



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

### **CRC Response to**

### **PROTECTING WATER FOR FUTURE GENERATIONS: GROWING THE GREENBELT IN THE OUTER RING**

**March 7 2018**

### **Comments**

The critical issue in protecting water resources for future generations **is about prioritizing the protection of the moraines in view of their critical importance in contributing to the recharge, storage, cooling, cleaning and discharge of water. Inasmuch as the Greenbelt policies currently permit aggregate extraction in the moraines that fall within its boundaries, that protection is lacking. Expansion into other moraine lands will be similarly lacking in water resource protection.**

The aggregate extraction and water resource protection issues converge in these moraines. Now, and for many decades, the Province of Ontario has given priority to aggregate extraction, euphemistically described as an “interim land use”. Aggregate extraction in the moraines results in permanent, fundamental change to the nature and function of these lands. The stripping of overburden for extraction of gravel removes the very filtering capacity that enables the moraines to clean groundwater as part of their recharge function. Penetration into bedrock and below the water table for aggregate extraction in quarries permanently alters aquifer flow patterns that have naturally evolved since the ice age that gave rise to the moraines, and establishes a conduit between pristine groundwater and surface contamination sources. The overall aggregate extraction process degrades or destroys coldwater streams, already increasingly rare in Ontario, and the aquatic habitat they provide.

In addition, aggregate extraction may involve water-taking under a Permit to take Water. We are concerned that such permits are not difficult to obtain and operators are rarely monitored for compliance with the permits.

The current Provincial legislative framework recognizes the importance of protecting the Oak Ridges Moraine and the Niagara Escarpment, although diminished in impact by not prohibiting aggregate extraction. The equally important Paris/Galt, Waterloo and Orangeville moraines receive little if any protection at the Provincial level. And yet, at this time an estimated 800,000 people in the region depend on these moraines as sources of their drinking water, and projected population growth will bring the total in the Grand River watershed to 1.53 million by the year 2051.

Furthermore, the proposed study areas do not include **all** moraine lands, and in our view all such features require protection because of their critical role in sustaining groundwater resources throughout the Province.

It is a serious shortcoming of the Provincial Greenbelt plan that aggregate extraction continues to be given higher priority than water protection, in spite of there being no requirement on the part of the industry to demonstrate the need for new extraction operations. Indeed, protections that may be enacted by municipalities through their official plans that go beyond the minimal requirements of the Provincial Policy

Statement and the Aggregate Resources Act, as they are reflected in the Greenbelt rules, are not permitted in municipalities that lie within the Greenbelt.

Unless the Greenbelt expansion study addresses this conflict between aggregate extraction and water protection in moraines any benefits derived from growing the greenbelt into the “blue belt” areas will be grossly exceeded by the continuing loss of irreplaceable moraines to aggregate mining and the concomitant degradation of critically important water resources which would result in the need for expensive water treatment infrastructure.

#### **Recommendations:**

1. **Revise Greenbelt policies and/or enact legislation to prohibit aggregate extraction in moraines**, in particular although not limited to, the Paris/Galt, Waterloo, and Orangeville moraines, whether or not they lie within the Greenbelt.
2. Revise Greenbelt policies to enable municipalities to apply more stringent water protection policies as included in official plans.
3. Given recommendation 1, include “blue belt” areas, particularly to capture contiguous ecological systems currently only partially within the Greenbelt, and ensure that the moraine lands currently excluded from the Study Areas are captured in the expansion.
4. Source water protection plans must capture more of the moraine area, rather than using time of travel estimates to define these protection areas.

#### **Discussion Question Responses:**

What follows is our response to several of the study questions posed in the consultation document.

*Question 1. Are there additional “building blocks” features that should also be considered for addition to the Greenbelt to protect water?*

It is critical that both the moraines and bedrock formations, such as the Amabel formation for example, are protected from destruction by aggregate extraction. Watershed headwaters are considered as a building block in that they typically include or are derived from moraines, wetlands and coldwater streams. Upwelling springs and other features of watershed headwaters need to be explicitly identified as building block features.

