



Appendix G  
Leachate Generation Calculations

**Purpose:**

To estimate the approximate volume of leachate that will be collected during operation and after closure of the Eastern Vertical Expansion of the Dane County No.2 Landfill (Rodefild).

**Methodology:**

The estimate of leachate generation is base on leachate recirculatiojn rates, the leachate generation ratee specified in NR 512.12(3) and the amount of open and closed landfill areas.

NR 512.12(3) states that the following leachate generation rates be used to calculate leachate volumes:

Closed Areas that will have a composite cap:	1.0 inch/year
Closed Areas that will not have a composite cap:	3.0 inch/year
Unclosed Areas that have a composite liner:	6.0 inch/year

**Assumptions:**

1. The footprint of the entire landfill is 104.6 acres.
2. Approximately 43.4 acres will be open when the Eastern Vertical Expansion area is being filled.
3. Approximately 9.1 acres of the existing final cover is not composite cover and will remain so.
4. 95.5 acres of the landfill will have a composite cover when closed.
5. The leachate generation rate was calculated for filling of the vertical expansion and when the entire landfill is closed.

**Results:**

During filling of the Eastern Vertical Expansion, the estimated leachate generation rate is 25,278 gal/day.  
During post-closure conditions, the estimated leachate generation rate is 9,135 gal/day.

	Landfill Areas at Start of Eastern Vertical Expansion	Leachate Generation Rate (inch / year)	Total Leachate Generation (Gal / Day)
Composite Cover Area (Ac.)	52.1	1	3,876
Soil Cover Area (Ac.)	9.1	3	2,031
Open Area (Ac.)	43.4	6	19,371
		Total:	25,278

	Landfill Areas at Completion of Eastern Vertical Expansion	Leachate Generation Rate (inch / year)	Total Leachate Generation (Gal / Day)
Composite Cover Area (Ac.)	95.5	1	7,104
Soil Cover Area (Ac.)	9.1	3	2,031
Open Area (Ac.)	0	6	0
		Total:	9,135