



## Meeting Minutes

Pockwock Watershed Management Committee			
Date: March 3, 2022 Location: Virtually via Microsoft Teams		Meeting Time: 10:00 a.m.	Adjourned: 12:00 pm
Member name and position:		Agency/Representation:	
Attendees:	Michael Allen (MA), Watershed Planner	Nova Scotia Environment and Climate Change (NSECC)	
	Jillanna Brown (JiB), P. Eng., Reg. Engineer,	NSECC	
	Barry Geddes (BG), ( <i>Vice Chair</i> ) Watershed Manager,	Halifax Water	
	Rachel Gilbert (RG), Manager of Planning Services,	Municipality of East Hants (MEH)	
	Anna McCarron (AM), ( <i>Secretary</i> ) Source Water Planner,	Halifax Water	
	Neil Morehouse (NM), (for Dawn MacNeill) Manager Protected Areas & Ecosystems,	NSECC	
	Michael Perry (MP), Community Representative,	Mount Uniacke	
	Sanjeev Tagra (ST), Manager of Water Supply Plants	Halifax Water	
	Colin Waddell (CW), Senior Manager, Water Services,	Halifax Water	
Regrets	Tim O'Brien (TO), ( <i>Chair</i> ) Regional Forester,	DNRR	
	Sally Steele (SS), Protected Areas Coordinator, Western Region	NSECC	
Absent	Jeff Brown (JeB), Forestry Technician	Department of Natural Resources and Renewables (DNRR)	
Guests	Tricia Isnor (TI), Regulatory Services,	Halifax Water	
	Graham Scott (GS)	Municipality of East Hants	

## 1. Attendance / Introductions

Meeting called to order by Acting Chair, Barry Geddes

Discussion:	Attendance recorded. Regrets conveyed (see above). Guests acknowledged. Minutes recorded electronically via Teams. AM displayed the following: <ul style="list-style-type: none"><li>• March 3, 2022 – Meeting Agenda; and</li><li>• DRAFT September 9, 2021, Meeting Minutes.</li></ul>
Decision:	Quorum determined.

## 2. Review and Approval

### a. March 3, 2022, Meeting Agenda

Discussion:	No additions added to the Draft Agenda.
Decision:	Approved as presented.
<b>Motion</b> to approve March 3, 2022, Meeting Agenda.	<b>Moved</b> by JB, seconded by CW. All in favour.

### b. September 9, 2021 Meeting Minutes

Discussion:	Review of Draft Minutes: <ul style="list-style-type: none"><li>a) Under Item 3.e.i – remove action; there was no action item under this item;</li><li>b) Under Item 3.a. top of page 3 – change completed every 7 years to every 5 years;</li><li>c) Under 3.c.ii – expand R&amp;R to Report and Recommendation in 2 places.</li></ul>
Decision:	Approve Minutes with changes.
<b>Motion</b> to approve September 9, 2021, Meeting Minutes	<b>Moved</b> by JiB, seconded by MP. All in favour.

## 3. Old Business

### a. Water Storage and Withdrawal Permit Application (TI Presentation)

Discussion:	<p>TI presented a 4-page slide presentation to update the Committee on the J.D. Kline (Pockwock) Water Storage and Withdrawal Permit Application (see Power Point Presentation in separate attachment).</p> <p>Submitted Application to NSECC on November 3, requesting the same withdrawal rates as in the existing Approval, which is for an average daily withdrawal rate of 110 million litres per day (MLD), calculated over a 3-day period, and a maximum 143 MLD rate, from Pockwock Lake.</p> <p>The submitted application status is pending review and approval by NSECC. Halifax Water is expecting questions and clarifications coming from NSECC. The existing Withdrawal Permit expires September 1, 2022.</p> <p>JiB added, for context, that Pockwock had previously been given a 50-year water license in the 1970s, which was essentially a piece of paper; these days there is a lot of work and data to compile to be granted an Approval and expressed gratitude to Halifax Water for starting the Approval process early.</p>
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Halifax Water has assessed its need for its water supply over the next 10 years – the typical timeframe for a water withdrawal permit, now. It appears Halifax Water will need an additional 35 MLD withdrawal average rate and a 45 MLD maximum withdrawal rate – about a third more withdrawal than previously asked for Pockwock. So as not to task the Pockwock system more, Halifax water is looking to Tomahawk to provide that additional supply, which will require the same application process we used for Pockwock.

The 50-year permit for Tomahawk is also expiring September 1, 2022. The existing permit is for 30.3 MLD, with a maximum withdrawal rate of 39.4 MLD, which is about the same as what we are requesting in the new application. It will take 2.5-3 years to complete the studies required, including a public consultation exercise, which will require the same rigor as for Pockwock's application, particularly regarding the hydrogeological information as well as the wetland, aquatic and water quality assessments, to assess its viability as a water supply. It is not a simple add on to the Pockwock watershed; Tomahawk is a completely different watershed and may present several effects that are different from Pockwock's, including water quality.

