

GREATER SUDBURY SOURCE PROTECTION AREA EXPLANATORY DOCUMENT



PREPARED ON BEHALF OF THE
GREATER SUDBURY SOURCE PROTECTION COMMITTEE

UNDER THE CLEAN WATER ACT, 2006
(ONTARIO REGULATION 287/07)

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1.0 INTRODUCTION

The Explanatory Document must accompany the Source Protection Plan as per Section 40 of Ontario Regulation 287/07. The purpose of the explanatory document is to provide stakeholders, the general public, other interested parties, as well as the Source Protection Authority and the Minister of the Environment with an understanding of the rationale for the policies included in the plan. This supports a transparent decision-making process. Information on the context of the Source Protection Plan and the planning process is presented in Part I of the Source Protection Plan.

As stated in section 40 of Ontario Regulation 287/07 of the *Clean Water Act*, the Explanatory Document contains the following information where applicable:

- An explanation of the rationale for each policy set out in the source protection plan;
- A summary of the comments received during pre-consultation and consultation and an explanation of how these comments affected the development of the source protection plan;
- A summary of how the consideration of financial implications influenced the development of the policies;
- The reasons that Section 57 prohibition is used to address the risk of an existing activity;
- If soft tools, such as education and outreach, incentives, land use planning and specify actions, were chosen as the only policy tools to address a significant threat, an explanation of how it effectively addresses the threat; and
- An explanation of how climate change considerations affected the development of the policies.

1.1 EXPLANATION OF POLICY DECISIONS

The Source Protection Committee (SPC) endeavoured to develop fair, implementable and cost-effective policies that meet the requirements of the *Clean Water Act*.

The SPC wrote policies by threat type because this allowed for in-depth consideration of the threat parameters (e.g. scientific basis of the activity, existing relevant legislation and applicable vulnerable areas).

Like the policies of the Source Protection Plan, this document is organized by category of threat. In order they are:

1. Agriculture
2. Chemicals
3. Salt & Snow
4. Sewage
5. Waste
6. Water quantity
7. Transportation
8. Issues Water Quality Monitoring
9. Monitoring Policies

Please note that comments received during pre-consultation and consultation that applied to more than one policy are discussed in Section 3.0.

Please refer to the glossary (Appendix G) in the Source Protection Plan for an explanation of technical terms.

1.2 POLICY IDENTIFIER

To assist the reader and to organize the policies, an identifier has been designated for each policy in order to efficiently provide information regarding the threat being addressed, whether the policy addresses existing and/or future threats, and the policy tool being used. Each policy is given an identifier with the following components:

1. Threat
2. Policy Number for the Threat Category
3. Existing and/or Future
4. Policy Tool

For example, the first policy's identifier is "Ag1EF-EO", where:

Ag = Agriculture (Nutrient)

1 = the first policy addressing the nutrient-related agricultural threats

EF = the policy applies to both existing and future threats

EO = Education & Outreach

There are 12 threat categories with the following abbreviations:

Ag = Agriculture (nutrient related)

AirD = Aircraft De-icing Fluid

DOS = DNAPLs and Organic Solvents

F = Fuel

P = Pesticides

M = Monitoring

MI = Monitoring of Issues

Sa = Salt and Snow

S = Sewage

T = Transportation

W = Waste

WQ= Water Quantity

There are 8 policy tool types with the following abbreviations:

EO = Education & Outreach

LUP = Land Use Planning

M = Monitoring

PI = Prescribed Instrument

RMP = Section 58 Risk Management Plan

SA = Specify Action

s57 = Section 57 Prohibition

TP = Transition Provisions

2.0 SOURCE PROTECTION PLAN POLICY RATIONALE

2.1 AGRICULTURE POLICIES

Ag1EF-EO An education and outreach program will enable the City of Greater Sudbury and the Municipality of Markstay-Warren to provide information on the agricultural related threat activities to all residents in the vulnerable areas. The program will provide information about the policies contained in the Source Protection Plan, and encourage property owners to apply fertilizers appropriately – leading to reduced pollutant loading (e.g. phosphorus) of municipal drinking water sources.

The Source Protection Committee is of the opinion that this education and outreach program alone will adequately manage the threat activities in the Wanapitei IPZ 2 and 3 areas with a vulnerability score of 8 and in the Ramsey Lake Issue Contributing Area for those properties that are not captured by the other agricultural policies (e.g. low density residential).

Pre-consultation comments from the Ministry of the Environment and the City of Greater Sudbury suggested removing the reference to nutrient management strategies and plans because this would be outside the scope of the prescribed instrument. The City of Greater Sudbury recommended removing mention of the City’s shoreline buffer and development set back requirements because this type of practice is a best management practice and is therefore already included in the policy. The Source Protection Committee agreed with these comments and modified the policy accordingly.

Ag2F-s57 The Source Protection Committee is of the opinion that prohibiting these future activities is the most efficient way to address these agricultural related threat activities. Prohibition provides the best environmental protection and is also financially effective. A substantial portion of these areas are zoned residential and so these activities are already prohibited. For those areas that are zoned rural, existing farm-related activities will be allowed to continue under the auspices of risk management plans, and future activities will be prohibited.

Ag3E-RMP Risk Management Plans to manage agricultural threat activities were deemed to be the best policy option to manage these threats. Risk Management Plans are specific to each property and so can be written in a way to best suit that property and to ensure that the threat activity is adequately managed in the most cost effective way. Risk Management Plans consider the best management practices that a land owner may already be undertaking.

The number of properties projected to require Risk Management Plans is low (approximately 7) for this threat activity. Risk Management Plans are an effective tool as they can be customized to each property, and a single plan can manage a number of threats on a property.

There are no prescribed instruments available to manage these threats because the farming operations in the Greater Sudbury Source Protection Area (GSSPA) are small and therefore are not regulated under the *Nutrient Management Act*.

Ag4EF-RMP The Committee decided that Risk Management Plans were the best option to manage the threat of application of commercial fertilizer to land for larger properties. Risk Management Plans are specific to each property and so can be written in a way to best suit that property and to ensure that the threat activity is adequately managed in the most cost effective way. The number of properties projected to require Risk Management Plans is low (approximately 3) for this threat activity. Risk Management Plans are an effective tool as they can be customized to each property, and a single plan can manage a number of threats on a property.

