

## 7. Proposed policy ideas

For discussion purposes, this section of the report provides examples of policy ideas that could be applicable to the subject threat in the Thames-Sydenham and Region. It is not an exhaustive list. Each policy tool is discussed separately in the table below.

<b>Threat:</b>	The Handling and Storage of DNAPL
<b>Sub- Threat</b>	The handling of DNAPL The storage of DNAPL
<b>Circumstances</b>	<ul style="list-style-type: none"> <li>• No limit to the volume of DNAPL on site.</li> <li>• Stored or handled above, at or above, below grade, or a portion below grade.</li> <li>• For the purposes of these policies trace amounts in other products are not considered a drinking water threat.</li> <li>• All areas where the storage and handling of DNAPL are considered a significant drinking water threat (i.e. within WHPA-A, B or C).</li> <li>• Handling is considered to include handling during manufacturing, disposal and all other uses of DNAPL.</li> </ul>

Policy Tool	Policy ideas
Education and Outreach	<ul style="list-style-type: none"> <li>• Education and outreach policies should be included for handling and storage of DNAPL to complement incentive and regulatory approaches.</li> <li>• Incorporate source water messaging into existing education and outreach programs whenever possible.</li> <li>• Implement an outreach and education program intended to help inform affected landowners of threats to the source of local municipal drinking water.</li> <li>• Educate businesses about the importance of proper handling and hazardous waste disposal.</li> <li>• Encourage businesses (especially smaller ones) to dispose of hazardous waste properly.</li> <li>• Raise awareness of the location of WHPA / IPZ zones through various means including roadside signs.</li> <li>• Encourage the use of more environmentally friendly landscaping products rather than products which may contain DNAPL (such as creosote or pentachlorophenol used in some treated wood products) in designated areas (WHPAs). Promote the benefits of the more environmentally friendly products.</li> <li>• Encourage proper disposal of landscaping materials which contain DNAPL such as creosote or pentachlorophenol rather than burning these treated wood products.</li> <li>• Improve on existing or develop new education programs on the importance of local hazardous waste collection, for household products and help identify means to minimize threats including providing a list of possible hazardous chemicals and where they might be found.</li> <li>• Improve on the promotion of hazardous waste collection.</li> <li>• Incorporate Environmental aspects into Employee training.</li> </ul>

	<ul style="list-style-type: none"> <li>Educate rail operators in the location of the WHPA where DNAPL are significant threats to reduce the storage of creosote railway ties within the areas where DNAPL are a significant threat.</li> </ul>
Incentive Programs	<ul style="list-style-type: none"> <li>Recommend that Ontario Drinking Water Stewardship Program continue to adequately fund risk mitigation practices for DNAPL threats.</li> <li>Encourage long-term support of existing incentive programs.</li> <li>Encourage new incentives to reduce risk of significant threats such as: <ul style="list-style-type: none"> <li>Process / technology review / revision evaluations and BMPs;</li> <li>Relocation of chemical storage;</li> <li>Secondary containment, reducing individual tank volumes; and,</li> <li>Replacing Underground Storage Tanks for Above Ground Storage Tanks</li> </ul> </li> <li>Provide Incentives to municipalities to make hazardous waste disposal more accessible.</li> <li>Encourage municipalities to establish or participate in incentive programs to manage significant threats.</li> <li>Consider incentive programs to encourage replacement of landscaping products DNAPL products with more environmentally friendly products.</li> </ul>
Land Use Planning and Municipal Act tools	<ul style="list-style-type: none"> <li>Include in Municipal Plans a Zoning By-law to address the creation / conversion of any structure which would result in the production, sale, handling or storage of DNAPL.</li> <li>Encourage “alternative” corridor access (truck) routes around rather than through areas where DNAPL are considered significant threats.</li> <li>Expansion or replacements of properties with existing significant threats may be permitted if the expansion allows for a reduction in risk over the existing.</li> <li>Expansion of current land use may not be permitted if the expansion causes the activity to become a significant threat.</li> <li>Prohibit new land uses that handle and store significant quantities of DNAPL.</li> <li>Incorporate SWP into future municipal service expansion plans.</li> <li>Encouraging municipalities to reflect risk management in their bylaws.</li> <li>Use Restricted Land Uses to identify land uses that are associated with the handling and storage of DNAPLs in areas where these activities are or would be a significant drinking water threat.</li> </ul>
Prescribed Instruments	<ul style="list-style-type: none"> <li>In areas where DNAPLs are significant threats new Certificates of Approval (C of A) for waste management activities shall have conditions which do not allow the storage or handling of specified DNAPL.</li> <li>MOE shall review and revise where necessary existing C of A to manage the threat through conditions in the C of A so that the significant threat ceases to be significant</li> <li>These policies need to be linked to those under waste management.</li> </ul>
Municipal Operations/ Infrastructure	<ul style="list-style-type: none"> <li></li> </ul>