*Q: Wasn't it looking as though we were not going to need Tomahawk? It seems to be a big shift from what we were talking about as recently as 2 meetings ago, though it is good that it is there to be used. (MP)*

**A:** While it was hoped that we wouldn't need Tomahawk, it was pending review of our projections for water usage, tenures along the line and into the future. As studies progressed, we came to realize through our increasing populations that we are going to potentially need more water; therefore, we are going to get ahead of the game, do some study work and find out where we stand with Tomahawk. We also talked about the plant itself having a very good capacity. (TI)

**A:** JiB added two things:

1. Probably DFO had something to do with the amount of water that could be taken from the Pockwock system and as the investigation developed, the decision was made to not take as much water from Pockwock as had been planned a year ago.
2. There would need to be a separate water approval for withdrawal from Tomahawk Lake. Typically, NSECC doesn't give water withdrawal permits unless it is demonstrated that the water is being used, but because this is the water supply for the biggest city in NS, NSECC is agreeing to make the concession that the water rights on this lake be protected for water use. So, we are going through this exercise whether we need the water now or not, to ensure the water supply is there should we need it someday.

*[RG arrived at the meeting.] [TI resumed her presentation.]*

Since the Tomahawk Lake studies will take a few years, we will be looking at a short-term renewal application of the existing approval we have with NSECC, to give us some extra time to work on the application submission. That is our next action item. Once we get more information, we will be submitting our short-term application to NSECC for the June 1<sup>st</sup>, 3-month NSECC review window, before the expiry of the permit in September. In the meantime, we are continuing with our study activities.

There are some other considerations as follows:

In the essence of withdrawal, we need to consider what is the best balance of withdrawal from each lake. Assessing the hydrology and the ecology first will help us to understand what the balance should be.

	<p>We are doing some safe-yield studies for all our water supply lakes to understand the hydraulic capacity for all of the lakes and hence what the balance should or could be for that purpose.</p> <p>We also need to assess the water quality of each lake because there is likely to be a difference in the waters and its effect on the treatment side of things. We also need to determine how we are going to manage the water coming from Pockwock and the water coming from Tomahawk in terms of managing the flows and the chemistry, which will also require a lot of studies. Along with that comes the infrastructure requirements. Though we have an Approval, we don't have any infrastructure to physically remove water from Tomahawk Lake. As the assessments progress, we will be talking with DFO and NSECC, using the interim information gathered, about what kind of infrastructure we will need when the time comes to balance the combination of water sources we are going to need. A lot to consider. #1 is the hydrogeological assessment.</p>		
Decision	Ongoing		
<b><i>i. Lake Trout Information</i></b>			
Discussion	BG asked TI whether the communication about Lake Trout had been conveyed to the consultants. TI said it had been.		
Decision	Remove from Agenda.		
<b>Action Items:</b>			
TI will pass the Lake Trout information along to the consultants.	TI	Complete	
Remove from Agenda	AM	By next meeting	
<b><i>ii. Provide NSECC Protected Areas Branch a Copy of hydrology report – status</i></b>			
Discussion	JiB clarified the reporting process: NSECC Approvals and DFO communicate between each other regarding an application for water withdrawal. It is unclear what this Action Item is referring to. If the Protected Areas Branch wants information, they would need to receive it directly from the applicant, not through another branch of NSECC, unless that Branch wants to go through the FOIPOP process to access that information.		
Decision:	Remove from Agenda		
<b>Action Items:</b>			
Provide NSECC Protected Areas Branch a copy of assessment reports.	NM/SS	Unclear why this was requested.	
Remove from Agenda	AM	By next meeting	
<b><i>b. Pockwock Wilderness Area</i></b>			
<b><i>iii. Signage Update</i></b>			
Discussion:	Small Wilderness Area signs were collected from the Protected Areas Branch.		
Decision	Remove from agenda.		
<b>Action Items</b>		<b>Person Responsible</b>	<b>Deadline</b>
Tell SS and NM how many signs are needed by Halifax Water, and they will be provided.	BG	Complete	
Remove from Agenda	AM	By next meeting	

