



ENR Career Development Event

DISCUSSION

- Show monoliths of poorly drained (Treaty), well drained floodplain (Genesee) and well drained (Ockley)
 - o Soils vary in their suitability for a variety of uses, like construction, manure application, sewage disposal or agricultural production
- What are some things that need to be considered when thinking of waste management and soils?
 - o Flood plains, highly permeable soils, poorly drained soils
 - o When disposing of Municipal Solid Waste (MSW), landfills have been the standard for years, but as seen in the charts and graphs, incineration, composting and recycling are also being used.
 - o Indianapolis has a waste incineration plant that burns waste and generates electricity.
 - o One downside is that cities that incinerate, often have weaker recycling programs.
 - o In general, the slogan for MSW is “Reduce, Reuse, Recycle”.
- Indiana also has a vibrant animal agricultural industry. What are some of the considerations for animal and manure management and soils?
 - o The state of Texas recommends not exceeding 200 parts per million (ppm) phosphorous soil test levels for land application of manure. Many states have lower recommended levels.
 - o In general, pounds per acre (lbs/acre) of a nutrient listed on a soils test is 2x the number for parts per million. $\text{ppm} \times 2 = \text{lbs/acre}$

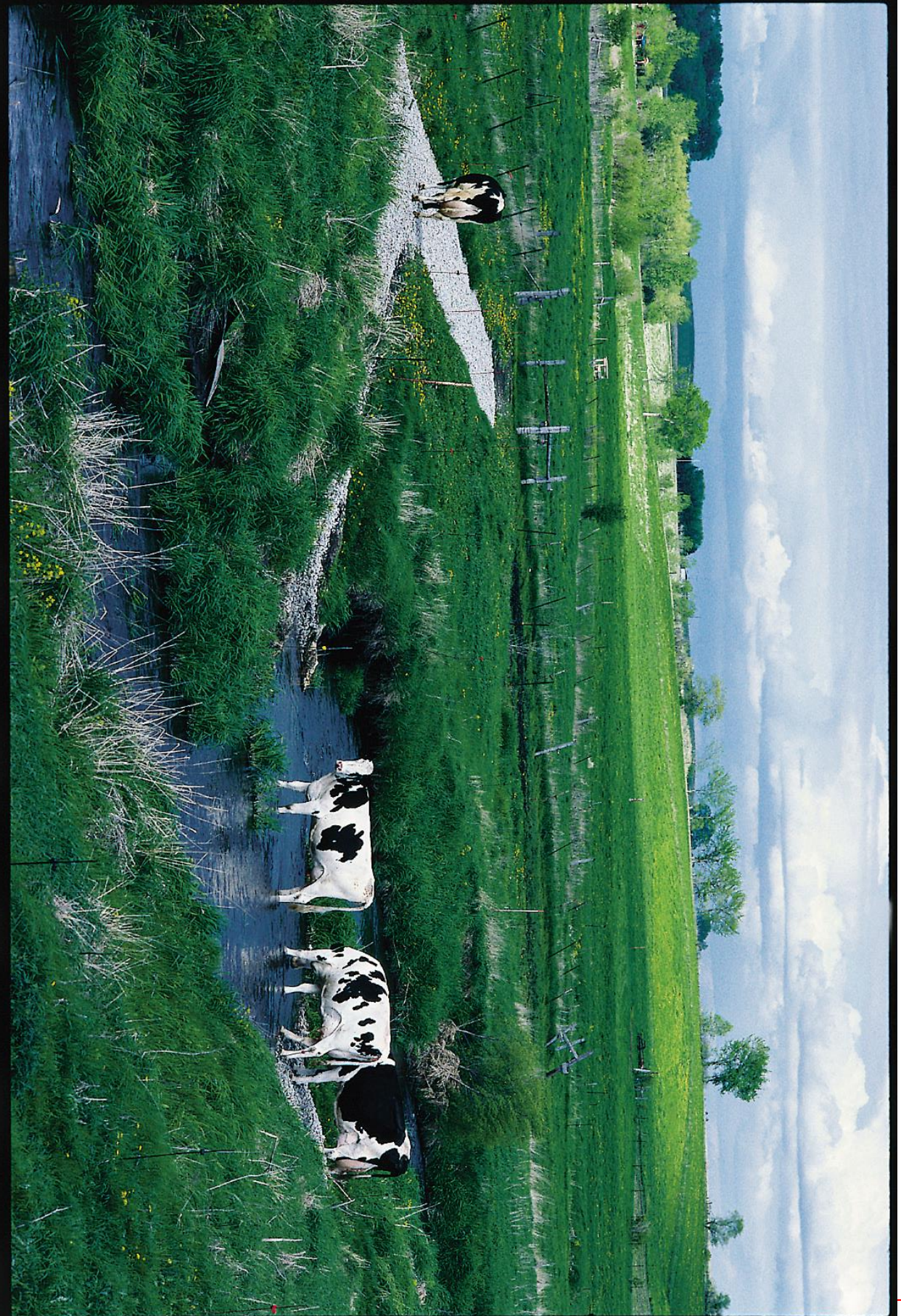
Municipal Solid Waste (MSW)

