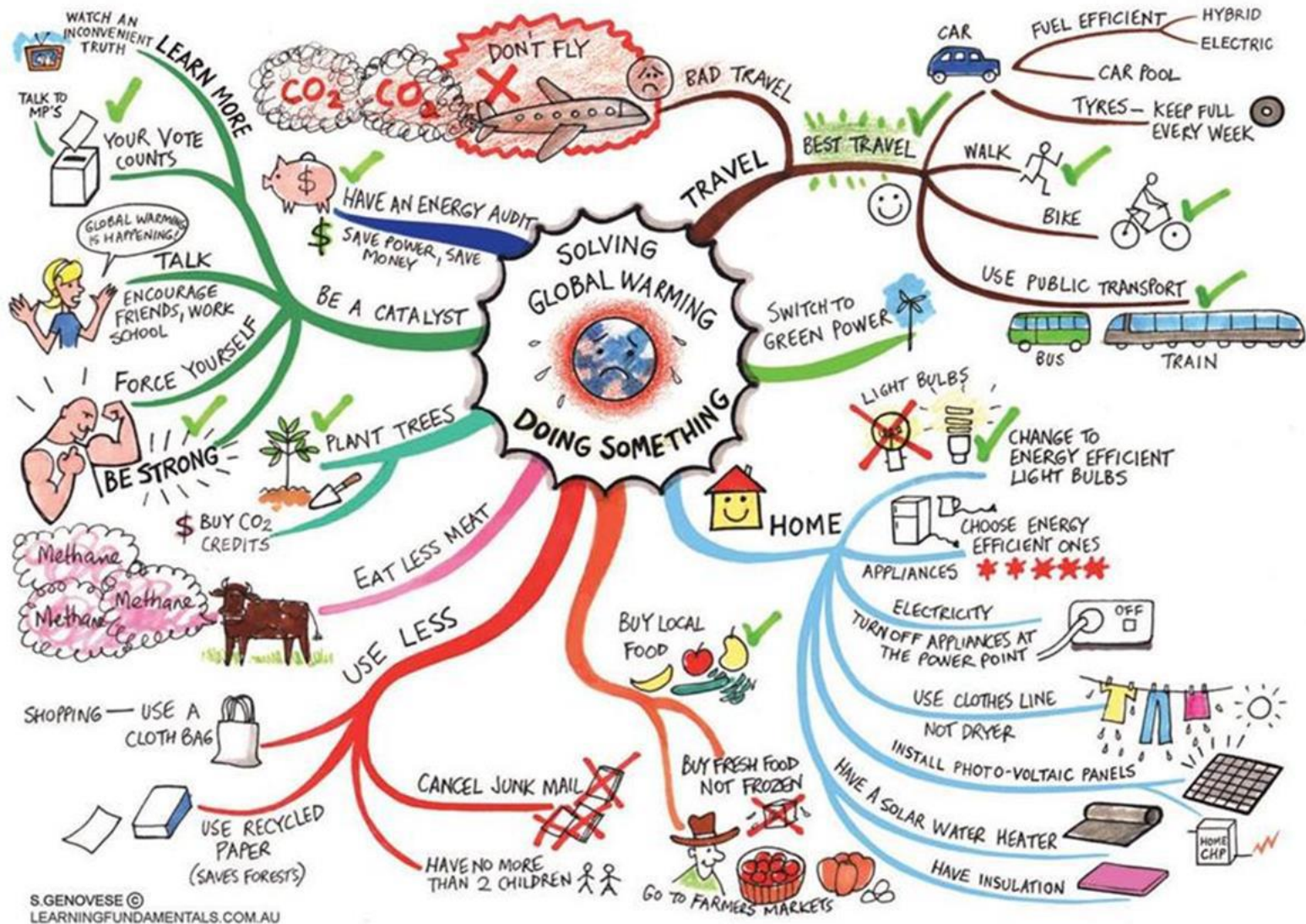


# ***Recycling 101***

**Webster Groves Presbyterian Church**

**March 17, 2019**

*J.R. Walters*



# The Problem

We make, use, and throw away a lot of stuff!

On average a person in the U.S. produces approximately 4.48lbs of waste each day.



## One Day



# The Problem

We make, use, and throw away a lot of stuff!

