



## Explanatory Document

Raisin-South Nation Source Protection Region

Région de protection des sources de Raisin-Nation Sud  
**Document explicatif**



## **Important Notice**

This document contains two Explanatory Documents for the following Source Protection Areas:

- Raisin Region Source Protection Area; and,
- South Nation Source Protection Area.

Policies, intent, and rationale apply to both Source Protection Areas unless otherwise stated.

## **Avis important**

Ce document contient deux documents explicatifs relatifs aux zones de protection des sources suivantes :

- Zone de protection des sources de la région Raisin et
- Zone de protection des sources de la Nation Sud.

Les politiques, intentions, et justifications s'appliquent aux deux zones de protection des sources à moins d'avis contraire.

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# 1 Introduction

The Raisin-South Nation Source Protection Committee was required to develop a Source Protection Plan under the *Clean Water Act, 2006*. The Plan contains policies to address activities that are, or would be, significant drinking water threats for all the drinking water systems identified in the Assessment Report. The policies were developed through collaboration with the public, other Source Protection Regions, local Municipalities, and industry experts.

This Explanatory Document provides implementers, stakeholders, the general public, and interested parties with a summary of the intent and rationale for the Source Protection policies. The Explanatory Document also outlines the background information that the Source Protection Committee considered when developing policies and includes a summary of the comments that were received from implementing bodies during all consultation periods. The requirements for the Explanatory Document are listed in Ontario Regulation 287/07 (S. 40, ss. 1-5).

The Explanatory Document was not subject to Provincial and public comment; it was provided to clarify the policies in the Plan. The Explanatory Document should be read in conjunction with the Source Protection Plan.

## 2 Policy Development Process

The Source Protection Policy Working Group was established by the Source Protection Committee to develop draft policies. Each Working Group meeting focused on developing policies for a specific sector and threat category. The Working Group met with industry experts and municipal staff for help with policy development. The Working Group also reviewed technical research and background documents for each threat before developing preliminary policy recommendations for the Source Protection Committee. Draft policies were brought to the public Source Protection Committee meetings for review and approval.

### 2.1 Guiding Principles

The Source Protection Policy Working Group and Source Protection Committee defined their guiding principles before developing the Source Protection policies. The following criteria were always considered when evaluating policy options:

- **Effectiveness:** would the policy effectively protect sources of drinking water;
- **Appropriateness:** would the policy be practical and avoid regulatory duplication; and
- **Fiscal Responsibility:** would the policy be cost-effective and reasonable.

The Working Group debated the feasibility of various policy options based on these criteria. The Working Group also weighed each policy option against possible alternatives and the availability of regulatory and non-regulatory instruments. The Committee always decided on the most reasonable option that was able to effectively manage or eliminate the significant drinking water threat.

### 2.2 Financial Considerations

Financial considerations played an important role in determining which policy tool would be used when drafting policies for the Source Protection Plan. This included consideration of an implementing body's financial capacity, the costs versus benefits, and future monitoring and reporting requirements.

The Source Protection Committee specifically considered the implications of prohibition versus Risk Management. Risk Management Plans can be used to effectively mitigate both future and existing significant threats; however, Risk Management Plans are generally more time consuming for the municipality than one-time prohibition. The Source Protection Committee felt that prohibition was the most effective tool for some future threats to prevent negative impact to the drinking water source.

## 2.3 Climate Change Considerations

The Assessment Report contains a summary, based on a study by Crabbé and Robin (2003), of the projected effects of climate change in the Raisin-South Nation Source Protection Region (Assessment Report, S. 3.1.15). The projections indicate the potential for increased average temperature, decreased river water levels, and a shift in precipitation to the winter months resulting in more frequent and intense summer droughts. Despite this, the effects of climate change do not appear to affect groundwater quantity.

The development of the Source Protection Plan was not directly influenced by the climate change summary in the Assessment Report given that water quantity was not an identified significant threat.

## 3 Summary of Comments

The following is a summary of the comments received during pre-consultation and public consultation. Pre-consultation involved the implementing bodies for each policy. Public consultation included implementers, landowners, and the general public.

Comments were received by mail, email, and verbally during one-on-one meetings. The summary will note if a comment resulted in a policy change.

### 3.1 Provincial Implementers

#### Ministry of Transportation

##### *Pre-consultation*

Comments were received from the Ministry of Transportation (MTO) on December 12, 2011. The MTO noted that they do not have any designated snow storages. The sub-threat of snow and salt storage was removed from policy SALT-4.

The MTO noted that their Salt Management Plan is up-to date. Revisions will be made as required to ensure consistency with the Transportation Association of Canada's Best Practices document. The MTO also stated that they do not support the identification of significant threat areas in its Salt Management Plan; the MTO uses the best available winter maintenance practices in every location due to public safety concerns.

An additional monitoring policy (MONITORING-7) was created to accompany SALT-4 which was specific to the MTO.

##### *Public Consultation*

Comments were received from the MTO on April 12, 2012. The MTO reiterated that their Salt Management Plans will be kept up-to-date with all best management standards from Environment Canada and the Transport Association of Canada. The MTO also discussed their current and proposed research initiatives and suggested this be incorporated into the policy. The suggested policy wording for Salt Management Plans was incorporated into policy SALT-4.

On February 29, 2012 the MTO provided wording for a Provincial signage initiative which was added to policy GENERAL-11.

##### *Proposed Plan*

On July 27, 2012 the MTO submitted a letter indicating they are supportive of the anticipated salt management and road signage policies, and look forward to continuing to work with the Source Protection Authority during the implementation of the Plan.

## Ministry of Government and Consumer Services

### *Pre-consultation*

The Ministry of Government and Consumer Services (MGCS) responded to the invitation for comment on December 20, 2011. Their comments generally stated that as they are not a specified implementer of policies and as such, they did not have specific comments on the policies.

The MGCS stated that they support the general comments from the Technical Safety and Standards Authority (TSSA) and will assist the TSSA with any relevant implementation and review.

### *Public Consultation*

No comments. The TSSA/MGCS is not identified as an implementer for any policies.

### *Proposed Plan*

No comments. The TSSA/MGCS is not identified as an implementer for any policies.

## Ministry of Northern Development and Mines

### *Pre-consultation*

Comments were received from the Ministry of Northern Development and Mines (MNDM) on December 21, 2011. The comments were addressed to Ontario Source Protection Committees in general and did not specifically reference the Raisin-South Nation Source Protection policies.

MNDM reviewed the applicable Prescribed Instruments for drinking water threats associated with mine tailings. They commented that some regions are not using the appropriate Prescribed Instruments; this comment did not apply to the Raisin-South Nation Region. They offered to support the Ministry of the Environment and Climate Change to address this threat through S. 53 of the *Ontario Water Resources Act, 1990* but noted that they are not the actual implementing body.

### *Public Consultation*

No comments. The MNDM is not identified as an implementer for any policies.

### *Proposed Plan*

No comments. The MNDM is not identified as an implementer for any policies.

## **Ministry of the Environment and Climate Change - Safe Drinking Water Branch**

### ***Pre-consultation***

Comments were received from the Ministry of the Environment and Climate Change (MOECC) on December 23, 2011. The comments came from the Safe Drinking Water Branch and supported the policy FUEL-3 related to fuel storage at drinking water plants. The MOECC outlined their proposed process for implementing this policy, including anticipated additional conditions for Environmental Compliance Approvals.

### ***Public Consultation***

The comment from pre-consultation was intended to be suggested policy wording to replace the existing fuel storage wording. Unfortunately, this was not incorporated into the Draft Proposed Plan in time for public consultation. The suggested wording was reviewed by the Committee after public consultation and added to the Proposed Plan.

### ***Proposed Plan***

No comments.

## **Ministry of the Environment and Climate Change – Source Protection Programs Branch**

### ***Pre-consultation***

The Ministry of the Environment and Climate Change (MOECC) provided on-going, detailed edits and suggestions on the pre-consultation policies. These clarifications/comments were provided through emails, teleconference calls, and in-line editing of the document. The suggested edits were reviewed and incorporated where possible.

### ***Public Consultation***

The MOECC provided on-going, detailed edits and suggestions on the Draft Proposed Plan. These comments/clarifications were provided through emails, teleconference calls, and in-line editing of the document. These edits were reviewed and incorporated where possible.

The MOECC clarified the definition of 'strategic action' which was being used incorrectly across the Province. MOECC reviewers also pointed out missing policies for some existing threats. Although these threats are not known to exist in the Raisin-South Region, policies CHEM-1, CHEM-2 and WASTE-3 were changed to address the missing activities. The MOECC also suggested that context should be added as a preface to the policies to clarify the intent for each policy. This was added to the beginning of each threat policy section.

An informal comment was provided on May 3, 2012 regarding Prescribed Instrument conditions. As a result, a teleconference took place between MOECC and Raisin-South Nation Source Protection staff. During the teleconference, the Province-wide implementation of Prescribed Instrument policies was discussed. After discussion and review, wording in all Prescribed Instrument policies was clarified to specify that addition of new conditions to Prescribed Instruments are strongly recommended (not required). It will be up to the Ministry to review these recommendations across the Province and incorporate them into relevant business plans.

Formal comments were received from the Drinking Water Management Division on June 14, 2012.

### ***Proposed Plan***

The MOECC provided on-going, detailed edits and clarifications on the Proposed Plan. This also included province-wide teleconference calls with Source Protection staff and project managers. A Province-wide memo dated June 13, 2012, outlined recommendations for policies and a summary of pre-consultation review comments. This focused on the discrepancies between content for prescribed instruments, monitoring policies, policies directed at MOECC, and non-legally binding policies.

Email comments were received from MOECC Source Protection Programs Branch on July 26, 2012. The comments were provided with the expectation that incorporating the comments would improve the Source Protection Plan by improving readability, reducing misinterpretation, and promoting easier implementation. These comments were reviewed and assessed to determine if there would be an impact to stakeholders as a result of potential changes. Most of these comments were incorporated into the Plan and Explanatory Document.

Preliminary comments were received from MOECC on April 2, 2013. These comments clarified minor errors and inconsistencies throughout the document. A few policies were edited to remove actions that would take place after a threat was already removed (ex. lawn grading after septic tank decommissioning).

Complete MOECC comments were received on December 12, 2013. The MOECC requested that conditions in the Provincial reporting policy MONITORING-3 be changed from 'required' to 'recommended'. This was changed to allow for consistent reports across the Province.

MOECC relayed a comment from the Ministry of Agriculture, Food and Rural Affairs (OMAFRA) regarding the AG-2 policy. They requested that the conditions be required 'where appropriate'. This wording was changed as requested. OMAFRA also requested that the inspection guidelines be removed from AG-2. This guideline was originally included to protect landowner rights but OMAFRA felt that it could be misunderstood as requiring an enhanced inspection.

## **Ministry of the Environment and Climate Change – Southwestern Region (Program Services)**

### ***Pre-consultation***

The Ministry of the Environment and Climate Change (MOECC), Southwestern Region (Program Services) submitted comments on January 20, 2012, which suggested that terms and conditions relating to Prescribed Instrument inspection frequency should not be included in the policies. This is because inspections are not a part of a Certificate of Approval (they are generally complaint-driven). The inspection condition was removed from the Prescribed Instrument policies and moved to the monitoring policies (as was suggested by the Ministry of Agriculture, Food and Rural Affairs).