iv. Website Update			
Discussion:	NM indicated that he had reminded the NSECC communications department about updating websites to include links to the <i>Protected Water Area</i> Regulations that fall within Wilderness Areas (or vice versa). BG showed that the <a href="#">Pockwock Wilderness Area Website</a> had been updated to include a link to the Pockwock Watershed <a href="#">Protection Water Area Regulations and Designation</a> , and indicated that this had been done for all of Halifax Water's Protected Water Areas.		
Decision	Remove from Agenda		
Action Items		Person Responsible	Deadline
NSECC to create a link on the <i>Pockwock Wilderness Area</i> webpage to the <i>Pockwock Watershed Protected Water Area</i> and the <i>Pockwock Watershed PWA Designation and Regulations</i> attached to the area.		BG/NM	Complete
Remove from Agenda		AM	By next meeting
c. Sackville River Protected Wilderness Area (Nature Reserve)			
i. Halifax Water Meeting with NSECC PA Branch			
Discussion:	NM received an email from BG updating him on the issues that need to be addressed regarding the Pockwock <i>PWA</i> relationship with the proposed Sackville River Nature reserve, which were outlined in the Sept. 9, 2021, Meeting Minutes. NM said all the items listed would be addressed after the Sackville River Nature Reserve was designated. The discussion between BG and NM is considered to be the meeting with NSECC regarding this topic (per action item below) and therefore may be considered complete. However, we still need follow up, to make sure the license agreement is in place.		
Decision:	NM advised that most of the items listed in the email from BG will be addressed after the area is designated. Once the Sackville River Nature Reserve (SRNR) designation is approved by Cabinet then we can look at the license agreement.		
Action Items		Person Responsible	Deadline
Halifax Water will meet with NSECC's Protected Areas Branch to discuss the impacts on the portion of the SRNR inside the Pockwock <i>PWA</i> .		BG	Complete
Remove this item (meeting with PA Branch) from Agenda		AM	By next meeting time.
Follow up after the designation is in place to ensure the license agreement is in place		BG/NM	Pending
ii. Boundary Lines			
Discussion:	Once the report and recommendations (R&R) phase is done, and the area is Designated the Sackville River Nature Reserve (SRNR), the boundary lines will be drawn and recorded, addressing this issue of the boundary lines. Further, the Pockwock Wilderness Area will be expanded to include the SRNR to make things more efficient for everyone.		
Decision	Boundary lines will be finalized once the SRNR R&R is completed.		

Action Items		Person Responsible	Deadline
Request clarification from NSECC of the Sackville Rivers WA boundary southwest of the 101.		BG	Pending (see Action Item immediately below)
Once SRNR Designation is approved by Cabinet and the report and recommendation (R&R) process is complete, we will look at the license agreement.		BG/NM/SS	Pending Designation of the SRNR
<b>d. Mount Uniacke Signage</b>			
<b>i. Bell Park Interpretive Signs</b>			
Discussion:	<p>AM advised the Committee that she spoke to Jim Foster about putting <a href="#">interpretive signage</a> (defined as educational signage as opposed to do and don't signage) in Bell Park.</p> <p>Mr. Foster advised AM that the Bell Park Committee had recently completed some signage related to the trails, including a new sign at the entrance to the park. Some of their signage also include directives about keeping pets on leash, picking up after them and no campfires.</p> <p>The Bell Park Committee's funds are pretty much depleted for signage. If Halifax Water could provide funding for interpretive signs about how to protect the watershed and the history of the area – from an educational perspective – that would be welcome.</p> <p>AM asked Mr. Foster about the watershed sign that Halifax Water put up at the entrance a few years ago. He said he has heard no negative comments about that sign. He does recall the pushback from people when Halifax Water took over the watershed area but does not hear a lot about that now. However, he has heard comments about the forest activity in the watershed area. People perceive forestry activity to be counter to watershed protection efforts. There has also been some backlash about the new signs Halifax Water put up last summer about keeping pets on leash.</p> <p>If we want to put up interpretive signs in Bell Park, we are welcome to do that. It is now up to the Committee to determine if we want to put up signs and what they would state.</p> <p>BG recalled that the original idea 11 years ago was to put up signage about the history and "did you know". We want to work with the Committee's signage efforts not create redundant signage about pets on leash and picking up after them.</p> <p>MP commented that the issue with dogs is also relevant to Bell Park. They don't have a garbage system and people don't want to bring their waste out.</p> <p>MP recalled that when he joined the PWMC Committee, while awareness of the watershed exists in the community, he thought the signs would be of an informative nature such as what types of fish species are in the area – educational pieces that enhance the park. Helping the Bell Park groups with such signage would demonstrate a goodwill partnership with Halifax Water that would be well-received. For example, when the province put signs along their trails, the community really appreciated that new knowledge.</p> <p>MP figures about 3-4 signs would be sufficient. He also thought it a great opportunity to recognize truth and reconciliation, traditional uses, recognition of the indigenous population there and to highlight what needs to change.</p> <p>As the local Councillor, MP will suggest that the Bell Park (BP) Committee look at options and put together a proposal that the PWAC Committee might accept. MP could present this as an opportunity that Halifax Water would be willing to help fund. All the BP Committee needs to do is design 3-4 signs and the RFP for a company that could make</p>		

