



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Food Waste Reduction in Materials Management Planning

Southwest Region MMPC meeting - August 18, 2025

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Food Waste in the U.S.



Approximately 30-40% of food produced is never eaten

Financial

- Costs the nation an est. \$300 billion annually
- Costs the avg household of four \$3,000 a year
- 3-5% of businesses food costs

Social

- 15.4% of Michiganders face food insecurity

Environmental

- ~25-30% of landfill waste
- 58% of fugitive landfill methane emissions
- Wasting food also wastes the resources that went into producing it

Food Waste Reduction Goals



EGLE's MI Healthy Climate Plan Food Loss & Waste Reduction Goal

Drive clean innovation in industry: Cut food waste in half by 2030



USDA, EPA, and FDA: Federal Interagency Collaboration to Reduce Food Loss & Waste

Joint initiative to reduce the amount of food leaving the human food supply chain by 50 percent by 2030

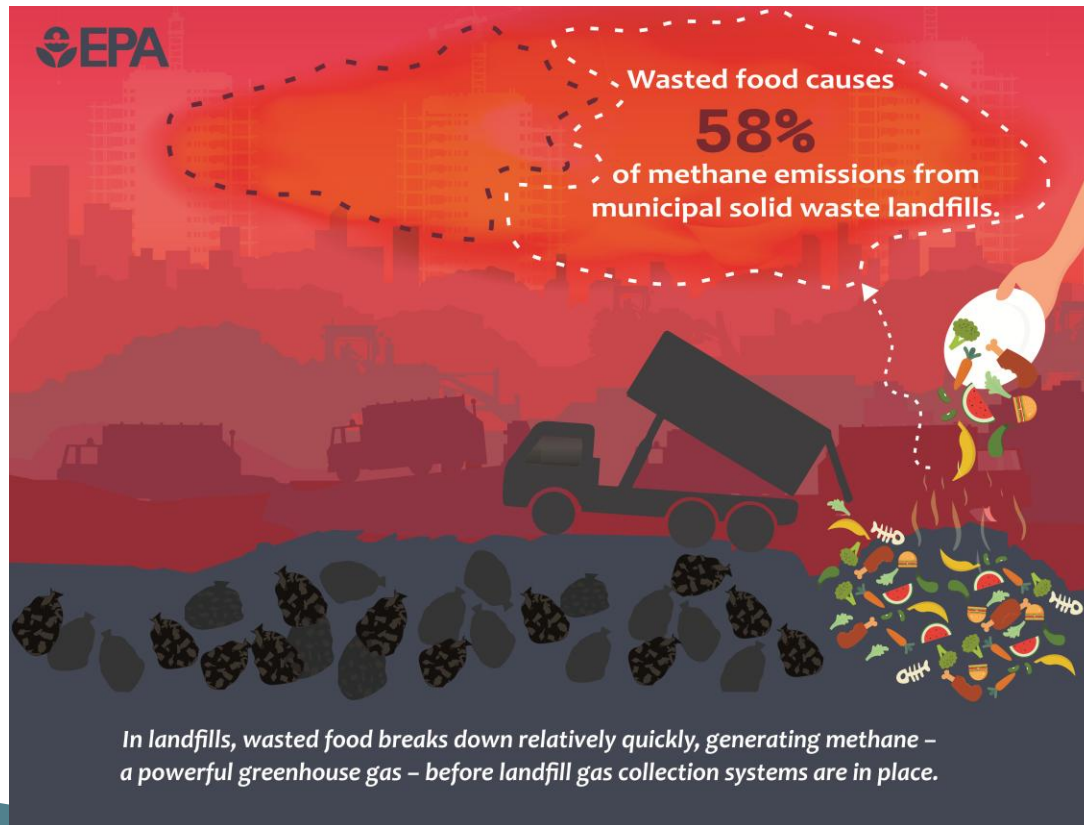


United Nations Sustainable Development Goal 12.3

By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses

Food Waste in Landfills

Municipal solid waste landfills are the third-largest source of methane emissions from human activities in the United States. (EPA)



An estimated **61 percent** of methane generated by landfilled food waste is not captured by landfill gas collection systems

Because food waste decays relatively quickly, its emissions often occur before landfill gas collection systems are installed or expanded.

