Thames – Sydenham and Region Source Protection Committee

Meeting Notice

Please be advised that a meeting of the Thames-Sydenham and Region Source Protection Committee has been called for the following time. Please confirm attendance with Deb Kirk at 519-451-2800 x256.

Meeting Date: October 30, 2020

Meeting Time: 10:00 am 12:00 p.m.

Meeting Location: **St. Clair Conservation Authority Board Room**

Proposed Agenda

1	**Chair's Welcome, Roll Call and Certification of Quorum**	10:00-10:15
2	**Adoption of the Agenda**	
3	**Approval of March 15 SPC minutes**	
4	**Delegations** *(none scheduled)*	
5	**Declaration of Conflict of Interest**	
6	**Business arising from the minutes**	
7	**Business**	
7a	Updated SPC Rules and Procedures	10:15-10:20
7b	Program Update	10:20-10:40
7c	Annual Progress Reporting – Provincial Summary	10:40-11:00
7d	Proposed Changes to the Director's Technical Rules	11:00-11:20
7e	Section 36 SPP and AR Amendments	11:20-11:40
8	**Information** 8a – CA Review Mandate Letter of Support from Quinte SPC 8b – ESE Magazine Article on Source Protection 8c – Water Canada Article on Source Protection 8d – Microplastics Article	11:40-11:45
9	**In Camera Session** (not planned)	
10	**Other Business**	
11	**MECP Liaison report**	11:45-11:55
12	**Members Reports**	11:55-12:00
13	**Adjournment**	12:00
	Next Meeting: (TBD)	

Thames – Sydenham and Region Drinking Water Source Protection
Source Protection Committee Discussion Paper

Report to	Chair and members Thames – Sydenham and Region Source Protection Committee	**Agenda #**	2020.10.30 7a
Cc	SP Management Committee	**Date**	October 30, 2020
Prepared By	Jenna Allain, Source Protection Coordinator		
Re:	Amendments to SPC Polices		

Purpose

To amend the Thames Sydenham and Region Source Protection Committee Rules of Procedure to allow for certain electronic processes during declared states of emergencies.

Background

On March 26, 2020, the Minister of the Environment, Conservation and Parks issued a Direction to all Conservation Authorities ("CAs") enabling a special meeting to be held to make some recommended amendments to their Administrative bylaws to allow for certain electronic processes during declared states of emergencies. The Minister's Direction applies to CAs when meeting as a Source Protection Authority ("SPA") under the *Clean Water Act, 2006*. Necessary amendments also need to be made to the Rules of Procedure for the Thames-Sydenham and Region Source Protection Committee to allow ongoing business during a declared state of emergency.

Below are proposed amendments to the Thames-Sydenham and Region Source Protection Committee Policies Document (attached). The following sections have been added to Section 3 – Rules of Procedure, between Section 3.1 – Meeting Dates and Section 3.2 – Meeting Agendas and Reports.

Electronic participation, emergencies

During any period where an emergency has been declared to exist by the Province or by municipalities (in all or part of an area over which a source protection authority has jurisdiction) that may prevent members of the SPC from meeting in person:

a) *The chair, members, liaisons of the SPC, and SPA staff shall participate in meetings electronically, which shall include the ability of members participating electronically to register votes.*
b) *Any member of the SPC who is participating electronically in a meeting shall be counted in determining whether or not a quorum of members is present at any point in time during the meeting.*
c) *Any member of the SPC who participates in a meeting electronically is eligible to receive a meeting per diem. Mileage will not be paid in instances of electronic meetings.*

Meetings open to the public

a) *The SPC shall ensure an alternative means to allow the public to participate in the SPC meetings electronically.*
b) *The SPC shall ensure that the electronic meeting information is publicly available on a website prior to the meeting date.*

Recommendation

THAT the Thames-Sydenham and Region Source Protection Committee endorses the proposed amendments to the Committee's Rules of Procedures.

Thames-Sydenham and Region Source Protection Committee

Code of Conduct, Rules of Order and Conflict of Interest Policies

Version 5

December 3, 2015

Table of Contents

1. Background

Section 14 and 15 of Ontario Regulation 288/07 require that the committee prepare written rules of order, code of conduct and conflict of interest policy. These sections are reproduced below.

Rules of procedure for committee business

14. (1) Within two months after a sufficient number of members to constitute a quorum are appointed to a source protection committee, the committee shall prepare written rules of procedure for conducting the business of the committee that are satisfactory to the source protection authority. O. Reg. 288/07, s. 14 (1).

(2) The committee shall ensure that the rules of procedure contain the following rules:

1. The business of the committee shall be carried out at meetings of the committee at which a quorum is present.
2. The committee shall attempt to make decisions by consensus among the members.
3. If the chair determines that reasonable efforts have been made to achieve consensus but the committee has been unable to make a decision by consensus, the decision may be made by a vote of two-thirds of the members present, not counting the chair.
4. The chair shall not vote. O. Reg. 288/07, s. 14 (2).

(3) The committee shall publish its rules of procedure on the Internet. O. Reg. 288/07, s. 14 (3).

(4) The committee shall conduct its business in accordance with its rules of procedure. O. Reg. 288/07, s. 14 (4).

Code of conduct and conflict of interest policy

15. (1) Within two months after a sufficient number of members to constitute a quorum are appointed to a source protection committee, a source protection committee shall prepare a written code of conduct and conflict of interest policy for members of the committee that are satisfactory to the source protection authority. O. Reg. 288/07, s. 15 (1).

(2) The committee shall publish its code of conduct and conflict of interest policy on the Internet. O. Reg. 288/07, s. 15 (2).

(3) The members of the committee shall comply with the code of conduct and conflict of interest policy. O. Reg. 288/07, s. 15 (3).

These rules of order, code of conduct and conflict of interest policies together with the terms of reference will guide the SPC in developing the Source Protection Plan. The Clean Water Act requires that terms of reference be developed by the SPC in consultation with the municipalities of the region. The municipalities will be given the opportunity to undertake the work required by the Clean Water Act related to their own municipal water systems.

This Code of Conduct and Rules of Order are separate from the Terms of Reference as the Code of Conduct and Rules of Order must be developed to the satisfaction of the Source Protection Authority (SPA).

A brief code of conduct agreement approved by the striking committee was agreed to by all appointees as part of their acceptance of the appointment. This agreement is attached as appendix 3 of this document. The policies contained in this document provide considerably more detail on the Code of Conduct.

The Rules of order section contained in this document form the basis of specific policies which were developed to the satisfaction of the striking committee and will be received by the SPA. The committee was encouraged to adopt Roberts Rules of Order or one accepted by a conservation authority; however the policies contained herein are intended to govern the committee even if they contradict rules established through the adoption of standard rules of order.

The committee developed mission and vision statements which assists them in the fulfillment of their legislated responsibilities. These statements and the background behind them were produced in a separate report.

1.1. Revisions to these SPC policies

1.1.1. 2015 Revisions

In 2015 the committee was preparing to submit the Source Protection Plan for approval and prepare for implementation. At this time the committee reviewed these policies and identified a number of areas where the policies require amendments. These areas included:

- Use of Proxy and other meeting logistics,
- Use of Executive Committee, Vice Chair and Recording Secretary
- Use of working groups and sub-committees
- Discussion paper format vs reports with recommendations
- Posting of meeting minutes
- Electronic documents (move towards paperless meetings)

These amendments were discussed in principle at the June 12, 2015 meeting. Revisions were made to the policies based on the discussion and the resulting changes were reviewed by the committee at their October 15, 2015 meeting. The resulting revisions were considered by the striking committee on behalf of the 3 Source Protection Authorities.

2. Code of Conduct

2.1. Primary Responsibilities

1. The committee members' primary responsibilities are to the committee.
2. It is understood that the committee members bring the viewpoints of the various stakeholder groups to the committee table; however their primary responsibility is to meet the legislated requirements.
3. Committee members are expected to work collaboratively with their colleagues to develop a Source Protection Plan. Once the Plan has been approved the members will continue to work collaboratively to monitor the implementation of the Plan through the required annual reporting and as directed by the Minister update the Assessment Reports and Plans.
4. Ultimately the committee must develop a Source Protection Plan which reduces existing significant risks to an acceptable level and prevents new significant risks to municipal drinking water sources. This plan must be based on best available science.

2.1.1. Legislated Responsibilities

5. The committee is established pursuant to the Clean Water Act 2006 and the regulations made under the act, specifically Ontario Regulation 288/07. The Act and its regulation require the committee, among other things, to:

- Develop rules of order, code of conduct and conflict of interest policies to the satisfaction of the SPA
- Submit a Terms of Reference to the SPA on which they have consulted the municipalities and other stakeholders
- Direct the completion of Assessment Reports for the Source Protection Areas in the Source Protection Region
- Direct the completion of Source Protection Plans for the Source Protection Areas in the Source Protection Region.
- Engage the stakeholders in the development of the products that the committee produces
- Review, monitor and report on the Source Protection Plan

2.2. Term of Appointment

6. The Term of appointment is defined in O. Reg. 288/07, s. 8. which indicates the Term of appointment for the first SPC is until the posting of the notice of the approval of all of the Source Protection Plans for the Region.

7. In making the appointments the SPA must ensure that no more than 1/3 of each third of the committee expire in the same year.

8. The first appointments have been made for a 3 year period at which time the SPA will consider reappointment until the completion of the SPP and beyond as required by the Act.

9. The SPA will consider the desires of the committee members in establishing the term of the appointment wherever possible.

2.3. Code of Conduct Agreement

10. Basic committee member expectations are included in a code of conduct agreement which is included as Appendix 3 of this document.

11. The code of conduct agreement forms a basic agreement which all members have signed as part of their appointment to the Source Protection Committee. The expectations contained in these policies expand upon the basic expectations contained in the code of conduct agreement.

2.4. Meeting attendance

12. Source Protection Committee members are expected to attend all meetings.

13. The chair may approach the lead Source Protection Authority to have a committee member removed from the committee if the chair believes that the absence of a committee member is having an impact on the committee.

14. It is understood that, from time to time other commitments, illness or other uncontrolled circumstances may prevent members from attending a meeting. When such a situation is anticipated the committee member is expected to notify the chair and the administrative assistant well in advance of the meeting.

15. It is important that notice of an expected absence is received in advance of the meeting so that members may be notified if the committee will not have enough members in attendance to make quorum.

2.5. Harassment

16. The UTRCA (the lead SPA responsible for committee formation and administration) has a policy in its personnel policies that every employee and volunteer can expect a work environment free from harassment/discrimination. No employee or committee member shall be harassed because of race, ancestry, place of origin, colour, ethnic origin, citizenship, religion, creed, sex, sexual orientation, age, record of offences, marital status, family status, or handicap.

17. The policies of the UTRCA as amended and updated from time to time shall apply to the committee, as well as the staff of the authority working with the committee.

18. Every committee member will deal with their fellow members and staff of the conservation authorities in a fair and equitable manner free from discrimination and/or harassment.

19. Harassment may include, but is not limited to, the following:

- unwelcome remarks, jokes, innuendos or taunting about a person's body, attire, sexual orientation or sex;
- practical jokes of a sexual nature which cause awkwardness or embarrassment;
- displaying pornographic pictures or other offensive material;
- leering (suggestive staring) or other gestures;
- unnecessary physical contact such as touching, patting or pinching;
- physical assault;
- demands for sexual favours or repeated unwanted social invitations;
- unwelcome remarks, jokes, innuendos or taunting about a person's racial or ethnic background, colour, place of birth, citizenship or ancestry;
- the displaying of derogatory, offensive or racist pictures or material;
- refusing to converse or work with an employee or volunteer because of his or her racial or ethnic background;
- insulting gestures or practical jokes based on racial or ethnic grounds, which cause embarrassment or awkwardness;
- unwelcome remarks jokes, innuendo or taunting about a person's age, record of offences, marital status, family status, handicap or creed.

20. A committee member who feels they are being harassed as part of their involvement with the committee should;

- make it clearly known to the offender that their conduct is unacceptable and should not be repeated; and/or
- discuss the situation, in confidence, with the chair, vice-chair, the SPA liaison or the Human Resources Administrator of the UTRCA (519)-451-2800x225;
- keep a short written record of dates, incidents and names of witnesses, if any;
- if necessary, prepare a written complaint.

21. An appropriate member of the Executive Committee together with the Human Resources Administrator (or appropriate designate) will, upon receipt of a verbal or written complaint, conduct an investigation in confidence. If the investigation concludes that

harassment has occurred, appropriate disciplinary action will be taken (this may include suspension or termination of staff or removal from the committee of a member).

22. An employee of a conservation authority who feels that they are being harassed as part of their involvement with the committee may follow the policies of their employer in reporting the complaint or follow the policies contained herein. If the complaint is dealt with through the employer their investigation will involve an appropriate member of the executive committee and the UTRCA Human Resources Administrator (or appropriate designate).

23. The employee or volunteer who issued the complaint will be informed of the results of the investigation and of any action taken.

24. The filing of an internal complaint of harassment/discrimination is the right of every employee or committee member and may be exercised without fear of retaliation or threat thereof.

2.6. Media Contact and Publicity

25. Contact with the media related to the business of the source protection committee is to be undertaken by media spokespersons as designated by the chair. This will generally be undertaken through press releases.

26. The Chair or the Source Protection Project Manager or communications staff will most often be relied upon as media spokespersons.

27. All messaging whether to media or stakeholder groups must be consistent with the objectives of the committee.

28. If approached by the media, members should discuss the contact with the chair.

29. Discussions of the committee or working groups undertaken in camera are to be treated with the strictest of confidence. See the section on FIPPA/MFIPPA for other considerations related to protection of privacy.

2.7. Liaison with Sectors

30. Liaison with sectors is expected in formulating decisions of the committee. It is important that this input be sought in a consultative manner rather than as criticism of policies yet to be established.

31. Committee members are expected to liaise with the stakeholder groups that they represent. They are expected to bring the viewpoint and expertise to the table. They are also expected to assist with disseminating the viewpoints of the other stakeholders to the groups they represent.

32. One of the many important roles of committee members is to assist with education and outreach which will undoubtedly be an important tool in protecting drinking water sources.

2.8. Role of the Liaisons on the Committee

33. O Reg 288/07 allows for 3 liaisons to participate in meetings of the SPC.

34. These liaisons are able to participate in all discussions of the committee.

35. These liaisons are not allowed a vote and may not move or second a motion.

36. Liaisons may not be removed from the meeting, should the meeting go in camera.

> 19. The following persons may attend and participate in discussions at meetings of a source protection committee, including any meeting or part of a meeting that is closed to the public:
>
> 1. A person designated by the source protection authority as a representative of the authority.
>
> 2. A person designated by the Minister as a representative of the Ministry.
>
> 3. A person designated by the Minister as a representative of the medical officers of health for the health units in which any part of the source protection area or source protection region is located. O. Reg. 288/07, s. 19.

2.9. Liability and Insurance

37. Section 98 and 99 of the Clean Water Act offer Protection for the SPC and SPA .

38. CAs carry liability insurance which covers errors and omissions for staff and directors/officers.

39. CAs are determining if the insurance needs to be extended to the SPA, SPC and chair.

2.10. FIPPA/MFIPPA

40. The committee is bound by the Freedom of Information and the Protection of Privacy Act (FIPPA) as well as the Municipal Freedom of Information and the Protection of Privacy Act (MFIPPA).

41. Much of the information collected, reviewed and relied upon for the development of a source protection plan contains private information.

42. Although the business of the committee is to be open and transparent it will be important that personal privacy is maintained throughout the development of the plan. For this reason, among others, portions of the business of the committee will be considered private and will be conducted in camera. Committee members are required to maintain this privacy.

43. Committee members continue to be bound by FIPPA and MFIPPA requirements even after they are no longer on the SPC.

2.11. Per diems Eligibility

44. Per Diem allowance includes payment for attendance at meeting, travel and associated meeting preparation time

45. Members are eligible for a Per Diem of $150 for all meetings of the Source Protection Committee including meetings held as a teleconference.

46. Committee members chairing working groups will be eligible for a per diem for the meetings of the working groups. All other members of the working groups will not be eligible for the per diem.

47. It is the intent of the province that committee members are not paid twice for their involvement with the committee. As there are many different variations and subtleties as to whether an employer is paying for the member's time on the committee, the SPA has made all members eligible for the per diem. Should the member wish to collect the per diem, the member's employer may need to be made aware that the member is collecting a per diem for their involvement in the Source Protection Committee so that the intent of the province can be followed.

48. Committee members will be required to sign a meeting attendance sheet and indicate round trip mileage.

49. Committee members will be issued a tax form at the end of each year. Taxes will not be withheld from payments.

50. Per diems will be paid monthly by direct deposit.

2.12. Eligible Expenses

51. Reasonable out of pocket expenses will be reimbursed.

52. Expense claims must be directly related to the attendance at meetings of the SPC or MOE required training.

53. Eligible expenses will be governed by the policies of the UTRCA as they apply to staff and members of the board of directors and must be consistent with provincial guidance.

54. Mileage will be reimbursed at the rate paid to UTRCA staff and board members.

55. Examples of eligible expenses:

- Telephone toll charges associated with teleconferences.
- A meal on the road where the committee member has been required to be away from home for more than 4 hours where a meal was not provided as part of the meeting.

56. Examples of ineligible expenses.

- Lunch at meetings, office supplies or equipment.

57. Expense claims will be paid monthly at the time of payment of per diems.

3. Rules of Order

58. The committee adopts Roberts Rules of Order. The following are specific items which will be observed by the committee and chair. Although they may vary from the standard rules of order those rules identified herein shall govern the committee.

3.1. Meeting Dates

59. The first meeting date and location will be set by the chair.

60. At the first meeting of the SPC the dates, times and locations for the committee meetings will be set for the next 6 months.

61. It is anticipated the meetings will occur 2-4 times per year and will be approximately 2 to 3 hours per meeting. Meetings must occur annually to complete an annual report.

62. Once set, meeting dates, times and locations will be posted on the web site. Generally, meetings will be held at the St. Clair Conservation Authority office, the second Friday of the month at 10:00 a.m.

63. Members may request meetings of the committee by submitting the request to the chair. The chair will determine whether the item may be dealt with at the next meeting by allocating specific time to the item or may consider other alternatives to address the issue.

3.2. Meeting Agendas and Reports

64. Agendas and reports will be posted on the SWP website and the link sent to members for the members to access 7 days prior to meetings.

65. Materials are required to be publically available reducing the need for members to retain their own copies of the materials.

66. Meeting materials will be available for display on screen in the meeting room during the meetings.

67. Members are encouraged to take advantage of the Adobe portable document format which is viewable with a number of available viewers and to use their electronic devices to be able to access the materials before, during and after meetings. WIFI and technical support would be available during the meetings.

68. Printed documents will only be provided at specific request of a member.

69. It is expected that the agenda and Discussion Papers will be reviewed prior to meetings. Questions of staff may be asked prior to meetings. Discussion Papers will indicate who they were prepared by.

70. Meeting agendas will be set by the chair and accepted by the committee by motion at the start of the meeting. New business may be allowed for as part of the approval of the agenda.

71. Each meeting agenda will include an in-camera section where subject matter of a confidential nature will be discussed as noted in the section on In Camera Sessions.

72. Reports for the consideration of committee members will be discussion papers which will be general in nature typically without recommendations. Recommendations may be appropriate where a professional opinion is warranted. (An example of this would be the opinion of a professional engineer or hydrogeologist as to whether a threat still poses a significant risk).

73. Staff recommendations may be included in Discussion Papers when the regulations, Act or other guidance provides clear direction and could include options to facilitate discussion.

3.3. Meeting minutes

74. Meeting minutes will be completed and circulated to the members with the meeting notice for the next meeting.

75. Minutes of meetings will be posted after being circulated to the committee by email for approval. An email vote will be recorded for the approval of the minutes. Once approved the minutes will be posted on the website.

76. Minutes will indicate the general tone of discussion, motions, clarification made and additional information or action required.

77. Staff discussion papers will be attached to meeting minutes.

78. Meeting minutes will be retained as per the retention policy of the lead SPA related to board minutes.

3.4. Decision Making Process

79. The Source Protection Committee is expected to arrive at decisions through consensus. Unanimous agreement is not required. Where necessary, votes will be undertaken on motions. Motions will carry by 2/3 majority.

80. Reports presented to the committee as discussion papers will allow for the committee to discuss the business and will be focused on presenting the options and allowing the committee to arrive at consensus.

81. The chair will determine if consensus is likely to be able to be achieved within the allotted time. The chair may then call for a motion on the business, ask to have the discussion extended by motion or deferred to a subsequent meeting.

3.5. Disciplinary Actions

82. Should a member of the committee have an issue with the conduct of a committee member which cannot be resolved through discussions with the committee member, it should be discussed with the chair of the committee.