- Household waste, office and retail wastes
 - o Tires, furniture (Durable goods)
 - o Newspapers, plastic plates/cups (Nondurable goods)
 - o Milk cartons, plastic wrap (Containers and packaging)
 - o Yard waste, food (Other wastes)
- Excludes industrial, hazardous, and construction wastes
- US represents 4% of the world's population but produces 12% of municipal solid waste
- Disposal methods
 - o Compost
 - o Incinerate (may hinder recycling programs)
 - o Landfill
 - o Recycle
- The three R's: Reduce, reuse, recycle
 - o Compost
 - o Donate unused items instead of throwing them away
 - o Exchange products with neighbors
 - o Reject items with excessive packing
 - o Repair items instead of discarding them
 - o Something is not considered waste until it's discarded
 - o Use more fresh products

Manure Management

- Manure management plans
- Soil testing
- Soil types
- Management
 - o Compost bedded pack barn
 - o Roofs
 - o Mortality composting facility
 - o Dry stack
 - o Manure pit
 - o Heavy use areas
 - o Fencing
 - o Overgrazing
 - o Confinement vs. grazing
 - o Community manure lagoon
 - o Buffers
 - o Waste treatment lagoon
 - o Solid separator

- Land application
 - Sinkholes
 - Highly permeable soils
 - Erosive soils



Scenario #1



Scenario #2

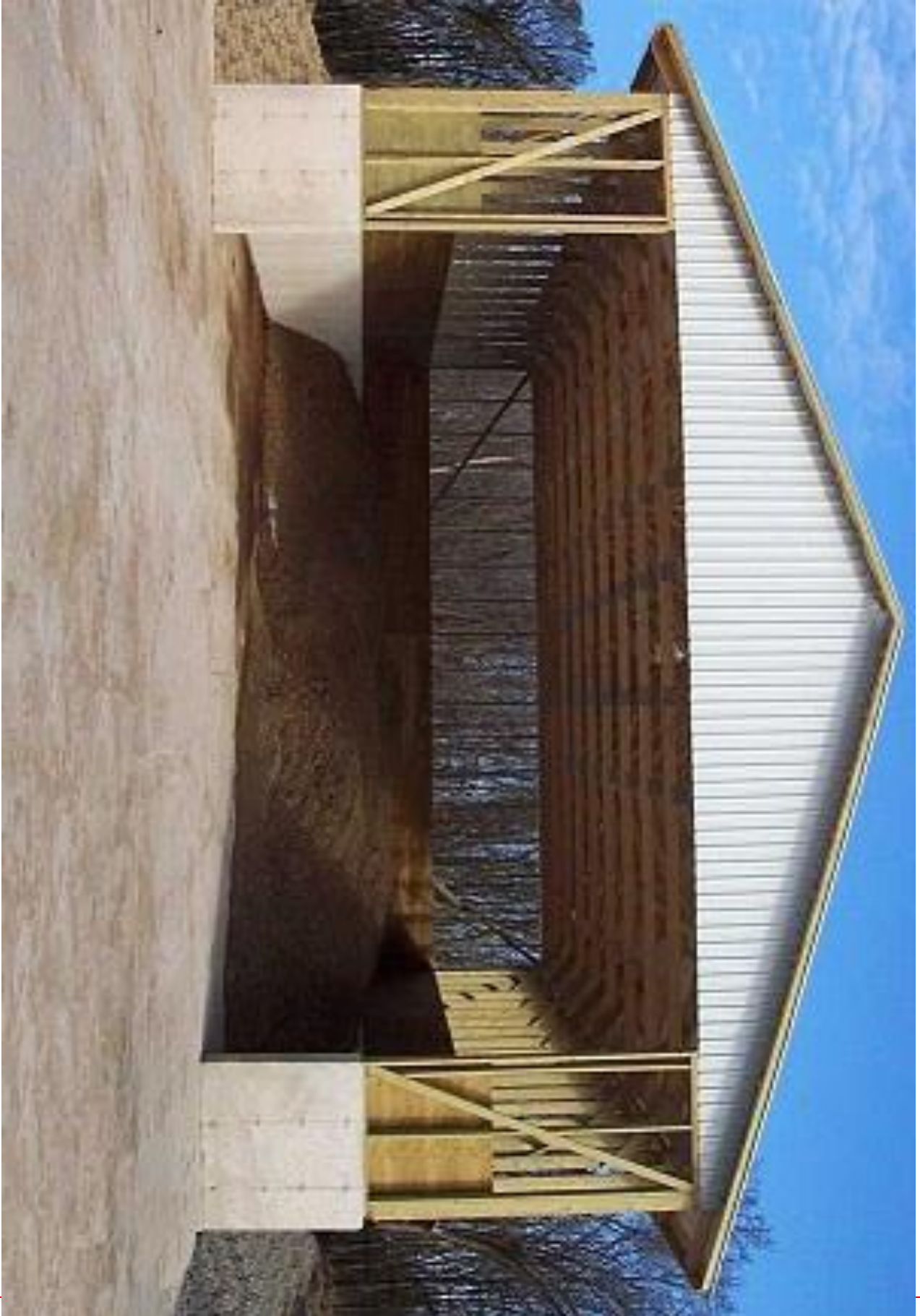


FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.