While total methane emissions from MSW landfills are decreasing due to improvements in landfill gas collection systems, methane emissions from landfilled food waste are increasing.

Why Divert Food Waste?

Methane accounts for 11% of global emissions and traps more heat in the atmosphere than CO₂.

Methane & biogas capture systems are not the most efficient solutions for capturing harmful emissions generated by food waste in an anaerobic environment.

Landfilling food waste does not promote a circular economy.

Food waste diversion increases the life of landfills and impacts our land, water, air, & communities.

Economic opportunities: Sustainability and economic viability can go hand in hand.



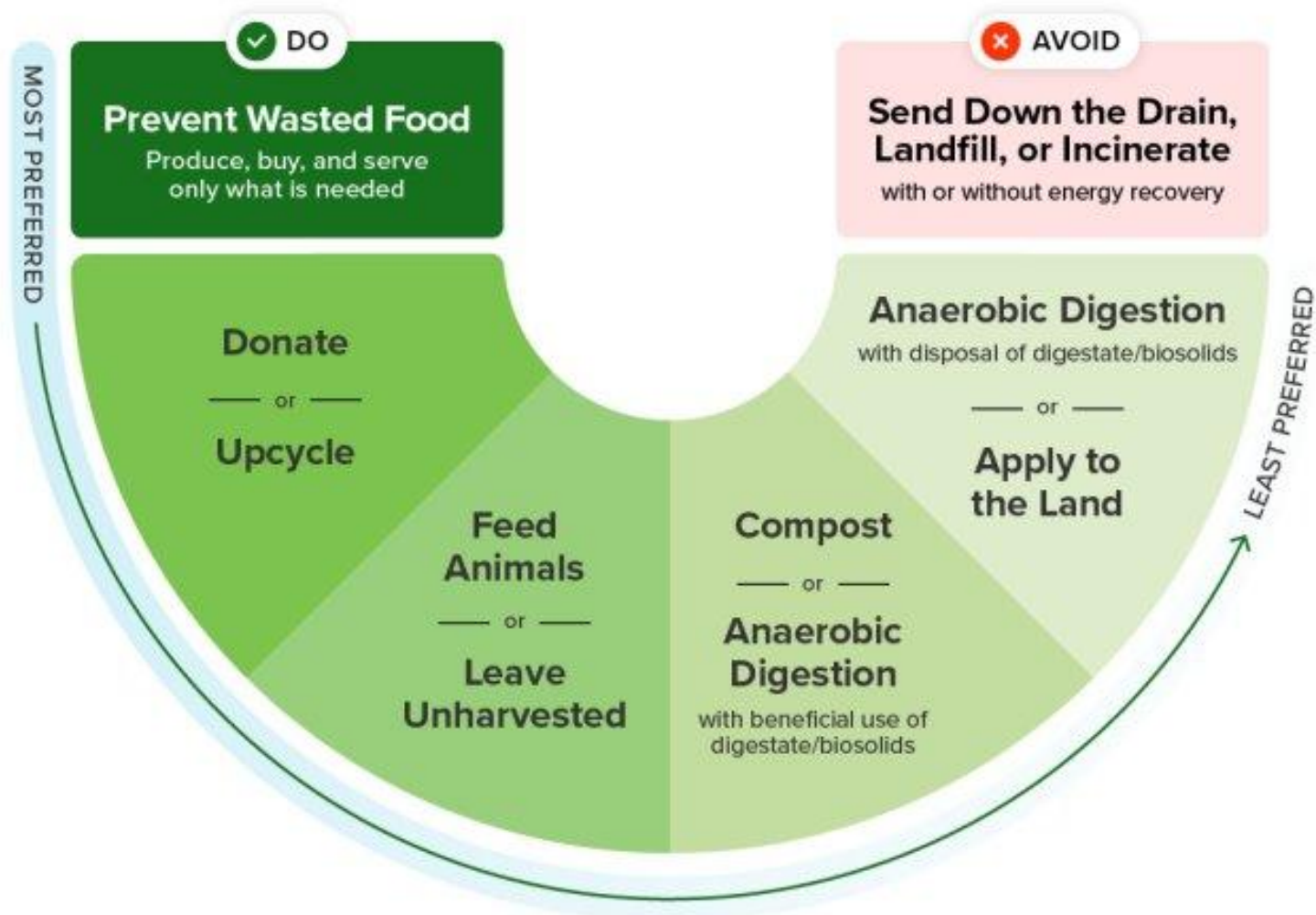
SUSTAINABLE FOOD MANAGEMENT





Wasted Food Scale

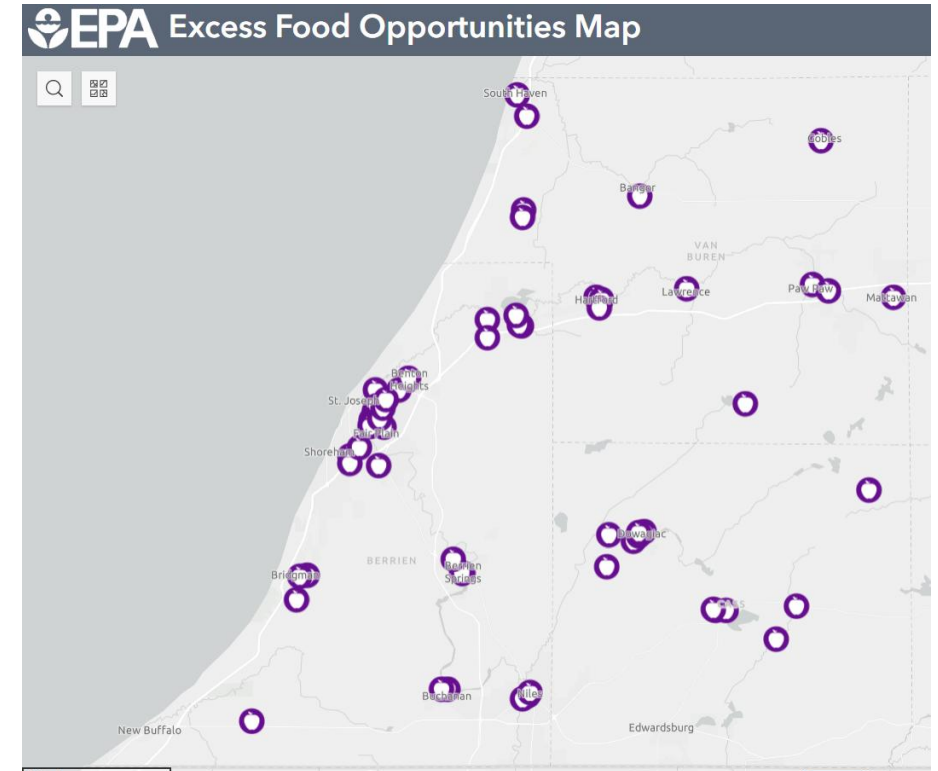
How to reduce the environmental impacts of wasted food



