

MIDDLE MUSQUODOBOIT WATERSHED ADVISORY COMMITTEE



Meeting Minutes

November 6, 2019 – 6:30 pm

Nova Scotia Natural Resource Education Centre, Middle Musquodoboit

Attendance:

Andrew Faulkner (AF), Principle Planner & Development Officer, Halifax Regional Municipality
Barry Geddes (BG), Watershed Manager (*Chair*).....Halifax Water
Dawn MacNeill (DM), Watershed Planner.....Nova Scotia Environment
Matthew McFetridge (MM), District Forest Technician.....NS Department of Lands and Forestry
Hugh Parker (HP), Representative.....Musquodoboit River Watershed Society (MRWS)
Dave Taylor (DT), Representative.....Forestry/Woodlot Owner
Kerry-Anne Taylor (KT), Representative.....Community Landowner

Guest Presenter:

Michael Kittilsen (MK), Senior Agriculture Extension Worker.....NS Department of Agriculture

Regrets:

Anna McCarron (AM), Source Water Planner (*Secretary*).....Halifax Water
Rob Kay (RK), Representative.....Middle Musquodoboit Community/Customer

Absent:

Mark Sutherland (MS), Representative.....Agriculture Sector

1. Attendance / Introductions:

- BG distributed:
 1. November 6, 2019 Draft Agenda;
 2. March 6, 2019 Draft Meeting Minutes;
 3. Middle Musquodoboit Watershed Area Firefighters' presentation;
 4. Middle Musquodoboit Watershed Newsletter; and
 5. N'Rich Presentation Slides.
- MK distributed to the members:
 6. [Manure Management Guidelines \(MMG\)](#)
 7. [A Guide to Agricultural Best Management Practices within Municipal Drinking Water Supply Areas in Nova Scotia \(Agriculture BMPs\)](#)

Middle Musquodoboit Watershed Advisory Committee Meeting Called to Order by Chair (BG)

- Regrets conveyed (see above); and
- Quorum noted.

2. Presentation – Michael Kittilsen (MK)

MK is a Senior Agriculture Extension Worker, tasked to aid farmers and/or find others to assist regarding land and other agriculture issues;

- previously sat on advisory boards;
- grew up as the son of a dairy farmer on pasture land situated on a river, which the cattle accessed for drinking water;
- sat on a river restoration committee involved in salmon restoration 6-7 years ago and wrote funding proposals, providing them with the ability to hire students;
- work at the [Nova Scotia Department of Agriculture](#) (DoA) that includes working with the general public to conduct site assessments and engaging with them about farming topics;
- basing current presentation on items distributed (see distributed items 1.6 and 1.7 above);

Q: Are there fertilizer setbacks in the BMP document? (BG)

A: Yes. In Appendix A. (MK)

- Agriculture BMPs provide guidance on farming best management practices and references regulations;
 - There are two primary sets of regulations regarding farming with respect to river water; they are the *Federal Fisheries Act* and the *Environment Act*. These *Acts* essentially state that deleterious substances may not be released into a waterway; and in such an event, charges may be laid. These regulations provide the best defence against river pollution;
- MMG;
 - the authoritative document for the province about manure: the when, where, why and how of manure applications; and the density, how much an animal will produce and storage for the year, which engineers use for reference;
 - references special land use designations that could restrict or prohibit agricultural activity; e.g., *Protected Water Area (PWA)* designations;
- BG reminded the committee that Middle Musquodoboit is not a designated *PWA*;
- DM added, there are 77 provincial municipal water supplies – 25 are *PWAs*;
- not every water supply area must have a *PWA*; it's whatever works for each community;

Q: Where does the push for *PWAs* come from? (DT)

A: Among the triggers initiating *PWA* development is a utility's limited capacity to conduct education or land use planning. (DM)

- there are also municipal land use bylaws that govern what land use practices are permitted (i.e., regulations adopted by the community and Council);
- the Agriculture BMPs Appendices and the MMG document provide detailed specifications for application and storage of commercial fertilizers, handling and setbacks from the watercourses of fertilizers, manure, pest control and chemicals of any sort that are spread on the farm; and fuel storage distances from a watercourse;

Q: *Are there storage and/or application setbacks; e.g., chemical fertilizer storage setback limits from a brook or maximum concentration level applications near a brook? (BG)*

A: Yes and no. There are minimum separation distances from ditches, watercourses, wellheads and municipal water supply intakes for fuel storage and fertilizer application in the Agriculture BMPs; but no setback distances for fertilizer storage. (MK)

Q: *How long have the setbacks been in place? (DT)*

A: Since the MMGs were established in 2005-6. (MK/DM)

Q: *How do you police it? (DT)*

A: It is not policed. It is up to the farmers and producers to review their respective BMPs. (MK).

