

Submission to the Ontario Environmental Registry

ERO 019-0556

Proposed amendments to the Aggregate Resources Act

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About the Grand River Environmental Network

The Grand River Environmental Network concerns itself with all aspects of the wellbeing of the environment in the Grand River Watershed. Membership is open to all residents who share our concerns. The organization was founded 11 years ago. Our main concerns include the adequacy of Provincial policies to protect our natural resources, enhance environmental quality, protect natural areas, and safeguard public health.

Concerns about proposed amendments to the Aggregate Resources Act

We welcome the opportunity to comment on two proposed amendments that we believe could endanger public health and result in irreparable damage to natural areas:

- “Clarify that depth of extraction of pits and quarries is managed under the Aggregate Resources Act and that duplicative municipal zoning by-laws relating to the depth of aggregate extraction would not apply.” (Proposed Amendments to the Aggregate Resources Act, Environmental Registry of Ontario, 019-0556
- “Outside of the Greenbelt Area, extraction may be considered in the natural heritage features listed in section 2.1.5, 2.1.6 and 2.1.7, provided that the long-term rehabilitation can demonstrate no negative impact on the natural features or their ecological functions.”

Proposed prohibition of municipalities from setting the vertical limits of aggregate extraction in their zoning bylaws

The Region of Waterloo, the most urbanized and populous part of the Grand River Watershed, includes the cities of Waterloo, Cambridge, and Kitchener as well as the townships of Woolwich, Wilmot, Wellesley, and North Dumfries. Their combined population is over 600,000 and the growth rate in the three cities has been ranked as the fourth fastest in Canada. It is also the largest municipal jurisdiction in Canada dependent on groundwater for most of its domestic water supply. Thus the protection of groundwater quality and assurance of adequate supplies are crucial to the security, health, and wellbeing of Waterloo Region.

The Region has had notable success over the past 40 years in instituting various measures to improve efficiency of water use in industry and provide incentives and public education to assist residents to engage in the judicious use of the limited water supply. These measures have resulted in a 50% decrease in per-capita water use with the happy result that the long-projected expenditure of an estimated \$1.5 billion to bring in additional water by pipeline from Lake Erie is now not necessary, despite rapid population growth. This is a notable achievement and testifies to the ability of the Regional government to manage the resource wisely while remaining accountable to the public purse.

Another concern of the Region is water quality and safeguarding public health. This has entailed state-of-the-art hydrological studies, regulatory safeguards, attention to threats such as road salting, water quality testing and monitoring, and identification of vulnerabilities. It is for this reason that the Region has turned its attention to one of the major industrial activities in the rural areas, aggregate extraction, which poses potential threats to water security.

The Guelph MNR district, which includes Waterloo Region, is the largest aggregate-producing area of Ontario. A 2013 study found 91 active and 8 surrendered aggregate sites in the Region of Waterloo (Port, 2013), and more large sites have since come into production. Although the effects of individual aggregate pits on groundwater hydrology may not be large or extensive, studies indicate there could be significant cumulative impacts from the combined operations of aggregate extraction pits at the landscape level, if appropriate safeguards are not taken (S. S. Papadopoulos and Associates, 2004; Port, 2013).

Caitlin Port in her study “The opportunities and challenges of aggregate site rehabilitation in southern Ontario”, concludes (p. 115):

The uncertain cumulative effects of aggregate extraction activities on water quality and quantity are of particular concern to many Southern Ontario communities that draw drinking water supplies from groundwater sources. This *concern is understudied* (italics ours) and the cumulative effects on ground water flows from the extraction of aggregate below the water table are unknown. In order to understand this concern better, there is need for

more comprehensive and consistent data for assessing the cumulative impacts of aggregate extraction below the water table on the watershed and sub-watershed level. The responsibility for the collection of this necessary information (i.e. the development and undertaking of cumulative effects assessment) should be the joint-responsibility of the aggregate industry, provincial government, and local government (including conservation authorities). It is necessary *to involve all stakeholders* involved to ensure accountability, transparency, and the accurate interpretation and dissemination of results.

Current aggregate regulation and licensing should employ the precautionary principle and assure that below water table extraction will not result in negative cumulative impacts to groundwater sources. Operational strategies, including rehabilitation planning, should be developed and implemented to minimize the impacts of below water table extraction on the watershed.

The Region of Waterloo has stated that it shares such concerns. It has sought to employ a protective practice that aggregate extraction must remain at least 1.5 meters above the water table. This would prevent both groundwater drawdown as well as the seepage and penetration of contaminants whether airborne, by way of storm events, from agriculture (fertilizer, pesticides, livestock manure), road maintenance and salting, and accidents or mishaps. However, the Province did not grant approval for the Region to introduce vertical zoning policies when the 2009 Regional Official Plan was revised. Regional Council appealed the matter to the Ontario Municipal Board, which deferred the matter to allow the Region to revisit the issue during the present Regional Official Plan review.