FEED PEOPLE

*Eat what you take; Donate extra
to food banks and shelters*

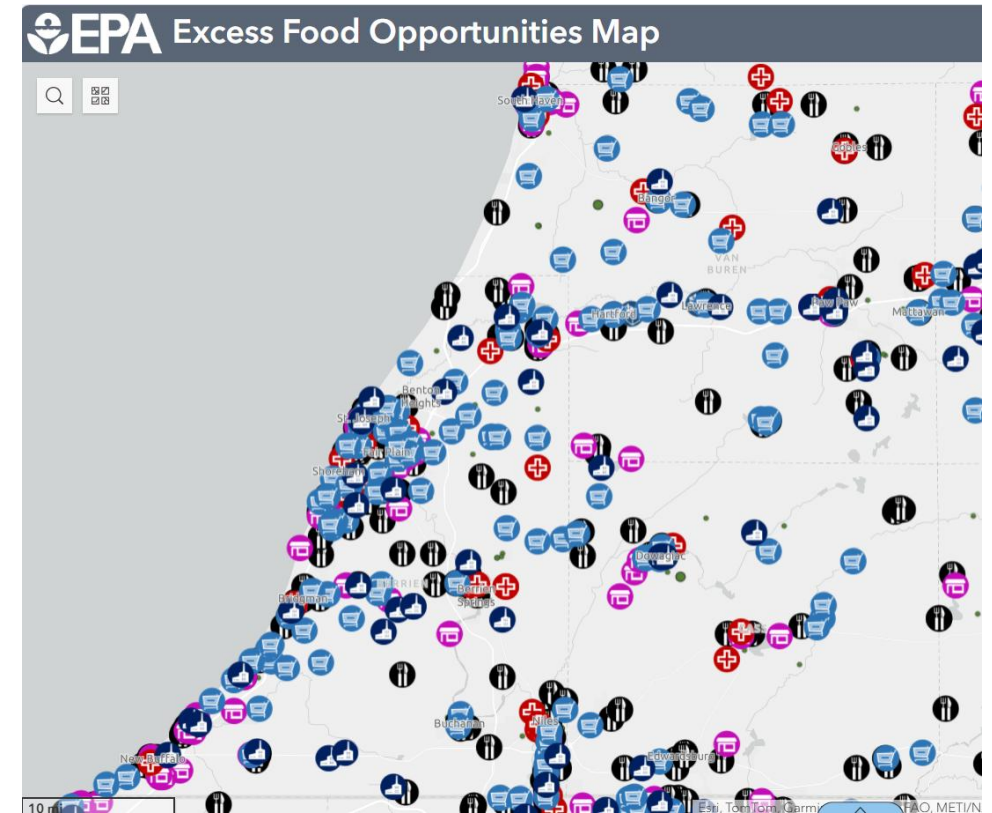
- Food Rescue/Donation
 - Food Banks, Food Pantries, Soup Kitchens
 - Larger Food Rescue organizations serving Southwest MI
 - Feeding America West MI
 - Hungry For Christ
 - Lakeshore Food Rescue/Community Action House
 - Farmlink (national program)
 - The Bill Emerson Good Samaritan Act
- Low cost or wholesale avenues
 - Michigan Agricultural Surplus System (MASS)
 - Charitable food organization direct purchasing
- Upcycling



