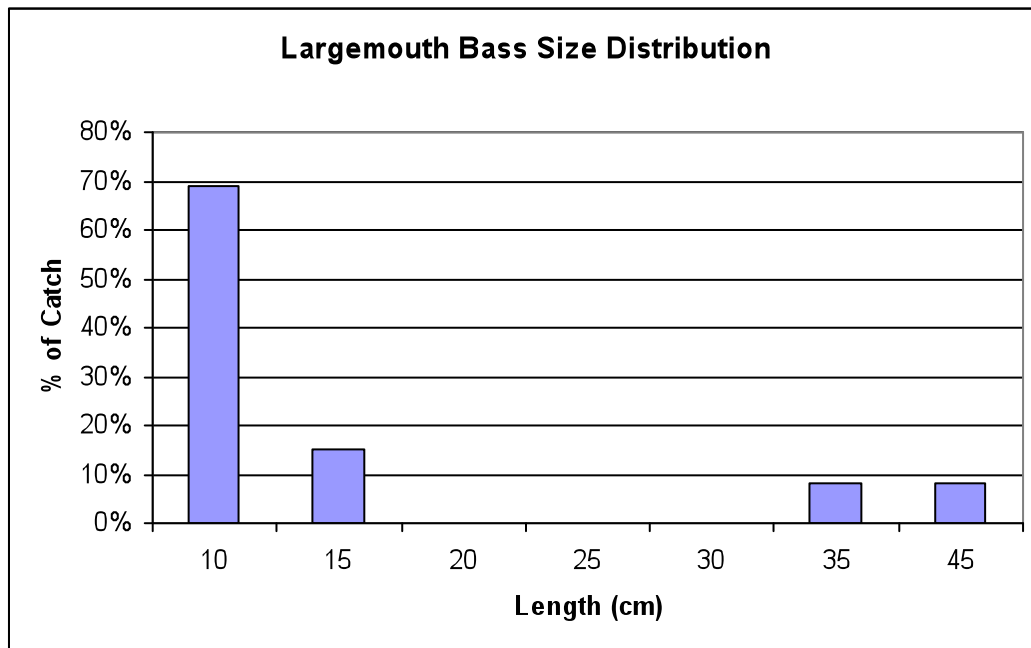
- “Large mesh” gill nets that target fish larger than 20 cm in length, the size range of interest to anglers (mesh sizes 1.5” to 5.0”);
- “Small mesh” gill nets that target smaller fish, the size range of interest to large fish (mesh sizes 0.5” to 1.5”)

Eight different species of fish were captured during this assessment. The following two tables provide summaries of how many nets were set at various depth ranges and how many fish by species were caught:

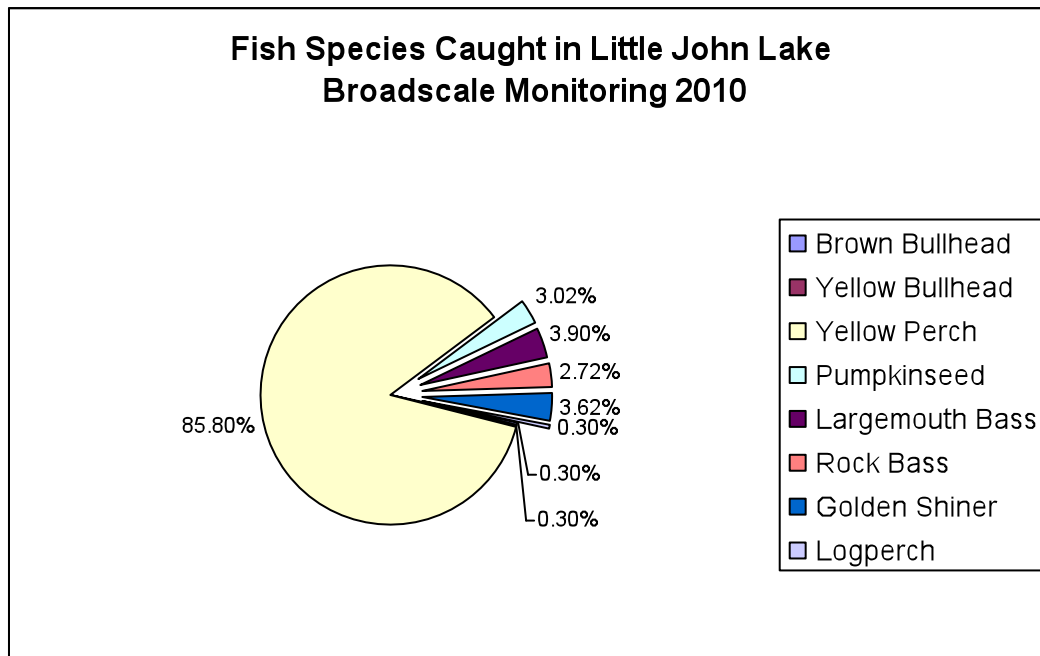
Large Mesh	# Fish Caught by Depth Ranges of Gill Net Sets					
	1-3m	3-6m	6-12m	12-20m	20-35m	Total
<b>No. of net sets</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>10</b>
<b>Brown Bullhead</b>	1	0	0	0	0	1
<b>Yellow Perch</b>	21	62	6	0	0	89
<b>Pumpkinseed</b>	3	5	0	0	0	8
<b>Largemouth Bass</b>	1	2	0	0	0	3
<b>Rock Bass</b>	0	2	0	0	0	2
<b>Yellow Bullhead</b>	0	0	1	0	0	1
<b>Totals</b>	26	71	7	0	0	104

<b>Small Mesh</b>	<b># Fish Caught by Depth Ranges of Gill Net Sets</b>					
	<b>1-3m</b>	<b>3-6m</b>	<b>6-12m</b>	<b>12-20m</b>	<b>20-35m</b>	<b>Total</b>
<b>No. of net sets</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>8</b>
<b>Yellow Perch</b>	116	49	0	0	0	165
<b>Pumpkinseed</b>	1	1	0	0	0	2
<b>Largemouth Bass</b>	8	2	0	0	0	10
<b>Rock Bass</b>	4	1	0	2	0	7
<b>Golden Shiner</b>	10	2	0	0	0	12
<b>Logperch</b>	0	0	0	1	0	1
<b>Totals</b>	139	55	0	3	0	197

What do we know about sizes of Largemouth Bass caught in BsM gill nets in Little John Lake?



Here is a general overview of the percent of fish per species caught in the Broad Scale Monitoring survey on Little John Lake in 2010.



