



April 1, 2010

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Ministry of the Environment
Environmental Programs Division
Lake Simcoe Project Team
55 St.Clair Avenue West, Floor 7
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Dear Ms. Weller,

Re: EBR #010-8986 – Lake Simcoe’s Proposed Phosphorus Reduction Strategy and Amendments to the Lake Simcoe Protection Plan

On behalf of Conservation Ontario (CO), thank you for the opportunity to comment on the draft EBR # 010-8986 - Lake Simcoe's Proposed Phosphorus Reduction Strategy and Amendments to the Lake Simcoe Protection Plan.

Conservation Ontario represents the common interests of Ontario’s 36 Conservation Authorities. Conservation Authorities are local, watershed management agencies that deliver services and programs that protect and manage water and other natural resources in partnership with government, landowners and other organizations. As part of the Conservation Authorities’ mandate, they ensure that Ontario's rivers, lakes and streams are properly safeguarded, managed and restored. In addition to serving the public and Ontario landowners, Conservation Authorities also provide advice to all levels of government on the responsible management of water.

Conservation Ontario commends the Ontario Government’s efforts at legislating a watershed plan and reiterate that Conservation Authorities are in full agreement that the best way to protect and restore the ecological health of the Lake Simcoe watershed is through the implementation of an integrated watershed management plan. Given that the implementation of watershed plans is not legislated and the science and plans are therefore only advisory to local decision-making, Conservation Ontario supports the concept of a provincially mandated watershed plan for the

protection of Lake Simcoe and the ultimate approval of such a Plan by the province. There are many aspects to the Plan that, as they are further developed under the implementation of the policies, will provide tools to assist in watershed management by Conservation Authorities across the province.

Comments are based on Conservation Ontario's views and submissions from 3 Conservation Authorities (South Nation Conservation, Credit Valley Conservation and Lake Simcoe Region Conservation Authority). It is noted that Conservation Authorities may also be submitting individual comments on the EBR postings. Conservation Ontario's comments are not intended to limit your review and consideration of the specific comments provided by Lake Simcoe Region Conservation Authority (LSRCA). The comments included in this letter focus on high-level issues identified within the proposed strategy.

The proposed strategy has the following key concepts and directions: adaptive management; watershed approach; source specific actions; stewardship and community action; monitoring and compliance; and research, modeling and innovation. Most of these items are closely related to the work of Conservation Authorities.

KEY COMMENTS

Build On Established Successful Stewardship and Community Action Programs Aimed At Phosphorous Reduction

Conservation Authorities (CAs) have an extensive and proven track record of developing and implementing adaptive management programs designed to reduce anthropogenic impacts to watercourses using a watershed approach. These programs are carried out in coordination with municipalities and other local stakeholders (i.e. landowners, farmers, etc). Some of these programs involve the province (i.e. Provincial Water Quality Monitoring Network, Ontario Source Protection Program). This has resulted in a level of trust and understanding between the various stakeholders that has taken years to develop. Conservation Authorities would look forward to a greater commitment from the province to support and build on these successful initiatives.

The strengths of CAs are very evident in watersheds that are undergoing increasing pressures from new and existing developments. Lake Simcoe Conservation has been working for years to reduce phosphorous levels through stewardship, engineering and planning programs such as stream restoration, erosion and sediment control, and the Landowner Environmental Assistance Program (LEAP). LEAP provides landowners with funding and technical assistance for environmental projects on their land. This program includes 50% or more funding to a maximum level for projects such as planting cover crops, controlling erosion, managing manure, restricting livestock from waterways, upgrading stormwater management ponds (up to \$2500 per kg of P reduction), and upgrading on-site septic systems. Septic systems within 300 m of Lake Simcoe are eligible for additional funding.

Many other CA's also have similar programs aimed at reducing impacts from humans (including dissolved oxygen and phosphorous) to lakes and rivers. Toronto and Region Conservation Authority (TRCA), Rideau Valley Conservation, Grand River Conservation Authority, Upper Thames River

Conservation Authority and many CAs across the province deliver stewardship programs that provide technical assistance and funding to landowners that are similar to programs of Lake Simcoe Region Conservation Authority, and South Nation Conservation that implements a renowned and successful phosphorus trading program in its watershed.

Given the programs already in place, the Phosphorus Reduction Strategy should build on and complement existing stewardship programs, to avoid duplication and competition between programs. In order to develop a successful program it's recommended that it be developed and delivered by building upon existing local relationships, utilizing one on one contacts, landowner outreach programs, and making the application process as simple as possible (eg. only one application to fill out). South Nation Conservation has found that assistance provided to the landowner by the delivery agency in the form of on-site technical information, interpretation of the eligibility requirements and completing applications for funding increases landowner uptake of phosphorus reduction projects.

Improve Phosphorous Loading Criteria

Proportional loadings should be established on a subwatershed basis and not based on contributing sources as each watershed is different (i.e. topography, soils, etc). If it is established by contributing sources, the goal for phosphorus reductions in the lake may be reached, however locally impaired watersheds and nearshore areas will still be present and remain a problem.

