

## Minutes of January 10, 2017 Meeting at the Campbell River Comfort Inn at 12pm

Attendees: Dr. Gilles Wendling, P. Engineer and Hydrogeologist, GW Solutions (GW); Allan Leuschen, Senior Environmental Protection Officer Authorizations – South, MOE (AL); Avtar Sundher, Section Head, Authorizations – South (AS); Terri Martin, City of Campbell River Environmental Specialist (TM); John Lewis, (JL) member of CREC; Leona Adams, (LA) President, CREC

Introductions and lunch

Dr. Gilles Wendling gave his presentation which covered:

1. The differences in the GHD (Upland's consultant) watershed boundary divide location and the divide given in the Ministry of Environment (MOE) Water Resource Atlas. The watershed divide needs to be confirmed and is central to determining risk to McIvor Lake and our drinking water.
2. The location of the High Vulnerability aquifer in relation to Upland's and the Regional Landfill (Garbage Dump)
3. A Ministry of Mines map showing the surficial geology at both locations and the east/northeast groundwater drainage identified in the Regional District Monitoring.
4. The GHD Groundwater map showing east/southeast groundwater drainage. Two wells in Upland's south west corner data were not used in GHD's calculations. One well is shallow and the other is completed in bedrock. They both indicate a high elevation of the groundwater. This high groundwater elevation at the southwest corner of the Upland's property may produce a groundwater movement both to Rico Lake and to east/northeast, should there be a groundwater divide through the property. This needs to be investigated.
5. Due to the well data omissions, the monitoring well GHD proposes will likely not catch the leachate it was intended to.
6. Dr. Wendling's finding indicate an east/northeast groundwater drainage from Upland's site, similar to the groundwater regime occurring under the regional landfill.
7. A cross section of Rico Lake and Upland's site identifying a possible groundwater divide that could result in leachate moving west to Rico Lake on the west side of the divide, especially under high water table conditions and groundwater drainage to the east/northeast on the east side of the divide. This divide needs more investigation and could even dissect Upland's property.
8. An array of groundwater investigation/monitoring wells is needed to the west and to the east at Uplands property.
9. Groundwater drainage to the east/northeast will daylight into creeks east of the site.
10. The proposed landfill will create a mounding of groundwater. This mounding effect needs to be modeled and determination made if this presents additional risks, both under operation, at closure, and long-term after closure (assuming that liners will lose their integrity over time).

11. In Summary GHD's investigation is preliminary. Much more investigative work is required. This work should be independently reviewed. The watershed divide delineation must be affirmed and any groundwater connection to McIvor Lake more fully understood.

Discussion:

JL: Used the cross section slide of Dr. Wendling's presentation to demonstrate CREC's concerns with our drinking water and the need for a fuller understanding of the watershed divide.

AS: Asked Dr. Wendling about Rico Lake being higher than the excavation and groundwater moving to Rico Lake.

GW: The landfill would create mounding. Water management would be controlled by ditches. What is the guarantee that the water management plan will work as proposed, during operation and post closure?

AS: There would be a dual lined facility with leak protection.

JL: Stated that all liners fail. John also notified that we were told that all drainage was east, but he discovered drainage west from Rico Lake through the ballast of the road daylighting and then flowing into McIvor Lake. Also, that CREC determined the bottom depth of Rico Lake. Upland, although requested, did not give the bottom depth of Rico Lake.

LA: Brought up the rain events experienced in Campbell River and the examples of other industries, namely Quinsam Coal and Myra Falls, that have not been able to manage run off when using the 1/100-year water management. Also, that the colder weather conditions in our area limit the success of leachate treatment.

Leona handed out information booklets with backup information supporting Dr. Wendling's findings of east/northeast drainage from Upland's and asked about the importance of the drainage to Cold Creek, the hatcheries water supply.

Leona informed about the possibility that hydrocarbons would cause the liner to leak.

Leona also discussed that the letter she received from the Ministry of Mines stated that all waste and contaminated soil deposits are MOE jurisdiction. No determination on zoning was given.

JL and LA spoke about the landfill creepage causing the liner to tear.

TM: Expressed that the City does not have the ability to complete the detailed technical review that is required for this type of application. Therefore, when the City, or other stakeholders, are asked for their feedback by the applicant, this does result in the informed technical review that is required. Because stakeholders and the City don't have the level of expertise required, it is also difficult to know if the answers supplied by the consultant are sufficient. Similarly, when the consultant notes that additional studies are recommended, we can't judge the scale of the missing information. Is the missing information just to clean up a few details, or is at the scale that the application can't/shouldn't move forward? For these reasons, we are relying on the detailed technical review and feedback from the Province as the regulator.

We also know that all developments require regulatory oversight in order compliance to be achieved. This is a concern if the permit is being overseen by a distant regulator. It has been the City's experience that development is still struggling with maintaining things that are standard such as erosion and sediment control. Here, the consequences could be much higher especially when climate change is factored in. Will the checks and balances be in place?

On the one hand, the Province is continually reaching out to Local Government on the importance of preparing for climate change in all aspects of community development. Yet, when it comes to mining and landfill applications, we are not seeing the same focus on climate change impacts from the provincial regulatory bodies and this is a concern to us.

The City was also told by the applicant that they would not be responding to additional stakeholder concerns at this point in the process. Only the City would be responded to. This is a concern to us.

We were also concerned with the difficulties CREC faced in obtaining the reports for review in a way that was user friendly. It is unrealistic to view hard copies from the Upland Office and through read only viewing on computers that don't permit printing. This is a barrier to appropriate consultation.

AS: Asked Dr. Wendling how many investigative wells would be needed.

GW: Answered 3 to the west and 5 to the east.

Avtar Sundher and Al Leuschen informed us that Uplands is going to do more well sampling and are expected to come back to the MOE with their findings by the end of April. Also, that this application could take up to a year to decide.

Dr. Wendling will be given time to do a review on Upland's future reports.

Avtar Sundher notified us that the MOE has access to a hydrogeologist that could be used if the disagreement between the GHD, Uplands Consultant, and Dr. Wendling opinions cannot be solved. Also, an independent hydrogeologist can be hired with the company paying.

CREC's points of concern were summed up as:

- What is the impact to Rico Lake?

- The need for water sampling in Rico Lake to determine background

- What is the direction of the groundwater flow?

- Surface water protection

- The location of the Campbell River and Quinsam River Watershed Divide needs to be identified

The process is at some point the MOE may give Upland a Draft Operational Certificate and legal notification will be given in the paper with a legal 30-day comment period.

Leona is to contact Avtar Sundher if she is not provided with a copy of future reports in a timely manner that cannot be printed and workable.

Meeting Adjourned approximately 3pm