	signage; what we want; and what would last. MP will reach out to Mr. Foster and say that Halifax Water is willing to fund the project within reason and ask them to respond to AM, or MP will gather the information to provide to the Committee at the next meeting.		
Decision	Ongoing		
Action Items		Person Responsible	Deadline
Contact Bell Park Association President, Jim Foster, about interpretive signage in the Park.		AM	Complete
Contact Mr. Foster to discuss an interpretive signage proposal for Halifax Water to consider funding.		MP/AM	Next meeting
<b>ii. Regulatory Signs</b>			
Discussion:	<p>BG would like to remove this from the agenda. It is an ongoing item and a requirement under a water utility's responsibilities as directed by NSECC. If there are new signs that the Committee wishes to post, then we can discuss that at the Committee level as those occasions arise.</p> <p>MP concurred and suggested that we advise the Committee under new business when new signs are going up, so it is not a standing item.</p> <p>MP added that he has heard a lot of comments about the new Halifax Water signs, especially regarding dogs on leash. MP tells people that Pockwock is a watershed area, and that just because you have been running dogs unleashed for years, it is not something we are continuing to do; it is not a right that you can go in there. Also, it is private land. BG interjected to say that it is primarily Crown land, which is public land, so people do have a right to go in there. MP concurred. Social media is trolled by certain people who like to place negative comments about the signage as well and one shouldn't take what is said on social media as what most people think, generally.</p> <p>BG responded that many (albeit not all) people he has spoken to on the trail/road are appreciative of the signs because not all people are comfortable with loose dogs. Signs are a reminder to uphold a general regulation about keeping dogs on leash unless it is in a specified unleashed dog area. Also, to adequately pick up dog droppings, and because it is a watershed area, they need to be on a leash. Dogs far exceed the number of wild animals, according to the game cams. Picking up after and keeping them on-leash is all-important.</p>		
Decision:	Watershed signs are an ongoing responsibility of the utility as directed by NSECC. The Committee will be updated on an ongoing basis as new signs go up. This item should be removed as a standing item from the agenda.		
Action Items		Person Responsible	Deadline
Complete regulatory signage for the Pockwock watershed area.		BG	Ongoing
Remove from agenda		AM	By next meeting
<b>e. Resource Management Updates</b>			
<b>i. Forestry</b>			
Discussion Notes:	<p>BG updated the Committee on the forestry activities in the Pockwock watershed area as follows:</p> <p>WestFor didn't finish their harvesting block of about 30 ha. They finished about half – 15 hectares – of what was left, which was all commercial thinning. They started in late</p>		

	<p>July because of the bridge, impending wet weather and the sensitive soil type. Lots of wood was left standing. Looks as though they will finish this block next year.</p> <p>Most of the province follows the same forestry practices that is practiced inside the watershed area. A positive thing.</p> <p>Silviculture has been done. None was done last year because we were caught up. Moving back into the area this year. Nothing else is planned for this year. They have other blocks that are going to be done, pending the <a href="#">Lahey Report</a>, eventually.</p> <p>AM asked what WestFor's role is. BG responded that it is the license holder and a conglomerate of ~5 sawmills. WestFor does the forestry planning for the area, which includes the Pockwock watershed area. A contractor, who is part of, or a contractor, on behalf of one of the WestFor member conglomerate mills, does the forestry work. Halifax Water is a shadow planner for watershed area lands who comments on the plans. There is also a public review period to comment on the plans. There was concern about the size of the blocks, but the work is done progressively over many years to make it sustainable. Nothing new has come to the Committee in the last year or so because we have been harvesting the same block, which is done progressively over the whole area and includes some areas outside the PWA.</p>		
Decision:	Standing agenda item.		
Action Items		Person Responsible	Deadline
No action item. Standing Agenda Item.		BG	Ongoing
<b>ii. Water Quality</b>			
<b>1) Geosmin update:</b>			
Discussion:	<p>CW provided the following Geosmin update for 2021:</p> <p>Geosmin for Pockwock Lake is showing its seasonal trend downward. It is currently reading 6 ng/L (February 8, 2022). The results are <a href="#">posted on the website</a> as they come in. There has been no significant change in the trend lately. The levels may rise with higher precipitation rates, which tend to occur in the fall and winter and as water flows off the frozen ground into the lake, transporting nutrients and TOC (Total Organic Carbon). We are keeping an eye on what the trend will be in the spring.</p>		
Decision:	Standing agenda item.		
Action Items		Person Responsible	Deadline
Keep on agenda		All	Ongoing
<b>2) Lake Recovery Research:</b>			
Discussion:	<p>CW provided the following Lake Recovery Research update:</p> <p>CW advised the Committee that Halifax Water is increasing its instrumentation and monitoring for lake recovery. We are looking at installing more tributary monitoring stations and potentially expanding that program, by getting some new instrumentation to enumerate the algal species and maintain our genetic testing for algal toxins. We have an outward response procedure and monitoring program that we presented to our drinking water quality group within NSECC, which we are revising operationally before our algal season kicks in this year. We have enhanced our in-house technology because we often must send these samples away, which takes considerable time to receive results. So, we have inline instrumentation hooked up to the plants to measure the phycocyanin and indicators of indicator cyanobacteria bloom or algal bloom in that</p>		



	area. We are looking at doing some more remote monitoring in the lake body, including entire depth sampling throughout the water column to monitor how that biota behaves throughout the year.		
Decision	Standing agenda item.		
Action Items		Person Responsible	Deadline
Keep on the agenda.		All	Ongoing