2.2 CHEMICALS POLICIES

Pesticides

P1EF-EO The Source Protection Committee believes that existing and future pesticide application can be managed through Ontario’s many existing protocols, regulations, and requirements. This avoids regulatory burden and overlap. The only pesticide that is or could be a significant threat in the Tables of Circumstances that could be applied without a permit under the *Pesticides Act* is glyphosate. The only case where this could be a significant threat in an IPZ-1 with a vulnerability score of 10 where the application area for this pesticide is greater than 10 hectares. The Source Protection Committee is confident that a one-time communication to the applicable property owners is a reasonable approach.

This policy was modified from its original form as a result of pre-consultation comments from the City of Greater Sudbury – the original policy required a broader education and outreach program which was determined to be unnecessary due to the nature of the threat and the existing regulatory regime.

This policy was again altered as a result of comments on the proposed SPP from the Director of the Source Protection Programs Branch at the Ministry of the Environment (MOE). The policy originally stated it would only be applicable to the Vermilion IPZ-1. While this area is the only likely area where the application of glyphosate would be a significant threat, it was suggested to broaden the policy to all areas where the threat could be significant.

P2EF-PI The Source Protection Committee believes that existing and future pesticide applications can be managed through Ontario’s many existing protocols, regulations, and requirements. This avoids regulatory burden and overlap. The use of permits under the *Pesticide Act* was determined to be the best tool to manage this threat.

There were no specific pre-consultation comments received for this policy. During consultation the Ministry of the Environment requested that the wording be adjusted to allow flexibility for the review of prescribed instruments and determining the most appropriate terms and conditions. This policy was modified to allow for this flexibility vis-à-vis emergency response measures and spill contingency planning.

The policy was modified as a result of comments on the proposed SPP from the MOE’s Director of the Source Protection Programs Branch. The policy originally referenced the application of pesticide to commercial or agricultural lands; however was broadened to encompass application “to land” in order to also capture other potential land uses such as institutional or industrial.

P3EF-SA The Pesticide Management Plan is a low cost policy to ensure that pesticide application undertaken by the City on municipal properties is necessary and aims to reduce pesticide use as much as possible.

During pre-consultation the City of Greater Sudbury commented that this policy should state that it applies to municipal lands. Text was added to accomplish this.

P4EF-RMP The policy was added in spring 2013 as a result of comments on the proposed SPP from the Director of the Source Protection Programs Branch at MOE. A policy gap was identified and policy P4EF-RMP was written to fill the gap.

The Committee decided that a Risk Management Plan policy to cover the remainder of pesticide chemicals not covered by policy P1EF-EO would be the best policy choice to fill the gap and properly manage the threat. By exempting glyphosate from this policy it would likely eliminate the need to make risk management plans for residential areas. There are no known incidences of this threat requiring a risk management plan.

P5E-RMP The Committee decided that Risk Management Plans were the best policy choice to manage the handling and storage of pesticide. The plans are specific to each property and so can be written in a way to best suit that property and to ensure that the threat activity is adequately managed in the most cost effective way. The plans also take into consideration best management practices that the landowner may already be undertaking. The number of properties projected to require Risk Management Plans is low (approximately 1) for this threat activity. Risk Management Plans are an effective tool as they can be customized to each property, and a single plan can manage a number of threats on a property. There were no specific pre-consultation comments received for this policy.

P6F-s57 The Source Protection Committee is of the opinion that prohibiting these future activities is the most efficient and cost-effective way to address these threat activities. The handling and storage of pesticide in quantities that would make it a significant threat are not likely to be pursued in these limited areas.

There were no specific pre-consultation comments received for this policy. A comment from OMAFRA during the consultation period for the Draft Source Protection Plan asked the SPC to further consider the prohibition of pesticides as it may be restrictive of agricultural practices in WHPA B. However, the policy applies to larger quantities of pesticides (e.g. minimum 250 kg for some substances, and minimum 2,500kg for most) and the vulnerability scores in the WHPA-B areas are identical to those in the WHPA-A areas, indicating that the wells are highly susceptible to contamination from both the WHPA-Bs

and the WHPA-As. The SPC continues to support the future prohibition of this threat activity in those areas where it would be a significant threat.

Fuel and Aircraft De-icing Fluid

F1E-RMP Risk Management Plans to manage the existing handling and storage of fuel were the chosen policy tool by the Source Protection Committee. The plans are specific to each property and so can be written in a way to best suit that property and to ensure that the threat activity is adequately managed in the most cost effective way. The number of known properties projected to require Risk Management Plans is low (approximately 3) for this threat activity. But this may increase depending on the number of properties using oil for heat where it would be a significant threat.

Risk Management Plans are an effective tool as they can be customized to each property, and a single plan can manage a number of threats on a property. There were no specific pre-consultation comments received for this policy.

F2EF-PI This prescribed instrument provides an effective way to ensure that the handling and storage of fuel occurs in a manner that best protects municipal drinking water sources.

The Ministry of the Environment provided recommended text for the two policies addressing the handling and storage of fuel via Municipal Drinking Water Licenses (a prescribed instrument). This text did not change the intent of the policy, and the Source Protection Committee adopted the recommended text with minor modifications that were approved by the Ministry.

F3F-s57 The Source Protection Committee is of the opinion that prohibiting the future handling and storage of fuel is the most efficient way to address these threat activities. This prohibition will not have an adverse effect upon businesses in the vulnerable areas, as most uses associated with fuel are already prohibited in the Zoning By-law. Specifically, the current Zoning By-law prohibits the establishment of storage tanks and gas bars in the Wellhead Protection Area overlay zone.

Fuels can severely compromise drinking water sources; it is known that petroleum loss at fuel outlets via spills and leaks is a common occurrence, and that a small volume of spilled fuel can contaminate a large volume of water. Therefore, the Source Protection Committee is of the opinion that prohibiting future handling and storage of fuel is warranted. The only case where the future handling and storage of fuel is not prohibited is for those facilities that would be regulated by a Municipal Drinking Water Licence.

