

**Goffs Quarry Community Liaison Committee – Meeting Minutes
Meeting 3**

Thursday November 2, 2017 6:30 P.M.-8:30 P.M.

Members in attendance:

- Bud Baker, Resident
- Bill Horne, MLA
- Dean Bouchard, Airport,
- Mimi LeCain, Resident,
- Rob MacPherson, Scotian Materials
- Marc Webb, Scotian Materials
- Anna McCarron, SWEPS
- Martin Zwicker, Resident,
- Keri Irwin, Resident,
- Angela Dicker, Resident
- Cam Wainwright, FRABA

Regrets:

- Steve Streach, Local Councillor
- Sean MacLean, Maritimes Northeast Pipeline
- Greg Hughes, Clean Earth

Others Present:

Janet MacMillan - NATIONAL (facilitator)

Andrew Blanchette - NATIONAL (administration)

Meeting Minutes

1. Call to Order

Bud Baker, Chair, led the meeting by requesting the approval of the minutes from last week.

Greg and Martin approved the minutes of the following meeting, and the motion is carried

The minutes are uploaded to the CLC website and are now available.

2. Proceedings

Rob provides an update for blasting, citing delays and says that Scotian has crews arriving on site Monday, November 6 and they are targeting the week following, potentially Monday or Tuesday of the week of the 13.

He says he will send a notification to the CLC for the day when the blast is scheduled for.

Rob indicates that the requirement for blast monitoring is for structures within 800m. Scotian is going to undertake additional monitoring above and beyond the requirement and asks for feedback from the CLC for a blast monitoring location in Miller Lake West. Rob talks about the blast monitoring procedures, and how the blast measurement goes through the blasting monitoring device.

It is decided that the blasting monitor will be placed at the closest residence.

- Presentation given by the Golder Associates Ltd. Team

Kevin MacKenzie and Callie Andrews

Kevin MacKenzie introduces himself as a surface water expert, over 20 years in consulting and 18 years in aggregate production industry.

Callie Andrews, from Halifax, is a qualified wetland assessor based in St. John's Newfoundland.

Kevin highlights the outline of the Goffs Quarry for an orientation, shows overview of the map

Callie discusses the definition of a wetland under the environment act in Nova Scotia, a marsh bog swap or anything possessing the key feature of anything that is permanently saturated. In Nova Scotia, the wetland conservation policy is a no net loss policy, the reason being the protection and resources that wetlands provide.

There are key indicators to assess whether a wetland is a wetland, including species association, Callie shows a fern species in a wetland on site.

There are two watercourses and three wetlands identified within 100 m of the quarry.

Wetland three is formed in the basin, and is a swamp forested by furs and grass species.

Wetland 4, south of the quarry, is a slope forested wetland dominated by ferns and spruce

Wetland 5 is to the NE and boundaries are defined by the manmade banks of the old quarry footprint

Kevin talks about the assessment, saying that part of what was done is a water balance. The water balance is used to define baseline conditions, and is used to compare expected operational conditions to pre development conditions to assess potential effects. This analysis can be done with any surface water feature or waterbody.

Kevin talks about the removal of the sediment, Mimi says that the discharged water is pumped towards wetland 4. Callie provided clarification that the discharge from the sedimentation pond is not pumped

into the wetland and the water is discharged at the boundary of the quarry and there is a 30 m vegetative buffer between the discharge location and wetland 4.

Keri asks about rainwater, and the sediment that might contain heavier metals, if it is discharged in that 30 m buffer, could the basin overflow. Kevin said that it has been designed not to do that, and if there is an overflow it would flood the quarry floor rather than environment.

Janet asks about the environmental approvals, and that corrective measures have to be taken.

Mimi says she is talking to Ducks Unlimited, and once a wetland is contaminated, a company has to fix up two other areas to make up the areas for one, Callie talks about the wetland monitoring perspective. Mimi asks about animals instead of ferns and plants. Callie indicated that Golder is monitoring the vegetation community, soils, hydrology and function and if there is no change in function there should be no change in how the wetland is used.

Callie touches upon the species at risk with the monitoring. Kevin talks about the water is not getting from the quarry to a wetland without being treated and the sediment removed. There are naturally occurring water issues out there that will continue to be at play after the quarry is developed, the adjacent flow of the wetlands will be measured under the industrial approval requirements.

Question concerning Golder's sampling methodology. Golder is following industry standards and the mythology used will be included in the Annual Report to be submitted in February 2018. The guidelines are for the protection of aquatic life in fresh water systems.

Martin asks about the sample findings from streams and if they were consistent with well testing requirements, Kevin indicates that yes but well quality is usually a bit worse because that is water in the rock, but the same parameters are present.

Kevin touches on large volumes of water in development, and if there is a large rainfall event there are big volumes of water that can fluctuate from zero flow to high flow. Many quarry developments provide settling ponds that have enough capacity that the solids can be settled out in a large rainfall event. Discharged clear water is typically pumped off the top.

Kevin touches upon the dewatering infrastructure that is being established with the quarry, and how the precipitate settles to the bottom.

The monitoring program addresses discharge water quality and quantity – measuring locations in streams 4 and 5 are located upstream and downstream of the quarry. The tightness of the rock suggests low seepage, so monitoring flow rates there will allow us to identify differences of water quality and flow reductions.

Mimi asks if the other wetlands will be effected. Kevin says that there would be some potential for small losses of water from adjacent wetlands due to groundwater drawdown. The amount of water that may be lost is expected to be small because of the low conductivity of the rock.

Mimi asks if the blasting would affect the wetlands, and Kevin says that it typically does not, the only way is if you fractured rock under wetlands and the blasts will be designed so that doesn't happen,

Martin says the last presentation indicated the radius of influence is 200m, each of the wetlands falls within that, so, is there a possibility that the wetlands could be impacted. Kevin says that the drawdown in the tight rock would not likely result in this.

Callie says that there will be tracking around vegetation communities that have developed based on the conditions that are there now, and if there is a change in those, then there will be changes in the hydrology and those will be the indicators used.

Callie says they will be monitoring the water in and out of the wetlands, specifically tracking the water going in. The data has been collected since 2012 and there is a number of baseline information to suggest changes going forward.

Callie talks about functional assessment – an evaluation of all the functions of a wetland including flood protection, species at risk present, the intent is that animals would be using them the same way they're using them now. Unless they're avoiding the area due to activity in the quarry.

Kevin highlights the industrial approval monitoring requirements and the requirements for surface water, pH monitoring for upstream and downstream locations on a quarterly basis and the flow that is regularly monitored in the drainage features running adjacent to the quarry. General chemistry, metals and total suspended solids are measured in the discharge to the environment to ensure the sump (settling pond) is working.

Groundwater observations and wetland water levels, extent of wetlands, all of that needs to be reported to NSE by Feb 15 every year. Needs to highlight any exceedances of the quality. Exceedances from the discharge from the quarry have to be reported in 48 hours.

Rob clarifies that this would be the report made available to the CLC and if there was an exceedance that required remedial action then this would be made know to the CLC.

Any unexpected water quality issues can be addressed a number of ways, aim not to have too much material stockpiled on site, there are options surrounding the amount of materials available on site to mitigate any significant risks associated with the quarry development.

If there was a scenario where suspended sediment was too high and it was common place, you might consider increasing the size of the ponds to increase settling time.

Next Meeting

The time for the next meeting is agreed upon as Tuesday, December 12 at 6:30 PM. This meeting will feature a blasting expert from Golder Associates.