

8

PROPOSED LAKE SIMCOE PHOSPHOROUS REDUCTION STRATEGY, FEASIBILITY STUDY FOR WATER QUALITY TRADING AND SHORELINE PROTECTION DISCUSSION PAPER

(Regional Council at its meeting on June 25, 2010 amended this Clause to include recommendation 1a) as follows:

- 1(a) Council request that the Province provide sufficient ongoing funding to support the implementation of the Lake Simcoe Protection Plan, including the phosphorous reduction components of the Plan.)***

The Planning and Economic Development Committee recommends the adoption of the recommendations contained in the following report dated April 30, 2010, from the Commissioner of Planning and Development Services.

1. RECOMMENDATIONS

It is recommended that:

1. Regional Council endorse the attached staff comments on Environmental Bill of Rights (EBR) posting entitled Lake Simcoe Shoreline Protection Discussion Paper (EBR No. 010-9107) as submitted on April 7, 2010.
2. The Regional Clerk forwards this report to the Minister of Environment.
3. The Regional Clerk circulate this report to:
 - a) The Lake Simcoe Region Conservation Authority,
 - b) the Towns of Aurora, East Gwillimbury, Georgina, Newmarket, Whitchurch-Stouffville and the Township of King.

2. PURPOSE

The purpose of this report is to advise Council of the contents of the Proposed Lake Simcoe Phosphorous Reduction Strategy, the Water Quality Trading Feasibility Study and the Shoreline Protection Discussion Paper; and obtain Council endorsement of the comments submitted to meet the EBR comment deadline of April 3, 2010.

3. BACKGROUND

Province is proceeding with Lake Simcoe Protection Plan implementation

The *Lake Simcoe Protection Act, 2008* (LSPA) received Royal Assent on December 12, 2008 and required the Province to establish a watershed-based plan to help restore and protect the health of Lake Simcoe. The Lake Simcoe Protection Plan came into effect on June 9, 2010.

The Lake Simcoe Protection Plan committed the Province to develop a Phosphorous Reduction Strategy, conduct a feasibility study for Water Quality Trading and begin consultation on proposed shoreline protection regulations for the Lake Simcoe Watershed within one year of the release of the Plan.

On February 17, 2010, the Province posted the following documents on the EBR for a 45 day comment period ending April 2, 2010:

- Lake Simcoe Proposed Phosphorous Reduction Strategy and Amendments to the Lake Simcoe Protection Plan (EBR Posting 010-8986).
- Feasibility Study for Water Quality Trading in the Lake Simcoe Watershed (EBR Posting 010-8989).
- Lake Simcoe Shoreline Protection Discussion Paper (EBR Posting 010-9107).

Environmental Services staff provided detailed comments on the Water Quality Trading Feasibility Study and the proposed Phosphorous Reduction Strategy by letter dated April 14, 2010. This letter and related staff report were endorsed by Environmental Services Committee and Council (Report No. 5, Clause 3, May 20, 2010).

Planning Department staff comments, primarily focused on the Shoreline Discussion Paper, were submitted to the Province on April 15, 2010 as draft pending Council endorsement (Attachment 1).

4. ANALYSIS AND OPTIONS

York Region has a long and consistent history of supporting the protection of Lake Simcoe

York Region has consistently supported the protection and study of Lake Simcoe through the funding of the Lake Simcoe Regional Conservation Authority, participation on the Lake Simcoe Environmental Management Strategy (LSEMS) and the incorporation of required policies in the Regional Official Plan (as adopted by Council, December 2009) in order to conform with the Lake Simcoe Protection Plan. In addition, York Region continues to invest in state-of-the-art sewage treatment facilities and technology throughout York Region and specifically within the Lake Simcoe watershed.

