

Packaging in MSW

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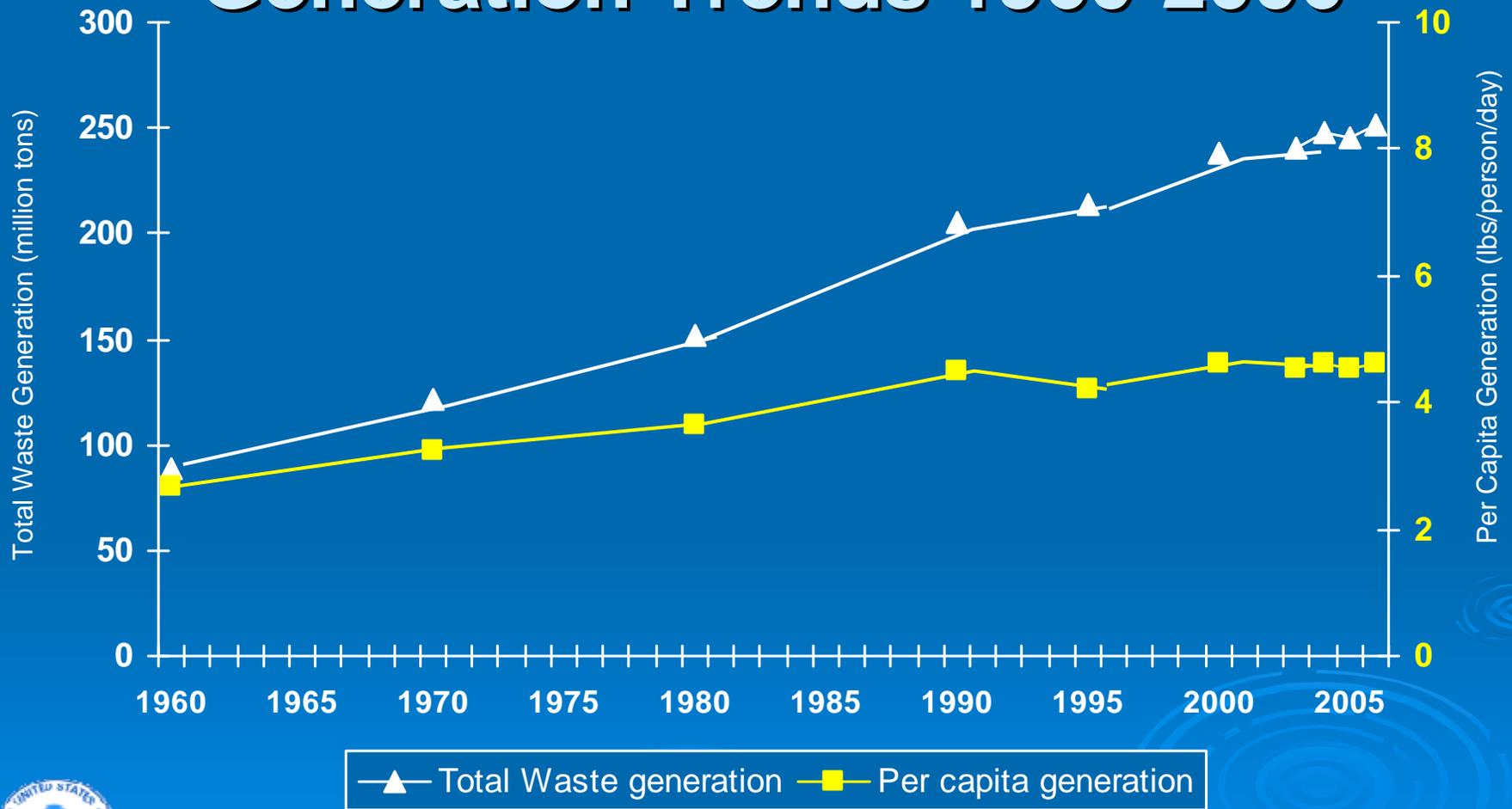
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Why does EPA care about packaging?