F4EF-PI The delivery and pumping of fuel into storage tanks is understood to create a high potential for spills. Since the tanks are in close proximity to the municipal drinking water sources the SPC is of the opinion that this policy managing moderate and low threats is necessary.

This prescribed instrument provides an effective way to ensure that the handling and storage of fuel occurs in a manner that best protects drinking water sources.

The Ministry of the Environment provided recommended text for the two policies addressing the handling and storage of fuel via Municipal Drinking Water License (a prescribed instrument). This text did not change the intent of the policy, and the Source Protection Committee adopted the recommended text with minor modifications that were approved by the Ministry.

AirD1EF-EO The Greater Sudbury Regional Airport is located outside of the vulnerable areas. The Source Protection Committee believes that it is highly unlikely that another regional or national airport will be constructed in the future in any of the vulnerable areas. The SPC is of the opinion that the education and outreach policy alone is enough to ensure that the drinking water threat will not become significant, and an additional policy to regulate or prohibit the activity is not necessary. There were no specific pre-consultation comments received for this policy.

One change was made during the review process for the plan. The Ministry of the Environment requested that the policy text be revised so that the body identified to receive the notification associated with this policy be changed to the “airport authority or operator” instead of “Transport Canada”.

Dense Non-Aqueous Phase Liquids (DNAPLs) and Organic Solvents

DOS1E-RMP Risk Management Plans are specific to each property and so can be written in a way to best suit that property and to ensure that the threat activity is adequately managed in the most cost effective way. This was the chosen policy tool by the Committee to manage the existing threats for handling and storage of dense non-aqueous phase liquids and/or organic solvents because it enables the specific threat activity to be adequately regulated.

The number of properties projected to require Risk Management Plans is low (approximately 4) for this threat activity. Risk Management Plans are an effective tool as they can be customized to each property, and a single plan can manage a number of threats on a property.

This policy was modified as a result of pre-consultation comments. The City of Greater Sudbury requested that consideration be given as to whether training is available for employees who handle dense non-aqueous phase liquids and organic solvents for the Risk Management Plan policy. The Source Protection Committee discussed the comment and decided that training should be made an optional requirement at the discretion of the Risk Management Official on a case-by-case basis.

DOS2F-s57 The prohibition of future handling and storage of dense non-aqueous phase liquids (DNAPLs) and organic solvents will not have an adverse effect upon businesses in the vulnerable areas, as most uses associated with these chemicals are already prohibited in the City of Greater Sudbury Zoning By-law. DNAPLs and organic solvents are highly toxic and can severely compromise drinking water sources; they are extremely difficult and sometimes impossible to remediate once an aquifer is contaminated. The Source Protection Committee is of the opinion that prohibiting future handling and storage of these substances is warranted and provides the best environmental protection for the source water. There were no specific pre-consultation comments received for this policy.

DOS3EF-EO An education and outreach program will enable the City to provide information to all businesses and residents in the vulnerable areas, helping ensure that DNAPLs and organic solvents are handled, stored and disposed of properly. This education and outreach program will also support the other DNAPLs and organic solvents policies, in particular risk management plans for existing activities and the prohibition of future.

For storage of 25L and under for both types of substances, education and outreach is the only policy. The SPC is of the opinion that the education and outreach policy alone is enough to ensure that the drinking water threat will not become significant, and an additional policy to regulate or prohibit the activity is not necessary. There were no specific pre-consultation comments received for this policy.

DOS4EF-SA A review of available household hazardous waste disposal options for the residents of the City of Greater Sudbury will lead to the optimization of the existing system (if necessary), resulting in increased proper disposal of hazardous materials such as DNAPLs and organic solvents. There were no specific pre-consultation comments received for this policy.

2.3 SALT & SNOW POLICIES

Sa1EF-EO An education and outreach program will enable the City to provide information to all residents, businesses, institutions and contractors who may be applying and/or storing salt and/or storing snow, helping ensure that salt is used and stored appropriately and that snow is stored appropriately. An education and outreach campaign was the most efficient policy tool to help manage this threat for the thousands of household properties which are significant for this threat activity. An increased level of awareness and understanding will help to decrease sodium and contaminant loading into municipal drinking water sources. The Source Protection Committee is of the opinion that this policy, along with the other 6 sodium-related policies, will adequately address the threat in the Ramsey Lake Issues Contributing area and other vulnerable areas where the threat is significant. There were no specific pre-consultation comments received for this policy.

Sa2EF-SA The Source Protection Committee supports the City of Greater Sudbury's Salt Management Plan, and wishes to both acknowledge it and also to ensure that the protection of municipal drinking water sources is included and prioritized in the Salt Management Plan. This is a low cost policy to ensure that the City's application and storage of road salt is undertaken in a manner that best protects sources of municipal drinking water. There were no specific pre-consultation comments received for this policy.

Sa3EF-RMP Risk Management Plans are to be used to manage the application of road salt and the storage of snow. The plans are specific to each property and so can be written in a way to best suit that property and to ensure that the threat activity is adequately managed in the most cost-effective way. The Risk Management Plans will also take into consideration the best management practices that a landowner may already be undertaking. Application of road salt is known to exist on approximately 17 properties with parking lots greater than 1 hectare in size where the threat is significant – if there are other properties in the vulnerable areas where the threat is occurring then these properties will also be required to have a risk management plan. There were no specific pre-consultation comments received for this policy.

Sa4E-RMP Risk Management Plans to manage the handling and storage of road salt are specific to each property and so can be written in a way to best suit that property and to ensure that the threat activity is adequately managed in the most cost-effective way. The Risk Management Plans will also take into consideration the best management practices that a landowner may already be undertaking. The City of Greater Sudbury currently has plans to build a sand/salt storage structure at the Frobisher Public Works Depot; this requirement in the Risk Management Plan is not an unplanned capital cost. There were no specific pre-consultation comments received for this policy.

Sa5F-s57 The Source Protection Committee is of the opinion that prohibiting future handling and storage of road salt is the most efficient way to address this threat activity. This policy complements and builds upon the existing Zoning By-law which restricts related land uses in Wellhead Protection Areas (Section 4.42.1). Prohibition will provide the best environmental protection for the drinking water sources. There were no specific pre-consultation comments received for this policy.