A: BMPs are not regulations, so they cannot be policed. However, some utilities have created PWAs and state in their regulations that the BMPs **must** be followed, which turns the applicable BMPs into regulations under that specific PWA. (DM)

Q: *Behind a dairy farm is a pond and a channel going into a brook; where they intersect, the water is coloured green and yellow – a hose is dripping into the brook there. (HP) In this case what is the standard procedure? Who should be contacted if it is an issue of concern? (BG)*

A: Call me, a local rep, or Nova Scotia Environment (NSE). The NSE inspectors are permitted to go on the property. (MK)

Q: *Does the Department of Agriculture have permission to go on the property? (DT)*

A: No. It is difficult for departments of DoA and/or NSE Environment to change what is happening. Need to work with farmers. There have been successes; e.g., rerouted a milk waste house into manure storage and spread it along with manure, which is an acceptable practice.

- water management on farms is encouraged, to direct rain or snowmelt away from manure storages and from where cattle reside – away from the farm;
- [nutrient management plans](#) are very important – a tool farmers use to balance the amount of fertilizer the farmer will put on the field with what the plants take up;
- not concerned about the amount of manure that is applied because the plants will take up everything – more manure is needed;
- [Environmental Farm Plan](#) (EFP) – a voluntary program for farmers – NS Department of Agriculture administers the Plans – farm planners assess the air, water, soil and potential contaminants and make recommendations on how the farmer can rectify potential polluting practices.

Q: *Is an Environmental Farm Plan information private? i.e., this farm has a farm plan and this one does not. (DM)*

A: It's a better question for one of the farm planners. (MK)

Q: *Could you say what percentage of farms in the watershed have an EFP? (DM)*

A: Doubt they would entertain providing that information. It falls close to [Freedom of Information and Protection of Privacy Act](#). (MK)

Q: *Are specifically-named farmers doing EFPs? (DT)*

A: Some farmers conduct a [biodiversity](#) plan, which is not the same as an EFP. (DM/MK)

- Under Livestock Production we encourage farmers to fence off cattle from watercourses;

- two programs are bank stabilization and stream crossings, which cost approximately \$40-\$50 thousand to implement;
- provide a clean crossing – i.e., a designed bridge or designed culvert inspected by NSE;

Q: *Are they allowed to have a hard crossing, such as rocks in the river? (HP)*

A: Yes. Although that might be considered a watercourse alteration, which would require a permit. Nothing stops a farmer from having any kind of crossing across a river. (DM/MK)

Q: *Would DoA entertain providing additional funding for extra precautionary environmental measures? (BG)*

A: The funding we have for farmers is cost-shared – 60% provincial and 40% federal. The farmer fronts the money and gets about 25% of the cost to do the project back. (MK)

Q: *Are the funds evenly spread across the county or province? (BG)*

A: It is first come first served. Most important is the ranking of items that farmers indicate when applying for money. They must check off a list of specific items. If they are in a drinking water supply area, they are given higher priority. Another example is fuel storage, which rates higher than tile drainage. The farmer who checks off fuel storage is more likely to get funding than the farmer who checked off tile drainage. (MK)

Q: *Do the farmers know this? (BG)*

A: No. But they must fill out the form, and the department analyses those. (MK)

Q: *Is being aware that their funding could be bumped up, based on specific needs, something that should be indicated? (HP)*

A: Tile drainage ranks higher from the farmer's perspective, because it assists the farmer in getting crops in sooner, which provides a monetary incentive for the farmer to go after what will benefit their bottom line the best rather than what might be better for the environment.

Comment: Reminds DT of the Forest Stewardship Council program. When people became aware of the ranking order, they would put the higher ranking down whether it was true or not.