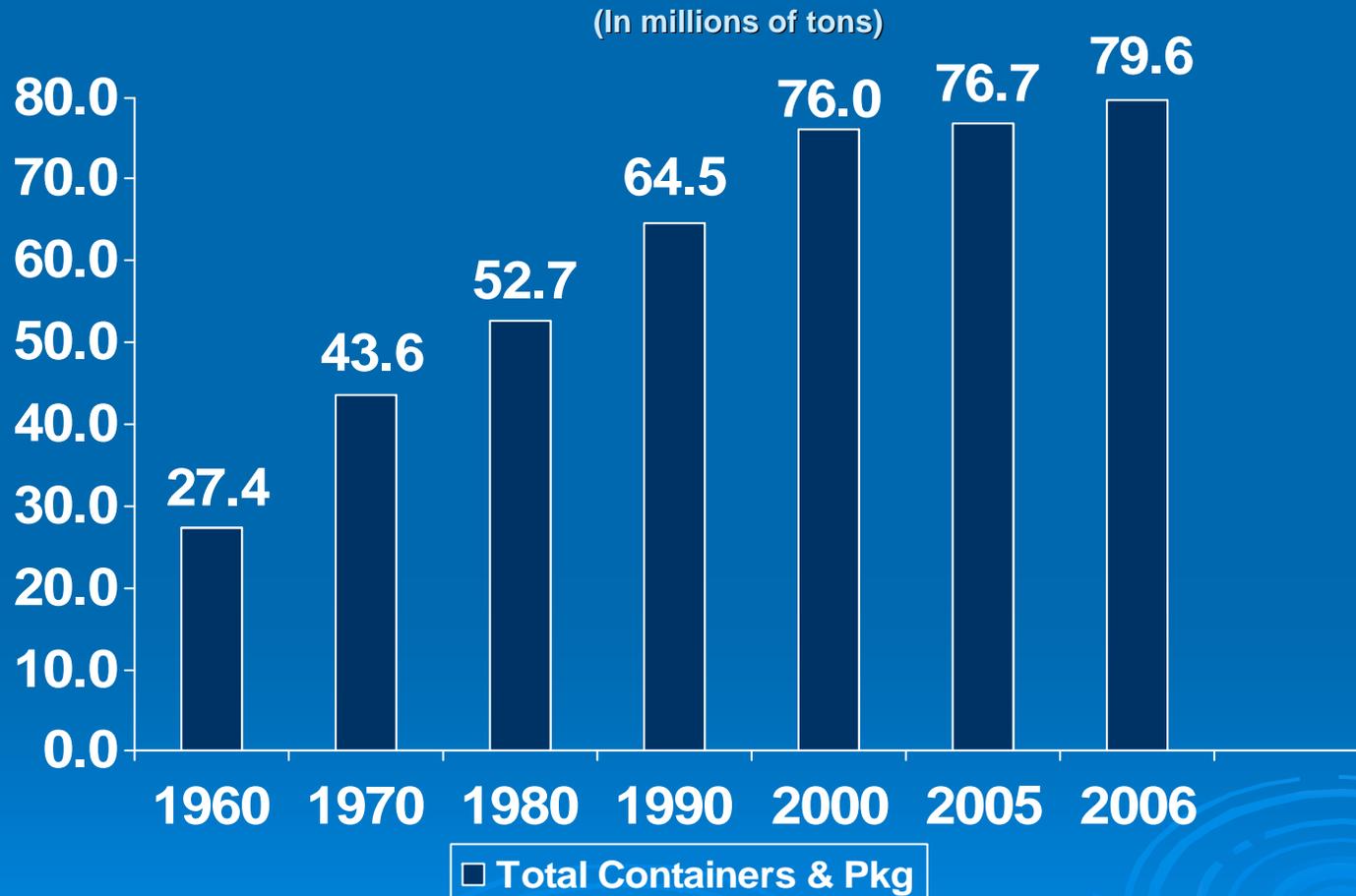


Municipal Solid Waste (MSW) Generation Trends 