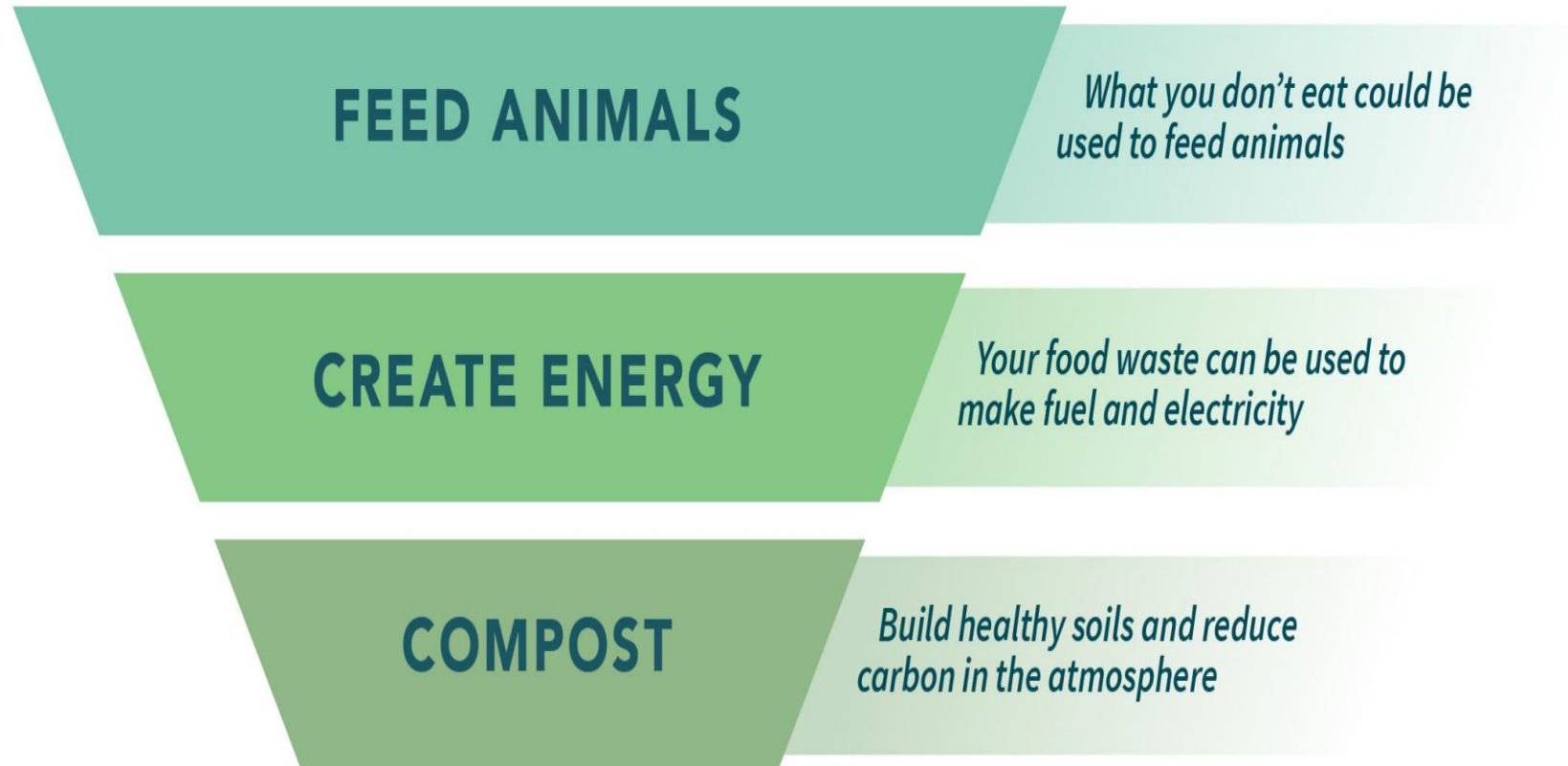
FEED PEOPLE

Eat what you take; Donate extra to food banks and shelters

- Farmers
- Wholesalers/Distributors
- Transportation Companies
- Farmers Markets
- Grocery stores/Retail/Corner Stores
- Schools/Institutions/Caterers
 - Share tables (schools)
- Restaurants



But what if people just can't eat it?!



FEED ANIMALS

*What you don't eat could be
used to feed animals*



- Many foods can be fed to chickens, turkeys, pigs, and cattle
 - Grains and Vegetables
 - Recovered and handled properly
- Fed directly or reprocessed first
 - Puts food materials back into the food chain