**f. forWater Research Network**

Discussion Notes	<p>BG advised the Committee that the <i>forWater</i> Research project is a 5-year project looking at the impacts to water quality resulting from the different types of harvest practices in the watershed. The research being conducted in the Atlantic Region is in the Pockwock watershed area land-base to learn more about what CW was just talking about regarding TOC and how much is being released before, during and after various types of forest harvest practices.</p> <p>The project has completed its fourth year of data collection. This year data is being compiled. Some data collections will continue this year as well. Two different research tracks were conducted that are now overlapping, which is what we were hoping for. We want to learn how carbon behaves vis-à-vis forestry practices and its effects on carbon in the water supply and how we may remove it. Typically, we have been looking at an overall picture of carbon in the watershed. This research is breaking that down further to examine which types of tree store and release carbon and when.</p> <p>This year the <i>forWater</i> Research Team is looking to expand the program a few more years to refine the information and delve into it more deeply. This research is also intertwined with lake recovery and geosmin data.</p> <p>CW added that the program might help us determine what is the optimal removal of trees when they reach that complete saturation of TOC, balanced with all the other forestry concerns, together with the water quality aspect; at what point does the specific species of tree reach its optimal TOC; and if you don't remove that TOC from the forest, at what point does it start releasing TOC into the natural environment and into the water supply.</p> <p>It is a remarkable collaboration between utilities, forest management and regulators. It is exciting research.</p> <p>BG added that this research is putting the forestry activity that has and is occurring in the Pockwock watershed under a lens and comparing the types of forestry practiced in the watershed with the practices in the rest of the province. The results of this work will help to address some of the issues raised in the Lahey Report as well, especially regarding carbon and which species of trees are more of a carbon sink than other species of trees. With respect to clearcutting concerns, the research is also examining the data from a small 3 ha patch of balsam fir – a short-lived tree – that was clearcut in the watershed. The research associated with this clearcut patch is helping us understand what the impact of that activity is, in relation to carbon and the type of tree that was cut in that stand.</p>		
Decision	Ongoing agenda item		
Action Items		Person Responsible	Deadline
Keep on the agenda.		AM	Standing item

**g. Tours of the Watershed Area**

i. Helicopter			
Discussion:	Leave this on the agenda because we do want to pursue this.		
Decision	Pending Covid-19 restrictions. Keep on agenda.		
ii. Educational Ground Tour of Watershed Area Research			
Discussion:	<p>BG asked MP what he thinks of providing an opportunity for the Municipality of East Hants councillors to see what is going on in the watershed area through a tour of the Pockwock watershed area, to display the thought and science and planning that has been exercised regarding the forestry activity there.</p> <p>MP responded that this would be a good idea for engaging community leaders as well, such as Jim Foster, the Fire Chief and others who understand the lay of the watershed area. BG concurred.</p> <p>AM asked whether this should also be open to the public since this would be more of a tour for the layman as opposed to those who were already in the know, like those who went on the tour last summer.</p> <p>BG and MP think that the first responders and Councillors and other community leaders would be a great target group to start with, from whom we could get feedback to determine what was good, what needs to be refined and what other questions should be addressed for another group in the future (perhaps the Hammonds Plains community), starting with a presentation conducted along the lines of what took place last summer. Perhaps David Foster, the PhD student doing the primary research in the watershed would be a good presenter.</p> <p>Let's target this for this summer – a small convoy of a 5-7 group size.</p> <p>BG is asking for a list of contacts from MP.</p> <p>BG asked RG whether some of the Directors at East Hants would be a good target group too. RG would be interested in putting that through to that group.</p> <p>Invite the PWM Committee members as well.</p>		
Decision:	Plan a tour for the watershed area, targeted at a small group consisting of councillors, community leaders, first responders, East Hants Directors and PWM Committee members, for this summer.		
Action Items		Person Responsible	Deadline
Plan a tour for the watershed area targeted at a small group consisting of councillors, community leaders, first responders, East Hants Directors and PWM Committee members, for this summer.		BG/MP/RG/AM	By the summer
h. Mount Uniacke Business Park Expansion - GS			
Discussion:	<p><i>[BG clarified to GS what the Committee was looking for from him, as follows:]</i></p> <p>There have been questions about some of the road construction activities in the Business Park. What are the construction plans moving forward and the timelines for further construction?</p> <p>GS replied that Phase 1 was completed last year. The design and construction of Phase 2 was conducted in late summer and early fall of 2021, which is not quite complete. The roads within the expansion area are complete, other than placing the gravel and paving in</p>		

late spring as weather permits. Phase 3 is in the design phase. That involves minimal work at the lower end of the property, pending Council's approval in the subsequent year.

