

BEDFORD WATERSHED ADVISORY BOARD
PUBLIC MEETING MINUTES

June 20, 2012

PRESENT: Richard Hattin, Chair
Lem Murphy, Vice Chair
Lynn Davis
Councillor Tim Outhit

ALSO PRESENT: Councillor Reg Rankin
Councillor Debbie Hum

STAFF: Cameron Deacoff, Environmental Performance Officer
Paul Morgan, Senior Planner, Regional & Community Planning
Scott LeBlanc, Planning Technician, Regional & Community
Planning
Richard MacLellan, Manager, Energy & Environment
Kim Cahill, Legislative Support

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1. CALL TO ORDER/OPENING REMARKS/PURPOSE OF MEETING

The Chair called the meeting to order at 7:09 p.m. in the Cafeteria of Basinview Drive Community School, 273 Basinview Drive, Bedford.

The Chair explained that the purpose of the meeting is to address the objectives of the Preliminary Report. He noted that the Bedford Watershed Advisory Board is looking for public input and comments on the work that the consultants from AECOM have done. The Chair indicated that the Birch Cove Lakes Watershed Study will have significant interaction with the Birch Cove Park Study about how much parkland will be allocated in the area.

2. BIRCH COVE LAKES WATERSHED STUDY (WATER QUALITY OBJECTIVES)

Mr. Paul Morgan stated that the study was authorized by Council in 2010 with two motions pertaining to the Birch Cove lands. Firstly, that the Watershed Study be undertaken and secondly, that the municipality initiate negotiations with property owners. He explained that following public presentation of the draft Preliminary Report, the consultants will prepare a draft Final Report to be presented at a public meeting, hosted by the Bedford Watershed Advisory Board. Mr. Morgan noted that the Final Report will then be presented to Regional Council because the study involves a policy decision.

Mr. Morgan indicated that while the Bedford Watershed Advisory Board is the primary Board responsible for making recommendations, on this watershed, to Northwest Community Council, recommendations for this study will go to Regional Council. He requested that any public submissions be sent to him by July 6, 2012, prior to the Bedford Watershed Advisory Board's next meeting on July 11, 2012.

Mr. Morgan introduced Mr. Russell Dmytriw, Mr. Gregor, and Ms. Nora Donald, consultants from AECOM.

Mr. Dmytriw and Mr. Gregor, gave a presentation outlining the draft Preliminary Report of the Watershed Study. The following points were discussed:

- What is a Watershed Study
 - An assessment of the ecological and hydrological features and functions of a watershed.
 - Where the wildlife corridors are; what the protected species are; where the wetlands are and how they function
 - Water quality and flow through the system
 - Shape of lakes and direction of wind
 - An approach to understanding likely changes in these features and functions as a result of future development

- An evaluation of mitigation options and their efficiencies for protection of the watershed
- Origin and Objectives
 - Recommend Water Quality Objectives
 - “*Maintain the existing trophic status of our lakes and waterways to the extent possible*” – Regional Plan
 - Thirteen objectives as listed in Policy E-17 of the Regional Plan
- Report and Presentation Timing
 - Presentation 1: Scope and Objectives (October 26, 2011)
 - Presentation 2: draft Preliminary Report (June 20, 2012)
 - Presentation 3: draft Final Report (Fall 2012)
- Data Collection – Field Work
 - Install temperature and flow level recorders (five stations)
 - Records every five minutes; water level data collected once a month
 - Measure velocity for calibration of hydraulic models
 - Water quality sampling (four events, five supplemental stations)
 - Elevation survey of control structures
- Watershed Characterization
 - Spatial Modeling – existing and future conditions
 - Identify wetlands, land uses, natural and sensitive areas, etc.
 - Historical Water Quality Data Analysis – current conditions
 - Select key water quality parameters for consideration
 - Total phosphorous
 - Nitrate
 - Ammonia
 - Total suspended solids
 - Chloride
 - *E. coli* bacteria
 - Data Sources
 - Historical total phosphorous concentrations
- Setting Water Quality Objectives
 - Determine parameter list
 - Review Water Quality Objectives from other jurisdictions
 - Establish Water Quality Objectives based on existing water quality
 - Use models to evaluate development effects on water quality – Lake Capacity Model (LCM) and USEPA Water Storm Management Model (SWMM)
- Next Steps
 - Review Water Quality Objectives
 - Model Planned Development Scenarios
 - Identify how development changes and historical conditions can be mitigated
 - Recommendations

Ms. Wendy McDonald, Halifax North West Trails Association, questioned if the assessment of flow through the system is only possible by being onsite at the time.

