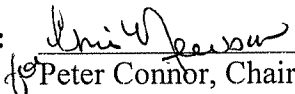


**Harbour East Community Council
June 9, 2011**

TO: Chair and Members of the Harbour East Community Council

SUBMITTED BY: 
Peter Connor, Chair, Dartmouth Lakes Advisory Committee

DATE: May 6, 2011

SUBJECT: Levels in Lake Banook and Lake Mic Mac

ORIGIN

A motion of the Dartmouth Lakes Advisory Board at their meeting of May 4, 2011

RECOMMENDATION

That the Harbour East Community Council request that Halifax Water consider a transparent and more technically rigorous model for managing lake levels in Lakes Banook and Mic Mac.

BACKGROUND

At the meeting of February 9, 2011 the Dartmouth Lakes Advisory Committee received a presentation from Halifax Water regarding the monitoring and management of lake levels in Lakes Banook and Mic Mac. An extract of the minutes of that meeting outlining the presentation and discussion is attached to this report.

DISCUSSION

During discussion of this matter members expressed a desire for a more technical approach to monitoring lake levels in Lakes Banook and Mic Mac which would include an automatic recording gauge and a model for lake hydraulics. Note was made that recording data in this manner is common in monitoring reservoirs. Any model employed should first consider the health of the lake and then the needs of all users of the lake.

BUDGET IMPLICATIONS

There are no budget implications to HRM from the recommendation. Any budget implications to Halifax Water would need to be considered by Halifax Water in their analysis and response to the request.

FINANCIAL MANAGEMENT POLICIES/BUSINESS PLAN

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

COMMUNITY ENGAGEMENT

The Dartmouth Lakes Advisory Board is an Advisory Committee to Community Council and is comprised of eight volunteer citizens and one Councillor.

ALTERNATIVES

1. The Harbour East Community Council may choose not to approve the recommendation requesting that Halifax Water consider a transparent and more technically rigorous model for managing lake levels in Lakes Banook and Mic Mac. This is not the recommended option.

ATTACHMENTS

1. Extract of the Dartmouth Lakes Advisory minutes of February 9, 2011.

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: Sherryl Murphy, Deputy Clerk, Office of the Municipal Clerk 490-4211

**EXTRACT – FEBRUARY 9, 2011 – DARTMOUTH LAKES ADVISORY BOARD
MINUTES**

6.3.1 Shubenacadie Canal / Lake Banook System

Mr. Jamie Hannam, Manager of Engineering, Halifax Water, gave a verbal presentation regarding the Shubenacadie Canal / Lake Banook System. Highlights of his presentation are as follows:

- there are four main stakeholders
- the Society for Canoe Championship owns Lock No. 1 and surrounding lands. There is a three party agreement with HRM and the Canal Commission for which HRM holds the deed.
- the Shubenacadie Canal Commission coordinates the upkeep of heritage facilities associated with the canal system and owns Lock No. 2 and Lock No. 3 plus the land on both sides.
- Halifax Water has an obligation and responsibility to operate and maintain the control gate (upper gate) at Lock No. 1 located at the south end of Lake Banook and the trash racks at Sullivan's Pond for storm water control.
- HRM has a significant recreational presence along Lake Banook and Lake Mic Mac (on and off the water). Lake Banook is recognized as a world class paddling venue.
- other Stakeholders would include canoe interests (3 clubs and associations), Dartmouth Lakes Advisory Board; private property owners (lakeshore property), general public, Nova Scotia Department of the Environment, the Federal Department of Natural Resources, Tourism and Culture; First Nations community, Federal Fisheries and Transportation (Navigable Waters Act), and the Municipality of East Hants.

On June 12, 2007 HRM and Halifax Water entered into an agreement to transfer wastewater and storm water assets with an effective date of August 1, 2007, with the explicit approvals of the Nova Scotia Utility and Review Board. Clause 9 (c) covers the role and responsibility of Halifax Water with respect to the control gate at Lock No.1 and screens at Sullivan's Pond.

Halifax Water operates and maintains the gate at Lock No.1 but is not responsible for maintenance of the remaining lock structure (not responsible for capital upgrades to the control structure or lock). Halifax Water will clear the grass and shrubs from either side of the lock (to maintain access to the control gate) but not on the masonry brick structure.

Halifax Water's protocol for Lake Banook Control includes:

- establishing winter and summer target lake level
- the winter level is lower than summer to accommodate spring thaw
- the operational goal is to keep the lake at target level during both seasons
- Halifax Water's service truck monitors levels and makes required adjustments at gate
- if large amount of rain is expected and the lake is at, or above, target level, Halifax Water will lower the level in anticipation of the rainfall

- during summer months when the weather forecast is for a long dry spell, staff may raise the lake levels to account for the forecasted lack of rain
- Halifax Water also responds to calls from residents, received through the HRM Corporate Call Centre 490-4000 number, in regard to lake levels being either high or low and takes action within operational target level constraints to address those concerns.

HRM is responsible for inspection and maintenance of stone structure of Lock No. 1. The lower locks at Lock No.1 are not part of the operational control for lake levels. They were reconstructed for historical purposes and the Canal Commission has an interest to exercise and to keep alive.

Future project discussions include:

- future upgrades to Lock No.3 by Canal Commission;
- Watershed Study for Fall River, completed by HRM, and Watershed Study proposed for Port Wallace area in 2011/2012
- possible HRM Secondary Planning amendments for Port Wallace
- Regional Storm Water Functional Plan to be completed by HRM.
- future sanitary forcemain, and other utilities, from Port Wallace to Dartmouth Crossing

The maintenance truck goes by Lock No. 1 weekly. If a weather event is scheduled either on the weekday or weekend the monitoring is done on a daily basis until this event is over.

Mr. Pierre Clement inquired if adjustments to Lock No. 1 were done by eye or if there was a model which was used? Mr. Hannam explained that there was modeling in place for the lock. The water levels are eyed and any adjustments are based on the experience of the maintenance personnel. Some modelling was done when the lake was drained for the canoe championship however this information has not been used to date. Mr. Cameron Deacoff expressed interest in obtaining this modelling information. Dr. Mark Trevorrow stated that installing a model for Lock No. 1 could be done rather easily.

Mr. Peter Crowther had a concern with having one person monitoring these locks. It could prove very challenging especially during a weather event which lasts for some time. He also wanted to know what happens to Lock No. 2 and Lock No. 3. Mr. Hannam explained that Halifax Water is only responsible for Lock No. 1 and they have internal procedures for constant monitoring during an extended weather event.

Mr. Jamie Hannam advised the Board that he would welcome feedback on water levels (too high or too low). Mr. Mark Mclean asked what the targets were and if these targets were available to the public. Mr. Jamie Hannam stated that he did not know what these targets were however was sure they were not available to the public. He will ensure that the Board is given these targets and will look forward to feedback to help Halifax Water fine tune these targets as required.

The Board discussed the significant rain event which happened last year, around the first weekend of November. There were significant water levels at that time. The Board questioned whether there were any other ways to control water levels besides the one's presented. Mr. Hannam explained that another control, located 100 feet outside Lock No. 1, could be opened up to help relieve high water levels.

Mr. Hannam was then asked if there was any talk about having electronic monitoring installed on these locks. He said there was no plan to do so at this time, however Halifax Water currently use electronic monitoring on sewage pipes and thought it might also be used for the locks. He explained that the current equipment would have to be tested before being used on the locks if this type of policy was adopted.

Mr. Hannam will forward a copy of his presentation to the Board along with the current target levels for Lock No. 1.