



City of
Peterborough

TO: Members of Planning Committee

FROM: Ken Hetherington, Manager, Planning Division

MEETING DATE: October 11, 2011

SUBJECT: Report PLPD11-070
Source Water Protection
Information Report

PURPOSE

A report to provide an update on the Source Water Protection planning initiative including a presentation of the Draft Policies to the City for comment.

RECOMMENDATIONS

That Council approve the recommendations outlined in Report PLPD11-070, dated October 11, 2011 of the Manager, Planning Division, as follows:

- a) That Report PLPD11-070 and presentation be received.
- b) That staff be directed to communicate comments from the City on the draft policies back to the Source Water Protection Committee.

BUDGET AND FINANCIAL IMPLICATIONS

No budget or financial implications would result from the decision to approve the above recommendation. It should be anticipated that there will be financial implications in the future if and when the proposed draft policies are implemented.

BACKGROUND

In the wake of the Walkerton tragedy, one of the recommendations from Justice O'Connor's report on the Public Inquiry was the need for a "multiple barrier approach" to prevent contamination of municipal drinking water. The *Clean Water Act, 2006*, is the Provincial Government's commitment to implementing an additional level of protection to the existing protective measures provided through: effective water treatment; secure distribution systems; monitoring programs and response protocol to adverse test results.

The *Clean Water Act, 2006*, requires the Province to establish *Source Protection Structure* involving the establishment of Source Protection Areas and Source Protection Committees with a mandate to develop a science based Source Protection Plan to protect municipal sources of drinking water. Peterborough's representation on the Source Water Protection Committee include; Richard Straka, Wayne Stiver (Peterborough Utilities Services Inc.) and Mary Smith (Reeve, Smith Ennismore Lakefield). The three members of the Committee also attend as members of the Source Water Municipal Working Group along with Councillor Len Vass.

The City of Peterborough's source of drinking water is the Otonabee River which is one of five watershed based areas that make up the Region covered by the Trent Conservation Coalition. The Source Water Protection Committee for Trent Region has undertaken its mandate with the support of the Coalition of Conservation Authorities and their consultants which includes the following:

- 1) Development of its own *Terms of Reference* that describe the limits of its mandate including each of the steps toward developing a Source Protection Plan. The Terms of Reference have been completed and approved by the Ministry of Environment (M.O.E) since August 2009.
- 2) Development of an *Assessment Report* for the Region. The Assessment Report prepared by consultants, identifies vulnerable areas in relation to sources of municipal drinking water including threats that may exist within those vulnerable areas. Since the last report to Council, the Assessment Reports were completed, subject to a public consultation process that concluded this spring (June 2011). The Assessment Reports are currently awaiting final approval by the M.O.E.
- 3) Development of a *Source Protection Plan*. Draft Policies for the Plan have been completed and as of September 2, 2011, they have been provided to municipalities and implementing bodies for comment.
- 4) *Implementation and enforcement* of recommendations contained within the Plan (pending).

Ultimately it is and will continue to be the responsibility of the municipality to protect its own source of drinking water. Municipalities will therefore be responsible for implementation of policies to protect drinking water under legislation of *The Clean Water Act* and *Municipal Act*.

In accordance with the Section 2.2 of the Provincial Policy Statement, planning authorities are required to protect, improve or restore the quality and quantity of water by implementing necessary restrictions on development and site alterations to protect all municipal drinking water supplies and designated vulnerable areas.

ANALYSIS:

The purpose of the source protection initiative is to ultimately implement policies that will eliminate or reduce the risk of threats to drinking water. The Source Water Protection Committee has formulated draft policies and is now presenting them for the purpose of inviting input from the implementing agencies and municipalities.

a) Significant Threats to Drinking Water:

Drinking water threats are activities (or conditions from past activities) that have the potential to pose a risk to the quality of water that is or may be used as a source of drinking water. That risk to drinking water sources is assessed on the basis of the nature of the activity and its proximity to the source of drinking water which in the case of surface water sources is described by Intake Protection Zones (IPZ). Intake Protection Zone 1 is the most vulnerable area and includes an area measured 120 metres inland from the water line extending 1000 metres upstream from the intake. The IPZ 2 includes an area measured 120 metres inland from the water line, extending up stream to the 2 hour limit of travel time during a two year peak storm event. The IPZ areas were introduced in previous reports to Council (PLPD09-035 and PLPD10-017) and are illustrated on the Map attached to this report (PLPD11-070) as Exhibit A.

b) Assessment Report:

