



**Source Protection Guidance
for Proposed Developments
in Wellhead Protection Areas
in The Regional Municipality of York**

June 2021

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1.0 Introduction and Background

This guidance is provided in order to improve consistency and implementation of the legislated requirements related to drinking water source protection. It is intended for new land uses and for future potential significant threats to drinking water. The purpose of this document is to assist proponents of new developments to determine what is required by York Region's Risk Management Office to protect the Region's drinking water sources. It takes into consideration current requirements of the Regional Official Plan, Oak Ridges Moraine Conservation Plan, Provincial Policy Statement and Source Water Protection (i.e. Clean Water Act) initiatives as they relate to protection of municipal drinking water sources.

Under York Region's Official Plan, Source Water Impact Assessment and Mitigation Plans (SWIAMPs) are required in specified circumstances to develop a plan to manage risk of potential impacts associated with activities related to certain land uses. These activities could occur as a result of new land uses involving activities that may contaminate municipal groundwater supplies or threaten the quantity of water available in the municipal groundwater supplies. Reviews of site specific development applications for potential impacts to municipal wells are completed by York Region's Risk Management Office.

There are also activities outlined in the Clean Water Act (CWA) that pose a potential threat to municipal water supplies and require a Risk Management Plan (RMP). The purpose of the CWA is to protect existing and future sources of drinking water. The Act empowers specified groups to prevent threats from being or becoming significant, and it is the intention of the Region to work with proponents of development applications to ensure their sites are operated in a way that meets the requirements of the Act now and in the future. Using this type of approach will help protect the drinking water supply and reduce the impacts on proponents that could occur if risk management takes place later in the development process.

Source Water Impact Assessment and Mitigation Plans and Risk Management Plans, the "Plans", for the purposes of this document should be prepared by a hydrogeologist that is a licensed Professional Geoscientist or Professional Engineer, unless otherwise stated by the Risk Management Office.

Persons licensed by the Professional Geoscientists of Ontario (PGO) or the Professional Engineers of Ontario (PEO) should sign and stamp a completed report which is submitted to York Region. For issues of professionalism and data integrity, the hydrogeologist should be directed to guidelines and codes of ethics maintained by their respective associations. Pre-consultation with the Risk Management Office at York Region is strongly encouraged.

2.0 Source Protection Regulatory Requirements

Legislation and Policies

Some policies and legislation that apply to the protection of drinking water supplies in York Region:

- **Provincial Policy Statement (2014)**
- **Oak Ridges Moraine Conservation Plan (2017)**
- **Regional Official Plan (2010)**
- **Clean Water Act (2006)**

Provincial Policy Statement (2014)

The Provincial Policy Statement (PPS) provides broad policy direction on matters of provincial interest related to land use planning and development. It sets the policy foundation for regulating the development and use of land. The PPS states that planning authorities shall protect, improve or restore the quality and quantity of water by implementing necessary restrictions on development and site alteration to protect all municipal drinking water supplies.

Oak Ridges Moraine Conservation Plan (2017)

The Oak Ridges Moraine Conservation Plan (ORMCP) provides land use and resource management direction for the land and water within the Oak Ridges Moraine (ORM). Municipal planning decisions must conform to the Plan, which takes precedence over municipal official plans. The Plan includes prohibitions of some new land uses within Wellhead Protection Areas (WHPAs) on the ORM.

Regional Official Plan (2010)

The Regional Official Plan (ROP) was updated in 2010 to expand ORMCP policies to off-moraine WHPAs and to cover any additional categories of threats outlined by the Clean Water Act (CWA). One of the objectives in the ROP is to ensure that municipal well water quality and quantity is protected from contamination from incompatible land uses. ROP policies prohibit or require SWIAMPs for specified land uses associated with groundwater quality and groundwater quantity threats.

. ROP Amendment 5 (ROPA5) updated sections of the ROP relevant to Source Protection. The ROP is undergoing a Municipal Comprehensive Review to update it. Find updated information about [York Region's ROP](#).