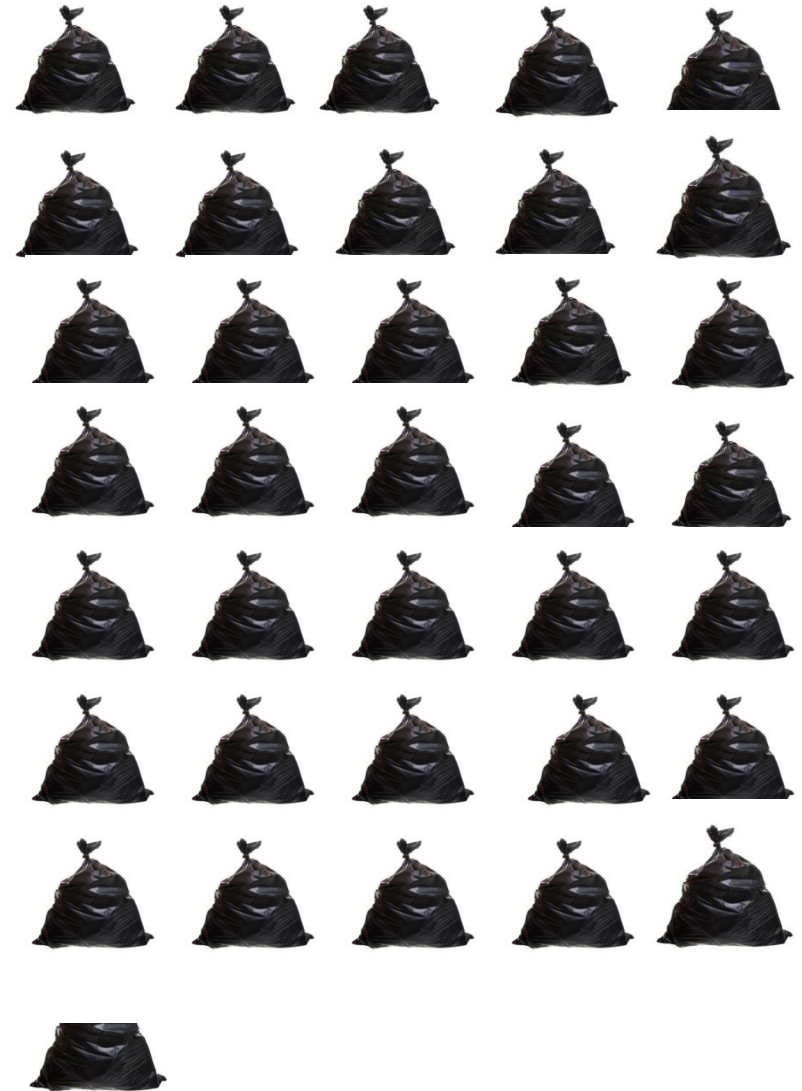
On average a person in the U.S. produces approximately 4.48lbs of waste each day.

In 2015, Americans generated **262 million tons of trash.**

How much of that was recycled or composted?