Sa6F-SA The Source Protection Committee is aware that there are designated snow dump areas in the City of Greater Sudbury that are outside of the vulnerable areas; this policy supports the location of those facilities. The committee is concerned primarily with facilities where snow is transported from a variety of sites (roadside and parking lot clearing) and the accumulation of contaminants is greater. Run-off from the storage of snow (snow melt) may contain a concentration of chemicals that are a threat to municipal drinking water. Prohibition eliminates the potential threat from establishing a snow melt facility (snow dump) in the vulnerable areas in the future.

This policy was changed from a land use planning policy to a specify action policy as a result of pre-consultation comments from the City of Greater Sudbury, the Ministry of the Environment and the Ministry of Municipal Affairs and Housing. All three bodies commented that snow dumps are not traditionally a land use, and therefore land use planning was not an appropriate tool to use. The policy as re-written allows the City more flexibility in implementing the policy.

2.4 SEWAGE POLICIES

S1EF-SA The Source Protection Committee supports the *Ontario Building Code* septic system mandatory maintenance inspection program in municipal drinking water source vulnerable areas. Under the Ontario Building Code, principal authorities (the Sudbury and District Health Unit in the GSSPA) are required to undertake on-site sewage system maintenance inspections for those areas where septic systems are significant drinking water threats by October 2016 (e.g., within five years of the Assessment Report being approved by the Ministry of the Environment). This ongoing program of regular inspections was developed to correct malfunctioning septic systems, mitigating the significant threat.

The policy was modified as a result of comments received during pre-consultation. The Sudbury and District Health Unit requested that the phrase “if known” be added to the policy text in regards to the requirement to prioritize inspections based on the septic systems’ age. The Source Protection Committee accepted this change in recognition that the age of older septic systems is often not available – prior to the 1970s (the *Environmental Protection Act* and subsequently the *Building Code*) the installation of septic systems did not require recording.

The Ministry of Municipal Affairs and Housing noted that the inspection guidelines it has developed do not form part of the *Building Code*. Reference to these guidelines was removed from the policy text as it was deemed unnecessary.

S2EF-EO The education and outreach program will ensure that homeowners with septic systems in the vulnerable areas receive important information about how best to maintain their system, helping to reduce the cumulative impact of improperly functioning septic systems. This education and outreach program will complement the on-site sewage system maintenance inspection program policy (#S1EF-SA). There were no specific pre-consultation comments received for this policy.

S3F-PI Prescribed instruments will be used to manage the threat of future sewage works. This policy complements and builds upon the existing Zoning By-law which restricts land uses allowed in Wellhead Protection Areas (Section 4.42.1). The Source Protection Committee is of the opinion that these sewage threats are highly unlikely to be, and should not be, sited in the most vulnerable areas. This policy applies only to those areas with a vulnerability score of 9 or higher, which was chosen by the Committee to best protect the source.

The policy was modified as a result of comments received during pre-consultation. The Ministry of Municipal Affairs and Housing noted that land use planning is not an appropriate mechanism to prohibit certain types of servicing or infrastructure. The Ministry of the Environment and the City of Greater Sudbury commented that combined sewers are not a land use and therefore could not be prohibited via land use planning. The land use planning part of the policy was therefore dropped and this prohibition will rely solely on the Environmental Compliance Approval process for sewage works.

S4EF-PI The Source Protection Committee believes that all existing and most future large scale sewage infrastructure can be managed through Ontario’s existing protocols, regulations, and requirements. This avoids regulatory burden and overlap and is an effective way to manage the threat.

There were no specific pre-consultation comments received for this policy. During the first public consultation period, a public group questioned as to whether this policy applies to stormwater infrastructure - this policy does apply to all sewage threats, including stormwater infrastructure. A slight text revision was added to clarify.

S5F-LUP The Source Protection Committee supports the restriction of severances that would result in the installation of new septic systems in WHPA A and B with a vulnerability score of 10. This policy extends this prohibition to the IPZ 1 areas with a vulnerability score of 10.

This policy was modified as a result of consultation comments from the Ministry of the Environment and discussion amongst the Source Protection Committee and input from the City of Greater Sudbury. It was determined to keep the section of the policy that prohibits the severing of lots in WHPA A and B and IPZ 1 that would result in new septic systems being installed in those areas. The other parts of the policy that related to small areas on the south shore of Ramsey Lake were removed entirely.

The latter parts referred to City policies that allowed for unserviced lots to install on-site domestic septic systems within very specific parameters. To keep this section, the policy needed to be reworded to express the content of the CGS’s policy (e.g. it was not permissible to refer directly to the City’s Official Plan/Zoning By-Law) and this could have resulted in unnecessary administrative difficulties for the City. Also, these sections of policy will remain the Official Plan and Zoning By-Law and therefore the policy was deemed redundant.

S6EF-SA The Source Protection Committee supports the updated Sewer Use By-law and is of the opinion that it will contribute to improved water quality in municipal drinking water source vulnerable areas. As a result of pre-consultation comments received from the City of Greater Sudbury, one threat that is not relevant to the sewer use by-law was removed (storage of sewage). The Ministry of the Environment also provided suggested text that was adopted.

S7F-LUP This policy will allow the CGS to better manage storm water on site and encourage the adoption of innovative storm water management techniques, leading to improved water quality in the vulnerable areas. This policy and policy S9EF-SA complement each other – both recognize the City of Greater Sudbury’s ongoing work and also require the City to further develop its capacity to adopt cutting edge Low Impact Development and green infrastructure techniques.

This policy was modified based on pre-consultation comments from the City of Greater Sudbury, the Ministry of the Environment and the Ministry of Municipal Affairs and Housing. The City and MOE noted that the policy as originally written was too vague and clarification was required. MMAH recommended that the SPC work with the City to confirm that the policy as written could be implemented.

S8EF-EO Education & Outreach targeting residential and business property owners is important because the cumulative impact of these parties’ actions can have a large effect on the quality and quantity of storm water runoff. There were no specific pre-consultation comments received for this policy.

S9EF-SA The Committee is requiring the City of Greater Sudbury to provide a Stormwater Management Strategy. The Source Protection Committee recognizes the City’s efforts to manage storm water in the Ramsey Lake watershed. The intent of this policy is to ensure that storm water management in the Ramsey Lake watershed protects municipal drinking water as well as possible.