Clean Water Act (2006)

In October 2006, the Ontario government passed Bill 43, the *Clean Water Act, 2006*, (CWA) to protect drinking water at the source as part of an overall commitment to human health and the environment. The Act received royal assent on October 19, 2006 and the first phase of regulations came into force on July 3, 2007. The source water protection work stems from the Walkerton Inquiry recommendations in 2002 where Justice O'Connor indicated the **"first barrier to the contamination of drinking water involves protecting the sources of drinking water."**

York Region, through continued collaboration with our Source Protection Watershed Region partners and the Province of Ontario, undertook a number of technical studies to provide the necessary background for the development of Source Protection Plans (SPP) for all the vulnerable drinking water protection areas, one for the Lake Simcoe watershed and one for the Toronto and Region watershed. Further information can be found at the following websites:

Credit Valley, Toronto and Region, and Central Lake Ontario (CTC) Source Protection Region (www.ctcswp.ca)

South Georgian Bay Lake Simcoe (SGBLS) Source Protection Region (www.ourwatershed.ca)

A SPP is a series of mandatory and voluntary policies developed in consultation with the local community to help prevent contamination of municipal drinking water sources. The CTC and SGBLS Source Protection Committees ensured municipalities, farmers, businesses, industries, property owners, First Nations, community groups, health officials, provincial ministries and the public all had an opportunity to be involved in policy development. SPPs must contain policies to address potentially significant drinking water threats. For an activity to be considered a significant threat, it must be taking place in a vulnerable area around a municipal well or a vulnerable area upstream of a municipal water treatment plant intake pipe.

The SPPs were approved by the Minister of Environment, Conservation and Parks in 2015 and now all planning decisions must conform to it. York Region's ROP is being updated to reflect the SPP policies. Current ROP policies were developed to protect municipal drinking water supplies. York Region Staff will work with proponents to identify all new requirements.

3.0 How to Determine Regulatory Conformity

The most recent version of the ROP and SPPs should be consulted for detailed information on what land uses and/or activities require a SWIAMP, RMP or are prohibited. The SPPs generally prohibit most future activities that would be

significant threats under the CWA. However, RMPs may be required for future activities such as:

- Application of agricultural source material to land
- Storage of agricultural source material
- Application of non-agricultural source material
- Handling and storage of non-agricultural source material
- Application of commercial fertilizer to land
- Handling and storage of commercial fertilizer
- Application of pesticide to land
- Handling and storage of pesticide
- Use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard. O. Reg. 385/08, s. 3

The ROP generally prohibits new land uses associated with activities listed above and below that occur in WHPAs on the ORM. Off the ORM, it generally requires SWIAMPs for many new land uses associated with activities above, and new land uses in WHPAs that involve the manufacture, storage and use of:

- Construction and agricultural equipment
- Inorganic chemicals
- Petroleum-based fuels or solvents
- Road Salt
- Hazardous or liquid industrial waste
- Waste disposal sites
- Contaminants identified by the Province
- Organic soil conditioning sites
- Snow
- Pathogen threats such as stormwater management ponds and rapid infiltration basins (prohibited within 100 metres of a municipal well)

Please refer to the relevant legislation for additional guidance on determining regulatory conformity and speak with York Region Water Resources staff.

4.0 Preparing a Plan - Identifying Risks

During the initial stage of preparing a SWIAMP or RMP, it is important to know what major land uses and activities are of concern for a particular property with

respect to York Region's interest in the maintenance and protection of the municipal water supply. An understanding of these issues will assist in completing the necessary information. It is also important for the municipal reviewer to have a means of identifying the major threats and circumstances associated with a particular property. Consultation between the York Region Risk Management Office and the proponent is an important part of the initial stage to ensure that the major threats are identified.

It is the objective of York Region to require a Plan, where applicable, during the earliest possible stage of the development review process (e.g. local Official Plan amendment). This requirement for a Plan will also be carried through other stages of the process (i.e. secondary plan, subdivision plan, zoning application and site plan, as applicable). The proponent could be asked to develop a conceptual Plan early in the plan review process since it is often difficult to finalize all aspects of the development until later. It could then be a condition of the site plan approval that the Plan be finalized before final approval of the site plan.

Plan Components

The following information is recommended for a complete SWIAMP or RMP and could be used to outline the report's table of contents. However, the information required may be dependent on the type of project and its location in the WHPA. For example, low risk developments far from a well may require a less detailed SWIAMP than developments near a well. In these cases a simplified SWIAMP could be prepared using York Region's template (see appendix). Plans should be accompanied with supporting documentation including figures, tables, charts, and supporting calculations and analysis. A reference list should also be provided at the end of the report to indicate the source of information relied upon and methods used. Sufficient information should be provided to facilitate a review of the hydrogeological analysis and conclusions.

The proponent should collect information using the following legislation and associated documents: York Region Official Plan, Clean Water Act and Oak Ridges Moraine Conservation Plan. The proponent should check with York Region staff in the Water Resources Group's Risk Management Office before preparing the documents so that all requirements are met.

