

Solid Waste Management

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Solid Waste - Definition

- Any material that we discard, that is not liquid or gas, is solid waste
- Solid waste refers to the range of garbage arising from animal and human activities that are discarded as unwanted and useless.

<https://www.thebalance.com/an-introduction-to-solid-waste-management-2878102>



Solid Wastes

- Solid waste is generated from industrial, residential and commercial activities in a given area.
- Municipal Solid Waste (MSW)
 - Solid waste from home or office
- Industrial Solid Waste:
 - Solid waste produced from mines, agriculture, industry, construction & demolition

Solid Waste Categorization

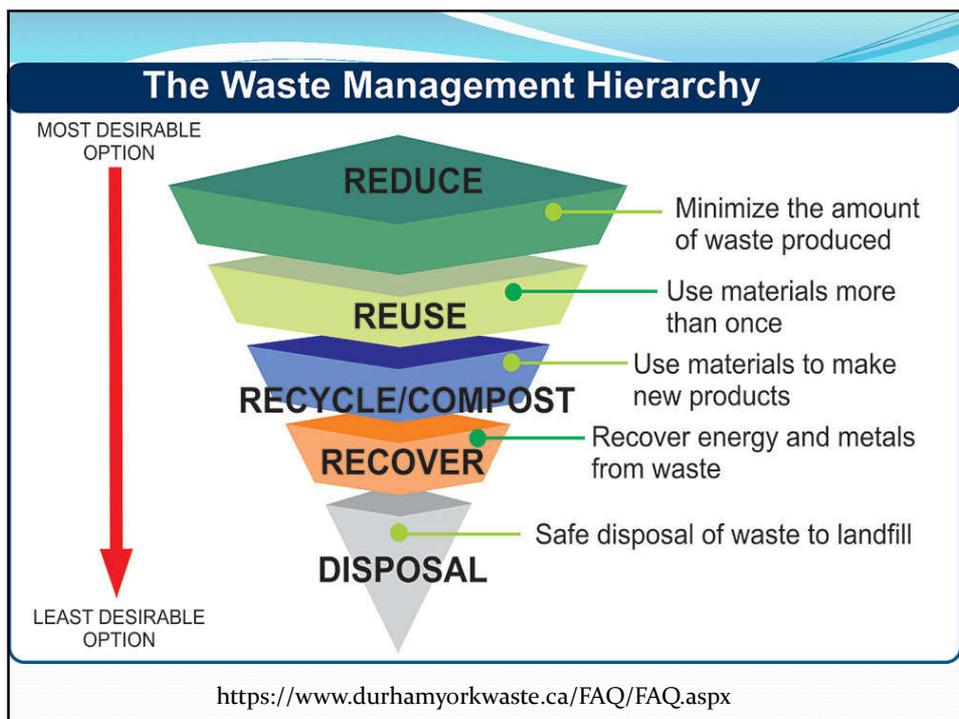
- Waste can be categorized based on material:
 - Plastic
 - Paper
 - Glass
 - Metal
 - Organic waste
- Recyclable wastes



Solid Waste Management

- The discipline associated with control of generation, storage, collection, transport or transfer, processing and disposal of solid waste materials in a way that best addresses the range of public health, conservation, economics, aesthetic, engineering and other environmental considerations.

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3R's of Waste Management

- **Reduce:** Don't create waste in the first place! Buy only what you need.
- **Reuse:** Reuse items - use them over and over until they are completely worn out.
- **Recycle:** the process of converting waste materials into new materials and objects.




 STU's Single Stream recycling accepts the following:

 Plastic Bottles	 Aluminum Cans	 Glass Bottles & Jars	 Steel & Tin Cans	 Boxboard
 Mail	 Office Paper & Folders	 Cardboard Boxes	 Magazines	 Newspaper

Do not put the following in recycling containers!

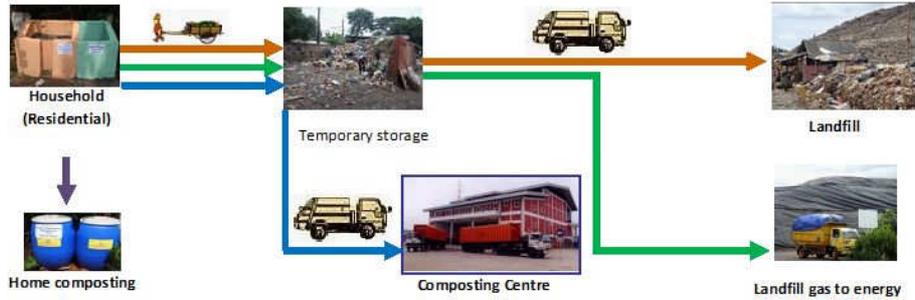
- Food
- Styrofoam
- Plastic Bags

Recycle here:

		
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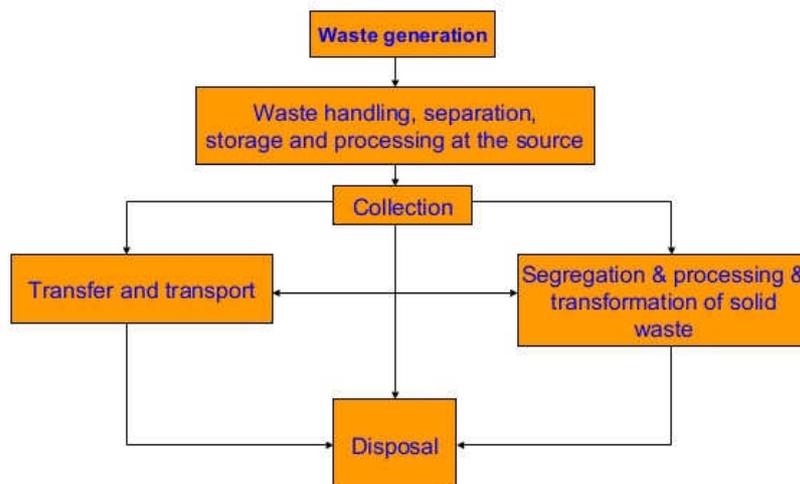
<https://web.stu.edu/aboutstu/administration/officeofthephysicalplant/recyclingsolidwaste/tabid/3611/default.aspx>

Solid Waste Management



<https://www.intechopen.com/books/waste-management-an-integrated-vision/household-solid-waste-management-in-jakarta-indonesia-a-socio-economic-evaluation>

Functional Elements of Solid Waste Management System



<https://www.slideshare.net/gauravpahuja3012/ce-105-81-solid-waste-management-vcs>

Solid Waste Treatment Options

- **Biological reprocessing**

Recoverable materials that are organic in nature, such as plant material, food scraps, and paper products, can be recovered through composting and digestion processes to decompose the organic matter.

- **Energy recovery**

Energy recovery from waste is the conversion of non-recyclable waste materials into usable heat, electricity, or fuel through a variety of processes, including combustion, gasification, pyrolyzation, anaerobic digestion, and landfill gas recovery.

Ultimate Disposal

- A **landfill site** is a site for the disposal of waste materials by burial and the oldest form of waste treatment.