Additionally it was suggested that land-use planning prohibition be used in conjunction with Prescribed Instrument prohibition as a front-end flag for applicants. The Committee agreed with this suggestion and the complimentary land-use planning policies were added.

MOECC recommended that tertiary septic systems not be required for new septic systems to allow more flexibility for landowners. Reference to tertiary systems was subsequently removed from policy SEWG-5.

MOECC also suggested that the timelines for Prescribed Instrument review and revision be set to a three year timeframe or to the Minister's discretion. This comment also was also stated in the email comments received from MOECC Source Protection Programs Branch on July 26, 2012. The Committee discussed this comment at length and decided that a timeline of three years was sufficient for the Prescribed Instrument review process and did not change the policy.

***Public Consultation***

No comments.

***Proposed Plan***

No comments.

## Ministry of Municipal Affairs and Housing

### *Pre-consultation*

Comments were received from the Ministry of Municipal Affairs and Housing (MMAH) on January 6, 2012. The MMAH had a number of suggestions including:

- Encourage municipalities to add reference to the *Clean Water Act*, 2006 tools (prohibition and Risk Management Plans) in their Official Plan;
- Ensure that there is adequate municipal consultation on the sewer inspection program;
- Specify that prohibition of future sewage treatment applies only to new development and not expansion/upgrades;
- Consider the staff labour required for site plan control applications in the vulnerable areas;
- Determine if hydrogeological assessment be required for septic systems on individual developments. Describe how these would be caught in the application process; and
- Add a policy to consider the acquisition of 5% parkland in WHPAs and IPZs as opposed to cash-in-lieu.

The MMAH supported the septic system policies, but noted that the MMAH inspection guideline is not part of the existing regulation and should be specifically required in the policy. Policy SEWG-4 was changed to specify that the On-Site Sewage System Maintenance Inspections Program shall be used for existing and future inspections of septic systems to ensure consistency within the Region.

Policy SEWG-3 was re-worded to allow for expansions of existing sewage treatment to facilitate full-servicing of developments or to allow for upgrades to an older plant.

### *Public Consultation*

Comments were received from the MMAH on April 13, 2012. The comments suggested that Official Plans should be amended to require a Risk Management Plan as part of a complete application in the areas where this type of policy could apply. Similarly, all prohibited activities and vulnerable areas should be included in the Official Plan. It was further noted that requiring hydrogeological review for single lot developments, or creation of a Mandatory Connection By-law would likely require an Official Plan amendment.

An additional letter was received on April 26, 2012 from the MMAH – Building Code Branch. The letter included a specific comment regarding Policy SEWG-4. The MMAH asked the Committee to verify that the *Clean Water Act*, 2006 provided the authority to require mandatory connection. This was discussed with Ministry of the Environment and Climate Change's Source Protection liaisons and the policy was not changed.

### *Proposed Plan*

No comments.

## Ministry of Agriculture, Food and Rural Affairs

### *Pre-consultation*

Comments were received from the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) on January 17, 2012. OMAFRA generally supported the use of Prescribed Instruments and Risk Management Plans (RMP) for agricultural source material, non-agricultural source material, livestock, and fuel threats; although they noted that there is no Prescribed Instrument for the use of land for livestock grazing and pasturing (LIVE-1 in the pre-consultation document). Grazing and pasturing was removed from the Prescribed Instrument policy but was left in the Risk Management Plan policy (now policy AG-2). OMAFRA recommended that the Risk Management Plans for pesticides be based on agri-environmental practices and the Pesticide Grower Safety course. This reference was added to policy PEST-2.

OMAFRA did not support the prohibition of fuel or commercial pesticide storage outside of the WHPA-A and IPZ-1 zones as they felt that it was impractical and costly for small farmers. This comment regarding prohibition outside of the WHPA A and IPZ 1 was given to all Source Protection Committees across the Province. The fuel prohibition policy was removed from the Plan.

### *Public Consultation*

On April 4, 2012 OMAFRA reiterated that the *Nutrient Management Act* does not cover the storage of commercial fertilizer or farms with 5 or fewer nutrient units. The OMAFRA liaison also assisted with the development of the Risk Management conditions listed in policy AG-2.

A general letter was sent from OMAFRA to all Committees on June 12, 2012. This letter included a technical guidance document to clarify the Ministry's broad approach to Source Protection in agricultural areas.

Formal comments were received from the OMAFRA - Environmental Management Branch on June 14, 2012. Although these comments were received after the May 24<sup>th</sup> Source Protection Committee meeting (where the proposed policies were approved), the Proposed Source Protection policies were consistent with OMAFRA's comments.

### *Proposed Plan*

Comments were received from OMAFRA on July 23, 2012 re-stating their comments on a Provincial perspective for local consideration. OMAFRA also specified that where Committees have proposed policies that do not align with OMAFRA's legislation and policies a strong rationale should be provided to justify local, site-specific conditions.

Overall, OMAFRA recommended various changes and edits for clarification purposes, which were all incorporated into the Plan and Explanatory Document. This included removing references to non-agricultural source material in the Risk Management policy AG-2 (as it did not apply), as well as slight rewording of policy AG-2 for clarification.

Other recommendations included clarifications of certain terms such as "certified crop specialist" in policy AG-2 and "livestock grazing and pasturing" in policy AG-1 as it is not covered in the *Nutrient Management Act*, 2002.

OMAFRA also stated that they support policies concerning education and outreach programs, and suggested that their staff may be able to assist in identifying resources for implementation of these policies.

## 3.2 Municipal Implementers

### United Counties of Prescott and Russell

#### *Pre-consultation*

Comments were received from the United Counties of Prescott and Russell on December 15, 2011. The comments requested that a template be developed for municipal reporting. It was further commented that municipal reporting for land-use planning should occur on an as-needed basis as opposed to annually to avoid overloading municipal staff. As a result, the policy MONITORING-2 was changed to make it more efficient.

#### *Public Consultation*

No comments.

#### *Proposed Plan*

No comments.

### Village of Casselman

#### *Pre-consultation*

A meeting was held in Casselman on January 20, 2012, with the Source Protection staff, Source Protection Committee Chair, Chief Administrative Officer (CAO), Mayor, water treatment plant operator, and the municipal planner. During the meeting, the CAO commented that Source Protection policies were seen as very beneficial for the Village of Casselman. In the past, they had limited control of activities up-stream from their intake.

The planner mentioned they have a new pumping station planned in the Intake Protection Zone 1 to service an area with failing septic systems and a new proposed subdivision. They were concerned that the current policies would prohibit this type of beneficial expansion. This echoed comments received from the Ministry of Municipal Affairs and Housing; as a result policy SEWG-3 was amended to allow for these types of beneficial upgrades and expansions.

During the meeting, the CAO expressed concern over the jurisdictional issues relating to managing threats located in other municipalities. It was discussed that the Risk Management Official could be shared between municipalities or delegated to a Board of Health or local Conservation Authority to avoid potential political conflicts.

#### *Public Consultation*

No comments.

#### *Proposed Plan*

No comments.

## **Town of Hawkesbury**

### ***Pre-consultation***

Comments were received from the Town of Hawkesbury on January 12, 2012. The comments referred to the jurisdictional issues relating to managing threats occurring in the neighbouring municipality of Champlain. Source Protection staff met with Hawkesbury council on February 13, 2012 to present the preliminary Source Protection policies. The presentation to Council addressed the questions from the Director of Planning relating to enforcement of Risk Management Plans in the adjacent Municipality.

### ***Public Consultation***

No comments.

### ***Proposed Plan***

No comments.

## **Nation Municipality**

### ***Pre-consultation***

A meeting was held in at the Township offices on January 23, 2012, with the Source Protection staff, Source Protection Committee Chair, Chief Administrative Officer/Clerk, Mayor, Council, and municipal planners. During the meeting, the Mayor expressed concern over managing threats in other municipality's jurisdiction. Staff discussed that the Risk Management Official could be shared between the Municipalities or delegated to a Board of Health or local Conservation Authority to avoid political conflicts. Other comments focused on the specific requirements of Risk Management Plans for agricultural activities.

### ***Public Consultation***

No comments.

### ***Proposed Plan***

No comments.

## **Township of Russell**

### ***Pre-consultation***

No comments.

### ***Public Consultation***

Source Protection staff met with Russell council on May 29, 2012 to present the proposed Source Protection policies. The presentation to Council focused on questions relating to jurisdictional issues, enforcement of Risk Management Plans in the adjacent Municipality, and the overall implementation of the Source Protection policies.

### ***Proposed Plan***

No comments.

## **United Counties of Leeds and Grenville**

### ***Pre-consultation***

On September 22, 2011 a motion was passed by Joint Council of Leeds and Grenville stating Source Protection policies should be supported with funding from the Province. This sentiment was repeated by Sandy Hay (Leeds and Grenville County Planner) to Raisin-South Nation staff at a Municipal Forum on September 29, 2011.

Staff also attended joint council on January 18, 2012 as part of a delegation involving Source Protection staff from Mississippi-Rideau and Cataraqui Source Protection Regions.

### ***Public Consultation***

No comments.

### ***Proposed Plan***

No comments.

## **Township of Edwardsburgh/Cardinal**

### ***Pre-consultation***

Comments were received from the Township of Edwardsburgh/Cardinal on January 25, 2012. It was noted that Spencerville is now partially serviced by sanitary sewers. As a result, existing septic system threats were removed for the Bennett Street drinking water system.

The Township of Edwardsburgh/Cardinal also felt that the 20 year window for inspections of new sewage infrastructure was too long to remain reliable. It was suggested a five year timeframe would be more appropriate. Policy SEWG-1 was changed to require future inspections of new pipes every 10 years. The township also requested guidance on the Risk Management Office process including possible templates for Risk Management Plans.

### ***Public Consultation***

No comments.

### ***Proposed Plan***

No comments.

## **United Counties of Stormont, Dundas, and Glengarry**

### ***Pre-consultation***

Comments were received on December 14, 2011 from The United Counties of Stormont, Dundas, and Glengarry (UCSD&G). UCSD&G commented that the *Planning Act, 1990* is limited in what it can address (it cannot address activities or existing land-uses). UCSD&G also questioned how the new Risk Management Official office would fit into the normal municipal approval system.

Source Protection staff attended a meeting on January 12, 2012 with the individual Township Planners and the UCSD&G County Planner to discuss these questions and concerns.

### ***Public Consultation***

Source Protection staff presented to the UCSD&G Joint Council on March 19, 2012. On April 10, 2012 Council passed a resolution to petition the Provincial Government to fund the implementation of a Risk Management Office.

### ***Proposed Plan***

No comments.

## **City of Cornwall**

### ***Pre-consultation***

No comments.

### ***Public Consultation***

On March 15, 2012, the City of Cornwall sent an email advising staff that the Source Protection Plan had been reviewed by both City planning and engineering staff. It was pointed out that the policies were not expected to have much impact on Cornwall (the protection area is small and the City is on full municipal services). The City expressed their desire to be consulted and remain a part of the process as the Plan developed.

### ***Proposed Plan***

No comments.