Introduction/Background

- Identification of the site location including street address, UTM (or northing and easting), roll/tax number, township/municipality, lot, concession, size of property, area to be developed /disturbed
- Contact information for the land owner and/or person engaged in the activity or land use, if they are different people (e.g. tenant versus landlord)
- Summary of objectives and purpose of the Plan

- Description of the planning context and relevant policies and/or legislation
- Outline of the scope of the Plan and the specific issues

Site Description

- Identification of the study area
- Definition of the proposed undertaking or development
- Identification of the type of site servicing
- Description of construction/site disturbance activities
- Provision of the development plan or draft plan
- A map of the property identifying the location of relevant things (e.g. location of fuel tanks)

Local Setting

- Identification of existing and, if available, historic land uses including land cover types; if information from Environmental Site Assessments (ESAs) is available, this should be provided
- Description of site conditions; this could include things such as a description of buildings, ponds, chemical storage tanks, etc.

Identification of Vulnerable Areas

- Identification of the property with respect to municipal drinking water sources and their associated protection areas (Wellhead Protection Areas and Intake Protection Zones)^[1]
 - Mapping of the property in relation to vulnerable areas (e.g. WHPA and IPZ maps)
- Identification of the property with respect to vulnerability scoring maps for the vulnerable areas^[1]
 - Mapping of the property in relation to vulnerability scores (e.g. VS maps)
- Identification of the property with respect to the Oak Ridges Moraine Conservation Plan Area

Anthropogenic Transport Pathways

- Identification of anthropogenic (i.e. man-made) transport pathways from ground surface to the relevant aquifers (e.g. existing, unused or abandoned water wells; pits and quarries; sewers)

^[1] [See existing maps](#), they are available in York Region's Official Plan and/or in the Assessment Reports prepared by Toronto and Region Conservation Authority and Lake Simcoe Region Conservation Authority, under the Clean Water Act, 2006, or at yorkmaps.ca.

Summary of Potential Drinking Water Quality Impacts and Threats

- Summary of prescribed drinking water threats, as per the Clean Water Act, 2006, and/or ROP potential hydrological impacts will be occurring at the site (e.g. fuel storage)
- Summary of applicable drinking water threat circumstances, as per the Clean Water Act Tables of Drinking Water Threats (November 2009 or most recent version) (e.g. underground storage of more than 25 litres of organic solvent containing carbon tetrachloride)
- Rating of the identified threats as low, moderate, or significant, based on the Clean Water Act Tables of Drinking Water Threats^[2].
- Preparation of a summary table to display the results of the threats assessment (see sample in Table 1).

[2] The Upper Thames River Conservation Authority has developed a web-based Threats Analysis Tool to simplify the use of Provincial Tables of Drinking Water Threats. Here is the link to website to access this tool: swpip.ca/Threats)

Summary of Drinking Water Quantity Impacts and Threats

- Identification of water quantity threats, such as dewatering or reduction in recharge
- Results of any subsurface investigation to identify any need for dewatering and/or groundwater depressurization and where applicable, submit a detailed dewatering plan prepared by a qualified professional
- An evaluation of third party dewatering currently taking place around the site (using MECP well logs and Permits To Take Water), an evaluation of any potential contributions from the underlying aquifer, and an understanding of the geology and hydrogeology at the site (e.g. location of confining layers). It is recommended that the proponent arrange for a pre-consultation meeting with the applicable regulatory agencies, including York Region and the MECP to assist in this process
- Preparation of a summary table to display the results of the threats assessment

5.0 Preparing a Plan - Risk Mitigation

Every RMP and SWIAMP must include proposed measures to appropriately manage risks to drinking water as detailed in the sections below.

Proponents can also refer to TRCA and MECP's Risk Management Measures Catalogue for additional information at: <http://trcagauging.ca/RmmCatalogue>

5.1 Risk Management Measures

- Development of Risk Management Measures (RMMs) for water quality impacts and threats that include:
 - Information on industry standards, regulations, best management practices, policies, etc. that are in place to help prevent contamination from the land use
 - Copy of proponent's environmental management policies and commitments
 - Details on how the chemical or material of concern will be stored so that it does not cause contamination
 - Information on how the site will be maintained to ensure it operates as intended/designed and spillage/contamination is prevented
 - Fire containment and prevention details
 - Security information
 - Procedures for proper disposal of dangerous/ hazardous/ contaminated materials
 - Procedures for training staff on how to implement the plan
 - Cost/benefit analysis that justifies risk management measure(s) chosen
- Development of RMMs for water quantity impacts and threats that include:
 - Dewatering plan
 - Low Impact Development techniques

Monitoring

Although not a requirement in every case, for some threats, a monitoring program may be a viable management measure.

