



**CATARAQUI SOURCE PROTECTION COMMITTEE**  
**AGENDA FOR MEETING**

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Date: Thursday May 13, 2010  
Time: 8:15 PM\*\*  
Location: Little Cataraqui Creek Conservation Area (General Purpose Room, Outdoor Centre)  
1655 Perth Road (Division Street), Kingston

\*\* Please note: This meeting will be preceded from 5:00 to 8:00 PM by a public open house in the West Hall regarding the Draft Assessment Report.

1. Roll Call
2. Adoption of the Agenda
3. Declarations of Conflict of Interest
4. Approval of Previous Meeting Minutes from April 8, 2010 (attached)
5. Business Arising
6. Delegations
7. Correspondence
8. Business / Reports
  - a. Source Protection Plan Policy Evaluation Criteria – Christine Woods, Source Protection Planner (report attached; presentation)
  - b. Updates from the SP Committee Chairs' Meeting in Windsor – John C. Williamson, Chair
  - c. Status of the Draft Assessment Report – Rob McRae, Project Manager (presentation)
9. Sector Updates from the Committee
10. Announcements or Inquiries
  - a. "Pesticides in Ontario's Treated Municipal Drinking Water - 1986-2006" report released by Ontario Ministry of the Environment (Q&A document attached; report available at: <http://www.ene.gov.on.ca/publications/7407e.pdf>)
11. Motions or Notices of Motion

12. Opportunity for Questions from the Media

13. IN CAMERA Session (if required)

14. Adjournment

*Please inform Donna Cellini at (613) 546-4228 ext. 248 or via e-mail at [dcellini@cataraquiregion.on.ca](mailto:dcellini@cataraquiregion.on.ca) if you will not be able to attend the meeting.*

**THE CATARAQUI SOURCE PROTECTION COMMITTEE**  
**MINUTES OF MEETING # 29**

Thursday April 8, 7:00 PM

St. John's Memorial Hall  
216 Church Street, Bath

Note: This meeting was preceded at 5:00 PM with a tour of the Lafarge North America Inc. facility in Bath for members and staff.

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**Present:** John C. Williamson, Chair    Richard Bresee    John Conley  
Rob Cumming    Gary Davison    Scott Ewart  
Joan Green    Jacques Labelle    Kathleen Laird  
Wendy Lavender    Richard Lindgren    Chris Mangan-Greene  
Nona Mariotti    Allan McPhail    Alex Palilionis  
Jeff Peters    Kevin Riley    Kim Sytsma

**Regrets:** Peter Raabe

**Staff Present:** Donna Cellini, Project Secretary  
Lauren Forrester, Water Quality Specialist  
Rob McRae, Project Manager, Source Water Protection  
Titia Praamsma, Hydrogeologist  
Sean Watt, Water Resources Engineer  
Christine Woods, Source Protection Planner

**Guests:** None

At 7:06 P.M. Chair John C. Williamson, called the meeting to order.

**1) Roll Call and Mileage**

There were 18 members present. Chair John Williamson thanked Rob Cumming and Lafarge for the interesting tour of the Lafarge facilities prior to the meeting. Staff of the CRCA (Cataraqi Region Conservation Authority) and members of the SP (Source Protection) Committee had been invited.

**2) Adoption of Agenda**

Moved by: Gary Davison  
Seconded by: Nona Mariotti

**THAT** the Cataraqi Source Protection Committee members adopt the meeting agenda as circulated.

**Carried**

**3) Declarations of Conflict of Interest**

There were none.

**4) Approval of Cataraqui Source Protection Committee Minutes**

- a) Approval of March 11, 2010 Cataraqui Region Source Protection Committee Minutes

Moved by: Richard Lindgren  
Seconded by: Richard Bresee

**THAT** the minutes of the March 11, 2010 meeting of the Cataraqui Source Protection Committee be approved as amended.

**Carried**

**5) Business Arising**

There were none.

**6) Delegations**

There were none.

