

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
WASTE MANAGEMENT DIVISION  
PERMITS**

TO: Solid Waste Permit Staff  
FROM: Hassan Vakili  
DATE: May 24, 1993  
SUBJECT: HELP Model

The following procedure can be used in order to calculate the amount of leachate generated for design of the storage tanks to meet the minimum requirements of § 9 VAC 20-80-290 C.

1. Run the RUNHELPI model for a minimum period of 5 years.
2. Run the RUNHELPO model to get detailed output of monthly totals in inches for precipitation, runoff, evapotranspiration, percolation through the base of the landfill, and total lateral drainage for each year of simulation.
3. From this information get the highest monthly value (during the 5 years) for lateral drainage. This value is in inches. Calculate the average daily value (divide by 30). Next, find the amount of leachate in  $\text{ft}^3/\text{acre}$ . This value multiplied by 7 will give the storage capacity for 7 days.

This method will be used solely to calculate an estimate of required leachate storage capacity. If any landfill finds that this estimate is too low, then the owner will be responsible for adequately adjusting the leachate storage capacity to handle the additional flow.