Scenario #3



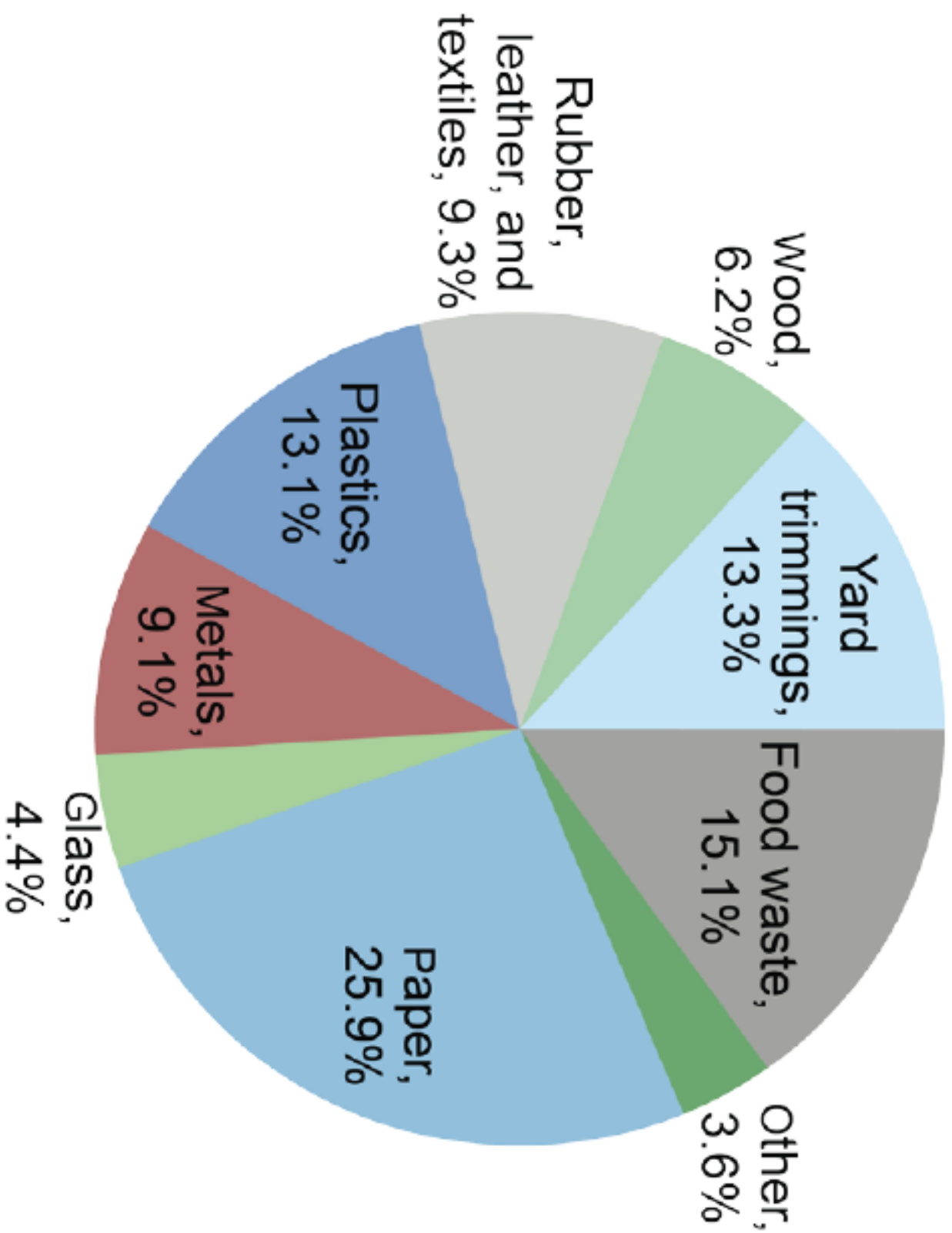
Scenario #3

