

Monitor It

Lake System Health Program

Muskoka Stewardship Conference

April 27, 2013

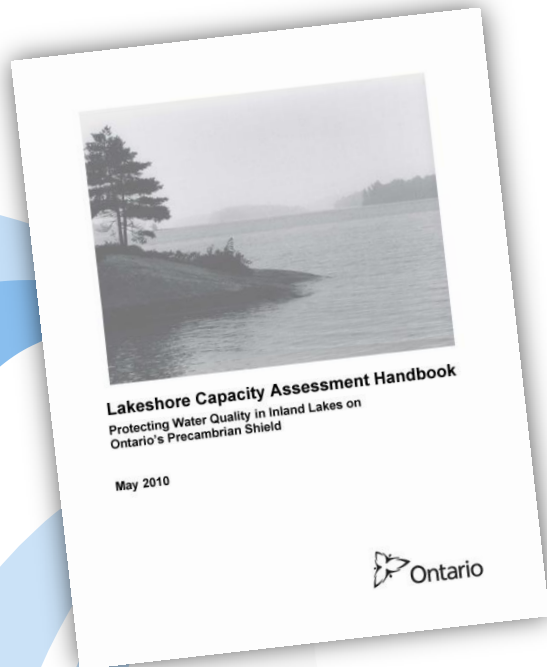
Rebecca Willison, BSc.
Watershed Planning Technician



WHY Monitor Water Quality?

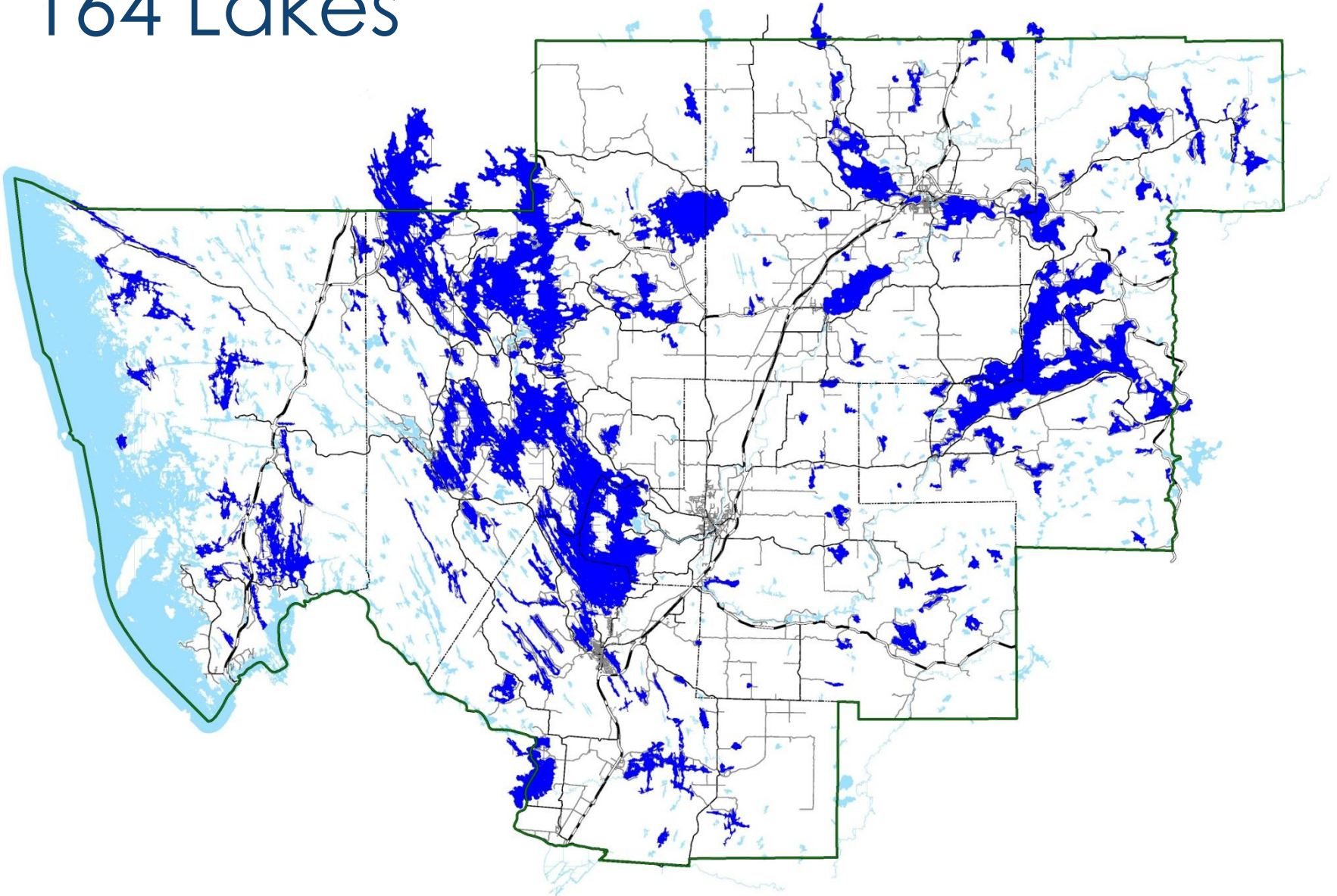
- Muskoka has 680 lakes over 8 hectares in size
- Approximately 18% of Muskoka's area is water
- Urban and rural centres located on waterbodies
- Muskoka's Total Population in 2010 (est.): 140,927
- In 2006, 57% of the economy was related to tourism and service to seasonal residents
- In 2009, 2.3 million visits to Muskoka generated \$389,170,000
- **Studies have linked high quality of lakes with higher property values**

