

Category: Media Release  
Subject: Request for Review of Waterloo Moraine  
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## REQUEST FOR REVIEW OF THE WATERLOO MORAINES

WATERLOO, ON –

A Request for Review of the Waterloo Moraine has been submitted to the *Environmental Commissioner* of Ontario's office under section 61 of the *Environmental Bill of Rights*. This Request for involvement by the Province of Ontario in the management of the Waterloo Moraine reflects the recent suite of regional decisions regarding this important community resource.

For example the Waterloo Moraine, on any given day, provides drinking water to more than two hundred thousand people in the Region of Waterloo. This moraine represents the landscape feature that led to the name for the region, and extends across the Cities of Waterloo and Kitchener and several adjacent townships. The extension of Waterloo Moraine across cities and townships makes the management of this resource a large inter-jurisdictional challenge for local officials. Awareness of the importance of the moraine led the Region of Waterloo to present planning documents to the public that prioritized the protection of land directly associated with groundwater and surface water resources. In contrast to these public presentations, the Region continues to approve land developments that will knowingly reduce available groundwater volumes and degrade sensitive landscapes like provincially significant wetlands. These actions have been well described in the local media.

This Request for Review, co-sponsored by Mr. David Wellhauser, states we: "...request a Review because the Ontario Water Resources Act (OWRA), the Safe Drinking Water Act (SDWA), and the Ontario Provincial Policy Statement (OPPS) do not adequately protect existing groundwater volumes associated with the Waterloo Moraine in the Region." This Request also states: "The applicants also submit and demonstrate below that the value of even a minimal loss of additional groundwater volume from Waterloo Moraine represents a very expensive consequence of any further land development for the citizens of the Region."

In this Request, the applicants demonstrate that a minimal loss (i.e., 1%) of groundwater volumes represents a large financial cost due to lost groundwater volumes available to the citizens of the Region. The Request recognises: "This identification of a lack of proper assessment of the cost of lost groundwater by local managers represents another reason why the Province of Ontario must become immediately involved in the management and protection of the Waterloo Moraine."

The Request explains that these consequences due to development on the Waterloo Moraine and lost water volumes have not been disclosed as a cost during the presentations to the public on this matter. The Request also identifies this theme: "Such a lack of full disclosure of the cost of the lost groundwater volumes by these government entities is in the least, impolite, and in the worst, negligent."

The Request concludes by stating: "...these government entities have also failed to recognize that the water from the moraine belongs to all citizens and when it is wasted, all citizens have to bear the cost."

A response on this matter from the *Environmental Commissioner's* office is expected in the very near future.

For further information:

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Direct copy of a portion of the Request for Review noted in the Media Release on the next page.

## Background to this Request for Review

"When the well's dry, we know the worth of water." Benjamin Franklin

On any given day, the Waterloo Moraine provides drinking water to more than two hundred thousand people in the Region of Waterloo. This moraine represents the landscape feature that led to the name for the region, and extends across the Cities of Waterloo and Kitchener and several adjacent townships. The extension of Waterloo Moraine across cities and townships makes the management of this resource a large inter-jurisdictional challenge. This awareness led the City of Waterloo and Region to present planning documents recently to the public that prioritized the protection of groundwater and surface water resources. Specifically, the City stated in their *Environment First* document, on p. 32, that: "The protection of water resources is best achieved through an understanding of groundwater and surface water quantity and quality issues. It involves a commitment to maintain existing high quality resources necessary for drinking water reserves, terrestrial and aquatic ecosystems." Similarly, the Region stated in the *Long-term Water Strategy*, adopted on 10 May 2000, that: "An integral component of the *Water Supply Master Plan* is the continued commitment to protection of the Region's local water resources, both surface and groundwater." These documents demonstrate both the City and Region are aware development of lands on the Waterloo Moraine reduces groundwater volumes and should be avoided.

## Analysis of the cost of lost groundwater volumes: Methods

We submit that the developments being considered for the lands of the Waterloo Moraine will continue to impact water quality and quantity. Because the cost of impact on water quality is hard to define, we have estimated the potential cost of a loss of water volume available to the Region due to the past and proposed land developments. These estimates of cost or the value of lost water quantity are very conservative and reflect direct communications with the Region for the actual current value of water. For example, the Region currently estimates a litre of water as having a value of 1 cent (i.e., 1/2 cent cost to pump the water from the ground and 1/2 cent cost to process the water as sewage after use; words of Mr. Thomas Schmidt, Director of Water Services at the Region of Waterloo during public presentation in 2006. Thus, to explore the value of lost water volumes currently and for the future, we consider a litre of water as being worth from 1 to 3 cents; these values contrast with the current retail value of water being greater than 25 cents per litre). We also consider the possible losses of groundwater volume from the Waterloo Moraine as ranging from 1 to 10% of the total volume of the 40 (range of 35 – 43) million imperial gallons used per day, as pumped by the Region during the last calendar year. We also estimate the value of the water volumes recently included in the MOE permit to dewater the Wideman Road construction site with a similar analysis. Also, we have used the conversion factor of one imperial gallon as equal to 4.546 litres.

## Analysis

The large volumes of groundwater pumped by the Region on a daily basis necessarily translate to a large cost for even minimal losses of groundwater volume. Specifically, based on the pumping rates of water reported for the Region, our analyses reveal the value of lost water volumes ranges from \$18,184 to \$545,820 per day (Table 1). For example, the loss of just 1% of water volume per day, at a cost of 1 cent per litre, represents a cost to the Region of \$18,184 per day (annual cost = \$6,637,160). In a similar manner, the large volumes of water pumped from the Wideman Road site also translate to a large cost. The value of lost water volumes from this site ranges from 50,400 to 151,200 dollars for the volume noted in the MOE permit (Table 2). It is important to note this analysis does not include the loss and associated value of water from natural seepage along the entire Wideman Road site, so the value of this loss is not fully represented.

**Table 1.** Summary of predicted cost per day of water volumes lost due to construction on the Waterloo Moraine. These predictions reflect a base pumping rate of 40.000 million gallons per day (equal to 181.840 million litres per day) in the Region during 2004. The predicted volume losses range from 1 – 10% and cost range from 1 to 3 cents per litre per day.

Volume lost per day (%)	Total volume lost per day (million litres)	Total cost of water lost per day (\$)		
		0.01 \$ / litre	0.02 \$ / l	0.03 \$ / l
1	1.8184	18,184	36,368	54,552
2	3.6368	36,368	72,736	109,104
5	9.092	90,920	181,840	272,760
10	18.184	181,840	363,680	545,520

**Table 2.** Summary of predicted total cost of water volumes lost due to construction on Wideman Road over a 14 day period with a base pumping rate of 360,000 litres per day from the Waterloo Moraine.

Total volume pumped (million litres)	Total cost of water lost (\$)		
	0.01 \$ / litre	0.02 \$ / l	0.03 \$ / l
5.040	50,400	100,800	151,200