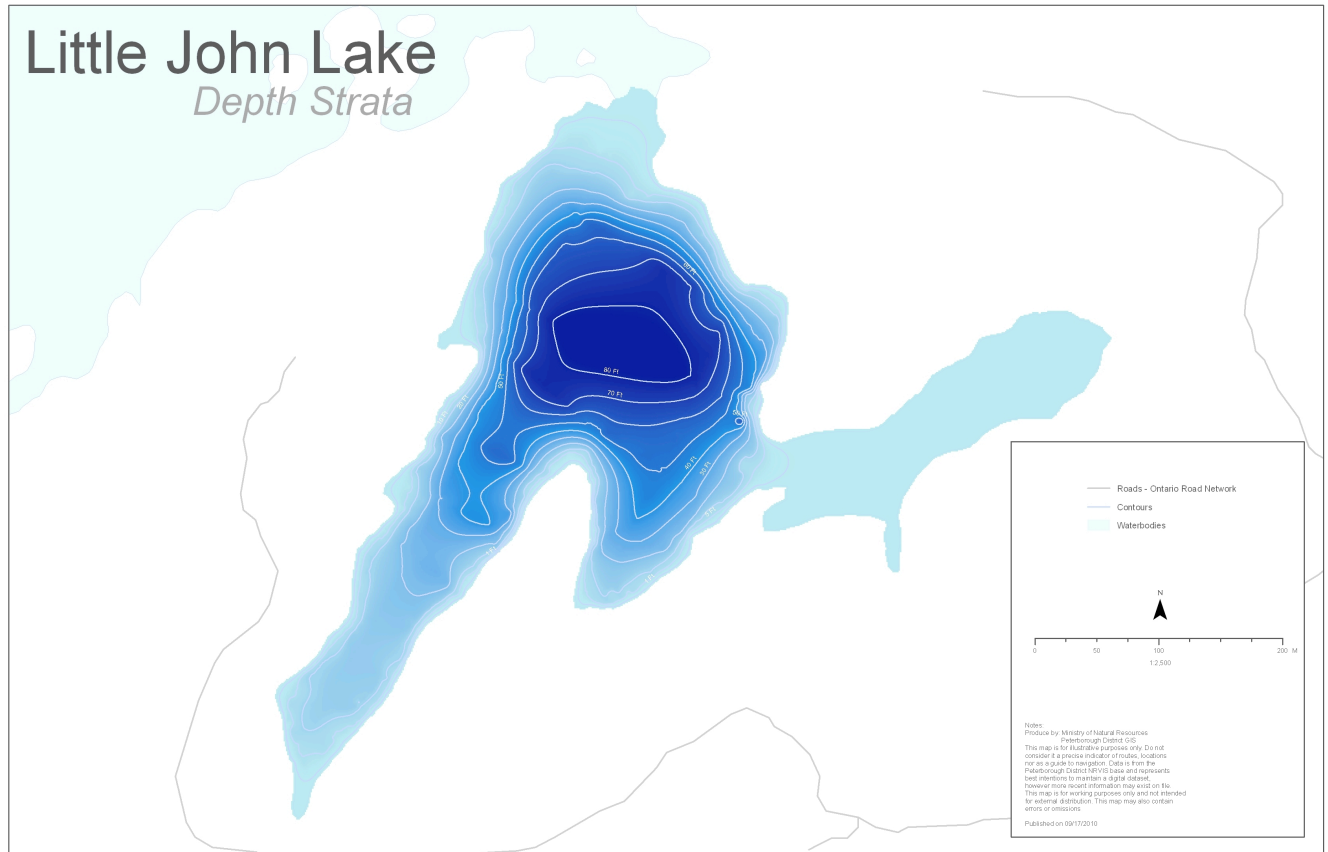
### Water Chemistry Sampling Results

<b>Secchi:</b>	4.4 m
<b>Gran Alkalinity:</b>	73.5 mg/L as CaCO <sub>3</sub>
<b>Calcium:</b>	24.2 mg/L
<b>Chloride:</b>	16.3 mg/L
<b>True Colour:</b>	26.0 TCU
<b>Conductivity:</b>	203.0 µS/cm
<b>Dissolved Inorganic Carbon:</b>	18.7 mg/L
<b>Dissolved Organic Carbon:</b>	6.1 mg/L
<b>Potassium:</b>	1.5 mg/L
<b>Magnesium:</b>	5.6 mg/L
<b>Sodium:</b>	9.7 mg/L
<b>Ammonia + Ammonium:</b>	36 µg/L
<b>Nitrate + Nitrite:</b>	2 µg/L
<b>Kjeldahl Nitrogen:</b>	442 µg/L
<b>pH:</b>	7.31
<b>Total Phosphorus:</b>	19.2 µg/L
<b>Reactive Silicate:</b>	1.4 mg/L
<b>Sulphate:</b>	5.5 mg/L
<b>Iron:</b>	140.0 µg/L

The Broadscale Crew recorded temperature and oxygen on Little John Lake. The results are as follows:

[illegible]

The crew also updated our bathymetry data for Little John Lake. The following map was generated from the data collected on the lake.



## Plankton Haul Results

Zebra mussel veligers were collected during the 3 hauls conducted on Little John Lake. Daphnia and zooplankton (Chaoborus sp. and Rotifers) were also found in the samples.