



Chemical handling and storage

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Region of Waterloo, Water and Wastewater Services

Supply · Protection · Conservation · Wastewater

regionofwaterloo.ca/water

Section 1: instructions

This worksheet includes beneficial practices for property owners and staff to consider when developing a plan for handling and storing chemicals. Following these practices may help reduce the risk of spills that can be harmful to our drinking water sources.

Before you start

The Region of Waterloo recommends you first confirm the property is not in a wellhead protection area. Properties in wellhead protection areas may be subject to the Grand River Source Protection Plan and may require the negotiation of a Risk Management Plan with the Region of Waterloo. Financial support may also be available to implement the Risk Management Plan.

To find out if the property requires a Risk Management Plan:

1. Go to <http://taps.regionofwaterloo.ca>
2. Click on “Does the Source Protection Plan apply to my property?”
3. Enter the property location
4. Answer questions as prompted
5. Follow instructions on how to proceed

To learn more go to www.regionofwaterloo.ca/SourceProtection.

Create your chemical handling and storage plan

- Complete a property site assessment
 - Complete a visual inspection of the property
 - Use a property site map to include applicable identifiers. Refer to the end of this worksheet for a sample map with possible identifiers.
 - Complete Sections 2, 3 and 4 of this worksheet
- Develop and implement your chemical handling and storage plan
- Review the plan following a spill and annually with your team
 - Are there changes to the property requiring updates to your plan?
 - Does your team require training?
 - How effective was the plan? Can you identify areas for improvement?
- Additional resources available at www.regionofwaterloo.ca/Spills

Section 2: property and contact information

Company name: _____

Property address: _____

Section 3: site assessment

An external professional may be needed to assess the site, operational processes and drains and prepare a report with recommendations to reduce or eliminate the risk to drinking water sources.

Professionals eligible to conduct a site assessment include:

- Professional Engineer (P. Eng.)
- Environmental Professional specializing as a Compliance or Environmental Auditor (EP-CEA)
- Licensed Toxic Substance Reduction Planner licensed by the Ontario Provincial Government

Section 4: beneficial management practices

The following section contains the beneficial management practices that will protect our water and form the basis of your Chemical Handling and Storage Plan. Under each practice indicate the most accurate status and provide additional information in the notes section as follows:

- In place: describe what you are doing or have done and indicate the location on the site map
- Planned: describe how and when you will have the practice in place, and indicate the new location (where applicable) on the site map
- Not practical: describe the reason and provide an alternative practice that can achieve a similar result

Spill prevention and response

1. Remove unknown and unused chemicals

- Not applicable
- In place
- Planned

Notes: _____

2. Store the chemicals in a permanent, secured area with restricted access

- In place
- Planned
- Not practical

Notes: _____

3. Store chemicals in appropriate containers, as identified in the Safety Data Sheets (SDS)

- In place
- Planned

Notes: _____

4. Inspect chemical storage facilities and storage tanks at least once a week

- In place
- Planned

Notes: _____

5. Protect storage areas from all vehicular traffic including, but not limited to, forklifts

In place

Planned

Notes: _____

6. Develop your Spills Plan, including prevention and response measures

- Complete and review your written Spills Plan at least once a year
- Document the completion of each review

In place

Planned

Notes: _____

7. Train staff on Spills Plan, including prevention and response measures

- All staff to complete training initially with annual reviews
- New staff to complete training upon hire
- Document training

In place

Planned

Notes: _____

8. Continuously supervise delivery and transfer of chemicals by personnel trained on Spills Plan

In place

Planned

Notes: _____

9. Place spill kits in accessible locations

- Spill kit content must be appropriate for chemicals, inventoried monthly, and restocked as necessary
- Document spill kit contents and locations

In place

Planned

Notes: _____

Spill containment

Complete the following sections for each applicable storage method at each storage location. Identify each storage location and label on site map.

1. Store and handle chemicals in an area that does not drain into the environment, including storm sewer, sanitary sewer or watercourse

- Includes direct and indirect drainage such as via floor cracks, drains or ditches
- Prevention includes sealing cracked floors, moving chemical storage away from drainage areas, completing drain assessments, covering or decommissioning drainage points
- If moving chemicals to new location, label proposed storage area on the site plan

In place

Planned

Notes: _____

2. Aboveground storage tanks

- Not applicable. Aboveground storage tanks are not used to store chemicals on-site
- Aboveground storage tanks are used on-site (select A or B below)

A. Chemicals are stored in double-walled tanks with automatic leak detection system, corrosion protection, and backflow prevention for tank and associated piping

- In place
- Planned

OR

B. Chemicals are stored in tanks contained within a berm or dyke that can contain at least 110% of the largest tank

- If rainwater is collected, the berm or dyke is considered sewage works under the Ontario Water Resource Act. An Environmental Compliance Approval must be obtained from the Provincial government.
- In place
- Planned

Notes: _____

3. Underground storage tanks

- Not applicable. Underground storage tanks are not used to store chemicals on-site
- Underground storage tanks are used on-site (select A, B, or C below)

A. All underground tanks will be replaced with double-walled aboveground tanks with automatic leak detection systems, corrosion protection, and backflow prevention for tanks and associated piping.