**7) Correspondence**

The following items of correspondence were acknowledged by the SP Committee:

- a) Letter from Robert Morrison, Chair, Cataraqui Source Protection Authority, to Debbie Scanlon, Ontario Ministry of the Environment, regarding EBR Environmental Registry posting 010-8766 (proposed amendments to Ontario Regulation 287/07), dated March 25, 2010.
- b) Letter from Ian Smith, Director, Source Protection Program Branch, MOE, to John Williamson, Chair, Cataraqui Region Source Protection Committee, regarding Livestock Density Alternative method, dated March 29, 2010.
- c) Letter from Ian Smith, Director, Source Protection Program Branch, MOE, to Conservation Authority Project Managers and Source Protection Committee Chairs, regarding Preparing for source protection plan policies development – Provincial versus local roles and responsibilities, dated March 30, 2010.

## 8) Business/Reports

### a) Draft Assessment Report

- i. Overview of Key Improvements Since December 2009 – Lauren Forrester, Water Quality Specialist and Rob McRae, Project Manager

Ms. Forrester and Mr. McRae highlighted some suggested changes to the Draft Assessment Report before publication and the reasons that the changes should be considered by the SP Committee. These changes would bring clarity to the document and ensure that anything that will be required to advance to the updated Assessment Report was addressed properly in the Draft. There was considerable discussion about Highly vulnerable aquifers delineation, Significant groundwater recharge areas delineation and vulnerability scoring, Great Lakes Intake Protection Zone 3 - inland areas, Evaluation of surface and groundwater quality, Threat inventory update from landowner contact, and Sites and areas where conditions may be present as outlined in the presentation. It was agreed that the changes should be made prior to publication. In the opinion of the staff, the Draft AR was now a complete document relative to the Ontario Ministry of the Environment requirements.

- ii. Assessment Report Subcommittee Comments and Recommendation – Nona Mariotti, Lake Association Representative

Ms. Mariotti reported on behalf of the Assessment Report Subcommittee and indicated the SP Committee that they reviewed the Assessment Report for repetition, flow, clarity, tone and consistency and that the Ontario Ministry of the Environment comments had been addressed.

### Resolution CSPC 13-10

Moved by: Nona Mariotti  
Seconded by: Kevin Riley

**WHEREAS** the Ontario *Clean Water Act, 2006* and its regulations and rules prescribe requirements for the development and approval of assessment reports;

**AND WHEREAS** a draft report for the Cataraqui Source Protection Area has been developed in accordance with those requirements;

**THEREFORE BE IT RESOLVED THAT** the Cataraqui Source Protection Committee approves the publication of a Draft Assessment Report: Cataraqui Source Protection Area for public review and comment, as outlined in the presentation by CRCA staff on April 8, 2010.

**Carried**

iii. Posting and Public Consultation Update – Lauren Forrester, Water Quality Specialist

Ms. Forrester presented some information about the open houses listed below. Rob McRae welcomed all SP Committee Members to attend the Kingston Open House that will precede the regular SP Committee meeting and asked for two or three volunteers to attend in official capability at each of the other suggested open houses.

Thursday May 6th Brockville Public Open House (5:00 – 8:00 PM,  
presentation at 7:00 PM)  
Brockville Rowing Club  
1 Ferry Street, Brockville

Thursday May 13th Kingston Public Open House (5:00 to 8:00 PM,  
presentation at 7:00 PM)  
Little Cataraqui Creek Conservation Area (Outdoor Centre)  
1655 Perth Road, Kingston

Monday May 17<sup>th</sup> Napanee Public Open House (5:00 – 8:00 PM,  
presentation at 7:00 PM)  
Strathcona Paper Centre  
16 McPherson Drive, Napanee  
(to be held jointly with the Quinte Source Protection Committee)

It was decided that Kim Sytsma, Chris Mangan-Greene and John Conley will be attending the Brockville Open House as official representatives of the SP Committee. It was also decided Ric Bresee, Rob Cumming and Richard Lindgren will be attending the Napanee Open House as official representatives of the SP Committee. It was requested that the CRCA staff share with the SP Committee what information will be shared with the public at the open houses. Mr. McRae stated this information would be sent out to the SP Committee for review in late April.

b) Introductory Discussion: Source Protection Plan Policy Evaluation Criteria – Christine Woods, Source Protection Planner

Ms. Woods recommended that the SP Committee use criteria to evaluate its draft source protection plan policy concepts. This had been promised in the approved Terms of Reference (May 2009).