Mr. Dmytriw explained that doing the assessment once a month onsite allows AECOM to build a curve, using the peak level data. Once the curve is built, it can be used at any time to assess changes in depth, as long as you have a depth reading. He noted that there is a separate curve for each site.

Ms. Mary Ann McGrath, Kearney Lake – Chair of Kearney Lake Residents Association, noted that the consultants are sampling at the point where the brook from Washmill Lake flows into Kearney Lake; questioning the possibility of inputs from the Bicentennial Highway.

Mr. Dmytriw confirmed that inputs from everything upstream would occur, including highway run-off.

Mr. Bob McDonald, Halifax Field Naturalists and Halifax North West Trails Association, questioned if the consultants considered measuring pH and trace metals.

Mr. Gregor explained that they tried to keep the new sampling program at a minimum to keep costs down and to match the historical data. Mr. MacLellan confirmed that routine sample analyses for metals and pH are conducted by HRM. Mr. Gregor noted that pH is not likely to be largely affected by urbanization.

Mr. McDonald questioned the pH level of Quarrie Lake.

Mr. Gregor stated that that the pH level of Quarrie Lake was not summarized in the report but that he would check his records.

Ms. Wendy McDonald, Halifax North West Trails Association, questioned why Susie's Lake was not included.

Mr. Gregor stated that in order to get a representative sample, other than getting in a boat to measure, it would mean added time and cost. He noted that Susie's Lake and Quarrie Lake are very similar in water quality, at least in surface area, and that Susie's Lake flows into Quarrie Lake.

The Board noted the acid reduction issue that is significant in Bayers Lake. The Board questioned whether or not that would impact the water quality, especially if there was development on the south side of Susie's Lake.; thus requiring a significant pH monitoring system.

Mr. Dmitriw referred to the geology map in the report where the Halifax formation is very limited to the very southern tip of the watershed. He explained that since a lot of that Halifax formation has been developed already, the remaining area that is likely to be developed will not have significant impacts on water quality throughout the watershed.

Mr. Bob McDonald, Halifax Field Naturalists and Halifax North West Trails Association, questioned the average un-ionized ammonia levels of Black Duck Brook being two and a half times the Water Quality Objective.

Mr. Gregor explained that with Black Duck Brook, the average level is right at the detection limit. He agreed that it is higher than the Water Quality Objective but that such an issue occurs when the detection limit used for sampling is higher than the guideline.

Ms. Mary Ann McGrath, Kearney Lake – Chair of Kearney Lake Residents Association, noted that there is a sewer overflow at the southern end of Little Kearney Lake that could be another mitigating factor.

Mr. Gregor agreed, noting that there could be sewer influences or overflows in these data measurements as well.

Bruce E. Smith, Halifax North West Trails Association, inquired why the consultants did not do any mineral testing. He acknowledged the cost constraints but questioned whether such testing should have been deemed valuable enough. Mr. Smith questioned why there was no sampling on Susie's Lake when it is the largest water surface area of all of the lakes and although it is not a headwater, it is close to a headwater. He noted that given the threat Susie's Lake is under because of some future development that has been approved, he thought it would be valuable to know the lake's levels prior to development in order to compare levels when the development takes place. Mr. Smith offered to take the consultants out onto Susie's Lake to collect samples.

Mr. Gregor agreed that the more data, the better but that he was bound by the practical cost constraints of paying for sampling. Regarding mineral testing, he explained that not all variables can be modeled. Focus was placed on what AECOM thought would be the most important variables.

Mr. Bob McDonald, Halifax Field Naturalists and Halifax North West Trails Association, questioned whether or not evaluation of the inherent buffering capacity of the lakes had occurred, since many of the lakes are pristine.

Mr. Gregor explained by using phosphorous as an example. He noted that when you build a septic system on rock, even though the bed is built above the rock, ultimately you will still get a bloom down to the bed/soil rock interface. He further noted that in the case of Kearney Lake, where some of the septic systems are at or just barely above the water bed, the systems are not functioning very well.

Ms. Mary Ann McGrath, Kearney Lake – Chair of Kearney Lake Residents Association, referred to the total phosphorous peak points on Kearney Lake. She inquired if, removing the potential for an impact from the sewer overflow station, you could better mitigate peak rainfalls by better control of the dam and/or the way the dam was operated.