1960-2006

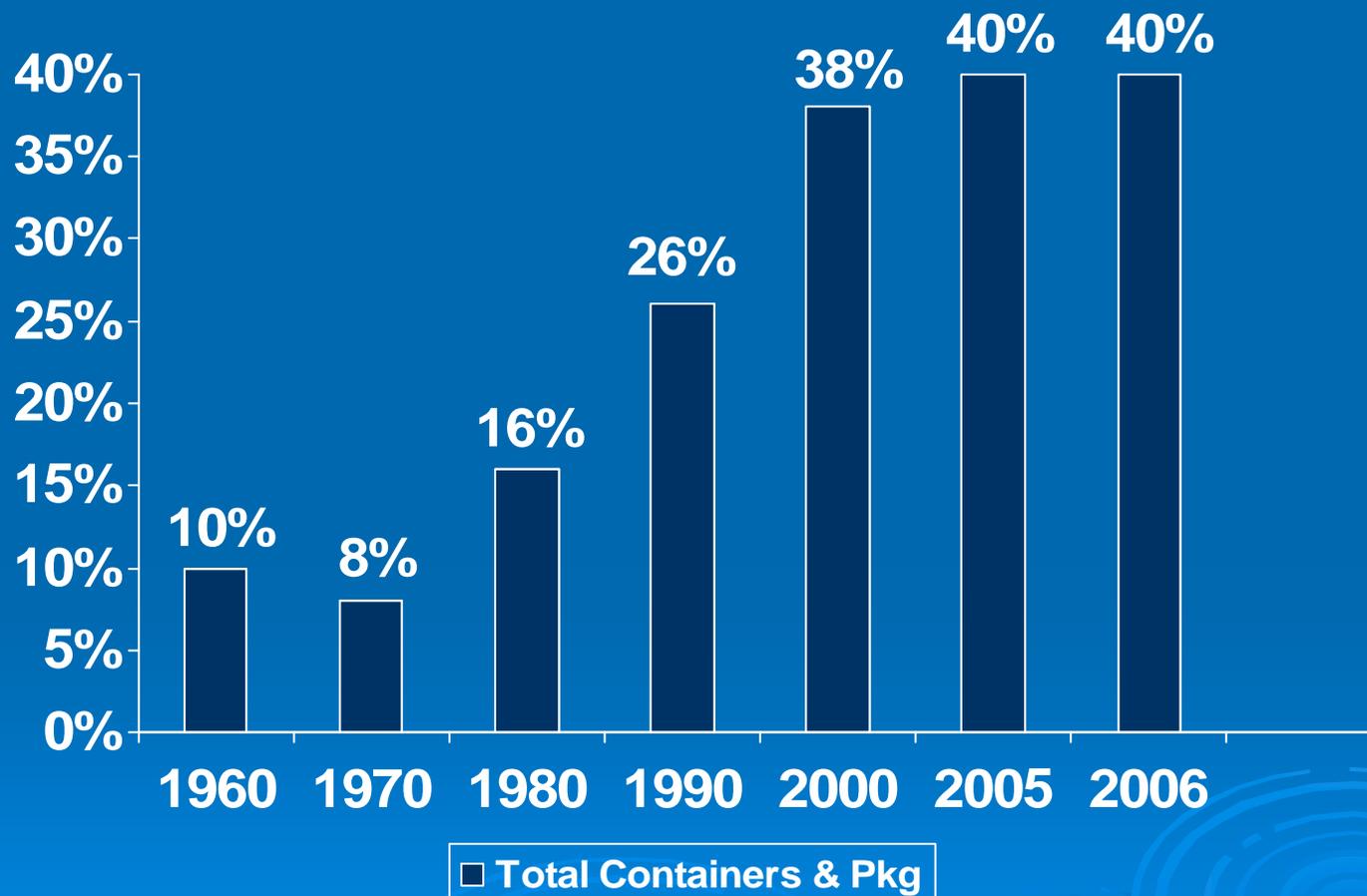


MSW Characterization 2006