Q: *Do you verify the farmer's application? (DM)*

A: We take their word for it, but we know where they are.

Comment: We can provide GIS files regarding where PWAs are, which would provide a simple verification. (BG)

Comment: If they know the opportunity to get funding is higher in a watershed area, then perhaps more people will apply for funding. (DM/BG)

Q: *Barbed wire across a watercourse is a hazard to navigation. Do you make farmers aware that navigable waters are not private land?*

A: NSTIR is responsible for navigation.

Q: *Is bank stabilization and keeping livestock out of streams part of the funding? (DM)*

A: Yes. Funding is available to keep livestock out of streams. Buffers, fencing and a solar system and nose pumps to get water to cattle without disrupting watercourses are also eligible. (MK)

Q: *What is the funding process? (HP)*

A: Maximum 25% of the funding will be returned. Two intake opportunities to submit applications; in spring and fall. Submit a simple application to the DoA with tombstone

information – how much and what they farm with address etc. In a couple of months there is a response regarding the approval. If approved, they get a cheque back after receipts are submitted.

Q: *Let's say I put in for tile drainage in a PWA and someone else puts in for a water crossing in a non-PWA? (BG)*

A: Good question. (MK)

Q: *Is there funding available to help farmers practice BMPs that mitigate environmental impacts? (BG)*

A: No

Comment: Through our sampling program, we learned that our newly improved water supply treatment plant could not sufficiently remove nitrates. The problem arose from the timing of spreading manure on the field and the subflow, such that not enough plants were available to uptake the fertilizer nutrients when planted in corn, but when planted in legumes there was better uptake.

Q: *Could funding for water quality testing be provided to help overcome those challenges? (BG)*

A: Consult the MMG. (MK)

A: Consult the Agricultural BMPs. (DM)

Q: *Does DoA have staff expertise to help engineer and cost a stream restoration program? (HP)*

A: For near-storage programs, yes, but not for bank stabilization. (MK)

Q: *Have you ever worked in conjunction with another program; e.g. Adopt a Stream? (BG)*

A: Yes. We work with other programs if it is not another government funding source (Federal or Provincial but not sure of Municipal) and AaS is not a government source.

Comment: BG sees this as an opportunity for utilities to acquire funding; so long as it is not considered a municipal government.

Action: **MK will investigate whether a utility (Halifax Water) would be eligible for funding.**

Q: *Do nutrient plans or EFPs get audited? (BG)*

A: No they are not audited. The Nutrient Management Plans and Environmental Farm Plans are good for five years and must be renewed. In order to access any of that funding for soil and water conservation type projects; i.e., near storage, fuel storage or anything that can contaminate soil, water or air must have an EFP and must include in their application the appendix of their approved EFP. The EFP is not auditable.

Q: *If they didn't identify as something they should do, would they still be eligible for funding?*

A: It is unlikely it wouldn't be identified. The group is very thorough and knowledgeable.

Q: *Halifax Water had a booth with a picture of cattle in the water. Do you have anything that is palatable to people who are against the idea that cattle shouldn't be in the water. (HP/BG)*

A: I have. It is an education process. (MK)

Q: *Do you have neutral products that could be used for water groups and others to use? (BG)*

A: Not that I know of. (MK)

MK was thanked for his presentation and he left the meeting.

