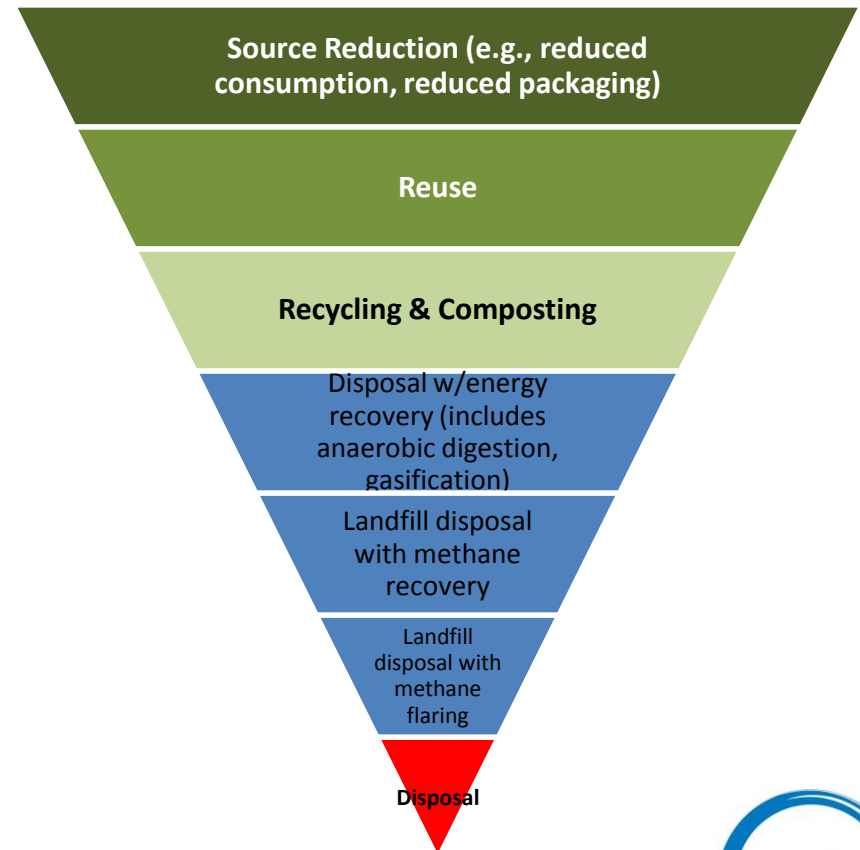


# Solid Waste Management Hierarchy

## Old Hierarchy

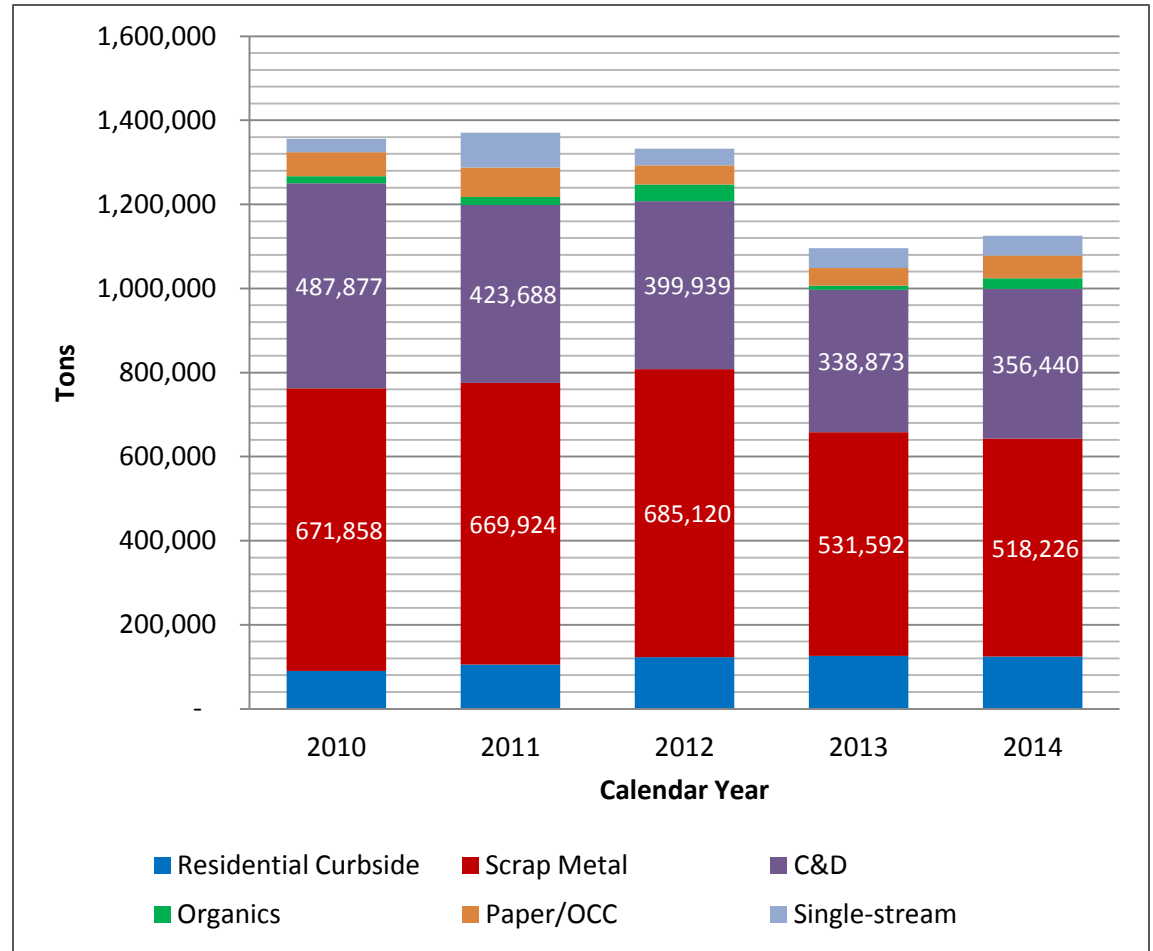


## New Hierarchy



# Distribution of Recyclables Tonnages

- “All-in” recycling rate (residential + commercial + C&D) heavily influenced by scrap metal & C&D



# Zero Waste Definitions

## Zero Waste International Alliance:

*Zero Waste is a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use.*

*Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them.*

*Implementing Zero Waste will eliminate all discharges to land, water or air that are a threat to planetary, human, animal or plant health.*

## Upstream/Product Policy Institute:

- *Zero waste programs include all of the following strategies:*
- *Reducing consumption and discards*
- *Reusing discards*
- *Extended producer responsibility*
- *Comprehensive recycling*
- *Comprehensive composting or bio-digestion of organic materials*
- *Citizen participation*
- *A ban on waste incineration*
- *Effective policies, regulations, incentives, and financing structures to support these systems.*



# Sustainable Materials Management

## U.S. EPA definition:

SMM) is “an approach to serving human needs by using/reusing resources most productively and sustainably throughout their life cycles, from the point of resource extraction through material disposal. This approach seeks to minimize the amount of materials involved and all the associated environmental impacts, as well as account for economic efficiency and social considerations.”



# Sustainable Materials Management

## GreenBlue's definition:

- *Use Wisely - The old adage “waste not, want not” is more relevant now than ever. Use Wisely means that at each step of the production life cycle, we must seek to conserve material resources. The concept of dematerialization means combining various conservation strategies such as reducing the amount of materials needed to provide the function required, extending the service life of products, and eliminating the concept of waste by ensuring that there are robust markets to reutilize post-industrial and post-consumer materials.*
- *Eliminate Toxicity - Providing consumers with products and services that are safe for people and the environment is only possible if they are made out of safe materials. GreenBlue is developing information sharing tools to help manufacturers communicate with each other along the entire product value chain, enabling them to make more informed decisions about the chemicals and materials they use to manufacture products.*
- *Recover More - Recovering more value out of the materials economy is synergistically related to the principle of using materials wisely, because outputs from one part of an industrial system should be used as inputs to some other part of the system, so design issues impacting sourcing and end of life considerations start to become aligned.*
- *Life Cycle Design - Sustainable materials management is predicated on life cycle design which is a process for identifying the positive and negative impacts of the life cycle of materials as they are produced and consumed in an economy.”*