This policy was modified based on pre-consultation comments from the City of Greater Sudbury. The City requested that the timeline for the strategy be increased from one to five years. The Source Protection Committee agreed that this was reasonable.

During the consultation period the Committee received a letter from the general public requesting that the timeline for submission of the stormwater strategy be changed from 5 years to 2 years. However, the Committee chose to keep the 5 year timeline as per the draft plan. The annual progress reports, as required by the monitoring policy, will provide

details on progress towards completion. The City of Greater Sudbury also indicated that these progress reports will include information on decisions taken and projects/development applications modified based on a concern for Ramsey Lake as a drinking water source and in step with the strategy and the anticipated projects that will stem from the strategy.

2.5 WASTE POLICIES

W1EF-RMP The Committee chose risk management plans to manage the threat of some existing and future waste disposal sites. This policy is meant to capture those instances when a waste facility is exempt from a Certificate of Approval / Environmental Compliance Approval under the *Environmental Protection Act*. Risk management plans were the only regulatory policy tool available to properly manage this threat activity.

Risk Management Plans are specific to each property and so can be written in a way to best suit that property and to ensure that the threat activity is adequately managed in the most cost-effective way. There were no specific pre-consultation comments received for this policy.

Comments on this policy were received from the Ministry of the Environment during the review of the proposed SPP. Policy W3F-LUP which prohibited future waste disposal sites within the meaning of Part V of the *Environmental Protection Act* would have inadvertently prohibited small scale waste related activities. The Source Protection Committee decided that these activities would be better managed instead of prohibited and policy W1E-RMP was broadened to include future threat activities.

W2E-PI Prescribed instruments were the chosen policy tool to address the threat of existing waste disposal sites. This is a low cost and effective policy that builds on existing administrative processes. The Source Protection Committee is of the opinion that waste disposal sites are highly unlikely to be sited in the vulnerable areas - the policy complements and builds upon the existing Zoning By-law which restricts land uses allowed in Wellhead Protection Areas (Section 4.42.1). There were no specific pre-consultation comments received for this policy.

W3F-PI Future waste disposal sites that require approval under the *Environmental Protection Act* are prohibited where they would be significant drinking water threats for the following reasons:

- The predominant land uses in the applicable vulnerable areas are not compatible with waste disposal sites.
- Current land designations and zoning do not permit new waste disposal sites in the wellhead protection areas (Section 4.42.1 of the Official Plan).
- This is a low cost and effective policy that builds on existing administrative processes.
- Areas exist outside of the vulnerable areas that are better suited to this land use.
- Waste disposal sites, especially landfills, always generate leachate that could contaminate ground and surface water.

There were no specific pre-consultation comments received for this policy.

Comments on this policy were received during the MOE review of the proposed Source Protection Plan. The initial policy W3F-LUP which prohibited future waste disposal sites within the meaning of Part V of the *Environmental Protection Act* would have inadvertently prohibited small scale waste related activities, such as service stations or laboratories, that the committee decided would be better managed than outright prohibited. Policy W1 was altered to accommodate both existing and future threat activities. W4F-PI was renumbered to W3F-PI.

2.6 WATER QUANTITY POLICIES

WQ1EF-SA The intent of this policy is to build on existing or planned City projects.

- a budget request for a water efficiency plan has already been approved (March 2011 presentation to finance committee)
- an aquifer monitoring program has been established and is crucial for better understanding aquifer level and optimizing operations
- an Environmental Assessment Report has been completed and includes the construction of a water storage tank, which has been written into municipal capital forecasts and is therefore consistent with planned capital costs
- Efficiency and conservation in this policy refer to both water consumption and to water replenishment (ie maintaining aquifer recharge in the Local Area)

The City of Greater Sudbury has many existing programs that help alleviate stress to water quantity and this policy will ensure the continuation of these. This policy should be cost effective since all programs are existing or planned activities.

During pre-consultation, the City of Greater Sudbury had requested that the number of policies be reduced and that more flexibility be added. Multiple water quantity policies were condensed into this one policy and considerable flexibility was added in accordance with the *Clean Water Act* and guidance from the Ministry of the Environment.

WQ2EF-LUP The Source Protection Committee's intent for this the policy is to ensure that future settlements do not create unmanageable stress on the municipal water supply from the Valley aquifer. Development should be managed in the Local Areas to ensure that aquifer recharge for the municipal wells is not reduced.

Financial impact should be minimal because the Official Plan updates to the model will only need to be run when Official Plan updates are required, which is currently once every five years. Running the model for the Official Plan update could potentially be incorporated into a scheduled Water and Wastewater model update or calibration.

The City of Greater Sudbury requested some minor changes during the pre-consultation period that were all incorporated.

WQ3EF-PI The Source Protection Committee believes that the permit to take water prescribed instrument is an effective way to help manage existing and future threats.

The policy requires that the MOE demonstrate that future water takings do not become significant threats. According to the MOE Technical Rules, the only way to demonstrate the existence or absence of a significant threat is through the water budget modeling process; therefore this policy assumes that the Tier Three water budget model would

need to be re-run to implement this policy.

During pre-consultation for this policy, the City of Greater Sudbury requested that the policy exempt the renewal of municipal permits to take water. No pre-consultation comments were received from the Ministry of the Environment.

2.7 TRANSPORTATION POLICIES

T1EF-SA The Committee created a strategic action policy to address the threat of transportation of hazardous substances (liquid fuels, sulphuric acid and septage). Updated Spills Action Centre information and procedures that incorporate the municipal drinking water vulnerable areas where a threat is or would be a significant, moderate or low threat, would help improve local response to a spill. It is important that the agencies that respond to these situations have up-to-date information and procedures that would help improve local response to a spill. There were no specific pre-consultation comments received for this policy.

T2EF-SA The main purpose of adding signs to these vulnerable areas is to make emergency responders immediately aware that they are in a vulnerable area for a drinking water source and that special consideration should be given to spill containment and clean-up. Signs designating the location of vulnerable areas will also remind residents and inform visitors about the sensitivity of the area.