Mr. Dmytriw indicated that one of the original tasks was to evaluate the potential for water quality improvements by changing water levels by way of dams. He stated that at this time, dams are not permitted by the provincial government to change the water level.

An unidentified gentleman, referred to a Regional Plan reference to keep Susie's Lake area free of further development. He inquired what the effect would be of allowing development and what would be the benefit of not permitting development.

Mr. Gregor indicated that modeling had not been conducted to look at the impact on those headwater lakes.

Councillor Debbie Hum, District 16, Rockingham – Wentworth, referred to the development of Bayers Lake Business Park. She questioned Mr. Morgan as to whether or not Regional & Community Planning had considered making the requirement to undertake water quality testing available for any future developments.

Mr. Morgan indicated that a Development Officer can only administer the regulations put in place so if the requirement is not within the Development Agreement, it cannot be enforced.

Councillor Hum questioned the possibility of a motion from either the Environment Committee or Community or Regional Council on requiring water quality testing. She noted that she will send her own inquiry.

The Chair relayed the following question/comments provided by Councillor Peter Lund in his absence:

Councillor Lund indicated that it is not clear that Objectives 3 and 11 will be met from the Next Steps scope of work. He stated that the scope of work needs to be clear that objectives will be met as to whether future planned developments will impact lakes, how much development and what type of development can be accommodated without potentially impacting the lakes, and that areas suitable / not suitable for development are identified.

Councillor Lund stated that the potential impacts related to malfunctioning on-site septic systems should be addressed. He noted that the outflows from Bayers Lake Industrial Park have not been addressed nor sampled, to determine whether they have potential to impact Susie's Lake. He further noted that the inlet to Washmill Lake from Clayton Park has also not been sampled. There is therefore, no early warning system in place.

Councillor Lund explained that there are planned developments around Washmill Lake Court Underpass which have been presented to Halifax Watershed Advisory Board, but not to Bedford Watershed Advisory Board. These developments will discharge stormwater to Susie's Lake. He questioned how this added discharge would be monitored and what mitigation measures will be put in place.

Councillor Lund noted that there is no mention of pesticides use / control. Elevated phosphorous can release nitrates to water.

Councillor Lund noted that the last paragraph under Section 5. Next Steps describes making recommendations for a Water Quality Monitoring Program, particularly to better calibrate phosphorus loading model. This recommendation is good and its importance should be emphasized, particularly in consideration of the recent termination of HRM's Water Quality Sampling Program. More data is required to establish background.

Councillor Lund questioned why Big Horseshoe Lake is listed as mesotrophic when it is noted that only two samples were collected, which is not considered statistically valid.

Councillor Lund asked how potential impacts from blasting would be mitigated. The soils are thin and there is little to no buffering capacity.

The Chair questioned if the consultants can carry this plan out without additional water quality sampling being done. Mr. Gregor indicated that while they can do a lot of sampling, they cannot carry out the plan.

Ms. Wendy McDonald, Halifax North West Trails Association, referred to Policy E-17 and questioned how the 12 other requirements will be identified.

Mr. Dmytriw stated that the remaining 12 objectives of E-17 will be addressed in the final report.

Ms. McDonald inquired if the consultants have a formula or mode of identifying the volume of water coming off roofs since we are receiving higher amounts of rain.

Mr. Gregor explained that with stormwater management modeling, they can model a specific storm event after it happens and tell you how much water was generated and the water level increases downstream.

Councillor Debbie Hum, District 16, Rockingham – Wentworth, indicated her concern in light of the termination of HRM's Water Quality Sampling Program.

Mr. Gregor explained that they could not have moved the study ahead much more based on the time constraints of a one year study. The biggest concern was flow monitoring data and the lack of stations and/or data. He noted that there is opportunity for volunteer flow monitoring.

Bruce E. Smith, Halifax North West Trails Association, asked for clarification on the line of general increase displayed on the Kearney Lake's Three Year Average graph. He asked if the pH and phosphorous levels will still continue to increase if nothing is done and no further development occurs on these lakes. Mr. Gregor noted that based on the data, levels will still continue to rise.

3. CLOSING COMMENTS

The Chair reminded members of the public to submit comments to either Mr. Morgan or the HRM website by July 6, 2012 for discussion during the Bedford Watershed Advisory Board's meeting on July 11, 2012.

4. ADJOURNMENT

There being no further speakers, the Chair thanked the consultants, members of the public and staff for attending and the meeting was adjourned at 9:15 p.m.

Kim Cahill
Legislative Support