- Development of a monitoring program and plan to keep records on-site and available upon request by York Region. For example, this could include sampling monitoring wells, procedure and schedule for qualified persons hired by proponent to inspect the site and all related contamination prevention measures to ensure they are functioning as intended/designed, etc.
- Definition of a schedule to review and update the monitoring plan on a regular basis

Communication and Implementation Plan

- Description of a Communication Plan for communications between proponent/consultant and York Region Environmental Services outlining submission timelines for documents (e.g. monitoring reports) to the Region
- Implementation schedule for measures

Appendices

- Well records and borehole logs
- Pump test and associated water level information
- In-situ hydraulic conductivity testing results
- Soil analysis
- Water balance calculations
- Supporting information for stored chemicals
- Copies of relevant planning policies, agency guidelines
- Document should be signed and dated by relevant people
- List references

5.2 Emergency/ Spill Response Plan

- Develop a Spill Response Plan to prevent adverse effects. For example, this should include information such as emergency contacts in the event of a spill, large dewatering or fire (e.g. companies that will conduct cleanups such as vacuum trucks, contact numbers for the Region, plan to remediate adverse effects, etc.)
- Definition of a schedule to review and update the Spill Response Plan

5.3 Termination of Plan

Include a closure section outlining what will be done if the proponent moves and the Plan no longer applies. As part of the Plan, they would be required to provide York Region with notice that they are moving. If they are moving out of a WHPA, a termination of the Plan would occur, or if they are moving into another, then the Plan will be re-assessed for the new location and amended as needed. This way York Region is aware they are leaving, knows where they are going, and can put the site on a “for follow-up” list and the information will then be used for tracking purposes.

5.4 Reliance Statement

The Plan should be addressed to “The Regional Municipality of York”, or a reliance letter to the Region should be included with the Plan.

The following are suggestions for preparing reliance letters:

Send a draft first. Before sending a final reliance letter, send the Region a draft letter so that the Region can provide feedback. This will potentially avoid needing to amend or re-issue a reliance letter that has already been issued but is not acceptable to the Region.

Specify the subject matter. The Region requires the right to rely on the information and data, representations, assumptions, findings, opinions and recommendations. To satisfy this requirement, the letter must contain a statement to this effect and must list the Plan and the reports relevant to development of the Plan. The owner or consultant should summarize the information in the Plan into an opinion stating that the Plan will not result in harm to the source water.

Limitations. York Region will not accept any limitation of liability of the owner or consultant or any limitation on the legal remedies available to the Region. The reliance letter may not incorporate by reference limitations contained in previous reports or other documents without providing a copy of the limitations; all limitations must be specific and relate particularly to the Region's reliance.

Confidentiality. The information provided in the Plan is not considered confidential and will be handled in accordance with the *Municipal Freedom of Information and Protection of Privacy Act, 2001* and may be disclosed to the public upon request. If you wish information to be considered confidential it must be marked as such at the time of submission. Please be aware that even information marked as confidential may still be subject to disclosure if it does not meet the exemptions under MFIPPA.

Adherence with the above guidelines will facilitate the Region's acceptance of reliance letters and minimize delays.

References

Department of Environment, Australia. 2009. Environmental Guidelines for Preparation of an Environmental Management Plan.

Gartner Lee Limited, 2004: Permit-to-Take-Water Application Feasibility and Effects Assessment of Yonge Street Aquifer, Draft Report, Prepared for the Regional Municipality of York, 57p. with four Appendices.

Ministry of Health. 2005: *A Framework on How to Prepare and Develop Public Health Risk Management Plans for Drinking-water Supplies*. Wellington, New Zealand: Ministry of Health.

Turner, M , 1977: Oak Ridges Aquifer Complex, Ministry of the Environment, Water Resources Branch, Major Aquifers in Ontario Hydrogeologic Map 78-2, Scale 1:100,000.

Sibul, U., K.T. Wang and D. Vallery, 1982:Groundwater Resources of the Duffins Creek-Rouge River Drainage Basins, Ministry of the Environment , Water Resources Branch, Water Resources Report 8, 109 p. with 16 Maps.

Vallery, D.J., K.T. Wang and V.I. Chin, 1982:

Water Resources of the Holland and Black River Basins-Summary, Ministry of the Environment, Water Resources Branch, Water Resources Report 15, nine p. with seven sheets.

Woerns, N. 2009: Hydrogeological review Guidance/Checklist Document, Prepared for the Regional Municipality of York, 11 p.

DISCLAIMER

THIS GUIDE ASSISTS READERS AS THEY CONSIDER DIFFERENT APPROACHES TO MANAGE OR REDUCE THE IMPACT OR PROBABILITY OF THE RISK POSED BY LAND USES AND/OR DRINKING WATER QUALITY THREATS TO A “RESIDUAL RISK” WHICH IS JUDGED TO BE “TOLERABLE” OR “ACCEPTABLE”.