Ms. Woods reviewed the policy evaluation criteria in her staff report and asked the SP Committee to consider them and think of others that could be added at the May SP Committee meeting.

**9) Sector Updates from the Committee**

Kim Sytsma advised the SP Committee that she attended a meeting of the Ontario agricultural representatives recently on regarding drinking water source protection and shared that it was worthwhile and interesting.

**10) Announcements or Inquiries**

a) Chair John Williamson suggested that the SP Committee meet before the June 10<sup>th</sup> meeting and have a social hour and BBQ in recognition completing the Draft Assessment Report and associated public consultation period.

**11) Motions/Notice of Motion**

There were none.

**12) Opportunity for Questions from the Media**

There were no questions.

**13) IN CAMERA Session**

There were no questions.

**14) Next Meeting**

Next meeting of the SP Committee: May 13, 2010

5:00 PM Open House

West Hall, Outdoor Centre

Little Cataraqui Creek Conservation Area,

1641 Perth Road Glenburnie, Ontario

8:00 PM Regular Meeting

General Purpose Room, Outdoor Centre

Little Cataraqui Creek Conservation Area,

1641 Perth Road Glenburnie, Ontario

**15) Adjournment**

The meeting adjourned at 10:10 P.M. on a motion by Chris Mangan-Greene.

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John C. Williamson, Chair

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Rob McRae, Project Manager

# THE CATARAQUI SOURCE PROTECTION COMMITTEE

## REPORT

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To: Cataraqui Source Protection Committee

Date: May 6, 2010

From: Christine Woods, Source Protection Planner

File: SPP 8

### **RE: POLICY EVALUATION CRITERIA**

Staff presented an overview of policy evaluation criteria at the April 2010 Cataraqui Source Protection Committee (SP Committee) meeting (staff report dated March 31, 2010). The criteria examples were then discussed at the April 2010 Surface Water and Groundwater Working Group meetings. This report summarizes the outcome of these discussions for the consideration of the SP Committee. In addition, staff seek direction on a proposed evaluation approach for use (on an interim basis) at the test roundtables that are planned for summer 2010.

#### 1. Evaluation criteria

The proposed (interim) policy evaluation criteria are listed in attachment 1.

The qualitative scales of measurement were assigned a value of 1, 2 or 3 to make it easier to rank policy alternatives. Changes were made to some of the criteria to make them better fit the categories and to clarify their meaning.

The Groundwater Working Group discussed the possibility of using MATS (multi-attribute tradeoff system) as a decision-making tool. MATS is a method to compare alternatives quantitatively by converting weighted criteria (preferences based on stakeholder preferences) and utility functions (preferences based on raw data) to a dimensionless 0 to 1 score.

Staff researched these types of method in preparation of the March 31, 2010 report, and concluded that they are more complicated than is necessary for policy evaluation. It is best to use a simple method for clarity to all participants in the evaluation process.

#### 2. Criteria in action

The evaluation criteria can be used compare and rank policy alternatives when there are numerous options to choose from.

Staff recommend that the effectiveness criteria be given a higher level of priority over the appropriateness and economic criteria since the purpose of source protection plan is to protect existing and future drinking water sources in the Cataraqui Source Protection Area. In other words, while a sound policy may be widely-accepted and relatively inexpensive to implement, it must first be deemed effective at addressing a drinking water threat.

This higher level of priority could be accomplished in one of two ways: (1) to assign weights to the effectiveness, appropriateness and economic criteria categories, or (2) to use the effectiveness criteria as a screening tool.

Staff recommend the second option. The effectiveness criteria would be used first to screen a long list of policy alternatives. Then the appropriateness and economic criteria would be used to evaluate the short list of the most effective policy alternatives (attachment 2).

### 3. Policy ranking using criteria

Attachment 3 provides an example of how policy alternatives could be ranked using the evaluation criteria.