**Approximately 91 million tons recycled or composted**

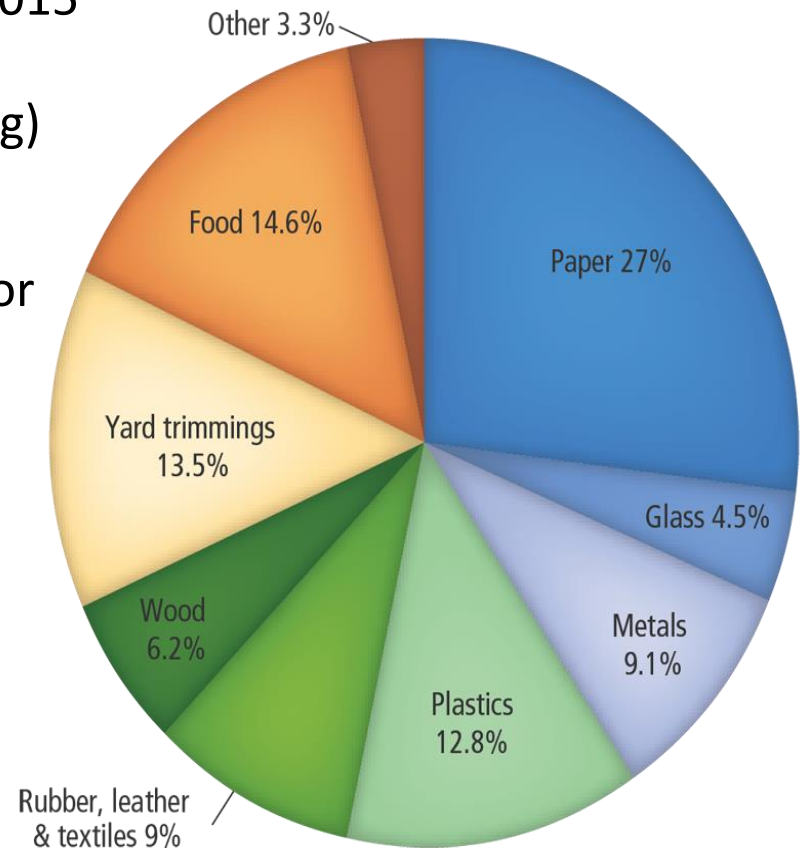
## One Week



# Understanding the Problem

## Total MSW Generation (by Material), 2015

- 262 Million Tons (before recycling)
- 91 Million Tons (35%) diverted for recycling or composting
- Average of 4.48lbs of waste generated per person per day