- In place
- Planned

OR

B. Where aboveground storage tanks are not practical, underground storage tanks are upgraded with double-walled underground tanks with automatic leak detection system, corrosion protection, and backflow prevention for tanks and associated piping.

- In place
- Planned

OR

C. At the end of their lifecycle, single walled underground storage tanks will be upgraded to aboveground, double-walled tanks with automatic leak detection system, corrosion protection, and backflow prevention for tanks and associated piping.

- In place
- Planned

Until single-walled tanks are replaced:

- Complete weekly volume checks to ensure the volume in the tanks are equal to what has been added minus what has been removed
- Document volume checks

- In place
- Planned

Notes: _____

4. Containers storing chemicals including tubs, drums, cans or equivalent

- Container stored within a berm, dyke, pallet, tray or other system that can contain at least 110% of the largest container
- If rainwater collected, the berm or dyke is considered sewage works under the Ontario Water Resources Act. An Environmental Compliance Approval must be obtained from the Provincial government

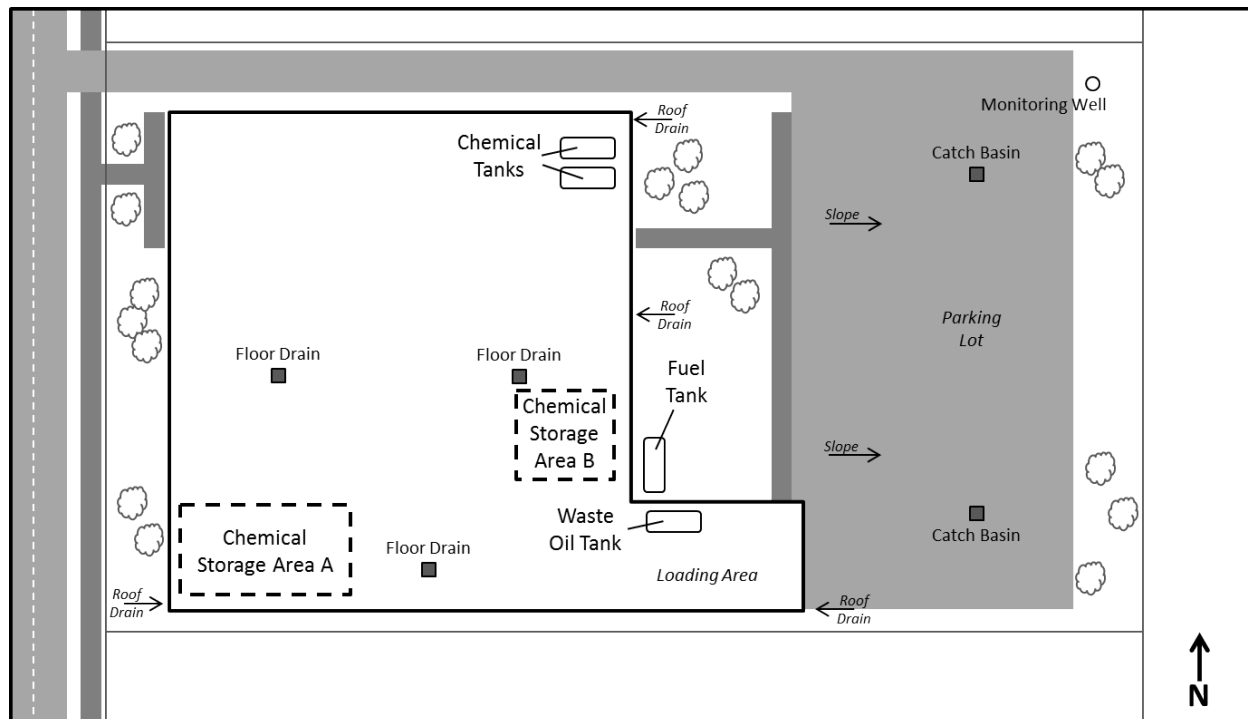
Not applicable. Chemicals are not stored on-site in smaller containers

In place

Planned

Notes: _____

Chemical handling and storage sample map



The map should include the following identifiers (where applicable).

- loading areas
- septic systems
- wells
- direction of surface drainage flow
- site drainage features including catch basins and ditches
- stormwater management ponds and discharge locations
- surface water
- areas of land leased
- chemical storage areas
- areas of vehicular traffic, including forklifts