## Township of North Dundas

### *Pre-consultation*

Questions were received via e-mail from the Director of Planning, Building and Enforcement, on February 15, 2012. The questions were sent in anticipation of the February 21, 2012 meeting with the North Dundas Council. The questions were specific to existing properties and proposed developments within the vulnerable areas. Generally, the questions related to development requirements and Risk Management Plans, including the qualifications required for a Risk Management Official, anticipated changes for the agricultural community, interim planning, sewer system inspections, and the potential for future policy application in the wellhead protection areas C and D.

### *Public Consultation*

Comments were received on April 4, 2012 from the Director of Planning, Building and Enforcement. Major comments included the following:

- The wording for sewer inspection should specify that it does not include laterals;
- Would like the sewer inspection for new pipes to occur once every 20 years;
- Would like more time to implement the sewer inspection program;
- Requested a change in wording to clarify the intent of Policy SEWG-3;
- Suggested that one year (in the definition of existing use, GENERAL-2) may not enough time for an activity to resume after a natural disaster. Suggested that the definition of existing be changed to 'within two years';
- Requested one year timeframe for replacement of side-feed fuel tanks;
- Would like 'site plan control' removed from Policy SEWG-5;
- Feel that hydrological review should only take place for new developments with three or more lots; and
- Would like the education and outreach component to be optional and left to the municipalities' discretion.

### *Proposed Plan*

Comments were received from the Director of Planning, Building and Enforcement on June 22, 2012 on the proposed Source Protection Plan and Explanatory Document. Comments were received related to the fuel policies requirements for inspections and replacements of single-walled side-feed tanks. North Dundas also commented on the sewage pipe inspection policy, the requirements for development on new lots, and conditions for new septic systems.

Other comments included recommendations for clarity and consistency within both documents, and issues around timeframes for implementation. The comments were incorporated into the Plan and Explanatory Document where they did not change the intent of the policy.

## **Township of South Dundas**

### ***Pre-consultation***

One comment was received from the Mayor of South Dundas, confirming the receipt of the Source Protection Policies for Pre-Consultation. It was indicated that there were no major concerns with the policies given that there were no threats associated with the Municipal drinking water system in their Township.

### ***Public Consultation***

No comments.

### ***Proposed Plan***

No comments.

## **Township of South Glengarry**

### ***Pre-consultation***

One comment was received on January 24, 2012 from the General Manager of Community Services, to inform the Source Protection Committee (SPC) that the South Glengarry Council did not support the prohibition of future residential fuel storage. This policy option was eliminated and replaced with a Risk Management Plan policy for residential fuel storage (FUEL-1).

### ***Public Consultation***

No comments.

### ***Proposed Plan***

No comments.

## **Township of North Stormont**

### ***Pre-consultation***

One comment was received from North Stormont Council on January 26, 2012 which requested that the Source Protection Committee use Risk Management Plans (RMP) for future residential fuel storage. The RMP policy FUEL-1 was subsequently chosen by the Committee for residential fuel storage.

A meeting was held with Source Protection staff, North Stormont Council, municipal planners, Ontario Clean Water Agency staff, and public works staff on February 7, 2012. During the meeting the requirements for future development applications were discussed in addition to questions relating to residential fuel storage and septic systems.

Official comments were received on February 23, 2012 with North Stormont Council approval. The comments were generally related to implications for farmers, feasibility of Risk Management Plans for small farms, costs related to mandatory septic system inspections (mandated through the Ontario Building Code), and general questions related to policy implementation.

### ***Public Consultation***

No comments.

### ***Proposed Plan***

No comments.

## **Township of South Stormont**

### ***Pre-consultation***

Source Protection staff met with South Stormont staff on February 14, 2012. During the presentation comments and questions were received from the Manager of Building and Development, Fire Chief, Deputy Chief Building Official, Drainage Superintendent, and Public Works Manager. Comments generally related to implementation of Risk Management Plans and requirements for existing and future septic systems. South Stormont staff asked about existing properties within the Newington vulnerable area and potential emergency response considerations for these properties. The policy GENERAL-10 was already in development to address concerns relating to emergency response and is now a part of the Source Protection Plan.

### ***Public Consultation***

No comments.

### ***Proposed Plan***

No comments.

## **City of Ottawa**

### ***Pre-consultation***

A letter was received on December 6, 2011 from the Mayor of the City of Ottawa. The letter acknowledged receipt of the pre-consultation policies. The City of Ottawa provided detailed comments on February 21, 2012. The comments included a comparison of the Raisin-South Nation and Mississippi-Rideau Source Protection policies. Ottawa staff requested to meet with staff from both Source Protection Regions to discuss harmonization of policies where possible.

The comments from the City of Ottawa generally addressed threats which required a Risk Management Plan, requirements for septic system inspections, and Prescribed Instrument revisions. The City of Ottawa also commented that the original policy FUEL-4 was confusing as it combined policies for fuels which are regulated differently. As a result, this policy was discussed with the Source Protection Committee. One fuel policy was determined to be redundant and subsequently removed. Similarly, based on comments from the City relating to small diameter pipes in Greely, the policy SEWG-1 was revised to allow for an alternate method of testing for sewage pipe inspections. City of Ottawa staff also stated that they did not support the installation of signage relating to Source Protection in the intake protection zones.

### ***Public Consultation***

City of Ottawa staff met with Source Protection staff from Raisin-South Nation and Mississippi-Rideau Source Protection Regions on several occasions. The City of Ottawa requested that policies be harmonized where possible to allow for consistent implementation across the city. This included requirements for fuel oil storage, pollution liability insurance, and future fertilizer storage. The City requested that the definition for an existing activity be included in the Plan, including any transition provisions. This was included in policy GENERAL-2.

The Source Protection Committee considered the changes to FUEL-1 and FUEL-2 based on Ottawa's comments. The Committee did not agree completely with harmonizing policies between neighbouring regions just for status quo, and felt the existing requirements for fuel tank replacement was justifiable. The fuel policies were separated into two Risk Management policies, one for each fuel type (FUEL-1 – *fuel oil* and FUEL-2 – *liquid fuels*).

The City suggested that 'site plan control' be removed from Policy SEWG-5 text to allow more freedom to implement the policy through other planning tools where appropriate. The wording was removed. Other minor edits were suggested and considered by the Committee.

### ***Proposed Plan***

A letter was received on July 31, 2012 from the City of Ottawa based on the review of the proposed Plan.

The City of Ottawa outlined the policy conflicts between the Raisin-South Nation and Mississippi-Rideau Source Protection Regions with regards to FUEL-1 and FUEL-2. This echoed the issues which were raised during public consultation about the replacement date for single-walled tanks with side feed. The City of Ottawa also did not agree with the requirement for the drinking water plant owner/operator to have pollution liability insurance in policy FUEL-2.

In keeping with the intent of the Source Protection Committee, changes were not made to the Source Protection Plan. The recommended changes would have changed the intent of the policies which was not appropriate at that stage.

### **Other Municipalities**

The following additional municipalities were consulted during all stages of Plan development:

- Township of Alfred-Plantagenet
- Township of Augusta
- The City of Clarence-Rockland
- Township of East Hawkesbury
- Township of Champlain
- Township of Elizabethtown-Kitley
- The Town of Prescott
- Township of North Glengarry

## **3.3 Other Comments**

Four public open houses were held and landowners were invited to submit formal written comments. Several comments were also received during the consultation on the Proposed Source Protection Plan. These comments came from business owners, farmers, landowners within vulnerable areas, and the general public.

Most comments related to the following:

- Activities which were not identified as significant threats (windmills, pits and quarries, natural gas pipelines, abandoned dumps, etc.);
- Requirements for agricultural Risk Management Plans;
- Establishing clear guidelines for property entry (giving five day advance notice);
- Upcoming review of Prescribed Instruments and the potential for addition of conditions;
- Negative impacts to property values, insurance costs, mortgage rates, etc.;
- Cost for implementation for septic system replacements, Risk Management Plans, etc.;
- Future changes to policies, vulnerable area delineations, etc.; and
- The accuracy of geological assessments in certain areas.

Additionally, general Source Protection program position papers were received from the Technical Standards and Safety Authority, the Salt Institute, and the Canadian Oil Heat Association during public consultation.

South Nation Conservation staff also provided comments on the Source Protection Plan during the Pre-Consultation and Proposed Consultation stages.

## 4 Policy Rationale

When developing the policies for the Source Protection Plan, the Source Protection Committee thoroughly weighed and evaluated the different policy options. The committee considered the financial implications, policy effectiveness, appropriate threat management, and the potential regulatory burden.

The policy rationale explains why each policy was chosen for a particular threat. This section also contains a record of the decision-making process and a summary of the key factors that affected policy decisions. The rationale will specifically explain why prohibition under Section 57 of the *Clean Water Act, 2006* was used.

The 21 prescribed drinking water threats identified by the Province were grouped together to facilitate policy planning (agricultural activities, waste sites, sewage works, etc.). The policy rationale is presented in the same order as the policies in the Source Protection Plan. The rationale generally applies to all policies within a threat category.

### 4.1 Agriculture

The following activities were prescribed as drinking water threats through the *Clean Water Act, 2006* regulations:

- The application of agricultural source material to land;
- The storage of agricultural source material;
- The management of agricultural source material (generally, aquaculture);
- The application of non-agricultural source material to land;
- The handling and storage of non-agricultural source material;
- The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard;
- The application of commercial fertilizer to land; and
- The handling and storage of commercial fertilizer.

#### Contaminants of Concern

The activities have been prescribed as drinking water threats because under certain circumstances the following contaminants pose a hazard to drinking water sources:

- Nitrogen;
- Phosphorus; and
- Pathogens.

#### Policy Considerations

As part of the policy development process, the Source Protection Committee considered all available technical information and Provincial guidance.

The following points are a summary of the discussion relating to this threat category.

- The *Nutrient Management Act, 2002* and Nutrient Management Plans (NMP) and Strategies set out Province-wide standards regulating the safe application and storage of agricultural source material (ASM) to land.
- The *Nutrient Management Act, 2002* specifies that nutrients cannot be applied within 100 metres of a municipal well. This is equivalent to the wellhead protection area A.
- Farms generating greater than 300 nutrient units (NU) annually, generating between 5 and 300 NU annually, or those farms within 100 m of a wellhead are required to apply for a building permit to construct a building used to hold farm animals or manure. These farms are captured under the *Nutrient Management Act, 2002* and Ontario Regulation 267/03. Smaller operations are not captured under this instrument.
- Non-Agricultural Source Material Plans (NASMPs), similar to NMPs, are required in order to apply or store Category 2 and Category 3 non-agricultural source materials. It was noted that not all NASM Plans for Category 2 material are approved by the Province.
- Category 1 NASM does not need a NASMP in order to be applied to land; however, application and must still follow the maximum application rate set out in Ontario Regulation 267/03.
- The NMP and NASMP are effective instruments which are already implemented within the agricultural community. The Committee discussed avoiding regulatory duplication and unnecessary costs on property owners.
- Ontario Regulation 267/03 is the principal regulation related to management of runoff from lands used as confinement areas and yards. This regulation sets out detailed criteria for the storage and application of nutrients to agricultural cropland.
- Non-intensive, small-scale farms ( $\geq 5$  NU, and  $>1$  NU per cropland) are in the Environmental Farm Plan's "low threat" category.
- The application of commercial fertilizer on farms is captured by the *Nutrient Management Act, 2002*.
- It was discussed that the storage of commercial fertilizer on farms is usually minimal, as it is often delivered at the time of need. Even if it is stored on-site, the farmer must keep it dry for application and economic reasons.
- Commercial fertilizers are sold at discounted prices in the autumn and, if purchased, would have to be stored until the next year.
- Golf courses and farmers can hire third party application companies to spread commercial fertilizer - no storage would occur on the property.
- Most golf courses and farmers already use best management practices for fertilizer; these practices should be encouraged and supported.
- Source Protection Committee did not consider prohibiting commercial fertilizer storage.
- There are no Provincial circumstances where the management of agricultural source material is considered a significant threat; therefore, policy options are not required for this prescribed activity. This activity is primarily related to aquaculture (fish farming).