The Assessment Report is a comprehensive document that includes a summary of technical studies prepared for each Source Protection Region as required by the *Clean Water Act*. In addition to a description of the watershed characteristics, the report includes any assessment of water budgets to determine potential stresses and risks. The report includes the following components:

- 1) A characterization of watersheds within each source protection area that describe the human and physical geography, drinking water systems terrestrial and aquatic characteristics and regional water quality.
- 2) Water budget and water quantity stress assessment,
- 3) An assessment of ground water and surface water vulnerability,

- 4) An evaluation of existing source water issues associated with municipal drinking water systems,
- 5) A water quality threats assessment,
- 6) Great Lakes considerations
- 7) Climate Change implications,
- 8) A discussion of (regional) cross boundary considerations,
- 9) A list of data gaps and next steps.

Under the subject area of threats assessment, the assessment report identifies “Significant Threats” located within Intake Protection Zones.

The Province identified a list of activities that can be considered drinking water quality threats. Under the *Clean Water Act*, activities that pose the greatest risk to drinking water must be minimized or eliminated through the source Protection Planning initiative.

According to the Assessment Report for the Peterborough intake, a total of 60 significant drinking water threats were identified on 26 properties located within the Intake Protection Zone 1 and 2 listed as follows:

Significant Drinking Water Threat	Count
Waste disposal site	2
Sewage System	3
Application of agricultural source material	14
Storage of agricultural source material	5
Application of pesticide to land	13
Handling and storage of pesticide	5
Application of road salt	1
Livestock grazing and pasturing	16
Mown grass that promotes waterfowl congregation	1
Total number of Significant Threats	60
Total number of Properties affected by Significant Threats	27

In order to begin developing policies that could potentially address the threats, a review of available “tools” or means of action was conducted.

Source Protection Toolbox:

The goal of the Source Protection Plan is to manage or eliminate existing activities that are or could become significant drinking water threats. The *Clean Water Act* provides a set of tools that could be used to accomplish the goal. A more detailed description of

the tools is contained within the material attached to this report (PLPD11-070) as Exhibit D. The Source Protection Committee would like to work with municipalities and stakeholders to determine what combination of the following tools will work when applied appropriately to local circumstances:

i) Land Use Planning:

Official Plan policies and zoning by-laws are used to direct development to appropriate areas and site plan agreements often ensure compatibility between adjacent land uses. These controls could be used to restrict or prohibit new developments which would create new threats.

ii) Risk Management Plans:

Similar to a site plan agreement, a risk management plan is a site specific plan negotiated and agreed to by the land owner that will establish and maintain conditions regarding an activity that may be a risk to ensure it will not become a threat.

iii) Risk Management Official:

Depending on the reliance through policy on a risk management plan, a municipality may be responsible for appointing a risk management official. The risk management official would be responsible for administering and enforcing risk management plans designed to regulate or restrict activities that could pose a threat to drinking water sources. Depending on the number of risk management plans that may be relied upon and the jurisdiction that may cross municipal boundaries, it may be prudent for a risk management official to be a person who's role is shared between municipalities and may be employed by a municipality, conservation authority or health unit.

iv) Prescribed Instruments:

A “prescribed instrument” is a permit or license or other legal document issued by the provincial government that would allow an activity that could be a risk to take place. Examples include a permit issued in accordance with the *Pesticide Act*, a license issued under the aggregates act Nutrient Management Plans or certificates of Approval under the *Water Resources Act*.

A general policy may require that the instrument be examined and amended to ensure the risk will not become a threat.

v) Prohibition:

A policy could prohibit certain activities from becoming established in a vulnerable area to prevent a potential future threat.

Restricted Land Uses:

Conditions could be placed on properties located within vulnerable areas that require planning approvals or building permits to limit the establishment or expansion of activities that could become a threat in the future.

Other Tools include Incentive Programs – providing financial incentives to land owners to address significant threats on their property. Education and Outreach providing information how a land owner could manage a threat on their property through best management practices or stewardship programs to foster the same objective.

c) Source Protection Draft Policies:

A source protection plan must contain a policy for every area where an activity could be a significant drinking water threat as identified in an assessment report. The policy must meet the objectives in Section 22(2) and (6) of *Clean Water Act* – a threat to drinking water ceases to be / does not become significant. (*i.e.* adequately managed) The policies will effectively apply to lands included within the intake protection zones that could potentially have an impact on municipal sources of drinking water.

On September 2, 2011, the Trent Conservation Coalition Source Protection Committee issued notice of pre-consultation to all municipalities within the Source Protection region in accordance with requirements of the Source Water Protection Planning Process. The notice issued included the entire package of material attached to this report as Exhibits A to G inclusive. Written comments are requested on the Draft Policies, attached to this Report PLPD11-070 as Exhibit F, to be provided by October 31, 2011.

The draft policies are designed to implement a range of measures to appropriately address the activities that could pose a threat. These could include:

- prohibition of activities
- management including perhaps monitoring or periodic inspection of activities
- education and outreach providing information on stewardship opportunities or best management practices
- no change should it be determined that satisfactory risk management practices are already occurring.

To aid in understanding the intention of the Draft Policies the policies are prefaced by a text explaining the intent and rationale for the policy approach recommended: This material is attached to this Report (PLPD11-070) as Exhibit E.

The City of Peterborough is fortunate not to have many of the threats that these policies are designed to deal with, however, the policies should be considered with a view toward ensuring protection of the water supply in the future. The Policy Applicability Table attached to this report (PLPD11-070) as Exhibit G, attempts to assist in identifying policies that pertain to the Peterborough scenario. Most of the policies do not have any

direct impacts on the City and are more precautionary in nature. However, some of the draft policies may involve the need amend the City's Official Plan and Zoning rights to reflect the restrictive land use polices within Intake Protection Zones. Other policies may require a Risk Management Plans for certain activities located within intake protection zones. Implementation of Risk Management Plan would require the City to engage the services of a Risk Management Official.

Some examples of polices that would apply to Peterborough include:

- Policies that focus on sewage threats calling for the requirement to establish inspection and maintenance programs for sewage systems located in the Intake Protection Zones. The policies also encourage the connection to municipal sewer services which the existing City by-law already does.
- Policies that rely on instruments involving other regulatory bodies such as the Conservation Authority, Ministry of Environment, Ministry of Food and Agriculture and Rural Affairs regarding the regulation of agricultural source material such as fertilizer for example.
- Policies that address the application and storage of road salt that range from the requirement of a plan for best management practices considering the application of road salt to the prohibition of locating new facilities or sites for storage of road salt or snow within intake protection zones.
- Policies that require management plans to address land use activities that result in the congregation of waterfowl in close proximity to drinking water intake.

The complete list of policies is contained in the Table attached to this Report PLPD11-070 as Exhibit F.

Considerations regarding the Draft Policies:

a) General:

- This is a notice and circulation of the Draft Policies for pre-consultation with municipalities and implementing bodies. There will be other opportunities for input and comment on the draft plan including the policies between now and the spring of 2012.
- Protection of the source of municipal drinking water is the legal responsibility of the municipality to do so.

b) Land Use:

- Once the Source Protection Plan is finally approved by the M.O.E., the city will be responsible for updating the Official Plan and Zoning By-law as necessary to implement the plan.
- Some policies affecting land use may result in here may be appeals to the OMB of City initiated amendments to the Official Plan and Zoning by-law. Such appeals will involve costs in terms of staff time to defend the amendments at the OMB.

- c) Risk Management Plans:
- Some policies may require Risk Management Plans to address mitigation measures for certain activities. While the costs for preparation of such plans will be borne by the proponent, (similar to site plan agreements) there will be the need for the city to appoint a Risk Management Official to implement such plans.
 - The City will have to appoint a Risk Management Official. Depending on the number of activities that may require policies that call for on Risk Management Plans, there may not be the requirement of a RMO on a full time basis. Municipalities could elect to share the services and costs of such a person who may be employed by the City, the Health Unit or by the Conservation Authority.
- d) Education and Outreach:
- General workload and financial impacts – may request that source protection committee translate draft policies into a work plan that would also consider education and outreach, monitoring and reporting responsibilities. While Education and outreach may seem like a soft approach, it could be important considering older home heating tanks and best practices regarding the application of road salt and snow storage. The City may rely on other agencies such as the Health Unit or the Conservation Authority for providing this service.

SUMMARY

It is requested that Council review the material contained in this report including the considerations listed above and direct staff to communicate these and any additional comments back to the Source Water Protection Committee by October 31, 2011.

Submitted by,

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Attachments:

Exhibit “A” – Map of Peterborough System Intake Protection Zones 1 and 2

Exhibit “B” – List of Draft Policy Material circulated by Source Protection Committee

Exhibit “C” – Notice to Clerk

Exhibit “D” – Source Protection Toolbox

Exhibit “E” – Intent and Rationale for Draft Policy Text

Exhibit “F” – Draft Policy Text

Exhibit “G” – Policy Applicability Table