The proposed Phosphorous Reduction Strategy indentifies 6 strategic directions

The proposed Phosphorous Reduction Strategy identifies 6 strategic directions on a source/sector basis:

1. The established baseline effluent limits and loads for sewage treatment plants were adopted as objectives after March 31, 2010. These objectives will become compliance limits by 2015 or the next STP expansion (whichever occurs first).
2. No net increase in phosphorous loading as a result of new development.
3. Encourage continued best management practices through stewardship activities to reduce phosphorous loading from rural and agricultural sources.
4. Enhance existing stewardship programme to reduce phosphorous from polders and promote research and innovation.
5. Meet long-term reductions in loading from atmospheric deposition including.
 - a) continue and expand stewardship opportunities that address urban and agricultural sources of airborne phosphorous;
 - b) build scientific knowledge through partnership-based approaches with the aggregate and development industries; and
 - c) work with the aggregate and development industries to identify opportunities for phosphorous reduction including the implementation of best management practices.
6. Support the continuation and enhancement of stewardship activities including celebrating successes and removing barriers to participation in phosphorous reduction activities.

There is a need to identify practical and effective phosphorous reduction strategic actions

The Proposed Phosphorous Reduction Strategy indicates that a shared responsibility is required to reduce phosphorous loading into Lake Simcoe and a need to identify practical and effective actions. There is little discussion on how the strategic actions were determined or deemed to be a practical and effective analysis. Staff recommend that a cost-benefit analysis would ensure that the most practical and effective phosphorous reduction.

The Proposed Phosphorous Reduction Strategy focuses on controlling point sources of phosphorous

Regional staff acknowledge that point sources of pollution including phosphorous loads from sewage treatment plants (STP's) are easier to define, control and regulate and therefore, represent a very implementable reduction strategy. However, staff feel that this may not be the most effective or practical approach. As indicated in the strategy, reductions in loadings to meet 2045 phosphorous reduction targets for sewage treatment

plants are not feasible at this time with current technologies. In addition, the cost of implementing new technologies could impact negatively on the economic sustainability of the Region and local municipalities.

Non-point sources of phosphorous should be held to same standards as point sources of phosphorous

Agricultural and rural operations should be required to implement best management practices related to soil erosion and fertilizer application. Currently, the Phosphorous Reduction Strategy encourages continued best management practices and participation in voluntary stewardship activities over the longer-term for non-point sources of phosphorous.

The Reduction Strategy should address rural and agricultural activities on a sector by sector basis to determine where stronger phosphorous reduction strategies would be most beneficial. This would better reflect the vast difference in the practices and impact on phosphorous loading across the rural and agricultural landscape.

Water Quality Trading Feasibility Study identifies the Lake Simcoe Phosphorous Water Quality Trading program as the best bet

The Province retained XCG Consultants Limited to prepare the Water Quality Feasibility Study pursuant to the requirements of the Ontario Water Resources Act and the Lake Simcoe Protection Plan. The study reviewed pollutant trading programs established in other jurisdictions, identifies options for the structure and delivery of a water quality trading program including potential participants and governance.

The Water Quality Feasibility Study concludes that a Lake Simcoe Phosphorous Water Quality Trading Program is technically and economically feasible and may be the only mechanism available through which municipalities can ensure that sewage treatment plants remain in compliance and achieve the phosphorous reduction requirements of the Lake Simcoe Protection Plan.

York Region encourages the development of a Water Quality Trading Program

Staff support the development of a Provincial Water Quality Trading Program subject to a number of considerations.

In developing a water quality trading program, a system of determining eligibility for purchasing credits must be established. Municipalities who have exhausted reasonable technological solutions for achieving phosphorous reduction should be given highest priority to purchase credits.

Staff would also ask that the Province consider including proven inflow and infiltration reduction reductions as a source for trading credits (especially if improvements are consistent for a period of three years).

