



P.O. Box 1749
Halifax, Nova Scotia
B3J 3A5 Canada

Dartmouth Lakes Advisory Board
March 3, 2011

TO: Chair and Members of the Dartmouth Lakes Advisory Board

A handwritten signature in blue ink, appearing to read "P. Townsend", written over a horizontal line.

SUBMITTED BY: _____
Phillip Townsend, Director, Infrastructure and Asset Management

DATE: February 15, 2011

SUBJECT: Russell Lake Phosphorus Results 2010

INFORMATION REPORT

ORIGIN

Morris-Russell Lake Secondary Planning Strategy (SPS), Russell Lake West Development Agreement

BACKGROUND

In 2005, Halifax Regional Municipality (HRM) entered into a Development Agreement with Clayton Developments Limited (“Clayton”) to develop lands adjacent to Russell Lake. This Development Agreement was subject to the terms and conditions of the Morris - Russell Lake Master Plan, as incorporated in the Morris-Russell Lake Secondary Planning Strategy of 2005 (attachment 2).

In accordance with the terms of the Development Agreement, Clayton undertook a water quality monitoring program in 2005, through Jacques Whitford Limited (now Stantec). This Program was developed in consultation with the Dartmouth Lakes Advisory Board and with the approval of HRM.

In 2006, the Harbour East Community Council set the Total Phosphorus (TP) threshold value for Russell Lake of 15 micrograms (µg) per litre (L). HRM staff use the annual average TP value of the in-lake station for the purposes of assessing current lake water quality with this threshold value.

Clayton’s water quality monitoring program has operated continuously since 2005, with four sampling periods per year. TP results have typically fallen well below the TP threshold value, with limited exceptions.

DISCUSSION

The August 2009 sampling results were exceptional, in that TP levels were 20 µg/L, and Fecal Coliforms were also found to be exceptionally high, exceeding 1500 MPN/100mL at each of the four sampling stations. A report on these results was presented to the Dartmouth Lakes Advisory Board in January 2010. At that time, HRM expressed an opinion that the “... high TP values observed in the August 2009 sampling vent were the result of a single large pulse of contaminants originating from an unconfirmed location, with limited to no impact on the long-term status of water quality within Russell Lake.”

TP results for the in-lake station during 2010, were again well below the HRM TP threshold for each of the four monitored seasons, with an annual average of 6 µg/L – lower than each of the previous annual average results from 2005 inclusive - see Attachment 1. These observations support the opinion expressed by HRM in 2010.

Recent observations and analysis has revealed that other lakes in Dartmouth, and elsewhere in HRM, have experienced much higher levels of TP in 2010. The cause for this very significant increase is unknown at this time and is the subject of an active investigation by HRM, with the support of local experts. These observations, along with those of significant plant growth in lakes

across HRM in 2010 and the associated investigations of each, are the subject of reports to the Environment and Sustainability Standing Committee.

BUDGET IMPLICATIONS

There are no budget implications associated with this report.

FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Capital and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Capital and Operating reserves, as well as any relevant legislation.

COMMUNITY ENGAGEMENT

No community engagement was undertaken in the development of this report.

ATTACHMENTS

1. Russell Lake Total Phosphorous Results
2. Morris - Russell Lake Secondary Planning Strategy

A copy of this report can be obtained online at <http://www.halifax.ca/council/agendasc/cagenda.html> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

Report Prepared by: Cameron Deacoff, Environmental Performance Officer,
Sustainable Environment Management Office, 490-1926

Report Approved by:



Richard MacLellan, Manager, Sustainable Environment Management Office, 490-6056