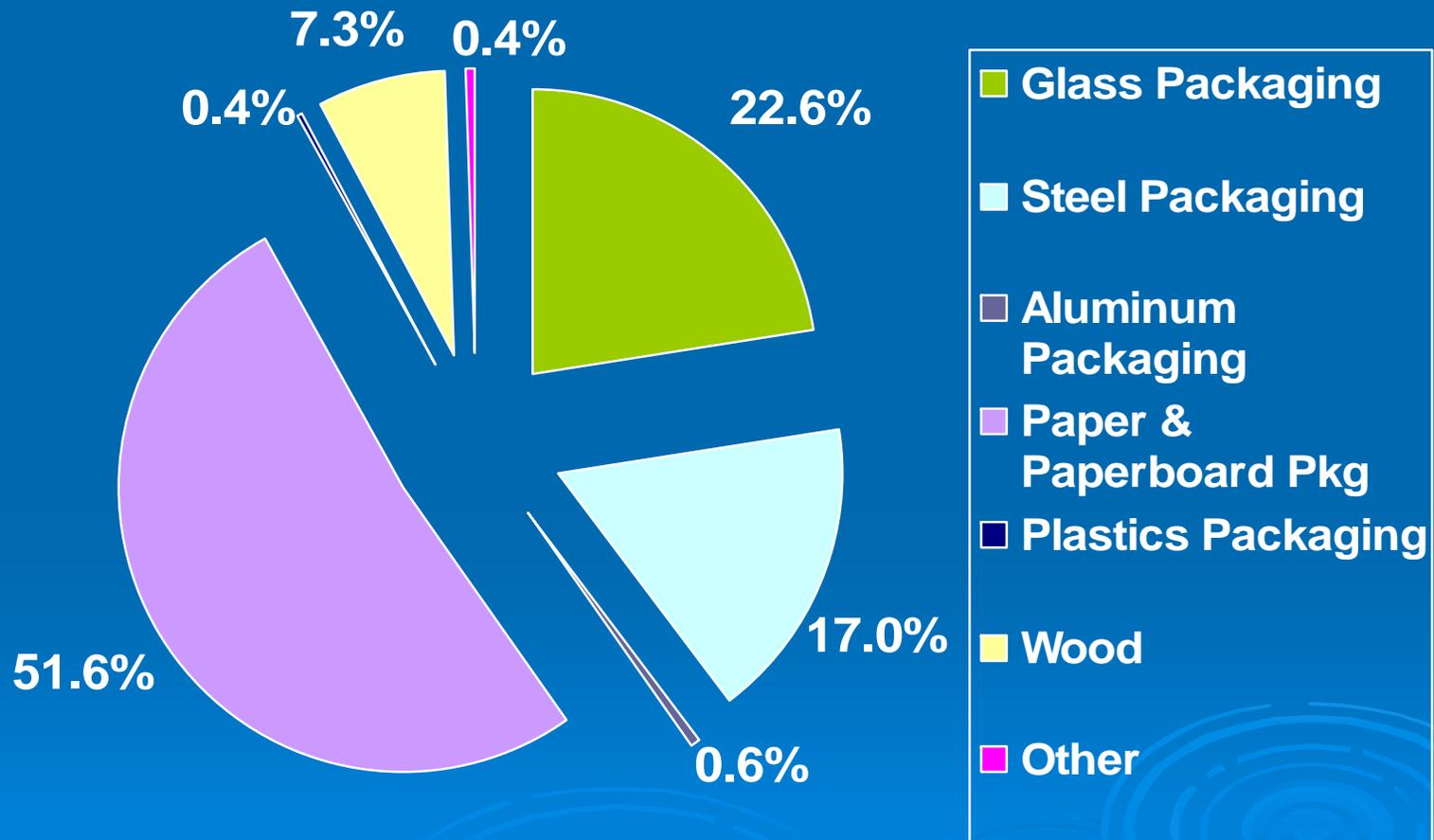
Packaging Waste Generated In MSW 1960 – 2006