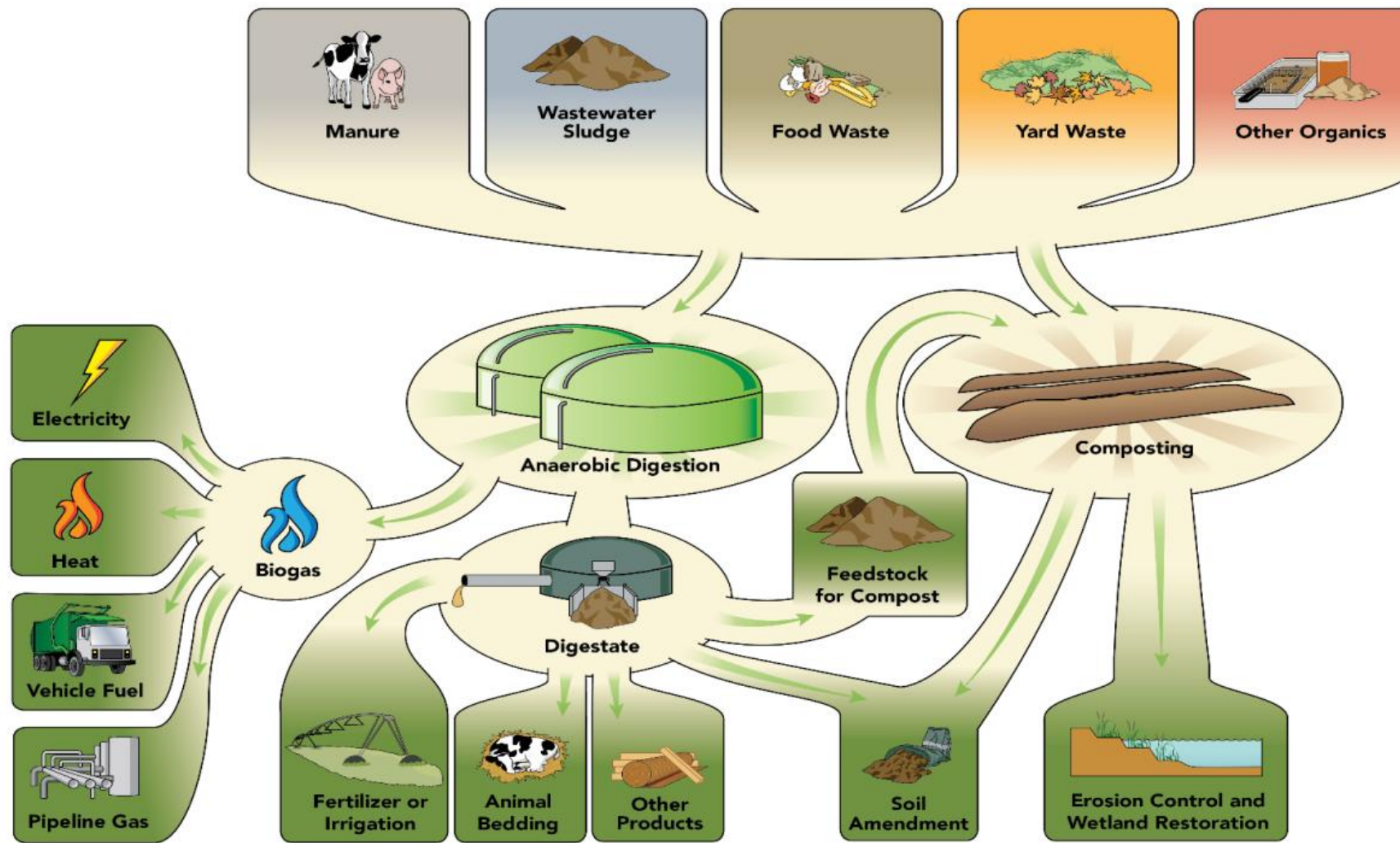


Figure 4-1. Byproducts and Beneficial Uses of Diverted Organic Waste.

CREATE ENERGY

Your food waste can be used to make fuel and electricity

- **Food is Energy!!**
- Food waste materials can be utilized to create electricity or natural gas
- More efficient biogas capture than landfill methane capture technology
- Materials counted towards diversion rate



Anaerobic Digestion

- Energy or natural gas
- Fertilizer

COMPOST

Build healthy soils and reduce carbon in the atmosphere

Composting = microbes break down organic materials back into nutrient rich soil

- Keeps organics out of the landfill
- Builds flood & drought resilience
- Reduces carbon in the atmosphere
- Can be used in place of chemical fertilizers

10 REASONS TO COMPOST

- 1) Improves plant growth
- 2) Reduces soil erosion
- 3) Allows soil to retain more water
- 4) Enhances soil fertility
- 5) Reduces waste landfilled & burned
- 6) Benefits soil structure
- 7) Allows soil to retain more nutrients
- 8) Stores carbon in soil to protect the climate
- 9) Builds community resilience & power
- 10) Is something everyone can do!