Livestock farms and their associated sources of phosphorous should be included as potential phosphorous credits. Manure storage, milkhouse wastewater treatment/storage, and other facets of the operations can represent large opportunities for phosphorous reduction.

The type of phosphorous reduction (e.g. soluble versus total P) should be specified in any discussions since the fate of phosphorous is dependent of the chemical characteristics of it. This will focus any discussions on the real impacts of individual sources and the real benefits of reductions in supply of phosphorous.

Increase Research and Innovation

Lake Simcoe Region Conservation Authority (LSRCA) has also been working on new and innovative ways to reduce phosphorous impacts to waterways, including testing of new products (Phoslock and other adsorption type products). An important part of LSRCA's efforts to reduce phosphorous levels has been their water quality monitoring programs. The LSRCA operates:

- Twelve ambient water quality monitoring sites detecting nutrient levels, metals, and general water quality, in partnership with the Ministry of the Environment.
- Six water quantity stations, and another seven in partnership with the Ministry of Natural Resources.
- Fourteen groundwater monitoring wells, in partnership with the Ministry of the Environment.
- Six year-round precipitation gauges.

- One evaporation pan, in partnership with Natural Resources Canada.
- Twenty fish population monitoring locations.
- Twenty Benthic Invertebrate monitoring locations

The Sustainable Technologies Evaluation Program (STEP) is a multi-agency program led by TRCA. The program was developed to provide the data and analytical tools needed to support broader implementation of Low Impact Design (LID) sustainable technologies and practices within a Canadian context. Its main objectives are to:

- Monitor and evaluate sustainable technologies in the areas of water and air
- Assess potential barriers to implementing sustainable technologies
- Provide recommendations for guideline and policy development
- Disseminate study results and recommendations and promote the use of effective technologies at a broader scale through education and advocacy

It is recommended that a more detailed strategy address the differences between soluble and particulate phosphorus entering the lake instead of just total phosphorus. This is important and will help to address where targets should be set as soluble phosphorus is readily available for plant uptake and particulate phosphorus is not.

A cost benefit analysis should also be completed to determine the feasibility of reductions from sewage treatment plants (STPs). This will help to determine the level of reductions that the STPs can economically achieve. In addition, a review of the Holland Marsh's long-term viability, and changing cropping practices should be completed. The polders are an area where significant reductions can be achieved.

Expand Phosphorous Strategy to Cover All of Ontario

According to monitoring from the province-wide Lake Partner Program there are many lakes, other than just Lake Simcoe that have high concentrations of phosphorous in them. Almost half the phosphorous samples collected by CA's and MOE between 1997 and 2007 were above the provincial objective of 30 ug/L. Approximately one hundred lakes, and twenty major rivers in Ontario could be classified as meso-eutrophic. Eleven of these rivers could be considered eutrophic. Evidence has shown that even the Great Lakes (Lake Erie in particular) are showing signs of cultural eutropication (i.e. massive blue green algae plumes are observed in satellite photo's in the western portion of the lake).

The Source Protection Program administered by the province and CA's would benefit from this type of program as well. Drinking water intakes are currently being assessed for vulnerability to threats and phosphorous could cause issues at some of these intakes. A provincial phosphorous reduction program would improve the protection of these drinking water supplies.

Conservation Authorities have developed watershed report cards that show poor water quality (based on phosphorous levels and other parameters) in some sub-watersheds across southern Ontario. This indicates a need for a broader provincial phosphorous strategy to address problems in other areas, and to prevent more lakes and rivers from becoming eutrophic.

Virtually Eliminate Phosphorous from All Detergents

Table 3 of the proposed strategy shows a comparison of household phosphorous releases. One of the largest sources is from dishwasher detergent containing phosphates. Several locations in the United States (including the states of Wisconsin and Washington) have banned dishwasher detergents with phosphorous. The Canadian Consumer Specialty Products Association committed to limit the phosphorus content in household automatic dishwashing detergent to 0.5 per cent by weight effective July 2010. The federal government has discussed implementing a similar limit. Ontario should regulate the amount of phosphorous in residential, commercial and industrial cleaners and dishwasher detergent to 0.5 percent or less by weight.

Climate Change and Infrastructure

Potential climate change impacts also need to be considered in more detail, as it will have effects on assimilative capacity of streams, erosion, and sediment loadings in streams. The larger, less frequent, more intense storms which are predicted to become more prevalent with climate change will significantly increase large pulses of phosphorus to Lake Simcoe. The phosphorus reduction strategy should also include a requirement for mandatory maintenance of stormwater ponds to ensure they are operated at a high rate of efficiency.

Finally, in order for the phosphorus reduction strategy to be successful the roles and responsibilities, and ultimate authority of the delivery agency will need to be clearly outlined along with guaranteed sustainable funding.

Conservation Ontario thanks you for the opportunity to provide comments. If you have any questions please contact myself (ext. 224) or Scott Lister (ext. 229).

Yours truly,



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