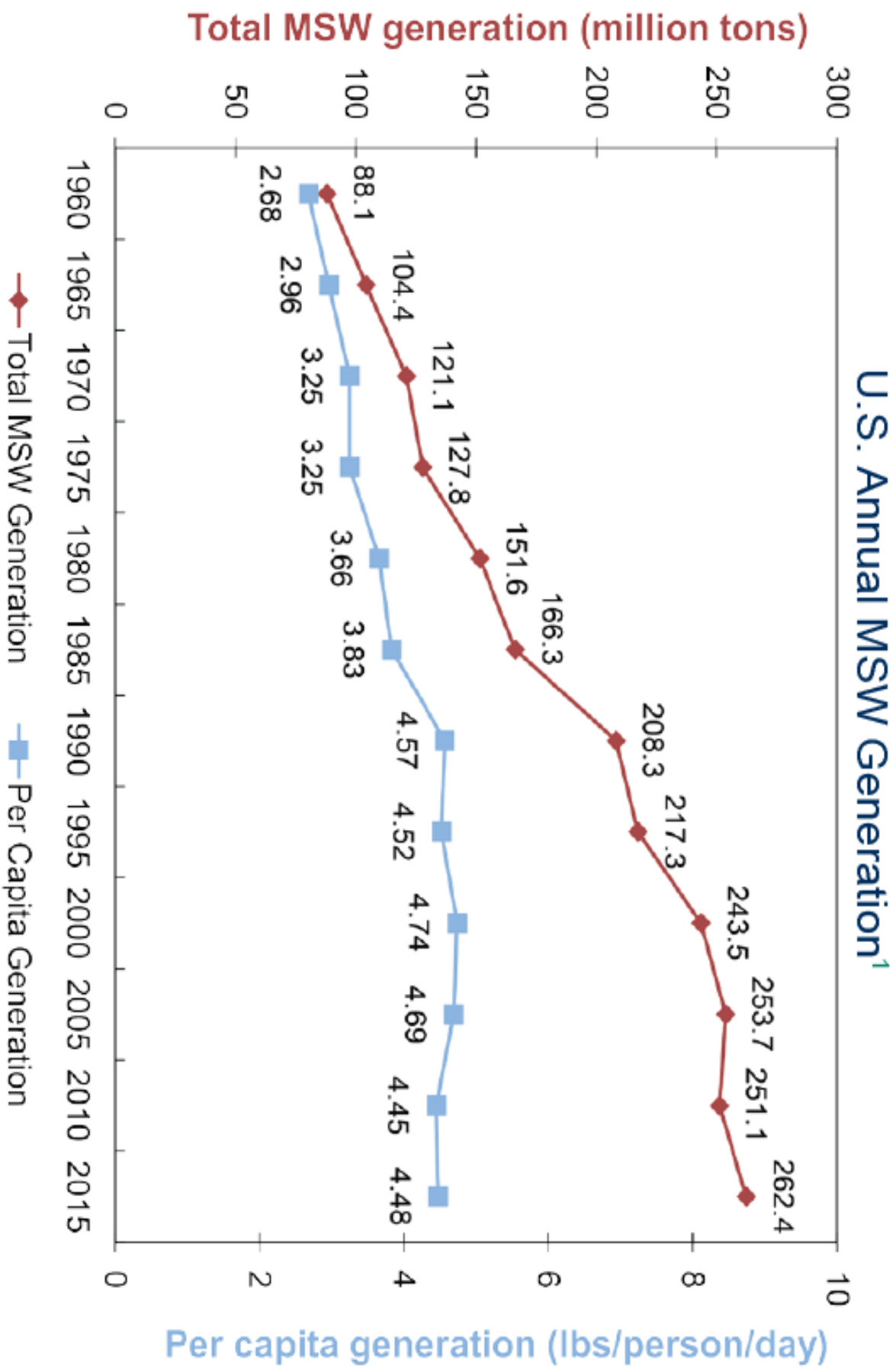


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