Land Securement	<ul style="list-style-type: none"> <li>•</li> </ul>
Risk Management Plans (RMPs)	<ul style="list-style-type: none"> <li>• Require risk management plans for activities involving the handling and storage of DNAPLs in areas where this activity is a significant threat. The plan should address items of operating practices including containment and management, proper waste disposal, employee training as well as a spill contingency plan. Other areas to be covered may include monitoring of groundwater, appropriate alarm system and automatic valves to ensure containment of leaks and spills, periodic testing of storage systems, secondary containment systems as well as other items. Require annual inspection as part of plan.</li> <li>• Rely on industry best practices for risk management measures as well as those included in the Risk Management Catalogue.</li> <li>• Conduct formal site inspection on a prescribed schedule within areas where storage and handling of DNAPL are a significant threat of private sector occupants to identify potential threats within their properties. May be combined with Fire Department visits. Inspection to be done in conjunction with education and outreach programs.</li> <li>• Encourage municipalities to enact sewer use by-laws which require that floor drains in areas where Organic Solvents are being handled or stored are not directly connected to sanitary or storm sewers and conduct inspections to make sure that floor drains are properly contained and that materials collected are properly disposed.</li> </ul>
Prohibition	<ul style="list-style-type: none"> <li>• Prohibit new handling and storage of DNAPLs in WHPA-A, B and C.</li> <li>• Although the committee considered prohibiting existing storage and handling where it would be a significant threat when a suitable risk management plan is not able to be negotiated it was determined that an activity could not be subject to risk management and prohibition in the same area.</li> <li>• It is preferred to develop policy which will give municipalities the flexibility to prohibit this significant threat where they see fit.</li> </ul>
Restricted Land Uses	<ul style="list-style-type: none"> <li>• Flag those land uses that are associated with the handling and storage of DNAPLs as restricted land uses in WHPAs where these activities are or would be significant drinking water threats so that municipal planners and building officials consider implications of the proposed development.</li> </ul>
Other – specify action	<ul style="list-style-type: none"> <li>• Encourage municipalities to improve access to hazardous waste collection within the areas where DNAPL are significant threats. Regular collection is preferred over infrequent depot days.</li> </ul>

**Threat:** The Handling and Storage Organic Solvents

**Sub- Threat** The storage of organic solvents

Handling is also considered a threat as indicated in the name of the activity

**Circumstances**

- The volume circumstances for Organic Solvents are divided into four groups:
  1. less than 25 L,
  2. between 25 L and 250 L,
  3. between 250 L and 2500 L, and
  4. greater than 2500 L of organic solvent stored at a location.
- In general, the greater the volume of material stored, the greater the inherent risk to drinking water.
- Storage of the organic solvent at or above, below or partially below grade.
- Handling is also identified as a threat however the circumstances are the same as for storage with volumes and locations referring to the storage.

Policy Tool	Policy ideas
Education and Outreach	<ul style="list-style-type: none"><li>• Education and outreach policies should be included for the handling and storage of Organic Solvent threats to complement incentive and regulatory approaches.</li><li>• Incorporate source water messaging into existing education and outreach programs whenever possible.</li><li>• Implement an outreach and education program intended to help inform affected landowners of threats to the source of local municipal drinking water.</li><li>• Educate businesses about the importance of proper handling and hazardous waste disposal.</li><li>• Encourage businesses (especially smaller ones) to dispose of hazardous waste properly.</li><li>• Raise awareness of the location of WHPA / IPZ zones through various means including road side signs.</li><li>• Improve on existing or develop new education programs on the importance of local hazardous waste collection, for household products.<ul style="list-style-type: none"><li>○ help identify means to minimize threats</li><li>○ provide a list of possible hazardous chemicals and where they might be found.</li></ul></li><li>• Improve on the promotion of hazardous waste collection.</li><li>• Incorporate Environmental aspects into Employee training</li></ul>
Incentive Programs	<ul style="list-style-type: none"><li>• Recommend that Ontario Drinking Water Stewardship Program continue to adequately fund risk mitigation practices for Organic Solvent threats.</li><li>• Encourage long-term support of existing incentive programs .</li></ul>