We are deeply troubled by the Province's proposed amendment to the ARA. Public health is at stake. **The Province should not revise the Act by introducing a prohibition against municipalities setting the vertical limit of aggregate extraction in their zoning bylaws.** We are in full agreement with the Region of Waterloo's response to this change that allowing aggregate extraction to occur below the water table would "weaken or work against policy direction that the Region has been working towards for many years, such as providing stronger source water and environmental protection policies" (Region of Waterloo, Planning, Development and Legislative Services, Regional Response to Provincial Policy Statement Review, October 22, 2019).

Proposed revisions to enable permission for aggregate extraction in Provincially significant natural features

At present, site alteration or development is not permitted within provincially significant natural features (e.g. significant woodlands, endangered species habitat) unless it can be shown that there will be no deleterious effects to the natural features or associated ecological functions. The proposed revision states that

“Outside of the Greenbelt Area, extraction may be considered in listed natural heritage features **provided that the long-term rehabilitation** can demonstrate no negative impacts on the natural features or their ecological functions.”

We find this shocking proposal to be completely unacceptable - and indeed dangerous. Port’s study shows “Because the life-span of an aggregate site can be so long (20+ years), it is difficult to anticipate the most desirable final requirements for rehabilitation, due to surrounding land-use change, unanticipated environmental changes, and improvements in best-management practices.” It should be noted that this statement about the difficulties of rehabilitation concern only currently allowed sites (e.g., cornfields) and not natural heritage sites which are so designated because they represent pristine systems which are usually more ecologically complex, environmentally sensitive, unusual or rare, or harbour threatened or endangered species. They also serve important ecological functions at the landscape level, such as maintaining biodiversity. The proposal also ignores the realities of climate change which make matters even more unpredictable.

A recent review of aggregate licences in the Region showed that only 20% of excavated lands have even undergone rehabilitation (Region of Waterloo, Regional Response, October 22, 2019). Port (2013) lists numerous deficiencies in her review of aggregate pit rehabilitation. For example, one third of plans didn’t specify topsoil sources for restoration (a critical factor), only 10% had on-site erosion control, 70% did not specify the species to be used for revegetation, only 25% proposed to use native species, procedures were “vaguely explained and lack sufficient detail to guide the undertaking of specific rehabilitation activities”. She summarizes the current situation as seriously deficient:

This lack of clarity can be expected to have a negative effect on the resulting quality of rehabilitation occurring in the field. Because rehabilitation plans lack direction and performance indicators, there are no criteria available to hold aggregate producers accountable for achieving successful rehabilitation.

Port also notes problems with the quality of regulations, lack of enforcement, and that operators ignore rehabilitation because it can be costly and affect their profit margins.

This shocking and sorry situation in currently allowed extraction sites surely shows that it would be impossible to rely in any way on “long term rehabilitation plans” to justify destruction of designated natural areas for aggregate extraction: there is almost no chance that they could be reconstructed or rehabilitated.

We ask you not to adopt this highly dubious proposal. We concur with the Region of Waterloo’s well-considered conclusion “addressing the negative impacts of aggregate extraction through long-term rehabilitation plans is risky and could result in the permanent destruction of significant natural features or habitats.” This is too high a price to pay.

A final Thought

The Environmental Commissioner of Ontario provided this thoughtful statement in its 2010/11 Annual Report. We have taken it to heart in preparing this submission.

There is no question that source protection planning is complicated, inconvenient and expensive. However, this should not be allowed to eclipse the sheer importance of the program of not only ensuring a safe drinking water supply but just as important, of instilling public confidence in it. The suffering that happened in Walkerton in 2000 should be a constant reminder that the benefits to human health and the environment that come from protecting the province's aquatic resources are priceless.

References

Environmental Commissioner of Ontario. Annual Report, 2010/2011.

S. S. Papadopoulos and Associates, Inc. 2004. Analyses of the Potential Effects of Aggregate Extraction Operations on Water Resources in the Cedar Creek Subwatershed. Prepared for the Regional Municipality of Waterloo.

Port, Caitlin M. 2013. The Opportunities and Challenges of Aggregate Site Rehabilitation in Southern Ontario. An Evaluation of the Rehabilitation Process from 1992-2011. Master of Environmental Studies thesis in planning, University of Waterloo. uwspace.uwaterloo.ca/bitstream/handle/10012/7966/Port_Caitlin.pdf

Region of Waterloo, Planning, Development and Legislative Services. October 22, 2019. Regional Response to provincial policy statement Review (ERO Posting No. 019-0279).