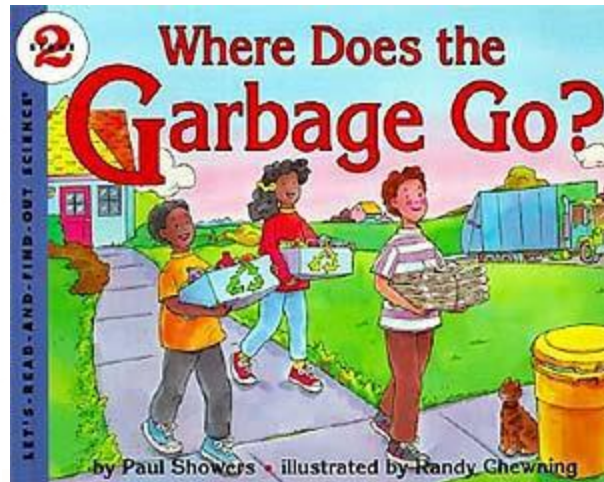


# So What do We do to Solve the Waste Problem?

First, Use Less – ***REDUCE***

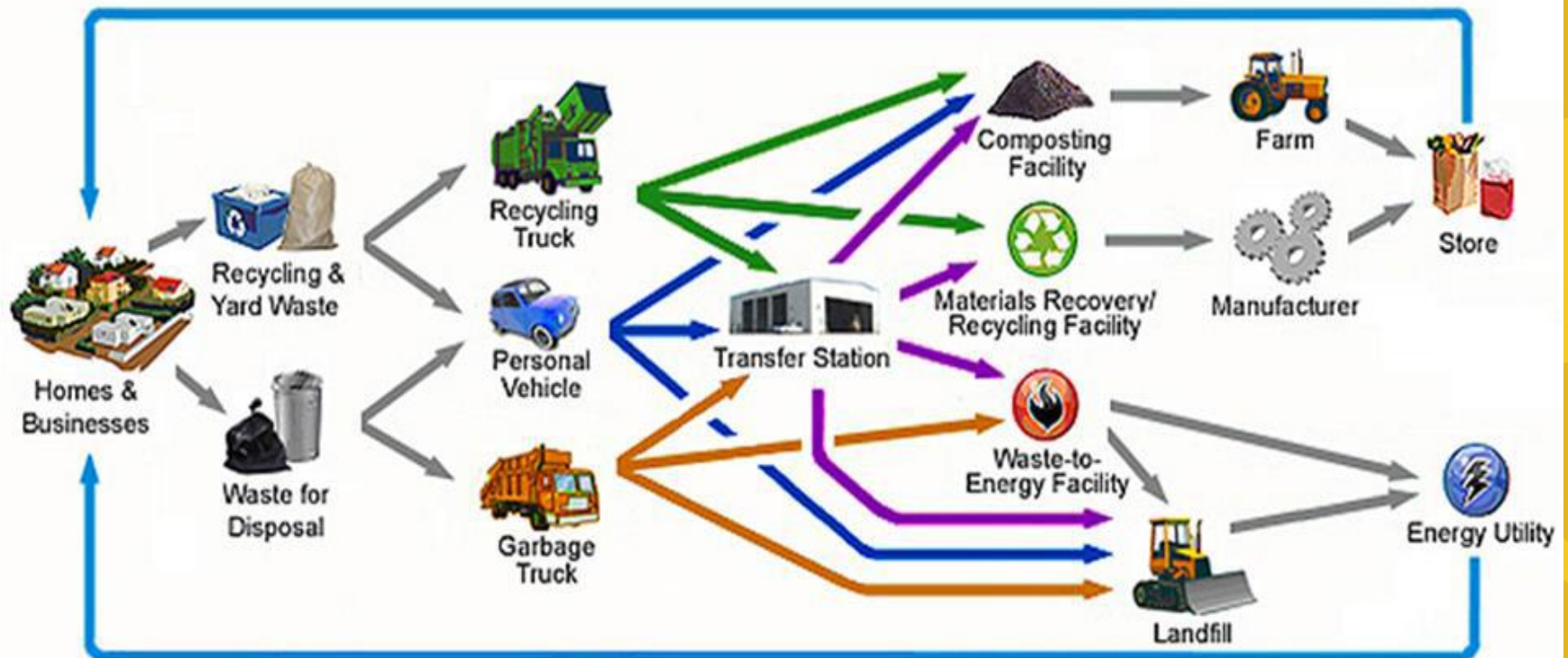
Second, Repurpose or ***REUSE***

Last, ***RECYCLE!***



The waste stream is more complicated than simply throwing stuff in the correct bin. There are many places for waste to be disposed of, and many paths for waste to take to get there.

Follow the chart below to the different paths of our complex waste stream.



# Terminology

**Single Stream** – All “fiber” and ‘container” materials accepted for recycling can be combined in a one-bin collection system.

**Contaminant** – Any material not acceptable in a recycling collection system. Contaminants can include kinds of materials (like plastic bags) or “goopy” items that compromise the quality of other single stream materials.

**Hauler** – The company that literally picks up your recycling from home, workplace or school. This company is typically the “face” of recycling for you, but many haulers are an intermediary between the customer and the point of processing recycled materials on their way to becoming resources for recycled-content manufacturing. *Haulers also haul to landfills.*