### 4. Recommendation

At this time staff recommend that the SP Committee approve the use of policy evaluation criteria on an *interim* basis. The final selection of policy evaluation criteria for the planning phase will benefit from lessons learned at the test roundtables in June. Further, staff anticipate that the Ontario Ministry of the Environment will release a draft Water Quality Risk Management Catalogue in May or June; the catalogue will inform this discussion. Approval of the proposed amendments to Ontario Regulation 287/07 may also have a bearing on the decision-making tools used by source protection committees.

BE IT RESOLVED THAT the Cataraqui Source Protection Committee approve the proposed framework as outlined in the report titled “Policy Evaluation Criteria” (dated May 6, 2010) and prepared by Christine Woods, Source Protection Planner on an interim basis for use at the upcoming test roundtables.

Respectfully submitted,

Original signed by:

Christine Woods MCIP, RPP  
Source Protection Planner

Attachment 1: Proposed Policy Evaluation Criteria  
Attachment 2: Criteria in Action  
Attachment 3: Example of Policy Ranking using Criteria

Attachment 1: Proposed Policy Evaluation Criteria

*Effectiveness criteria*

<b>Criterion</b>	<b>Consideration</b>	<b>Measure</b>	<b>Score</b>
Adequacy	The policy will adequately manage site specific activities or land uses that are or could be threats	Good      very adequate, few performance problems	3
		Fair      somewhat adequate, some performance problems	2
		Poor      not adequate, many performance problems	1
Duration of process	The sooner the policy is implemented and the threat is addressed, the least amount of time the threat poses a risk to people and the environment.	Short      relatively short period of time required to address threat (< 1 year)	3
		Intermediate      moderate period of time required to address threat (2-5 years)	2
		Long      relatively long period of time required to address threat (> 5 years)	1
Improvement in water quality	The policy will maintain or improve a specified level of water quality	High      potential to substantially improve source water quality	3
		Moderate      potential to improve source water quality	2
		Low      potential to maintain source water quality	1