Proposed Shoreline Protection Regulation Discussion Paper outlines restricted activities to reduce threats

The proposed Shoreline Protection Regulation would address activities that occur within the shoreline area that do not require approvals and are not regulated or required to conform to the Lake Simcoe Protection Plan. The Shoreline Protection Regulation aims to restrict activities that are identified as ongoing threats to the health of the Lake Simcoe watershed including:

- The removal of natural vegetation near shoreline
- Significant shoreline alteration
- Fertilizer use
- Restrictions on the location of new septic systems
- Alteration of wetlands
- Removal of peat

Staff support the protection of natural vegetation and the requirements for no net loss of vegetation as a result of construction. Strategic areas for terrestrial restoration should be identified and should provide connection to/from other sensitive lands uses including the Regional Greenland System.

The proposed Shoreline Regulation proposes restrictions on the cosmetic application of phosphorous-based fertilizer within 35 metres of the Lake Simcoe shoreline. Regional staff strongly suggest that the cosmetic use of phosphorous-based fertilizer be prohibited throughout the Lake Simcoe watershed for ease of enforcement and further reduction of phosphorous loading through storm water. Further, the Province should consider requiring rural and agricultural operations to conduct soil testing prior to phosphorous-based fertilizer applications within the riparian areas (5 metres) of Lake Simcoe.

5. FINANCIAL IMPLICATIONS

Taxpayers and municipalities should not bear the cost burden to reduce phosphorous loadings in Lake Simcoe

Previous reports to Environmental Services Committee and Council (October 22, 2009, Report No. 2 and May 12, 2009, Report No. 3 of the Environmental Services Committee) have indicated estimated costs based on capital expenditures to meet recently imposed phosphorous limits and concluded that significant capital costs will be required to meet the proposed phosphorous limits. These estimated costs to remove phosphorous using

membrane ultrafiltration technology represent 200 to 500 times current phosphorous removal costs, from approximately \$2600 to \$5000 a kilogram.

It is not known at this time what the financial implications of the proposed Water Quality Trading Program and the Shoreline Protection Regulation will have on the Region and local municipalities.

6. LOCAL MUNICIPAL IMPACT

It is not known at this time exactly what the impacts of these proposals under the Lake Simcoe Protection Plan will have on the local municipalities.

The proposed Shoreline Protection Regulation Discussion Paper indicates that the Province intends to rely on existing legislated permits, approvals and tools to implement the regulation. In addition, the Province intends to use existing agencies to provide compliance functions. This could potentially increase resource requirements for municipalities in the Lake Simcoe Watershed.

7. CONCLUSION

York Region has consistently demonstrated a commitment to protecting Lake Simcoe and continues to invest in state-of-the-art sewage treatment facilities and technology throughout York Region and specifically within the Lake Simcoe watershed.

Overall, York Region is encouraged to see that the Province continues to make progress on the commitment made to protect and restore the ecological health of Lake Simcoe and its watershed. However, estimated costs based on capital expenditures to meet recently imposed phosphorous limits will result in significant capital costs to meet the proposed phosphorous limits.

It is not known at this time what the financial implications of the proposed Water Quality Trading Program and the Shoreline Protection Regulation will have on the Region and local municipalities.

For more information on this report, please contact Laura Atkins-Paul, Senior Planner at Ext. 1534 or John Waller, Director of Long Range and Strategic Planning at Ext. 1525.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause is attached to this report.)



April 15, 2010

Ms. Jennie Weller
Senior Outreach and Consultation Coordinator
Ministry of the Environment
Environmental Programs Division
Lake Simcoe Project Team
55 St. Clair Avenue West, 7th Floor
Toronto, Ontario M4V 2Y7

Dear Ms. Weller:

Re: EBR Registry Number 010-8986 – Lake Simcoe’s Proposed Phosphorus Reduction Strategy and Amendments to the Lake Simcoe Protection Plan
EBR Registry Number 010-8989 – Feasibility Study for Water Quality Trading in the Lake Simcoe Watershed
EBR Registry Number 010-9107 - Lake Simcoe Shoreline Protection Discussion Paper

Thank you for this opportunity to comment on the above noted documents posted on the Environmental Registry on February 17, 2010. These comments are supplemental to the comments that have been forwarded by the York Region Environmental Services Department by letter dated April 2, 2010 and have been prepared in consultation with Regional and municipal planning staff. Please be advised that these comments are draft until they have been reviewed and endorsed by Regional Council. A copy of the Council report will be forwarded to you upon endorsement.