	<ul style="list-style-type: none"> <li>• Encourage new incentives to reduce risk of significant threats such as: <ul style="list-style-type: none"> <li>○ Process / technology review / revision evaluations and BMPs;</li> <li>○ Relocation of chemical storage;</li> <li>○ Secondary containment, reducing individual tank volumes; and,</li> <li>○ Replacing UST for AST.</li> </ul> </li> <li>• Encourage municipalities to establish or participate in incentive programs to manage significant threats.</li> </ul>
Land Use Planning and Municipal Act tools	<ul style="list-style-type: none"> <li>• Include in Municipal Plans a Zoning By-law to address the creation / conversion of any structure which would result in the production, sale, handling or storage of Organic Solvents.</li> <li>• Revise existing municipal zoning plans that are not in keeping with vulnerable area designation under SWP.</li> <li>• Encourage “alternative” corridor access (truck) routes around rather than through areas where handling and storage of Organic Solvents are considered significant threats.</li> <li>• Expansion or replacement of properties with existing significant threats will be permitted if the expansion allows for a reduction in risk over the existing.</li> <li>• Expansion of current land use may not be permitted if the expansion causes the activity to become a significant threat.</li> <li>• Prohibit new land uses that would handle and store Organic Solvents where that storage would be a significant drinking water threat.</li> <li>• Incorporate SWP elements into future municipal service expansion plans.</li> <li>• Use Restricted Land Uses to identify land uses that are associated with the handling and storage of Organic Solvents in areas where these activities are or would be a significant drinking water threat.</li> </ul>
Prescribed Instruments	<ul style="list-style-type: none"> <li>• New Certificates of Approval (C of A) for waste management activities associated with Organic Solvent in the areas where the handling and storage of Organic Solvents are significant threats shall have conditions which do not allow the storage or handling of specified Organic Solvents.</li> <li>• MOE shall review and revise where necessary existing C of A to manage the threat through conditions in the C of A so that the significant threat ceases to be significant.</li> <li>• These policies need to be linked to those under waste management.</li> </ul>
Municipal Operations/ Infrastructure	<ul style="list-style-type: none"> <li>•</li> </ul>
Land Securement	<ul style="list-style-type: none"> <li>•</li> </ul>
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	<p>annual inspection as part of plan.</p> <ul style="list-style-type: none"> <li>• Rely on industry best practices for risk management measures as well as those included in the Risk Management Catalogue.</li> <li>• Conduct formal site inspection on a prescribed schedule within areas where storage and handling of Organic Solvents are a significant threat of private sector occupants to identify potential threats within their properties. May be combined with Fire Department visits. Inspection to be done in conjunction with education and outreach programs.</li> <li>• Encourage municipalities to enact sewer use by-laws which require that floor drains in locations where Organic Solvents are being handled or stored are not directly connected to sanitary and/or storm sewers and conduct inspections to make sure that floor drains are properly contained and that materials collected by the floor drains are properly disposed.</li> </ul>
Prohibition	<ul style="list-style-type: none"> <li>• Prohibit new handling and storage of Organic Solvents in areas where the handling and storage of Organic Solvents is a significant threat.</li> <li>• Although the committee considered prohibiting existing storage and handling where it would be a significant threat when a suitable risk management plan is not able to be negotiated it was determined that an activity could not be subject to risk management and prohibition in the same area.</li> <li>• It is preferred to develop policy which will give municipalities the flexibility to prohibit this significant threat where they see fit.</li> </ul>
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Other – Specify action	<ul style="list-style-type: none"> <li>• Encourage municipalities to improve access to hazardous waste collection within the areas where Organic Solvents are significant threats. Regular collection is preferred over infrequent depot days.</li> </ul>