83. Should the chair not be able to resolve the issue, the issue can be referred to the executive committee.

84. Should the executive committee not be able to resolve the issue it can be referred to the lead SPA.

85. The lead SPA may undertake to correct the situation or may form a joint committee of the 3 SPAs to deal with the situation.

86. The lead SPA or the SPAs collectively through a joint committee may remove a committee member from their seat and appoint a member to fill the position. In appointing the member to fill the seat which has been made vacant, the SPAs will, wherever possible, utilize a process similar to the process that the striking committee used to fill the position originally.

3.6. Removal from the committee

87. A member may be removed by the lead SPA or the SPA's collectively through a Joint Committee.

88. Pursuant to O. Reg. 288/07, s. 7 (4) appointments are subject to the condition that members attend meetings and abide by the code of conduct as such failure to abide by these conditions is grounds for the removal of the committee member from the committee.

89. If the SPA proposes to remove a member of the committee, it shall give the member a written statement of the reasons for the proposed removal.

90. If the chair requests the removal of a member from the committee it shall be made in writing and shall include a written statement of the reasons for the request.

91. If the SPA proposes, on request of the chair, to remove the member from office, it shall give the member a copy of the chair's request.

92. The SPA shall provide the member and the chair with an opportunity to make submissions to the authority before it makes a decision on whether or not to remove the member from office.

93. A member must be removed from office should a member no longer comply with Section 7 of the Regulation which pertains to residing, owning or renting land or being employed within the Source Protection Region.

94. The SPA shall, as soon as is reasonable, remove from office a member of the committee if the member was appointed from a list of persons that was submitted jointly by the councils of the municipalities that are in a group established under the regulation and the removal of the member from office is jointly requested by the councils of the municipalities referred to above. Those municipalities must also jointly submit the name of a person to be appointed to fill the vacancy created by the removal of the member. The SPA shall, as soon as reasonably possible, appoint the person whose name is jointly submitted by the councils of the municipalities.

3.7. Chair

95. The chair is appointed by the Minister of the Environment.

96. The chair:

- Presides over the meeting,
- sets agendas,
- allows delegations, and

97. The chair does not vote.

98. Any issues that a member has with the chair which cannot be resolved through discussion directly with the chair should be discussed with the SPA liaison and the Provincial liaison to determine possible solutions. These liaisons may solicit the advice of others as they see fit. Only the Minister of the Environment may remove a chair from their position.

3.8. Elections

99. Where elections are required the elections shall be conducted in a manner consistent with the adopted rules of order.

3.8.1. Acting Chair

100. The SPA liaison, MOE liaison or Project Manager can call the meeting to order and ask for an acting chair. The acting Chair would then preside over the meeting.

101. Acting chair does not vote when fulfilling the role of chair.

3.8.2. Recording Secretary.

102. The position of recording secretary was established in the past to record notes from in-camera sessions. To date this has not been needed. In rare instances that a recording secretary would be required to record in camera discussions one will be elected by the committee.

3.9. Working Groups and Sub-Committees

103. Working groups will generally be open to participation by any SPC member who wishes to participate.

104. Working groups will also rely on technical staff participation as well as stakeholder participation.

105. Working groups of the committee will be chaired by a SPC member who will be appointed by the committee and report back to the SPC. Working groups and technical advisory committees may also be chaired by staff who will also report back to the SPC.

106. SPC members who chair a working group are eligible for per diems for the meetings of the working group.

3.10. Attendance by Teleconference

107. Attendance by teleconference is allowed however, attendance in person is preferred due to the importance of the consensus building decision making process. It is acknowledged that teleconferences will be challenged by limited audio quality and may not have the benefit of video so this should only be used as a last resort for members who otherwise will not be able to attend the meeting.

108. If a committee member participates in a meeting of the SPC by telephone they will be eligible for the same per diem as those who attended in person.

109. For members who participate in a meeting by teleconference, the member is expected to request that the SP Administrative Assistant indicate attendance by teleconference on the meeting attendance sheet.

110. A member must let the Administrative Assistant know that they wish to participate by teleconference in advance of the meeting.

111. Attendance by teleconference will be counted towards quorum.

3.11. Proxy

112. The Clean Water Act allows for absent members to participate in decision making by proxy. The committee, however determined that this presents many logistical problems. Proxies are better suited to predetermined votes. This committee preference will be to make decisions by consensus making it difficult for a member to provide an informed proxy. The committee members acknowledge however that it may be necessary use proxies but only if the member cannot attend in person or by teleconference and as a last resort for urgent business.

113. If a member is not able to participate in a meeting, in person or by teleconference, they are encouraged to submit their opinion on an issue. Absent member's opinions and current views shall be submitted to a member of like mind on an issue, in writing, in advance of the meeting. This opinion and a proxy if so desired shall be made in writing and a copy provided to the chair. The member receiving the opinion and proxy shall make the absent members views know during the meeting prior to any vote. In this manner absent members initial opinions may be considered in arriving at consensus. It is acknowledged that positions arrived at in the absence of the group discussion is contrary to the consensus building process. Only through the discussion should members form a position. This initial opinion is, however, intended only to allow the absent member's initial opinion to be considered in the group discussion. The focus should therefore be placed on the input rather than an established position.

114. A copy of the written proxy be provided to the member who carries the proxy as well as the chair.

115. Proxy will be counted any time a vote is recorded. Based on the history of the SPC's decision making it is rare to have a vote which required a count and no recorded votes were cast which is in line with consensus building decision making which is the committee's goal. If a recorded vote is called for, the members will cast their votes as well as any proxies that are held, Proxy votes will be cast based on opinions provided and due consideration by the member holding the proxy of the consensus building discussion which has occurred.

3.12. Quorum

116. Meeting quorum is identified in the Clean Water Act.

> 13. (1) The quorum of a source protection committee is the chair or acting chair, plus at least two-thirds of the number of members of the committee that the source protection authority is authorized to appoint. O. Reg. 288/07, s. 13 (1).
>
> (2) One or more vacancies in the membership of a source protection committee does not prevent the committee from conducting business as long as the number of members remaining in office is sufficient to maintain a quorum. O. Reg. 288/07, s. 13 (2).

117. CWA requires that business of the SPC will only be conducted at a meeting at which a quorum is present.

118. It is the responsibility of the member to notify the administrative assistant, as early as possible, if they are not able to attend the meeting.

119. Attendance by teleconference will be counted towards quorum.

120. Written proxies provided as described in the Proxy section of this document proxies will also count towards quorum.

3.13. Delegations

121. The chair will consider requests for delegations.

122. Delegations may be arranged through contact with the Administrative Assistant. Requests need to be made in writing 3 weeks prior to meeting so that the information may be included in the meeting notification.

123. No more than 3 delegations will be scheduled per meeting.

124. Preference will be given to having the delegations at working groups, where appropriate, and at the discretion of the chair.

125. The chair will determine the amount of time to be allocated to the delegation on the agenda. The delegation will then be limited to the time allotted by the chair.

3.14. In Camera Sessions

126. The committee discussions may include personal or private information such as:

- personnel records or issues,
- property related discussion,
- discussions which could adversely affect the interests of a third party, or
- a personal or financial matter pertaining to an identifiable individual or business.

127. A recording secretary will be elected by the members to record notes if an in camera session is called.

128. Notes from the in camera session will be filed with the Source Protection Project Manager and will be approved by the committee at the next in camera session.

129. Discussions of this nature need to happen without public or media in attendance.

130. Staff will generally be allowed to remain for these discussions as they are governed by the same FIPPA/MFIPPA policies as the committee.

131. Staff input into discussions held in camera may be required.

132. Where all staff are required to leave the meeting the SPA liaison will determine in consultation with the alternates which alternate is to remain to participate in the discussions.

133. Notes from in camera sessions will not be part of the minutes of the meeting which will be available to the public.

3.15. Conflict of Interest

134. A conflict of interest shall be declared if private interests or personal considerations of the member could compromise or could reasonably appear to compromise the member's judgment in acting objectively and in the best interests of the committee.

135. A conflict of interest also includes using a member's position or confidential information for the private gain or advancement or the expectation of private gain or advancement.

136. A conflict of interest also occurs when the interest benefits any member of the member's family, friends or business associates.

137. Members must identify their conflict of interest at the start of the meeting or at such point during the meeting when the conflict of interest becomes apparent to the member.

4. *Any member who has declared a conflict of interest must excuse themselves from the discussion.* *Procedure for Revising these Policies*

138. These policies may be amended from time to time by the SPC. The committee will adopt any revisions of these policies by motion after discussion at a meeting of the SPC.

139. Proposed revisions to the policies require the acceptance of the SPA. Minor changes may be considered by the lead SPA, however more significant changes will require the acceptance of all partner SPAs or through a joint committee formed by the 3 SPAs.

140. Once the revised policies have been accepted by the SPA, the web site must be updated with the revised version.

5. Appendices

Appendix 1 - Committee Chair – Job Description

Under the Clean Water Act the preparation of a Source Protection Plan begins with the establishment of a Source Protection Committee (SP Committee) by the SP Region. The Upper Thames River, Lower Thames Valley and St. Clair Region Conservation Authorities have been assigned to work as a SP Region under the Act. .

The SP Committee is to include 16 or 22 members, including the Chair of the Committee The Chair of the SP Committee is appointed by the Minister of the Environment, after consideration of recommendations by the Conservation Authority. Committee members are appointed according to regulations under the Act and will oversee the source protection planning process.

As the chair is a provincial appointee the province will therefore be considered the chair's employer. This position description is intended as an indication of the local expectations which has been based on guidance materials and information provided by the province..

Job Purpose

The Chair is responsible for guiding the effective operation of the SP Committee in completing the Terms of Reference, Assessment Report and Source Protection Plan for the SP Region and submission to the SPA.

Skills and Qualifications

- Demonstrated independence and neutrality.
- Demonstrated ability to understand source water protection science concepts and technical reports.
- Advanced negotiating, mediation, and chairing skills.
- Understanding of municipal and conservation authority functions.
- Solid problem-solving, analytical, communication and organizational skills.
- Knowledge of watershed(s), local issues, etc.
- Demonstrated ability to draw people together.
- Preference will be given to Watershed residents.
- Criminal check will be required for recommended candidates.

Roles and Responsibilities.

- Where requested by the SPAs or where time permits, work with the SPAs in the region to determine the composition of the source protection committee and select members.
- Guide the effective operation and chair meetings of the SP Committee at a minimum of once per month or as needed until completion of the Source Protection Plan, and possibly extending beyond submission of the plan to include implementation.
- Act as neutral member of SP Committee (voting right used only as needed).

- Function as a spokesperson of the SP Committee as required.
- work collaboratively on behalf of the SP Committee with partners such as municipalities, First Nations, health units, agriculture, industry and other community stakeholder groups and Source Protection Authorities to produce the Terms of Reference, Assessment Report, and Source Protection Plan(s) as defined under the Act.
- Follow the rules of procedure and code of conduct and conflict of interest policy as developed by the source protection committee.
- Provide quarterly updates to the source protection authorities on the status of the committee work.
- Be prepared to participate in meetings of the SPC chairs as requested by the Minister.
- Attend public information sessions and participate in public consultations.
- Work with the SPAs to address removal of a committee member.

Term and Time Commitment

- Three to five year timeline for project requires sustained long-term interest.
- It is anticipated that the committee and, therefore, the chair will be in place beyond the development of the SP Plan. Monitoring of the plan is required once the plan has been developed. It is anticipated that the plan will be required to be updated every 5 or 10 years depending on the pressures on drinking water systems.
- Once the plan is developed the term of the chair should be renewed every two years.
- Availability to commit up to 12 days per month year-round until project completion (based on current understanding).

Compensation

Based on a per diem to be determined by the province

Appendix 2 - Committee Member – Job Description.

Under the Clean Water Act the preparation of a drinking water Source Protection Plan begins with the establishment of a Source Protection Committee (SP Committee) by the Thames Sydenham and Region Source Protection Region. The Upper Thames River, Lower Thames Valley and St. Clair Region Conservation Authorities have been assigned to work as a SP Region under the Act.

The SP Committee is to be composed of 16 - 22 members, not including the seat for a First Nations representative. The Chair of the SP Committee is appointed by the Minister of the Environment, after consideration of recommendations by the SP Authority. Committee members are appointed according to regulations under the Act.

Job Purpose

The SP Committee is responsible for completing a Terms of Reference(s), Assessment Report(s) and Source Protection Plan(s) for the Thames, Sydenham & Region Source Protection Region in accordance with the Clean Water Act.

Skills and Qualifications

- Demonstrated ability to understand source water protection science concepts and reports.
- Proven ability to act as a liaison to sector represented.
- Solid problem-solving, analytical, communication and organizational skills.
- Knowledge of watershed(s), local issues, etc.
- Watershed resident.
- Bilingual – French an asset (where applicable).

Roles and Responsibilities

- Member will attend meetings of the SP Committee
- Member must have knowledge of sector interests and issues and be able to communicate these at the SP Committee table.
- Members are expected to participate in working groups and forums as well as be available to participate in meetings with their sector stakeholder groups as required.
- Member will act as liaison of their broad sector bringing forward representative issues from the sector to the SP Committee and assist in communicating the SP Committee work back to the broad sector. The Committee, with the assistance of the SP Authority, could create central communications to ensure common messaging is communicated to all sectors.
- Member is expected to make decisions at the SP Committee table.
- Members must work collaboratively with partners such as municipalities, First Nations, health units, agriculture, industry, community stakeholder groups, and

Conservation Authorities to establish Terms of Reference for each Source Protection Area, Assessment Reports and SP Plans as defined under the Act.

Term and Time Commitment

- The Chair is expected to make a commitment to the project until the Source Protection Plan is complete (this is expected to require a 5 year commitment).
- Once the SP Plan is completed monitoring will require a lessened commitment. Plan updates will be required every 5 or 10 years with a heightened involvement during the period that the plan is being updated.
- Committee members will be replaced on a 3 year rotation after completion of the Source Protection Plan.
- Availability to commit approximately five days per month year-round until project completion.

Compensation

Based on a per diem to be determined with a provincial maximum

Source Protection Committee Code of Conduct Agreement

Members of the Source Protection Committee agree to work collaboratively towards the development and implementation of Source Protection Plans for the Source Protection Areas within the Thames-Sydenham and Region. This code of conduct summarizes the basic expectations of committee members. All members of the Source Protection Committee agree to abide by this code of conduct as indicated by their signature on this code as part of their appointment to the committee.

As a committee member I agree to:

- Work collaboratively towards meeting the legislative responsibilities of the committee.
- treat fellow committee members, the chair, staff and others whom they deal with in the course of Source Protection Committee business with professionalism and courtesy.
- make reasonable efforts to attend all meetings or make appropriate allowances for their absence including notification and providing a proxy when appropriate.
- prepare in advance of meetings.
- come to meetings prepared to contribute to the decision making processes as defined in the committee's rules of order.
- become involved in working group and forums.
- ensure that media contact related to the business of the source protection committee is undertaken by media spokespersons as designated by the chair and that messaging is consistent with the intent of the committee.
- uphold the requirements of Freedom of Information and Protection of Privacy Acts (FIPPA and MFIPPA).
- act as a liaison with the stakeholder groups disseminating source protection concepts in a manner consistent with the intent of the committee.

and

- bring the interests and perspectives of the stakeholders which you represent to the table while working with the committee members to develop a source protection plan which meets with the requirements of the Clean Water Act and its Regulations.

I agree to abide by this code of conduct and work collaboratively with the other members of the committee towards the development and implementation of the Source Protection Plans for the Thames – Sydenham and Region. I understand that failure to meet these expectations may result in removal from this committee. I understand that a condition of my appointment is to sign the more detailed code of conduct of the committee once it is finalized by the Source Protection Committee to the satisfaction of the Source Protection Authorities..

Signed and agreed to by

_____

[print name of committee member].

_____

On

_____

[print date in full]

Ministry of the Environment, Conservation & Parks

2019 Annual Progress Reporting Summary

"Insert Name of SPC" Source Protection Committee Meeting

Insert Month, 2020

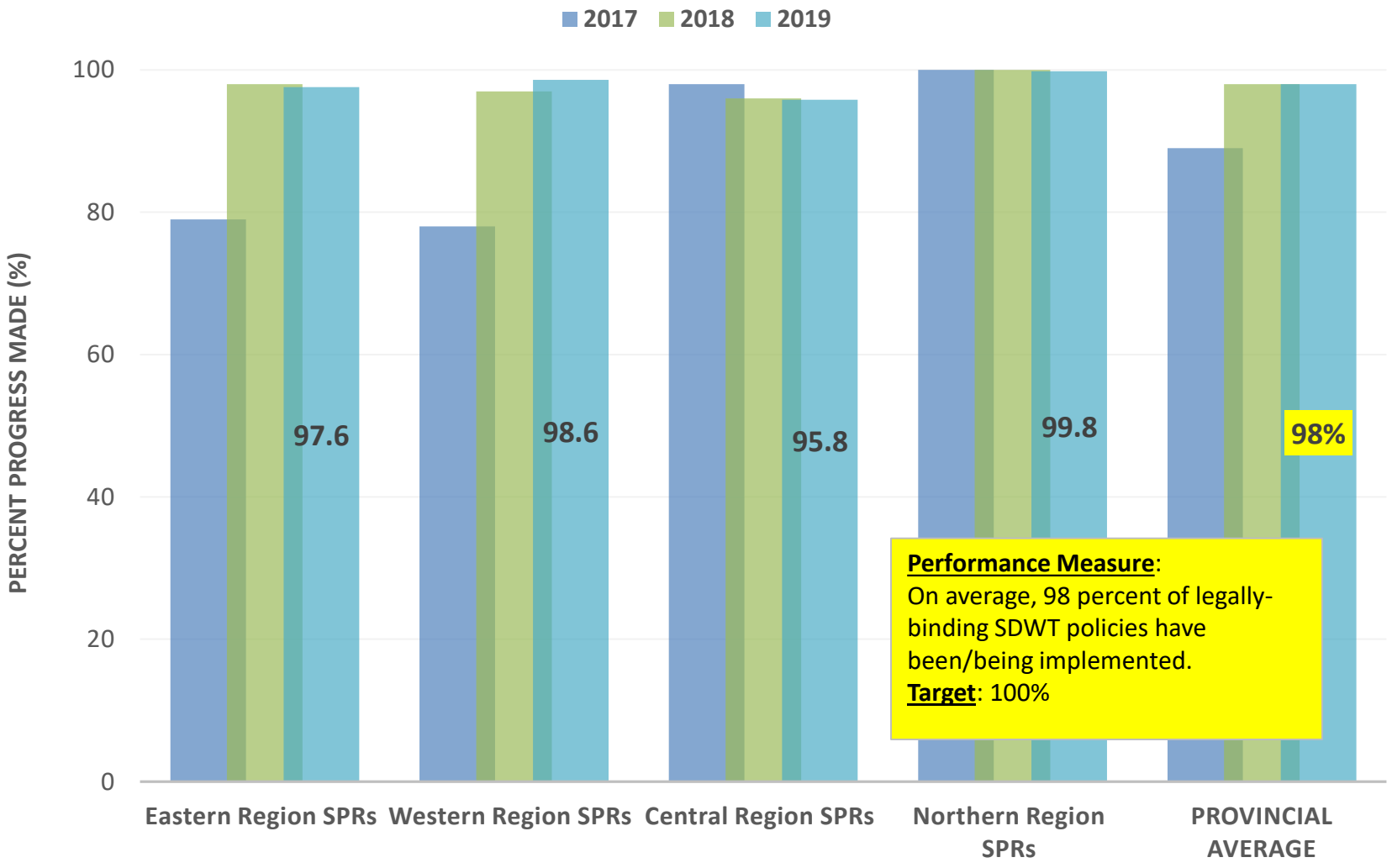
Ontario

Introduction

- This generic slide deck has been prepared for Project Managers to update their local Source Protection Committee should there be an interest in sharing 2019 annual progress reporting data.
- Liaison Officers are available to support the discussions.