% of Packaging Waste Recycled from MSW 1960 – 2006

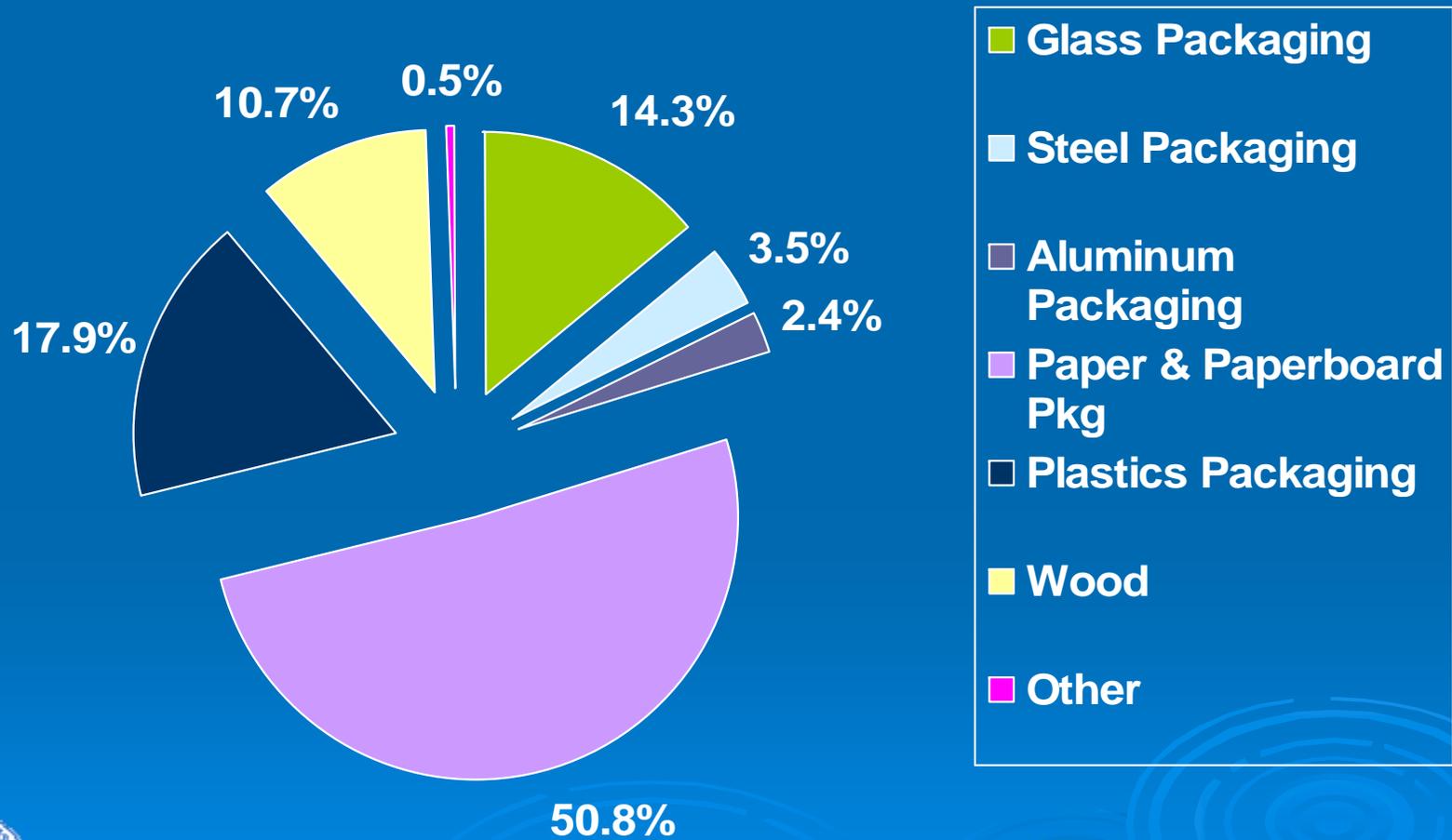


Packaging Composition 1960 (27.4 million tons generated)



MSW Characterization 2006

Packaging Composition 2006 (79.6 million tons generated)



MSW Characterization 2006

So What?

