



# Transformation and Innovation in Solid Waste Management Policy

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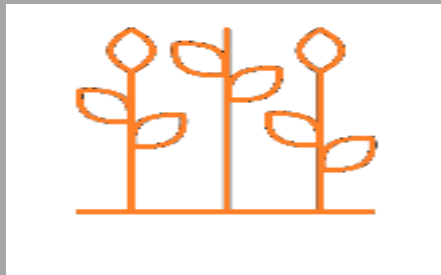
# Natural resource extraction and processing contributes:



**50%** of global climate change impacts



**90%** of global biodiversity loss and water stress



**11%** of global species loss

# Food Production and Waste

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- One-third of all food in the United States goes uneaten
- More than 85% of the GHG emissions associated with food waste occur during production, processing, and distribution
- Food comprises over 24% of municipal solid waste in landfills
- Methane from landfilled food contributes to climate change





# Global Plastics Consumption & Waste

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By 2060:

- Plastics ***use*** is projected to almost triple
- Plastic ***waste*** is projected to almost triple
  - Half will likely be landfilled
  - Less than a fifth recycled
- Plastic ***leakage*** is projected to double
  - Tripling the plastic build-up in aquatic environments



# Plastic Waste Generation Differs Greatly

Kg/cap, 2019			
			Plastic waste per capita (kg/cap)
OECD	OECD America	USA	220.5
		Canada	177.9
		Other OECD America	57.9
	OECD Europe	OECD EU countries	121.6
		OECD non-EU countries	94.4
	OECD Pacific	OECD Asia	68.9
		OECD Oceania	62.1
Non-OECD	Other America	Latin America	43.4
	Eurasia	Other EU	75.5
		Other Eurasia	53.0
	Middle East and Africa	Middle East & North Africa	37.6
		Other Africa	14.5
	Other Asia	China	46.6
		India	14.0
		Other non-OECD Asia	21.4

# Landfills in the United States

## Landfill challenges

The United States currently spends **\$50 bn** on it's **1,250** landfills annually. Beyond cost, landfills also present multiple challenges.

### Methane emissions

- Solid waste landfills are the third largest source of methane emissions in the US, behind Energy and Agriculture
- Landfills are estimated to produce **15% of the total 41 MMT** of annual methane emissions – the equivalent of more than **21 million passenger cars driven in one year**

### Environmental contamination

- Leachate from landfills can contaminate nearby groundwater environmental systems

