


How You Can Help Achieve A Waste-Free Future

Syracuse University
Center for Sustainable Community Solutions

A man in a dark jacket and pants stands on a grassy ridge, looking out over a landscape of mountains and a lake. The sky is overcast.

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HOW: USDA, EPA, and DEC Grants

WHAT: Sustainable Materials Management

WHERE: EPA Region 2 (NY, NJ, PR, USVI)



THE ISSUE

*How much waste does
the U.S. produce?*



The U.S. generated **292.4 MILLION TONS** of municipal solid waste (MSW) in 2018. That's **4.9 POUNDS** per person per day.

(Source: U.S. Environmental Protection Agency, 2020)

Image Credit: Andrew Greaves

NYS throws away 1.4 BILLION POUNDS of clothes and textile material every year.

(Source: NYS Department of Environmental Conservation, 2023)



**U.S. consumers threw away 6.9 MILLION
TONS of electronic equipment in 2019.**

(Source: The Global E-waste Monitor, 2020)

~35% of all food produced in the U.S.
goes to waste. **~24%** of material sent to
landfills and waste combustion is food.

(Sources: U.S. Department of Agriculture, 2017; U.S. Environmental Protection Agency, 2020)



WHERE IS “AWAY”?

*How is waste currently
managed in the U.S.?*

An estimated **50%** of MSW is managed via landfilling in the U.S.

(Source: U.S. Environmental Protection Agency, 2020)



Image Credit: Lori Van Buren/Times Union

An estimated **11.8%** of MSW is managed
via waste combustion facilities in the U.S.

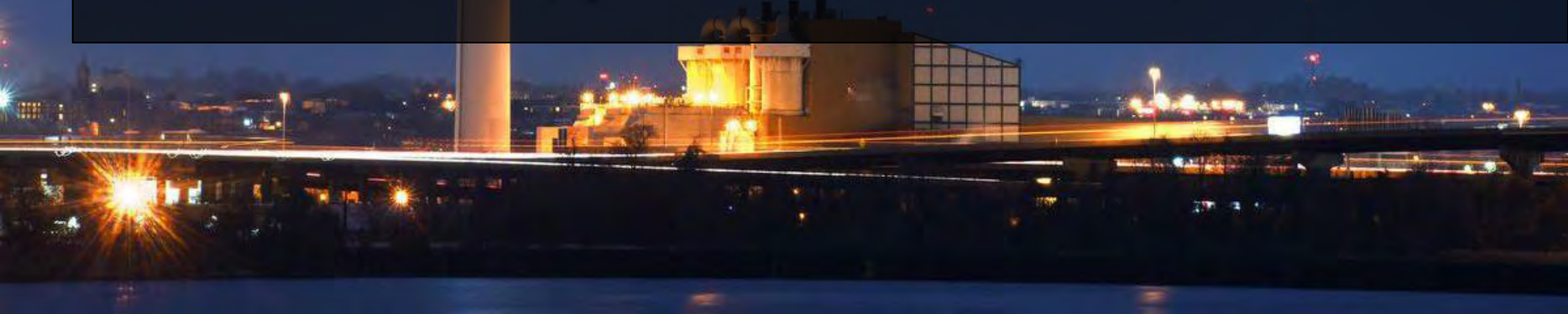
(Source: U.S. Environmental Protection Agency, 2019)




EXTERNALITIES

What are the negative impacts of landfilling and waste combustion?

Incinerating used materials releases **AIR POLLUTANTS** including nitrogen oxides, sulfur dioxide, particulate matter, and more.





Unlined landfills can potentially pollute nearby groundwater and surface waters with **LEACHATE, which is highly toxic.**



Landfilling organics produces 15.1% of all methane emissions generated in the U.S.

(Source: U.S. Environmental Protection Agency, 2019)

An aerial photograph showing a large industrial waste combustion facility. The facility features several large, interconnected ponds of varying colors (blue, grey, brown) and a large area of brown earth, likely a waste pile or processing area. To the right, there are several large industrial buildings and parking lots. In the foreground and to the left, there is a residential neighborhood with houses and trees. The background shows a mix of green fields and distant hills under a clear sky.

In the U.S., 79% of waste combustion facilities are estimated to be sited in environmental justice communities.

(Source: The Tishman Environment and Design Center at The New School, 2019)


An estimated average of **8 MILLION TONS**
of plastic debris entered the ocean in 2010.

(Source: Jambeck et al., 2015)





Landfilling and waste combustion
removes **MATERIAL RESOURCES** from
natural cycles and future beneficial use.