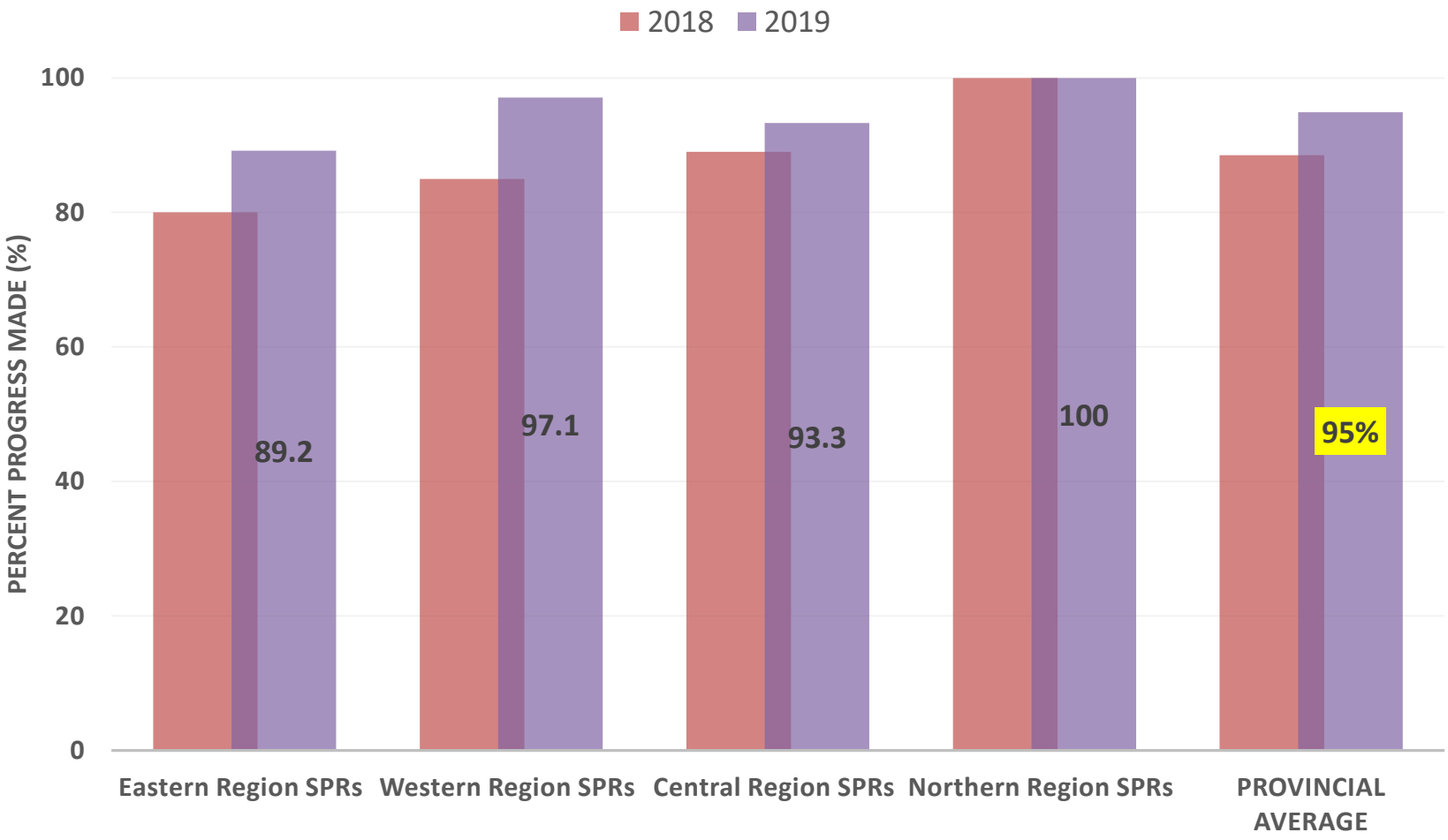
Section 1: Policy and Threat Implementation Highlights

2019 Annual Progress Reporting Highlights: Average Percentage of Legally-binding Significant Drinking Water Threat Policies Implemented/being Implemented by Provincial Source Protection Regions (SPRs)



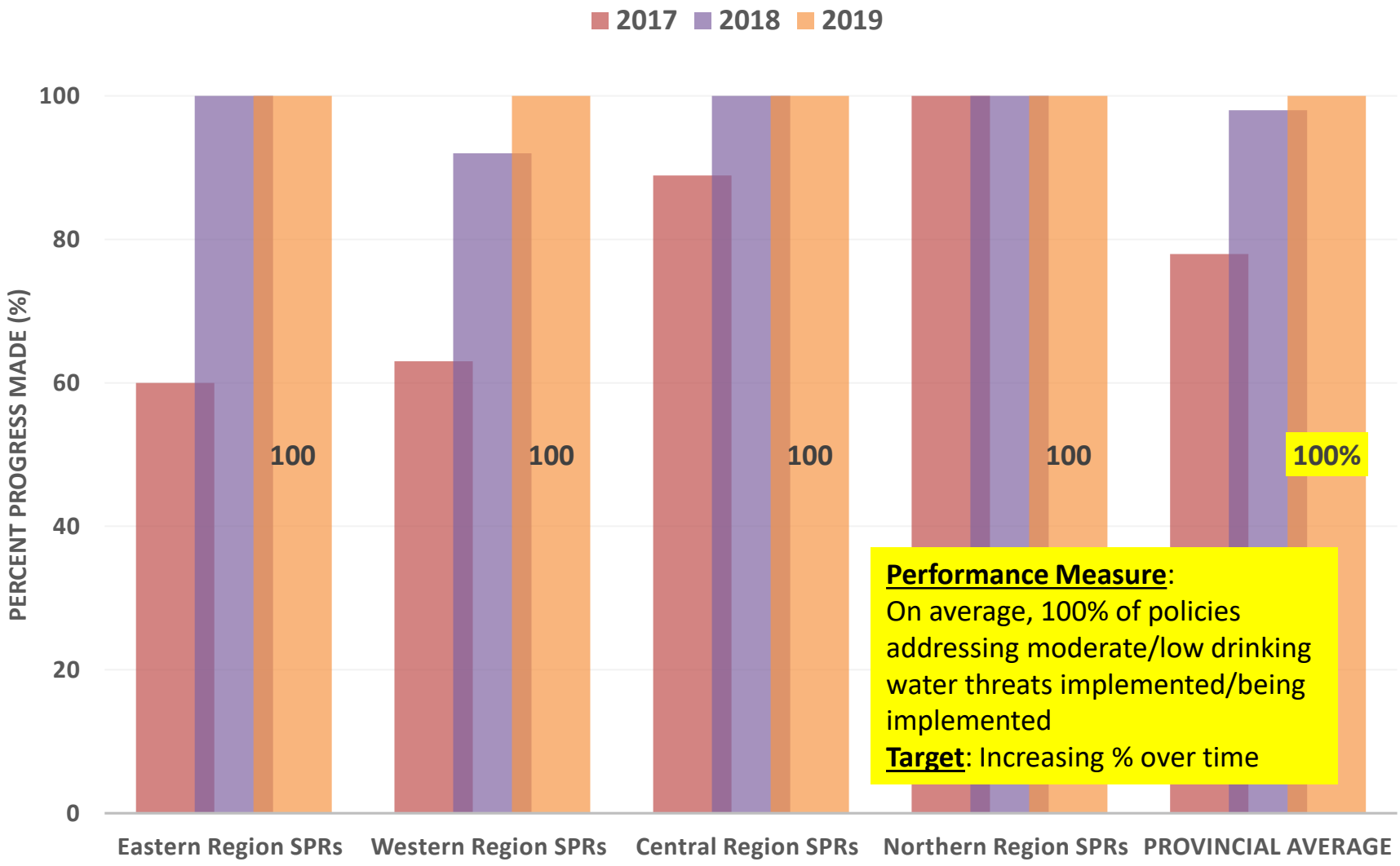
Ontario

2019 Annual Progress Reporting Highlights: Average Percentage of Non-binding Significant Drinking Water Threat Policies Implemented/being Implemented by Provincial Source Protection Regions (SPRs)



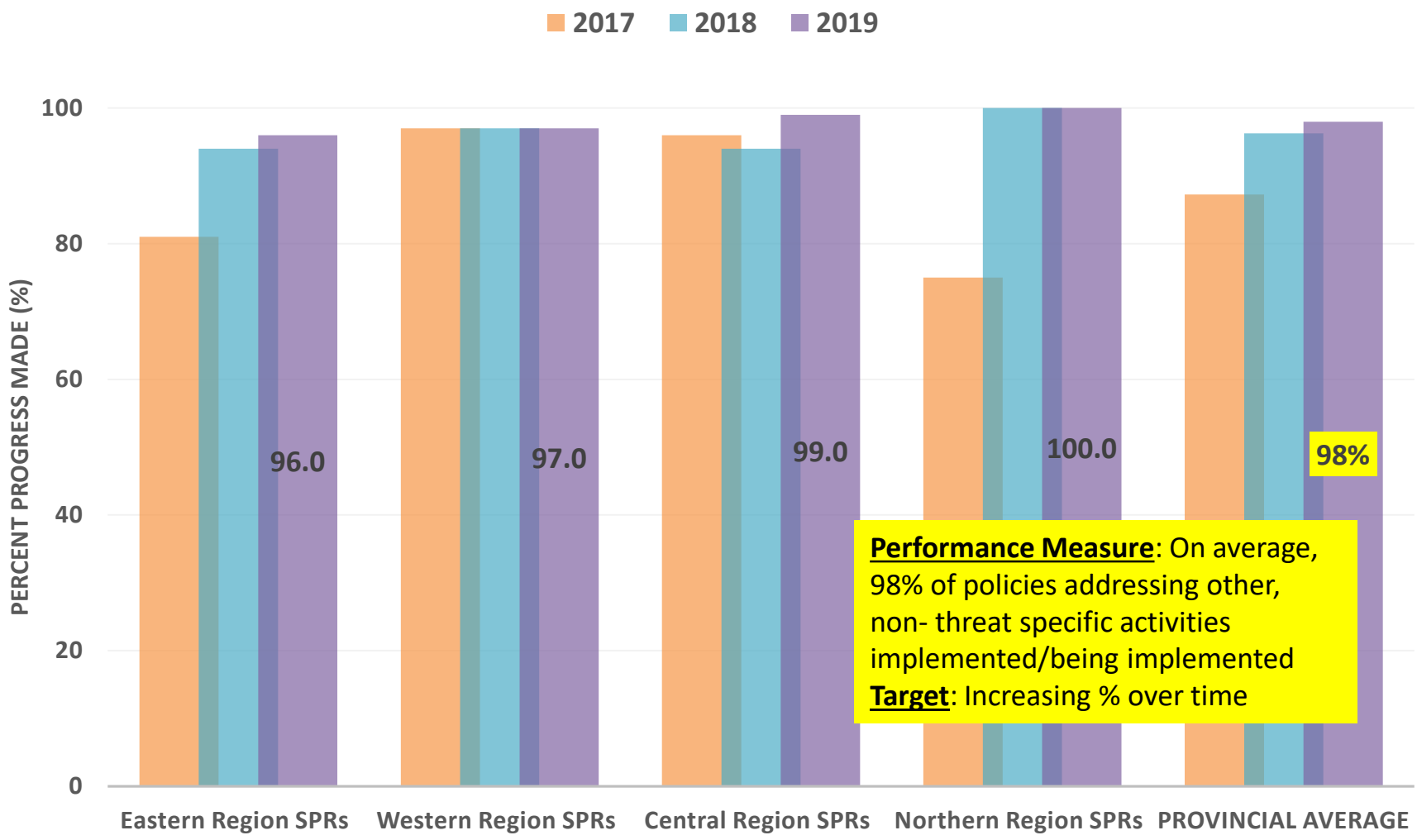
Ontario

2019 Annual Progress Reporting Highlights:
Average Percentage of Moderate-low Drinking Water Threat Policies Implemented/being Implemented by Provincial Source Protection Regions (SPRs)



Ontario

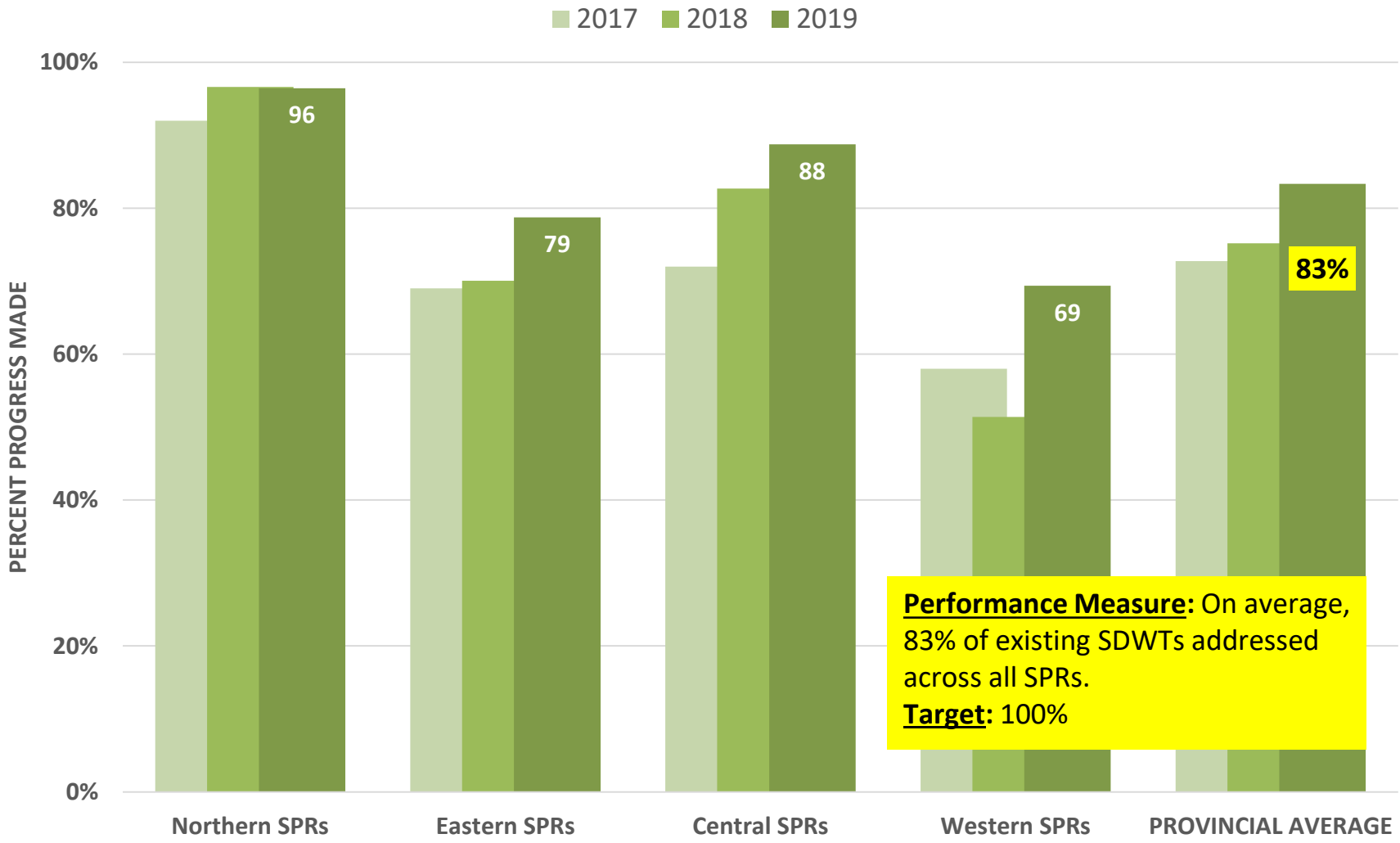
2019 Annual Progress Reporting Highlights: Average Percentage of Other, non-threat Policies Implemented/being Implemented by Provincial Source Protection Regions (SPRs)



Implementation Challenges

- Reporting indicates that a total of 21 threat (low, moderate, significant) policies from 8 SPR/As are experiencing implementation challenges
    - Of the 21 threat policies, 17 address significant threats (81%)
- The 17 SDWT threat policies with implementation challenges include:
    - Specify action (10)
    - Incentives (4)
    - E&O (2)
    - Risk Management Plan (1)
- Reasons for delay include: Non-binding policy, implementing bodies are considering options for implementation, activity not currently zoned to occur on landscape.
- Authorities reported steps they are taking to ensure implementation. SPPB developing a compliance strategy to assist.

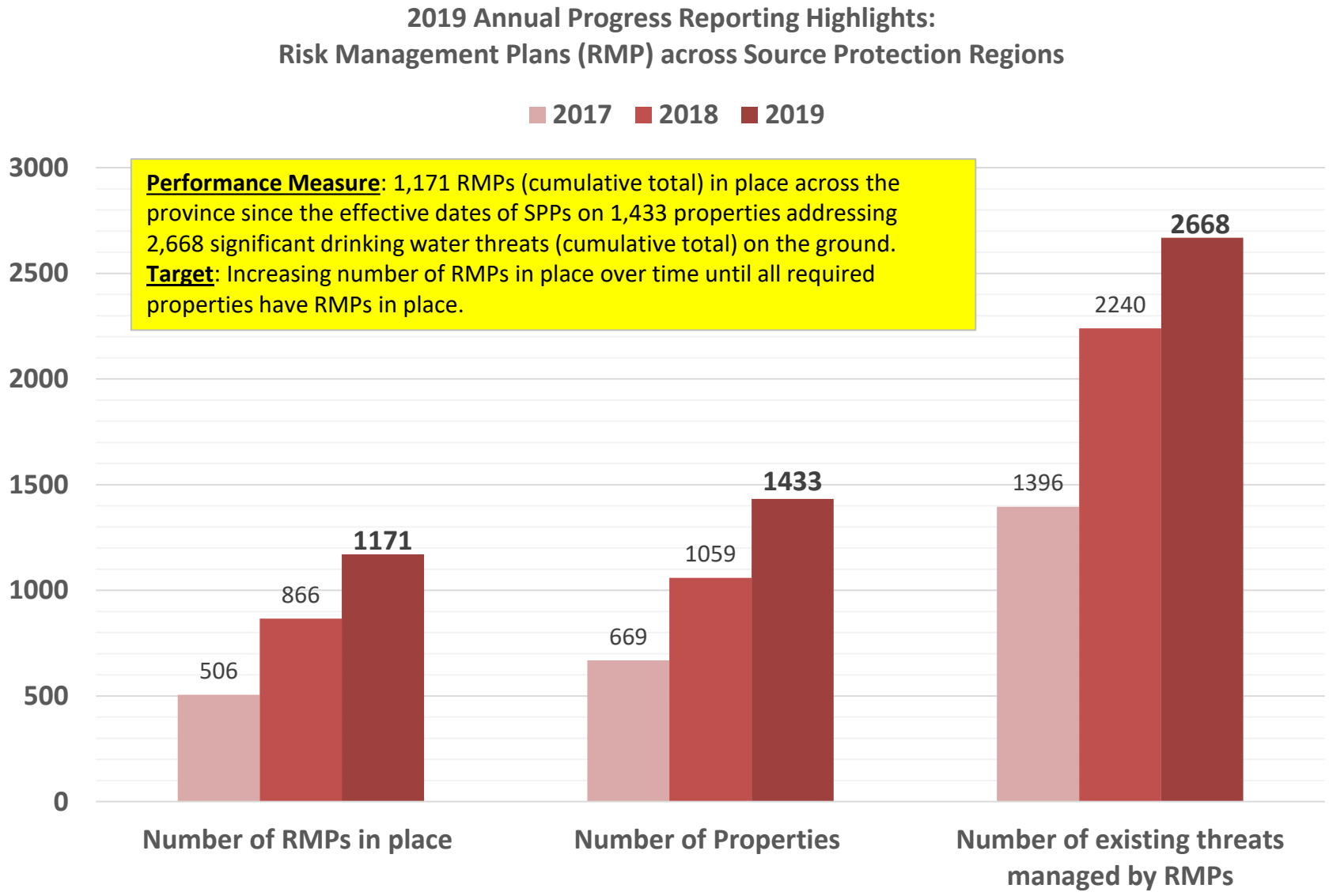
2019 Annual Reporting Highlights:
Addressing Existing Significant Drinking Water Threats (SDWT) by provincial Source Protection Regions (SPR)



