

LEACHATE

Groundwater and surface water contamination from landfill sites is caused by waste-derived liquid and chemical seepage. As landfill materials break down, an acidic liquid called leachate forms. This liquid can contain a wide range of contaminants such as nutrients, heavy metals like lead and zinc, and pesticides. Their release into water systems can cause serious environmental damage, killing aquatic flora and fauna and polluting groundwater supplies.

The amount of waste we produce continues to grow, increasing demand for landfill space and the costs (economic and environmental) of waste disposal. Daily covering of waste at landfill sites helps to reduce odour, litter and pests, the capture and treatment of leachate requires specialist technology, such as liner systems

underneath landfills, to protect our groundwater resources. Multiple layers of geosynthetic and natural (usually clay) materials help prevent rainfall and other liquids that mingle with the waste from entering our groundwater systems. A series of pipes are usually placed just above the liner system so that the leachate can be removed and properly treated.

Managing leachate depends on the conditions of each landfill site, such as soil type and temperature, and may be managed by disposal into sewers, re-injection to the buried waste and evaporation. This technology adds to the cost of maintaining and running landfill sites. The more waste we create, the larger the threat we place on the environment.

WHAT CAN I DO?

- Reducing household waste creates a significant positive effect on the problems of waste management and environmental degradation caused by leachate.
- Buy recycled, recyclable, repairable, refillable and reusable items and where necessary ask supermarkets and local stores to stock these if they don't already. Avoid throwaway and disposable items.
- Support charity groups. Give your unwanted clothing, household goods, linen, and blankets to charity groups who can reuse them.
- Recycle rather than dispose. Approximately 80% of household waste is recyclable in some way.

MORE INFORMATION

- http://news.bbc.co.uk/1/hi/english/static/in_depth/world/2002/disposable_planet/waste/burn/ - information on landfill sites and water contamination
- http://www.wasteservice.nsw.gov.au/dir138/publish.nsf/Content/environment_leachat - an example of the integrated and complex approach landfill operators must take to combat waste degradation problems
- www.regional.org.au/au/asssi/supersoil2004/s7/poster/1821_jonesg.htm - dealing with leachate in the Tweed shire.