BG advised that there are concerns regarding the stormwater runoff, which is in relation to a specific rain event that occurred in the late summer. After that event, Halifax Water sampled the water over a 2–3-week period in Lacy Mill Brook (See Appendices B and C) at an established water quality sampling location. The results showed that iron and turbidity increased. The contractor was consulted and indicated that the sediment control structures failed. Considering this event, moving forward, what type of mitigation will take place to minimize such impacts in the future?

GS responded that the East Hants Infrastructure and Operations (I&O) division, who Halifax Water contacted about the incident, has spoken to the contractor and looked at the operations. The contractor has since spoken to NSECC about that incident and the controls have been upgraded. East Hant's I&O team feel that the controls in the spring will be sufficient to handle further rain events. If there is interest in providing exact specifications, please speak to the I&O team and project manager for that project. The Phase 2 work has been completed. It is anticipated that with the gravelling and paving and hydroseeding those incidents won't be repeated there.

BG advised that Halifax Water sent a letter to East Hants, who agreed to meet to discuss some of the water protection mitigation measures that Halifax Water uses in its watershed operations, which are expressed in its BMPs. For example, our operations have a no-work policy when there is a  $\geq 20$  mm rain event over a 24-hour period, which has vastly reduced the impact from rain events. The activity is what causes the issue during a rain event. That's what we would like to discuss with East Hants.

RB replied that the project manager received the letter and is happy to discuss strategies to mitigate further impacts. BG will reach out to them.

BG asked when the lots will be sold. GS replied that lot sales will be open for Phase 2 in the summer, after the roads are complete.

BG added that there is acid rock drainage (ARD) (pyritic slate) in the area, about which landowners have been advised, according to RG. Has the degree of its presence been determined?

GS replied that they have done significant testing as part of the road construction and expansion project and determined what is and isn't there. In Phase 1, the presence of acid rock was significantly less than what was anticipated. Appropriate measures have been taken for the road construction. For building construction it's the same thing. Clients are made aware of it and have been given the NSECC regulations around it. It is up to the landowners to implement those practices. We monitor it. We have not had any issues with the acid rock being a problem.

BG asked whether the new landowners have been made aware that they are in a drinking water supply area, what the potential risks are to the water supply regarding their building plan/uses and techniques, and whether there will be any restrictions regarding when (during rain events for example) and what the new landowner can build.

GS/RG replied that landowners know they are in a watershed, but there is nothing to restrict what or how building takes place. There are restrictions regarding land uses but nothing about timing or construction details.

BG replied that that is the concern for Halifax Water at this stage, about which Halifax Water can reach out to discuss adjustments to construction details.

	<p>GS advised reaching out to the project manager on the road construction side. As part of that we can have those conversations about construction practices. If there are any other questions, please reach out to GS or RG.</p> <p><i>[GS left the meeting and RG expressed thanks for making time for GS to speak.]</i></p> <p>BG elaborated briefly to the Committee about run-off into Lacey Mill, which runs into Pockwock, associated with the construction activities combined with a rain event last summer (see Appendices B and C). After the construction activities were over, the water quality returned to baseline conditions. Halifax Water contacted East Hants to set up a time to discuss mitigating the potential effects of construction on lake water quality.</p>		
Decision	Halifax Water will meet with East Hants to discuss mitigating the effects of construction on the Pockwock water supply.		
Action Items		Person Responsible	Deadline
	Halifax Water will meet with East Hants to discuss mitigating the effects of construction on the Pockwock water supply.	BG	Pending

#### 4. New Business

##### a. Source Water Protection Plan (SWPP) Annual Report – Pockwock Excerpt

Discussion:	<p>BG advised the Committee that the SWPP Report has been completed. We have until the end of the month to submit it to NSECC.</p> <p>BG asked AM to circulate a PDF of the Source Water Protection report.</p> <p>AM displayed the water quality parameter chart for Total Suspended Solids and Turbidity from the Report. BG explained that this chart relates to the water sampling results collected at the culvert where water feeds into Lacy Mill brook from the surrounding area. PG 8, 9 and 10 also show where iron is also increasing in that area. December’s Iron results relate to runoff during the 2-week period that construction activity occurred. When the activities stopped, there was still runoff, but the numbers decreased (see Appendices B and C), indicating that after BMPs were employed, the impacts of the construction activity were mitigated.</p> <p>Further, you can see where development occurs based on the risk-based sampling program water quality sampling baseline results. When these numbers fluctuate, it indicates there are impacts, at which point target-based sampling is employed to monitor the situation. Appendix B shows the whole watershed area and the difference between the natural and protected water supply areas.</p> <p>CW added that Halifax Water is putting the pieces together for causation and where we can draw causation between activities and what is happening in Pockwock Lake.</p> <p>BG added that Halifax Water has a good understanding of what is going on in the watershed. Something that concerns us is not just the acid drainage from that pyritic slate, it is also other metals such as aluminum and iron that is also found in that rock type. Iron is a feeder for algae; when the overall pH increases in the lake that will help algae grow as well.</p>		
Decision:	BG asks the members to review the report and provide comments within 2 weeks.		
Action Items		Person Responsible	Deadline
	Members to review the report and provide comments within 2 weeks.	All	Review report within 2 weeks

