

REGULATION 309

CLASSIFICATION OF MUNICIPAL LANDFILL SITES

Background Notes

Appendix 6 of the Blueprint outlines general standards for the operation and siting of landfill sites. Feedback received from the public input process indicated that certain small municipalities felt that the regulations as proposed were general and applied to larger sites. They also stated that there should be different requirements for smaller and remote sites. In addition, the Ministry's staff feel that with general, as opposed to specific standards, it is difficult for the Director or the hearing boards to make sound decisions.

Accordingly, the Waste Management Regulation 309 is being revised to make the standards more specific. Municipal waste disposal sites have been categorized into different classes based on two criteria; (a) the degree of disposal site usage, and (b) the proximity to and nature of surrounding land use.

(a) Site Use Categories

Degree of usage is categorized into three groups. The lifetime capacity of a site is assumed to be 20 years.

- 1) lifetime capacity of greater than 200,000 m<sup>3</sup>\* or 100,000 tonnes;  
(greater than 7,500 persons/yr)
- 2) between 40,000-200,000 m<sup>3</sup> (20,000 and 100,000 tonnes); and
- 3) less than 40,000 m<sup>3</sup> or 20,000 tonnes. (Approximately 1400 persons/yr.

\* Based on a waste compaction density of  $600 \text{ kg/m}^3$ , 100,000 tonnes equals  $170,000 \text{ m}^3$ ; however, for this Regulation it has been rounded out to  $200,000 \text{ m}^3$  for simplification purposes.

(b) Site Separation Categories

Land use separation distances from sensitive land uses are categorized into: 1) greater than 3 km, i.e. isolated sites (I) (in these cases the presence of a landfill should have a negligible impact); 2) 500 metres to 3 km, i.e. rural sites (R) (where there may be some conflict from effects such as odour and noise) and; 3) less than 500 metres, i.e. urban sites (U) (where there could be land use conflict such as odour, litter, traffic, dust, leachate and gas migration).

The separation distance is to be measured from the perimeter of the fill area (not from the site boundary) of a site <sup>at grade</sup> to any existing or proposed land use, at, above or below grade which includes:

- (i) a permanent structure used in animal husbandry;
- (ii) agricultural land used for pasturing livestock; or
- (iii) a permanent structure where
  - (A) a person sleeps or
  - (B) a person is employed, full-time, for at least three months in a year,but not including food service facilities or motor vehicle service facilities adjacent to a highway, utility operations, scrap yards, heavy industrial uses, gravel pits, quarries, mining activities or forestry activities.

Excepted land uses include above grade transportation routes and utilities, fences, wood harvesting and other forestry activities; certain farming activities, scrap yards, incinerators, gravel pit and quarries and other mining operations and such land uses, which would not be threatened by any hazard to public health or safety or would not be impaired by nuisance effects.

### SITE CLASSIFICATION

Based on these criteria, a matrix of waste disposal sites has been developed consisting of three groups, divided into nine classes (see Matrix attached). For the purposes of regulation, the matrix has been written in standard legal format. (Reference Appendix "B")

Where possible, the regulations identify specific minimum requirements. Guidelines will be developed to assist the Director in applying discretion to alter the requirements when necessary.

Although the Blueprint proposed both siting and operating standards, it has been decided that siting standards should not be regulated in the same way as operational standards because siting must be decided on a case-by-case basis. Once a site has been selected and a Certificate of Approval issued, the siting conditions cannot be altered and therefore cannot be regulated on a day-to-day basis. Therefore, required siting specifics will be covered in guidelines which are under preparation.

This matrix and draft regulation address only the standards for sites accepting municipal waste. For sites accepting hazardous waste, the existing regulation (O. Reg. 309) applies. (Development of regulations specific to hazardous waste sites is contemplated in the future).

Other sections of Appendix 6 of the Blueprint, i.e. waste processing facilities and transfer stations, will also be addressed at a later date in similar fashion to this approach. Appropriate regulations and guidelines will be prepared.

The Reasonable Use Concept as defined in the Bluebook entitled "Water Management - Goals, Objectives and Implementation Procedures of the Ministry of the Environment" has been considered and incorporated in this approach in that zero discharge at the boundary is not considered a necessity.

It is intended that the proposed approach will initially apply to new sites. A phase-in program has been developed for existing sites (Reference Appendix "D").

It is to be noted that this proposed approach will simplify enforcement by Ministry personnel, since subjective judgement by staff will be minimized. Similarly, site owner/operators will have a clear understanding of the operational requirements for their site. Although meeting the requirements may require additional costs to some municipalities, the end result will be sites that are more environmentally sound and costs would probably not exceed those associated with strict application of the existing regulations.