	<u>Action</u>
<p>Discussion/questions about presentation outcomes:</p> <ul style="list-style-type: none"> • If the DoA are giving priority to drinking water supply areas, why are they not sharing the information with farmers if more funding could be provided to them in such areas? • There seems to be a great opportunity for the advisory Committee to improve environmental protection within a water supply area by sharing information with farmers that there is money to be had. • Propose sending a letter to DoA citing the presentation and asking if there is room for environmental education; e.g., suggest informing farmers about the watershed area and funding opportunities. • Is there a difference between being in a PWA or a municipal water supply with respect to funding priorities? • MS has applied for funding before. Perhaps the first step is to ask MS to shed some light on the processes. • Need to clarify whether the EFP may be audited or whether the project receiving funding may be audited, or whether anything is audited. • Do they use up all the money in the spring or hold back some of the funds for the fall? This may impact when to apply for funding. 	
<p>Action: Determine what avenues are there for farmers to know of funding opportunities and how they are prioritized with respect to the environment.</p>	<p>AM/BG/ MS</p>
<p>Action: Contact DoA to clarify whether EFPs or their projects are audited.</p>	<p>AM/BG/ MS</p>
<p>3. Approval of March 6 Meeting Minutes:</p> <ul style="list-style-type: none"> • Second set of Q and A's page 5: "Guarantees that cattle will not be in the brooks again". Reword to make clear that this means only on MS' property • DT moved to approve Minutes as amended, seconded by KT; all in favour. 	
<p>4. Old Business:</p>	
<p>a. Emergency Preparedness:</p>	
<p><i>i. Update on Middle Musquodoboit and Area Firefighters Presentation</i></p>	
<ul style="list-style-type: none"> • AM presented at the Middle Musquodoboit Firefighters meeting on Wednesday March 27 in their Fire Hall (see handout 1.4); <ul style="list-style-type: none"> ○ Approximately 25 people attended, including members from neighbouring firefighter associations; ○ AM left a 48"x36" map of the watershed area (page 6 of presentation) and a 24"x18" map of the service areas (page 8 of presentation) to post in the Middle Musquodoboit fire station; ○ Laminated 8" x 10" maps of the watershed area were given out as well to members to have in their trucks; ○ DLF also presented about the 2019 Wildfire Season, which AM attended; 	

<ul style="list-style-type: none"> • A very important outcome of the meeting was Rob Kay’s offer to volunteer his services as a customer rep on the Middle Musquodoboit Watershed Advisory Committee. • Welcome and thank you Rob! 	<u>Action</u>
<p>Action: Remove item from agenda.</p>	AM
<p>b. Education and Awareness:</p>	
<p><i>i. Signage:</i></p>	
<ul style="list-style-type: none"> • From AM’s notes, BG updated the MMWAC on the status of the remaining two (2) (of five (5)) signs to be placed in the watershed area: 	
<p>Sign 1:</p>	
<ul style="list-style-type: none"> ○ AM visited the landowner at 8442 Moose River Road (Lindsay Lake) about placing a sign next to the fire hydrant in the right of way next to his property. He said he was fairly certain it would be OK to place the sign there as long as it doesn’t obstruct his view too much. ○ He also recommended contacting his neighbour about placing the sign there, which has not yet been done. 	
<p>Sign 2: Upper Musquodoboit (bottom of Stuart Hill);</p>	
<ul style="list-style-type: none"> ○ NSPI has stopped responding to the request to place a sign adjacent to their property, so another site has been proposed; ○ Through Google Maps and a physical ground search, another site that falls on Crown Land at 8385 Highway 224 Upper Musquodoboit is being considered; ○ AM contacted MM requesting permission to place a sign there; ○ At last check-in with MM on October 7, the request was still being reviewed by the province’s Land Administration Coordinator; ○ further discussion is necessary to refine the location since it appears to be next to a steep bank, near a wetland and beside the trail; and ○ this sign proposed to be installed at the same time as the one on Moose River Road will be, to save on installation costs. 	
<p>Action: Continue to work on installing the last of the Middle Musquodoboit Watershed Area signs in the watershed area.</p>	AM
<p><i>ii. Newsletter/Outreach Opportunities (BG read AM’s notes):</i></p>	
<ul style="list-style-type: none"> • A Newsletter was created in time for the Halifax County Exhibition (see item 1.4. above) and was/may be distributed through the following means: <ul style="list-style-type: none"> ○ distributed via Canada Post admail to residents throughout the watershed and included at the Exhibition display; ○ including the Newsletter in customers’ bills was deemed to be feasible by Halifax Water Customer Service. This will be targeted for the next billing cycle; and 	

