

Recommendations to Improve EA processes

Examples of EA based OMB hearings and Provincial conflicts

- Rockway Quarry: Cancelled at OMB
- Nelson Quarry in Burlington: Cancelled at OMB
- Tiny Township Landfill: Cancelled
- Highland Quarry in Melancthon: Cancelled
- St. Mary's Quarry Flamborough: Cancelled
- West Side Lands OMB hearing PL071044

Common issue:

Discretionary powers were used to undermine risks of EA processes for the sake of approval. Challenges to EA data by concerned residents revealed flawed data and economic risks that successfully cancelled these projects.

How to avoid repeating these situations: Establish Mandated Test Times and Methods

-If companies use Modflow data, mandate that they support it with the source of data so results can be reviewed and replicated if need be to facilitate an auditing process. Mandate the use of quarterly geology and sediment studies to support the findings.

-The Province needs to set a reasonable criteria for what is deemed “outdated” data. One example is the bore hole data for the proposed Melancthon Mega Quarry which used data taken from 1945 to support the hydrogeology studies. Such data is no longer relevant when one considers post development impacts since 1945.

-Currently discretionary powers can be used to pick and choose data based on whatever objectives someone has but the need is there to mandate and define the criteria for what is deemed reasonable data. Those guidelines should be clearly outlined for all forms of testing associated with planning protocols to secure best management practices are adhered to.

-Test times and methods of testing, particularly in regards to issues regarding rare species must be standardized to the methods that meet reasonable scientific criteria. How long is the minimum requirement to test for rare species? What is the appropriate technique or time of year to test? Mandate review of potential habitats with Universities, the ROM, Toronto Zoo, Conservation authorities and the MNR prior to approval processes to reasonably identify where projects may have an impact. The data bases already exist. They should be consolidated and cross referenced.

-Bore hole data is often too shallow or too few. To get better quality data to protect water supplies, it requires a minimum depth of 20m. The reason is because the first 12m only reflect sediment influenced by surface water features like rain. You cannot reasonably determine the underlying geology or connectivity to aquifers unless you look at the substrate sediment composition. If there are aquifers in the area, testing should go down 100m to determine aquifer connectivity and

vulnerabilities. The benefit is greater understanding on impacts to aquifers and a higher measure of protection for structural integrity issues of projects built on top of these areas.

- Better bore holes with regards to sediment type can prevent many geological risks. Deposits of dolomite can release magnesium in water supplies leading to mood disorders. Gypsum tends to expand upwards and releases calcium sulphur and hydrogen sulphide that can lead to black water issues. In areas of Southwest Ontario there is phenol content in bedrock. There was a blow out in Platsville that killed every trout in Whiteman's Creek. Geological risks exists but we can't be sure of where these risks are unless we secure proper sediment studies.

- Ontario is seeing a trend of flood and drought year cycles so 2 year studies for flow and flow rates to tributaries and bore hole data for groundwater features should be conducted making sure that delta water levels are reflected in the data. This includes delta water levels associated with spring thaw. Too often these values are overlooked.

- In the ruling for the Rockway Quarry OMB hearing, concerns were raised about the fact the MNR lacks funding to reasonably conduct the 80 year monitoring required and there was a lack of evidence to support the project could afford the 90 million cost for the restoration for this below water table quarry project. Similar concerns were voiced in regard to the Highland Quarry in Melancthon and the St. Mary's quarry in Flamborough. The need is there to establish firm prohibitions on below water table quarry extractions.

- Outwash moraines feature long gradual hill slopes on one side, a peak and steep slope on the other side, usually with a surface water feature like wetland, vernal pool or tributary. It is the place where glaciers settled and melted. As they melted, they distributed sediment in waves to create the long slope. Bore holes show these slopes as being clay covered but ground penetrating radar (GPR) reveals these slopes to contain pure recharge for groundwater in between. On radar it's like seeing shingles on a roof with many spaces in between. One such example is the Arkell Research Centre in Guelph. Bore holes show the area to be impervious but with GPR, it reveals that the slope gathers 7% of Guelph's groundwater supply. We need to mandate the use of GPR along outwash moraine systems during the planning process to protect municipal water supplies. The Canadian Geological Survey of Canada can provide further details on these key features.

In closing, I would like to submit a comment made by Environmental Commissioner Gordon Miller. I agree strongly with his views. The passage states:

The ECO believes MOE's research outlining the hydrogeology of the moraines, as well as the applicable laws and policies, is important and is to be commended. But it is not the final step in determining how best to protect water resources for future generations. If the principles of watershed-based planning are applied to an examination of the environmental and socio-economic context of the moraines, the ECO believes current provincial policies do not adequately protect the ecological integrity and hydrogeology of the moraines. On the 10th anniversary of the Walkerton water tragedy, we are reminded of the critical role water plays in the environmental, social and economic well-being of our communities. Our 2006/2007 Annual Report found that "serious conflicts are inherent in the province's plans for balancing growth and ecosystem sustainability." These conflicts must be addressed in a proactive manner through the mandated use of a systems-based approach that requires the explicit prioritization of ecological and hydrological integrity in land use planning. Sustainability requires regular assessments of where development is feasible and how much growth the natural environment can support. Although MOE's report provided excellent

benchmarking information on the moraines, it did not assess whether the ecological capacity of the moraines can realistically accommodate the projected growth in the region. Nor did it examine the cumulative environmental effects from the projected growth. Not only does the Growth Plan fail to require population allocations be adjusted for communities with watersheds close to or already at carrying capacity, it favours large-scale infrastructure projects aimed at overcoming the natural limits to growth. Waterloo is proposing to address any future water shortages by constructing a pipe to Lake Erie. Such infrastructure projects override ecological carrying capacities and are exempt from natural heritage protections in the PPS and Greenbelt Plan, despite their significant environmental effects. Provincial policies, such as the Growth Plan, favour development over sustainable planning processes.

A comprehensive systems-based plan for natural heritage protection and land use planning is needed. The moraines extend across several cities and regions, each with their own official plans and zoning. The resulting piecemeal approach to planning and protection can leave environmentally significant areas vulnerable or under-protected, thereby compromising the entire landscape.

Although the province's land use planning laws and policies are laudable in some respects, our past reviews reveal that they were ineffective in preventing, curtailing or modifying environmentally destructive developments.

Natural features, such as moraines, should be the basis upon which local land use planning decisions are weighed. Yet the province does not specifically identify moraines as a landform or natural heritage feature to be considered for protection. On numerous occasions, the province has asserted its planning system is adequate to protect significant environmental features. Yet, it has created specific laws and policies for several vulnerable regions, including the Oak Ridges Moraine, the Greenbelt and Lake Simcoe.

The province must use the opportunity of the current PPS review to make a strong commitment to ecosystems-based planning in Ontario. MMAH should revise the PPS to require that the diversity and connectivity of natural features, as well as their long-term ecological function and biodiversity, be maintained and restored.

The ECO recommends that the Ministry of Municipal Affairs and Housing amend the Provincial Policy Statement to require that the long-term ecological function and biodiversity of natural heritage systems are maintained.

<http://www.ecoissues.ca/index.php/>

Pushing_for_Natural_Heritage_Planning_on_the_Waterloo_and_Paris-Galt_Moraines