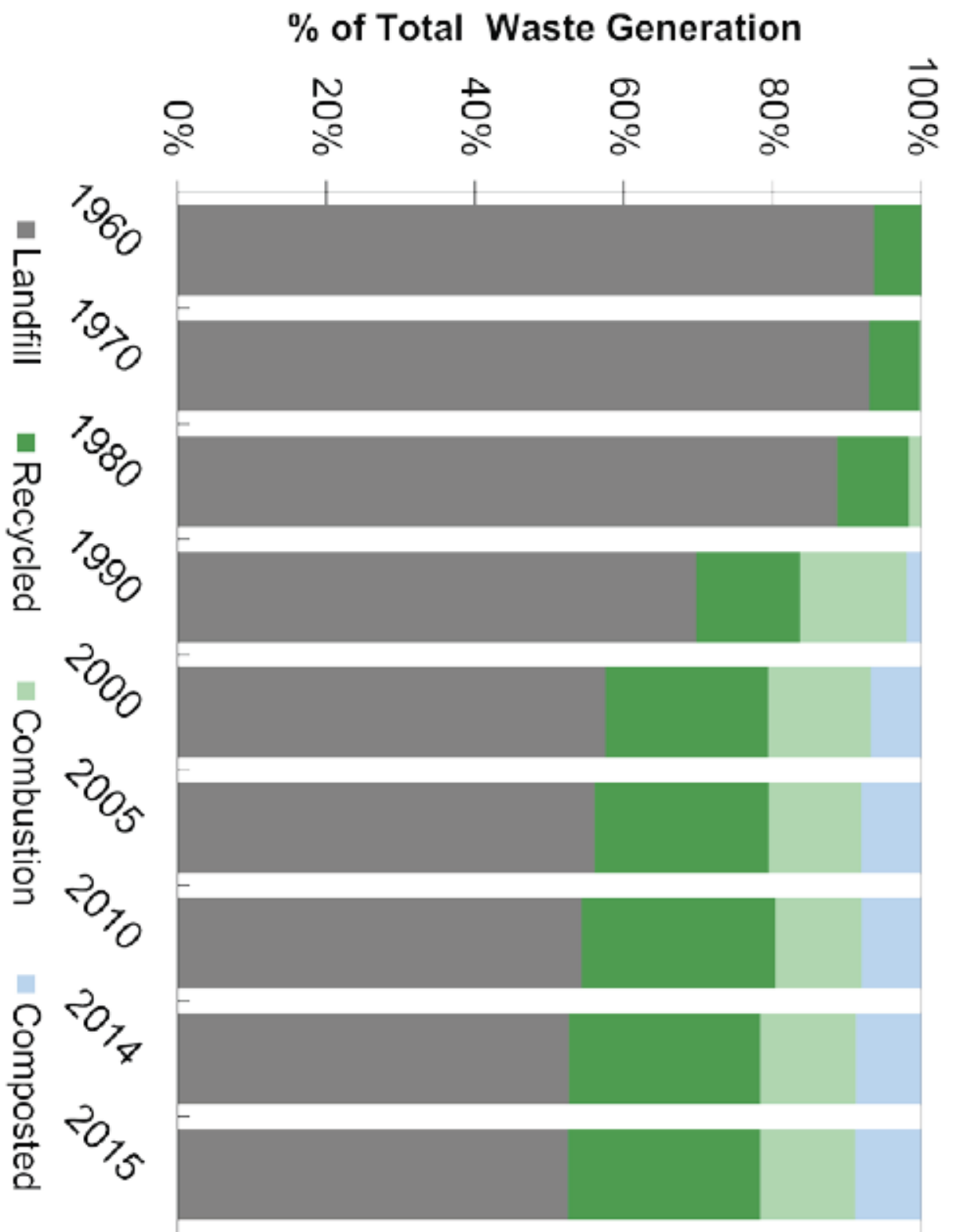
Scenario #3