*Appropriateness criteria*

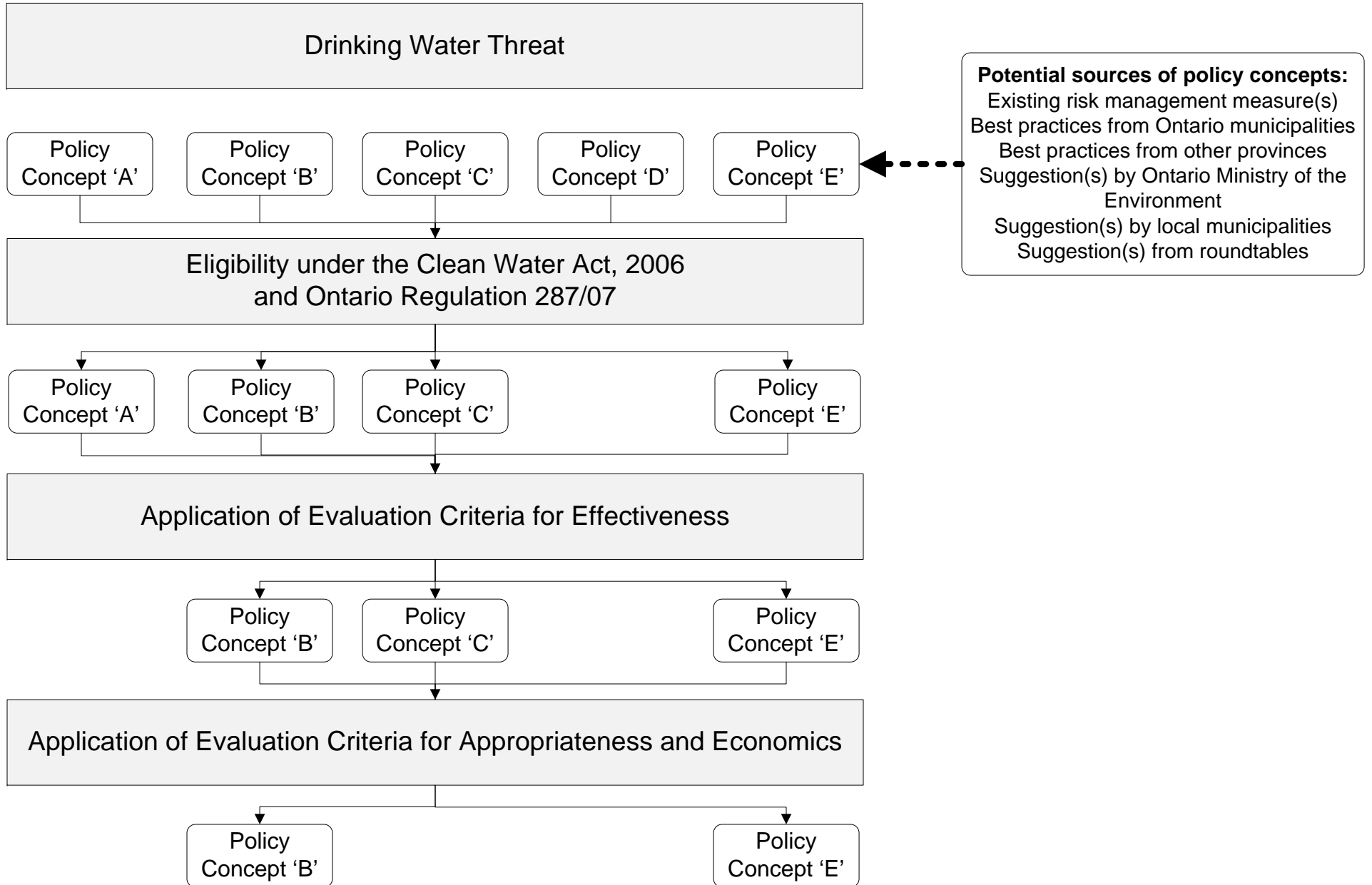
<b>Criterion</b>	<b>Consideration</b>	<b>Measure</b>		<b>Score</b>
Scale	The scale of the policy is suitable for the scale of the threat	Good	The policy is suitable for the scale of threat	3
		Fair	The policy is somewhat suitable for the scale of threat	2
		Poor	The policy is not suitable for the scale of threat	1
Administrative capacity	The administrative capacity of the delivery agent to implement the policy, including compliance monitoring	Good	easily implemented, few problems	3
		Fair	somewhat easily to implement, few problems	2
		Poor	not easily implemented, many problems	1
Community acceptance	The potential for the policy to be accepted by the community, to raise awareness and participation	High	potential for high acceptance, minimal complaints in community	3
		Moderate	potential for acceptance, some complaints in community	2
		Low	potential for minimal or no acceptance, many complaints in community	1

*Economic criteria*

<b>Criterion</b>	<b>Consideration</b>	<b>Measure</b>		<b>Score</b>
Financial capacity	The financial capacity of the delivery agent to implement the policy, including compliance monitoring	Low	availability of funds	3
		Moderate	reasonable availability of funds	2
		High	no availability of funds	1
Net costs	Direct and indirect financial costs for landowners and business operators (Note: a delivery agent can also be a landowner or business operator)	Low	relatively low costs	3
		Moderate	relatively moderate costs	2
		High	relatively high costs	1
Net benefits	Direct and indirect financial benefits for landowners and business operators, including the avoidance of future costs (Note: a delivery agent can also be a landowner or business operator)	Low	relatively low benefits	3
		Moderate	relatively moderate benefits	2
		High	relatively high benefits	1
Monitoring requirements	The level of watershed monitoring required to demonstrate the effectiveness of the policy	Low	the objectives need to be supported by limited monitoring	3
		Moderate	the objectives need to be supported by moderate monitoring	2
		High	the objectives need to be supported by extensive monitoring	1

# Attachment 2: Criteria in Action

May 2010



### Attachment 3: Example of Policy Ranking using Criteria

Refer to the flow chart in attachment 2.

