



A Fine Balance

With multiple threats in multiple areas, source protection committees are striving for the right mix of consistency and local flexibility.

BY NICOLE BARBATO

AS A RESPONSE to the tainted water tragedy in Walkerton in 2000, Ontario passed the *Clean Water Act, 2006*, which prompted the formation of source protection committees (SPCs) across the Province. SPCs have a mandate to develop science-based source protection plans (SPPs) to ensure the protection of clean and plentiful municipal drinking water sources. SPPs are being developed for 38 watershed-based source protection areas (SPAs), which for efficiency have been grouped under 19 committees. For the most part, SPAs coincide with the jurisdictions of conservation authorities (CAs), which provide technical and administrative support to the committees. The planning process has three steps:

1 Develop a terms of reference, outlining all the steps to develop and implement a SPP. Ontario's Ministry of the Environment (MOE) approved these terms in August 2009.

2 Develop an assessment report (AR). ARs identify vulnerable areas where municipal drinking water sources might face a risk of contamination or depletion and identifies drinking water threats within those vulnerable areas. Watershed stakeholders have had opportunities to review and comment on the ARs as part of two public consultation periods. All reports have been submitted to the MOE and are in the process of being approved.

3 Prepare a science-based SPP. The plan must address activities that the Clean Water Act defines as significant drinking water threats to ensure that a specific activity does not result in risks to municipal drinking water. The plan may also have policies addressing activities that are defined as moderate or low threats to drinking water. SPPs will build on the science of the ARs.

Drinking water source protection in Ontario is a collaborative and locally driven process. Local SPCs have been

empowered to determine what proactive measures are needed to protect their municipal drinking water and how best to carry them out.

Although tasked with development of local plans, SPCs recognize the need for balance in policy development. One major concern is that policies must consider consistent management approaches across the province while also taking into account local watershed characteristics.

From one perspective, consistent management approaches may help facilitate plan implementation. Implementing bodies will want some level of consistency to help them achieve their roles. As an example, committees are able to include policies that rely on land-use planning requirements. Municipalities that fall into more than one SPA will not want to implement widely different approaches to address the same threat. Variations in land use

planning requirements may become confusing for municipalities and residents during implementation. In addition, local businesses may desire consistent policies to ensure that they can remain competitive with businesses in other watersheds. For example, policies may address chemicals used in the dry cleaning industry. Where SPP policies greatly differ from one area to the other, they may cause businesses to relocate to an area with less stringent requirements. Industry associations representing networks of businesses have also indicated that consistent policies would help them provide a common message to all of their members and help promote buy-in for SPPs.

At the same time, there is a need to recognize local watershed

Consideration must be given to the resources required to implement a policy and how it fits within the local context.

characteristics and stakeholder needs. Each vulnerable area is different (for example, population and land use), so there may be legitimate justification for variation in policies from one SPA to another. For example, each watershed has a different capacity for implementation. Consideration must be given to the resources required to implement a policy and how it fits within the local context. This may hold true for an area with a smaller population where an implementing body (e.g. municipality) may only have three or four staff as compared to a larger area with greater staff capacity. Another consideration is whether there are existing local programs or activities that already address a threat. In such cases, an additional layer of management may not be required. As an example, many CAs already have watershed stewardship programs that promote best management practices related to water quality improvement,

provide advice and technical assistance to landowners, and offer incentives to complete on the ground improvements. SPP policies could support and tie drinking water protection activities into these existing programs. In many cases, policies will also look at the existing management regime and see how it can be refined to ensure proactive

drinking water source protection. This may mean including additional considerations as part of provincial instruments approvals (e.g. certificates of approval), land use planning policies, or existing management plans such as environmental farm plans.

SPCs are dealing with multiple threats in vulnerable areas. In each

Jellyfish® Filter - Setting New Standards in Stormwater Filtration!