IILSR INSTITUTE FOR
Local Self-Reliance

Learn how: ilsr.org/composting



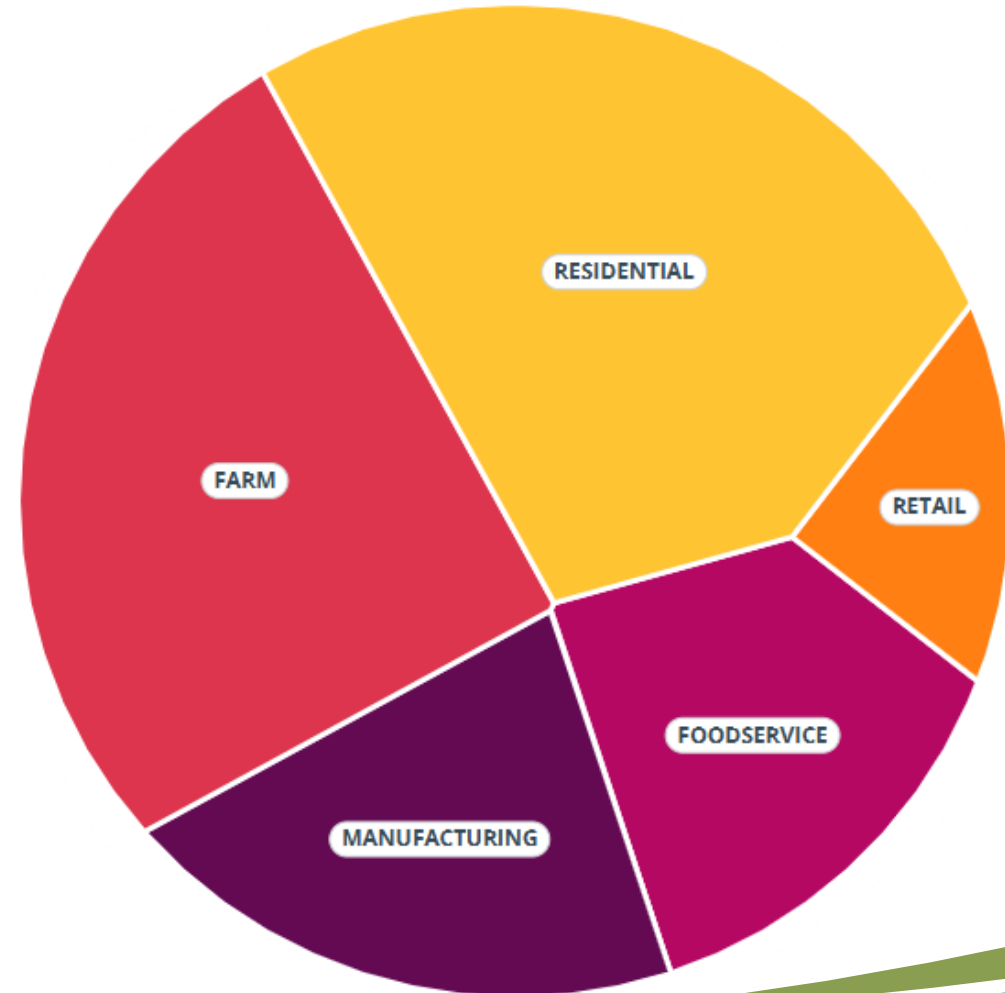
2.27 million Surplus Food Tons ▾

were generated in All Sectors ▾ across Michigan ▾ in 2023 ▾

Sectors

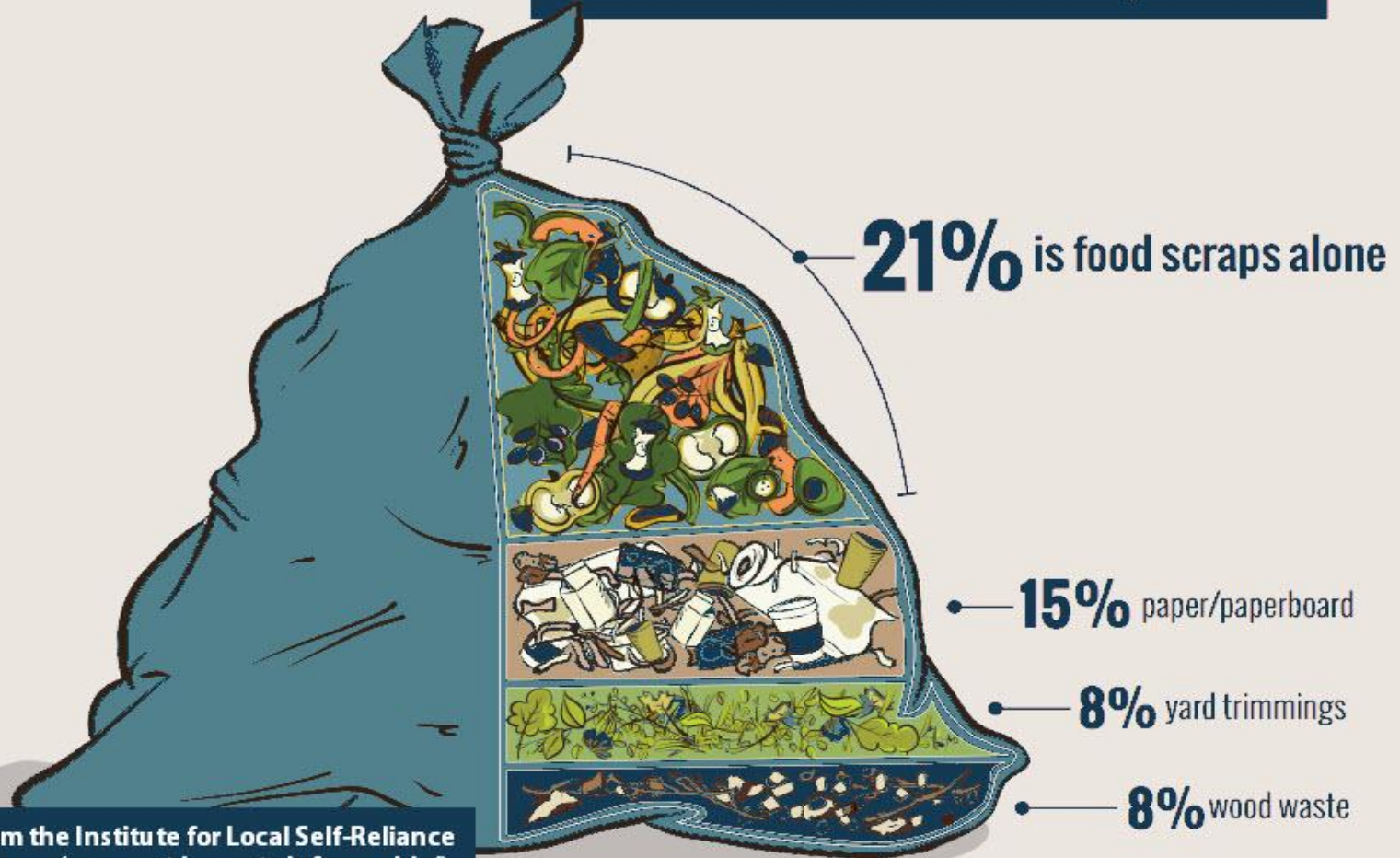
- Residential – 769k Tons (33.9%)
- Farm (Produce Only) – 693k Tons (30.6%)
- Manufacturing – 339k Tons (15%)
- Foodservice – 331k Tons (14.6%)
- Retail – 133k Tons (5.9%)

[ReFED - Food waste monitor](#)



Every year, U.S. landfills and trash incinerators receive **167 MILLION TONS** of garbage.

> 50% of typical municipal garbage set out at the curb is compostable.



Infographic from the Institute for Local Self-Reliance
(<https://ilsr.org/compost-impacts-infographic/>).

Residential Food Waste

- Food Scrap Drop off sites
- Curbside pickup
- Backyard & community composting
- Food Waste reduction
Education/Outreach programs



Food Waste Reduction & Diversion Goal Setting

Partnerships & Community Engagement

Why: *Networks, partnerships, and community engagement can help determine MMP organics goals focus areas for your county, facilitate communication, develop innovative solutions, generate buy-in and support from community members and businesses, and promote a more comprehensive approach.*

- Engage the community
- Increase partnerships and regional collaboration
- Ensure food waste management services are available to all communities
- Support municipalities



Food Waste Reduction & Diversion Goal Setting

Program Support & Development

***Why:** Setting goals to support new or existing initiatives can **maximize impact of food waste reduction efforts** and address the gaps identified in your food waste landscape analysis.*

- Lead by example (Walk the walk!)
- Prevent food waste in commercial settings
- Increase capacity for food scrap collection
- Decrease food waste in schools
- Support innovative technologies





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THANK YOU!

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