# MIDDLE MUSQUODOBOIT WATERSHED ADVISORY COMMITTEE

### Meeting Notes March 8, 2017 – 7:00 pm Nova Scotia Natural Resource Education Centre, Middle Musquodoboit

### <u>Attendance:</u>

Andrew Faulkner (AF), Development Officer	Halifax Regional Municipality
Barry Geddes (BG), Watershed Manager	Halifax Water
Dawn MacNeill (DM), Watershed Planner	Nova Scotia Environment
Anna McCarron (AM), Source Water Planner	Halifax Water
Matthew McFetridge (MM), Forest Technician	NS Dept. Natural Resources
Hugh Parker (HP), Representative	Musquodoboit River Watershed Society

### **Regrets:**

John Dillman (JD), Representative	Nova Scotia Federation of Agriculture
Valerie Farnell (VF), Representative	Community Customer

## 1. Attendance / Introductions:

AM/BG distributed the following materials:

- Meeting Agenda;
- November 9, 2016 Meeting Notes;
- Terms of Reference Approved Version;
- Environmental Regulations Handbook for NS Agriculture: Cover, Table of Contents, and pp. 11-12
- Graphs: a) *E. Coli* and b) Nitrate; and
- Source Water Protection Annual Report.

## BG called meeting to order:

- Regrets noted as above; and
- No quorum noted (insufficient community representation).

2. Old Business:	<u>Action</u>
a. Review of November 9, 2016 Notes and Deferred Action Items:	
<i>i.</i> Emergency Preparedness:	
• Annual Firefighters Meeting (MM/DM/BG)	
<ul> <li>MM to confirm time and location;</li> </ul>	
Action: Confirm time and location of firefighter meeting.	MM
<ul> <li>Presentation to firefighters is to identify source water protection areas; and</li> </ul>	
<ul> <li>DM recommended ensuring that each agency's priority is taken into consideration; i.e., how and why water quality protection is important for Halifax Water; and extinguishing the fire as quickly and efficiently as possible is the firefighter's priority.</li> </ul>	
• Emergency Contact Numbers:	
<ul> <li>A shapefile has been created whereby important Halifax Water, NSE and DNR data is embedded into GIS data files including:</li> </ul>	
<ul> <li>all provincial and water utility emergency contact numbers provided by NSE and DNR;</li> </ul>	
<ul><li>data relevant to DNR's fire suppression policy; and</li></ul>	
<ul> <li>locations of NS water supplies and corresponding emergency contacts for each area.</li> </ul>	
Action Item: BG to send new Customer Care Call Centre number to DM for insertion into GIS data file.	BG
b. Education and Awareness:	
<i>i</i> . Signage:	
$\circ$ not installed;	
<ul> <li>new design attempt abandoned due to lack of design student intern availability; and</li> </ul>	
$\circ$ signs in stock will be installed in due course.	
<i>ii.</i> Brochure:	
<ul> <li>HP distributed the SWP Brochure to various places in the community; e.g., Reid's restaurant.</li> </ul>	
Action: AM to ask Councillor Steve Streatch whether he has a Newsletter that contact information may be put into.	AM
c. <u>Blackie Lake:</u>	
<i>i</i> . Information gathering update:	

	• AM and BG visited the Blackie Lake site to investigate watershed boundaries.	<u>Action</u>
	<ul> <li>Initially it was believed Blackie Lake fell inside the Middle Musquodoboit River watershed based on contour elevation and wet areas mapping.</li> </ul>	
	• The site visit determined that the Blackie Lake surface water flows towards the Stewiacke River watershed instead of toward the Middle Musquodoboit watershed.	
	• Therefore, information requested regarding the concern over Blackie Lake fish populations is under Fisheries and Oceans Canada (DFO) and provincial regulators' jurisdictions; and the Committee's Action items associated with Blackie Lake (including acquiring data from Northern Pulp) are not applicable and will be removed from the agenda.	
Action: Rem	nove this item from agenda.	BG/AM
ii.	Watershed Boundary Changes:	
	<ul> <li>The original Middle Musquodoboit watershed area boundary delineated by Halifax Water changed as a result of the ground- truthing investigation around Blackie Lake and to coincide with the new watershed area boundaries established by Nova Scotia Environment (NSE).</li> </ul>	
	<ul> <li>The new watershed area boundary coincides with NSE's 2016 tertiary watershed boundaries except for two (2) tertiary areas located on the east side of the watershed boundary around the intake area, which remains as previously determined by Halifax Water with respect to the intake to the water supply plant (WSP). The Map attached to the Terms of Reference illustrates these changes and the new watershed area boundary.</li> </ul>	
	• DM requested that the shapefile for the new boundary area be sent to NSE for their records.	
	d shapefile of the new Middle Musquodoboit watershed area DM for their records.	BG/AM
d. <u>Term</u>	s of Reference (ToR):	
i.	Approved copy circulated:	
	• The ToR were circulated and approved via email using the "vote" tool on the email.	
ii.	Forestry/Woodlot Owner and Other Membership Recruitment:	
	<ul> <li>There is still a lack of membership per the ToR due to the resignation of two Committee members: Valerie Farnell, representing a community drinking water customer; and John Dillman, representing the farm community.</li> </ul>	