Lake System Health

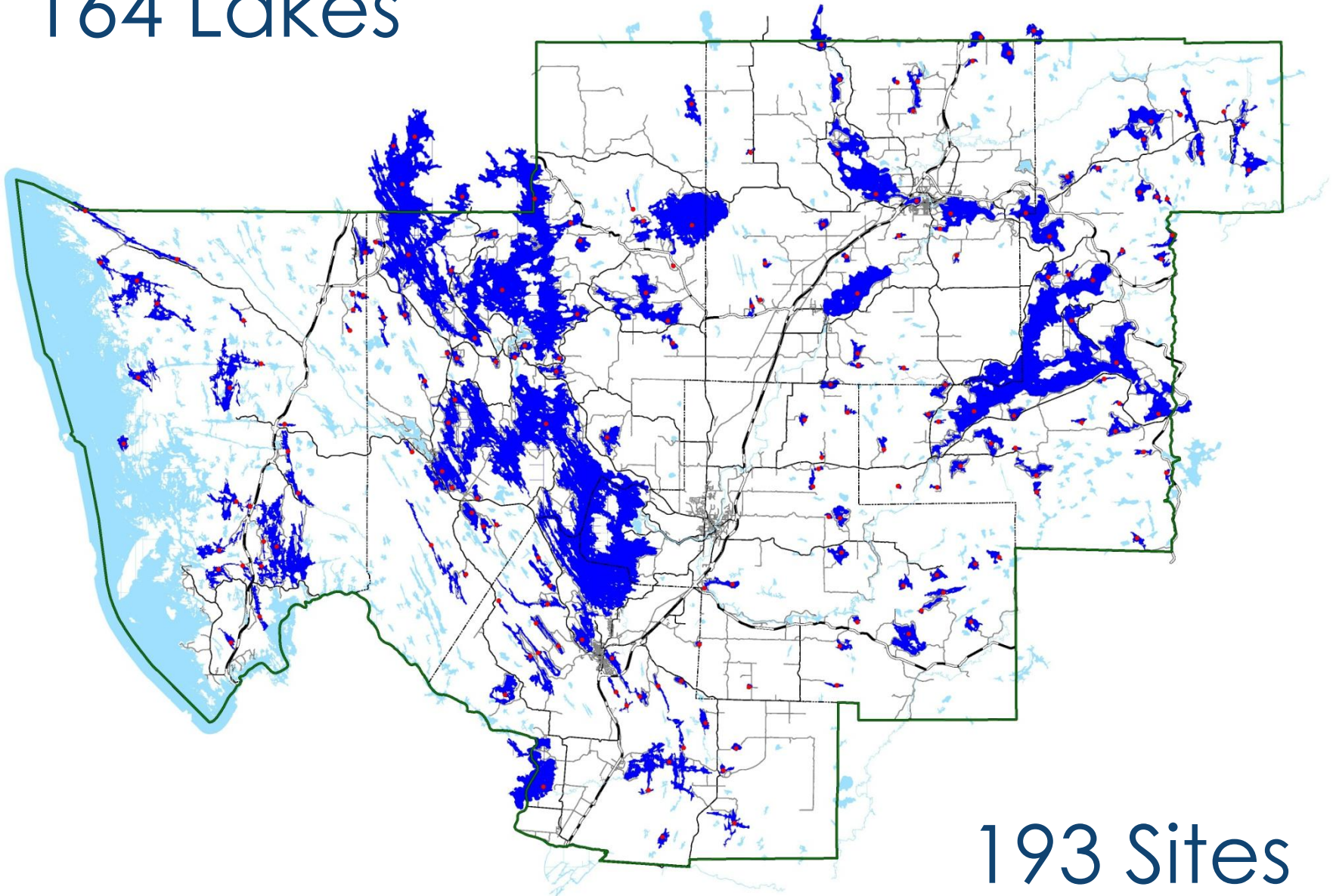


- Muskoka has been monitoring water quality for over 30 years
- First municipality to implement the Ontario Lakeshore Capacity Model developed by the MOE
- Have one of the best municipal datasets in the world
- Data is used to guide development on Muskoka's lakes
- Data is also used to support stewardship programs and efforts

164 Lakes



164 Lakes



193 Sites

Monitoring Activities

