

LAKE VERNON ASSOCIATION WATER QUALITY REPORT

OVERVIEW

This report has been prepared by George Crawford in June 2013, to inform the LVA membership of the current water quality in Lake Vernon, and also to stimulate discussion and response regarding the desired scope and content of future annual water quality reports. On the LVA's website, you will find the (brief) report, the report appendices that include much of the source data used in the preparation of the report, and the PowerPoint presentation used at the LVA AGM on June 8, 2013.

The Powerpoint includes the key report aspects for which feedback and comment is encouraged: Should we show more data? This refers to the tables and data sheets in "raw" form that were analyzed for this report. Should we emphasize data analysis, discussions and conclusions? This refers to the statistical analysis of the raw data (averages, deviations, statistical significance, and handling of "outlier" data points that does not appear to be consistent and may be due to erroneous sampling or analysis methods). This also refers to the inclusion and comparison of provincial guidelines and/or historical data for the type of data being analysed. More graphs, pie charts and pictures? How user-friendly do we want the report to be? Should we emphasize the effects and significance of the various water quality data and trends? This refers to the impact of the measured parameter on the overall water quality and on the water ecosystem, and the use of the water for recreation and as a drinking water supply. Should we include a "primer" on the meaning and impact of particular data? This would be a background discussion of the various parameters that we analyse and report upon in the report - examples of the parameters being phosphorus, water clarity, dissolved oxygen concentration, etc. The background discussion could include the likely sources of the contaminant, how that contaminant or parameter affects water quality or is an indicator of water quality and/or human impacts, what can be done to control the parameter, etc.

Comments can be sent through the LVA Environmental Committee or directly to George Crawford at georgevcrawford@gmail.com . We appreciate all feedback, and will incorporate your ideas into future reports.

OBJECTIVES

This year's LVA Water Quality Report has two main objectives. The first is to inform and educate the LVA membership of any new data, trends, issues or concerns discovered during the past year. The second objective is to solicit feedback from the membership regarding what we would like to see within future LVA annual water quality reports. This year's report identifies the sources of most of our water quality data, and much of that data and information is provided in Appendices to this report. The report then provides a very high-level summary of key conclusions that could be drawn from the data. This report structure is a "draft" for the future – the LVA membership is invited to comment on what we would like to see in our annual report

WHERE DO WE FIND WATER QUALITY INFORMATION?

The District of Muskoka, through their Water Web website, is the key source for Lake Vernon water quality data and for the shoreline survey results. The link to the Lake Vernon information within the Water Web is

<http://www.muskokawaterweb.ca/lake-data/muskoka-data/lake-data-sheets/lake-vernon> and the web page is attached as Appendix 1.

Lake Data Sheets are presented within the website for three sampling locations: the Main body of Lake Vernon, Hunter's Bay, and North Bay. The data sheets provide descriptive information, plus annual sampling results for the water temperature, dissolved oxygen concentration, phosphorus and water clarity at each of the three sampling locations. The three data sheets are attached as Appendix 2.

Lake Vernon Shoreline Land Use Survey maps for 2002 and 2012 are then presented on the website. The District provided the LVA with the raw data, which has been manipulated for clarity and included as Appendix 3.

The Water Web site then presents Biological Monitoring Data, including studies of invertebrate species found in the lake bottom (benthic) area in front of Camp Tawingo. Water quality information is also available from the Ministry of Natural Resources including the Lake Vernon data sheet in Appendix 4.