

# Impacts from Waste

## GREENHOUSE GASES

Greenhouse Gases like carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, and fluorinated gases trap heat in the atmosphere. In 2022, CO<sub>2</sub> made up **79.7%** of total emissions in the United States followed by Methane with **11.1%** of emissions.



Source: [U.S. Environmental Protection Agency \(EPA\), Greenhouse Gas Emissions](#)

## METHANE

Methane is a potent greenhouse gas that is more than **28 times** more efficient at trapping heat compared to CO<sub>2</sub> over a 100 year period.

Source: [U.S. Environmental Protection Agency \(EPA\), Greenhouse Gas Emissions](#)

## WHERE DOES METHANE COME FROM

Methane is produced by natural sources like wetlands and volcanic gases and by human activities like fossil fuels, agriculture, and landfills.

**50-65%** of methane emissions globally are from human activities.

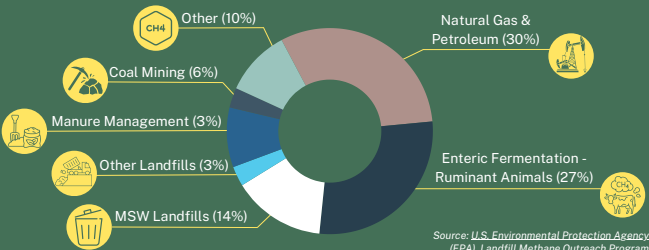
Bacteria in anaerobic (without oxygen) areas, like landfills, produce methane.



Source: [U.S. Environmental Protection Agency \(EPA\), Methane Emissions](#)

## 2022 U.S. METHANE EMISSIONS, BY SOURCE

Municipal solid waste (MSW) accounts for **14%** of human-related methane emissions in the United States, making it the **3rd largest** source of methane emissions.



Source: [U.S. Environmental Protection Agency \(EPA\), Landfill Methane Outreach Program](#)

## FOOD WASTE



**1/3**

OF ALL FOOD PRODUCED WORLDWIDE IS WASTED

Source: [Project Drawdown](#)

## OTHER GOODS & STUFF

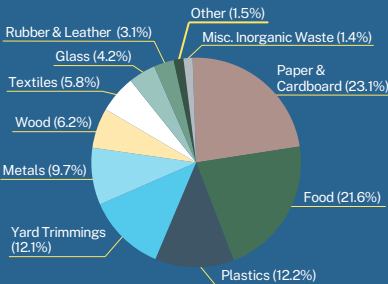


**5 lbs.**

AVG. AMOUNT OF TRASH PRODUCED PER PERSON PER DAY IN THE UNITED STATES

Source: [U.S. Environmental Protection Agency \(EPA\), Facts and Figures about Materials, Waste, and Recycling](#)

## 2018 U.S. MUNICIPAL SOLID WASTE LANDFILLED - BY MATERIAL



Source: [U.S. Environmental Protection Agency \(EPA\), Guide to the Facts and Figures Report about Materials, Waste and Recycling](#)

## FAST FACT

Food waste accounts for **58%** of methane emissions from U.S. MSW landfills.



Source: [U.S. Environmental Protection Agency \(EPA\), Quantifying Methane Emissions from Landfilled Food Waste](#)

## WI LANDFILLS

Items banned from landfills in Wisconsin include:

- #1 & #2 plastic bottles/jars
- Glass containers
- Aluminum containers
- Steel (tin) cans
- Leaves & Grass Clippings
- Corrugated Cardboard

And more - visit [WIDNR: What to Recycle](#) for information & resources.

Learn about solutions for waste reduction on the next page



Created in collaboration between the Dane County Office of Energy & Climate Change and the UW Madison Fall 2024 BOT 651 students



# Waste Reduction

Take action to reduce emissions. Simple actions can add up to big results.



There are things we can do on an individual, local, and national level to reduce our greenhouse gas emissions and save money!

## LOCAL LEVEL - DANE COUNTY

The Dane County Department of Waste & Renewables is taking action to reduce emissions from waste in a number of ways including by:

### Renewable Natural Gas



Methane captured from the landfill is turned into clean fuel cutting greenhouse gas emissions by **88%**.

### Bike Exchange



Bikes brought to the landfill for are accepted for a small fee but are then made free to the public to pick up.

### Sustainability Campus



The next landfill site planned is a sustainability campus, diverting waste and creating local circular economies.

Source: [Dane County Climate Action Plan \(CAP\) 2020](#)

## GET STARTED

Visit our "[Resources to Reduce Your Emissions](#)" webpage for tools on energy efficiency, composting, and more. Scan the QR code or follow the link below to get started.



## FOOD WASTE TIPS

When it comes to food there are some tips that we can follow to help us reduce our emissions and save money.

- 1 Reduce food waste** - here are some tips to reduce food waste including:
 
  - Shop at home first - check your pantry/fridge
  - Plan meals and buy only what you need/will use
  - Store foods properly
  - Turn vegetable scraps into stock
- 2 Adopt a plant rich diet** - Transitioning to more plant rich diets has the potential to reduce emissions & improve health.
- 3 Composting** - Divert food waste from the landfill by composting it. You can compost at home or use local compost services.

## 7 R'S OF SUSTAINABILITY

- 1 RETHINK**  
*Do you need the item?*
- 2 REFUSE**  
*Refuse unnecessary items or excess packaging.*
- 3 REUSE**  
*Is this item reusable?*
- 4 REDUCE**  
*Reduce the frequency or consumption of an item.*
- 5 REPAIR**  
*Can an item be repaired?*
- 6 ROT**  
*Can an item be composted?*
- 7 RECYCLE**  
*Is an item recyclable?*



## OTHER GOODS & MATERIALS TIPS

Everything we buy, from cleaning products to electronics, requires energy to make and transport, and some produce emissions when used. Here are some shopping tips to consider:

- **Pay attention** to what you buy
- **Avoid** excess packaging
- **Re-use items** & choose **second-hand items** instead of buying new
- **Buy local** to reduce vehicle-miles associated with shipping items
- **Share** infrequently used items
- **Donate** gently used items
- **Think Electric**



## WASTE RESOURCES

Making sure materials end up in the correct location for waste or recycling is important. Check out the resources below for local information and resources on waste & recycling:

- WI DNR: [Wisconsin Recycles](#)
- Dane Co. Waste & Renewables: [Recycling & Disposal Directory](#)
- Sustain Dane: [Recycle Better](#)