<ul> <li>A large private landowner from the farming community was recommended by a Committee member to sit on the Committee.</li> </ul>	<u>Action</u>
<ul> <li>A forest representative from the community of Brookfield, who conducts most of his work in the Middle Musquodoboit area was recommended by a Committee member</li> </ul>	
<i>iii.</i> Community (Customer) representative:	
<ul> <li>Despite efforts to recruit a Customer Community representative, no one has come forward. The Committee recommended contacting a Halifax Water staff member who lives within the watershed boundary, as well as Councillor Steve Streatch to solicit recommendations for filling the vacant position.</li> </ul>	
<ul> <li>If no one comes forward through the efforts and outreach described above, then the ToR will need to change regarding the number of community members required on the committee.</li> </ul>	
• The number of technical representatives is adequate.	
Action: Contact the recommended people as described above for the vacant Watershed Advisory Board positions	BG/AM
e. Logo Design Contest	
• Postponed due to lack of success in acquiring an intern.	
Action: Create a contest in local school(s) to design a logo for the Committee which will help to raise awareness in the community at the same time.	KT/AM
f. <u>Livestock Access to Watercourses – Water Quality</u>	
<i>Q:</i> How can cattle be kept out of the brook? Are there regulations to prevent cattle from accessing watercourses?	
<b>A:</b> BG brought the Committee's attention to pages (11-12) from the handout <i>"Environmental Regulations Handbook for NS Agriculture"</i> by Lorne Crozier (2004).	
Discussion:	
• Page 11 "While there is no law that specifically says "you shall not allow your cattle to enter a natural waterway body", there are several laws effectively say this in other ways. The key ones among these are: the Fisheries Act, the Environment Act".	
<ul> <li>Page 12 "Recommended Agricultural Practices within Municipal Drinking Water Supply Areas in Nova Scotia".</li> </ul>	
<ul> <li>DM added that the recommended agricultural practices are poised to be updated in the near future.</li> </ul>	
<ul> <li>Current Best Management Practices (BMPs) with regard to cattle in the proximity of watercourses have already helped to influence water quality source water protection programs.</li> </ul>	

0	DM is currently writing an article for BMPs regarding pesticide use in the agriculture industry to help further influence BMPs. Funding is available to farmers who wish to implement co- operative solutions to protect water quality by using other solutions that restrict access to watercourses while continuing to allow cattle to roam. This funding allows, for example, areas where no buffers exist and where cattle are permitted to enter the	<u>Action</u>
	watercourse to be restored before regulations are created.	
upstream from w	ample point been identified to collect baseline water quality where cattle have been seen standing in Lindsay Brook, near & meets Higginsville Road? HP	
deemed to be to therefore consid	er examined four (4) potential sites. Three (3) of the sites were o difficult for Halifax Water staff to access year-round and were lered unsuitable. A fourth site, upstream of the Higginsville Road ttle have been seen in Lindsay Brook, was deemed suitable.	
Discussion:		
0	HP alternatively suggested that the sample point below his driveway could be an option. HP also suggested other sites.	
0	BG explained that a new baseline water quality collection site should be as free from anthropogenic activity impacts as possible and that the four sites deemed to be suitable were too difficult to access. However, if any of the sites are passable during drier periods, the site could be sampled seasonally rather than monthly, as they are being done now.	
0	BG said he would visit HP in the spring to examine the sites together and determine where a suitable site may be accessed.	
Action: BG to collection point	visit HP to assess a new baseline water quality sample site t.	BG
<i>i</i> . V	Water Quality Data:	
0	BG shared <i>E. coli</i> and Nitrate water quality data with the Committee.	
0	In most surface water supplies, including the Musquodoboit River, natural sources of <i>E. coli</i> are common. Recent research suggests that elevated levels of <i>E. coli</i> in the Musquodoboit River come from both cattle and human-sourced activities. The human source suggests that septic systems are either malfunctioning or perhaps directly piped to the water supply (straight piping).	
0	The nitrate graph suggest that during heavy rainfall events (>25ml in a 24 hr period) nitrates are being washed from the field adjacent to the intake, causing short-term spikes.	
0	Although <i>E. coli</i> is treatable and can be removed at the water supply plant, nitrates are not, hence the importance of removing it	

<ul> <li>from the source water, or preventing it from entering the source water supply.</li> <li>Parameters such as turbidity, nitrates, <i>E. coli</i> and phosphate levels often spike during rain events.</li> <li>Action: Identify water quality collection sample sites by location as well as by abbreviation name on map/ spreadsheet for easier identification for Committee members.</li> <li>Action: Invite members to tour the Water Supply Plant to gain a better</li> </ul>	
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by abbreviation name on map/ spreadsheet for easier identification for Committee members.	G
Action: Invite members to tour the Water Supply Plant to gain a better BG/	
understanding of how the treatment system works.	AM
November 9, 2016 Notes not approved due to lack of quorum.	
3. New Business:	
a. Source Water Protection Report:	
• The SWPR is a snapshot of the annual activity conducted by a utility for each of its water supplies.	
• The SWPR is due April $1^{st}$ of each calendar year.	
• The last two pages of the report circulated at this meeting are specific to the Middle Musquodoboit Watershed area.	
<ul> <li>BG asked the Committee members to review the report and get back to him with comments by mid March.</li> </ul>	
Action: Provide any comments on SWPR to BG by mid-March	11
Action: In SWPR, identify the Guideline units.	G
${\it Q}$ : Who does the third party water quality sampling for Halifax Water?	
A: Maxxam	
4. Landowner Questions:	
• None	
5. Municipal Updates:	
<ul><li>No development updates.</li><li>AF is being seconded. Another HRM rep may attend the next meeting.</li></ul>	
6. Next Meeting:	
• November 8, 2017	
7. Adjournment:	
• 9:10 p.m.	
Chaired by: Barry Geddes / Notes by: Anna McCarron	