Ontario

Section 2: Part IV Implementation Highlights

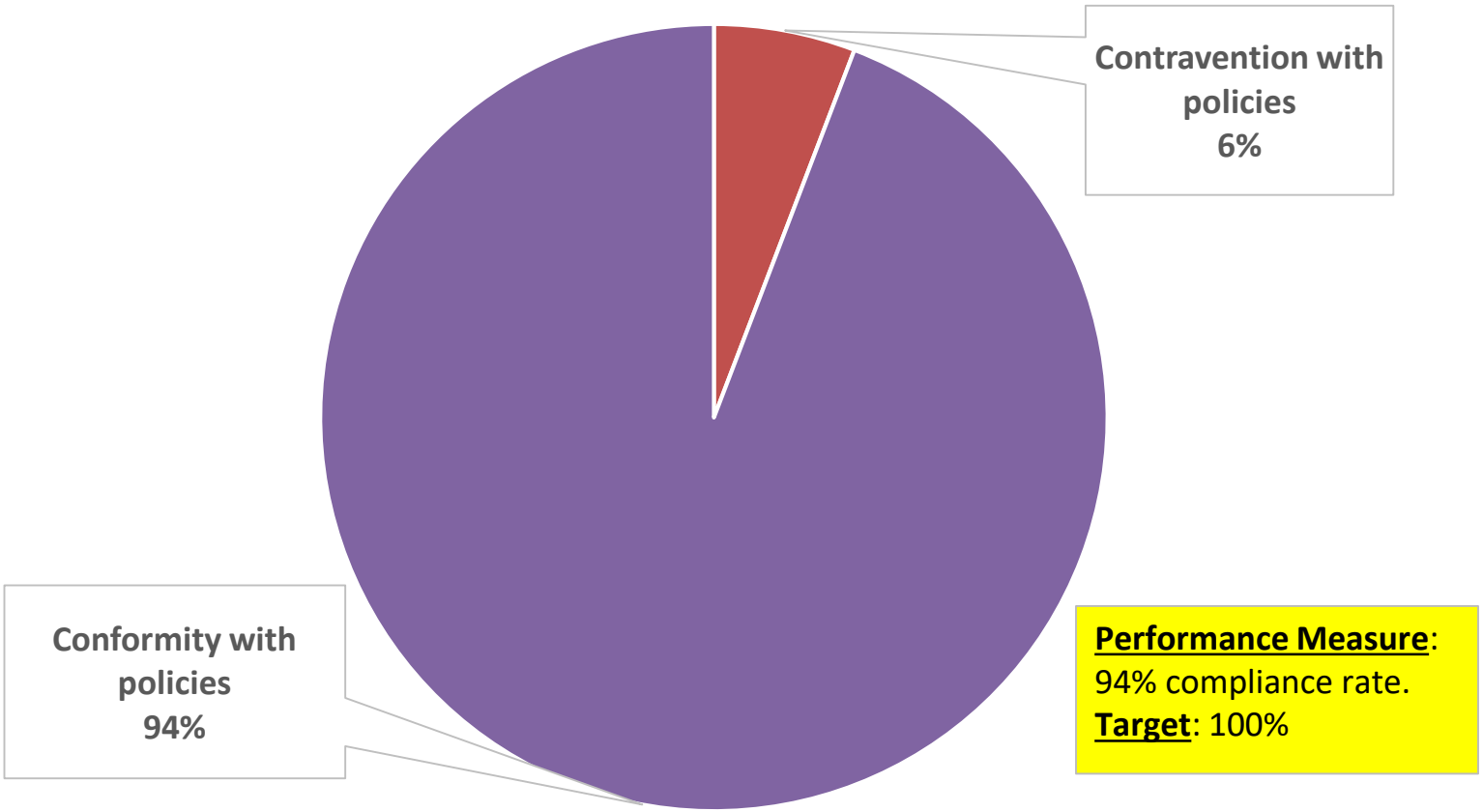
Part IV (Section 58 Risk Management Plans)



Ontario

Part IV (Inspections)

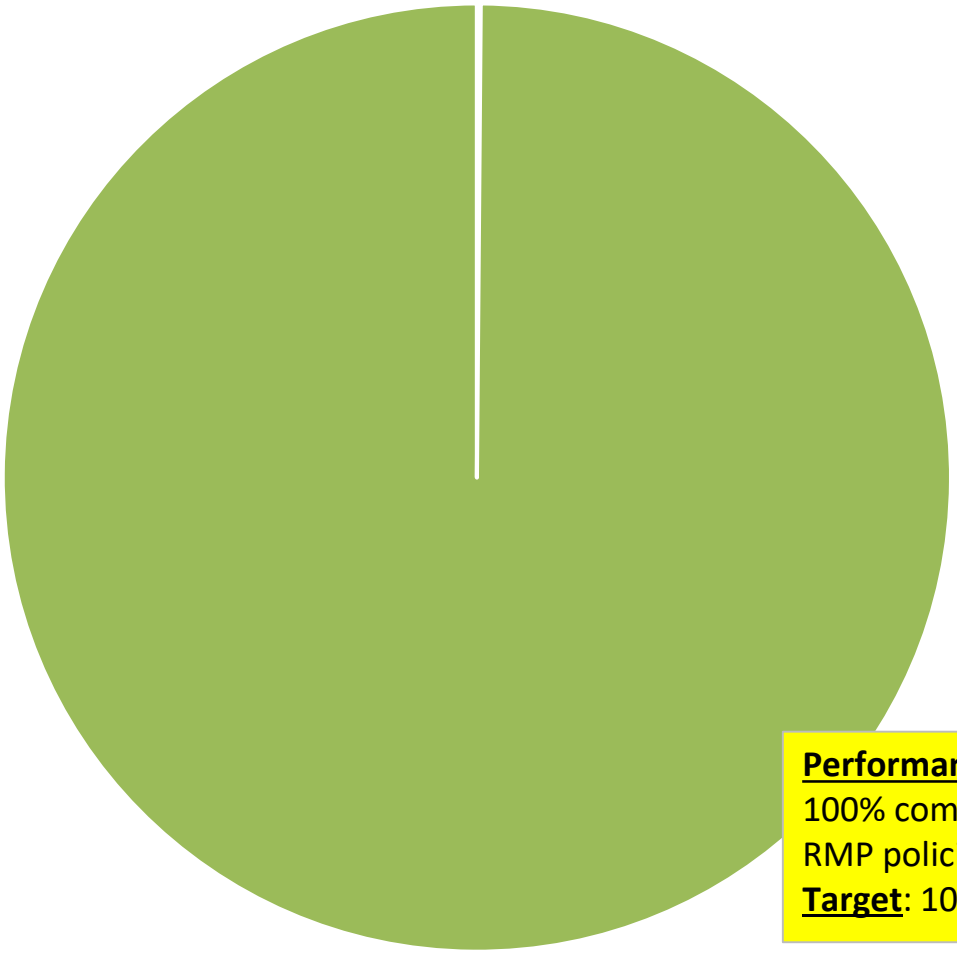
2019 Annual Progress Reporting Highlights:
Sections 57 & 58 Inspection Results



Performance Measure: 94% compliance rate.
Target: 100%

Part IV (Inspections)

2019 Annual Progress Reporting Highlights:
Section 58 Inspection Results



Performance Measure:
100% compliance rate with RMP policies.
Target: 100%

Ontario

Section 3: Provincial Ministry Highlights

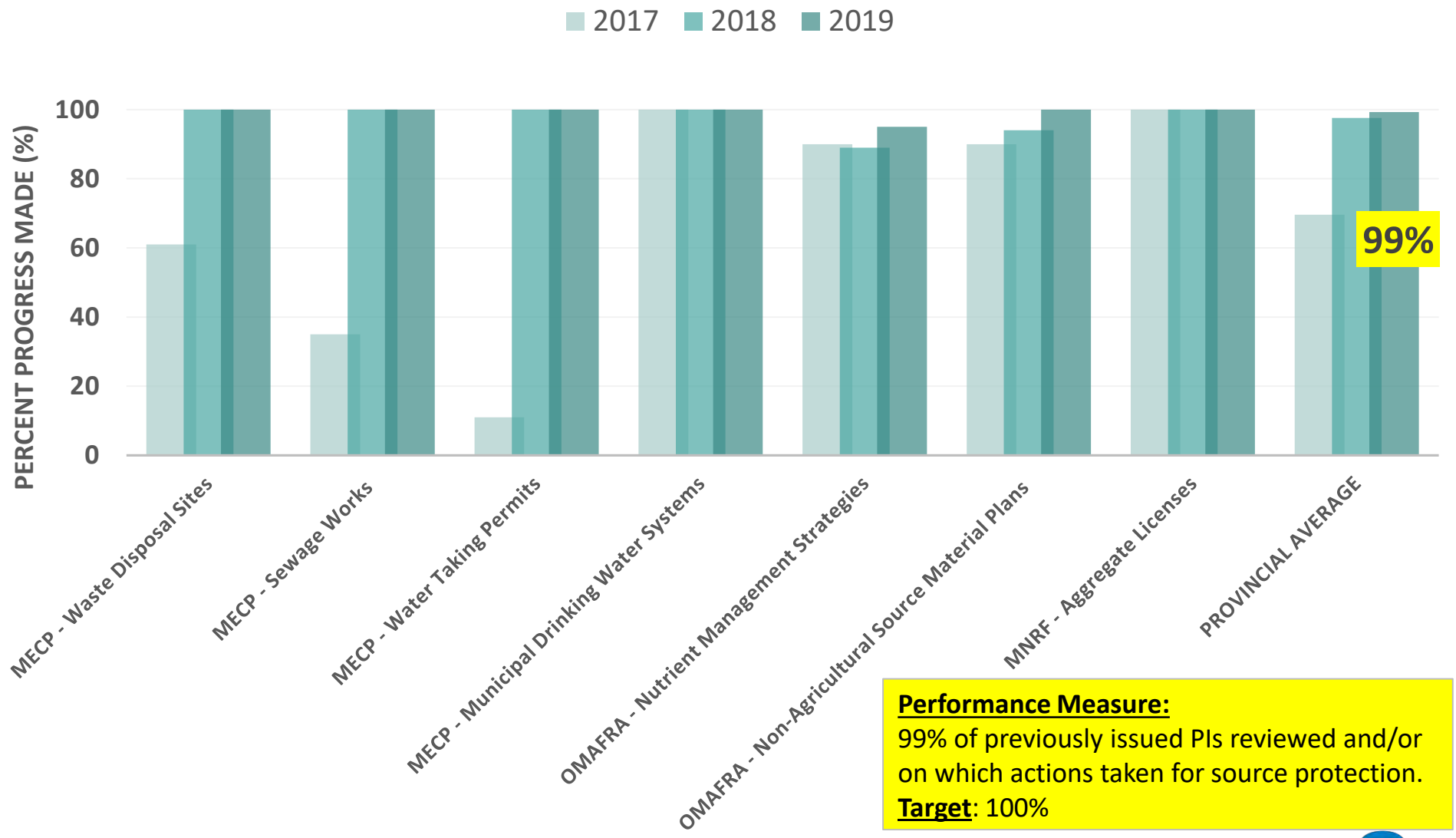
Prescribed Instrument Integration/Conformity

- All nine (9) Ministry program areas that issue prescribed instruments reported having the following processes in place:
  - Staff training on source protection;
  - Guidance documents to align with new program changes for source protection;
  - Mapping of prescribed instruments that are subject to policies;
  - Screening to review incoming applications for prescribed instruments where they are a significant drinking water threat;
  - Tracking prescribed instruments that are subject to source protection plan policies;
- Most program areas have additional processes in place related to:
  - Tools to support stakeholders during applications.
  - Protocol in place to review previously issued prescribed instruments

Prescribed Instrument Integration/Conformity (Future instruments)

2019 Total Count of Applications Screened for Source Protection across applicable ministry program areas	Cumulative Total of Applications Screened for Source Protection across applicable ministry program areas	2019 Count of Decisions Made (i.e., Manage/Prohibit) across applicable ministry program areas	Cumulative Count of Decisions Made (i.e., Manage/Prohibit) across applicable ministry program areas
264	1069	45	260

2019 Annual Reporting Highlights: Cumulative Percent Progress Made on previously issued Prescribed Instruments (PI) by Provincial Program Area



Performance Measure:
99% of previously issued PIs reviewed and/or on which actions taken for source protection.
Target: 100%

Ontario

Prescribed Instrument Inspections

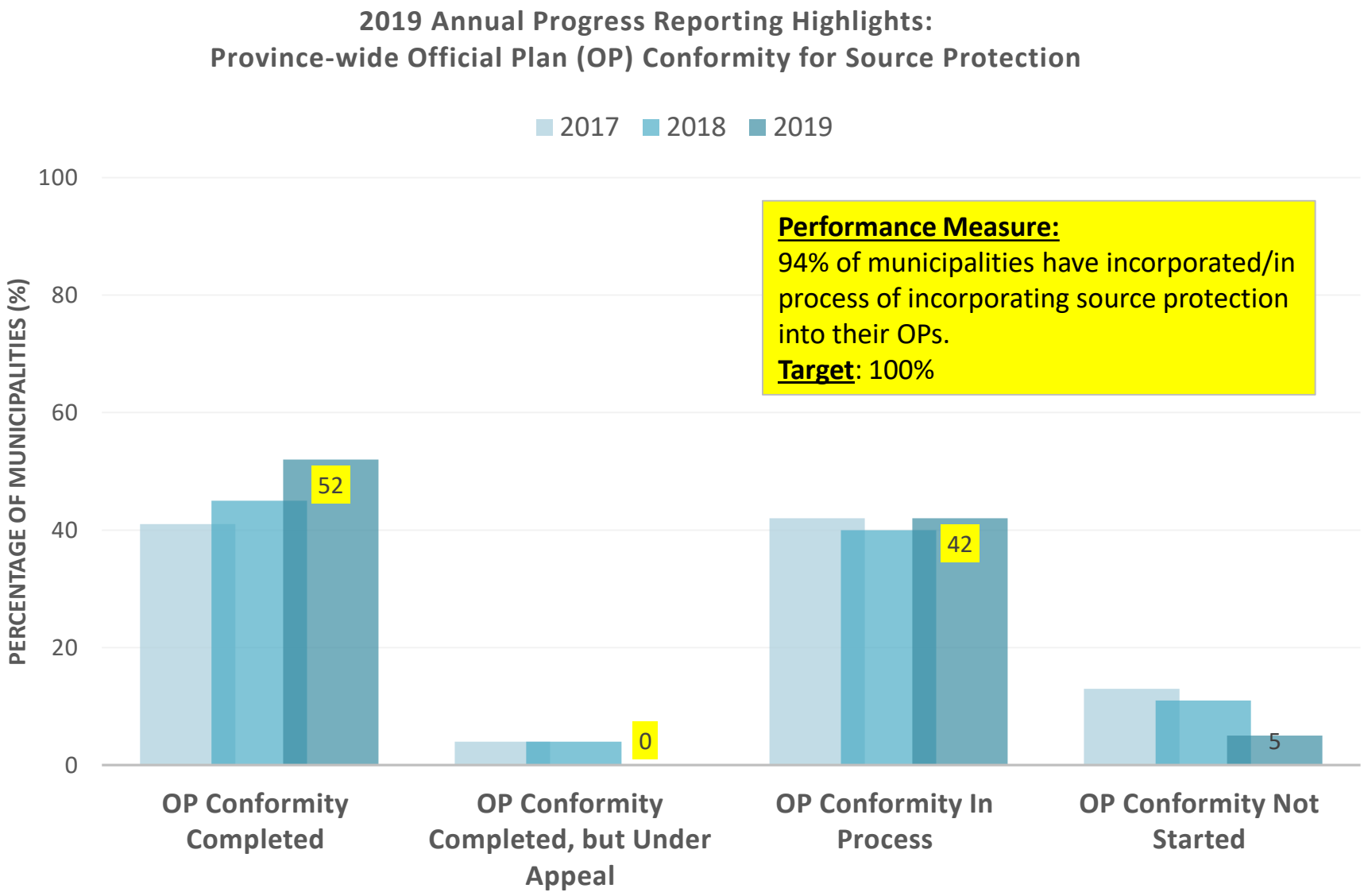
Ministry Program Area	Inspections	Orders	Voluntary Abatement Measures	Referral to Internal Investigations	Primary/ Secondary Screening of PI Application	Provincial Offense Notice	Self-reporting
MECP – WDS	Yes	Yes	Yes	Yes	Yes	Yes	No
MECP – Sewage Works	Yes	Yes	Yes	Yes	Yes	Yes	No
MECP – Pesticides	Yes	Yes	Yes	Yes	Yes	No	Yes
MECP – Water Taking	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MECP – Hauled Sewage/ Biosolids	Yes	Yes	Yes	Yes	No	Yes	No
MECP – MRDWS	Yes	Yes	Yes	Yes	Yes	No	No

Prescribed Instrument Inspections

Ministry Program Area	Inspections	Orders	Voluntary Abatement Measures	Referral to Internal Investigations	Primary/ Secondary Screening of PI Application	Provincial Offense Notice	Self-reporting
MECP – NMA Inspections	Yes	Yes	Yes	Yes	No	No	No
MNRF – Aggregates (Fuel Storage)	Yes	No	No	No	Yes	No	Yes
MTO – Road Construction (Fuel Storage)	Yes	Yes	No	No	Yes	No	Yes