<ul style="list-style-type: none"> ○ Committee members are encouraged to distribute Newsletters and in strategic locations for pick up; e.g., Reid’s Restaurant. 	Action
<p><u>Create newsletter to distribute through bills and at exhibition booth.</u></p>	<u>Complete</u>
<p>iii. <i>Logo Design Contest – Adopt-a-Watershed Awareness Program Design</i></p> <ul style="list-style-type: none"> • discussed branding with Halifax Water communications group; 	
<p><u>Send two or three mock-ups of the logo for MMWAC comment.</u></p>	<u>Complete</u>
<p><u>Create a plan for how to use the drawings for the booth.</u></p>	<u>Complete</u>
<p><u>Create two or three logos for MMWAC approval before August.</u></p>	<u>Complete</u>
<p><u>Send message to teachers indicating we would like to put select drawings on display as a thank you to students for creating the pictures</u></p>	<u>Complete</u>
<p>Action: Remove from Agenda.</p>	AM
<p>iv. <i>Open House or Booth at Halifax Exhibition</i></p>	
<p><u>AM to investigate getting a booth.</u></p>	<u>Complete</u>
<ul style="list-style-type: none"> • Comments/questions arising from Booth displayed August 16 and 17: <ul style="list-style-type: none"> ○ Wednesday to Friday provides better exposure than the weekend for an exhibition booth display; ○ Questions arising from booth visitors: <ul style="list-style-type: none"> ▪ Do sod farms impact water supply? • We sample (water quality) but don’t specifically target sod. More sod on the southern part but have since moved upstream; 	
<p>Q: Are sod farming industries required to adhere to the Agricultural BMPs? (DT)</p>	
<p>A: Need to ask DoA where sod farms sit regarding BMPs and invite a sod industry rep to make a presentation to the committee. (BG)</p>	
<p>Action: Invite the sod farming community to talk about their industry at one of our meetings.</p>	AM/BG
<p>Action: BG will find out where sod farming sits regarding Agricultural BMPs.</p>	BG
<ul style="list-style-type: none"> • Will Halifax Water be placing restrictions in the watershed? 	
<p>Q: Should we explain to the public what regulations are in place now? (BG)</p>	
<p>Q: Should we explain what HRM bylaws are in place with respect to the water supply? (DM to AF)</p>	
<p>Action: Defer these topic discussions to next meeting.</p>	AM
<ul style="list-style-type: none"> • At next booth: <ul style="list-style-type: none"> ○ create awareness about other issues besides land use planning; ○ volunteers to make the topic clear – we are there to discuss source water protection issues, not fees or tax issues; ○ have more direction for volunteers on how to use the “fish tank”. 	

	<u>Action</u>
<p>c. Terms of Reference (ToR):</p> <p><i>i. Community (Customer)/Landowner representative:</i></p> <ul style="list-style-type: none"> • Rob Kay has agreed to serve on the MMWAC as a customer representative on the Committee; <p>d. Livestock Access to Watercourses Impact</p> <p><i>i. NSSA NSLC Adopt-a-Stream (AaS) Project Update (HP)</i></p> <ul style="list-style-type: none"> • On June 5, Adopt-a-Stream (AaS) staff visited 4 sites of interest on Lindsay Brook along with HP, MS and another local farmer including: <ul style="list-style-type: none"> ○ a broken culvert site; ○ streambank erosion along a walking path; ○ Ditch Brook; ○ Higginsville Bridge (where cows drank from stream). • AaS is studying conceptual plans for the following: <ul style="list-style-type: none"> ○ <u>Higginsville Bridge:</u> <ul style="list-style-type: none"> ▪ AaS considers this to be a good candidate for restoration; ▪ they will return to do some measurements; ▪ everyone is on board and seems to think it is an easy fix, besides some possible issues putting trees on the bank; ○ <u>Ditch Brook:</u> <ul style="list-style-type: none"> ▪ most complicated of all sites; ▪ it is a ditch between two fields, created by farmers “back in the day”, to drain water off the fields; ▪ there may be insufficient flow to divert into Ditch Brook; ▪ potential for about a mile of original stream habitat that would add value to brook salmon if restored; ▪ HP investigating how to restore intermittent streams; ▪ HP contacted a hydrologist about different diversion techniques; might require some engineering work; ▪ Otherwise, MS wants to direct the drainage toward the brook below Higginsville Road and fill in the void; ▪ MS will investigate funding opportunities available through the Canadian Agricultural Partnership (CAP); ▪ HP and MS to conduct further site visits and discuss costs and values to include in AaS funding application; <p>Q: <i>Do you need approval to discharge into a watercourse?</i> (AF) A: Depends: deleterious substances, yes; just surface water, no. (DM/BG)</p> <p>Q: <i>Any more information the Musquodoboit River Watershed Society requires from the committee for this project?</i> (BG) A: No, but good to know the DoA funding options from MK’s presentation. (HP)</p>	