## Intent and Rationale

### Policy AG-1

#### Existing and future agricultural activities subject to a Prescribed Instrument

##### *Intent*

To manage the threat associated with existing and future storage and application of agricultural source material, the handling, storage, and application of non-agricultural source material, the use of land for an outdoor confinement area or a farm-animal yard, and the application of commercial fertilizer to land where these activities would be a significant drinking water threat.

##### *Rationale*

The Committee discussed the effectiveness of the existing Nutrient Management instruments and determined that they are effective and easy to implement. The Committee noted that the existing regulation prohibits the application of nutrients within 100 meters of a wellhead which is equivalent to prohibition in Wellhead Protection Area A.

The Committee reviewed the management of commercial fertilizer under the Nutrient Management Act. They determined that the storage of commercial fertilizer on farms is usually minimal, as it is often delivered just at the time of need. Even when it is stored, it is kept dry and sheltered for practical reasons.

The Committee felt that the existing agricultural regulations were strong enough to manage the risks to drinking water sources for all agricultural threat activities. The Committee wanted to reduce regulatory duplication and decrease the cost to landowners. It was noted that the *Nutrient Management Act, 2002* does not have standards for managing the use of land for livestock grazing and pasturing.

The Committee felt that Nutrient Management Plans and Strategies (NMP/S) should be reviewed in vulnerable areas to ensure that they protect drinking water sources; the Committee felt that the Ministry of Agriculture, Food and Rural Affairs (OMAFRA) would be most qualified to add conditions to manage these activities.

OMAFRA supported the policies that direct the Ministry to review and potentially amend NMP, NMS, and Non-Agricultural Source Material Plans. Amendments would only occur if there were site specific conditions that warrant additional protection.

## Policy AG-2

### Existing and future agricultural activities subject to a Risk Management Plan

#### ***Intent***

To manage the threat associated with existing and future storage and application of agricultural source material, the use of land for an outdoor confinement area or a farm-animal yard, and the application of commercial fertilizer to land where these activities would be a significant drinking water threat.

#### ***Rationale***

The Committee realized that ASM can be land applied without a Nutrient Management Plan/Nutrient Management Strategy (e.g. an outdoor confinement area or a farm-animal yard). The Committee felt that Risk Management Plans (RMP) could be used to catch these exceptions and that the RMP should be structured to achieve the same goals as the existing Prescribed Instruments. During the consultation stage OMAFRA stated that Category 1 Non-Agricultural Source Material is sufficiently regulated under the *Nutrient Management Act, 2002*, and should not be subjected to a RMP.

The Committee wanted the RMP to be based on the same principles as a Nutrient Management Plan or Strategy. The RMP would also address all drinking water threat activities on the property in one Plan and take into account the good work already being done by farmers on their properties. The fertilizer RMPs should be modelled after the Canadian Fertilizer Institute guidelines. Farmers will also have the option to voluntarily develop a Nutrient Management Plan with a person certified by OMAFRA. This Plan would be reviewed and approved by the Risk Management Official as a Risk Management Plan.

OMAFRA suggested that this policy be clarified to emphasize that RMPs will be based on the requirements of the Nutrient Management Plans and Strategies, and that the listed components be given as examples of what should be included, rather than minimum requirements.

## 4.2 Chemicals

The following activities, prescribed as drinking water threats through the *Clean Water Act, 2006* regulations, are related to chemical storage and handling:

- The handling and storage of a dense non-aqueous phase liquid;
- The handling and storage of an organic solvent; and
- The management of runoff that contains chemicals used in the de-icing of aircraft.

### Contaminants of Concern

The activities have been prescribed as a drinking water threats because under certain circumstances the following chemicals pose a hazard to drinking water sources:

Dense non-aqueous phase liquids include:

- Dioxane-1,4;
- Polycyclic Aromatic Hydrocarbons (PAH);
- Tetrachloroethylene (also known as perchloroethylene, PERC, PCE);
- Trichloroethylene (TCE); and
- Vinyl Chloride.

Organic solvents include:

- Carbon Tetrachloride;
- Chloroform;
- Methylene Chloride (Dichloromethane); and
- Pentachlorophenol.

Aircraft de-icing chemicals include:

- Dioxane-1,4; and
- Ethylene Glycol.

### Policy Considerations

The Source Protection Committee considered all available technical information and Provincial guidance as part of the policy development process. The following points summarize the discussion relating to this threat category.

- Dense Non-Aqueous Phase Liquids (DNAPLs) are persistent in the environment, and pose a threat at greater distances from the source than other chemical threats.
- Any volume of a DNAPL is considered a significant threat.
- DNAPLs are difficult to locate and remove from below ground and complete clean-up is considered unattainable. DNAPLs sink to the bottom of an aquifer; the key challenge is the adequately finding them and delineating where they settle.
- DNAPLs are used in many industrial sectors, and are manufactured in large quantities.
- The potential exists for future contamination through spills and leaks from storage.
- Chlorinated solvents are the most common DNAPLs. These solvents were produced and used in large quantities in the 1960's through to the 1990's.

- Organic solvents are toxic to humans used in many manufacturing processes, which can result in release to air and water.
- Ethylene/propylene glycol is the active ingredient in aircraft de-icing fluids. While other formulations have been considered, it is noted that glycol continues to be a major chemical used in this application. The runoff of large volumes of de-icing fluids into surface water bodies over a short period of time can lead to oxygen depletion which results in poor water quality and toxicity to aquatic life and mammals.
- The toxicity associated with the de-icing chemical can originate from both the glycol formulation as well as the additives mixed into these formulations.
- Although there are no existing aircraft de-icing operations identified in the Assessment Report, the Source Protection Committee felt it was theoretically possible that an airport could establish prior to the Source Protection Plan taking effect, and therefore an applicable policy was written.
- There are no Prescribed Instruments available for any of the chemical threats. As a result, the Part IV tools described in the *Clean Water Act* were used.

## Policy CHEM-1

### Risk Management Plans for existing chemical threats

#### *Intent*

To manage the threat associated with existing handling and storage of Dense Non-Aqueous Phase Liquids (DNAPLs), organic solvents, and aircraft de-icing using where they would be a significant drinking water threat.

#### *Rationale*

The Committee noted that DNAPLs and organic solvents are common in many industries; however, it was understood that these compounds are being phased out due to their hazardous nature. The Committee felt that the development of a Risk Management Plan would sufficiently manage existing significant chemical threats. Prohibiting existing activities was seen as a significant hardship to affected property owners; the Committee felt that an established operation should not be put out of business.

Although DNAPLs are a significant threat at any volume, this policy was not written to capture residential use of incidental volumes of products which may contain DNAPLs (like nail polish); and incidental volumes will not be addressed through a Risk Management Plan. The policy is targeted at the chemicals when stored or handled in a raw form (including chemicals that can degrade into DNAPLs).

## Policy CHEM-2

### Prohibition of future chemical threats

#### *Intent*

To prohibit future handling and storage of Dense Non-Aqueous Phase Liquids (DNAPLs), aircraft de-icing fluids, and organic solvents where the activity could be a significant threat.

#### *Rationale*

The Committee considered prohibition the most appropriate option for future non-residential instances of DNAPLs, aircraft de-icing, and organic solvents. This policy is not intended to capture residential use of incidental volumes of DNAPLs.

Prohibition was chosen because these chemicals can have very serious, irreversible impacts on drinking water systems. The prohibition is not intended to apply to small volume residential uses (ex. nail polish remover) or household cleaners.

In some cases these chemicals can be replaced with other less harmful products (the prohibition applies to the chemical used, not the business). Business that must use these harmful chemicals will be located outside of the vulnerable area to reduce the risk to drinking water. This is not anticipated to cause undue hardship as these requirements will be flagged early in the planning and approvals process through the restricted land uses policy.

## 4.3 Fuel

### Activities related to Fuel

The following activity, prescribed as a drinking water threat through the *Clean Water Act* Regulations, is related to fuel:

- The handling and storage of fuel

### Contaminants of Concern

The activity has been prescribed as drinking water threat because under certain circumstances the following contaminants pose a hazard to drinking water sources:

- Benzene;
- Toluene;
- Ethylbenzene;
- Xylene; and
- Petroleum Hydrocarbons (F1, F2, F3, F4).

### Policy Considerations

Separate policies were developed for fuel oil (under O. Reg. 213/01) and liquid fuel (under O. Reg. 217/01). Residential fuel use includes fuel oil storage for furnaces, boilers, water heaters and standby generators but excludes vehicles, lawnmowers, and portable storage like jerry cans. Liquid fuel facilities include licensed permanent or mobile retail outlets, bulk plants, marinas, card lock/key locks, private outlets and farms where gasoline or an associated product is handled other than in portable containers.

The Source Protection Committee (SPC) debated the policy options for handling and storage of fuel at several planning policy meetings. The SPC was divided on a policy for existing and future fuel oil storage: half of the SPC supported future prohibition and half of the SPC supported management through a Risk Management Plan. After receiving feedback and formal comments from Municipal implementers it was clear that Municipalities did not support the prohibition of fuel oil storage.

After additional debate, the SPC felt that this threat could be adequately managed through a detailed Risk Management Plan which includes best management practices. The SPC chose to use the Risk Management Plan tool to address existing and future circumstances involving the handling and storage of fuel oil. The SPC did not want to create undue hardship for residences and businesses by prohibiting a source of fuel that may be the only viable option for many rural areas. For the same reasons, the SPC preferred to manage existing and future liquid fuel handling and storage at private outlets and farms through a Risk Management Plan.

As part of the policy development process, the Committee considered all available technical information and Provincial guidance. The following points summarize the discussion relating to this threat category:

- According to industry experts, the most common failures related to fuel oil handling and storage is corrosion of tanks, problems with oil lines, and overfills/spills.
- Industry experts stated that outdoor single-walled fuel storage tanks (~ 900 litres) pose the greatest risk of failure; however, these tanks are not identified in the legislation a significant drinking water threat.
- Fuel leaks into drinking water have been known to cause irreparable damage to aquifers and pose a very serious risk; clean-up can be virtually impossible.
- The potential consequences of failure are severe (clean-up costs can be millions, even for residential spills), and insurance industries do not cover spills that were 'preventable'.
- Insurance companies vary in their requirements for fuel oil equipment; some may require photos and annual inspections where others do not. Some homeowners do not have home insurance.
- Issues with tanks, such as side-feeding, can lead to water accumulation in the tank causing corrosion. Only bottom-feed tanks have been installed since 2003. This means that any existing side-feed residential tanks are older than 2003. Some fuel suppliers will not deliver fuel to side-feed tanks.
- Existing licensed facilities (bulk plant, marina, cardlocks, etc.) are regulated through the Technical Safety and Standards Authority's comprehensive system of monitoring, licensing and inspections.
- Prohibition of fuel tanks would put major restrictions on residential/agricultural areas which may not have access to other economical fuel sources.
- The number of existing fuel storage threats estimated in the Assessment Report was predicted to be a high approximation – actual threats will be identified through ground-truthing.