This signage program is a province-wide initiative that will use consistent messaging and images across the participating source protection areas. During the pre-consultation process, the Ministry of Transportation (MTO) provided recommended text to ensure consistency across the province's Source Protection Areas and Regions. This text did not change the intent of the policy, and the Source Protection Committee adopted the revised text with minor modifications that were approved by the Ministry. The accompanying education and outreach initiative that is mentioned in the policy will be developed and delivered by the province (Ministry of the Environment).

During pre-consultation the Municipality of Markstay-Warren noted that their municipality should be added as an implementing body to this policy; this change was incorporated.

Comments on this policy were received from the Ministry of the Environment during the review of the proposed SPP by the Director of the Source Protection Programs Branch. The MOE suggested removing certain words to align with the approved provincial policy text and adding an associated monitoring policy for the education and outreach portion of the policy (M18).

T3EF-SA Updated City of Greater Sudbury and Municipality of Markstay-Warren emergency management plans will improve local response to a spill or accident. The policy will also help ensure that persons involved with emergency planning in the City of Greater Sudbury and the Municipality of Markstay-Warren are aware of the municipal drinking water source

protection vulnerable areas.

During pre-consultation the Municipality of Markstay-Warren noted that their municipality should be added as an implementing body to this policy; this change was incorporated.

T4EF-PI Prescribed instruments were the best policy choice to manage the threat of transportation of hazardous substances (septage). The addition of the vulnerable areas into the spill contingency plans would help to raise awareness of the vulnerable areas and drinking water source protection. It is important that persons engaging in these threat activities be aware of the location of vulnerable areas for the protection of source water.

There were no specific pre-consultation comments received for this policy. During consultation for the Draft Plan the Ministry of the Environment requested that wording be adjusted to allow flexibility for the review of prescribed instruments and determining the most appropriate terms and conditions. This policy was modified to allow for this flexibility with regards to contacting the Spills Action Centre in the case of a spill.

Comments on this policy were received during the MOE review of the proposed Source Protection Plan. It was suggested that the policy be broadened to allow flexibility for implementation. The policy was thus revised to allow this flexibility; and the first paragraph was added to the text in order to reaffirm the intent of the policy.

2.8 ISSUES WATER QUALITY MONITORING POLICY

MI1EF-M The monitoring of the presence of sodium and phosphorus in Ramsey Lake will help the Source Protection Authority to determine if the policies addressing these issues are effective (e.g. if the issues are improving over time – that is if the concentrations of sodium and phosphorus are decreasing).

The policies addressing these include those for the agriculture, sewage, salt and snow, and waste threats.

There were no specific pre-consultation comments received for this policy. During public consultation a stakeholder group commented that a phosphorus budget should be included as part of this monitoring policy. The Source Protection Committee considered requiring the City to undertake a phosphorus budget for Ramsey Lake but felt that it would be too costly given that it is not certain if there is enough data available for this exercise to provide useful information.

2.9 MONITORING POLICIES

M1-M18 The *Clean Water Act* requires monitoring for any policy that addresses a significant drinking water threat. Monitoring policies are intended to track and measure whether or not the Source Protection Plan policies are being implemented.

The Source Protection Plan includes policies that require and/or request information from implementing bodies be given to the Greater Sudbury Source Protection Authority in order to facilitate the preparation of annual progress reports to the Ministry of the Environment.

Depending on the policy, the implementing bodies are required or asked to provide information on a one-time or annual basis.

There were no specific pre-consultation comments received for these policies. Comments on policies M4, M9 and M11 were received from the MOE during their review of the proposed Source Protection Plan. It was suggested that flexibility be added to these policies. Some of the required reporting requirements for the implementing bodies were changed to become optional. The overall intent of the monitoring policies remain the same.

3.0 SUMMARY OF CONSULTATION COMMENTS

This section provides a summary of comments received during the consultation periods and how comments affected development of the policies.

3.1 PRE-CONSULTATION ON DRAFT POLICIES

The Source Protection Committee consulted on the draft source protection policies with the parties that would be responsible for their implementation, in accordance with Ontario Regulation 287/07. Customized notices were sent to all of the parties, with a request for comments. More details on this process can be found in Appendix C of the Source Protection Plan.

The explanatory document must contain a summary of any comments received as a result of requesting written comments from these persons or bodies during the notification process and an explanation of how these comments affected the policies in the plan.

Some specific comments from the pre-consultation period are included in Section 2, accompanying the rationale for the relevant policy. Below are the general pre-consultation comments that apply to more than one policy.

The Ministry of the Environment

The Ministry of the Environment supported the use of complementary land use planning policies and prescribed instrument policies to prohibit significant drinking water threats. The Ministry recommended that the policies use more direct language that prohibits the activity instead of the issuance of Environmental Compliance Approvals. The Ministry of the Environment also requested that the timeline for policies using existing prescribed instruments be extended from two to three years with some further flexibility as per a prioritized review of Environmental Compliance Approvals that govern significant drinking water threat activities. The Source Protection Committee deemed these recommendations to be reasonable and they were subsequently incorporated into the policies.

The Ontario Ministry of Agriculture, Food and Rural Affairs

The Ministry of Agriculture, Food and Rural Affairs (OMAFRA) indicated that it is supportive of prohibiting agricultural activities (with the exception of pasturing and grazing) in WHPA A and IPZ 1 since this is consistent with the requirements under the *Nutrient Management Act*. It is the Ministry's opinion that grazing and pasturing can be managed in these zones using nutrient management practices where the soil depth is greater than 30 cm and where the livestock density is < 1 NU/acre. The Ministry also suggested that agricultural activities can be managed outside of WHPA A. These comments were considered by the Source Protection Committee, however, based on local soil characteristics and the

amount of near-surface or exposed bedrock, municipal well and intake conditions, and findings from the Walkerton Inquiry the proposed policies have not been changed.

The Source Protection Committee believes that it is not appropriate in our area to apply to land and store large volumes of contaminants in close proximity to the municipal drinking water supplies due to the short time of travel and the thin overlying protective soil layer. Additionally, prohibiting these activities in WHPA B areas with a vulnerability score of 10 (the highest possible score and the same score as the WHPA A areas) is reasonable and warranted. The same logic applies to the Ramsey Lake Issue Contributing Area – all of the agricultural threats are associated with both phosphorus and sodium.