Section 4: Municipal & Source Protection Authority Highlights

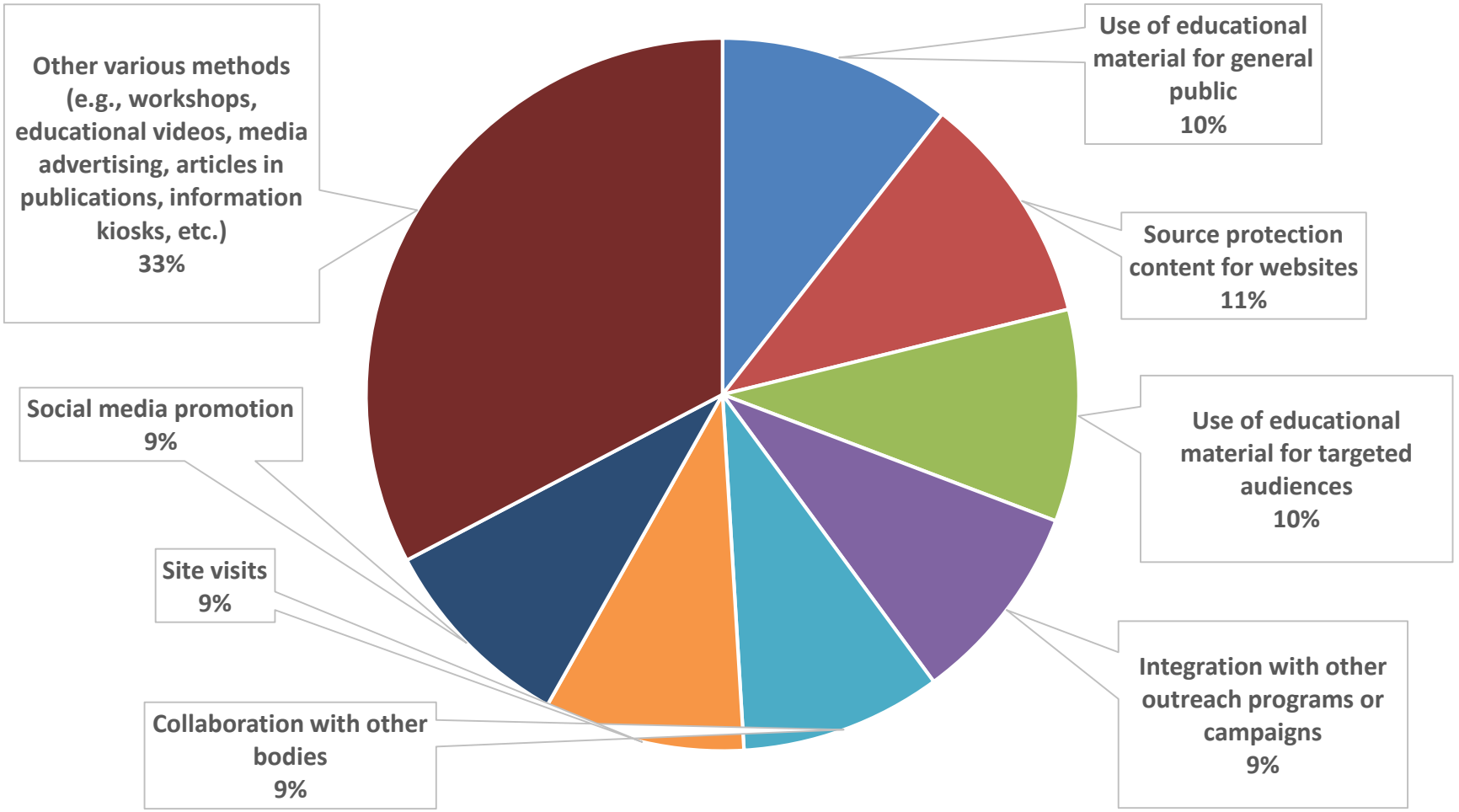
Land Use Planning



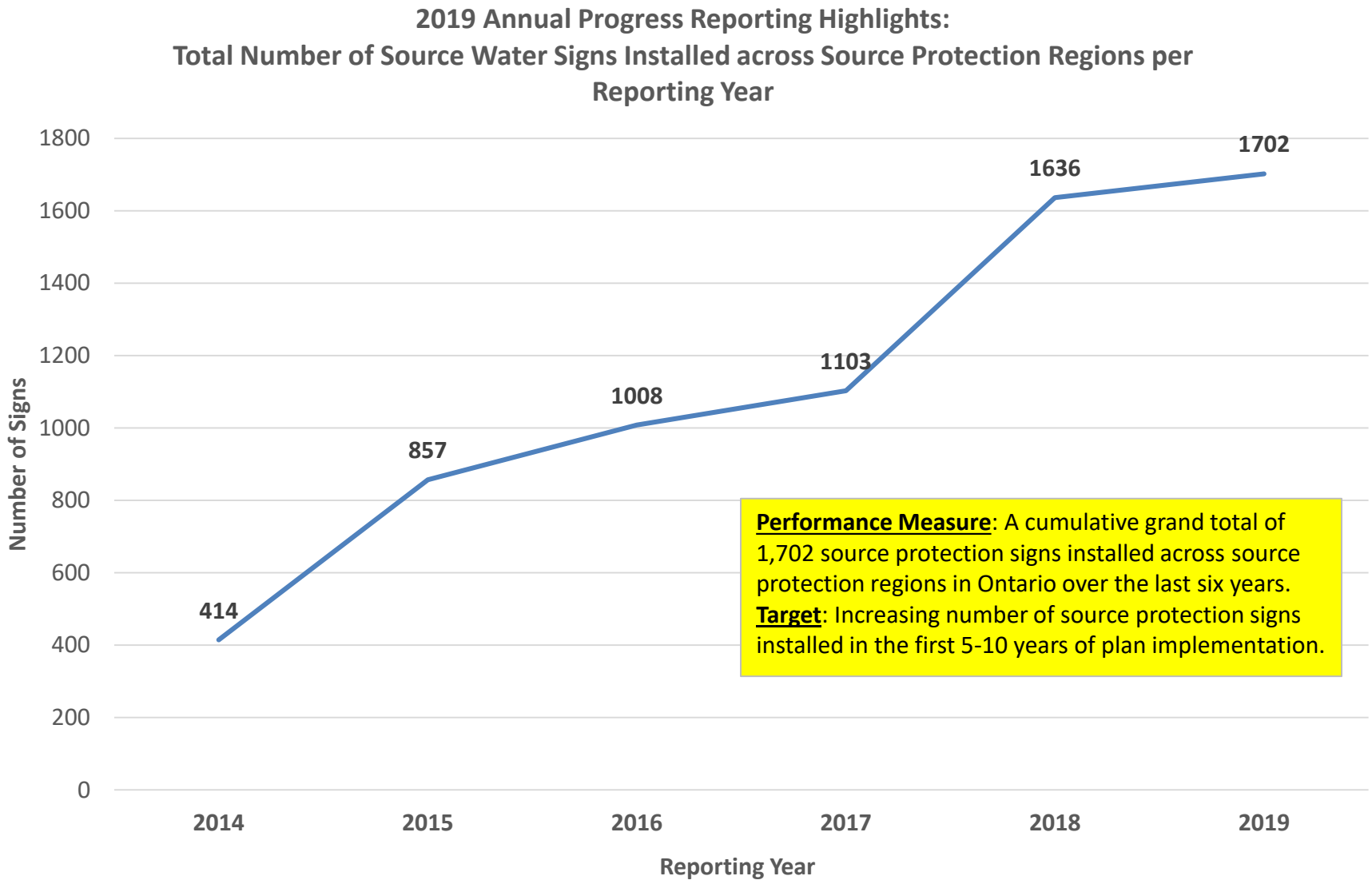
Ontario

Education & Outreach

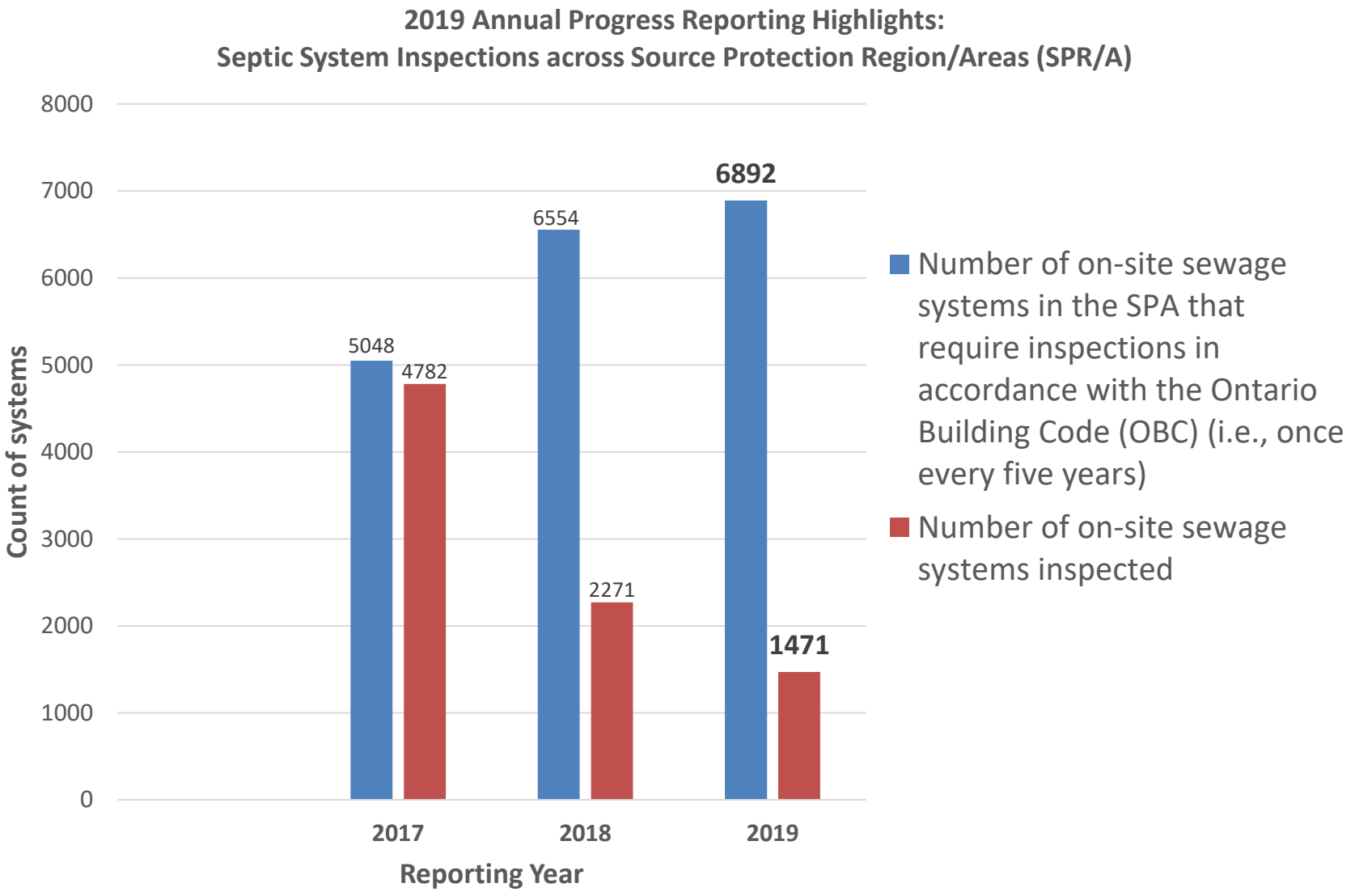
2019 Annual Progress Reporting Highlights:
Methods used to implement Education & Outreach Policies



Signage


2019 Annual Progress Reporting Highlights:
Total Number of Source Water Signs Installed across Source Protection Regions per Reporting Year
Number of Signs
1800
1600
1400
1200
1000
800
600
400
200
0
414
857
1008
1103
1636
1702
2014
2015
2016
2017
2018
2019
Reporting Year
Performance Measure: A cumulative grand total of 1,702 source protection signs installed across source protection regions in Ontario over the last six years.
Target: Increasing number of source protection signs installed in the first 5-10 years of plan implementation.

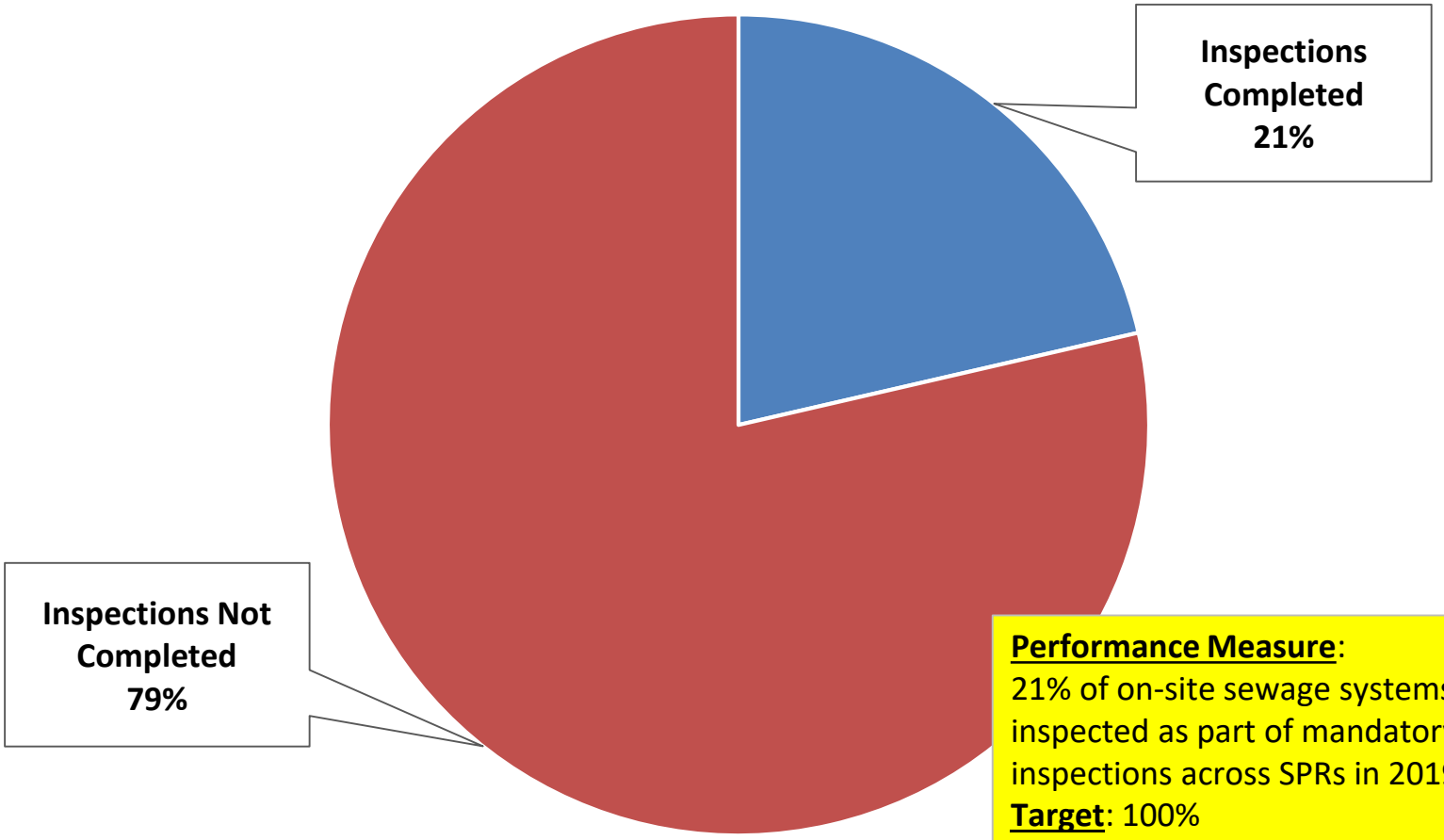
Septic Systems



Ontario

Septic Systems

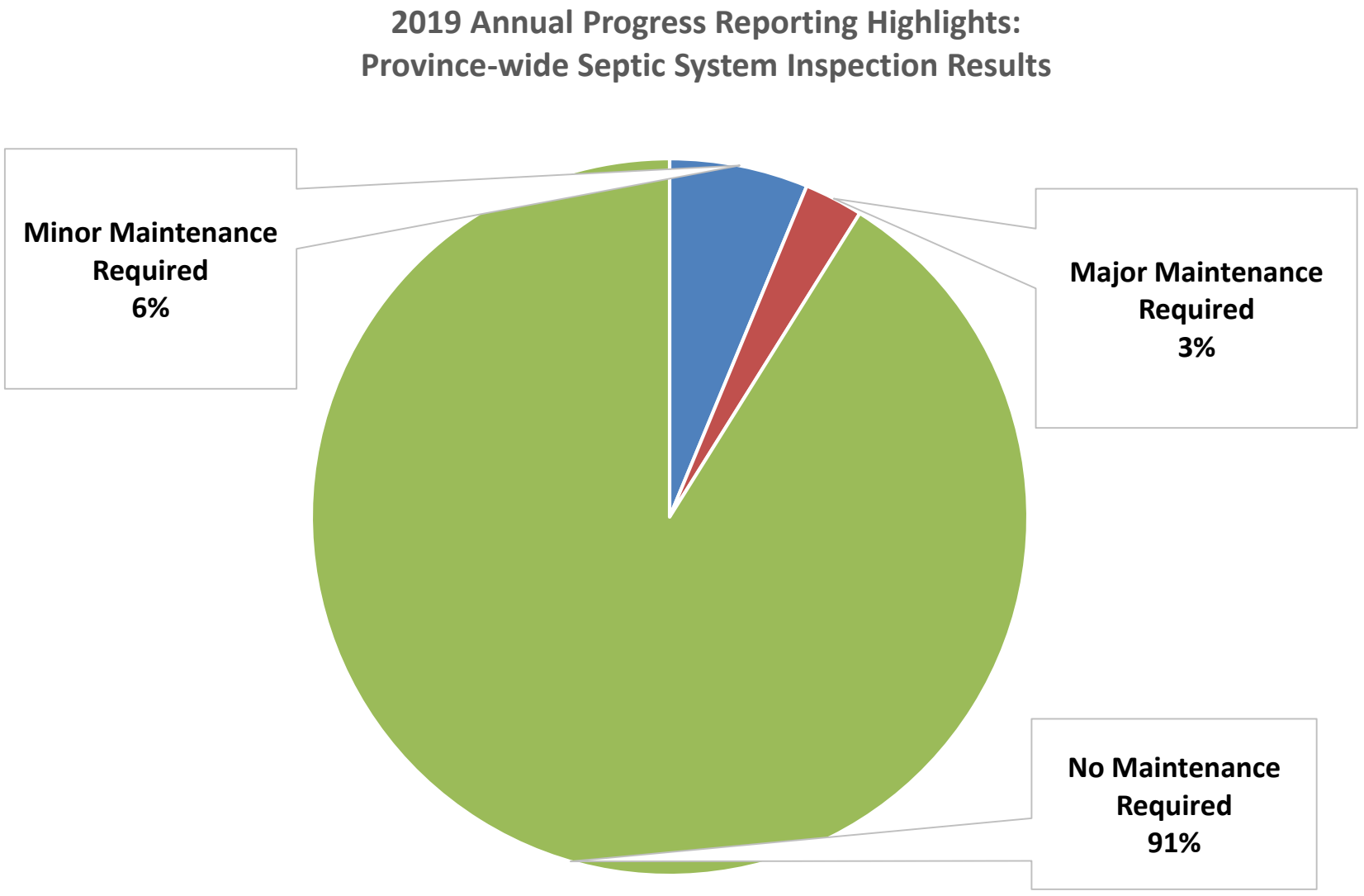
2019 Annual Progress Reporting Highlights:
Province-wide Septic System Inspections Completed



Performance Measure:
21% of on-site sewage systems inspected as part of mandatory inspections across SPRs in 2019
Target: 100%

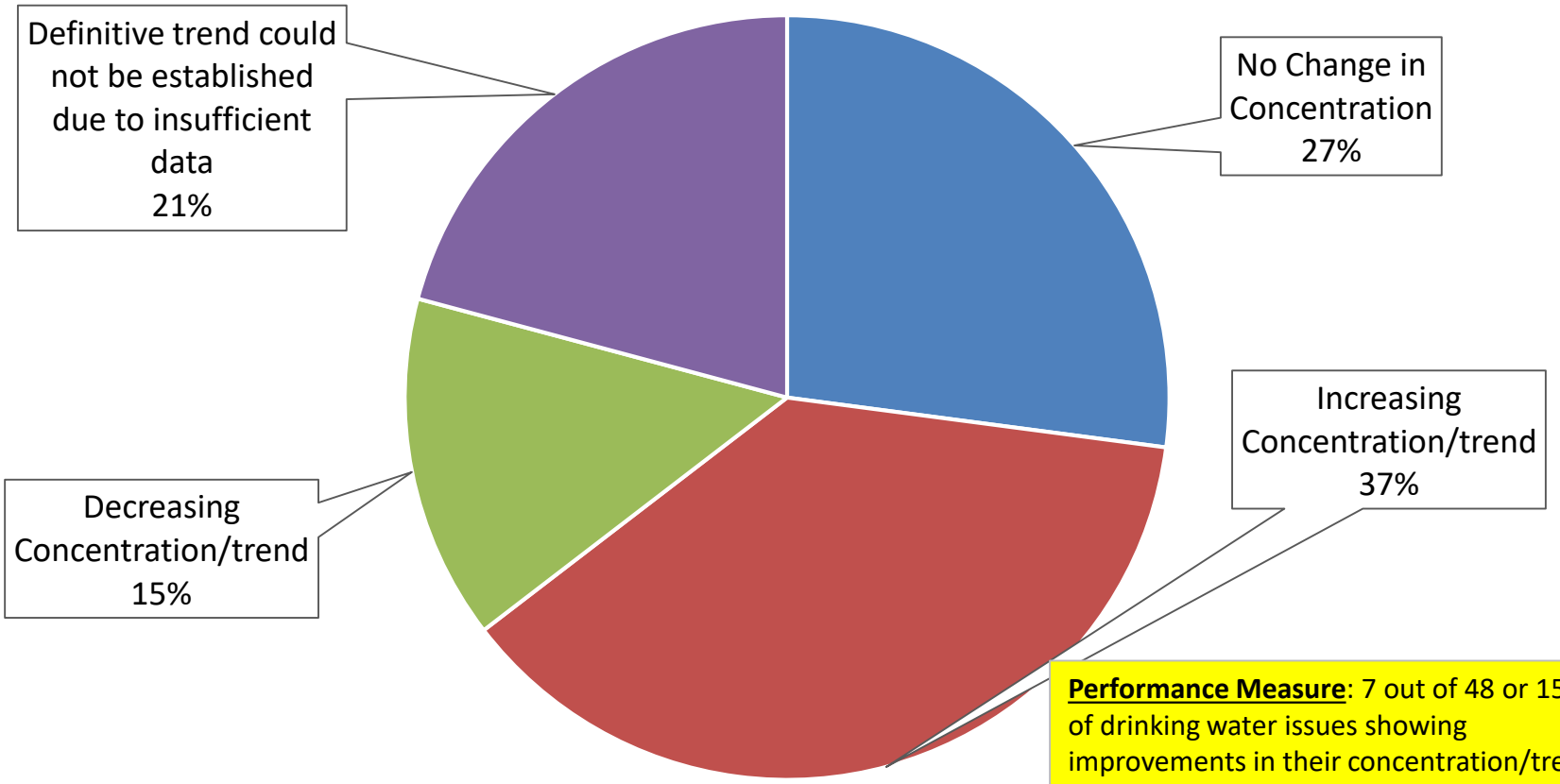
Ontario

Septic Systems



Environmental Monitoring of Drinking Water Issues

2019 Annual Progress Reporting Highlights:
Environmental Monitoring Results of Delineated Drinking Water Issues (n = 48) across Source Protection Regions in Ontario



Performance Measure: 7 out of 48 or 15% of drinking water issues showing improvements in their concentration/trend in 2019.
Target: Improvements over time.

Transport Pathways

- 11 notices about transport pathways (meaning a condition of land resulting from human activity) were received in 2019 by six (6) different source protection areas.
- Where transport pathway notices were received, various actions were taken by the source protection region/area in response to receiving these notices, such as:
    - Provided information to municipalities about changes in vulnerability.
    - Provided notice to Source Protection Committee for information.
    - Situation continues to be monitored.

Source Protection Positive Outcomes

- 82% of source protection authorities indicated that plan implementation is a contributing factor to achieving positive drinking water outcomes.
- Examples of positive drinking water outcomes that were shared by some SPAs include:
  - **CTC**: Long-Term Protection of Aquifer Recharge through the implementation of Low Impact Development.
  - **Halton-Hamilton**: Increased awareness about potential issues that can impact water quantity and quality in the context of capital projects and development applications.
  - **Lake Erie – Catfish Creek**: The Risk Management Official/Risk Management Inspector have noted a change in property owner behaviour during site inspections. People appear interested in protecting source water and are willing to change out chemicals for more environmentally-sensitive options.
  - **North Bay-Mattawa**: Awareness of factors that could contribute to blue green algae blooms.
  - **Quinte**: Raw water samples of Organic Nitrogen show results are improving.
  - **SGSNBP**: Results of the monitoring of nitrate have shown that levels have decreased and continue to fall below the threshold for an issues contributing area.