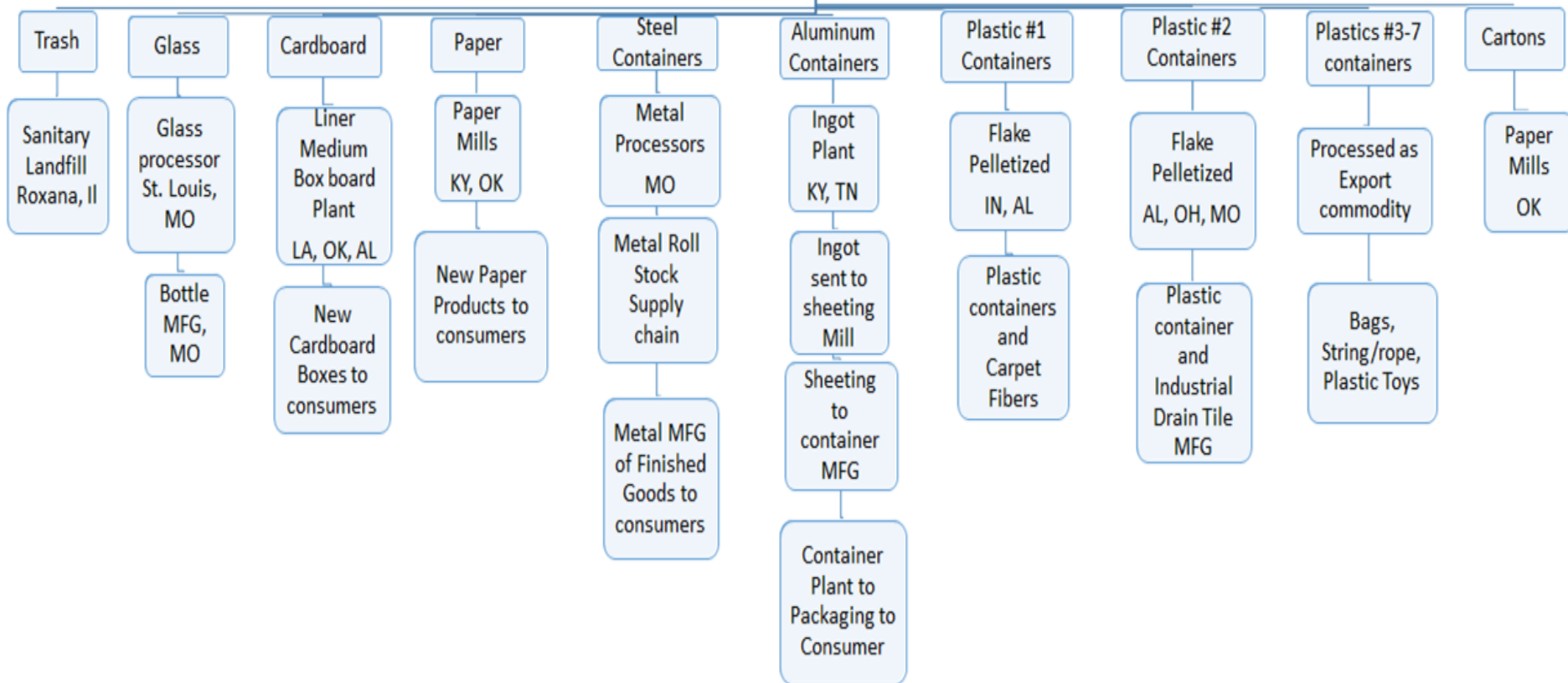
# Terminology

**MRF – Materials Recovery Facility** – Industrial plant, often highly automated, where recycled materials are **sorted** from co-mingled “single stream” collection into their unique material streams, so that these materials can be brokered (sold) to manufacturers wanting them as ingredients for recycled-content new products. *ALL single-stream recycled materials go through a MRF after they are picked up by a Hauler.*

**Markets** – Global manufacturers want recycled materials as ingredients for making new products. However, many of these markets are now rejecting loads of materials that are contaminated!

**Landfill** – Facilities that accept and contain a wide variety of “waste” materials. Landfills are highly regulated and monitored. Landfills are not bad! BUT *why would we send materials that still have “useful life” to be buried a landfill?*

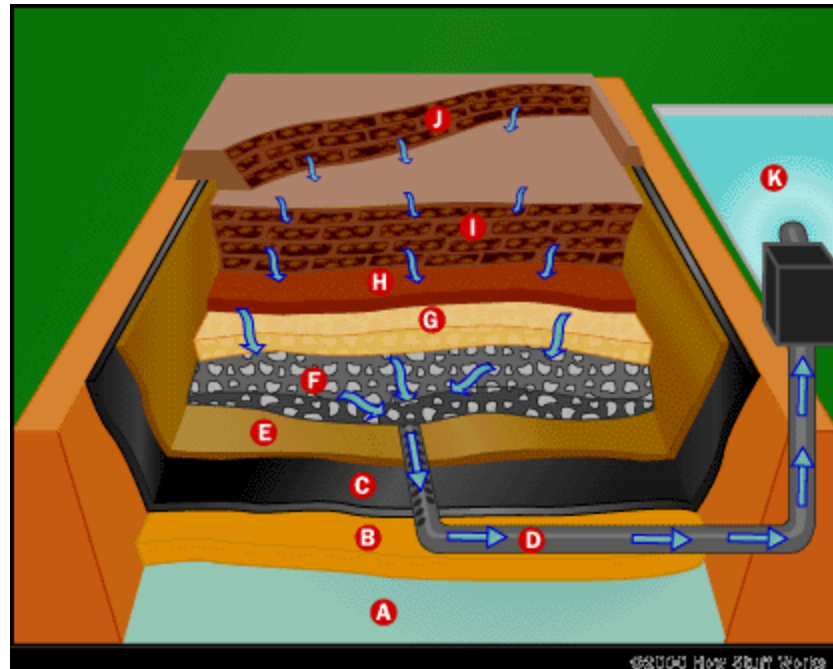
## Single - Stream Process



# The Landfill

Top Things in Landfills:

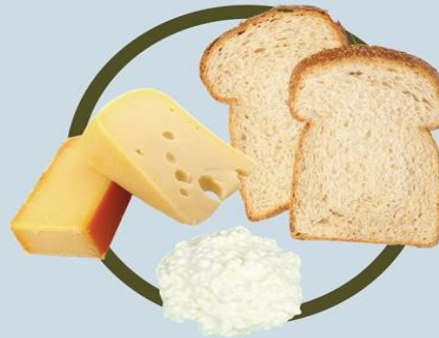
1) Paper 2) Organics (Yard & Food Waste) 3) Plastics



## Commercial Composting

# COMPOST IT!

*food waste, wooden utensils, certified compostable service ware, napkins, wax cardboard*