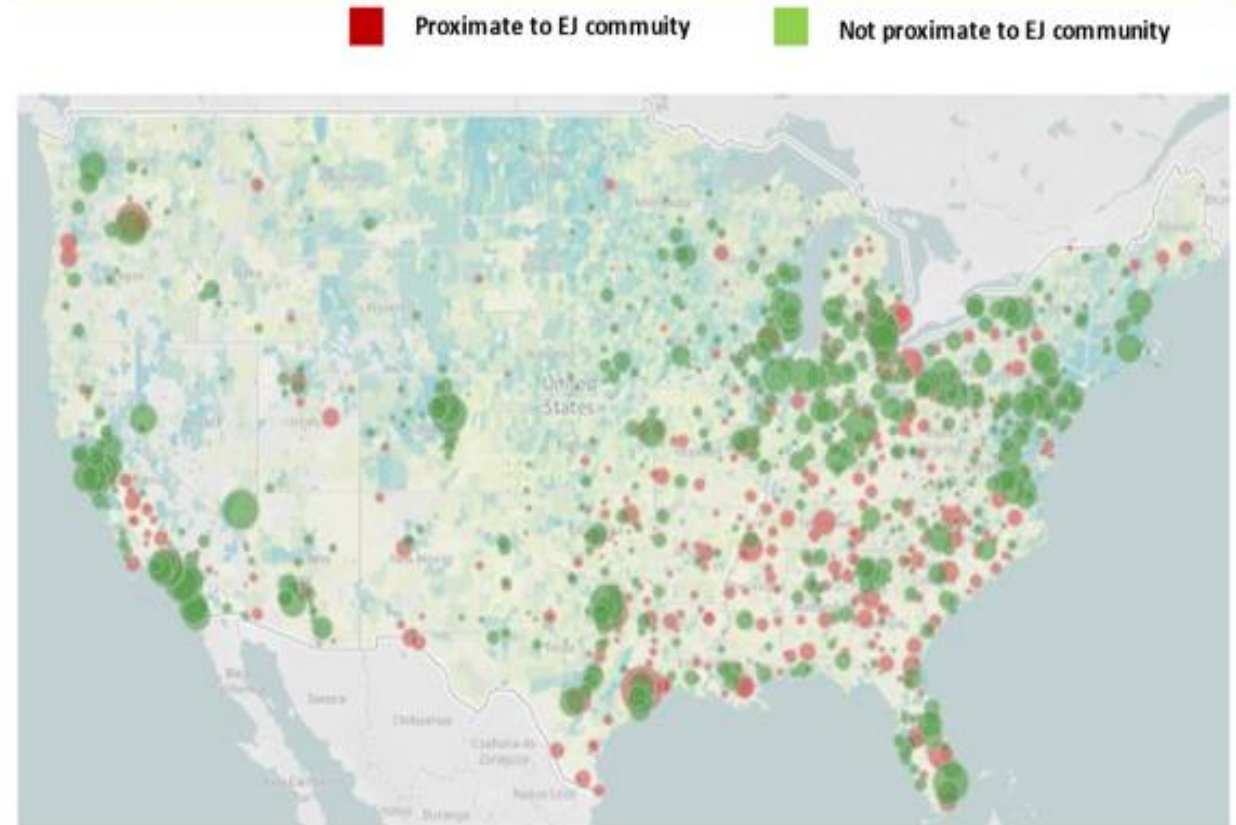
### Environmental Justice

- **35%** of landfills in the United States are located adjacent to environmental justice communities

### Capacity

- Nearly **200** landfills are expected to reach capacity and close within the next five years, which will require states and municipalities to export waste to neighboring states

Location of active landfills in the United States near environmental justice communities, by landfill size





# U.S. Recycling System

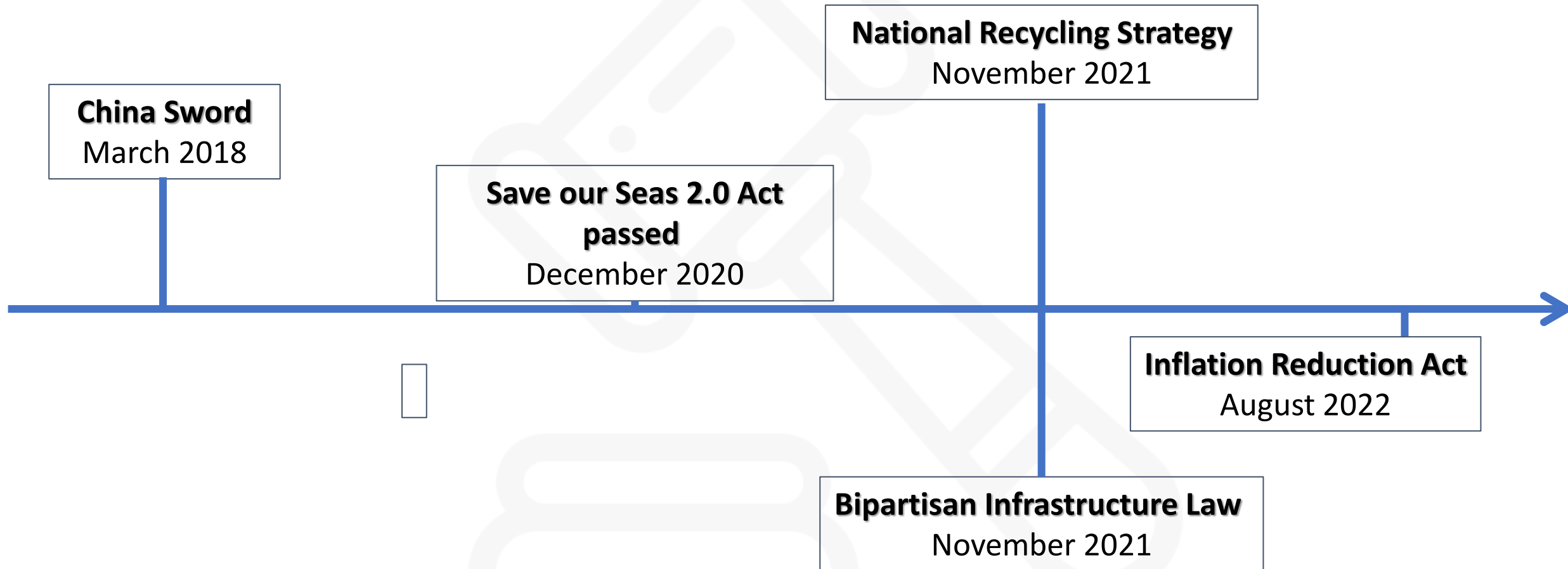
## **The U.S. recycling system is overburdened and under-funded**