<p><u>Assess how Halifax Water promotes Middle Musquodoboit AaS project activities at the exhibition booth.</u></p> <p>e. Tour of Water Supply Plant and View of Intake:</p> <ul style="list-style-type: none"> • 3:00 pm works for the Committee <p>Action: Send out a Doodle Poll to determine tour date after new committee member is chosen.</p> <p>f. Agriculture Regulations</p> <ul style="list-style-type: none"> • See notes at Item 2: <i>Presentation – Michael Kittilsen (MK)</i> above. <p>5. New Business:</p> <p>a. Atlantic Gold Activities at Moose River</p> <ul style="list-style-type: none"> • Although the Gold Mine itself falls outside the Committee’s mandate, there is concern with paving of and truck traffic implications on Moose River Road, which does fall within the Committee’s scope; <ul style="list-style-type: none"> ○ HP attended a meeting about the mine in Sherbrooke and learned more about its potential impacts, such as air particles; <ul style="list-style-type: none"> ▪ Still waiting on authorities’ response regarding this concern; ○ HP asked authorities whether they would be testing the excess quarry rock used to pave the road, for potential contaminants; <ul style="list-style-type: none"> ▪ NSE responded via email stating that the quarry rock geochemistry and local bedrock was of similar quality. Aluminum was lower than the background data for the area and the quarry rock was found to be non-acid generating. After reviewing the data, NSE granted permission to Atlantic Gold to use this material to pave the road; ○ need to be cognisant about road runoff; HP recommends sampling the water at the Moose River Rd. bailey bridge for baseline; <ul style="list-style-type: none"> ▪ Halifax Water samples for metals at Elmsvale bridge and the whole suite of potential contaminants below the bridge, providing baseline; (BG) ○ cyanide trucks travel over the bridge by the water supply plant; <ul style="list-style-type: none"> ▪ Halifax Water met with the mining company about that; the cyanide is in briquette form; if it goes in the water it can be retrieved; (BG) ▪ keeping things in perspective – consider how many oil trucks travel over that bridge and how little control we have to remove any oil getting into the water vs cyanide briquettes, which can be removed; • Halifax Water would quickly see changes in the water quality; <p>b. Source Water Protection Report Action Items</p>	<p><u>Action</u></p> <p><u>Moot</u></p> <p>AM</p>
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<p><u>BG will explain source water, water quality parameters.</u></p> <p><u>Provide fact sheets at Halifax Exhibition booth.</u></p> <p>6. Landowner Questions:</p> <ul style="list-style-type: none"> • N’Rich® Product Information and Tour <p><u>Conduct a Doodle poll for N’Rich® tour and for the next meeting.</u></p> <ul style="list-style-type: none"> • Tour and presentation were conducted, everyone learned a great deal and was impressed by it; <p>Q: <i>What causes the odour in the community?</i> A: Must put something else in it because there is not much smell in the plant.</p> <ul style="list-style-type: none"> • The field is in production in the first year as opposed to waiting 8 years to become productive through use of conventional fertilizers. <p>Q: <i>Did we ask about pharmaceuticals? (DM)</i> A: I think so? Not sure. Only test what is required. (BG/KT)</p> <ul style="list-style-type: none"> • 10 years ago it couldn’t be given away now it is demand 3 years in advance. <p>7. Municipal Updates:</p> <ul style="list-style-type: none"> • Nothing to report. <p>8. Next Meeting:</p> <ul style="list-style-type: none"> • Have a speaker come in to every meeting, even for just 15 minutes (e.g., <i>Fisheries Act</i> or <i>Environment Act</i>). <ul style="list-style-type: none"> ○ Fall may be better timing since there is less on the agenda than in spring. • Wednesdays at 6:30 are best for most people. • Propose March 11, 2020. Storm date March 25. <p><i>[Note: Rob Kay is unable to attend Wednesday meetings. [AM]]</i></p> <p>9. Adjournment:</p> <ul style="list-style-type: none"> • 8:50 p.m. <p><i>Respectfully submitted by: AM</i></p>	<p><u>Action</u></p> <p><u>Deferred</u></p> <p><u>Complete</u></p> <p><u>Complete</u></p>
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