



**Concerned Residents Coalition
Working to Protect Your Community and Environment**

**Ontario policies force competition
between water protection and aggregate mining in the moraines.**

A CALL TO ACTION

Protect Our Water: Stop aggregate mining in Ontario's moraines!

Introduction

In its 2009 report, **EBR Review Response: Paris and Galt Moraines**, the Ontario Ministry of the Environment (now MOECC) provides the following context:

“The term ‘moraine’ and the need to protect ‘moraines’ have gained prominence in Ontario since the Oak Ridges Moraine Conservation Plan was implemented in 2001. Moraines provide groundwater recharge, discharge and storage functions, which result in water quality and quantity related benefits, such as:

- *Maintenance/improved quantity and quality of drinking water and water for other water users;*
- *Provision and protection of habitat;*
- *Filtration of water (runoff/rainfall);*
- *Maintenance of stream flows and wetlands and resiliency during seasonal and longer terms droughts;*
- *Decrease of storm flows and downstream flooding; and*
- *Adaptation to impacts of climate change.”ⁱ*

Currently consideration is being given to the expansion of the Provincial Greenbelt into adjoining areas that in some cases are moraine lands, as for example the Paris/Galt, Waterloo and Orangeville moraines. This reflects the fact that, for example, in the Grand River Watershed alone, moraines are the most significant water recharge areas. In fact, 80% of all recharge takes place in this 30% of the land.

The Issue

While the Greenbelt offers protection to numerous ecological features and in the 2017 public consultation document, “Growing the Greenbelt: Protecting Water for Future Generations” designates moraines as a key ‘building block’ among these features, aggregate extraction is given priority over other considerations, such as water resources. The narrative promulgated by the industry and provincial government is that aggregate extraction has no negative impact on those water resources. Furthermore, aggregate extraction is characterized by the industry and government as an “interim land use”. When it involves extraction in moraine lands, however, the validity of the “no negative impact” assertion is

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P.O. Box 121, Rockwood, ON N0B 2K0
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questionable and problematic. Because of the permanent removal of water filtering overburden, and in the case of quarries, removal of typically porous bedrock, there is nothing interim about these permanent alterations to the topography and ecoservices.

A 2011 study by the Canadian Institute for Environmental Law and Policy (CIELP), **Aggregate Extraction in Ontario: A Strategy for the Future**, identifies numerous impacts on the environment by aggregate extraction, including the following pertaining specifically to quantity and quality of water resources:

*“Pits and quarries can have significant negative impacts on **water quantity** both on-site and in adjacent areas. Removal of vegetation and topsoil at the beginning of the extraction process can result in the loss of natural stream flow patterns. Aggregate deposits in their natural state also act as reservoirs, making the loss of water storage function a direct and largely unavoidable consequence of the aggregate extraction process. The daily average water takings for the purposes of quarry dewatering in Ontario have been estimated at up to 10 million litres per day, while the average daily water takings for washing of aggregate materials have been estimated to be up to 8.8 million litres per day.”ⁱⁱ*

The CIELP report fails to address the even more significant water quantity impacts when aggregate extraction occurs in moraines due to the loss of groundwater recharge and storage functions.

*Aggregate extraction may have an adverse impact on **water quality** due to on site contamination from fuel storage or asphalt plants.”ⁱⁱⁱ*

Again the importance of moraines in terms of water quality is overlooked by the CIELP report: the permanent loss of the water filtering function of overburden and porous aquifer-conducting bedrock, together with the creation of surface to groundwater pathways in below-water table extraction are significant threats to water quality.

Moraines and other natural heritage features hold considerable natural capital value, which can be evaluated by widely accepted methods. Illustrative of the value of moraines, for the site of the proposed Hidden Quarry in the Paris Galt moraine in Guelph Eramosa Township, the sum of the yearly values of the forest, wetland and agricultural ecosystem services has been determined to be \$2,307,758 per year. The degradation of the ecosystem services represents therefore a significant loss of a capital asset.^{iv}

A Call to Action

Critical assessment of aggregate extraction practices in the moraines leads inevitably to two competing priorities: on the one hand the ongoing demand for aggregate in support of development and infrastructure priorities from sources that insofar as possible are close to market; and on the other, the critical importance of preservation of increasingly fragile and stressed water resources throughout the Province. The CIELP report addresses the competing priorities in the following statement:

There is a tipping point at which the need to preserve remaining natural heritage features should outweigh the benefits of close-to market aggregates management.”^v

In an era of climate change adaptation, we would focus this statement on water and the moraines and contextualize it to 2018:

The tipping point has arrived at which the need to preserve and protect the essential water-resources-related functions of the moraines must outweigh the benefits of extracting the readily accessible, close to market aggregates found in Ontario's moraines.

We therefore call on the Ontario government to:

1. **Implement an immediate cessation of all new aggregate extraction licences in moraines, whether or not they fall within the Ontario Greenbelt; and**
2. **Develop a new aggregate management strategy that gives full value to the natural capital that resides in all potential aggregate extraction sites in a thorough cost-benefit analysis of proposed aggregate extraction operations.**

ⁱ **EBR Response: Paris and Galt Moraines**, Ontario Ministry of Environment. April 2009. P.7.

ⁱⁱ Binstock, Matt, and Carter-Whitney, Maureen, **Aggregate Extraction in Ontario: A Strategy for the Future**. Canadian Institute for Environmental Law and Policy. March 2011. P.13

ⁱⁱⁱ Ibid, p. 14

^{iv} Kauss, Peter B., **Natural Capital Valuation of Southern Ontario Ecosystems**. Concerned Residents Coalition, Rockwood ON, November 15 2017. P. 6

^v Binstock and Carter-Whitney, p. ii

Contact: Linda Sword 519-853-1896 lsword@crcrockwood.org
www.hiddenquarry.ca