## 5. Landowner Q & A

### a. Mount Uniacke Community

#### i. Uniacke Trails Association (Trail Development)

Discussion:	MP advised the Committee that since the change in the provincial government, the West Hants, East Hants and Mount Uniacke MLAs all support the trail system. The private rail lease is under review by the province (Department of Public Works) as the intervener to have that lease altered. MP will update the Committee as developments occur.		
Decision	MP will ask the Uniacke Trails Association (UTA) for feedback regarding whether it wants to ask the PWMC for a letter of support in the effort to lobby the Department of PW to continue the push to have the Windsor Junction – Windsor railway converted to a trail.		
Action Items		Person Responsible	Deadline
Ask the Uniacke Trails Association (UTA) whether it wants to ask the PWMC for a letter of support in their effort to lobby the Department of PW to continue the push to have the Windsor Junction – Windsor railway converted to a trail.		MP	Pending review by the province

### b. Crown

Discussion: Nothing to report

### c. Municipality of East Hants

#### i. Planning and Development within Pockwock's natural watershed boundary:

##### a. Business Park Expansion:

Discussion:	<p>RG reported that there is a desire to review the current regulations regarding the land uses in the business park. It is on our to do list to examine those land use regulations for the business park.</p> <p>The issue for developers is hydrocarbons. The concern is about a retail outlet that might have some bottles of oil for example and that they would not be able to have those on the property as the regulations stand now. That wasn't the intent of those regulations, so we need to have a look at that, with Halifax Water's guidance.</p> <p>We will get back to Halifax Water to review those changes to avoid having an impact on the watershed.</p> <p>BG advised that Halifax Water is ready to work with the East Hants whenever they are ready.</p>		
Decision	RG will share and seek advice from Halifax Water regarding the proposed changes to the regulations for the business park when they are prepared.		
Action Items		Person Responsible	Deadline
Share and seek advice from Halifax Water regarding the proposed changes to the regulations for the business park.		BG/RG/AM	When ready

##### 1) Regulations regarding pyritic slate and salt impacts in the watershed

Discussion: The slate was addressed under GS' presentation. AM advised that the salt impacts have not been addressed yet. JiB asked whether the chlorides are being monitored.

	<p>BG replied that yes, but there are also impacts from the highway. BG displayed the Total Chloride and Colour graphs of the water quality sampling results from PG8. They are cyclical according to the time of year. No impacts are observed on the back side of the watershed because there are no highways there, but if you go to Chain Lakes, where Highways 102 and 103 meet, for example, the chloride readings are from the 160 mg/L to 180 mg/L range which is approaching levels of concern for aquatic life. Longterm impact thresholds is 120 mg/L. However, the chloride levels are cyclical and do not stay above the threshold for detriment to aquatic life.</p> <p>Knowing the background water quality situation is crucial when you are trying to put regulations in place.</p>
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Decision:	Chloride concerns will be addressed when Halifax Water meets with the project manager for the business park development.
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Action Items:	Person Responsible	Deadline
Address the concerns about chloride impacts when meeting with the project manager for the business park development.	BG/Halifax Water	When meeting is determined

## 6. Education / Awareness Update

### a. Newsletter and PSA

Discussion:	<p>AM asked MP about whether his meetings resumed to garner ideas about people’s concerns, about which they could be informed through a newsletter.</p> <p>MP advised that he has not had these meetings since Covid. However, after we have the tour with the VIPs, this is something we may carry forward afterward, when we know better what people are interested in learning about regarding the watershed.</p> <p>BG advised the Committee that a PSA was circulated regarding recreational activities in the Pockwock watershed. We need to get another PSA out that targets all the watershed areas rather than targeting specific watershed areas.</p>
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Decision:	Pursue a newsletter after we have the tour and a better idea about what people are interested in learning more about, regarding the watershed.
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Action Items	Person Responsible	Deadline
Reach out to MEH to discuss posting the regulations as a municipal wide PSA rather than just in Mount Uniacke.	BG	March 2022
Pursue a newsletter after we have the key personnel tour and have a better idea what people are interested in learning more about regarding the watershed.	MP/AM	After tour discussed under Item 3.g.ii