## Intent and Rationale

### Policy FUEL-1

#### Existing and future fuel oil storage (O. Reg. 213/01) subject to a Risk Management Plan

##### *Intent*

To manage the existing and future threat related to storage and handling of fuel oil where it would be a significant threat.

##### *Rationale*

The Committee extensively debated the benefits of prohibition verses management for future fuel oil storage. The Committee was concerned about the cost and resources required to manage the risks related to fuel storage (based on the large number of identified threats in some areas). Prohibition was seen as a more effective option; however, prohibition also restricts development in some areas. After pre-consultation with the implementers (namely the local Municipal Councils) the Committee decided to use Risk Management Plans for existing and future fuel oil storage.

The Risk Management Plan policy lists a number of conditions for fuel oil storage. The Committee debated the minimum conditions for a Risk Management Plan and felt that a high standard of care was necessary to manage this threat. The City of Ottawa and the Township of North Dundas recommended that the condition relating to replacement of single-walled tanks with side-feed be changed to replacement within 1 year (instead of immediately), as most tanks of that construction are already 8 or 9 years old. The Committee did not change the policy; they felt that replacement timelines were appropriate given the level of risk associated with fuel oil storage.

### Policy FUEL-2

#### Risk Management Plan for liquid fuels (O. Reg. 217/01)

##### *Intent*

To manage the threat associated with liquid fuel storage and handling where it would be a significant threat.

##### *Rationale*

Liquid fuels have a different Risk Management policy because they are subject to different legislation and conditions than fuel oil.

As noted in the rationale for FUEL-1, the Committee debated whether to prohibit or manage future fuel storage. Based on strong feedback from implementers the Committee felt that prohibition would seriously restrict development and negatively impact agricultural operations.

Future and existing fuel handling and storage at private outlets and farms regulated under Ontario Regulation 217/01 can be managed through a Risk Management Plan. Other existing facilities regulated under Ontario Regulation 217/01 are subject to the same requirements but future occurrences are prohibited. The Risk Management Plan must contain conditions which are based on the Liquid Fuels Handling Code.

### Policy FUEL-3

#### Future and existing fuel oil storage at a drinking water facility subject to a Prescribed Instrument

***Intent***

To manage the threat associated with fuel oil storage and handling at a drinking water plant where it would be a significant drinking water threat.

***Rationale***

The storage of fuel oil at a drinking water plant is regulated under the *Safe Drinking Water Act, 2002* through a Drinking Water Works permit/license. Fuel is stored for back-up generators which are a necessity in these facilities. In this policy, the owner of the drinking water plant is required to assess if the existing permit/license manages the significant drinking water threat. If not, conditions must be added to ensure the threat is no longer significant.

### Policy FUEL-4

#### Prohibition of future liquid fuel facilities (O. Reg. 217/01)

***Intent***

To prohibit the future storage of liquid fuels at a licensed facilities where this activity would be a significant threat.

***Rationale***

The Committee decided that future prohibition of licensed facilities was warranted due to the serious risk of contamination from the frequent handling and storage of large volumes of liquid fuels. Section 57 prohibition (under the *Clean Water Act, 2006*) was used because these types of facilities do not have Prescribed Instruments. This prohibition also has the backing of the *Clean Water Act, 2006* (as opposed to prohibition through land-use planning). Prohibition under Section 57 is accompanied by policy GENERAL-6 (restricted land use) to notify applicants. This ensures that no applications proceed in the vulnerable areas where they would be a significant drinking water threat.

This prohibition applies in the most vulnerable areas, not area-wide. Businesses will locate outside of the vulnerable area to reduce to the risk to drinking water. In most cases this is a small area directly around the source.

## 4.4 Pesticides

### Activities related to Pesticides

The following activities, prescribed as drinking water threats through the *Clean Water Act, 2006* Regulations, are related to pesticides:

- The application of pesticide to land; and
- The handling and storage of pesticide.

### Contaminants of Concern

The activities have been prescribed as drinking water threats because under certain circumstances the following contaminants pose a hazard to drinking water sources:

- Atrazine;
- Dicamba;
- Dichlorophenoxy Acetic Acid (D-2,4);
- Dichloropropene-1,3;
- Glyphosate;
- MCPA (2-methyl-4-chlorophenoxyacetic acid);
- MCPB (4-(4-chloro-2-methylphenoxy) butanoic acid);
- Mecoprop;
- Metalaxyl;
- Metolachlor; and
- Pendimethalin.

### Policy Considerations

The Source Protection Committee considered all available technical information and Provincial guidance as part of the policy development process. The following points are a summary of the discussion relating to this threat category.

- Pesticides are well regulated at the Federal and Provincial level. People who store or apply pesticides receive appropriate training.
- Manufacturing, processing, and wholesale activities of pesticides are generally permitted on lands that are zoned for industrial uses.
- Storage of pesticides for retail sale or for use in extermination could occur on many properties since this activity is generally associated with agricultural, recreational, institutional, commercial, industrial land uses, and public works (use alongside roads and utility corridors).
- Various forms of legislation, guidelines, and protocols already exist for pesticide manufacturing. For example:
  - Agrichemical Warehousing Standards Association requirements are comprehensive and effectively address all aspects of safely siting a new storage.

- Golf courses and certain public works must become accredited for Integrated Pest Management and report annually to the public about how they have minimized their pesticide use.
- Pesticide manufacturers, operators, and vendors must be licensed and report their pesticide storage to local fire departments.
- Farmers and licensed exterminators must also have completed the Pesticide Safety Course which addresses many aspects of the threat.
- A pesticide permit issued by the Ministry of the Environment and Climate Change under the *Pesticides Act, 1990* is required for aerial spraying.
- Ontario's Cosmetic Pesticide Ban prohibits the use of pesticides for cosmetic use with some exceptions for protecting the health and safety of people (e.g., controlling mosquitoes that can transmit West Nile Virus, plants that are poisonous to the touch, fleas on pets, indoor pests or pests that can cause structural damage to a home).

## Intent and Rationale

### Policy PEST-1

#### The existing and future application of pesticide to agricultural or commercial land subject to a Prescribed Instrument

##### *Intent*

To manage the application of pesticide to land where it would be a significant threat using existing regulations.

##### *Rationale*

The Committee believes that existing and future pesticide application can be managed through Ontario's many existing protocols, regulations, and requirements. This approach was used whenever possible to avoid regulatory burden and overlap, and is consistent to the approach used to manage other agricultural-related threats.

### Policy PEST-2

#### The existing and future application, storage and handling of pesticide subject to a Risk Management Plan

##### *Intent*

To manage the application, handling, and storage of pesticides on land where it would be a significant threat and is not currently regulated through a Prescribed Instrument.

##### *Rationale*

The Committee preferred to use a Risk Management Plan for pesticide application, storage, and handling for operations that are not prohibited through the Cosmetic Pesticide Ban and are not regulated through a Prescribed Instrument. This allows a Risk Management Official to assess the activity and negotiate a site and activity specific Risk Management Plan with the landowner. The Plan will include information on what to do in the case of a spill including contact information for the local drinking water plant operator.

## Policy PEST-3

### Prohibition of future commercial storage and handling of pesticide

#### ***Intent***

To prohibit the future manufacturing and processing (industrial/retail handling and storage) of pesticides where they would be a significant threat.

#### ***Rationale***

The establishment of processing and wholesale facilities for pesticides, including retail outlets and custom applicators, is a serious and unnecessary risk in the vulnerable areas.

The Committee understood that these storages could be associated with larger volumes of pesticide stored for longer periods of time compared to other pesticide users. As with other large scale developments which pose a significant threat to drinking water, these facilities can be established in another suitable location.

There was no Prescribed Instrument available in relation to this specific threat so prohibition was achieved through Section 57 of the *Clean Water Act, 2006*.

## 4.5 Salt and Snow

### Prescribed Activities

The following activities, prescribed as drinking water threats through the *Clean Water Act* Regulations, are related to salt and snow:

- The application of road salt;
- The handling and storage of road salt; and
- The storage of snow.

### Contaminants of Concern

These activities have been prescribed as drinking water threats because under certain circumstances the following contaminants pose a hazard to drinking water sources:

- Sodium;
- Chloride;
- Copper (in runoff from snow storage);
- Cyanide (in runoff from snow storage);
- Lead (in runoff from snow storage);
- Nitrogen (in runoff from snow storage);
- Petroleum hydrocarbons (in runoff from snow storage); and
- Zinc (in runoff from snow storage).

### Policy Considerations

As part of the policy development process, the Source Protection Committee considered all available technical information and Provincial guidance. The following summarizes the discussion relating to this threat category.

- The road salt application is increasing Province-wide as a result of expanding road networks and climate change. This is considered to be an emerging environmental issue.
- Many regions are already implementing Salt Management Plans and education programs to address the use of road salt due to the cumulative environmental impacts to ground and surface water.
- Salt Management Plans and the Smart About Salt Program implement science-based techniques and practices that are proven to reduce salt use per weather event without compromising public safety. These programs encompass all aspects of winter maintenance (e.g. salt delivery, handling and storage, equipment handling and washing, training, and communication).
- Municipalities who use over 500 tonnes of salt annually (especially in vulnerable areas) are already encouraged to comply with Environment Canada's Code of Practice for the Environmental Management of Road Salt.
- The Ministry of Transportation is researching measures that can be taken to reduce the amount of sodium and chloride being released to the environment.

## Intent and Rationale

### Policy SALT-1

#### Municipal Salt Management Plans for future and existing application of road salt

**Intent**

To manage road salt application where it would be a significant threat.

**Rationale**

The Source Protection Committee believed that most municipalities already have Salt Management Plans. Where a Municipality already has a Plan, this policy requires the existing Plan be reviewed to ensure that it sufficiently manages the application of salt with respect to the requirements of the *Clean Water Act, 2006*. Where salt application is a significant threat and no Salt Management Plan exists, Municipalities will have to create a Plan to address salt application. These plans will only be required in a few areas where the circumstances show a significant threat exists.

The Committee acknowledged that there would be an initial cost of developing a Plan and that there may be potential investment required for new technologies. There are existing resources to support municipalities including training programs (i.e. Smart About Salt).

### Policy SALT-2

#### Risk Management Plans for existing storage of road salt and snow

**Intent**

To manage the existing handling and storage of salt and storage of snow where it is a significant drinking water threat.

**Rationale**

The Assessment Report did not identify and existing instances of these threats. This policy was developed to address the possibility that an existing occurrence was missed, or that this activity could establish in the time between the Assessment Report studies and the Source Protection Plan approval date. The Risk Management Plan would ensure that the threat is managed using all applicable best management practices.

### Policy SALT-3

#### Prohibition of future storage and handling of salt and storage of snow

**Intent**

To prohibit the future storage of salt and snow where it would be a significant threat.

**Rationale**

The Committee felt that future prohibition of these types of storage facilities was warranted due to the serious risk of contamination. Snow dumps can release a diverse range of contaminants picked up from road surfaces. Section 57 of the *Clean Water Act, 2006* (prohibition) was used because there is no Prescribed Instrument for these types of facilities.

This prohibition would only be in the vulnerable areas, not area-wide.

Townships/municipalities will locate their salt/snow storages outside of the vulnerable area to reduce to the risk to drinking water. This is not anticipated to cause undue hardship for future development.

### Policy SALT-4

#### Ministry of Transportation Salt Management Plans for the application of road salt

**Intent**

To manage road salt application and storage of road salt and storage of snow where it would be a significant threat.

**Rationale**

There is a small portion of Highway 417 and Highway 401 which passes through a significant threat area. In this area the application of road salt is strongly recommended to be managed by the Ministry of Transportation (MTO) with Source Protection in mind to eliminate the threat.

The MTO offered many comments regarding the Salt Management Plan policy. The MTO has current Salt Management Plans for their operations on all Provincial highways. Safety remains their primary concern; however, the Ministry actively researches alternative de-icing compounds in addition to ways to reduce salt use, and is proactively updating Salt Management Plans and encourages the use of best management practices.

This policy supports the MTO's mandate and encourages continued investment in pilot programs and mitigation technologies. This policy also serves as education/outreach regarding the locations of the Source Protection Areas and the precautions which should be taken in these areas.

## **Policy SALT-5**

### **Education and outreach for private facilities through the Salt Institute**

***Intent***

To manage road salt application and storage of road salt and storage of snow at private facilities where it would be a significant threat.

***Rationale***

The Source Protection Committee felt that salt should be used with care in the vulnerable areas. Private facilities cannot be captured by the Municipality's Salt Management Plans. Bodies such as the Salt Institute should target private contractors, building owners, and parking lot maintenance managers regarding salt use and Salt Management Plans.

## 4.6 Sewage Systems and Sewage Works

### Prescribed Activities

The following activity and the associated sub-threats are prescribed as a drinking water threat through the *Clean Water Act, 2006* regulations related to sewage works:

- The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage
  - Combined sewer discharge from a stormwater outlet to surface water;
  - Sewage treatment plant bypass discharge to surface water;
  - Discharge of stormwater from a stormwater retention pond;
  - Industrial effluent discharges;
  - Sanitary sewers and related pipes;
  - Sewage treatment plant effluent discharges (includes lagoons);
  - Storage of sewage (e.g. treatment plant tanks);
  - Septic system; and
  - Septic system holding tanks.

### Contaminants of Concern

These activities were prescribed as drinking water threats because under certain circumstances the following contaminants pose a hazard to drinking water sources:

- |                               |  |   |
|-------------------------------|--|---|
| • Acetone                     | • Dichlorobenzene-1,4                  | • Pathogens                               |
| • Acrylonitrile               | • Dichloroethane-1,2                   | • Polycyclic Aromatic Hydrocarbons (PAHs) |
| • Aluminum                    | • Ethylene glycol                      | • Pentachlorobenzene                      |
| • Arsenic or arsenic compound | • Formaldehyde                         | • Petroleum Hydrocarbons                  |
| • Biphenyl-1,1                | • Hexachlorobenzene                    | • Phenol                                  |
| • Bis(2-ethylhexyl) phthalate | • Hexachloroethane                     | • Total phosphorus                        |
| • Boron                       | • Hydrazine or hydrazine salt          | • Selenium or selenium compound           |
| • Bromomethane                | • Hydroquinone                         | • Silver or silver compound               |
| • BTEX                        | • Iron                                 | • Sodium                                  |
| • Butoxyethanol-2             | • Lead or lead compound                | • Sodium fluoride                         |
| • Butyl-n alcohol             | • Manganese or manganese compound      | • Styrene                                 |
| • Butyl-tert alcohol          | • Mercury or mercury compound          | • Hydrogen sulphide                       |
| • Cadmium or cadmium compound | • Methanol                             | • Tetrachlorobenzene-1,2,4,5              |
| • Carbon tetrachloride        | • Methyl ethyl ketone                  | • Tetrachloroethylene                     |
| • Chloride                    | • Methylene chloride (Dichloromethane) | • Trichlorobenzene-1,2,4                  |
| • Chloroform                  | • Molybdenum                           | • Trichloroethylene                       |
| • Chromium VI                 | • Naphthalene                          | • Tritium                                 |
| • Cobalt or cobalt compound   | • Nickel or nickel compound            | • Vanadium                                |
| • Copper or copper compound   | • Nitrogen                             | • Vinyl chloride                          |
| • Cyanide                     | • Nitrosodimethylamine-N (NDMA)        | • Zinc                                    |
| • Dichlorobenzene-1,2         | • Adsorbable Organic Halides (AOXs)    |   |

## Policy Considerations

As part of the policy development process, the Source Protection Committee considered all available technical information and Provincial guidance. The following points summarize the discussion relating to this threat category.

- S. 53 of the *Ontario Water Resources Act, 1990* applies to approvals of Prescribed Instruments to establish, alter, extend, or replace new or existing sewage works (septic systems and holding tanks) with a design capacity of greater than 10,000 litres per day. The Ministry of the Environment and Climate Change (MOECC) is responsible for enforcing the Act.
- The MOECC provides a “Guide for Applying for Approval of Sewage Works”. This guide outlines information needed for an Environmental Compliance Approval, such as the expected rate of contaminant discharge, what monitoring will take place, and what measures will be taken to reduce groundwater and surface water contamination.
- The Provincial Policy Statement (PPS) issued under S. 3 of the *Planning Act, 1990*, provides direction on matters of provincial interest related to land use planning and development. The PPS gives direction that settlement areas should be on full municipal sewer and water services.
- The amendments to the Ontario Building Code (January 1, 2011) require a septic system maintenance inspection program in the vulnerable areas to ensure septic systems and holding tanks are inspected every five years. If the septic system fails the inspection maintenance may be required.
- While municipal sanitary sewers are also considered to be a significant drinking water threat, they transport sewage away from vulnerable areas for off-site treatment and disposal. This makes them a preferred alternative to private septic systems. Where municipal sewer services are available, municipalities can, through a Mandatory Connection Bylaw, require people to connect if their septic system fails or is not adequate.
- Experts consulted during policy development emphasized the need for careful, professional review of development / renovation proposals which include on-site septic systems in the vulnerable areas.
- Principal Authorities (the agency responsible for septic system approvals) will incur costs related to administering the new maintenance inspection program. Under the Ontario Building Code, Principal Authorities can charge fees to recover costs. Locally, Principal Authorities have not determined what fees, if any, property owners would be charged for the inspections.

## Intent and Rationale

### Policy SEWG-1

#### Sanitary sewer maintenance program

**Intent**

To manage the threat associated with sanitary sewers in areas where they would be a significant drinking water threat.

**Rationale**

The Committee realizes that sanitary sewer pipes are necessary components of infrastructure; however, the highest standard of care should be taken to prevent ex-filtration that could cause contamination of drinking water in the significant threat areas. This policy outlines an inspection program designed to ensure that pipes in these areas are inspected and receive priority maintenance at regular intervals. The Committee debated the timeframe for inspection and agreed a five year interval was sufficient.

The committee felt that requiring a higher standard (similar to pipes for potable water) for future sewage pipe material will provide an extra level of protection for these significant areas. This subsequently reduced the inspection frequency to ten years for future sewer pipes.

### Policy SEWG-2

#### Existing sewage works

**Intent**

To manage the threat associated with existing storage of sewage, sewage treatment plant effluent discharges, sewage treatment plant bypass discharges, combined sewer overflows, and industrial effluent discharges where these activities would be a significant threat.

**Rationale**

The Committee felt that existing sewage threats regulated under the *Ontario Water Resources Act, 1990* are adequately managed by the existing approvals process (i.e. they already require review for an Environmental Compliance Approval from the Ministry of the Environment and Climate Change). The Committee did require the Ministry to review existing Environmental Compliance Approvals in light of the circumstances that make the activity a significant drinking water threat to ensure that the conditions of the Approval are adequate to protect drinking water.

### Policy SEWG-3

#### Prohibition of future sewage works

**Intent**

To prohibit future sewage storage, sewage treatment plant effluent discharges, sewage treatment plant by-pass discharges, combined sewer discharge from a stormwater outlet to surface water, and industrial effluent discharges where they would be a significant drinking water threat. An exception was added for beneficial circumstances where expansion or upgrade will reduce the overall risk related to sanitary sewage.

***Rationale***

The Committee decided it was reasonable to prohibit these sewage works as they are not currently established in the significant threat areas and felt they should be located elsewhere in the future.

An exemption was added to this policy to allow future expansions and/or upgrades to existing sewage treatment systems to provide full-servicing for new developments or to service existing development areas with failing septic systems.

The servicing of these types of areas is consistent with the Provincial Policy Statement and also reduces the risk of sewage contaminants entering the drinking water source. This policy direction was based on feedback from the Ministry of Municipal Affairs and Housing, the Village of Casselman, the Township of North Dundas, and a similar policy found in the Lake Simcoe Protection Plan.

This policy requires both Ministry and Municipal implementers to prohibit these activities in the future. This will ensure that applicants are aware of the prohibition at the front-end of the application process.

**Policy SEWG-4**

**Existing and future on-site sewage systems (septic systems)**

***Intent***

To manage existing and future on-site sewage systems where they would be a significant threat.

***Rationale***

The Committee supported the mandatory sewage maintenance inspection program required by the recent Ontario Building Code amendment and felt that this program can effectively manage the threat. The Committee wanted to specify that the inspection program follow the Ministry of Municipal Affairs and Housing 2011 Guidelines to ensure a consistent, ministry-approved approach.

This policy also specifies that septic systems must be properly decommissioned where inspectors determine a need for replacement or when connecting to municipal services. The Committee added in some additional recommendations based advice from the septic approval authority.

Where municipal services exist at the property line (capacity permitting) property owners will be required to connect to these services. Municipal servicing is the preferred option for sewage in the Provincial Policy Statement. This will be required for new developments or for existing systems that fail or need to be replaced where a property owner would have to invest in a new system anyway. This policy also applies to large on-site septic systems.

The Shadow Ridge municipal system (Greely) is currently drawing water from a shallow aquifer. It is strongly recommended that the City of Ottawa explore deepening this well to the deep aquifer to eliminate many of the significant drinking water threats in this area.

## Policy SEWG-5

### Planning requirements for future and proposed on-site sewage

#### **Intent**

To manage the threat associated with on-site sewage where it would be a significant threat, for the development of proposed lots or for any future development of properties with septic systems and/or septic system holding tanks.

#### **Rationale**

The Committee felt that the outright prohibition of future on-site sewage systems would restrict development in some communities. It was originally proposed that any new on-site sewage systems should require tertiary treatment; however, it was not known whether this type of treatment would effectively treat the contaminants of concern (pathogens, nitrates etc.). Due to this uncertainty, tertiary system requirements were not included in the policy text.

The Committee agreed that the developer must show that the lots are adequately sized and that existing conditions can accommodate on-site sewage treatment for any future on-site sewage systems where they would be a significant drinking water threat.

## Policy SEWG-6

### Large (>10,000L/day) on-site sewage systems

#### **Intent**

To manage the threat associated with on-site sewage where it would be a significant threat.

#### **Rationale**

The use of large (> 10,000 L/day) on-site sewage systems and septic system holding tanks are regulated under an Environmental Compliance Approval under the *Ontario Water Resources Act, 1990*. The Committee determined that the Prescribed Instrument is sufficient to manage the threat in significant areas. These Approvals must be reviewed to ensure conditions are in place to protect sources of drinking water.

## Policy SEWG-7

### Existing and future discharge from stormwater management facilities

#### *Intent*

To manage the threat related to stormwater management facility discharge where it would be a significant drinking water threat and to prohibit the future discharge from a stormwater management facility in Wellhead Protection Area A (WHPA A) and Intake Protection Zone 1 (IPZ 1) where it would be a significant drinking water threat.

#### *Rationale*

Stormwater management facilities are already regulated through the Environmental Compliance Approval process. It was agreed that existing and occurrences of this threat could be adequately managed using these regulations, but that additional conditions should be considered for facilities in vulnerable areas. Also, the Committee recognized that would not be feasible to prohibit existing stormwater infrastructure.

The Committee recognized that prohibiting stormwater facilities throughout the entire vulnerable area was not practical without potentially limiting development; however, the Committee felt it was not practical to locate stormwater management facilities directly beside a drinking water source. As a result, it was decided that the best approach would be to prohibit future stormwater management facilities in the smaller, most vulnerable WHPA A and IPZ 1 areas. This would be prohibited through Environmental Compliance Approvals and municipal land-use planning. Developments within these areas would be notified at the front end of the application process about the prohibition of these sewage systems in the vulnerable areas.

The Committee recommended additional conditions for existing facilities and future facilities outside of WHPA-A and IPZ-1. The suggested conditions include basic criteria for the facilities in vulnerable areas such as requiring Enhanced Level Protection, prioritizing maintenance and upgrades, and requiring annual reporting of sediment levels to ensure compliance.

The Committee reviewed the existing requirements for outflow monitoring. The Committee felt that more information on the concentrations of these contaminants in the discharge was required in order to address the risk posed by the Provincial contaminants of concern. Currently, this information is scarce. Research indicates that the discharge quality is highly variable between facilities. Site-specific monitoring is suggested to develop baseline water quality data and identify primary contaminants of concern. Baseline information will give the foundation for monitoring the effectiveness of any implemented protective conditions. This data could also inform a contaminant-specific education and outreach campaign within the contributing stormwater sewer-shed.

The Committee considered the impacts on municipalities due to this policy. The municipality would likely incur the cost of the stormwater facility maintenance program, although periodic monitoring, maintenance, and upgrades of stormwater facilities is standard for most municipalities.

## 4.7 Waste Disposal Sites

### Prescribed Activities

The following activity and the associated sub-threats, prescribed as drinking water threats through the *Clean Water Act, 2006* regulations, are related to waste disposal sites:

- The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act, 1990*
  - The application of untreated septage to land;
  - Storage treatment and discharge of tailings from mines;
  - Landfilling (hazardous waste);
  - Landfilling (municipal waste);
  - Landfilling (solid non-hazardous industrial or commercial waste);
  - Liquid industrial waste injection into a well;
  - Polychlorinated biphenyl waste storage;
  - Storage of hazardous waste at disposal sites;
  - Storage of wastes described in clauses (p), (q), (r), (s), (t), or (u) of the definition of hazardous waste; and
  - Land-farming of petroleum refining waste.

### Contaminants of Concern

These activities have been prescribed as drinking water threats because under certain circumstances the following contaminants pose a hazard to drinking water sources:

- |                              |                               |                             |
|------------------------------|-------------------------------|-----------------------------|
| • 1,2,4-T                    | • Chlorobenzene               | • Oxamyl                    |
| • 2,4,5-T                    | • Chromium VI                 | • PAHs                      |
| • 2,4-D                      | • Copper                      | • PCBs                      |
| • Arsenic                    | • Cyanide (CN-)               | • Petroleum Hydrocarbons    |
| • Atrazine                   | • Dichlorobenzene-1,2 (ortho) | • Selenium                  |
| • Barium                     | • Dichlorobenzene-1,4         | • Silver                    |
| • Barium                     | • Hexachlorobenzene           | • Trichloroethane-1,1,1     |
| • Bis(2-ethylhexyl)phthalate | • Hexachlorocyclopentadiene   | • Trichloroethylene (DNAPL) |
| • BTEX                       | • Lead                        | • Uranium                   |
| • Cadmium                    | • Mercury                     | • Vinyl Chloride (DNAPL)    |
| • Carbofuran                 | • Nitrogen                    | • Zinc                      |

## Policy Considerations

As part of the policy development process, the Source Protection Committee considered all available technical information and Provincial guidance. The following points summarize the discussion.

- The Ministry of the Environment and Climate Change (MOECC) issues Environmental Compliance Approval for waste disposal sites, under the *Environmental Protection Act, 1990*. These approvals are required prior to the establishment, extension, or ongoing operation of a waste disposal site.
- Under Part IV, S. 57 of the *Clean Water Act, 2006*, prohibition cannot be used for existing significant threat activities associated with waste disposal that have a related Prescribed Instrument or for the storage, treatment, and discharge of tailings from mines.
- Polychlorinated biphenyls (PCBs) waste storage/disposal sites are exempt from the requirements of an Environmental Compliance Approval and are regulated by Ontario Regulation 362 – Waste Management of PCBs.
- Until December 31, 2010, the *Environmental Protection Act, 1990* regulated the application of septage (hauled sewage) to land. As of January 1, 2011, the MOECC is not issuing new Environmental Compliance Approvals for land application sites, though existing Environmental Compliance Approvals remain valid until expiry. Hauled sewage does not include treated septage, which is considered a non-agricultural source material under the *Nutrient Management Act, 2002*.

## Intent and Rationale

### Policy WASTE-1

#### Existing Environmental Compliance Approvals for waste sites

##### **Intent**

To manage the existing threat associated with waste disposal sites where they would be a significant drinking water threat using existing Prescribed Instruments.

##### **Rationale**

The Committee used Prescribed Instruments to address the existing threats related to the establishment, operation, or maintenance of a waste disposal site. The Environmental Compliance Approvals for waste sites have thorough environmental assessments which take into consideration the hydrogeological vulnerability and proximity to sources of drinking water. This policy directs the Ministry of the Environment and Climate Change to review these approvals and ensure they are protective enough in vulnerable areas. This policy also addressed the maintenance of mine tailings ponds that are regulated through the *Environmental Protection Act, 1990* or *Ontario Water Resources Act, 1990*.

## Policy WASTE-2

### Prohibition of future waste sites

#### *Intent*

To prohibit waste disposal sites where they would be a significant drinking water threat.

#### *Rationale*

The Committee wanted to eliminate the possibility of future waste disposal sites occurring within vulnerable areas where significant drinking water threats would occur. These waste sites should be located in less sensitive areas. Waste sites will be prohibited through the Environmental Compliance Approval Process and through municipal land-use planning. This provides the front-end flag for applicants.

## Policy WASTE-3

### Risk Management Plans for existing waste sites without a Prescribed Instrument

#### *Intent*

To manage existing waste site threats that do not have a Prescribed Instrument where they would be a significant drinking water threat. This policy would not apply to waste sites that are registered with the MOECC waste generation reporting system or waste that is approved to be transported off-site using the MOECC manifest process or waste that is subject to Director's Instructions.

#### *Rationale*

There are waste sites which do not require Environmental Compliance Approvals (ex. storage of Polychlorinated bisphenyls). Although the Assessment Report did not identify any existing threats of this type, it is possible that one could be missed or established before the Source Protection Plan takes effect. For these reason a Risk Management Plan was chosen to ensure that any significant drinking water threats that are not being regulated are managed through a Risk Management Plan. This policy is not intended to capture wastes that are registered with the MOECC waste generation reporting system or waste that is approved to be transported off-site using the MOECC manifest process or waste that is subject to Director's Instructions. This policy also does not capture incidental accumulation of other household/commercial wastes; these types of activities will be managed through the education and outreach policy.

## Policy WASTE-4

### Prohibition of future waste sites without a Prescribed Instrument

#### ***Intent***

To prohibit future waste sites which do not have a Prescribed Instrument where they would be a significant drinking water threat. This policy would not apply to waste sites that are registered with the MOECC waste generation reporting system or waste that is approved to be transported off-site using the MOECC manifest process or waste that is subject to Director's Instructions.

#### ***Rationale***

The Committee was of the opinion that polychlorinated biphenyls and other waste disposal sites that do not require an Environmental Compliance Approval should be located outside of the significant threat areas. Generally S. 57 of the *Clean Water Act, 2006* (prohibition) cannot be used for waste threats; however, since there is no Prescribed Instrument which relates to these specific threats, prohibition under the *Clean Water Act, 2006* can be used. This policy is not intended to capture wastes that are registered with the MOECC waste generation reporting system or waste that is approved to be transported off-site using the MOECC manifest process or waste that is subject to Director's Instructions. This policy also does not capture incidental accumulation of other household/commercial wastes; these types of activities will be managed through the education and outreach policy.

## 4.8 General Policies

### Intent and Rationale

#### Policy GENERAL-1

##### Source Protection – Education and Outreach

***Intent***

To establish an effective education/outreach campaign to raise public awareness of Source Protection and the prescribed threat activities.

***Rationale***

The Committee felt that a strong education and outreach campaign would be needed for almost every threat activity identified under the *Clean Water Act, 2006*. Generally, education/outreach is needed to inform people about the Source Protection areas and the way their actions and activities can impact drinking water sources.

The implementer of this policy is the municipality; however, this responsibility can be passed on to another body and/or can be combined with existing programs for efficiency. This policy is legally binding in areas which have significant drinking water threats.

The education and outreach policy should also contain a program to promote any existing incentive programs in significant threat areas to decrease the financial burden on the landowners.

The Ministry of Agriculture, Food and Rural Affairs stated that they support policies concerning agricultural education and outreach programs, and felt they may be able to assist with identifying resources for implementation. These resources would consist of information on standards, management practices, educational materials, and technical guidance.

## Policy GENERAL-2

### Defining existing activities

#### *Intent*

To identify, for the purposes of the Source Protection Plan, when an activity is considered “existing” and to provide general context around transition provisions (grandfathering).

#### *Rationale*

Upon guidance from the Ministry of the Environment and Climate Change, the Source Protection Committee considered the following information:

- Where a plan prohibits future threats and manages existing threats, a transition provision could allow applications in process, and land use planning approvals granted, to be considered as “existing” even though the activity has not yet occurred. This allows the application to proceed and the threat to be managed.
- Transition provisions allow applications caught within the approvals process to proceed even if the Source Protection Plan comes into effect during that process. This is designed to protect applicants who have started the approvals process unaware of the proposed Source Protection policies. This provision is relevant when an activity is managed in the present and prohibited in the future.

Some policies address existing threats differently than future threats. In these situations it is important to clarify when an activity is considered existing. In general, an activity would be considered existing if it has occurred on a property 12 months prior to the Plan taking effect. This allows for some leeway for activities which may have been temporarily suspended due situations like change of ownership, natural disaster, or fire. This also encompasses activities which may be seasonal in nature.