Further, significant woodlands should be added to the list of building blocks. Their existence is important to the environment through providing shade for the maintenance of coldwater streams, provision of wildlife habitat, soil stability, carbon fixation, among other functions.

*Question 3. Of the seven areas, are there some that are more or less important?*

In an era of climate change adaptation, in which there is evident stress on groundwater resources arising from climate change and development, we maintain that the moraines on which the proposed study areas are based must receive protection of their role in the hydrological cycle in order to achieve the mission articulated in the consultation document title.

Without minimizing the importance of the other study areas, it is our view that the study areas that surround the “three cities” region of Kitchener-Waterloo, Guelph and Cambridge, that is Area 1: Waterloo and Paris/Galt Moraines, and Area 2: Orangeville Moraine are critically important as the source of municipal and domestic water supplies for more than 800,000 people, with significant population growth by mid-century. It is our view that these moraines are as important to this region as is the Oak Ridges Moraine to the GTA and that they need to be afforded protections, and in all cases protections that are more stringent than currently in place.

*Question 5. Should the province consider adding rivers that flow through urban areas as Urban River Valleys in the Greenbelt Plan?*

Yes, but this is a complex issue to the extent that conservation authorities are already charged with stewardship of such resources. We would only suggest that appropriate protections of critical watersheds continuously from source to end must be in place.

*Question 6. With the range of settlement areas in the GGH, how should the province balance accommodating future urban growth with protecting water resources?*

In many regions of southwestern Ontario, water supply capacity already defines build-out capacity for urban growth. The accommodation of future urban growth must continue to be predicated on the sustainability of water resources and not necessitate extreme engineering solutions such as water pipelines fed from the Great Lakes.

*Question 7. What are other key considerations for drawing a potential Greenbelt boundary around settlement areas?*

Although the focus of the consultation is protection of water resources, this broader question demands the inclusion of agricultural lands and “carbon sink” areas such as woodlands as constraints for settlement area/greenbelt boundaries. Food supply will also be a key issue in the future. Productive farmland (Class 1, 2 and 3) must be protected.

*Question 9. Once the Agricultural System and Natural Heritage System under the Growth Plan are finalized, how should they be considered as part of potential Greenbelt expansion?*

The challenge is to determine how best to protect critical environmental resources. As noted in our response to the next question, we are concerned that simply including land areas in the Provincial Greenbelt does not of itself afford appropriate protections. The protection of agricultural lands and natural heritage assets is critically important but the question needs to be considered whether the Greenbelt policies offer that protection.

*Question 10. How should other provincial priorities, such as mineral aggregates and infrastructure, be reflected in potential Greenbelt expansion?*

The Province is faced with competing priorities in the mineral aggregate/water resources dichotomy. On the one hand, close to market sources of mineral aggregates are given considerable weight in government and industry discourse and entrenched as a consideration in the Provincial Policy Statement—**even in the absence of objective evidence that new sources of aggregates are in fact required in view of currently licensed reserves.** On the other hand, Ontario’s freshwater resources are under increasing stress due to climate change, development and population growth.

Where these two priorities converge is in the moraines. Moraines are readily available sources of aggregates in overburden and bedrock, but as the consultation document explains, they are also critical components of groundwater systems through their role in aquifer recharge and groundwater purification. In spite of being characterized as “interim land uses”, pits and quarries in moraine lands result in permanent degradation through the removal of the overburden in the case of pits and penetration into bedrock below water tables in the case of quarries, thereby establishing a surface/groundwater conduit for water quality degradation, and potentially altering or even dramatically reducing the flow of groundwater..

**Conclusion:**

**In our view, a “tipping point” has been reached at which the priority needs to be decisively moved to protect the moraines as critical elements of our water resource systems. Because of the importance and permanent impacts of aggregate extraction in the degradation of the moraines and the groundwater and surface water resources that they sustain and give rise to, we maintain that the Province needs to enact an unbiased, objective, evidence-based Provincial resource management program and expedited policies for alternatives to virgin aggregate such as recycling.**

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