

DRINKING WATER THREATS FACTSHEET

Establishment, Operation or Maintenance of a Waste Disposal Site

What is the Threat?

Waste disposal sites may be active, inactive (i.e., no longer in use but did not follow a closure plan) or closed. A site is defined as any land, building or structure in connection with the depositing, disposal, handling, storage, transfer, treatment or processing of waste. Operational activities associated with these sites are also included in the definition. Waste includes: ashes, garbage, refuse, domestic waste, industrial waste, or municipal refuse and such other materials as are designated in the regulations under the Environmental Protection Act.



The following types of waste disposal sites have been included:

- Application of untreated septage to land
- Tailings from mines or stored in a pit (Mining Act operations only)
- Land farming of petroleum refining waste: This involves the biodegradation of petroleum refining wastes by naturally occurring soil bacteria by means of controlled application of the wastes to land followed by periodic tilling.
- Landfilling of hazardous waste: Landfilling is the process of the disposal of waste by deposit, under controlled conditions, on land or on land covered by water, and includes compaction of the waste into a cell and covering the waste with cover materials at regular intervals. Hazardous waste includes: hazardous industrial waste, acute hazardous waste chemical (includes commercial waste chemical), hazardous waste chemical, ignitable waste, corrosive waste, reactive waste (except radioisotope as per the Canadian Nuclear Safety Commission), pathological waste, leachate toxic waste, and PCB waste.
- Landfilling of municipal waste: Municipal waste is any waste, whether or not it is owned, controlled or managed by a municipality (except hazardous waste, liquid industrial waste or gaseous waste) and solid fuel that is derived in whole or in part from waste.
- Landfilling of solid, non-hazardous industrial or commercial waste: Non-hazardous industrial waste is industrial waste that is not liquid industrial, hazardous or asbestos waste. Commercial waste includes asbestos waste.
- Liquid industrial waste injection into a well: Liquid industrial waste defined by O. Reg. 347 is both liquid waste and industrial waste that has a slump of more than 150 mm using the Test Methods for the Determination of Liquid Waste (slump test) set out in Schedule 9 of the Regulation.
- PCB waste storage: PCB (any monochlorinated or polychlorinated biphenyl) waste is defined by O. Reg. 362 as PCB equipment, PCB liquid, or PCB material.
- Storage of hazardous waste at disposal sites: Defined in the Ministry of the Environment and Climate Change (MOECC) Drinking Water Threat Tables as hazardous waste or liquid industrial waste stored at or below grade that has the potential to discharge waste into surface water or groundwater.
- Storage of certain hazardous wastes: Includes small quantities of hazardous waste, the storage of empty hazardous waste containers, and the storage of residues or contaminated materials from the cleanup of a small spill.



Waste disposal sites do not apply to the storage or disposal on a private property, unless the situation becomes a nuisance (Director's decision), or where the activity would fall under the Ontario Water Resources Act (e.g., sewage disposal, water quality impacts).

Where is this Activity a Threat?

Existing and historic waste disposal sites may be identified within Intake Protection Zones (IPZ) and Wellhead Protection Areas (WHPA). A number of sites are more likely to be present within the Highly Vulnerable Aquifers (HVAs) and Significant Groundwater Recharge Areas (SGRAs) as they generally cover a greater geographical area. In most instances, any waste disposal site (particularly medium to large operations) located within a WHPA-A or B or IPZ-1 could constitute a significant threat. Acceptance of hazardous waste or industrial waste in small quantities, if stored above or partially above grade, increases the potential for even small municipal operations to be identified as a Significant Drinking Water Threat.

In WHPA-C and D there is considerable variability, although a waste disposal site will likely be classified as a moderate or low threat. The land disposal or storage of waste (at a waste disposal site) is generally classified as a low threat within HVAs and SGRAs where the vulnerability score is 6.

How is this Threat Managed?

In general terms, for existing activities related to the establishment, operation or maintenance of a waste disposal site where this activity is a significant risk, the policy approach was to manage the risk either through the existing Environmental Compliance Approvals (ECAs) administered by the MOECC or through a Risk Management Plan (policy 2.04). Existing application of untreated septage to land and tailings from mines or stored in a pit, however, are prohibited (Policies 2.01 and 2.03).

For future activities that would result in a significant risk, the policy approach was to prohibit such activities either through Section 57 of the CWA or through an ECA (Policies 2.03 and 2.05).

The only exception to the prohibition of new waste threats is for the following waste threat sub-categories, in circumstances where an ECA is not required:

- Storage of wastes described in clauses (p), (q), (r), (s), (t), or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste; or
- Storage of hazardous or liquid industrial waste.

These two exceptions were introduced based on further details regarding the nature of these threats that was provided by the MOECC as part of their review of the plan. Upon review of this information, it was determined that these two threat categories capture both large and small quantities of hazardous and liquid industrial waste that can be generated by a broad range of industrial, commercial and/or institutional operations. Examples of such operations include nursing homes, medical clinics, retailers, print shops and laboratories that may only generate small quantities of such wastes as part of their regular operations (e.g., hardware stores that collect hazardous waste for disposal). Given that there are a considerable number of industrial, commercial and institutionally zoned properties located within significant threat areas in the region, it was determined that prohibition of such waste threats where an ECA is not required may have the unintentional consequence of constraining or prohibiting many planned land uses that only generate fairly small quantities of such wastes. In these cases, the future threat will be managed through a Risk Management Plan (policy 2.05.1).

For existing and future low and moderate threats, the policy tool used was Education and Outreach (policy 1.01).

For More Information

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