- Total Phosphorus & Other Parameters
- Water Clarity
- Dissolved Oxygen
- Temperature
- Shoreline Land Use Surveys
- Benthic Macroinvertebrates
- Terrestrial Plot Monitoring



Study Design

- Total Phosphorus & Other Parameters
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Spring turnover sample taken at the deepest part of the lake



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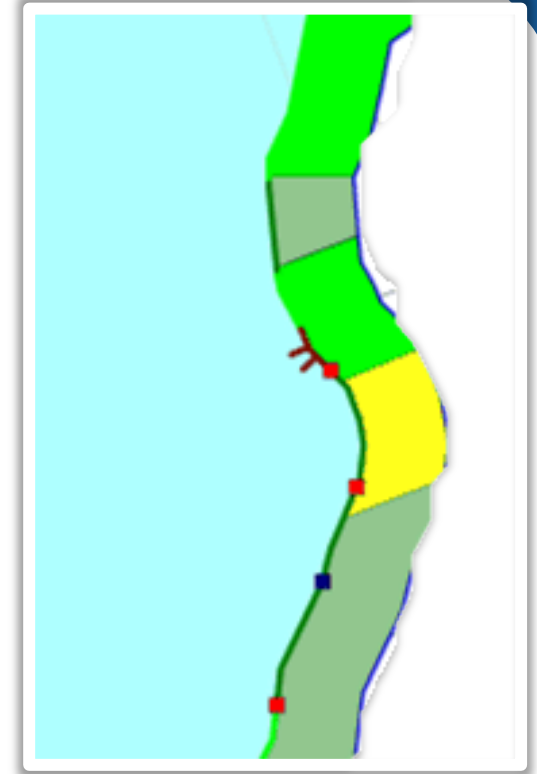
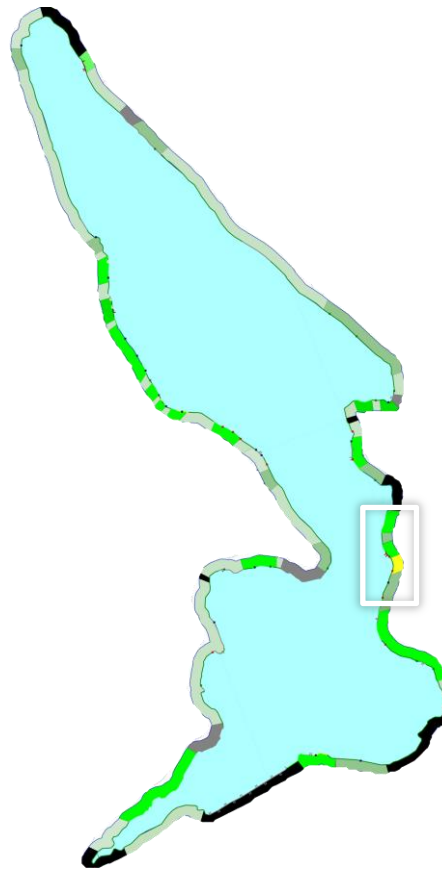