Virgin material extraction is environmentally destructive, causing widespread and long-lasting disturbances and loss of **ECOSYSTEM SERVICES.**

CAUSES

What are main forces driving consumerism and waste?

Healthy capitalistic economies depend on annual growth of Gross Domestic Product (GDP). **ECOLOGICAL ECONOMICS** describe the incompatibility of infinite economic growth within a finite ecological system.



PLANNED OBSOLESCENCE is exemplified by features of products that are intentionally designed to fail after a calculated period of time to spur increased consumption.

BEYOND WASTE

*What is sustainable
materials management?*


EPA's Waste Management Hierarchy

SOURCE REDUCTION & REUSE

RECYCLING & COMPOSTING


ENERGY RECOVERY

TREATMENT & DISPOSAL



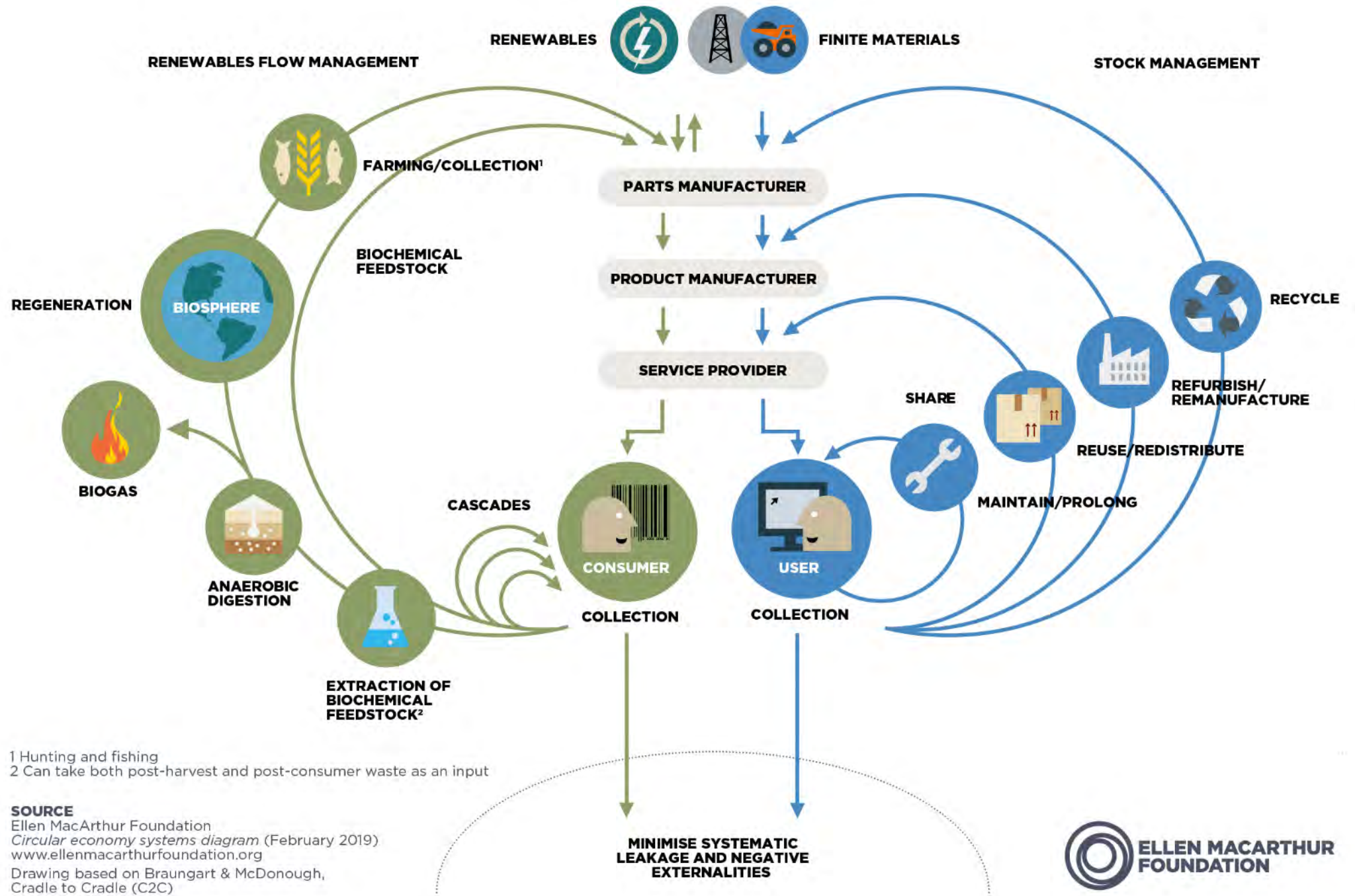
Words like **GARBAGE, TRASH, WASTE, RUBBISH, REFUSE, JUNK** indicate system inefficiencies and mischaracterize used materials as “valueless”.