Achievement of Source Protection Plan Objectives

Performance Measure: 91% of Source Protection Committees (SPC) are progressing well / on target towards achieving objectives of the plan
Target: Increasing percentage over time

Progressing Well / On Target

ABMV, CTC, Essex, Halton-Hamilton, Lake Erie – Catfish Creek, Lake Erie – Kettle Creek, Lake Erie – Grand River, Lakehead, Mattagami, Mississippi-Rideau, Niagara Peninsula, North Bay-Mattawa, Quinte, Raisin-South Nation, Sudbury, SSM, Saugeen-Grey Sauble-Northern Bruce Peninsula, Thames-Sydenham and Trent Conservation Coalition.

Satisfactory

Cataraqui, South Georgian Bay Lake Simcoe

Thames – Sydenham and Region Drinking Water Source Protection
Source Protection Committee Discussion Paper

Report to	Chair and members Thames – Sydenham and Region Source Protection Committee	**Agenda #**	2020.10.30 7d
Cc	SP Management Committee	**Date**	October 30, 2020
Prepared By	Jenna Allain, Source Protection Coordinator		
Re:	Proposed Updates to Directors' Technical Rule Changes for Source Protection		

Purpose

To provide details to the Source Protection Committee (SPC) on the proposed updates to the Directors' Technical Rules as posted on the Environmental Registry of Ontario. (https://ero.ontario.ca/notice/019-2219)

Background

The Source Protection Programs Branch (SPPB) initiated a project to review the source protection framework and propose amendments to the Director's Technical Rules (Rules) in 2014/15 after the first round of planning. The purpose of this project is to address challenges identified during the implementation of source protection plans, recommendations made in the 2014 Auditor General Report, and lessons learned during the development of the source protection plans and assessment reports. This project was divided into two phases, with the first phase of amendments finalized in March 2017.

On August 11, 2020, the Ministry of the Environment, Conservation and Parks (MECP) released proposed updates to the Director's Technical Rules on the Environmental Registry (ERO # 019- 2219). The proposed changes are aimed to help ensure that the quality of Ontario's drinking water continues to be protected and supported by current science. The public comment period for the proposed changes closes on November 9th, 2020.

The proposed changes and supporting materials can be found on the Environmental Registry of Ontario (https://ero.ontario.ca/notice/019-2219) . The proposed amendments to the Director's Technical Rules include:

- Surface water vulnerability – delineation of Intake Protection Zone 1 (IPZ-1) and scoring of IPZ-2
- Impervious surface area – calculation of percentage of impervious area
- Drinking water issues – delineation of Issue Contributing Areas
- Conditions – identification of a condition site
- Alternative approach request – administrative requirements to seek Director's approval
- Local activity / threat – requirements to designate a local activity as a risk
- Climate change assessment – specify what needs to be included in an assessment report if climate impact assessment (CIA) is conducted
- Drinking water threats – updates to the circumstances, e.g. waste, sewage, road salt, storage of snow, DNAPLs

Discussion

Thames-Sydenham and Region staff have been reviewing the proposed changes in consultation with other source protection regions and MECP staff. More details about the proposed changes along with staff expectations about the local implications of the changes is provided in the attached summary table. We have also included some draft comments and questions for submission to the MECP within the summary table. A track changes version of the proposed Amendments to the Director's Technical Rules is available on eScribe. Thames-Sydenham and Region Source Protection Committee members are encouraged to review the proposed changed to the Director's Technical Rules and submit any comments to J. Allain by Friday, November 6th for consideration. The finalized comments will be and submitted to the MECP on November 9th, 2020.

Recommendation

That Report 2020.10.30 7(d) is received for information AND THAT the Thames-Sydenham and Region Source Protection Committee direct TSR staff to finalize and submit the comments on the proposed changes to the Director's Technical Rules, on behalf of the Thames-Sydenham and Region Source Protection Committee.

Proposed Amendments to the Director's Technical Rules (DTR) under the Clean Water Act

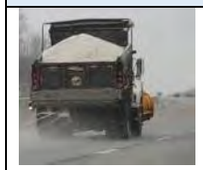
September 2020

IPZ= Intake Protection Zone; **WHPA**= Wellhead Protection Area; **HVA**= Highly Vulnerable Aquifer;
TDWT: Tables of Drinking Water Threats; **SDWT** = Significant risk of Drinking Water Threat

Information from MECP				**Local Implications/Comments**
Topic	**Goal of Change**	**Current Approach**	**Proposed Amendment**	**Thames-Sydenham and Region**
Alternate methods or approaches **Rules 15.1 and 15.2**	Reduce administrative burden. Remove requirement to receive Director approval.	Director's approval is required in situations where the local authority wishes to depart from the prescribed approaches in the rules.	Involve Ministry staff early in the development/ selection stage of the work to provide advice. All approaches will be reviewed by the Director when the assessment report is submitted to the ministry.	• No impact to TSR.
Climate Change Risk Assessment (water quality) **Rule 15.3**	New rule; Consistent approach	Currently, the Rules do not stipulate the information needed to conduct a climate change risk assessment for water quality.	Specify the information required (data source, approach, findings, impacts) for climate change risk assessment to be incorporated into the assessment report. *MECP has confirmed that this is optional; and that the SPA may use staff hours to have discussions with municipalities to identify if an assessment is needed.*	• The cost is to be borne by a municipality if they want to do the assessment. • No impact to TSR.
Cumulative impact of activities: **Issue Contributing Areas** (ICAs) **Rule 16 (9) (b)**	Improve scientific approach **Sep. 2020 SPC Chairs meeting slide deck:** Benefit: Defensible science behind delineating the cumulative areas to ensure activities within these areas that may impact drinking water	ICAs are not vulnerable areas and are mapped within vulnerable areas -IPZs, WHPAs, HVAs. Currently, the rules do not describe how to map areas within protection zones where activities are cumulatively impacting the	Introduce ICAs as stand alone vulnerable areas, named IPZ-ICA or WHPA-ICA. Focus on geographical areas where activities are cumulatively impacting drinking water **and this is supported by technical rationale**	• We have one ICA in Oxford County (Woodstock DWS). • Impacts TSR only if identifying a new Issue - then need to apply new rules • Further clarification is needed on "defensible science behind delineating the cumulative areas" – what kinds of technical studies are required to

Information from MECP				Local Implications/Comments
Topic	**Goal of Change**	**Current Approach**	**Proposed Amendment**	**Thames-Sydenham and Region**
	quality are appropriately captured.	quality of drinking water.	**and science** *MECP has verbally clarified that there is no need to re-assess current ICAs - unless you want to.*	prove cumulative impacts? Cause and effect? Loadings?
Total **impervious surface area** map **Rule 16 (11)**			The proposed amendment allows the calculation of percentages of imperviousness in a vulnerable area as a whole, or in a sub-area within the vulnerable area, where the road salt is applied. From the proposed TR page 84.	• SPP maps need to be updated. Who is doing this work? Makes sense to have the SPA do it for consistency (ML and LD maps too).
Intake **re-classification** **Rule 55.1**			The SPC can change the classification of the intake and must provide rationale and evidence to support the re-classification.	• No impacts to TSR.
Surface Water Vulnerability: **IPZ-1** **Rule 62.1**	Local flexibility **Sep. 2020 SPC Chairs meeting slide deck:** Provide better protection by: refinement of IPZ-1 to capture surface water features, e.g. ditches	Setbacks are mapped only around lakes, streams, and rivers.	Enable setbacks, within the prescribed radius, to capture transport pathways.	• If applied with current V scores, some of the areas within the IPZ-2 (i.e. transport pathways adjacent to IPZ-1) might take on the slightly higher IPZ-1 score, but still not result in SDWTs. • TSR is exploring the decision criteria for source and area V factors. If V scores increase, could have new SDWT's.
IPZ-ICA **Rule 78.1**	Delineation of an IPZ-ICA			• See comments on rule 16 (9)(b)
Surface Water Vulnerability: **IPZ-2** **Rule 87**	Local flexibility **Sep. 2020 SPC Chairs meeting slide deck:** Provide better protection by: changes to zone	Single vulnerability score is allowed for every IPZ-2.	Enable multiple scores to represent variations in land and hydrological conditions.	• If applied to current V scores, we get sub-scores that are science-based. Does not result in SDWTs, but need to re-do ISA, ML, LD maps for each sub-area.

Information from MECP				Local Implications/Comments
Topic	**Goal of Change**	**Current Approach**	**Proposed Amendment**	**Thames-Sydenham and Region**
	vulnerability scores of IPZ-2 to reflect existing ground conditions			• TSR is exploring the decision criteria for source and area V factors. If V scores increase, could have new SDWT.
Local activities to be designated as **local threats** **Rule 119**	Avoid duplication of provincial efforts	Activities beyond those prescribed under the regulations can be added to a local plan as a risk, with the Director's approval. Current rules are not specific about the type of activities that can be added as local threats.	Limit the addition of local drinking water threats to only those activities that are **not** currently regulated by the provincial or federal government.	• The proposed change assumes that provincial and federal instruments address source water protection.
Conditions **Rule 141**		Strikethrough and underlined text show the proposed change. Identifying Conditions: " (1) if there is evidence that the condition is causing ~~off site contamination~~ <u>the contamination is migrating towards the well or intake and the contamination</u> has the potential to deteriorate the quality of water of the aquifer drinking water source or the surface water drinking water source, the hazard rating is 10 *Clarification from MECP to Ausable Bayfield-Maitland Valley - Sept. 21, 2020: This is an editorial change to clarify the meaning of 'off-site contamination' to reflect how it is technically applied. The risk assessment, approach, identification of conditions is not actually impacted/changed by this proposed amendment.*		• "Offsite" vs. "migrating": Who is going to check that the contaminant is migrating to the well or intake? Or is it based on the watershed science and the RSC? MECP should share monitoring info (wells, surface water, soils, etc.) to help evaluate "migration". *See MECP clarification*
Threat Circumstances – Tables of Drinking Water Threats (TDWT); page 83-137 of the MECP '2020 Proposed Amendments to Technical Rules: Assessment Report'				
1. Road salt Application (page 84)	Technical; Improve scientific approach to better identify areas where salt application and	Percentages of impervious surface areas in 1x1km grid to make this activity a significant risk are **80% in**	More stringent thresholds: Percentages to identify significant risk will decrease to **30% for**	• This will require a significant amount of work to re-map the impervious surface areas (ISA) in the Thames-Sydenham and Region (TSR). **It will**

Information from MECP				Local Implications/Comments
Topic	**Goal of Change**	**Current Approach**	**Proposed Amendment**	**Thames-Sydenham and Region**
	storage of road salt may impair source water	**WHPAs scored 10** and 8% in IPZs scored 10 (no significant threats in ABMV at these thresholds)	**WHPAs scored 10**, 6% or greater for IPZ scored 10, and 8% for IPZ scored 9 or 10; Can now calculate % impervious in a vulnerable area as a whole, or in a sub-area within the vulnerable area, where the road salt is applied.	**most likely create new salt application threats and will require the SPC to develop new Source Protection Plan policies.** Currently the TSR SPP does not contain any policies to address salt application threats. • SPR to update ISA map, will province fund this work?
2. Road salt Storage and Handling (page 85) 	Same as above	Depending upon the exposure of stored road salt to precipitation, the quantity of storage of road salt that can be significant is 500 tonnes and greater in IPZ scored 10, and **greater than 5,000 tonnes in WHPA scored 10.** (no significant threats in ABMV at these thresholds)	More stringent thresholds for 3 categories of road salt storage. The thresholds have been lowered. Eg. for WHPA score = 10, SDWT where: 1. The road salt is exposed to precipitation or runoff and the quantity stored is **more than 20 kg** (uncovered) 2. Road salt stored in bin, box, shed; **more than 100 kg.** 3. Salt in impervious facility, not exposed to elements, is NOT SDWT, regardless of volume	• **Local salt storage in IPZ's and WHPA's will need to be reassessed but I think this is likely to create new significant threats in the TSR.** The current TSR SPP policies prohibit existing and future salt storage where it is a significant threat. The policy approach will need to be reviewed by the SPC.
3. Wastewater Collection Facilities (page 87)	Align with provincial regulations; Increase clarity	Rules do not clearly identify the different types of storm water and wastewater works that may contribute contaminants to drinking water sources, e.g.: sanitary sewer overflows, wet wells in pumping	Recognize distinct risks of: sanitary sewers; pumping Stations; Holding tanks; Overflow and discharge	• Impacts TSR. • Revise policies for new terminology and circumstances. • It is unclear whether this will create any changes to the number of drinking water threats in the TSR. However, these activities are primarily
4. Storm Water			Differentiate between the impact of SWMFs on surface water &	

Information from MECP				Local Implications/Comments
Topic	**Goal of Change**	**Current Approach**	**Proposed Amendment**	**Thames-Sydenham and Region**
Management Facilities		stations, wastewater effluents, stormwater ponds and infiltration facilities.	groundwater sources; ie - outfall discharges into surface water ; - Infiltration facilities to groundwater	addressed through prescribed instrument policies and it is assumed that the appropriate provincial ministries will address any changes that may arise as a result of these circumstance changes. • Qs for MECP: are all of these changes covered under PIs?
5. Wastewater Treatment Facilities	Align with provincial regulations; Increase clarity	Components of WWTFs are not explicitly referenced	Recognize risks of components: - Overflows and discharges - Lagoons - Process tanks / holding tanks	As above
6. Industrial Effluent Discharges (page 103)		Only identifies risk of IEDs to surface water.	The discharge to land will be added to recognize risks to groundwater sources as well. SDWTs in IPZs/WHPA-E scored 8 to 10 due chemical/ pathogen parameters.	• Impacts TSR. • Revise policies for the new circumstance of discharge to land. • TBD: impacts on numbers of SDWTs.
7. Storage of Snow (page 105) 	Align with provincial regulations and address implementation gap	(1) The snow is stored at or above (below) grade. (2) The area upon which snow is stored is at least 0.01, but not more than 0.5 (more than 0.5, but not more than 1; more than 1, but not more than 5; more than 5) hectares	- Include Snow covered under Ontario Water Resources Act (OWRA). Significant risk in IPZs/WHPA-E scored 8 to 10 and WHPAs scored 10. Volumes for DWSP decreased: -The area upon which snow is stored is **not more than 200 m2.** (WHPA-10)	• Impacts TSR. • Revise policies for changed circumstances. • **Local snow storage in IPZ's and WHPA's will need to be reassessed but I think this is likely to create new significant threats in the TSR.** <u>The current policy approach is a Risk Management Plan for existing and future threats, which may need to be reassessed.</u>

Information from MECP				Local Implications/Comments
Topic	**Goal of Change**	**Current Approach**	**Proposed Amendment**	**Thames-Sydenham and Region**
8. Handling and Storage of DNAPLs (page 107)	Address implementation challenges and align with provincial regulations	Circumstances define chemicals that are DNAPLs; no volume defined	Use list of industry type instead of list of chemicals; same WHPA A to C: Circumstance 1 is the list of activities adopted from O. Reg. 153 (brownfields) where DNAPL is likely stored/handled. Circumstance 2 defines the type of storage (above, below grade). *Verbal clarification from MECP: use of the list is optional.*	• Impacts TSR. • Revise policies for changed circumstances. • **These changes may require some review of activities and existing RMP's but I don't expect that this will significantly change the number of existing threats in the TSR.** <u>The existing policy approaches for DNAPLs in the TSR SPP can likely stay the same.</u>
9. Storage and Handling of NASM	Align with provincial regulations	Circumstances associated with Non-Agricultural Source Material (NASM) categories that represent risks to water quality were not explicitly mentioned. (ie too broad)	Explicitly list the three NASM categories* that pose risk; better aligns with the NMA. *1. Material from non-farm herbivorous animals); 2 Organic waste matter that contains no meat or fish; 3. pulp and paper biosolids, paunch manure and sewage biosolids	TBD
10. Application of NASM (page 112)				TBD
11. Handling & Storage of Fuel (page 116) 		Risks of handling and storage are separate Significant threat in WHPA 10 for quantities greater than 2,500 litre aboveground and 250 L below grade (eg basement oil tank)	Risks of fuel handling and storage are combined. Threshold drops: SDWT in WHPA 10 for storage of fuel both below and **above ground** for quantities greater than **250 litre.** (formerly 2,500 L aboveground)	• Impacts TSR. • Revise policies for changed circumstances. • **Although there are very few home heating oil tanks in the TSR, this change will likely add some new significant threats from agricultural and commercial fuel tanks that are between 250 and 2500 L.** <u>Some threats reassessment will be required.</u> Current TSR SPP policy requires RMP's for significant fuel threats.

Information from MECP				Local Implications/Comments
Topic	**Goal of Change**	**Current Approach**	**Proposed Amendment**	**Thames-Sydenham and Region**
12. Handling & Storage of Commercial Fertilizer (page 119)	Improved scientific approach	Risk is based on type of land use (eg retail; excludes manufacturing, processing) and mass stored.	Risk based on mass of fertilizer stored; not land use. Circumstances that define storage of fertilizer to be assessed based on that storage on the same property. Significant risk would be identified in IPZs/WHPAs scored 10; due to the contribution of chemical parameters.	• Impacts TSR. • Revise policies for changed circumstances. • Threats need to be re-assessed but <u>proposed changes are unlikely to impact the number of threats in the TSR.</u>
13. Waste (page 121) Several categories	Align with provincial regulations and address implementation challenge	*Currently the rules do not align with the definitions of Wastes under the Environmental Protection Act (EPA).*	Revise the Waste sub-threat categories to align with the EPA, e.g.: - Storage of proceeded organic waste (POW) - Storage of hauled sewage - Hazardous waste and liquid industrial waste sites - Municipal waste sites - Storage of subject waste at waste generation facilities.	Q for MECP: We need to know which of the proposed sub-threats corresponds to which of the current sub-threats. With these new sub-threats, will we be missing any of the sub-threats we currently have and are managing/ prohibiting? New?
14. Waste Generating Facilities (page 123)	Align with provincial regulations and address implementation challenge	Captured small amounts of waste exempt from waste registration: Waste Disposal Site - Storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste.	Replace with 2 new sub-categories: (1) sites that require generator registration but exclude those with ECA; (2) sites that are excluded from generator Registration (SDWT below grade, WHPA-10)	Similar to above qs.

General Comments / Questions:

- Will there be a cheat sheet that shows previous circumstances vs new circumstances? This will help especially with the property owners that previously didn't need an RMP and now they do.
- Which amendments are mandatory, and which are enabling? Which amendments will be funded under the DWSP program?
- Assuming that the change to threat circumstances are mandatory, will these new circumstances only apply to new vulnerable areas associated with new or changed drinking water systems, or would they be applied to Existing threats as well? If the latter, if these new circumstances identify a new SDWT on a property which already has a RMP in place, does the Ministry expect that RMP to be re-negotiated?

Thames – Sydenham and Region Drinking Water Source Protection
Source Protection Committee Discussion Paper

Report to	Chair and members Thames – Sydenham and Region Source Protection Committee	**Agenda #**	2020.10.30 7e
Cc	SP Management Committee	**Date**	October 30th, 2020
Prepared By	Jenna Allain, Source Protection Coordinator		
Re:	S.36 SPP and AR Amendments		

Purpose

To present the Source Protection Committee (SPC) with proposed amendments to the Thames-Sydenham and Region Assessment Reports (ARs) and Source Protection Plan (SPP) as part of the order from the Minister of the Environment, Conservation and Parks under s.36 of the *Clean Water Act*.

Background

At the March 13th, 2020 meeting of the Thames-Sydenham and Region Source Protection Committee, the Committee reviewed some of the proposed amendments to be included in the Section 36 update to the SPP and AR's. This report will provide a summary of the remaining proposed amendments to be included in the Section 36 update and seek SPC approval to move forward with early engagement on the proposed amendments.

Discussion

Details of the proposed amendments are summarized below:

Wallaceburg Nitrate Issue

Proposed Amendment: Update the SCR Assessment Report to indicate that nitrates are no longer an issue for the Wallaceburg drinking water system and remove Policy 4.13 from the SPP.

Rationale: At the time that the Assessment Reports were completed, nitrates were identified as an issue for the Wallaceburg intake in the Assessment Reports.

However, for a variety of reasons a longer period of monitoring was recommended to determine if nitrates should continue to be considered an issue for Wallaceburg. No Issue Contributing Area was therefore delineated, and Policy 4.13 was included in the Thames-Sydenham and Region Source Protection Plan recommending continued and improved monitoring to allow future assessment of the nitrate issue and delineation of the ICA (if warranted).

The results of the continued monitoring were inconclusive and did not yield enough information to confirm the issue and delineate an ICA. Additionally, water treatment plant staff indicated to the TSR that they no longer had any significant concerns regarding nitrate concentrations at the intake. TSR staff have therefore identified the nitrate issue for Wallaceburg and the corresponding Source Protection Plan policy for removal from the Assessment Report and Source Protection Plan

Shakespeare and Ridgetown WHPA Delineations

Proposed Amendment: Update to the Shakespeare and Ridgetown DWS information and mapping to reflect changes to number of wells and well locations.

Rationale: A new well (Well 2) has been drilled as a back-up supply for the Shakespeare well system in the Township of Perth East. Well 2 is in close proximity to Well 1, the capacity of the system is not changing, and the wells are not planned to be operated at the same time. Technical work is therefore not required to re-delineate the Wellhead Protection Area (WHPA) for the system. Instead the WHPA-A (the 100 metre zone) has been adjusted to include the new Well 2. Additional properties that will fall into the adjusted WHPA-A are all residential, or planned residential, which are fully serviced. No new significant drinking water threats are identified as a result of the WHPA adjustment. No changes to SPP policies are required

Three of the 7 production wells at the Ridgetown Drinking Water System have been taken out of service and 4 new wells have been installed. The new wells were installed in close proximity to the existing wells, and pumping rates have not increased. Like Shakespeare, technical work is not required to re-delineate the WHPA and the WHPA-A zones have been adjusted to reflect the changes in wells. This change does not impact any new properties and no new significant drinking water threats are identified. No changes to SPP policies are required.

Livestock Grazing and Pasturing in the Town of St. Marys

Proposed Amendment: Change the Section 58 Risk Management Plan policy for Livestock Grazing and Pasturing to a Section 57 Prohibition policy for the Town of St. Marys only. Policy would apply in WHPA-A and WHPA-B where the vulnerability score is 10.

Rationale: Section 58(15) of the *Clean Water Act* sets out the following criteria for agreeing to or establishing a risk management plan:

(15) Subject to subsection (16), a risk management official shall agree to or establish a risk management plan for an activity at a location under this section if, and only if, all applicable fees have been paid and,

(a) the risk management official,

(i) is satisfied that the risk management plan complies with the requirements, if any, of the regulations, rules and source protection plan, and

(ii) ***is satisfied that the activity will not be a significant drinking water threat if it is engaged in at that location in accordance with the risk management plan****;*

The highlighted provision above allows Risk Management Officials to use their judgement to determine whether a threat activity can be successfully managed to reduce risk.

Based on a number of factors affecting the vulnerability of the St. Marys wellhead protection area, including: the presence of fractured bedrock; the presence of exposed bedrock in, and adjacent to Trout Creek; and the historical documented evidence of microbial contamination for the municipal groundwater supply wells within this WHPA, it was concluded by the local Risk Management Officials that the threat of livestock grazing and pasturing cannot be reasonably managed through a risk management plan in the St. Marys WHPA. Farmers have been asked to fence cattle out of the most vulnerable parts of the WHPA (WHPA-A and B with a vulnerability score of 10) as part of the risk management plan developed for their property. This decision affects several farms in St. Marys and neighbouring farms in the Township of Perth South which fall within the St. Marys WHPA. Given this

decision by local Risk Management Officials, the proposed amendment is to change the policy from risk management to prohibition to support the decision made by the local risk management officials.

Risk Management Plan Policy Timeline for Existing Threats

Proposed Amendment: To add a timeframe of eight years to all Section 58 Risk Management Plan policies in the Thames-Sydenham and Region SPP with the exception of those policies that apply in Oxford County. This would require risk management plans to be established for all existing significant threats identified at the time of the initial SPP approval by December 31st, 2023.

Rationale: The Section 58 Risk Management Plan (RMP) policies of the Thames-Sydenham SPP do not have specific timelines associated with their implementation for existing threats. When writing the SPP policies, the Source Protection Committee (SPC) felt that it was important that RMPs be established in a timely manner; but also felt it was important that the RMO have adequate time to establish RMPs for existing activities while negotiating any plans required for new development approvals within accepted approval timeframes. Therefore, the SPC did not specify implementation timing for the establishment of RMPs for existing activities, to provide the RMO with the flexibility to determine local priorities and implementation timing for the establishment of such plans.

Now that almost five years of implementation of the Risk Management Plan policies have passed, annual reporting has shown that the implementation of these policies across the Region has been going well. However, there are some areas within the Region where very limited progress towards establishing Risk Management Plans has been made. The proposed amendment is to include a timeframe of eight years to establish risk management plans for all existing significant threats identified at the time of the initial approval of the SPP. This timeframe would be applied to all risk management plan policies in the Thames-Sydenham and Region except for those that apply to Oxford County.

Recommendation

That the SPC approve the proposed amendments to be submitted to the MECP for early engagement.

QUINTE SOURCE PROTECTION COMMITTEE

Quinte Region Source Protection Area
2061 Old Highway #2, R.R. #2
Belleville, Ontario K8N 4Z2
Phone: 613-968-3434
www.quintesourcewater.ca

April 17, 2020

The Honorable Jeff Yurek
Ministry of the Environment, Conservation and Parks
College Park 5th Floor
777 Bay Street
Toronto On, M7A 2J3

Re: Conservation Authority Review and Mandate

Dear Minister Yurek:

At a meeting of the Quinte Source Protection Committee (SPC) on February 27, 2020, the issue of participating in the electronic survey about Conservation Authorities (CAs) carried out by the Ministry of the Environment, Conservation and Parks (MECP) was raised. The committee members were encouraged to respond to the survey individually. Additionally, the Committee voted to address concerns by means of a letter directed to the Minister of MECP to describe its opposition to changes to the role and core programs of Conservation Authorities.

One of Justice D. R. O' Connor's key recommendations from the Walkerton Inquiry Report was: "The first barrier to the contamination of drinking water involves protecting the sources of drinking water. I recommend that the Province adopt a watershed based planning process, led by the Ministry of the Environment (MOE) and by the conservation authorities (where appropriate), and involving local actors." The ability to proficiently achieve this recommendation was because of the number of programs and services currently managed by conservation authorities that offer protection for the watershed and the drinking water sources within it, beyond that of the *Clean Water Act.*

The Committee recognizes and appreciates that source water protection is one of the four core-mandated responsibilities of Conservation Authorities. The Quinte SPC feels it is imperative to highlight the important and wider role that conservation authorities currently play in the holistic management and protection of watersheds and the natural resources found within them.

The Quinte SPC recognizes the strong support and services provided to the local source water protection program through the Quinte Source Protection Authority (SPA), which is essentially Quinte Conservation Authority (QCA) staff. The background knowledge, management and experience of this staff are essential to source protection in the Quinte region.

Conservation authorities have a proven record of service and innovation, adapting to changes in both program direction and environmental conditions. The watershed programs conservation authorities offer build local natural resource resiliency by protecting and improving various aspects of the natural environment. This provides necessary additional protection of sources of drinking water. It is the Committee's apprehension that reducing or limiting the programs and

services that support the watershed management role of the conservation authority will degrade the protection of the watershed and therefore sources of drinking water, which in turn will put the public at risk. As such, the Committee recommends that MECP include in the mandate the responsibility to enhance and protect the region's water resources, thus providing source protection across the region. This will ensure that present environmental management programs can be performed by conservation authorities on a watershed basis which include, but are not limited to:

- Preparing, monitoring and protecting against flooding;
- Low Water Management Program;
- Storm Water Management technical advisory service, education, and monitoring;
- Conservation education, outreach and communication on both the aquatic and terrestrial environments;
- Natural resource management programs including wetlands and shore lands rehabilitation;
- Participation in municipal, provincial and federal emergency response programs;
- Review and comment on draft municipal official plans and amendments;
- Review and comment on draft municipal zoning by-laws and amendments;
- Review and comment on draft municipal Wet Weather and Wastewater Servicing Master Plans;
- Review and comment on draft plans of subdivisions and consents and severances;
- Review and comment on proposed plans and activities of private pipelines and public energy utilities;
- Tree and ground cover planting, planning, monitoring and maintenance;
- Site remediation;
- Soil erosion, bank stability and shoreline erosion control and monitoring;
- Natural resource and environmental advice for land use and site planning.
- Review of applications for pits and quarries;
- Review of plans for agricultural drainage projects;
- Review of proposed Remedial Action Plans including providing monitoring;
- Watershed-wide monitoring for climate change, water quality and quantity, benthics, etc;
- Water budget studies for the watershed; and
- Review and update watershed characterization reports that inform the source protection planning process.

It is also important to highlight the fact that many natural hazards, including erosion, flooding and drought can endanger source water protection. The Quinte SPC strongly supports the conservation authority role and mandate that goes beyond the limited activities provided in Schedule 2, *More Homes More Choices Act*.

RECOMMENDATIONS:

The Quinte SPC recommends the following:

1. That the Government of Ontario reconsider proposed changes to the *Conservation Authorities Act* and include in the Regulation the essential programs and services to support Act as shown above;

2. That the MECP not rely merely on the responses from the online survey and instead commence a comprehensive review of the role and mandate of conservation authorities through scientific review, comparison with other jurisdictions and with thorough and complete public involvement and consultation consistent with the MECP Statement of Environmental Values. The application of science, up-to-date data and the application of the precautionary principle should continue to guide the activities of conservation authorities; and

3. That steps be taken by MECP to ensure that no significant variations of how watershed management and hazardous lands management are delivered across Ontario until the comprehensive review is completed and implemented and the Government of Ontario identifies a lead organization for watershed management in Ontario to ensure the full delivery of S. 2.2.1 a) of the Provincial Policy Statement.

Adoption of the above recommendations will assure that Ontario citizens and municipalities can safely continue to provide safe and reliable source water, such that the risks to public health, as posed by drinking water, continue to be ever diminished.

Thank you for taking the time to review the Quinte Source Protection Committee's comments and concerns. If you have any questions or would like to get in contact with me, please contact me at the email address provided below.

Sincerely,

Max Christie
Chair, Quinte Source Protection Committee
max@xieenvironmental.com

CC: Quinte Source Protection Committee
Quinte Region Source Protection Authority
Brad McNevin, CAO, Quinte Conservation

DRINKING WATER SOURCE PROTECTION IN ONTARIO 20 YEARS AFTER WALKERTON

By **Carl Seider**, **Mary Lynn MacDonald**, **Donna Clarkson**, **David Ellingwood**, **Amy Dickens**, **Chitra Gowda**, **Melissa Carruther and Kyle Davis**

It has been twenty years since a municipal drinking water well in the Town of Walkerton, Ontario, became contaminated with deadly bacteria. Seven people died due to the contamination, and thousands of residents were left with severe long-term illnesses, including neurological damage, arthritis and kidney failure.

It was a tragic event that quickly came under a public inquiry by the provincial government. The inquiry was led by Justice Dennis O'Conner, and resulted in major legislative and policy changes in Ontario to ensure clean, safe municipal drinking water.

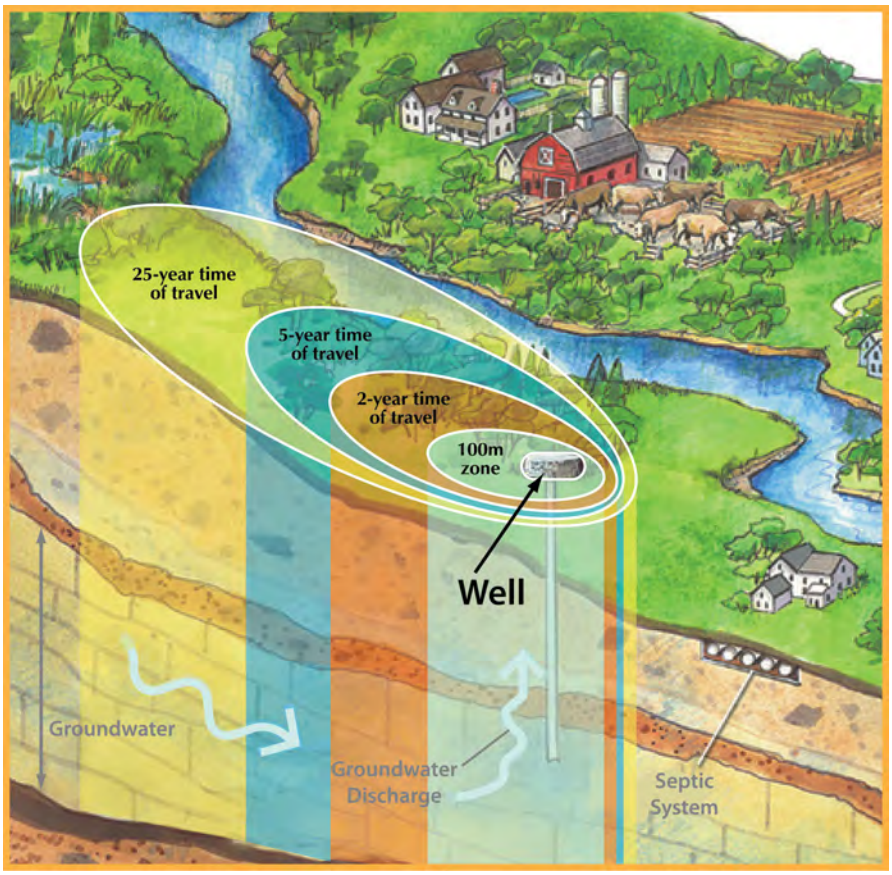


Illustration of a wellhead protection area. Courtesy Conservation Ontario

ONTARIO'S CLEAN WATER ACT FOR PROTECTING SOURCES OF DRINKING WATER

The *Ontario Clean Water Act* was established in 2006. Administered by the Province of Ontario, this legislation mandates the protection of sources of water for municipal residential drinking water systems. Certain other types of drinking water systems can be included as well.

Under this Act, 19 local multi-stakeholder source protection committees were established to guide source protection planning efforts across Ontario. They are supported by 38 source protection authorities, comprised of Ontario's 36 watershed-based conservation authorities, the Severn Sound Environmental Association, and the Municipality of Northern Bruce Peninsula. Some of the corresponding 38 source protection areas are grouped into larger regions.

The committees developed 38 local plans that contain more than 12,500 policies, to bring about actions to protect sources of municipal residential drinking water systems across Ontario. The source protection plan policies are based on strong science. Using local scientific data (like soil type, watershed time of travel of contaminants, depth of aquifer, etc.), drinking water vulnerable areas were delineated per provincial technical methodologies.

There are four types of vulnerable areas: wellhead protection areas, intake protection zones, significant groundwater recharge areas, and highly vulnerable aquifers. If a water quality issue is identified by a committee, an issue contributing area can be delineated within the vulnerable areas. Examples of water quality issues identified in Ontario include nitrate and chloride. Within the vulnerable areas, activities are identified that could pose a threat to drinking water sources under certain circumstances. Risk assessments determine risk levels of each threat activity as significant, moderate or low.

These in turn influence the policy tool chosen by the committee, and whether the policy is legally binding or not. Various policy tools and their implementers include: land use planning mainly by municipalities; risk management plans by Risk Management Officials (RMOs); educational and monitoring programs by conservation authorities and others; prescribed instruments by the provincial government; and in limited instances, prohibition by RMOs, municipalities or provincial government.

SOURCE PROTECTION PLANS GUIDING LOCAL ACTIONS

Source protection plans have been in effect for around five years. Various

source protection authorities and municipal partnership groups across Ontario describe the progress achieved in policy implementation.

The Saugeen, Grey Sauble, Northern Bruce Peninsula Source Protection Region, comprised of three source protection areas, covers a large portion of Grey and Bruce Counties in Ontario. Project Manager and RMO Carl Seider indicates that the region has the responsibility of overseeing plan policies, including for the municipality of Brockton where the community of Walkerton is located.

The local source protection committee developed its policies through a science-based approach premised on provincial technical rules. For example, the development of Intake Protection Zone – 3 (Event-based Areas) were assessed based on modelled fuel spills of various volumes, to determine the level of risk and appropriate protection measures.

Through this analysis, the majority of fuel handling and storage threats were managed through risk management plan requirements, with only a couple of areas identified as prohibition zones for future fuel storage activities. Risk management measures in these areas include requirements to develop and maintain spill prevention and response plans, secondary containment systems, spill cleanup and disposal measures, and spill alerting and notification systems.

This committee has tapped into expertise available at the Walkerton Clean Water Centre over the years through scientific assessments, policy development and more. The region has worked especially well with partner municipalities through the implementation of land use planning restrictions and *Clean Water Act* Section 59 screening processes to ensure that existing and future drinking water threats are effectively managed.

In this capacity, Grey Sauble Conservation has been designated RMO responsibilities on behalf of 13 municipalities, and has successfully negotiated over 150 risk management plans since the local plan came into effect in July 2016.

Mary Lynn MacDonald and Donna Clarkson are project managers for the Ausable Bayfield Maitland Valley Region.

continued overleaf…

Officials and landowners working together to protect drinking water sources. Pictured: Risk management officials Amy Dickens (top left) and Mary Lynn MacDonald (top right).
Courtesy Quinte Conservation and Ausable Bayfield Conservation Authority

Algal blooms in Callander Bay in 2017. Courtesy Mattawa Conservation Authority

They are also appointed RMOs, who negotiated close to 100 risk management plans with landowners for activities, including the application of manure, pesticide and fertilizer. MacDonald says that working in a prime agricultural region brings challenges and rewards. Based on her experiences, farmers have always been early adopters of technology, and this helps to protect municipal water supplies.

Risk management plans often reflect the embracing of technology, and include measures such as: specifying GIS data layer options for incorporation into farm guidance equipment and "As Applied" maps reporting the actual application rates, timing and areas covered. Many farmers use certified crop consultants and custom application services, so it is important for those partners to be part of the risk management plan development and reporting process. Innovative ideas, such as soil sampling at double the normal depth for high nutrient requirement crops like corn, can determine if nitrogen and phosphorus have infiltrated past the root zone (and in what levels), by harvest time.

This allows for application rates, timing and method of application to be adjusted as needed in the future. Pesticide licensing, 4-R nutrient training or other industry certification is also recognized in risk management plans.

Climate change is also having an impact on the watershed, so region staff participated in a climate change vulnerability assessment pilot study. It was led by Conservation Ontario, the network organization of Ontario's 36 conservation authorities. The Municipality of Huron East generously assisted to gain an understanding of climate change impacts on the source water quality of their wells.

David Ellingwood is the source water protection supervisor at the North Bay-Mattawa Conservation Authority. He reports that cyanobacteria blooms were identified as a drinking water issue for the Callander drinking water system. Callander is a small community on Lake Nipissing near North Bay, Ontario. The microcystin toxins from certain cyanobacteria are a known health hazard. Phosphorus fuels cyanobacteria blooms.

Water quality monitoring has been conducted for over 20 years by the conservation authority in Callander Bay and its main tributary of the Wasi River and Wasi Lake. A phosphorus budget showed that anthropogenic inputs have added to physical conditions in the watershed and the bay to elevate phosphorus levels. Anoxic conditions develop periodically at the bottom of the bay and liberate phosphorus from the sediments.

Periods of high flows on the Wasi River cause erosion in drains, at culverts and along meanders, adding to the phosphorus load. Charcoal filtration at the water treatment plant can remove the toxins. However, source water protection seeks to reduce contaminants in the first place. The local source protection committee developed policies to address the issue. Septic systems within 120 m of tributaries are inspected every five years under the Ontario Building Code.

Environmental permits, such as for the Callander sewage lagoons that discharge into the bay, have been reviewed. An education and outreach program is ongoing, including practices to reduce phosphorus movement from agricultural and other lands. A successful educational stewardship program called Restore Your Shore has helped prevent erosion and runoff from hundreds of metres of shoreline. Partnerships with academia are helping to better understand the factors contributing to cyanobacterial blooms.

Amy Dickens is the project manager and RMO at the Quinte Region Source

continued overleaf…

REINVENTING THE CHEMICAL DOSING SYSTEM

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The block type design allows for a rigid, compact and reliable product, and the significantly reduced number of connections greatly decreases leakage potential.

The module allows for better precision and protection in the dosing system, and also features great quality due to its machined fabrication.

The Dosing Module overcomes the many fundamental problems of the current piping system design:

- Poor quality of the piping connections;
- Many potential leakage points; and
- Excessive vibration caused by the pump pulsation – which leads to mechanical fatigue on connections and components.