IT IS UNDERSTOOD THAT THE RISK ASSOCIATED WITH A LAND USE AND/OR THREAT IS NOT ELIMINATED BY USING THIS GUIDE, BUT THE PROBABILITY OF IT BEING OR BECOMING SIGNIFICANT MAY LESSEN TO A CERTAIN DEGREE.

Users of this guide are encouraged to use their professional judgment and to consider local or site specific circumstances.

CONSULTATION WITH THE YORK REGION RISK MANAGEMENT OFFICE IS STRONGLY ENCOURAGED. WWW.YORK.CA/PROTECTINGWATER

This Guide is intended to support in preparing a Plan to manage or reduce the risk from a land use and/or drinking water threat. This Guide is not intended to provide advice or recommendations in relation to any specific circumstance. The Regional Municipality of York assumes no liability for any actions taken by the users.

While every effort has been made to ensure the accuracy of the information in this Guide, it should not be construed as legal advice or relied on as a substitute for the Regional Official Plan, and/or the *Clean Water Act, 2006* and its associated regulations.

Appendix A - Abbreviations Used

<u>Acronym</u>	<u>Full Words</u>
ASM	Agricultural Source Material
CWA	Clean Water Act
MECP	Ontario Ministry of Environment, Conservation and Parks
NASM	Non-Agricultural Source Material
ORM	Oak Ridges Moraine
ORMCP	Oak Ridges Moraine Conservation Plan
RA	Risk Assessment
RD	Risk Determination
RMM	Risk Management Measures
RMP	Risk Management Plan
ROP	Regional Official Plan
SPP	Source Protection Plan
SWIAMP	Source Water Impact Assessment and Mitigation Plan
WHPA	Wellhead Protection Area

Appendix B - Simplified SWIAMP Template

Source Water Impact Assessment and Mitigation Plan

This document is a Source Water Impact Assessment and Mitigation Plan (SWIAMP) for the protection of municipal wells and wellfields. It reflects current requirements of the Regional Official Plan.

This SWIAMP will be in effect on the date it is approved by York Region.

The activities listed in Section 2 below will be carried out in accordance with this SWIAMP.

Section 1: Site Information

Business Name: _____

Incorporated Name (If applicable): _____

Property Address (the "Site")

Street No. & Name: _____

Unit No.: _____

Community: _____

Municipality: _____

Postal Code: _____

IPACS ID: _____

Significant Business Threat ID: _____

Roll Number: _____

Business Directory ID: _____

Land Use: Retail Commercial ☐

Government/Institutional ☐

Industrial ☐

Other ☐

Business Description: _____

Primary Contact Information

Title: _____

(same as site address) ☐

Person engaged in activities _____

Name: _____

Email: _____

Mailing Address:

Street No. & Name: _____

Unit No.: _____

Community: _____

Municipality: _____

Postal Code: _____

Phone Number: _____

Fax Number: _____

Alternate Contact

(same as site address) ☐

Title: _____

Person engaged in activities _____

Name: _____ Email: _____

Mailing Address:

Street no. & Name: _____ Unit No.: _____

Community: _____ Municipality: _____

Postal Code: _____

Phone Number: _____

Fax Number: _____

Property Owner

(same as site address) ☐

Title: _____

Person engaged in activities _____

Name: _____ Email: _____

Mailing Address:

Street no. & Name: _____ Unit No.: _____

Community: _____ Municipality: _____

Postal Code: _____

Phone Number: _____

Fax Number: _____

Source Protection Area Details

Source Protection Area: _____

Source Protection Region: _____

Municipal Wellfield and Well: _____

Wellhead Protection Area (WHPA): _____

Vulnerability Score: _____

Section 2: Chemicals at the Site

Information on chemical products handled, manufactured and/or stored on the Site, the maximum volume present at any one time, and how the chemical products are handled and/or stored

Chemical Type and/or Product Name:	# of containers	Container Type	Container Volume (L)	Net Volume Stored (L)	MSDS
1) _____	_____	_____	_____	_____	☐
2) _____	_____	_____	_____	_____	☐
3) _____	_____	_____	_____	_____	☐
4) _____	_____	_____	_____	_____	☐
5) _____	_____	_____	_____	_____	☐
6) _____	_____	_____	_____	_____	☐
7) _____	_____	_____	_____	_____	☐
8) _____	_____	_____	_____	_____	☐
Review Date: _____		Aggregate Volume: _____			

Section 3: Implementation Schedule for Risk Management Measures (RMM)

The SWIAMP must include four mandatory RMMs listed below:

1. Secure containment/storage for all chemicals listed in Section 2
2. Spill / leak response plan to address all chemicals listed in Section 2
3. Spill / leak response kit suitable for the volume of all chemicals listed in Section 2
4. Spill / leak training for any persons handling chemicals listed in Section 2 (including annual refresher training)

Risk Management Measures

	Implementation Schedule
Planned measure:	To be implemented within _____ months (or by _____) and to be maintained.
Planned measure:	To be implemented within _____ months (or by _____) and to be maintained.
Planned measure:	To be implemented within _____ months (or by _____) and to be maintained.
Planned measure:	To be implemented within _____ months (or by _____) and to be maintained.
Planned measure:	To be implemented within _____ months (or by _____) and to be maintained.

Section 4.0 Communications Requirements

- The owner must contact the York Region Risk Management Office within a month of the sale, closure or location move of the business/operations. The owner agrees to disclose to any purchaser the designated requirements as presented in this SWIAMP;
- The owner must contact the York Region Risk Management Office prior to any process change that would increase the volume of chemicals such that the net volume exceeds 500 L (exclusive of waste oil). The RMO can be reached by calling (905) 830-4444 extension 75050, and will determine if amendments to the SWIAMP are required;

Section 5.0 General

- This SWIAMP cannot be transferred to another person without the prior written consent of The Regional Municipality of York RMO or designate.
- This SWIAMP has been agreed to under the authority of the RMO appointed for York Region. This SWIAMP was developed in accordance with the Act.
- The agreement to this SWIAMP and the implementation of the Risk Management Measures within it does not relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement necessary to carry out activities at the Site, including but not limited to obtaining all necessary authorizing instruments.
- The owner will ensure any person undertaking an activity listed under Section 2 is aware of the contents of the SWIAMP and will take reasonable measures to ensure such persons comply with the requirements of the SWIAMP.
- This SWIAMP should be on hand while an activity listed under Section 2 is undertaken.
- Inspections by York Region Risk Management Inspectors will be completed to assess the implementation of this SWIAMP.
- The SWIAMP does not exempt the Site from any additional measures that may be required by the Source Protection Plan.

Declaration

I, the undersigned, hereby declare that I have reviewed the content of this SWIAMP and, to the best of my knowledge, the information contained herein and attached to this SWIAMP is accurate and complete.

Prepared By: _____

Signature (I/we have the authority to bind the corporation)

Date
(DD/MM/YYYY)

<<Name, Position>>

<<Business>>

NOTES

All information in the SWIAMP is subject to the Municipal Freedom of Information and Protection of Privacy Act (MFIPPA). Information may also be provided to other regulatory bodies and/or local municipalities.

Section 9.0 References and Attachments

- Spill Response Plan
- Spill Reporting Form

SPILL RESPONSE PLAN

FOR PROPERTIES WITH RISK MANAGEMENT PLANS WITHIN THE REGIONAL MUNICIPALITY OF YORK

NOTICE: This document provides general information on discharges and spills, but is not to be relied upon as advice on these matters. Users of this Plan should satisfy themselves with respect to their full obligations under environmental and health and safety legislation, engaging technical and legal experts as necessary.

The Regional Municipality of York is not responsible for any damages whatsoever arising from the information in this document or its interpretation.

EMERGENCY CONTACT INFORMATION

**MINISTRY OF ENVIRONMENT,
CONSERVATION AND PARKS
Spills Action Centre (SAC)
1-800-268-6060 or 416-325-
3000**

EMERGENCY – 911

**THE REGIONAL MUNICIPALITY
OF YORK
Risk Management Official – Scott
Lister
1-877-464-9675, extension
75050**

FACILITY SITE SUPERVISOR

Name: _____
Cell
Number: _____

SPILL RESPONSE EQUIPMENT

PERSONAL PROTECTIVE EQUIPMENT

- Appropriate Personal Protective Equipment (PPE) must be worn before a spill can be cleaned up.
- 1. Splash-proof Safety Goggles
- 2. Nitrile Gloves
- 3. Tyvek poly coat suits
- 4. Disposable Respirators
- 5. Hand Wipes

SPILL RESPONSE EQUIPMENT – SPILL KIT

- Spill kits may contain, but are not
- 1. All purpose granular

- limited to, the following items as appropriate to the substances on Site:
- Store spill kit in an accessible area
 - On-site safe must ensure that the contents of the kit are maintained
 - Once seal on spill kit is broken, check contents monthly and record replenish supplies as required.
 - Inspect quality of contents every 5 years, if seal is unbroken.
- absorbent
 - 2. Sorbent Spill Socks
 - 3. Neoprene drain cover
 - 4. Chemical Universal spill pads
 - 5. Disposal Bags with Ties
 - 6. Hazardous material sticker
 - 7. Emergency Response Guide Book (ERG)

SAFETY

- All spilled material should be considered flammable and hazardous until otherwise proven. The spill must be isolated from any possible ignition sources, such as smoking, heaters, welding and grinding activities, and electrical equipment.
- Spill responders must become familiar with the contents of the Safety Data Sheets (SDS) for chemicals used/stored at the Site as part of their spill response training. Specific details on the dangers associated with the materials used on site are available from the SDS.
- Appropriate Personal Protective Equipment (PPE) must be worn before and during spill clean-up measures are performed.