## Policy GENERAL-3

### Timeline for Official Plan and by-law conformity

#### *Intent*

To specify the mandatory dates for municipal document conformity not described in the *Clean Water Act, 2006*.

#### *Rationale*

The Committee wished to specify that the amendments to municipal planning documents can occur within their normal five year review period. This will reduce the effort required to implement this policy. The planning decisions relating to these documents must still conform to the Source Protection policies when the Plan takes effect.

## Policy GENERAL-4

### Timeline for existing Prescribed Instrument conformity

***Intent***

To specify the mandatory dates for Provincial Instrument conformity not described in the *Clean Water Act, 2006*. Prescribed Instruments which exist on the day the Plan takes effect must be reviewed and, if necessary, amended within three years from the date the Plan takes effect.

***Rationale***

The Committee wished to specify the timeframe for review and amendment of Prescribed Instruments. Three years was suggested by Provincial implementers during pre-consultation and was found to be acceptable to the Committee. There was an option to leave this timeline open-ended (to the Director's discretion); however the Committee did not feel that was appropriate.

During Public Consultation, the Ministry of the Environment and Climate Change reiterated that the preferred wording for prescribed instrument conformity is within 3 years from the date the Plan takes effect, or such other date as the Director determines based on a prioritized review of prescribed instruments that govern significant drinking water threat activities. The Committee did not feel it was reasonable to leave the policy timeline open-ended for Prescribed Instrument review. Therefore, this suggested wording was not added to GENERAL-4 or to the timelines associated with Prescribed Instrument policies.

## Policy GENERAL-5

### Provisions for Risk Management Plans (S. 58, *Clean Water Act, 2006*)

***Intent***

To specify certain conditions for all Risk Management Plans.

***Rationale***

This policy articulates the scope of a Risk Management Plan. This ensures that the process is consistent, fair, and as efficient as possible. The Committee decided to leave the timeline for implementation to the Risk Management Official. This was done to allow landowners to hold-off on completing Risk Management actions if funding was coming in the near future.

## Policy GENERAL-6

### Restricted land uses

#### ***Intent***

To require that applications for development in the vulnerable areas be flagged for review by the Risk Management Official.

#### ***Rationale***

The restricted land uses tool (S. 59 of the *Clean Water Act, 2006*) is a beneficial tool to assist Municipalities with implementation of Part IV (prohibition and Risk Management Plans). Restricted land uses ties the Source Protection policies to the planning-approvals process through applicable law under the Ontario Building Code. This allows municipalities to screen applications to determine if they require the Risk Management Official's review.

This tool also gives municipalities the backing of the *Clean Water Act, 2006* for practical implementation; the other option for implementing part IV tools would be through Official Plan amendments which may be subject to lengthy, costly municipal board appeals.

All land uses were designated for this tool to ensure that all potential drinking water threats are captured. The specific policy codes were listed to clarify which policies would apply.

## Policy GENERAL-7

### Earth (Geothermal) energy systems

#### **Intent**

To ensure that transport pathways such as geothermal (earth energy) systems are constructed and maintained in a manner that protects source water. Additionally, the policy references the requirement for municipalities to monitor the creation of transport pathways in the vulnerable areas.

#### **Rationale**

Ontario Regulation 287/07 allows policies related to transport pathways to be included in the Source Protection Plan. O. Reg. 287/07 describes a transport pathway as a condition of land, resulting from human activity that increases the vulnerability of a municipal drinking water system's raw water supply. This includes deteriorating water wells, pits and excavations, and geothermal earth energy systems. When these pathways are improperly created or maintained they can allow surface contaminants to pass quickly into an aquifer and can lead to contamination of a drinking water supply. Although these pathways themselves are not a significant drinking water threat they can increase the risk related to other threat activities within a vulnerable area.

The Committee recommended that geothermal (earth energy) systems not be constructed within WHPA-A. These systems have recently been the subject of concern in Ontario related to the implications of non-licensed drilling and potential cross-contamination between aquifers. For vertical geothermal systems, the required holes can be very deep and may potentially cross multiple aquifers. This can result in cross-contamination of an aquifer being used to supply drinking water. The policy also strongly suggests that municipalities ensure that all future design and installation of geothermal systems be subject to proper review by a qualified professional.

Under O. Reg. 287/07 municipalities are required to notify the Source Protection Authority of any creation or modification of transport pathways in the vulnerable areas. New Provincial guidance and legislation also requires specific reviews and permits for new geothermal (earth energy) systems Province-wide.

## Policy GENERAL-8

### Municipal sewer-use by-law

#### **Intent**

To suggest that municipalities create or strengthen sewer-use by-laws.

#### **Rationale**

Sewer-use by-laws are presented as a way for municipalities to control the amounts of chemicals being discharged into the sewers. The Committee felt that the creation or update of this type of by-law would provide an extra layer of protection for drinking water sources.

This policy was designed to target existing commercial/industrial/retail use of dense non-aqueous phase liquids and organic solvents which are discharged through municipal sewers. The sewer-use by-law could be similar to that of the City of Toronto.

## Policy GENERAL-9

### Update of municipal emergency response plans

#### *Intent*

To update Emergency Response Plans in areas which include a Wellhead Protection Area or Intake Protection Zone along a transportation corridor (this include railways, highways as defined in Subsection 1(1) of the *Highway Traffic Act, 1990*, St. Lawrence Seaway, and the Ottawa River).

#### *Rationale*

During consultation with municipal implementers it became clear that there were concerns relating to emergency response in these vulnerable areas. Although human safety is the primary concern for emergency response, certain factors should be considered when working in a vulnerable area. This policy recommends that municipalities update their Emergency Response Plans to include the location of the vulnerable areas and contact information for local drinking water plan operators.

Ontario Regulation 287/07, s. 26 (6) allows policies to be written specifying the actions to be taken by persons or bodies to update spill prevention and spill contingency plans or emergency response plans for the purpose of protecting existing drinking water sources with respect to spills that occur within a Wellhead Protection Area or Intake Protection Zone.

This policy was also used inform Municipal Emergency Responders about Source Protection and the location of vulnerable areas. This policy will raise awareness of the impact Emergency Response can have on source water.

## Policy GENERAL-10

### Spills Action Center - identification of vulnerable areas

#### *Intent*

To ensure that the vulnerable areas are identified and incorporated into the Spills Action Centre procedure cards for transportation corridors.

#### *Rationale*

Within the Raisin-South Nation Source Protection Region we have numerous roads (including the Provincial 401, 416, and 417 highways), railways, and the Ottawa River and St. Lawrence Seaway. Although the movement of various contaminants along these corridors does pose a risk in the vulnerable areas the transportation corridors were not included as a significant threat. Ontario Regulation 287/07 does allow committees to write policies specifying actions to be taken to update contingency or emergency response plans.

The Committee felt that movement of contaminants on transportation corridors had the potential to impact Intake Protection Zones on the St. Lawrence and Ottawa River and Wellhead Protection Areas around roads and railways. It was felt that procedures may not be in place to notify local water treatment plant operators in the case of a spill (both from large vessels and small pleasure-craft) in these vulnerable areas specifically. The Committee was informed that the Spills Action Center will review their procedure cards and update them in the near future.

## Policy GENERAL-11

### Support for Ministry of Transportation signage initiative

***Intent***

To support the Ministry of Transportation's Provincial signage initiative.

***Rationale***

The Ministry of Transportation (MTO) is the lead agency for a Provincial signage initiative; the MTO will design road signs identifying the location of Wellhead Protection Areas and Intake Protection Zones on Provincial roadways. These signs will be made available to municipalities to install locally to ensure consistent signage across the Province.

The Committee supported this program and suggests that if municipalities wish to use signs as part of an education/outreach program, these signs should be consistent. The policy also specifies where these signs are to be placed.

## Policy GENERAL-12

### Updates to the Ontario Pesticide Education Program (Ministry of the Environment and Climate Change)

***Intent***

To recommend that the Ministry of the Environment and Climate Change add information on Source Protection to the Pesticide Education Program.

***Rationale***

The Committee felt that the Pesticide Education Program should be revised to include information on Source Protection and vulnerable areas. This could take place during the next Ministry of the Environment and Climate Change program review.

## Policy GENERAL-13

### Incentive programs

#### *Intent*

That Ministry of the Environment and Climate Change continue to support and facilitate the implementation of existing incentive programs that protect drinking water sources, such as the Ontario Drinking Water Stewardship Program (ODWSP). This program helps landowners undertake actions to manage or eliminate significant drinking water threats.

It is also recommended that the Ministry of the Environment and Climate Change promote and encourage other Provincial incentive programs that promote the implementation of best management practices for activities that are significant drinking water threats.

#### *Rationale*

Past stewardship programs have provided funds to landowners to undertake best management practices on their properties during the development of the Source Protection Plan. When the Plan takes effect many landowners will have a need for funds in order to implement Source Protection policies on their properties.

The Committee strongly recommended that the Ministry of the Environment and Climate Change continue to fund the Ontario Drinking Water Stewardship Program. Funding would allow policies to be implemented quickly and would ease the financial burden for landowners in the vulnerable areas.

The Committee also decided that the MOECC should encourage other Provincial Ministries to promote best management practices and incentive programs where funding would benefit Source Protection.

## 4.9 Monitoring Policies

### Policies

**MONITORING-1: Part IV Clean Water Act Tools (restricted land uses, Risk Management Plans, prohibition)**

**MONITORING-2: *Planning Act*, 1990 policies**

**MONITORING-3: Prescribed Instruments**

**MONITORING-4: Education and Outreach**

**MONITORING-5: Specify Action**

**MONITORING-6: Salt Management Plans and chloride monitoring**

**MONITORING-7: Salt Management Plans for the Ministry of Transportation**

#### ***Intent***

For each significant threat policy, the *Clean Water Act, 2006* (CWA) requires source protection plans include monitoring policies (as per ss. 22(2)). The monitoring policies will help the Source Protection Authority create annual progress reports relating to policy implementation. The Source Protection Authority will use this information to track the implementation and effectiveness of policies or monitor changing circumstances to assist in preventing an activity from becoming a significant drinking water threat.

The monitoring policies will also help to ensure that the policies are effective and are being properly implemented. The CWA includes specific legal requirements for monitoring policies which are directed at public bodies as per ss. 22(5) and 45. Furthermore, Ontario Regulation 287/07, S. 65, provides details on what information must be included in the Risk Management Official's annual reports.

#### ***Rationale***

In the Raisin-South Nation Source Protection Plan, a single monitoring policy text was established for each policy tool, where possible. For example, all Risk Management Plan policies have the same monitoring policy. The Committee did this to ensure that annual reporting to the Source Protection Authority would not be too onerous and time consuming for the implementing bodies. The purpose of the annual report is to provide ongoing administrative, compliance, and enforcement results so that the Source Protection Authority can monitor the implementation of Source Protection policies. The timeline for compliance for each monitoring policy is either stated in the policy or it is referenced by the compliance date of the corresponding significant threat policy.

Some of these monitoring policies are non-legally binding. Implementing bodies are encouraged to communicate the results to the Source Protection Authority to ensure successful implementation of the Source Protection Plan.