York Region has consistently demonstrated a commitment to protecting Lake Simcoe and continues to invest a tremendous amount of capital into state-of-the-art sewage treatment facilities and technology throughout York Region and specifically within the Lake Simcoe watershed.

Overall, we are encouraged to see that the Province continues to make progress on the commitment made to protect and restore the ecological health of Lake Simcoe and its watershed. The phosphorous reduction strategy, water quality feasibility study and shoreline regulation discussion paper move the discussion forward on how to implement the *Lake Simcoe Protection Plan*, 2009.

Our comments on these documents are as follows:

Lake Simcoe's Proposed Phosphorus Reduction Strategy (The Strategy) and Amendments to the Lake Simcoe Protection Plan (EBR Registry Number 010-8986)

Identification of Practical and Effective Strategic Action

- The Proposed Phosphorus Reduction Strategy indicates that a shared responsibility exists to reduce phosphorous loading into Lake Simcoe but it also indicates that there is a need to identify practical and effective actions. There appears to be little discussion or information provided on how the strategic actions were determined and how they were deemed to be practical and effective. A cost-benefit analysis would be beneficial to ensure that the most practical and effective phosphorous reduction activities are undertaken.

Strategy Primarily Focuses on Controlling Point Sources of Phosphorous, especially Waste Water Treatment Plants

- Regional staff acknowledges that point sources of pollution including phosphorous loads from sewage treatment plants (STP's) are easier to define, control and regulate and therefore represents a very implementable reduction strategy. However, Regional staff would argue that this may not be the most effective or practical approach. As indicated in the strategy, the technologies to reduce loadings to meet the 2045 phosphorous reduction targets for sewage treatment plants are not feasible at this time. In addition, these new technologies could negatively impact the economic sustainability of the Region and local municipalities. This issue is more fulsomely addressed by the letter prepared by the Regional Environmental Services Department dated April 2, 2010.
- Currently, new sewage treatment technologies must be well tested within the Canadian and/or Ontario context prior to receiving a Certificate of Approval. The Ministry of Environment should partner with willing municipal partners to study, test and evaluate emergent technologies. Demonstrated performance of technologies from other countries and jurisdictions, especially those with higher performance standards, should be accepted and considered for use.

Need clarification on how the Phosphorous Reduction Strategy will intersect with other pieces of provincial legislation.

- How will the phosphorous targets for STP's impact the Region's ability to meet the mandated growth projects established through Places to Grow? What happens if municipalities are unable to meet the requirements of both pieces of legislation? Which should prevail? How will the growth pressures between 2031 and 2045 be addressed by the Strategy? It might be more prudent to rationalize the Phosphorous Reduction Strategy time horizon with Places to Grow.

- How might the Phosphorous Reduction Strategy and the Green Energy Act impact on one another? Regional staff would suggest that Renewable Energy Approvals within the Lake Simcoe watershed be required to demonstrate no net increase in phosphorous loading as proposed for new development.
- At a minimum the Reduction Strategy, which also proposes amendments to the Lake Simcoe Protection Plan, should provide some direction on this issue.