SPILL RESPONSE PROCEDURE

Minor Spill

For the purposes of this document a **minor spill** is defined as a spill that is small enough that it can be safely cleaned up using an emergency spill kit(s), does not spread rapidly and is wholly contained within the building envelope or secondary containment area. Typically it is one that can be contained safely with materials on site and does not threaten to enter the sewer system, travel beyond the boundaries of the building envelope or pose a threat for an adverse effect to the environment, people or plant/animal life.

1. **Respond immediately** to spills that occur at the Site as soon as it is identified.
2. **Check for hazards** (flammable material, noxious fumes, cause of spill). If flammable liquid, turn off engines and nearby electrical sources. If noxious fumes are present, provide ventilation to the spill area.
If serious hazards are present leave area and call 911. When in doubt, consult the SDS for hazards.

3. Put on appropriate **Personal Protective Equipment (PPE)**
4. **Stop the source** of the spill (plug hole, upright the container, shut off valve, etc.).
5. **Notify Supervisor** and advise of the situation and response to be taken.
6. **Contain spill** using contents of spill kit to prevent contaminants from entering any drain or the natural environment (e.g. dyke spill using absorbent socks, lay down absorbent pads or granular absorbent material, and/or place drain covers over floor drains).
7. **Direct spill** away from floor drains, storm sewers, catch basins, sources of ignition (fire hazards), other incompatible chemicals, and pathways to sensitive natural features (e.g. Well Head Protection Area – A)
8. **Clean up spill** by moving dyke of absorbent socks slowly toward the middle of the spill while maintaining the dyke. If absorbent socks or pads are spent and there is still a large quantity of spilled material to be absorbed, place additional absorbent socks, if available, outside the dyke of used absorbent socks. Remove spent absorbent socks/pads/granular and place in the plastic disposal bag in the kit, and place bag in kit container.

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9. Mop the area of the spill with a disposable mop or wipe contaminated surfaces with a damp disposable cloth. Do not flush the area with water.
10. **Dispose of used spill response equipment** by placing contaminated equipment and PPE in a plastic disposal bag inside spill kit/container. Seal and label all containers containing contaminated materials. Contact hazardous waste disposal contractor for pick-up and proper disposal.
11. Follow all regulatory procedures for the reporting of disposal of hazardous waste through the Hazardous Waste Information Network (see www.hwin.ca for more information).
12. **Record spill** in log book on site and complete Spill Reporting Form (Attachment 1) and submit to Supervisor.

Major Spill

For the purposes of this document a **major spill** is defined as a spill that is large enough that it cannot be contained safely with the materials on site and/or threatens to enter the sewer system or travel/leak outside the building envelope or secondary containment system to enter the environment, including groundwater, and may cause an adverse effect to the environment, people or plant/animal life.

1. **Notify MECP Spills Action Centre (SAC)** immediately (1-800-268-6060; fax: 416-325-3011 - open 24 hours a day). The details of the spill are based on the

information available at the time of the call, and are required to be reported to the MECP by O. Reg. 675/98 ss 13(3) and (4), including but not limited to:

- A description of the discharge or spill location (municipal address if possible).
- The date and time the discharge spill was discovered/occurred.
- The name and contact information for those contacted to respond to the discharge.
- The duration of the discharge.
- The pollutant(s) discharged or spilled and quantity of pollutant(s) discharged.
- Relevant information regarding the cause of the discharge.

2. Follow procedures for ‘Minor Spills’ steps 1-7.

3. **Contact a remediation company** to clean up the spill and properly dispose of any hazardous materials from the site.
4. **Barricade the spill area** while maintaining emergency escape routes.
5. **Notify York Region Risk Management Official (RMO)** within 24 hours.
6. **Record spill** in log book on site and complete Spill Reporting Form (Attachment 1) and submit to Supervisor.

