

10.2 WASTE

Definition

Waste means the establishment or operation of a waste disposal site. Waste includes domestic, industrial or municipal waste or refuse, ashes, garbage and other materials designated under the *Environmental Protection Act, 1990 (EPA)*.

A "waste disposal site" means:

- Any land upon, into, in or through which, or building or structure in which, waste is deposited, disposed of, handled, stored, transferred, treated or processed;
- Any operation carried out or machinery or equipment used in connection with the depositing, disposal, handling, storage, transfer, treatment or processing of waste.

Ontario Regulation 347 under the *EPA* deals with waste handling, storage and disposal.

Why is Waste a Threat to Drinking Water Sources?

A number of chemicals and pathogens from the application, handling and storage of waste, could make their way into drinking water sources. There are ten potential sub-categories of this threat, three of which have been identified as existing significant threats in the CVSPA and TRSPA:

- Storage of hazardous or liquid industrial waste at disposal sites (see circumstances #1884-1913)
- Storage of waste described in clauses (p), (q), (r), (s), (t), or (u) of the definition of hazardous waste in O. Reg. 347 of *EPA* (small quantity wastes)¹ (see circumstances #1914-1943)
- Application of untreated septage to land (see circumstances #96-101, 1969)

¹ These refer to small quantities of hazardous waste, empty hazardous waste containers, and cleanup materials from small spills. The small quantity thresholds have been established by the Ministry of the Environment and Climate Change in the waste regulation and procedures.

The other seven sub-categories of waste threats are:

- Storage, treatment and discharge of tailings from mines (see circumstances #1533-1584)
- Landfarming of petroleum refining waste (see circumstances #1585-1602)
- Landfilling (hazardous waste) (see circumstances #1603-1638)
- Landfilling (municipal waste) (see circumstances #1639-1674)
- Landfilling (solid non-hazardous industrial or commercial) (see circumstances #1675-1710)
- Liquid industrial waste injection into a well (see circumstances #1711-1878)
- PCB waste storage (see circumstances #1879-1883)

The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identify a number of chemicals that could make their way from waste disposal sites into the groundwater and/or surface water under certain conditions. Pathogens may also be a concern, for example from untreated septage. Contaminants of concern for drinking water sources that may occur in waste include:

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|-------------------------------|-------------------------------------|
| • Arsenic | • Nitrogen |
| • Barium | • Phosphorus |
| • Cadmium | • Selenium |
| • Chromium VI | • Silver |
| • Copper | • Trichlorophenoxyacetic acid-2,4,5 |
| • Dichlorophenoxy acetic-acid | • Vinyl Chloride |
| • Lead | • Pathogens |
| • Mercury | |

See **Table 10-2** for when and where waste may be a significant drinking water threat.

Note: to determine if a specific activity is a significant drinking water threat consult the *Tables of Drinking Water Threats* for the specific circumstances that must be met for the activity to be a threat. In the case of the application of untreated septage to land, this activity may also be a significant drinking water threat anywhere in an Issue Contributing Area (ICA) for nitrates or pathogens. If the activity meets the description in Column 2 of the *Tables of Drinking Water Threats* it is a significant drinking water threat irrespective of vulnerability score.

Prescribed Drinking Water Threat	Waste Threat Sub-Category	Area and Vulnerability Score (VS)
The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the <i>Environmental Protection Act</i>	Storage of hazardous or liquid industrial wastes (excluding those described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste)	<ul style="list-style-type: none"> • WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 9)
	Storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste	<ul style="list-style-type: none"> • WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS = 10)
	Application of untreated septage to land	<ul style="list-style-type: none"> • WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 8) • Anywhere in an ICA for Nitrates or Pathogens
	Storage, treatment and discharge of tailings from mines	<ul style="list-style-type: none"> • WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 9)
	Landfarming of petroleum refining waste	<ul style="list-style-type: none"> • WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 9)
	Landfilling of hazardous waste	<ul style="list-style-type: none"> • WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 9)
	Landfilling of municipal waste or solid non-hazardous industrial or commercial waste	<ul style="list-style-type: none"> • WHPA-A • WHPA-B (VS ≥ 8) • WHPA-C (VS = 8) • WHPA-E (VS ≥ 9)
	Liquid industrial waste injection into a well	<ul style="list-style-type: none"> • WHPA-A • WHPA-B (VS ≥ 8) • WHPA-C (VS = 8)
	PCB waste storage	<ul style="list-style-type: none"> • WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS = 10)

Table 10-2: When/where waste may be a significant drinking water threat

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
WST-1	Storage of Hazardous or Liquid Industrial Wastes (not included in the small quantity exemptions)	RMO	H	<p>Part IV, s.58</p> <p>The establishment, operation, or maintenance of a site used by the generator to store hazardous or liquid industrial waste which is not included in the small quantity exemption in Ontario Regulation 347 under the <i>Environmental Protection Act</i> is designated for the purpose of s.58 under the <i>Clean Water Act</i>, requiring risk management plans, where the threat is, or would be significant, in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9) (existing, future). 	See Maps 1.1 – 1.21	<p>Future: Immediately (T-7)</p> <p>Existing: 1 year/ 5 years (T-6)</p>	GEN-1 GEN-2	MON-2
WST-2	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	Municipality MOECC	E K	<p>Education and Outreach</p> <p>The municipality shall deliver education and outreach materials and programs where the 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 is, or would be, a significant drinking water threat targeted towards ensuring that facilities that generate small quantities of waste manage the storage of these wastes so that they cease to be, or do not become, a significant drinking water threat in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS = 10) (existing, future). <p>Where appropriate education and outreach materials prepared by the Ministry of the Environment and Climate Change are available, the municipality shall deliver those materials.</p>	See Maps 1.1 – 1.21	Existing & Future: 2 years (T-10)	GEN-8	MON-1 MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
WST-3	Application of Untreated Septage to Land	MOECC	C	<p>Prescribed Instrument</p> <p>1) The application of untreated septage to land shall be prohibited where the activity is, or would be, a significant drinking water threat in the following areas:</p> <ul style="list-style-type: none"> • WHPA-A (existing, future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS ≥ 8) (future); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (future). 	See Maps 1.1 - 1.21	<p>Future: Immediately (T-3)</p> <p>Existing: Upon expiry or within 5 years (T-2)</p>	N/A	MON-4
				<p>2) The application of untreated septage to land may continue only until the expiry of the current approval, after which time it shall be considered a future activity in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-B (VS = 10) (existing); or • WHPA-E (VS ≥ 8) (existing); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (existing). 		<p>Existing: Upon expiry or within 5 years (T-2)</p>		

APPROVED SOURCE PROTECTION PLAN: CTC Source Protection Region

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Polices	Monitoring Policy
WST-4	<ul style="list-style-type: none"> •Storage, Treatment, and Discharge of Tailings from Mines •Landfarming of Petroleum Refining Waste •Landfilling (Hazardous Waste) •Landfilling (Municipal Waste) •Landfilling (Solid Non-Hazardous Industrial or Commercial Waste) •Liquid Industrial Waste Injection into a Well •Storage of Hazardous or Liquid Industrial Waste (at large facilities such as landfills and transfer stations) •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 (at large facilities such as landfills and transfer stations) 	MOECC	C	<p>Prescribed Instrument</p> <p>1) Waste disposal sites (future) shall be prohibited where the storage, generation or management of waste would be a significant drinking water threat, where these activities include:</p> <ul style="list-style-type: none"> a) Storage, treatment, and discharge of tailings from mines; b) Landfarming of petroleum refining waste; c) Landfilling (hazardous waste); d) Landfilling (municipal waste); e) Landfilling (solid non-hazardous industrial or commercial waste); f) Liquid industrial waste injection into a well; g) Storage of hazardous or liquid industrial waste (large facilities such as landfills and transfer stations); and h) 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 (at large facilities such as landfills and transfer stations). 	See Maps 1.1 - 1.21	Future: Immediately (T-3)	WST-5	MON-4
				<p>2) Where a waste disposal site (existing) is in an area where the storage, generation or management of waste is a significant drinking water threat, the Environmental Compliance Approval that governs the activity shall be reviewed to ensure appropriate terms and conditions are included so that the activity ceases to be a significant drinking water threat, where waste disposal sites include:</p> <ul style="list-style-type: none"> a) Storage, treatment, and discharge of tailings from mines; b) Landfarming of petroleum refining waste; c) Landfilling (hazardous waste); d) Landfilling (municipal waste); e) Landfilling (solid non-hazardous industrial or commercial waste); f) Liquid industrial waste injection into a well; g) Storage of hazardous or liquid industrial waste (at large facilities such as landfills and transfer stations); and h) 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 (at large facilities such as landfills and transfer stations). 		Existing: 3 years (T-1)	GEN-3	MON-4