Readings taken during spring turnover and late summer at the deepest part of the lake



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Data collected through visual inspection & mapped

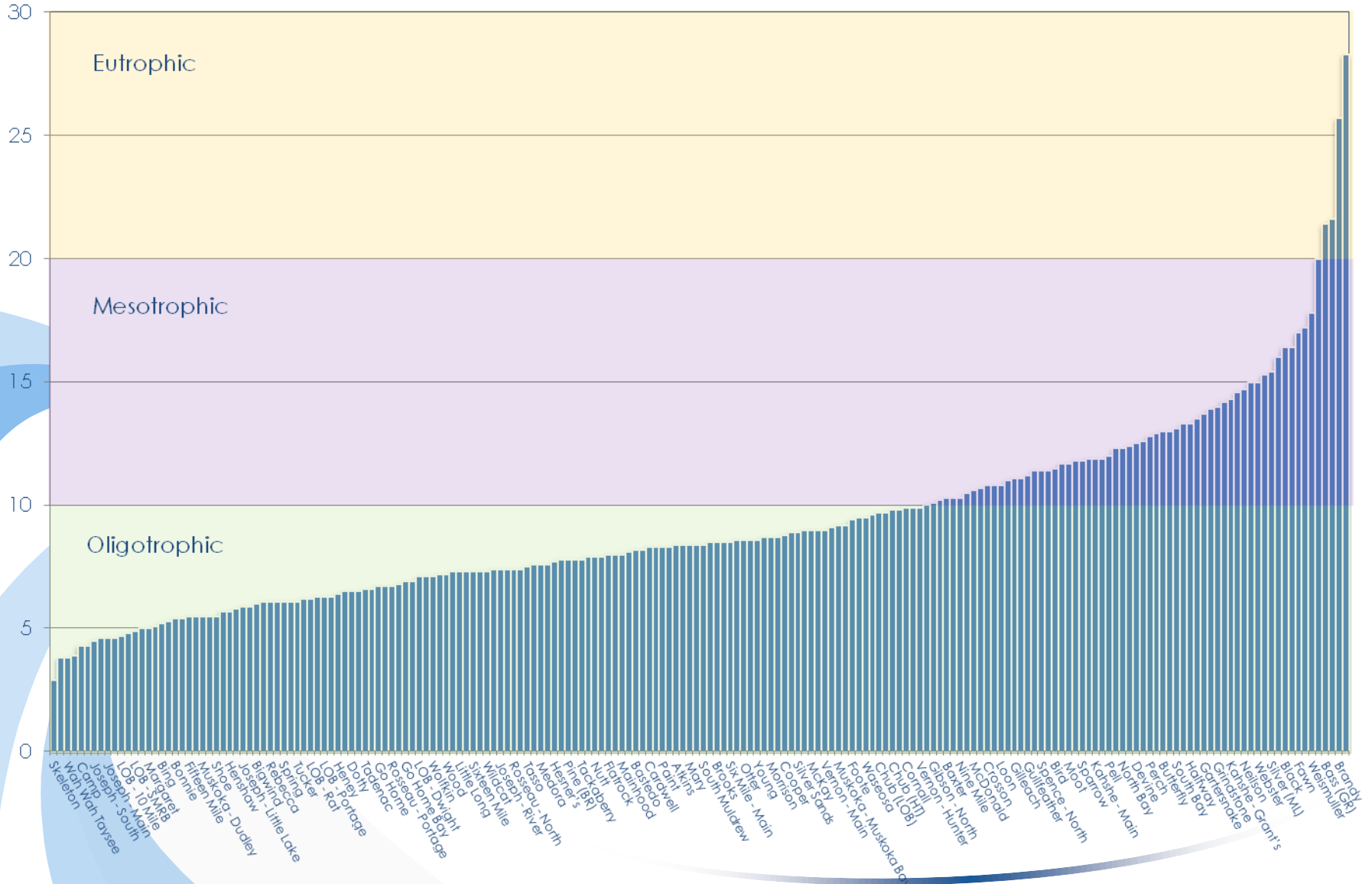
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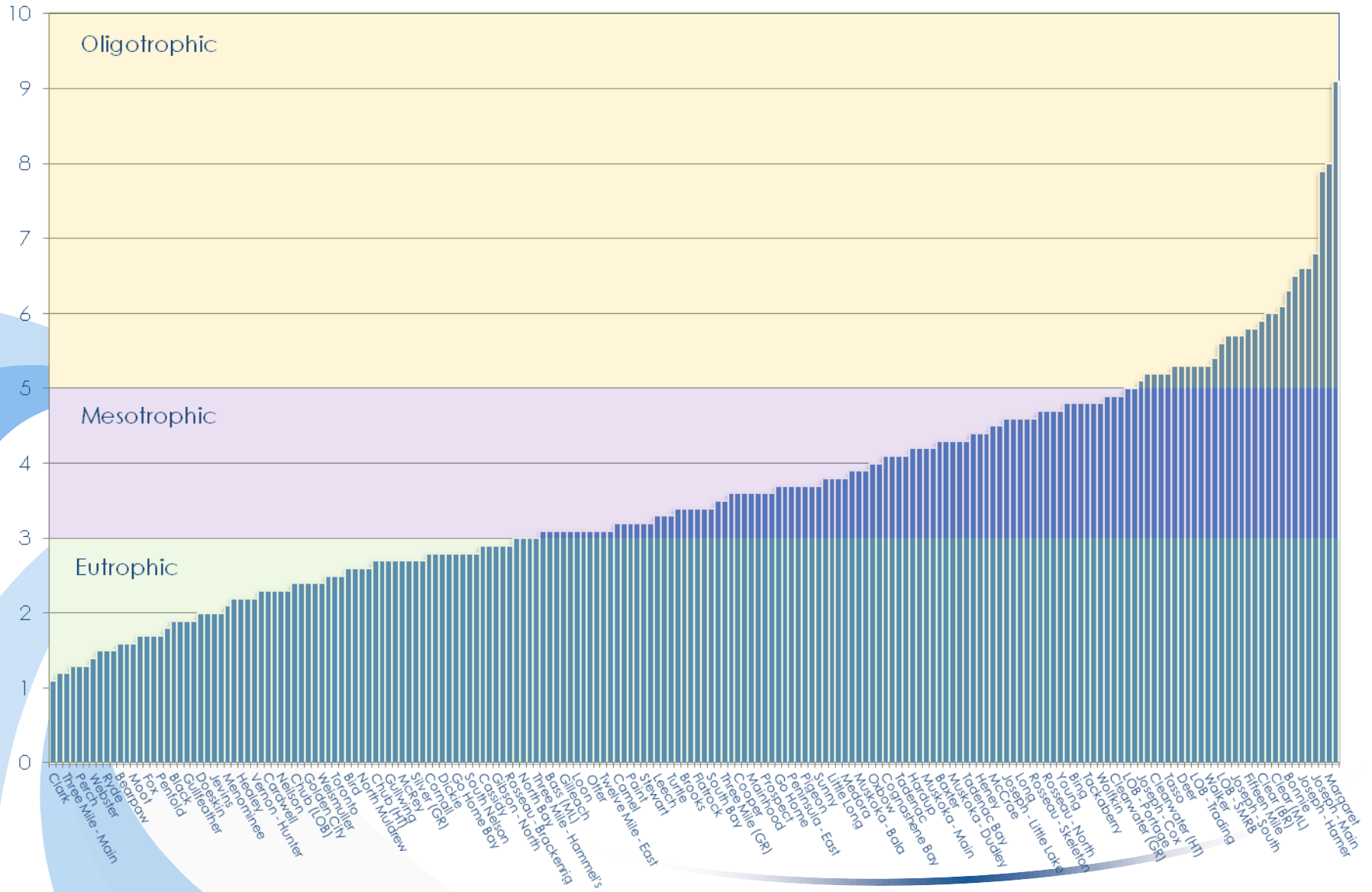