# Special Collections

- Grocery Store **Plastic Bag/Film** Collections
- St. Louis Household **Hazardous Waste**
- Multiple collector Events
  - **Electronic (E-Waste)**

■ MRC

■ EPC





# ONLY place these items in the recycling container



**Flattened Cardboard**



**Paper**



**Metal Cans**



**Plastic Bottles & Jugs**



**Cartons**



**Glass**

## How to prepare your recyclables



### **Empty. Clean. Dry.™**

Keep all recyclables free of food and liquid



### **Keep it loose**

Never put recyclables in containers or bags



## NEVER place these items in the recycling container



**Plastic Bags & Wrappers**



**Soiled Paper**



**Styrofoam**



**Clothing & Shoes**



**Greasy Pizza Boxes**



**Tools**



**Food**



**Toys**



**Electronics & Batteries**



**Construction Waste**



**Yard Waste**



**Medical**



**Diapers**



**Scrap Metal**

# What Happens to Recyclables?





# MRF: Material Recovery Facilities



**St. Louis Area Facilities**  
Republic Services, Hazelwood  
Resource Management, Earth City

- They Recycle over 300 Tons per day, at just one facility!

# Cardboard Screen and Glass Crusher





# Container Line





# Steel Magnet



# Eddy Current





# Optical Sorter 1 – PET Plastic



# Optical Sorter 2 – HDPE Plastic





# Optical Sorter 3 – Aseptic Packaging/Cartons, Other Plastic





# Recycle **clean, dry** plastic bags and film packaging



Newspaper Bags



Case Wrap  
(e.g. snacks, beverage cases)



Produce Bags



Retail Bags



Food Storage Bags



Air Pillows



[how2recycle.info](http://how2recycle.info)

✓ ONLY frozen food bags with the above how2recycle label

✗ NO prewashed salad mix bags

✗ NO degradable bags



Napkin, Paper Towel, Bathroom Tissue and Diaper Wrap  
(packaging)



Bread Bags



Dry Cleaning Bags



Recycled plastic bags and wraps can become new packaging or durable home building products.



Trex®

Bemis®

Ziploc®

[plasticfilmrecycling.org](http://plasticfilmrecycling.org)

## Clear. Consistent. Concise. Recycling labels that make sense.



### Preparing Material for Recycling

Information is provided to ensure the proper steps are taken to effectively recycle materials.

Rinse & Insert Lid   Empty & Replace Cap   Empty Before Recycling   Rinse Before Recycling   Rinse & Replace Lid   Recycle If Clean & Dry   See Website For Cap   Remove Label Before Recycling   Empty & Discard Sprayer   Empty & Reattach Sprayer   Empty & Discard Pump   Empty & Reattach Pump



### How2Recycle

Information and locational instructions let you know if an item can be recycled traditionally or by other means.



Widely Recycled



Limited Recycling \* Not recycled in all communities



Not Yet Recycled



Store Drop-Off



### Type of Recyclable Material

Lists what type of material the packaging is made from.

PLASTIC

PAPER

METAL

COATED PAPER

GLASS

MULTI-LAYER



### Lists Recyclable Parts of Packaging

Information on what parts of the packaging needs to be recycled in this specific way.

BOTTLE

TRAY

INSERT

BOX

BAG

WRAP

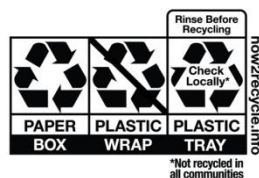
CAN

FILM

POUCH

## The Multi-Component Labels

We want to be sure that you know how to recycle your whole package, not just a part of it! For a How2Recycle label like the one at right, each "tile" represents a different part of the package. This is really helpful for when you're trying to know how to recycle different parts of your package. How2Recycle labels are intended to be read left to right, based on which part of the packaging you encounter first.



\*Not recycled in all communities

# Recycling Facts

- An aluminum can takes only 60 days to be repurposed into a new can
- If all our newspaper in the world was recycled we could save about 250,000,000 trees a year!
- Recycling one ton of plastic saves the energy equivalent of what it takes to turn 1500 gallons of petroleum into gasoline
- Recycling creates 8 times as many jobs as incineration and landfills
- It is cheaper to make material from recycled material than it is to make it from scratch

## **Online sources:**

**<http://how2recycle.info>**

**<https://search.earth911.com/>**

**<https://berecycled.org/search/>**

**Questions??**