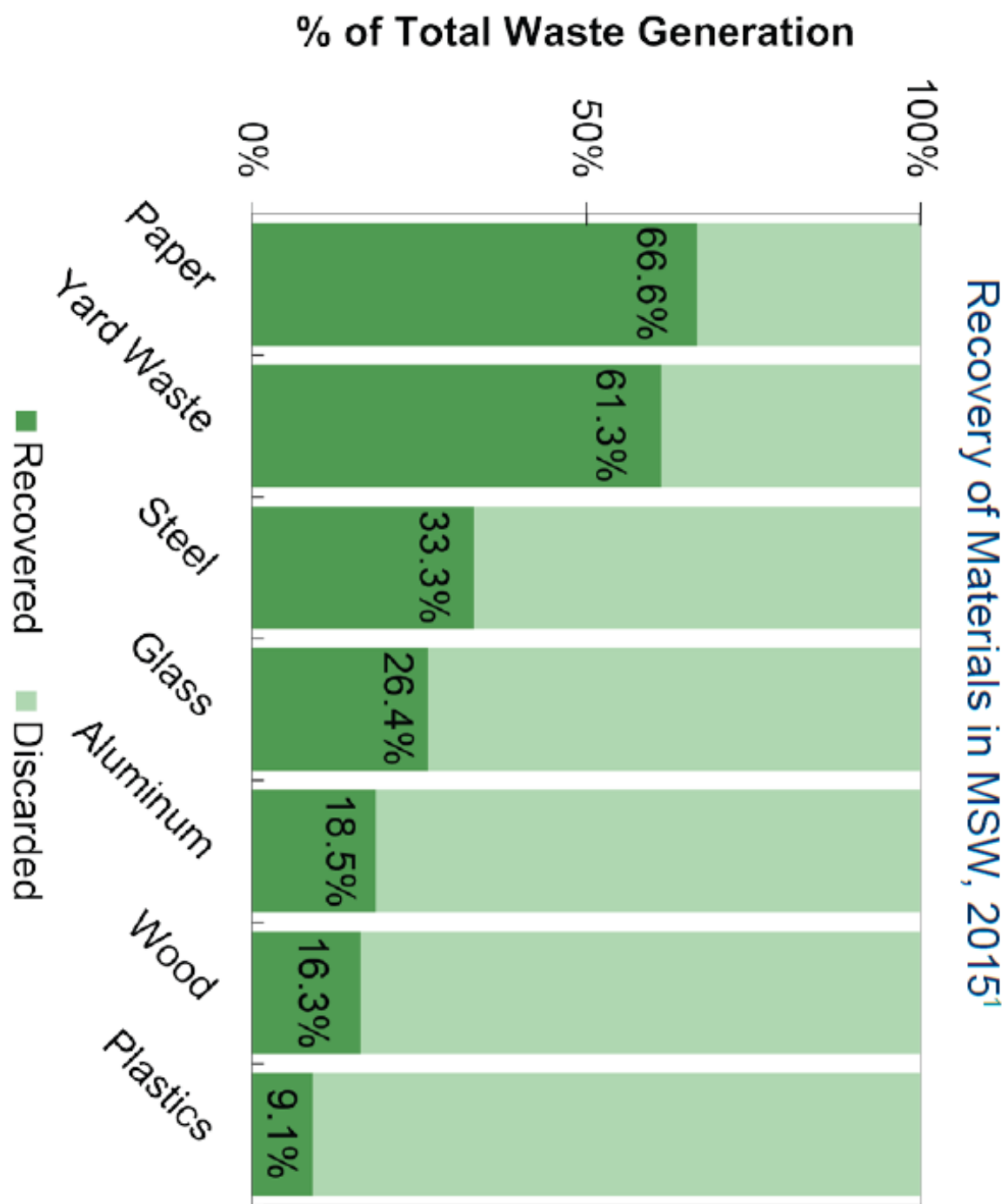
U.S. MSW Composition, 2015¹



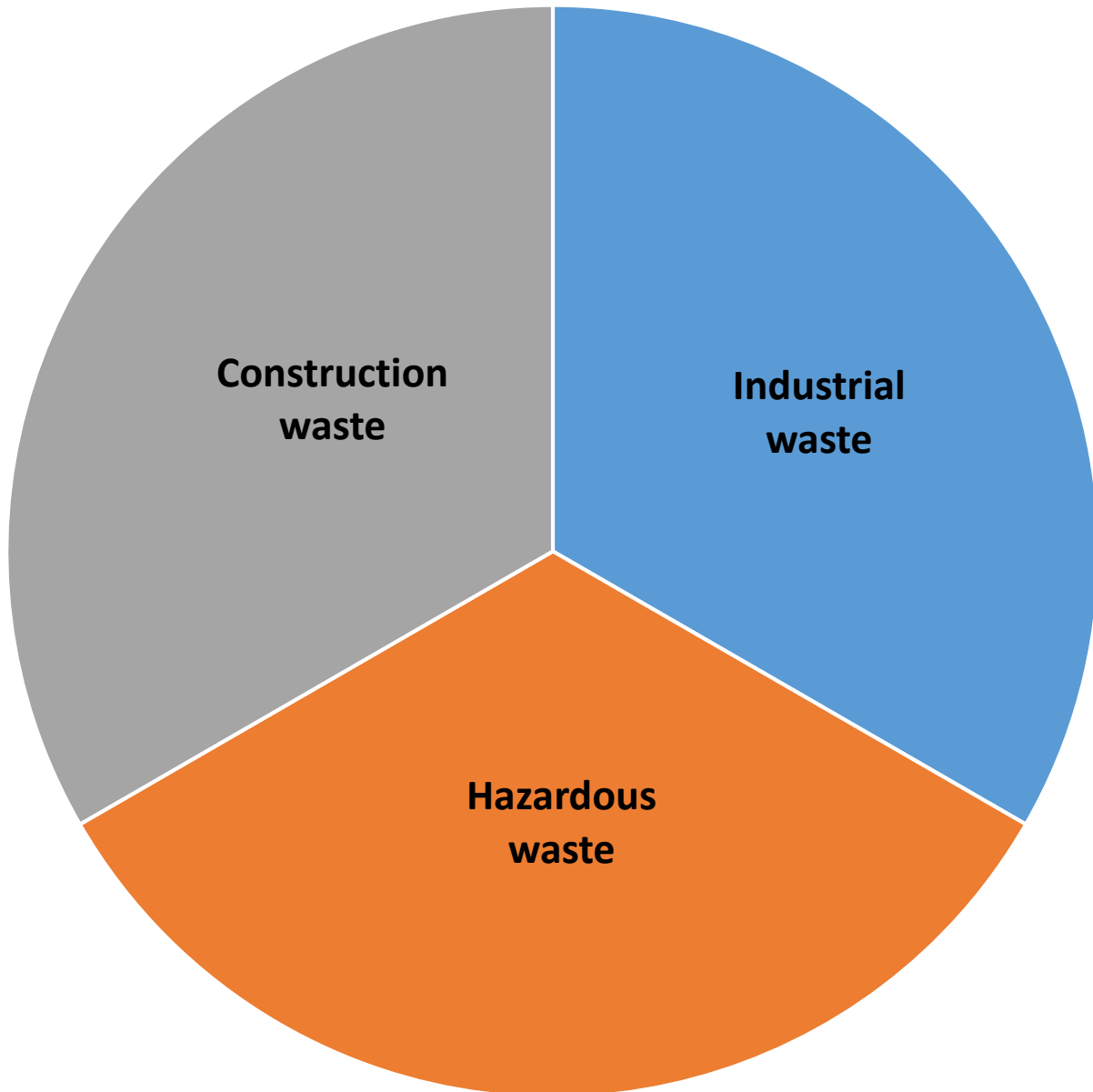