1. There are five policy concepts (labeled A, B, C, D and E) identified that could be applied to a specific drinking water threat.
2. It was determined that policy concepts A, B, C and E are eligible under the Ontario *Clean Water Act, 2006* and Ontario Regulation 287/07.
3. The effectiveness criteria are applied to policy concepts A, B, C and E. In this example, policy concepts B, C and E were considered the most effective and placed on the short list.

Policy Concept	Effectiveness Criteria			Subtotal Score
	Adequacy	Duration of Process	Improvement in Water Quality	
A	1	1	1	4
B	3	3	3	<b>12</b>
C	2	3	2	<b>10</b>
E	3	2	3	<b>10</b>

4. The appropriateness and economic criteria are applied to policy concepts B, C and E. The policy concepts are ranked based on their total scores (the higher the score, the higher the rank).

Policy Concept	Appropriateness Criteria			Subtotal Score
	Scale	Administrative Capacity	Community Acceptance	
B	2	3	2	7
C	2	1	1	4
E	3	3	3	9

Policy Concept	Economic Criteria				Subtotal Score
	Financial Capacity	Net Costs	Net Benefits	Monitoring Requirements	
B	3	2	2	2	9
C	1	2	1	1	5
E	3	3	2	2	10

Policy Concept	Effectiveness Criteria Subtotal	Appropriateness Criteria Subtotal	Economic Criteria Subtotal	Total Score	Ranking
B	12	7	9	28	2
C	10	4	5	19	3
E	10	9	10	29	<b>1</b>

5. Policy concepts B and E achieved similar high scores (28 and 29, respectively), and are likely the preferred options to address the specific drinking water threat.
6. The working groups and/or SP Committee will verify (double-check) that the preferred policy concepts are appropriate, effective and economical, and that they will help to protect existing and future drinking water sources.

## ***Pesticides in Ontario's Treated Municipal Drinking Water, 1986-2006***

### **KEY MESSAGES**

- The Ministry of the Environment recently completed a report examining the presence of pesticides in treated drinking water across Ontario for the period of 1986 to 2006. The report, *Pesticides in Ontario's Treated Municipal Drinking Water, 1986-2006*, summarizes water quality data on pesticides collected by the ministry in Ontario's treated (finished) drinking water during the twenty-year period.
- The goal of the report was to better understand the presence of pesticides in treated water for surface water and ground water systems.
- The report shows that there has been a dramatic decrease in pesticides detected in treated surface waters and that, where detections have occurred, concentrations are generally low. As well, most groundwater systems had no pesticide detections in treated water
- Only two pesticides, atrazine and terbufos, were detected above their respective Ontario Drinking Water Quality Standards. The last exceedance documented by the report occurred in 2001 and no exceedances have been detected since.
- The atrazine exceedances occurred at two surface water treatment plants that are no longer in use (Dresden and Alvinston).
- The terbufos exceedances occurred at two wells at the Strathroy Well Supply. Strathroy has since switched to the use of surface water only for its drinking water supply. All wells have been decommissioned.
- Samples taken for the study represent about 90 percent of Ontario's existing municipal residential drinking water systems.

### **QUESTIONS AND ANSWERS**

#### 1. What were the findings of the report?

The report shows that there has been a dramatic decrease in the pesticides detected in treated surface waters and that, where detections have occurred, concentrations are generally low.

Specifically, the report shows that in treated surface water the pesticide detection rate decreased from **86 percent to 3 percent** due to a drop in pesticide concentrations in source water between 1986 and 2006.

The report also shows that in treated ground water most groundwater systems had no pesticide detections. From 1987 to 2006, the pesticide detection rate in treated ground water was generally much lower than in treated surface water, however, the gap has steadily decreased.

2. What data was used to generate the report?

The report uses data from the ministry's Drinking Water Surveillance Program (DWSP) from 1986 to 2006, and data from the Drinking Water Inspection/Compliance Program from 1997 to 2006.

3. Which pesticides showed exceedances in the test results?

The study included 104 pesticides and pesticide degradates. Out of over 16,000 treated water samples collected from 1986-2006, there were only four exceedances of Ontario Drinking Water Quality Standards (ODWQS) for pesticides, namely:

- Two exceedances of atrazine in surface water systems; and
- Two exceedances of terbufos at a groundwater system that is under the direct influence of surface water (GUDI).