Although the *Nutrient Management Act* was enacted following the Walkerton tragedy to address setbacks to wells from manure storage and spreading, farms that have yet to be phased in, farms that generate less than five nutrient units per year and pastures do not require any setbacks to wells under the NMA. In the GSSPA vulnerable areas there are no farms that generate more than five nutrient units.

The Ministry of Municipal Affairs and Housing

The Ministry of Municipal Affairs and Housing recommended that the Source Protection Committee work with the City of Greater Sudbury to ensure that policies using land use planning tools could be implemented. These comments led the Source Protection Committee to decide to modify some of the policies using land use planning tools. Policy S7F-LUP was rewritten to require changes to the City of Greater Sudbury's Official Plan instead of its site plan control policy.

3.2 CONSULTATION ON THE DRAFT PLAN

The Ministry of the Environment

During consultation on the draft plan the Ministry of the Environment provided comments that related to specific policies – these comments are included in the rationale for those policies in Section 2.

The Ministry noted that S5F-LUP and S8F-LUP directly referred to other policy documents in their text and that this was not permissible. After discussions between City of Greater Sudbury and Nickel District Conservation Authority staff and discussion by the Source Protection Committee, the committee decided to remove policy S8F-LUP altogether, and to modify policy S5F-LUP. Details about policy S5F-LUP can be found in Section 2.

Policy S8F-LUP voiced support for the City of Greater Sudbury's existing development setback and natural vegetated shoreline buffer zone. City staff expressed that this policy could result in administrative difficulties for the City, and that those parts of the Official Plan and Zoning By-law would remain in those documents into the future (and therefore the policy was unnecessary).

The Ontario Ministry of Agriculture, Food and Rural Affairs

The Ontario Ministry of Agriculture, Food and Rural Affairs provided comments that were similar in nature to comments provided during the pre-consultation period. OMAFRA is not supportive of prohibiting agricultural activities outside of WHPA A and IPZ 1. The Committee had previously discussed this topic and was of the opinion to continue using s. 57 as a tool to prohibit future agricultural threat activities in WHPA A and B. Rationale for this decision is listed in section 3.1 of this document.

OMAFRA suggested that the SPC add a policy using the prescribed instruments under the *Nutrient Management Act* (Nutrient Management Plans/Strategies). Existing farms will have a risk management plan and while expansions may be permitted at the discretion of the Risk Management Official, it is anticipated that large expansions that could lead to farms becoming phased in under the NMA will not be allowed. If perchance it was allowed by the Risk Management Official, then it is anticipated that the farm would then have both a prescribed instrument and a risk management plan that would complement each other, unless an exemption from a RMP is requested under O. Reg 287/07. If no exemption is sought, then the farm would have both a prescribed instrument and a risk management plan, but the two documents would not contain duplicative information. No policies related to prescribed instruments were added to the source protection plan as it was felt to be unnecessary at this time.

OMAFRA also suggested adding text to further explain how the City of Greater Sudbury zoning by-law prohibits fuel storage in WHPA B. Text to the explanatory document for policy F3F-s57 was added.

Technical Standards and Safety Authority / Ministry of Consumer Services

During pre-consultation the Technical Standards and Safety Authority (TSSA) indicated that the proposed policy (#T5EF-SA) contained in the Greater Sudbury Source Protection Plan would not fit within TSSA's current mandate or funding scheme. The SPC decided to retain the policy in light of ongoing communications between the Ministry of the Environment, Ministry of Consumer Services (MCS) and TSSA.

Subsequent communications from MOE, MCS and TSSA have made it clear that this policy would not be implemented as there would be no legal obligation for TSSA to do so at this time. This is because the threat policy only applies to moderate and low threats. (The transportation of liquid fuel can only be a moderate and low threat in the Greater Sudbury Source Protection Area as defined in the Assessment Report). Therefore, the SPC has decided to remove the policy from the proposed plan.

General Public

During the consultation period for the Draft Source Protection Plan, the Source Protection Committee received 12 written comments. Eight of these were received at the two open houses and the remaining four were faxed or received by email.

Most comments addressed items that were already within the Source Protection Plan or were outside the scope of the *Clean Water Act*. Some comments were taken into consideration for policy alterations, and discussion of these can be found within the specific policies listed in section 2.0 of this document. No substantive policy changes were made as a result of public comments.

All written comments received a response from the Source Protection Committee and a notice of the public consultation period for the Proposed Source Protection Plan.

3.3 CONSULTATION ON THE PROPOSED PLAN

The Proposed Source Protection Plan was posted for public consultation from July 9, 2012 to August 10, 2012. Comments on the Plan were sent to the Source Protection Authority and attached to the Plan when submitted to the Ministry of the Environment on August 20, 2012.

Review comments on the proposed plan were received from the Ministry of the Environment Source Protection Programs Branch on April 16, 2013. There were ten comments and all suggested policy changes by the MOE were adopted by the Source Protection Committee after discussion at the May 9, 2013 SPC meeting. Final review comments from the Ministry of the Environment were received October 15, 2013. They were discussed by the SPC at their November 27, 2013 meeting, and revisions were made to address identified problems. All policy changes are discussed within the relevant policies in section 2.0 above.

3.4 PRE-CONSULTATION AND CONSULTATION ON THE REVISED PROPOSED PLAN

The 2013 updates to the Source Protection Plan required pre-consultation with implementing bodies for the water quantity policies. This consultation period with the Ministry of the Environment and the City of Greater Sudbury extended from late April to November 2013. Pre-consultation comments are included in the relevant policy description text in section 2.0 above.

A public consultation period went from December 16, 2013 to February 7, 2014. Notices to all required agencies were sent out, as well as notification to all landowners that may be affected by the updates to the source protection plan. The general public was notified via advertisements in the newspaper and on the internet and was invited to submit comments. No comments were received during the December to February consultation period.

4.0 SUMMARY OF FINANCIAL CONSIDERATIONS

When drafting policies for the Source Protection Plan financial considerations played an important role in determining which policy tool(s) would be used.