MSW Management in the U.S.¹

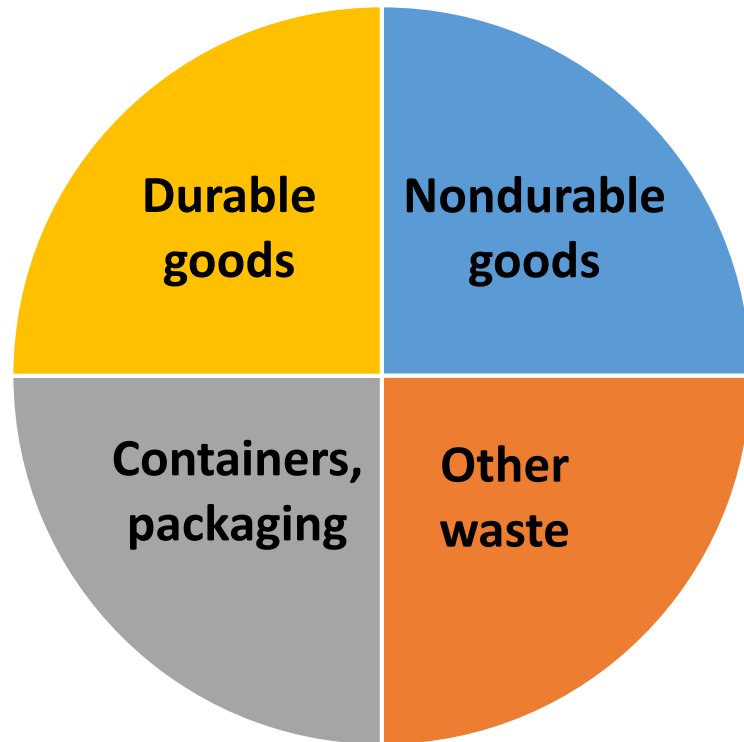




Not included in MSW



Municipal solid waste (MSW)



- **Durable goods (tires, furniture)**
- **Nondurable goods (newspapers, plastic plates/cups)**