The last exceedance documented by the report occurred in 2001. Since 2001 there have been no exceedances of ODWQS for pesticides in samples from either DWSP or the Drinking Water Inspection/Compliance Program.

4. Where did the exceedances occur in province?

The exceedances of atrazine and terbufos occurred at systems in southwestern Ontario, the region of Ontario with the highest agricultural use of pesticides.

- The atrazine exceedances occurred at two systems drawing water from the Sydenham river: the Dresden Water Treatment Plant (WTP) and the Alvinston WTP. The Dresden WTP exceedance was 2.8 times the standard and the Alvinston WTP exceedance was twice the standard. **Neither WTP is currently in use.**
- Both exceedances of terbufos occurred at the Strathroy Well Supply (three times the standard and twice the standard, respectively). **All wells have been decommissioned.**

5. What is atrazine and what are its effects?

Atrazine is one of the most widely used pesticides in Ontario. It is used by certified farmers and persons holding an Agriculture licence for the control of grass and broadleaf weeds in field corn, production seed corn and sweet corn. It is persistent in soils but is degraded by the action of microbes.

Atrazine is suspected of disrupting reproductive and developmental processes. However, the federal Canadian Pest Management Regulatory Agency concluded in its review of atrazine in 2007, which noted that the effects of atrazine on amphibians are inconclusive.

6. Are there are measures in place to mitigate the potential effects of atrazine?

Placement of risk mitigation measures on the atrazine product labels is required, which include:

- the herbicide not be applied by air
- the herbicide not be applied by ground application during dead calm, if winds are gusting greater than 8 km/hr, temperature is expected to exceed 28oC or if heavy rainfall is forecast.
- appropriate buffer zones be used between the downwind point of direct application and the closest edge of aquatic habits including a non-treated vegetation buffer zone between the treated area and any water body (a buffer zone of 30 metres is required for ground spray booms when mixing and loading and 10 metres when spraying).

7. What is terbufos and its effects?

In Canada, terbufos is limited to the control of soil dwelling pests (wireworms and root maggots) in sugar beets. Terbufos is allowed for use until August 1, 2012 prior to which time the federal Pest Management Regulatory Agency will re-evaluate its continued use.

Terbufos may lead to over-stimulation of the nervous system.

8. Does the report list the drinking water systems tested and their respective results?

The report does not name drinking water systems.

9. Is the ministry going to carry out further studies as a result of this report?

The ministry is currently conducting a study which examines pesticides in urban streams. This study is being carried out to determine the effect of the pesticide ban now in place.

The *Cosmetic Pesticides Ban Act*, which took effect in April 2009, prohibits the sale and use of pesticides for cosmetic purposes. Under the Act, 92 pesticide ingredients (all three formulations of 2,4-D and 89 other pesticide ingredients) are banned from use by homeowners and/or hired lawn care companies on lawns, parks, schoolyards and gardens. The ban also prohibits the sale of 231 domestic products containing these pesticides.

The study began in 2008 with the collection of pesticide data on ten urban streams prior to the implementation of the pesticide ban, and data collection continued in 2009 after the ban took effect. A scientific report on the findings is underway.

10. How do we account for pesticide contaminants in the drinking water source protection planning process?

One of the key objectives of the source protection program is to identify and manage both existing and future threats to sources of drinking water. Application of pesticides to land and the handling and storage of pesticides are two out of twenty-one prescribed drinking water threats under the Clean Water Act. Specifically, the source protection program prescribes activities and circumstances that may identify the application, handling, or storage of pesticides as a significant drinking water threat. Significant drinking water threats must be addressed in a source protection plan to reduce the risk to the drinking water sources. Policies to address significant drinking water threats will be developed by local source protection committees in consultation with stakeholders. Examples of policies could include education and training of persons applying pesticides, risk management plans for specific activities that include storage, application and handling of pesticides, or banning the application of pesticides in certain areas.

11. Where can I find a copy of the report?

The report can be found the ministry's website at:  
<http://www.ene.gov.on.ca/publications/7407e.pdf>