**Consider all the natural resources
invested to create the goods you use.
When they lose **FUNCTIONAL VALUE**,
they retain **RESOURCE VALUE**.**



HIGHEST AND BEST USE: Keep materials towards the top of hierarchy and in use for as long as possible and prevent them from being downcycled where the number of future uses are limited.

(Source: Zero Waste International Alliance, 2018)



1 Hunting and fishing
 2 Can take both post-harvest and post-consumer waste as an input

SOURCE
 Ellen MacArthur Foundation
Circular economy systems diagram (February 2019)
www.ellenmacarthurfoundation.org
 Drawing based on Braungart & McDonough,
 Cradle to Cradle (C2C)



SOLUTIONS

*How can you reduce
waste at home, at school,
and in your community?*

An estimated **23.6%** of MSW is **RECYCLED** in the U.S.

(Source: U.S. Environmental Protection Agency, 2020)



Image Credit: Jesse Kerns



Support your local recycling program,
learn how to “**RECYCLE RIGHT**”, and
purchase items made from “**POST-
CONSUMER RECYCLED CONTENT**”.

An estimated **8.5%** of MSW is **COMPOSTED** in the U.S.

(Source: U.S. Environmental Protection Agency, 2020)



**Separate food scraps and compost
them with landscape debris to create
NUTRIENT-RICH SOIL AMENDMENT.**





Use compost for **SOIL REGENERATION**, ecosystem restoration, gardens, landscaping, lawns, trees and shrubs, and potted plants.



FOOD RESCUE: Safely recover prepared and perishable food and redistribute to communities experiencing food insecurity.

REDUCE FOOD LOSS:

- Eat leftovers
- Meal planning
- Create grocery lists
- Check your stock
- Cook root-to-leaf
- Relearn date labels
- Store and preserve
- Donate extra food



REUSE SYSTEMS: material exchanges, community garage sales, reuse centers, sharing libraries, and repair cafes.

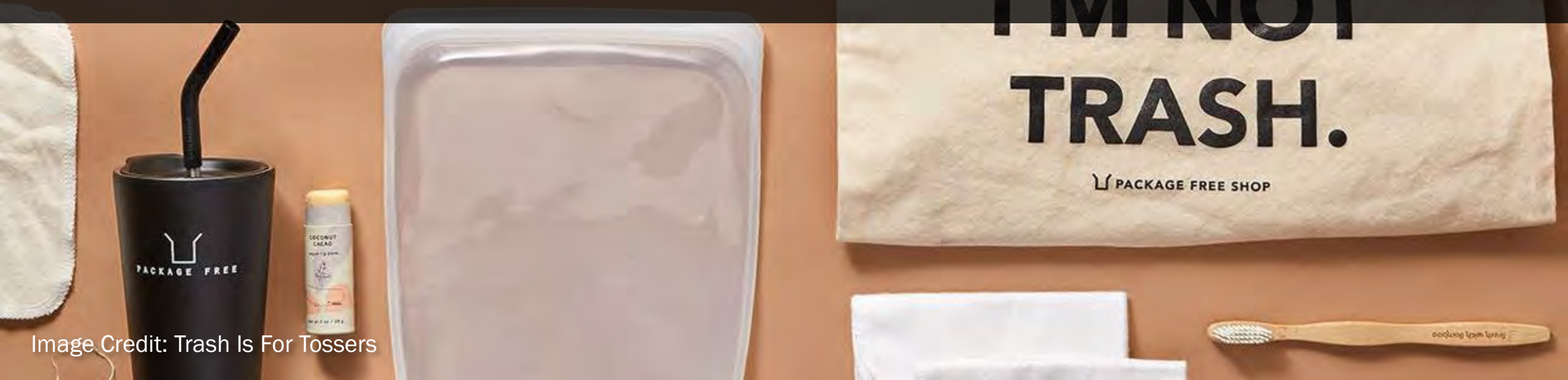




REDUCE SINGLE-USE: Conduct a waste audit, learn which items you dispose the most, swap single-use items for reusable alternatives.

I'M NOT TRASH.

PACKAGE FREE SHOP





REDUCE CONSUMPTION: Reflect on your buying habits, “buy better, buy less”, and prioritize services/experiences over goods.

Image Credit: Jesse Kerns