**Data collected from
beginning of May to
end of August**

Spring Phosphorus – 10-Year Average ($\mu\text{g/L}$)



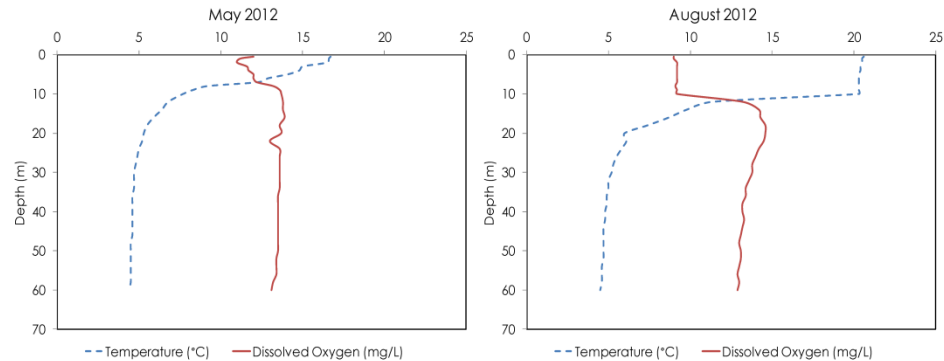
Secchi Depth – 10-Year Average (metres)



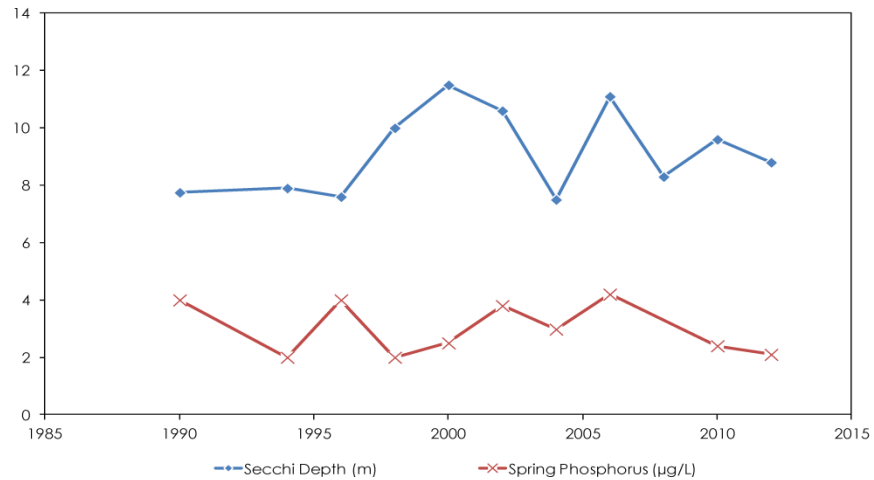
Lake Data Sheet

Skeleton Lake

Municipality:	Muskoka Lakes	Quaternary Watershed:	Skeleton River
Surface Area:	20.54 km²	Watershed Area (excluding lake):	46.68 km²
Maximum Depth:	60 m	Lake Trout Lake?	Yes
Wetland Area:	6 %	Secchi Depth (10-year average):	9.1 m
Phosphorus (10-year average):	2.9 µg/L	Sensitivity:	Moderate



Skeleton Lake Long Term Monitoring Data



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Access to Data

- Annual Water Quality Monitoring Report
- Muskoka Water Web
 - Lake Data Sheets
 - Shoreline Land Use Survey Maps
 - Aquatic Data Sheets
 - MNR Fisheries Fact Sheets
 - Stewardship Resources & Information

www.muskokawaterweb.ca

The screenshot shows the Muskoka WaterWeb website. The header features the logo "Muskoka WaterWeb" and the tagline "Your Link to Muskoka's Water!". A search bar is located in the top right corner. The main navigation menu includes "WATER 101", "LAKE DATA", "WATERFRONT LIVING", "RESOURCES BY TOPIC", "CONTACT US", and a "HOME" button. Below the navigation is a large banner image of a lake surrounded by trees. A quote reads: "In Muskoka, we know with our heads that water is the key to our economy and our quality of life. With our hearts, we cherish the splendor of our lakes and rivers." Below the banner are three smaller images: "Lake Data" (a lake with a boat), "Waterfront Living" (a waterfront building), and "Resources by Topic" (a canoe on a lake). The main content area includes a section titled "Water is major part of the Muskoka lifestyle" with a sub-heading "Welcome to the Muskoka Water Web". Below this is a paragraph about the importance of water in Muskoka. To the right is a "What's New" section with two items: "Muskoka Stewardship Conference" and "Muskoka Summit on the Environment". The footer contains navigation links and a note about website design and production by Creative One Inc.



Thank you.