Sixty-eight per cent (68%) of the existing sites fall in the lowest category (Io Uo Ro). New sites in the highest category (11.5%) will be subject to the Environmental Assessment Act (as proposed in the Blueprint and revised Part V of the EPA), while those in the smaller classes would fall under EPA only.

It should be noted that situations could arise where a site could be "bumped up" or "down" to a higher or lower classification at some time in the future whenever a change in adjacent land uses or in the site usage (volume) occurs.

It is, therefore, important to recognize that sites should not be developed where there is a potential of adverse impact on future land use activities, or conversely, Municipalities should recognize the importance of the landfill site when approving new land developments in the vicinity of existing waste disposal sites.

GU/gr  
June 10/86  
1575R/P

REGULATION 309

LEGEND

(To be applied in conjunction with the document entitled "Guidelines for the interpretation of the Regulation 309")

L-<40,000 m<sup>3</sup> lifetime or 20,000Tonnes  
 M >40,000 < 200,000 m<sup>3</sup> lifetime or 20,000-100,000Tonnes  
 H->200,000 m<sup>3</sup> lifetime or 100,000Tonnes

Standards	GROUP I			GROUP R			GROUP U			COMMENTS
	>3 km			Separation Distance 500 m-3 km			<500 m			
	0 LIGHT	40 MED.	200 HEAVY	0 LIGHT	40 MED.	200 HEAVY	0 LIGHT	40 MED.	200 HEAVY	
1. Legal Survey	Survey required for all classes except MNR and sites located on Crown lands require ----- description only -----									(See Guideline Appendix C)
2. Registration on Title	----- Required for all classes -----									
3. Development Plans X	----- Required for all classes -----									
4. Fencing	Min farm fence or natural barriers for I0, I40, R0, R40, U0 For I200, R200, U40, U200 chain link or similar ----- Lockable gates required where supervision is necessary -----									
5. Site Preparation Report X	----- For all classes -----									
6. Buffer X	----- Min 30 metre for all classes -----									
7. On-site Roads	-----Min road system to carry traffic under all normal weather conditions -----									
8. Signs	----- Min 1 sign at entrance -----									
9. Screening	Visual screening from road			Visual screening from *sensitive land uses			Screening from all sides of the site			
*Sensitive land use where man or the natural environment may experience an adverse environmental effect.										

LEGEND

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 M 40,000 200,000 m<sup>3</sup> life time or 20,000-100,000Tonnes  
 H->200,000 m<sup>3</sup> lifetime or 100,000Tonnes

Standards	GROUP I			GROUP R			GROUP U			COMMENTS
	Separation Distance			Separation Distance			Separation Distance			
	>3 km			500 m-3 km			<500 m			
CLASSES/ USAGE	0 LIGHT	40 MED.	200 HEAVY	0 LIGHT	40 MED.	200 HEAVY	0 LIGHT	40 MED.	200 HEAVY	
10. Housekeeping	<--- Spring & fall clean up for sites I0, I40. Site controls for other classes. --->									(See Guideline Appendix C)
11. Contingency Plan	<----- For all classes ----->									
12. Hydrogeological & Hydrological Evaluation	<----- For all classes ----->									
13. Surface Drainage	<----- Site drainage systems to protect adjacent property owners ----->									
14. Cell Cover	Monthly except Dec, Jan Feb & Mar	Daily	Daily	Weekly	Daily	Daily	2 x per Week	Daily	Daily	
15. Burning	<----- No open burning of Municipal waste -----> Controlled burning of segregated wastes at certain sites									
16. Final Cover	<----- Min. .75m + vegetation for all classes -----> plus final cover Program for classes I40, I200, R40, R200, S40, S200									

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Standards	GROUP I			GROUP R			GROUP U			COMMENTS
	>3 km			Separation Distance 500 m-3 km			<500 m			
	0 LIGHT	40 MED.	200 HEAVY	0 LIGHT	40 MED.	200 HEAVY	0 LIGHT	40 MED.	200 HEAVY	
17. Leachate Control X	<----- For all classes ----->									(See Guideline Appendix C)
18. Gas Control X	<----- For all classes ----->									
19. Supervision	Weekly insp.	When open	When open	Weekly insp.	When open	When open	Daily insp.	When open	When open	
20. Vectors & Rodents	C.M.	C.M.	P.C.	C.M.	P.C.	P.C.	P.C.	P.C.	P.C.	
21. Monitoring Program X	General monitoring<-----			General and predictive monitoring ----->						
22. Status Reports X	Every two years		<----- Annual status reports to Regional Directors -----> for all classes of sites							
23. Financial Guarantees	<----- For all private sites ----->									