Hint: It's not landfill space

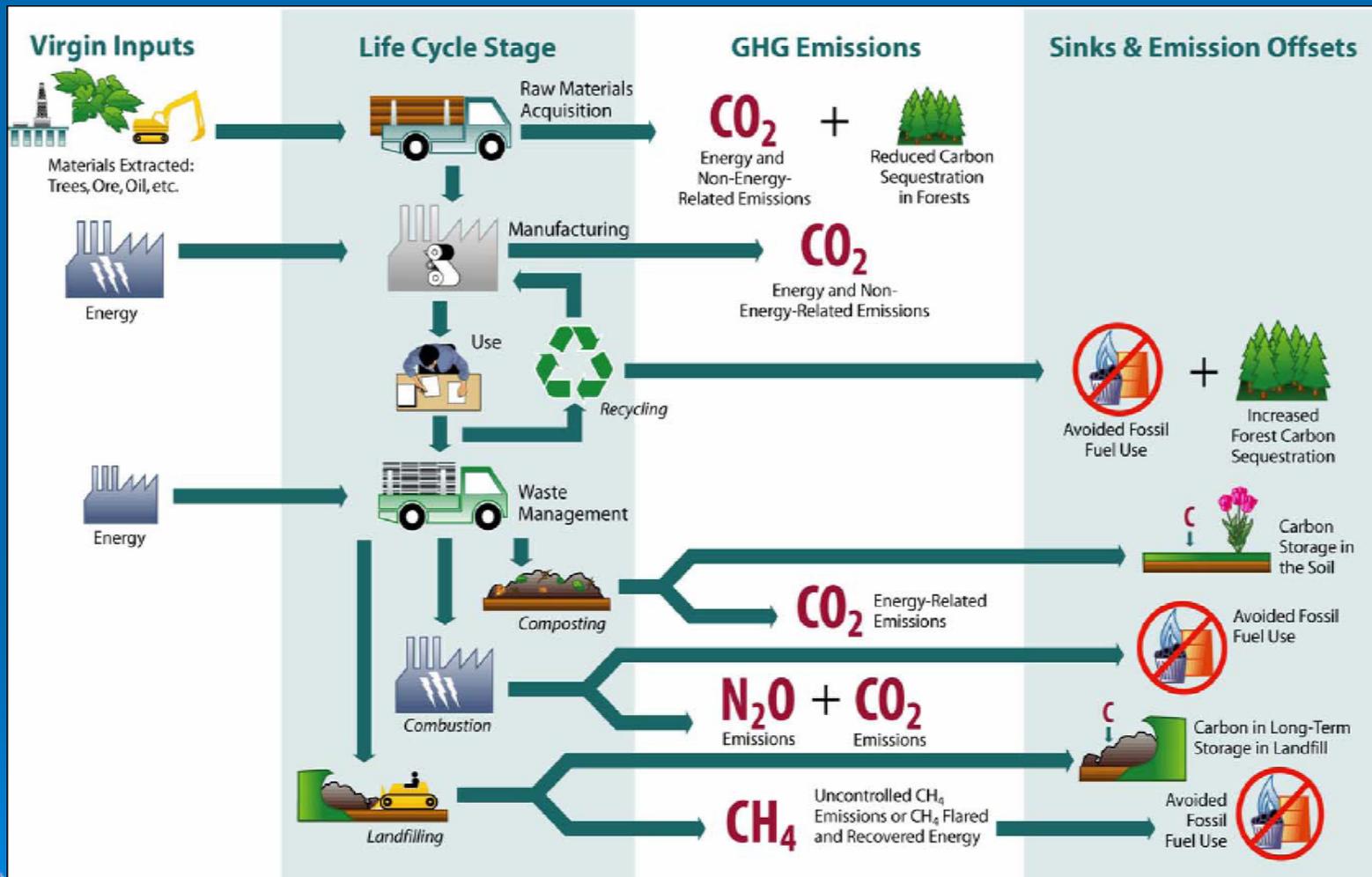


The Energy & Climate Connection to MSW

- Products that enter the waste stream have energy impacts and associated GHG emissions at each stage of their life cycle.
 - acquisition of raw materials,
 - manufacture of raw materials into products,
 - product use by consumers, and
 - product disposal.



Product Life Cycle



Packaging is a product



Source Reduction and Recycling of Packaging Materials:

- Saves energy
 - Reducing the demand for raw material
 - Reducing energy inputs to manufacturing
- Reduces Greenhouse Gas (GHG) Emissions
 - from landfills
 - from energy consumption
 - from non-process energy GHGs



How are we doing?



Benefits of Recycled Packaging:

➤ Mass of materials:

- Aluminum 0.69 million tons
- Steel 1.74 million tons
- Glass 2.88 million tons
- Paper 23.86 million tons
- Plastics 1.51 million tons

MSW Characterization 2006



Benefits of Recycled Packaging

- **Greenhouse Gas emissions avoided:**
 - > 100 million metric tons of CO₂e**
 - Aluminum 9.4 million MTCO₂e
 - Steel 3.2 million MTCO₂e
 - Glass 0.9 million MTCO₂e
 - Paper 93 million MTCO₂e
 - Plastics 2.3 million MTCO₂e



http://epa.gov/climatechange/wyacd/waste/calculators/Warm_home.html

Benefits of Recycled Packaging

➤ GHG emissions of 108 million metric tons of CO₂e are equivalent to the emissions from:

- Almost 1.4 million tanker trucks filled with gasoline ,
or
- Over 4 billion propane cylinders used for home
barbeques <http://www.usctcgateway.net/tool/>

It's the equivalent of preserving almost
890,000 acres of forest from
deforestation <http://www.usctcgateway.net/tool/>



Benefits of Recycled Packaging

➤ Energy Saved: >0.8 quadrillion BTUs

- Aluminum 143 trillion BTUs
- Steel 36 trillion BTUs
- Glass 8 trillion BTUs
- Paper 553 trillion BTUs
- Plastics 80 trillion BTUs

http://epa.gov/climatechange/wycd/waste/calculators/Warm_home.html



Benefits of Recycled Packaging

- 0.8 quadrillion BTUs saved is equivalent to:
 - Almost 12 million cars off the road for a year
 - Over 141 million barrels of oil

http://epa.gov/climatechange/wycd/waste/calculators/Warm_home.html



Could we do better?

Of Course we could do
better.....