The City of Greater Sudbury

Approximately 2/3 of the policies are directed to the City of Greater Sudbury. These policies have been developed by the Greater Sudbury Source Protection Committee with a keen eye towards keeping costs reasonable. The policies use existing administrative processes, City by-laws and programs wherever possible. Examples of some existing processes, by-laws, and programs include:

- Salt Management Plan;
- Emergency management operations;
- Sewer Use By-Law;
- Water quality monitoring in Ramsey Lake; and
- Restrictions regarding land uses in Wellhead Protection Areas.

Official Plan and Zoning By-law changes will be undertaken by the City of Greater Sudbury and it is anticipated that the cost for these changes will be borne internally and will not require the allocation of significant additional resources.

Some of the policies will require the creation of new programs and processes. In particular, the City of Greater Sudbury is responsible for ensuring that a Risk Management Official office exists in order to meet the requirements of the Part IV policies (Section 57 Prohibition, Section 58 Risk Management Plans, and Section 59 Restricted Land Uses). The Source Protection Committee is of the opinion that the policies using the Part IV tools were necessary in order to properly manage certain threat activities.

The City of Greater Sudbury will also be responsible for the development and implementation of the Education and Outreach policies. The City of Greater Sudbury undertakes some education and outreach currently; these existing programs should help reduce the financial impact of the Source Protection Plan education and outreach policies.

The Municipality of Markstay-Warren

The Municipality of Markstay-Warren will be responsible for implementing three policies in a small portion of their western lands and for reporting to the SPA on the implementation of these policies. Those policies and the associated monitoring policies are:

- Ag1EF-EO (Education and Outreach for some agricultural threats) and monitoring policy M4
- T2EF-SA (Signage along major roads for the transportation of hazardous substances threat) and monitoring policy M8

- T3EF-SA (Update Emergency Management Plan for the transportation of hazardous substances) and monitoring policy M15

It is anticipated that the costs of these policies will not be significant and can be absorbed by the Municipality because they apply to limited vulnerable areas and it is expected that the Municipality will also be able to work with the City of Greater Sudbury to achieve cost efficiencies.

The Sudbury and District Health Unit

The Sudbury and District Health Unit is the principal authority responsible for the mandatory on-site sewage system inspection program in the GSSPA. The costs for this program would have been incurred regardless of the policy in the Source Protection Plan – the inspection program is required under the *Ontario Building Code* and applies to all areas to which the source protection program applies.

The Ministry of the Environment

The Ministry of the Environment will be responsible for the review and possible amendment of a number of its prescribed instruments under the *Clean Water Act*. Where possible the Source Protection Committee chose to utilize prescribed instruments because they are an existing regulatory mechanism and therefore an efficient policy tool. The Source Protection Committee considers the potential cost to the Ministry to be relatively low because the prescribed instruments are already required under other legislation and there is trained staff in place that would normally review new applications.

The following is a list of those threats and related licences or permits used in the Greater Sudbury Source Protection Plan:

- The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act* (Certificates of Approval / Environmental Compliance Approvals);
- The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage (Certificates of Approval / Environmental Compliance Approvals);
- Application of pesticide (permits issued under the *Pesticide Act*);
- Handling and storage of fuel (Municipal Drinking Water Licence);
- An activity that takes water from an aquifer or a surface waterbody without returning the water taken to the same aquifer or surface waterbody (permit to take water); and
- The transportation of hazardous substances along transportation corridors (Certificates of Approval / Environmental Compliance Approvals).

The Ministry of Transportation

The Ministry of Transportation is responsible for the implementation of one policy (T2EF-SA). This policy requires the Ministry to work with the City of Greater Sudbury and the Municipality of Markstay-Warren to install information signs at the side of highways and municipal roads that border of vulnerable areas.

The Ministry of Transportation was involved with the development of this policy in partnership with the Ministry of the Environment, a number of other Source Protection Committees and Conservation Authorities staff. This partnership ensured that a standardized policy was adopted by the various Source Protection Committees and that it was written in such a way as to be as resource effective as possible.

5.0 SUMMARY OF CLIMATE CHANGE CONSIDERATIONS

At the time of writing the Assessment Report, it was decided that there was not enough data available to determine how conclusions reached in the report may be affected by climate change over the subsequent 25 years. Therefore, the policies in the Source Protection Plan were not informed by future climate change projections. The Source Protection Authority and the Source Protection Committee are involved in several projects to stay abreast of developments in climate change in an effort to incorporate climate change into future drinking water source protection technical assessments and policy development.

The Greater Sudbury Source Protection Area Assessment Report contains summary climate data from 1955-2004. The Greater Sudbury Source Protection Area Assessment Report contains summary climate data from 1955-2004. The Tier 2 water budget and stress assessment includes analyses for two-year and ten-year drought scenarios under both existing and future pumping rates. The Tier 3 water budget and risk assessment includes three scenarios for ten-year drought under existing and future land cover in addition to existing and allocated (existing + committed +planned) pumping rates.

The Risk Management Measures Evaluation (RMME) process was completed as part of the process of updating the source protection plan for water quantity policies. The GSSPA completed a provincial pilot project on the RMME process as part of this update, and was directed to focus on other aspects of the process rather than on climate change modeling. It is the mandate of a second provincial pilot project being conducted by the Credit Valley, Toronto Region and Central Lake Ontario Source Protection Region (Orangeville) to incorporate climate change modeling. Therefore, future climate change projections were not used to inform the water quantity policies.

Nickel District Conservation Authority staff participated on the provincial technical advisory committee for the development of training modules for the assessment of hydrologic effects of climate change in drinking water source protection. This material provides guidance on incorporating climate change into hydrological assessments such as those done for the water budget component of the drinking water source protection program.

The Conservation Authority added a climate change station to its monitoring network as part of the Canada Ontario Agreement (CAO) Climate Change Monitoring Program. Monitoring began in 2013 and is one of eight provincial sites to collect data for climate change monitoring purposes. In addition to the previously collected data (e.g. stream flow and precipitation) the following parameters are also being collected now: groundwater levels, groundwater quality, surface water quality, air temperature, water temperature, soil moisture and turbidity. The Nickel District Conservation Authority leads the Greater Sudbury Climate Change Consortium, which focuses on community strategies for adapting to climate change.