## 7. Election of Officers – Fall 2022

## 8. Next Meeting – Thursday September 22, 2022 @ 10am, Virtually via Microsoft Teams and in person at 2 Park Avenue

*Respectfully submitted by AM*

See separate attachment for Appendix A: Pockwoc Surface Water Storage and Withdrawal Application: Update To PWMC

Appendix B:

Figure 1: 2015 Uniacke Business Park in relation to Pockwoc Watershed pre-expansion

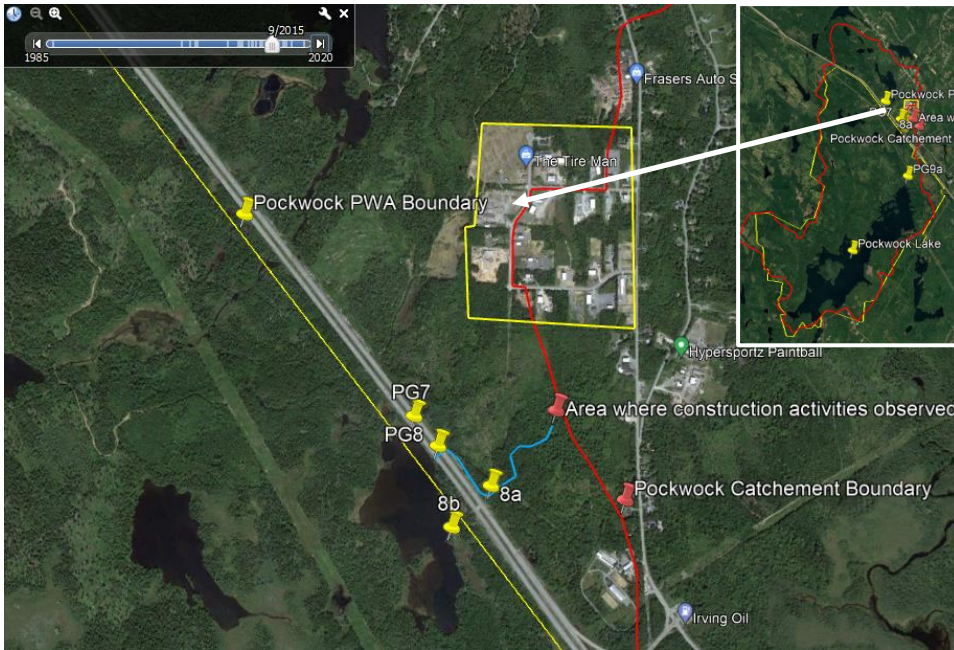
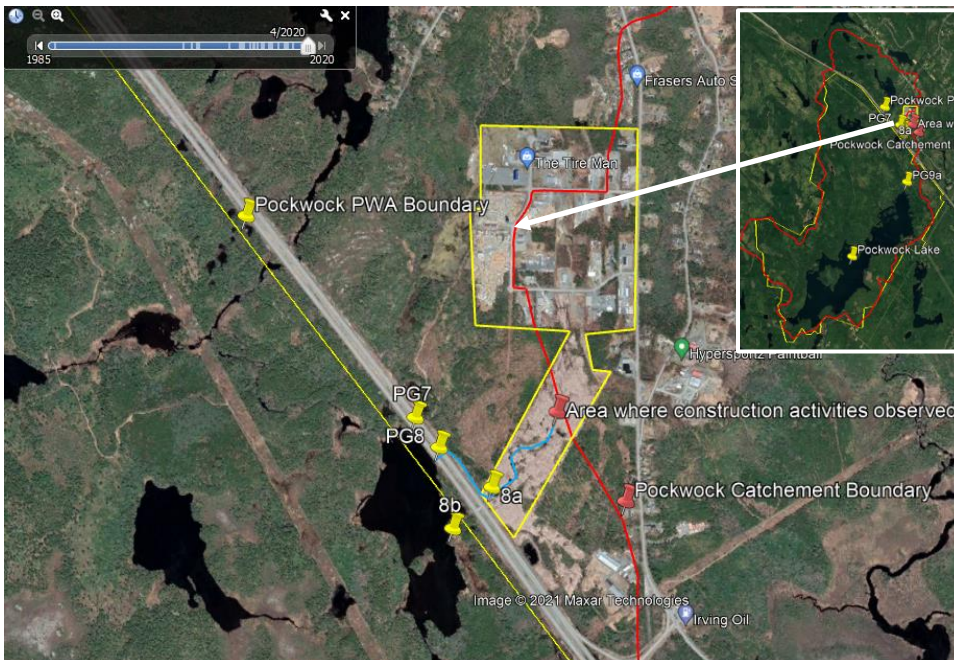


Figure 2: 2020 Uniacke Business Park in relation to Pockwoc Watershed post expansion



Appendix C:

