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Comments on Halton's Waste Water Treatment Master Plan
Including Mid- Halton Plant's Master Plan

I and many other Halton residents are concerned about the shoreline algae situation and we believe the current Master Plan will not improve the condition.

Algal growth is a function of sunlight, water temperature, and nutrient loadings into the Lake, with phosphorus the most significant; the nutrient load is affected by population growth which in the GTA is well above the national average.

Of these factors the most controllable is phosphorus which was singled out in the Great Lakes Water Quality Agreement [GLWQA] of 1978 under which phosphate detergents were eliminated and the application of phosphate fertilizer for commercial agriculture was reduced. The GLWQA set limits on municipal waste water treatment [MWWT] plants discharging into all Great Lakes both for the phosphorus content of waste water effluent and the total phosphorus loading, establishing specific targets for each Lake.

Halton has the best performing MWWT plant in the GTA, with respect to the lowest content of phosphorus in effluent, at its Skyway plant, and plans to apply this optimization process to the other 3 plants discharging into Lake Ontario within 5 years. However, the 89% population growth forecast for the Region will overwhelm these efficiencies resulting in more total phosphorus being loaded into the Lake by 2031 than occurred in 2001.

In 2001 the 4 Halton MWWT plants discharging into the Lake deposited an average of 55.2 kg per day of total phosphorus into Lake Ontario. Applying Skyway efficiency to all plants to projected 2031 waste water effluent flows, total phosphorus loadings will rise to 59.7 kg daily. The situation at Mid- Halton plant is much more dramatic because it will serve most of the growth planned for south Milton and north Oakville. Using Region's effluent flow projections and Skyway efficiency, total phosphorus loading will increase from 8.3 kg daily in 2001 to 28.2 kg daily in 2031.

These future results are at odds with Halton's Official Plan which emphasizes Smart Growth and addresses Environmental issues. So what can be done to reduce the quantity of total phosphorus from our waste water treatment plants into Lake Ontario ?

Two points must be considered. First, we must go beyond the compliance limits for phosphorus applied by Ontario's Ministry of the Environment. These were apparently based on the GLWQA which in the Supplement to Annex 3 set the phosphorus content in effluent at 1.0 mg/L for all MWWT plants discharging into the Great Lakes, and set total phosphorus loadings targets for each Lake, including a 7,000 tonnes target for Lake Ontario. [Inexplicably the initial effluent content targets for Lakes Ontario and Erie were to be 0.5 mg/L, but the final agreement used the 1.0 mg/L base set for Lakes Superior, Michigan, and Huron.] In retrospect it seems clear that the

consequences of population growth were overlooked. Otherwise the GLWQA agreement would have mandated declining phosphorus content in effluent as flows increased.

The second point is to ensure that Halton's Waste Water Treatment Master Plan, in addition to present optimization plans, incorporates specific steps [technologies and other measures] which will reduce total phosphorus loadings. Such means and measures would be compatible with the thrust of the Region's Official Plan on Smart Growth and the Environment. Sound planning requires that necessary infrastructure investment benefits all in the community. A worsening shoreline algae problem is not consistent with our Official Plan goals.

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