Non-Point Sources of Phosphorous shouldn't rely on voluntary Best Management Practices

- Agricultural operations should be required to implement best management practices related to soil erosion and fertilizer application.
- The Phosphorous Reduction Strategy should address rural and agricultural activities on a sector by sector basis. There is a major difference between the application of fertilizer for the production of food versus the maintenance of a golf course or production of sod.
- Research into phosphorous-free fertilizers is strongly encouraged. Perhaps tax incentives could be used as incentive to encourage farmers to use phosphorous free fertilizer over current practices. This would only be applicable if phosphorous free fertilizer's proved to be more costly.
- The Region currently employs a sophisticated winter road maintenance program and is actively involved in piloting programs for more efficient and safe products for winter roads, however, Regional staff would suggest that the Province undertake research into alternative winter road maintenance practices that are more environmentally sensitive than the application of salt and sand. Improvements in this area would impact the amount of phosphorous and salt entering the Lake Simcoe watershed.

Feasibility Study for Water Quality Trading in the Lake Simcoe Watershed

- Further investment in infrastructure to meet the 2031 phosphorous reduction targets may not be technologically or economically feasible. A Water Quality Trading Program may be the only manner in which sewage treatment plants can meet the phosphorous reduction requirements of the LSPP.
- In developing a water quality trading program, a system of determining eligibility for purchasing credits must be established. Municipalities who have exhausted reasonable technological solutions for achieving phosphorous reduction should be given highest priority to purchase credits.
- The province should consider including proven inflow and infiltration reductions as a source for trading credits (especially if improvements are consistent of a period of three years)

- The Region also requires more information on how the trading ratio will be determined, needs to ensure a net benefit in reducing phosphorous but also ensures that the purchase of credits remains economically feasible.
- The trading program should be implemented by an existing watershed agency or coalition such as the Lake Simcoe Conservation Authority. Regional staff does not support the establishment of additional special purpose bodies, which could duplicate the work of the Authority.
- Ensure that current rural and agricultural stewardship programs are continued and that any proposed water quality trading program doesn't diminish this funding. If anything management fee surpluses should be used as leverage funding to advance pilot projects, innovation and the research necessary to implement the LSPP.

Shoreline Regulation

- Strongly support the protection of natural vegetation and established buffers through a Shoreline Regulation. Public education and stewardship programs will be essential to promote the protection and restoration of shoreline vegetation.
- Strongly support the requirement for no net loss of vegetation as a result of construction. Strategic areas for terrestrial restoration should be identified for restoration activities. The strategic areas of restoration should provide connection to/from other sensitive land used including the Regional Greenland System.
- The proposed Shoreline regulation should consider a ban on the cosmetic use of phosphorous-based fertilizer except in specific circumstances to be determined within the entire Lake Simcoe watershed.
- Regional staff would strongly suggest that agricultural operations be required to conduct soil testing similar to the requirements of uses such as municipal sports fields.
- Regional staff support the broad definition of fertilizer including organic materials including animal waste, compost and manure.
- Under what instrument would the mandatory septic system inspection occur? Would it be under the Ontario Building Code? Who would conduct the inspections? While the inspection program is being determine, Regional staff strongly encourage the development and delivery of a training program on the maintenance of septic systems for home owners.

- Investigate alternatives to septic system for on-site waste management. This is essential for those areas of the watershed where the provision of municipal servicing is not feasible and septic systems threaten the health of Lake Simcoe.
- How will regulation deal with removal and alteration of vegetation on existing properties that do not trigger the need for a municipal or CA permit? Should investigate changes to the Conservation Act that would include shorelines as part of the regulated area and therefore under the jurisdiction of the LSRCA. Should also consider making the LSPA and LSPP applicable law under the Ontario Building Code.

We trust these comments are of assistance to the Province, York Region staff would be pleased to discuss any issues that arise from these comments. Please contact Teresa Cline at (905) 830-4444, ext. 1533 or Laura Atkins-Paul, Senior Planner at (905) 830-4444, ext. 1534 should you require clarification.

Sincerely,

John B Waller, MCIP, RPP
Director,
Long Range and Strategic Planning Branch
Regional Planning and Development Services Department

Copy to: Erin Mahoney, Commissioner Environmental Services, Lisa Lin, Policy Analyst, Environmental Services