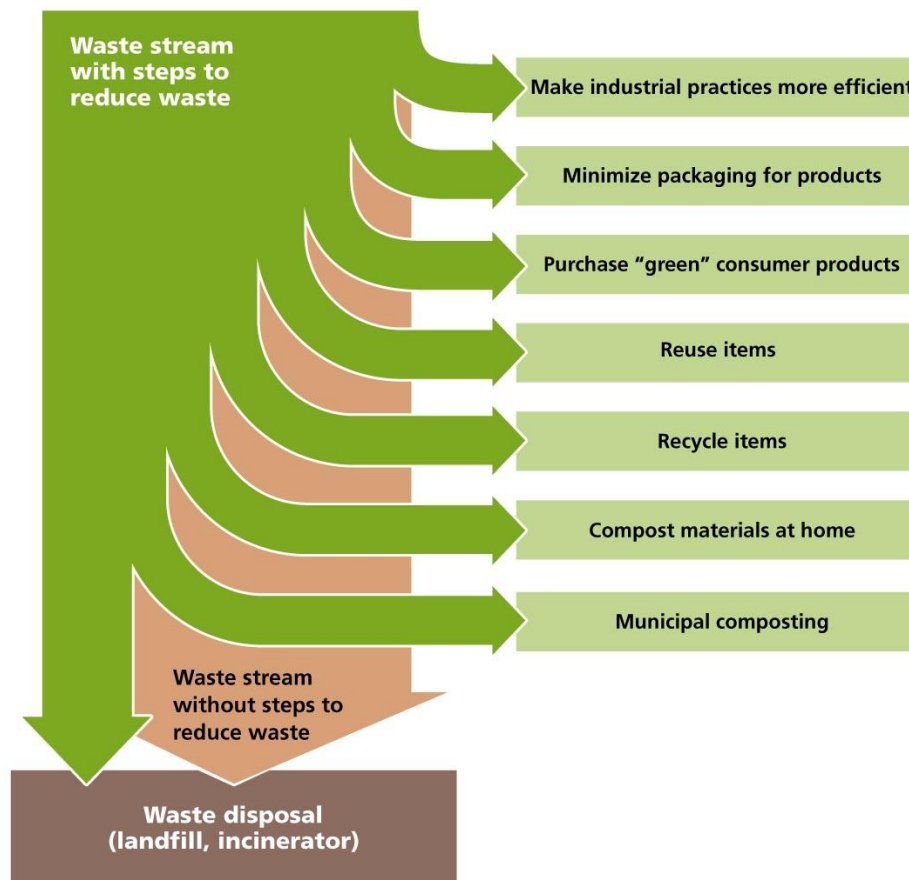


Why manage waste?

- Waste degrades water, soil, and air quality; does environmental and ecological harm.
- Waste does harm to human health.
- Waste is a symptom of inefficiency; wastes money.
- Waste is unpleasant aesthetically.

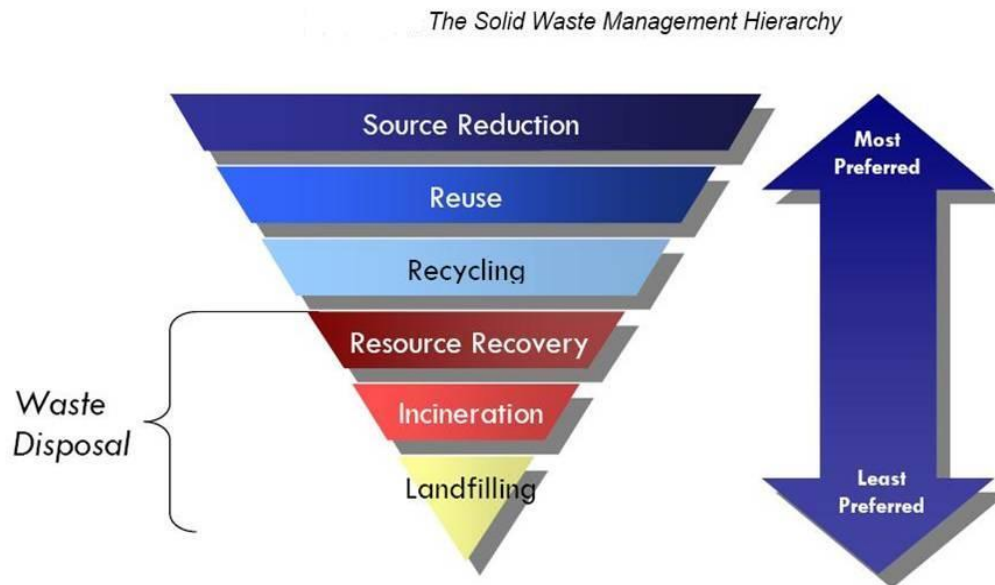
Ways to manage waste



Three components of waste management:

1. Source reduction, or reducing the amount of waste entering the waste stream, is best.
2. Recovery (recycling and composting) is next best.
3. Disposal is the least desired option.

How to manage waste?



Integrated Solid Waste Management:

- A set of plans to manage solid waste
- Adopted by many governments
- A means of achieving sustainability

Solid waste management Hierarchy

Source reduction, also known as waste prevention, means reducing waste at the source, and is the most environmentally preferred strategy. It can take many different forms, including reusing or donating items, buying in bulk, reducing packaging, redesigning products, and reducing toxicity. Source reduction also is important in manufacturing. Light weighting of packaging, reuse, and remanufacturing are all becoming more popular business trends. Purchasing products that incorporate these features supports source reduction.

Source reduction can:

- Reduce greenhouse gas emissions that contribute to climate change,
- Save natural resources,
- Conserve energy,
- Reduce pollution,

- Reduce the toxicity of our waste, and
- Save money for consumers and businesses alike

Source reduction, or preventing waste in the first place, is a better option than disposal.

- Personal/consumer behavior:
 - Use fewer items
 - Buy less-packaged and longer-lived goods
 - Reuse items
- Manufacturer behavior:
 - Make goods with less packaging
 - Make longer-lived goods
 - Adopt more-efficient production methods

Reuse and Composting is the second preferred waste management option after waste reduction. Reuse is the practice of using a material over and over again in its current form. The essence of reuse is that it preserves some or all of the energy and materials that went into making an item. Society has long embraced the practice of reuse by finding alternate uses for an item rather than disposing or recycling it. Some common examples include donating used household items like books, magazines, clothing, kitchen wares, etc. It may also include using empty food containers to store leftovers or reusing plastic grocery sacks to line trash containers or pick up after pets.

Reusing items is a powerful way to reduce one's waste.

There are simple ways to do this:

- Buy used clothing, and donate used clothing
- Bring your own cloth bags to grocery stores
- Bring your own coffee mug to coffee shops

Composting, is The conversion of organic waste into mulch or humus by encouraging natural processes of decomposition

- Reduces a home's waste stream

- Produces great soil for gardening
- Many communities now have municipally run composting programs.

Recycling is a series of activities that includes collecting used, reused, or unused items that would otherwise be considered waste; sorting and processing the recyclable products into raw materials; and remanufacturing the recycled raw materials into new products. Consumers provide the last link in recycling by purchasing products made from recycled content. Recycling also can include composting of food scraps, yard trimmings, and other organic materials.

Benefits of recycling include:

- Reducing greenhouse gas emissions that contribute to climate change;
- Preventing releases of air and water pollutants;
- Saving energy;
- Supplying valuable raw materials to industry;
- Creating jobs;
- Stimulating the development of greener technologies;
- Conserving resources for our children's future; and
- Reducing the need for new landfills and combustors.



For recycling to work, consumers must buy goods made from recycled materials:

- Many paper products

- Many glass and metal products
- Some plastic products
- “Glassphalt” for paving
- City park benches, etc.
- Pages of our textbook

Resource Recovery, When complete avoidance and reduction of waste are not possible, resource recovery is most important. This not only involves the effective recovery of materials for recycling (processing waste materials to make the same or different products) but also, their re-use (without further processing). During the recovery process, the waste is processed by machine and hand sorting to extract all recoverable materials for re-use and recycling. Materials are separated and processed for re-use – soil is screened, masonry is crushed, timbers and vegetation are mulched, while metals, glass, plastics, and cardboard are sent for recycling. Whether it’s gravel for a rural road, mulch for landscaping in a city park, or a new glass bottle for soft drink, the bulk of the waste stream is re-purposed while the remaining residue of non-recyclable material is taken to certified landfill sites.