Other features include:

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  - Auxiliary ports: pulsation dampener, washing port, transport/dilution water and secondary pumps;
  - Adjustable back pressure valve;
  - Adjustable pressure relief valve;
  - Pressure gauge with isolator; and
  - Standard design that fits all your essential needs.
- Extensive reliability and durability;
- No threaded or glued connections;
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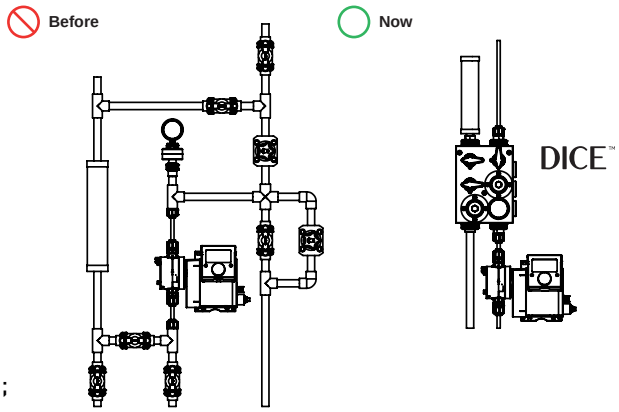
- Capability of calibrating the pump with the correct suction head and discharge pressure.



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Protection Authority. She reports that the authority saw large community buy-in from early on in the program. From 2007 to 2014, stewardship grants supported 90 projects in the region to address activities posing a significant risk to drinking water sources.

Through this grant program, half of all septic systems around the drinking water intake for the Village of Ameliasburgh (Prince Edward County) were upgraded or replaced entirely. As a result, the village's raw water quality results showed a decreasing trend in E. coli levels, demonstrating the benefits of protecting drinking water right at the source.

Community buy-in has continued, and is paramount to, the success of the policy implementation stage as well. Dickens also says that when landowners in Madoc Township became aware they would be required to negotiate a risk management plan, they took proactive measures based on information from the region's consultation letters and education materials.

Prior to meeting the RMO, they added measures to their farm operations. This included using the fields closest to creeks for hay only, installing fences to keep cattle out of creeks, and adding vegetative buffers between fences and creeks. Dickens and her colleagues at source protection authorities across Ontario believe that it is also important to highlight the tremendous work and advancements in water treatment and delivery by municipalities.

She and others developed the "Trust the Tap" campaign to commemorate the 20 years since the Walkerton tragedy, and raise awareness about work being done to supply clean, safe municipal drinking water.

The Severn Sound Source Protection Authority, which is not a conservation authority, is part of the South Georgian Bay Lake Simcoe Source Protection Region. This authority consists of eight municipalities, with 32 groundwater systems and two surface water systems.

Melissa Carruthers, RMO for all eight municipalities, reports on progress made. Throughout the pandemic, she continues to provide comments on development applications, respond to landowner inquiries, negotiate draft risk management plans, conduct land use restriction screening, and several other tasks necessary for the protection of local municipal drinking water sources.

Drinking water protection zone road sign.
Courtesy Conservation Ontario

Prior to the pandemic, negotiations of risk management plans were going well, with buy-in from the industrial, residential, commercial and agricultural community. This was despite the challenges of implementing a prohibition on commercial fertilizer containing nitrogen on 270 residential properties in a nitrate issue contributing area around municipal wells. The same issue contributing area also involves risk management plans with eight agricultural producers, to help manage nutrient runoff.

Besides having a crucial role in drinking water treatment and supply for over 80% of Ontario's population, municipalities implement around two-thirds of the source protection policies in Ontario. This includes land use planning, where planners proactively review development and building applications for source protection considerations.

Kyle Davis is the RMO at Wellington Source Water Protection, a partnership between the eight municipalities of Wellington County, formed to implement five source protection plans. He indicates that this arrangement ensures consistent and efficient delivery while meeting the local municipal needs, and was modelled after other shared service arrangements within the County.

Davis works with County and local municipal staff on all aspects of the program, including delivery of education, review of development applications (approximately 250 per year), verification of activities, including inspection and negotiation of risk management plans, completion of over 640 septic inspections every five years and updates to the County Official Plan and local municipal zoning by-laws.

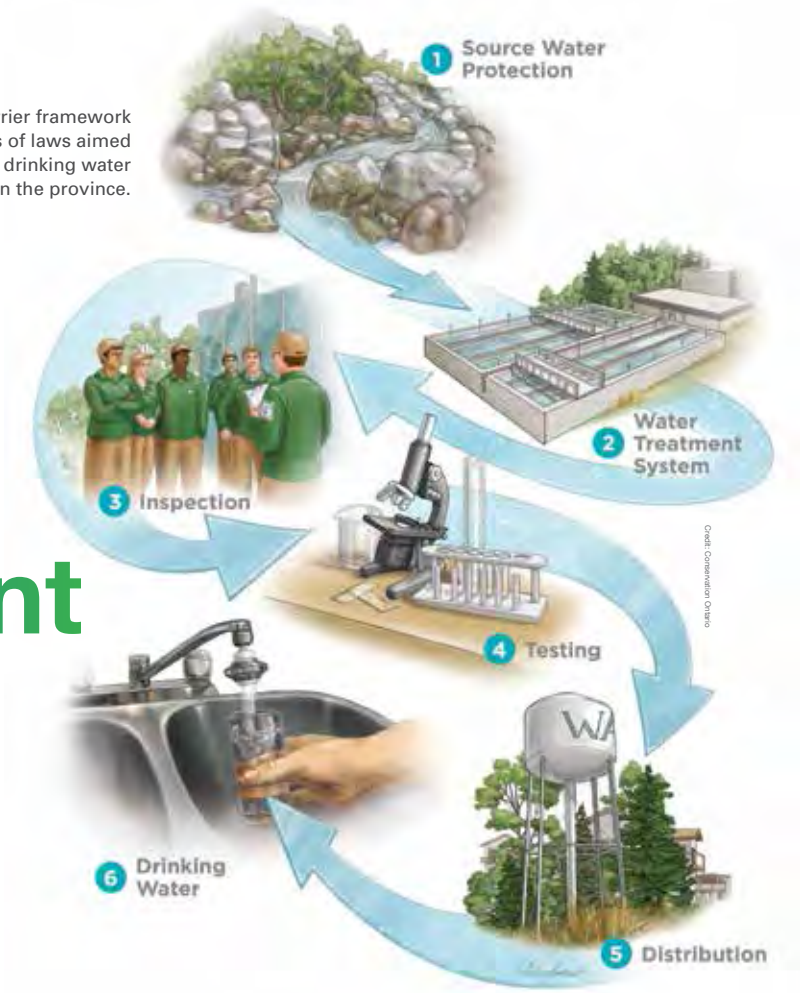
In 2016, the County Official Plan was amended, along with most of the zoning by-laws in the years following. Davis also notes that there have been a number of technical and policy updates, including water quantity (Tier 3) studies and delineation of new wellhead protection areas and chloride issue contributing areas, since the source protection plans became effective.

ELEMENTS OF SUCCESSFUL SOURCE WATER PROTECTION

Source protection authorities indicate that the success of the Drinking Water Source Protection program in Ontario is largely attributable to the reliance on sound technical information, strong working relationships with local municipalities and provincial ministries. Also, there has been overall support from landowners who understand the need for ongoing protection of our drinking water sources.

Source protection planning continues, as we face ongoing and new challenges including climate change. ■

Carl Seider is with the Grey Sauble Conservation Authority. Email: c.seider@greysauble.on.ca. Mary Lynn MacDonald and Donna Clarkson are with the Ausable Bayfield Conservation Authority. Email: mmacdonald@abca.ca, dclarkson@abca.ca. David Ellingwood is with the North Bay-Mattawa Conservation Authority. Email: david.ellingwood@nbmca.ca.AmyDickens is with Quinte Conservation. Email: adickens@quinteconservation.ca. Chitra Gowda is with Conservation Ontario. Email: cgowda@conservationontario.ca. Melissa Carruthers is with the Severn Sound Environmental Association. Email: mcarruthers@severnsound.ca. Kyle Davis is with the County of Wellington. Email: kdavis@centrewellington.ca



Ontario's multi-barrier framework includes a series of laws aimed at protecting drinking water resources in the province.

Essential Watershed Management

Remembering the Walkerton Drinking Water Tragedy.

BY KIM GAVINE AND CHITRA GOWDA

TWENTY YEARS AGO, in May 2000, a municipal well in the Town of Walkerton, Ontario became contaminated with deadly bacteria. Seven people including a child died due to the contamination, and thousands were left with severe long-term illnesses. A waterfall memorial there is dedicated to the victims of this drinking water tragedy, and reminds us about the necessity of proper water management.

Multi-barrier approach to drinking water protection

Since the Walkerton tragedy, vast improvements have been made in drinking water safety in Ontario, due to recommendations stemming from a public inquiry led by Justice O'Conner in 2001. Those recommendations are the building blocks of Ontario's multi-barrier framework that includes the Safe Drinking Water Act (2002), the Clean Water Act (2006), and other laws. Conservation Ontario, the network of Ontario's 36 watershed-based conservation authorities, provided recommendations to the public inquiry including the need for watershed management to protect our drinking water sources.

Since water quality test reporting began in 2004, more than 99.9 per cent of the tests for over 522,000 municipal drinking water systems continue to meet Ontario's water quality standards. Municipally-treated drinking water is delivered safely to over 80 per cent of Ontarians who can trust the tap, water treatment is part of the multi-barrier approach, and it follows the first step of protecting the source water quality and supply. The Great Lakes, inland lakes, rivers, and groundwater aquifers are our sources of drinking water, and we need to protect them from contamination and depletion.

Achievements in protecting drinking water sources

In Ontario, the Clean Water Act mandates the protection of sources of municipal residential drinking water systems, through local source protection plans. Certain other types of drinking water systems can be included as well. The Clean Water Act establishes the framework for local, multi-stakeholder decision making on a watershed basis, in step with Justice O'Conner's recommendations. There are 19 source protection committees representing municipal, economic, public, and Indigenous interests. They carry out their responsibilities supported by the watershed expertise of source protection authorities, who are comprised of Ontario's conservation authorities, the Severn Sound Environmental Association, and the Municipality of Northern Bruce Peninsula.

The committees led the development of 38 local source protection plans. These plans include science-based assessment reports that provide a strong foundation for policies. The assessment reports include delineations of drinking water protection zones around municipal wellheads, surface water intakes, highly vulnerable aquifers, and significant groundwater recharge areas. These zones are based on local science and follow methodologies established by the provincial government. The source protection plans also contain policies that manage certain activities within drinking water protection zones for:

- Over 900 groundwater wells.
- Over 70 Great Lakes intakes.
- Over 60 inland lake intakes.
- 13 Lake St. Clair and St. Lawrence River intakes.

Most source protection plan policy implementation began by 2015, with two-thirds of the implementation by municipalities, close to one-third by provincial ministries, and the rest by conservation authorities and others. Policy tools used include land use planning, risk management plans, permits, and educational programs. Source protection authorities indicate that support from landowners, who implement management measures within protection zones, has been a strong element of success of the program. Other successes include:

- Over 1,000 risk management plans have been established.
- Over 5,000 septic systems have been inspected.
- Over 900 road signs have been installed to identify drinking water protection zones.

The Clean Water Act also supports a continuous cycle of improvement through annual progress reporting and source protection plan updates. Source protection authorities collect information from policy implementers every year to develop progress reports on policy implementation. The plan policies are based on science and approaches that are updated as needed to reflect changing activities on the landscape, growth and development pressures, and other factors.

Finding solutions with watershed management

As we look back at the twenty years since the Walkerton water tragedy and recognize all that has been accomplished, we must also reflect on the lessons learned, plan for challenges ahead, and continue our efforts to protect our sources of drinking water.

A healthy watershed is key to a healthy community and a thriving economy. Conservation authorities and others have long supported elements of source water protection through their local watershed management programs that help to prevent and manage many source-water issues. The multi-stakeholder, collaborative and watershed-based approach in Ontario will continue to help face both ongoing and new challenges in source water protection.

We are living in a markedly changing climate and face exacerbated conditions including warmer temperatures, floods, and droughts. In parts of Ontario, flood events severely impact residents with private water supplies such as wells due to the high risk of contamination. As well, many First Nations communities are challenged with long-term drinking water advisories of boil water, do not consume, or do not use. Emerging contaminants like PFAS (per and polyfluorinated alkyl substances, commonly used in firefighting foam) are a public health concern health. At the same time, we face new unknowns like microplastics for which human health impacts are not fully studied yet.

Watershed-based source protection planning balances economic, social, and environmental needs for healthy and prosperous living. For example, water budget studies show where adequate water supplies exist to support new or growing populations. Watershed monitoring allows for the early detection of climate change impacts, including water quality and supply problems. Watershed-based policies help protect both existing and future water supplies, spanning political boundaries. These are crucial components of watershed management, without which we may become vulnerable to water contamination and lack of adequate water supply.

Twenty years after the Walkerton water tragedy, it is more apparent than ever that watershed management is necessary across Ontario to protect our precious sources of drinking water. WC

Chitra Gowda is the source water protection lead at Conservation Ontario.

Kim Gavine is the general manager at Conservation Ontario.

Microplastics are a Potential Vector for Chemical Contaminants

https://ijc.org/en/microplastics-are-potential-vector-chemical-contaminants?utm_source=IJC+Newsletters&utm_campaign=9045549200-EnglishEMAIL_CAMPAIGN_March2020&utm_medium=email&utm_term=0_e942718880-9045549200-375419701&mc_cid=9045549200&mc_eid=8e6ba78544

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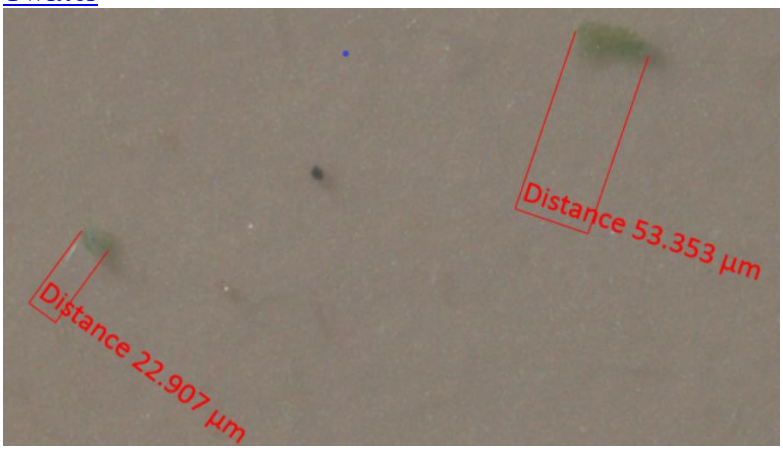


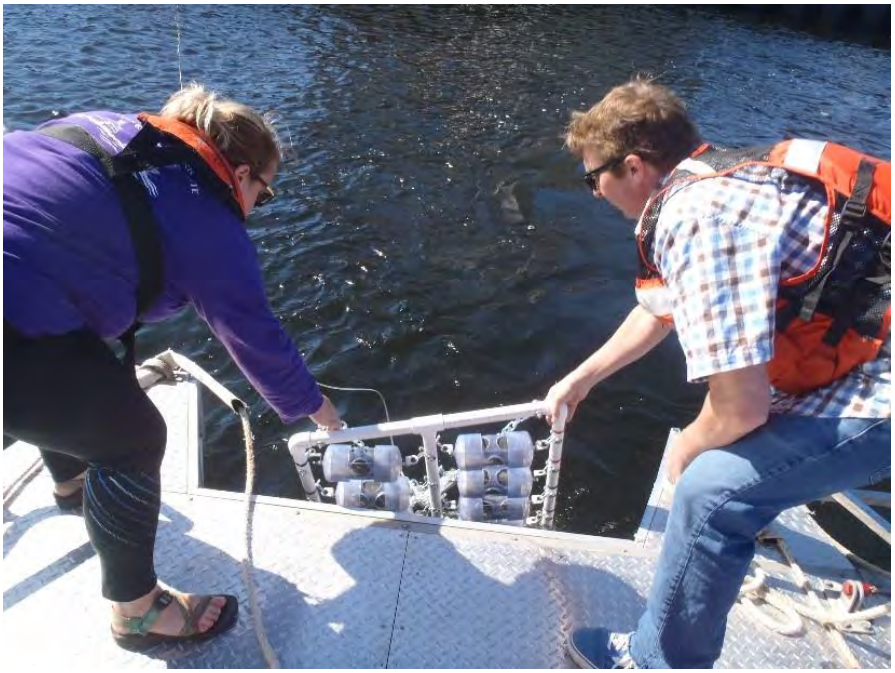
Caption
Microplastics from a Lake Muskegon water sample. Credit: John Scott

Since the emergence of mass-produced plastics in the mid-19th century, it's estimated that more than 6.3 billion metric tons of plastic waste have been generated --- equivalent to the weight of 1 billion elephants. Unfortunately, only 9 percent of these materials are recycled. As a result, plastics are now ubiquitous in the environment. Surface waters, such as our oceans and the Great Lakes, are the final destination for many of these materials and plastic is the most common marine debris found.

Microplastics are extremely small materials (less than 5 millimeters in length) that are turning up in just about every surface water sampled globally by researchers. Although some of these materials were originally designed to be very small, such as microbeads used in cosmetics, many are the result of the breakdown of larger plastics over time.

Since plastics are designed to resist degradation, it's no surprise they can persist in the environment for hundreds of years. Materials such as cardboard or wool can take two to three months to degrade, while plastics products such as straws, water bottles or fishing line can take up to 600 years or more.

Persistent organic pollutants (POPs) are man-made chemicals that, like plastics, are persistent and often ubiquitous in the environment. Many POPs, such as polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs) and pesticides such as DDT, are known to exist in the environment. However, new classes of contaminants, such as per- and polyfluoroalkyl substances (PFAS), also are being detected all over the world and have been raising public concern. The International Joint Commission issued recommendations to the Canadian and US governments in 2017 to keep microplastics out of the Great Lakes.



Maggie Oudsema, (left) a research assistant at the Robert B. Annis Water Resources Institute at Grand Valley State University, and John Scott from the Illinois Sustainable Technology Center, lower microplastic samples into Muskegon Lake. Credit: John Scott

Given the properties of plastics, many have the potential to soak up pollutants from their surrounding environment. To investigate the potential of microplastics to adsorb pollutants, a collaborative effort between the Illinois Sustainable Technology Center at the University of Illinois, along with the Annis Water Resources Institute at Grand Valley State University and the University of Birmingham in the United Kingdom has conducted a field experiment on Lake Muskegon in Michigan.

This team deployed three microplastic types (polyethylene, polypropylene and polyester) at two locations. After one- and three-month durations, the team retrieved the materials and analyzed them for more than 85 different POPs.

Some materials were found to have adsorbed pollutants in large amounts: up to 280 times background water levels for PAHs and 380 times background water levels for some PCBS.

In addition to legacy pollutants, the team also found concentrations of PFAS associated with some of their materials that were 259 times the background concentrations. This was quite

surprising since the team found that microplastics in laboratory water alone concentrate PFAS at only one-fifth of background levels. This difference of adsorption in the laboratory and the field is most likely due to biological materials enhancing the adsorption of PFAS in the environment.

Although the team found that these materials can concentrate pollutants at hundreds of times the background levels, overall the concentrations are quite low and likely aren't high enough to effect larger aquatic wildlife such as trout or bass. However, materials used in this study were only deployed for three months and some researchers estimate that many of the microplastics in the environment are decades or more old.

Furthermore, we still do not know if all the different chemicals and biological materials associated with microplastics work together to invoke adverse health effects in organisms that are exposed to them. This highlights the need for further work to explore the potential health effects of microplastics and other materials that can be associated with them. This approach would be more representative to what we find in the environment.

This project was funded by the Allen and Helen Hunting Research and Innovation Fund, Illinois-Indiana Sea Grant, the Illinois Hazardous Waste Research Fund and the Birmingham-Illinois Partnership for Discovery, Engagement and Education (BRIDGE).

SIDEBAR: Tips for Keeping Microplastics out of the Environment

Avoid single use plastics. Many of these items are designed to last forever yet are only intended for single use. Find ways to replace single use items with reusable items such as grocery bags, drinking cups, cutlery, etc.

Avoid bottled water. Use a reusable water bottle and always keep it with you. Tap water is typically safe and eliminating bottled water from your diet will probably save you money.

Recycle. Although most materials do not get recycled, don't be discouraged in these efforts. If you don't try to recycle your waste than there is a zero percent chance that it will be re-used. However, if you do recycle responsibly your waste material will have a fighting chance to be recycled.

Be sure to dispose of items responsibly. Dispose of litter in the proper places and do not allow things outside to become fugitive due to wind or water.

Buy in bulk. Single-serving products typically have a high product-to-packaging ratio. This results in more packing than necessary. Also note that buying in bulk is usually cheaper than buying single serving sizes.