Policy ID	Threat Description	Implement Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Polices	Monitoring Policy
WST-5	<ul style="list-style-type: none"> •Storage, Treatment, and Discharge of Tailings from Mines •Landfarming of Petroleum Refining Waste •Landfilling (Hazardous Waste) •Landfilling (Municipal Waste) •Landfilling (Solid Non-Hazardous Industrial or Commercial Waste) •Liquid Industrial Waste Injection into a Well •Storage of Hazardous or Liquid Industrial Waste (at large facilities such as landfills and transfer stations) •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 (at large facilities such as landfills and transfer stations) 	Planning Approval Authority	A	<p>Land Use Planning</p> <p>The use of land for waste disposal (future) shall be prohibited where the storage or generation of waste would be a significant drinking water threat at the following types of waste disposal sites:</p> <ul style="list-style-type: none"> a) Storage, treatment, and discharge of tailings from mines; b) Landfarming of petroleum refining waste; c) Landfilling (hazardous waste); d) Landfilling (municipal waste); e) Landfilling (solid non-hazardous industrial or commercial waste); f) Liquid industrial waste injection into a well; g) Storage of hazardous or liquid industrial waste (at large facilities such as landfills and transfer stations); h) 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 (at large facilities such as landfills and transfer stations). 	See Maps 1.1 - 1.21	<p>Future: Immediately (T-9)</p> <p>Amend OPs for conformity and ZBLs within 3 years of OP approval (T-8)</p>	WST-4	MON-1

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Polices	Monitoring Policy
WST-6	PCB Waste Storage	RMO	G	<p>Part IV, s.57, s.58</p> <p>Where an approval under the <i>Environmental Protection Act</i> is not required, the establishment, operation or maintenance of a waste disposal site, including for the storage of PCB waste where it is, or would be, a significant drinking water threat, will require the following actions to be taken:</p> <p>1) The storage of PCB waste is designated for the purpose of s.57 under the <i>Clean Water Act</i>, and is therefore prohibited where the threat would be significant in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-A (future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS = 10) (future). 	See Maps 1.1 - 1.21	Future: Immediately (T-5)	GEN-1	MON-2
			H	<p>2) The storage of PCB waste is designated for the purpose of s.58 under the <i>Clean Water Act</i>, requiring risk management plans, where the threat is significant in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-A (existing); or • WHPA-B (VS = 10) (existing); or • WHPA-E (VS = 10) (existing). 		Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2
WST-7	PCB Waste Storage (temporary waste destruction units)	MOECC	C	<p>Prescribed Instrument</p> <p>Where a temporary waste destruction unit for PCBs is required in an area where the storage of PCB waste is, or would be, a significant drinking water threat, the Environmental Compliance Approval that governs the activity shall be reviewed or established to ensure appropriate terms and conditions are included so that the activity ceases to be, or does not become, a significant drinking water threat in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS = 10) (existing, future). 	See Maps 1.1 - 1.21	<p>Future: Immediately (T-3)</p> <p>Existing: 3 years (T-1)</p>	GEN-3	MON-4