Innovative Stormwater Treatment



Field Tested Performance Pollutant Removal:

- TSS 85%
- Total Phosphorus 60%
- Total Nitrogen 50%
- Total Metals >50%
- Turbidity <15 NTU
- Trash 100%

Jellyfish® Filter

Benefits:

- ✓ Long lasting and effective stormwater treatment
- ✓ Fewer cartridges required, lower cost
- ✓ Design is compatible with all piping systems
- ✓ Superior pollutant capture
- ✓ Easy maintenance, low life-cycle cost

*For more details contact Imbrium



Creator of **Stormceptor®**

www.imbriumsystems.com

USA: 888.279.8826 CANADA: 800.565.4801 INT'L: +1.416.960.9900

case, committees are striving for the right balance between consistency in policy development and recognition of local needs.

Tools for writing strong policies

Early in the policy development process SPCs recognized the need to collaborate on policy development. In 2010, representatives from all 19 SPAs formed a working group called the Source Protection Planning Advisory Committee (SPPAC). The mandate of SPPAC is to develop a process for collaboration on local policy development in order to facilitate efficiencies and consistency where appropriate.

As a starting point, SPPAC contributed to a set of background documents for each drinking water quality threat. Each report summarized the nature of the drinking water threat, existing policies and programs that already manage the threat, and introduced policy concepts for SPPing. These documents provided all SPCs with a consistent starting point for policy development.

The MOE also supported SPCs through the development of planning bulletins,

SPP policies can include a general requirement for risk management plans, but their contents can be negotiated with landowners in order to address specific circumstances on their property.

which provided committees with a summary of key legislative requirements for SPP preparation and how various regulatory and non-regulatory tools can be used to manage drinking water threats.

The SPPAC continues to meet to exchange information and ideas, as well as to find solutions to stumbling blocks in policy development. Meetings are an opportunity for committees to discuss approaches to addressing threats and opportunities for consistency—not only in policy development, but also in policy language.

Consistency can also mean ensuring a common outcome while the individual local approach is different. As an example,

SPCs have the option of prohibiting activities where absolutely necessary to protect drinking water sources. This can occur through a number of avenues. It may be incorporated into municipal land use planning, through a provincial instrument such as a certificate of approval, or through specific powers provided to the committee under the Clean Water Act. SPCs also have the option of writing high-level policies which identify the general approach to addressing the threat and allowing the specifics of on-the-ground implementation to be determined on a case by case basis. An example of this is the development of risk management plans, a new tool enabled through the Clean Water Act. SPP policies can include a general requirement for a risk management plan and its contents can be negotiated with the landowner in order to address specific circumstances on their property.

SPCs are also working locally to find balance in their policy development. As a starting point, many committees developed criteria to guide policy writing. Criteria included effective (adequacy, timeliness, improvement in water quality), appropriate (scale, administrative capacity, community acceptance), and economic (financial capacity, net costs, net benefits, monitoring requirements) measures.

Stakeholder input has also been an important component in the policy development process. SPCs themselves are a collection of local watershed stakeholders consisting of one-third municipal representatives; one-third industry agricultural, industry, commercial and small business representatives; and one-third landowner, environment association, local community group or general public representation. In addition to committee membership, many SPAs are using working groups to support policy development. These working groups are often made up of specific sector representatives who have additional knowledge or expertise on a

particular threat.

Committees are also working with adjacent SPAs. Regional working groups have been set up in some areas facilitating more localized exchange of ideas and information. Committees are also coordinating stakeholder input on policies. For example, where a municipality falls within more than one SPA, committees are often coordinating meetings to allow municipalities the opportunity to review and comment on draft policies knowing that all relevant personnel are present to answer questions and discuss options.

Looking outside Ontario

How have other provinces dealt with flexibility in source water protection? Both Nova Scotia and British Columbia appear to be taking a similar approach to Ontario. In Nova Scotia, water utilities and municipalities are mandated to develop municipal management plans. The Province provides guidance on management options and structure of plans but encourages unique local plans based on a community's social, economic, and environmental conditions and values.

Similar to Ontario, Nova Scotia's guidance describes a range of management options that communities can use in developing their plans. The guide also indicates that while management plans are unique to individual areas, the components of all plans are to be the same. Guidance provides direction on the organization and key elements to be included under each section of the plan.

British Columbia also enables drinking water protection to be developed at the local level based on Provincial guidance. The Province's guidance for developing well protection management strategies states "coordination between different jurisdictions in implementing protection measures is vital." The guidance suggests that where a well straddles multiple jurisdictions, protection measures should be coordinated between jurisdictions. Similar to Ontario, guidance provides background information on existing management practices and types of management approaches plans may use. It suggests that planning teams

PARTNERING TO PROVIDE THE BEST SUSTAINABLE SOLUTIONS

Water is a precious resource and the management of water resources is a growing concern. SNC-Lavalin Environment has one of the most comprehensive environmental engineering and consulting teams in Canada. Our leading technological expertise can help solve water issues in Canada and around the world.

HYDROLOGY | HYDROGEOLOGICAL STUDIES AND GROUNDWATER POTENTIAL ASSESSMENT | AQUIFER MANAGEMENT
GROUNDWATER DEVELOPMENT FOR WATER SUPPLY AND IRRIGATION | GROUNDWATER FLOW AND CONTAMINANT
MODELLING | DEVELOPMENT OF WATER RESOURCES INFRASTRUCTURE | IN-SITU GROUNDWATER TREATMENT | WELL
HEAD PROTECTION | WATER/WASTEWATER TREATMENT AND PROCESS OPTIMIZATION | WATER RESOURCES ASSESSMENT AND
WATER RESOURCES MASTER PLANS | WATER RESOURCES DATA MANAGEMENT | TRANSBOUNDARY WATER RESOURCES
DEWATERING FOR EXCAVATION STABILITY AND MINING | WATER HARVESTING | RIVER BASIN WATER RESOURCES PLANNING



www.snc-lavalin.com/environment
1-877-753-6847

SOURCE WATER PROTECTION

evaluate management options against the S.M.A.R.T test to ensure practices are Specific, Measureable, Achievable, Realistic, and Time-bound.

New Brunswick has taken a different approach to source water protection. The Province established the Watershed Protected Areas Designation Order which sets consistent and comprehensive standards for land and water use activities across all 30 of its watersheds. The Order defines protected zones and what can occur within them. Activities not described within the Order are prohibited within a protected area.

Stakeholder input has also been an important component in the policy development process.

SPAs are working hard to strike the right balance in plan policies between consistencies among areas and meeting the unique characteristics of their communities. In Ontario, all SPPs must be submitted to the MOE by August 2012. Initial consultation on draft policies with proposed implementing bodies will be initiated before the end of 2011 and formal public consultation will begin early in 2012. Resources have been developed to ensure that all committees are starting with the same information and have the opportunity to exchange information and ideas. Now is the time for stakeholders to become involved in the SPP process. Stakeholder involvement can help to ensure that we develop strong, implementable policies which meet the balance that is right for each community. **wc**



LOCAL EXPERTISE, NATIONAL RESOURCES

Miller Thomson recognizes the need to invest in new technologies to better utilize our natural resources.

Our National CleanTech Group has the in-depth knowledge necessary to advance projects across the country.

Our experience in water-related matters includes:

- Water and wastewater treatment projects
- New water testing and treatment technologies
- Hydroelectric developments

For more information, please contact:

Aaron Atcheson
519.931.3526
416.595.2996
aatcheson@millerthomson.com

Added experience. Added clarity. Added value.

Miller Thomson LLP
millerthomson.com



VANCOUVER | CALGARY | EDMONTON | SASKATOON | REGINA | LONDON | KITCHENER-WATERLOO | SHELPH
TORONTO | MARKHAM | MONTRÉAL