GENERAL INFORMATION

Summary of Responsibilities

On-site staff are responsible for the following activities:

1. Ensure every precaution is taken to avoid a spill.
2. Respond to spills of hazardous chemicals, including waste oil and Dense Non-Aqueous Liquids (DNAPLs) to ensure the protection of people, property and the municipal Wellhead Protection Area (WHPA).
3. Follow the Spill Response Plan and any other applicable emergency procedures during the event, as required.
4. Attempt to keep the leak away from floor drains and catch basins, take all reasonable steps to clean up spills, and follow all applicable Procedures and the *Occupational Health and Safety Act*.
5. Meet discharge and spill notification requirements as mandated by the *Environmental Protection Act* (EPA) and the Spill Response Plan.
6. Escalate notification of spill to management staff.
7. Follow up with Spills Action Centre (SAC) that the spill was contained and cleaned.
8. Fill out waste manifest for the recording of disposal of hazardous waste (see www.hwin.ca for more information and registration).

Background – Acts and Regulations

The EPA requires notification to the Ministry of Environment, Conservation and Parks(MECP) when:

1. there is a discharge of a contaminant to the natural environment, out of the normal course of events that causes (or is likely to cause) an adverse effect (section 15(1)); or
2. a spill to the natural environment (Part X).

A spill is a type of discharge, addressed under Part X of the EPA including the definition of a spill, the duty to report a spill, clean-up and accountability. Section 92 of the EPA requires the discharger to report a spill to the MECP the municipality, the owner of the pollutant and others under some circumstances. Section 93 of the EPA indicates that the discharger must contain and clean up the pollutant and restore the spill site to essentially pre-spill conditions where this can reasonably be expected. O. Reg. 675/98 requires that the discharger call the MECP Spills Action Centre (SAC) and provide information on the major spill to the representative. Notification to SAC must be made forthwith when the person knows or ought to know that the pollutant is spilled, meaning as quickly as possible under the circumstances.

Definition of Spill

A spill is considered to be the discharge of a pollutant into the natural environment from or out of a structure, vehicle or other container which is abnormal in quantity or quality in light of all the circumstances of the discharge. A pollutant is a type of “contaminant”, other than heat, sound, vibration or radiation. The duty to report comes into effect when the person(s) having control of the pollutant who spills, or causes or permits a spill of, the pollutant becomes aware of the spill. The duty to clean up comes into effect when a spill of the pollutant is causing or likely to cause an adverse effect and the duty is on the owner of the pollutant and the person having control of the pollutant at the time of the spill.

A Contaminant is defined as any solid, liquid, gas, odour, heat, sound, vibration, radiation or combination resulting directly or indirectly from human activities that causes or may cause an adverse effect.

An Adverse Effect is defined as one or more of:

1. harm or material discomfort to any person
2. injury or damage to property or animal life
3. impairment the quality of the natural environment for any use that can be made of it
4. an adverse effect on the health of any person
5. impairment to the safety of any person
6. rendering any property, plant or animal life unfit for use
7. loss of enjoyment of the normal use of property
8. interference with the normal conduct of business

Training and Education

- Train all new staff on the Spill Response Plan within three months of being hired. Training must, at a minimum, cover hazards associated with chemicals used, PPE to ensure personal safety, and provide staff with sufficient knowledge to appropriately respond to a potential spill on-site.
- Staff must review Spill Response Plan every twelve months.
- Post Spill Response Plan in prominent location where DNAPLs and/or flammable liquids or combustible liquids are stored, handled, processed or used.

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Attachment 1: SPILL REPORTING FORM

Report Date and Time: _____

Reporting Author Name and Position: _____

Reporting Agency Contact Information (For Major Spills): _____
(e.g. SAC, or RMO)

GENERAL INFORMATION	
Spill Date and Time (mm/dd/yyyy hh:mm):	
Facility or Site Name:	
Address of Spill:	
Person Having Control of Material at Time of Spill:	
SPILL INFORMATION	
Type of Material Spilled (e.g. oil, DNAPL, etc.)	
Product Name:	
Quantity of Spilled Material (L):	
Describe How the Spill Occurred:	
Name and Position of Person who Responded to the Spill:	
Describe what actions were taken	

and what materials were used to clean up the spill:	
Spill Response Equipment Used:	
List Details or Possible Effects of Pollution:	Storm sewer affected: ☐ Yes or ☐ No or ☐ Unknown Sanitary sewer affected: ☐ Yes or ☐ No or ☐ Unknown Watercourse affected: ☐ Yes or ☐ No or ☐ Unknown Soil Contaminated: ☐ Yes or ☐ No or ☐ Unknown Other:
How was the waste material disposed of?	
Follow-up actions required:	
Copies of SDS collected and attached (if applicable):	☐ Yes or ☐ No

Notes/Comments:
