Professor worries over quarry

By Sarah Sobanski

An Earth Sciences professor with property on Jeffrey Lake is looking out for the Freymond quarry proposal. She wants to see it properly peer reviewed, and to make sure that locals understand the scientific language being used in the studies to come.

Associate professor of the Department of Earth Sciences for the University of Toronto Sharon Cowling suggested that last years quarry proposal wasn't up to minimal scientific standards. She also suggested that new technology algorithms coming out for environmental studies would never allow a quarry near four spring fed lakes.

?I was astounded that they would even consider putting it [there],? said Cowling. ?Only spring filled lakes will still be around 1,000 years from now.?

According to Cowling, research by six undergraduate students under her supervision focused on using geographical information systems (GSI) as a scientific tool to improve identification of prime locations ? where they will have the least environmental impact ? for high impact industry like quarries. Her students used a variety of input data including bedrock type, hydraulic conductivity, population density, presence of protected parklands (national parks), and location to roads for the entire County of Hastings. The results of the study did not suggest that the current Faraday location was suited for a quarry.

In her peer-review of the first hydrogeological proposal submitted last year, Cowling reported that the study showed inconsistencies, mischaracterized ?the hydrological regime?, and did not properly consider the ?components of the water balance?. Though the original study was thrown out to be redone, Cowling has many concerns she can't see a way around for the proposed quarry location.

?No one wants a mine in their backyard, but there are strong hydrological mitigating circumstances,? said Cowling.

In laymen's terms, spring fed lakes are filled by an underground network of fissures. If drilling or blasting were to puncture one of these fissures, the corresponding lake could be compromised.

?Fresh water is a rare natural resource. Of all the water found on the surface of the Earth, less than one per cent is suitable for drinking. Within that one per cent, one third of all the world's fresh water is found in the lakes and rivers of the Province of Ontario,? detailed Cowling in a secondary report. ?In fact, if these lakes did not exist, I likely would not be commenting on the proposed location of the quarry. But ignoring the lakes doesn't make them go away, nor does it allow us to pretend the fissures in the bedrock don't exist. In order to determine the true hydrological risks the quarry could pose, additional hydrological tests must be conducted. To re-iterate, blasting in bedrock known to contain fissures is a risky prospect, especially when the necessary background into the location or nature of these fissures has not been determined.?

Cowling's second largest concern is for the natural species found in these lakes. Trout can only reproduce naturally in North America. While trout are not endangered, Cowling suggested locals of the area should be stewards of the complex ecology of Bancroft and surrounding area. Trout populations are sensitive and their reproductive process is easily disrupted.

?In 1985, the Ontario Municipal Board sided with the Ministry of the Environment and the Ministry of Natural Resources in preventing Bancroft Lumber Limited from developing an additional eight lake-side properties on the shores of Jeffrey Lake because the potential risk to naturally-reproducing populations of trout was considered too high,? reported Cowling. She explained that if cottages can't be built because they are a threat to environment, a quarry could be subjected to denial for the same reasons.

Looking towards the coming quarry proposal, Cowling suggested that residents be mindful of the potential consequences to the hydrology of the area.

Cowling is developing a not-for-profit organization for people without scientific backgrounds. She suggested that the scientific

language in studies like the previous proposal can be hard to understand and misleading for those who are not well versed in it. She encouraged anyone with questions or concerns after the next studies are released for the quarry proposal to contact her at cowling@es.utoronto.ca.

?In less than 50 years, a litre of water will be worth more than a litre of gas, so we should be vigilant to protect our most pristine water resources while they still exist,? said Cowling.