- Changes in international trade policies appear to have exposed weak points in the U.S. recycling system by limiting exports of MSW recyclables

## **2020 GAO report flagged several key challenges in advancing U.S. recycling, including:**

- Contamination of recyclables
- Low recycling collection rates
- Limited market demand for recycled materials
- Low profitability for operating commercial recycling programs
- Limited information to support decision-making about recycling

# Major events affecting solid waste management in the US





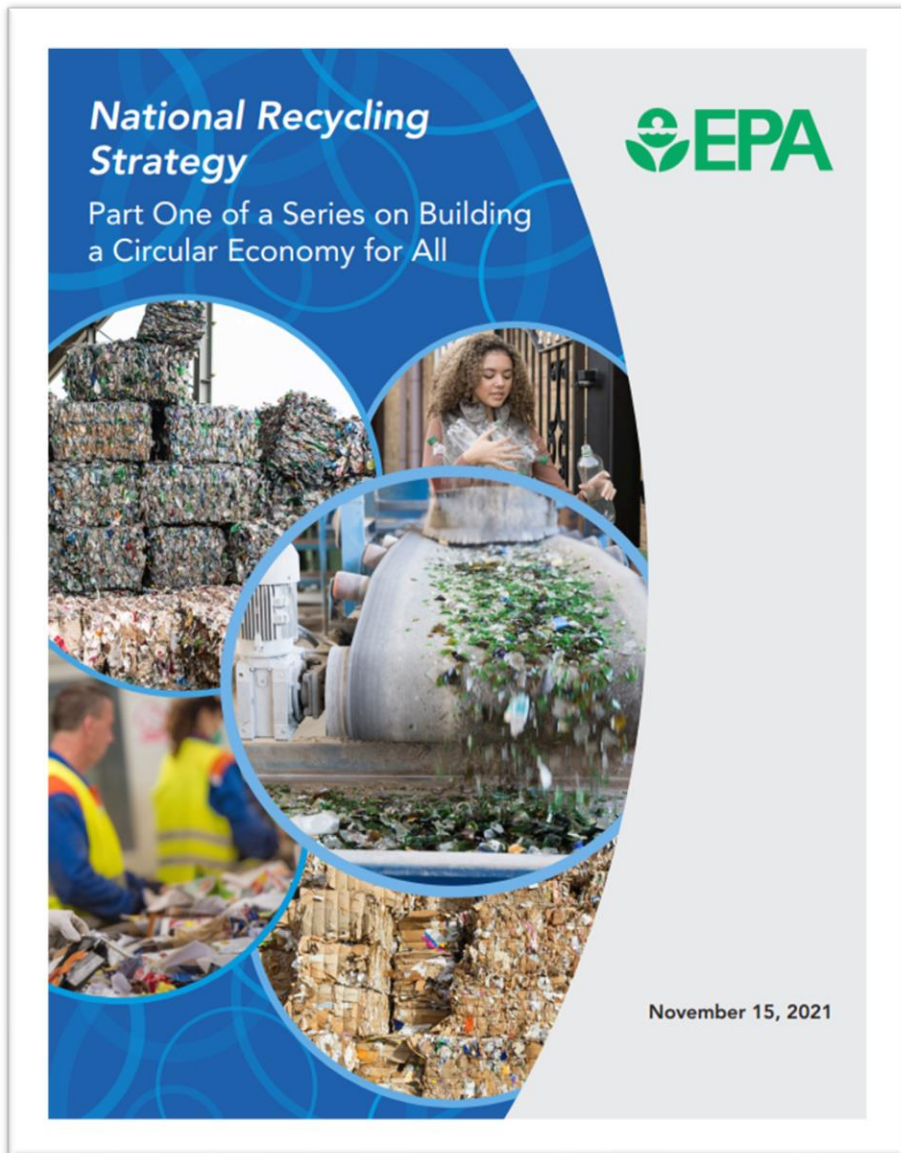
# Recent Congressional and Policy Drivers Shaping EPA's Materials Management Work

- FY20 Appropriations directed EPA to produce a national recycling strategy
- Government Accountability Office report asked EPA to strengthen recycling and recommend future policies
- FY21 Appropriations asked for data on recycling and single-use plastics
- 25+ pieces of proposed legislation related to recycling





- Became law in December 2020
- Defined a Circular Economy for the first time
- Gives EPA new authority to fund improvements to solid waste management programs and infrastructure
- Directs EPA to Develop (for example):
  - Strategy on Post-Consumer Materials Management and Water Management
  - Report on Eliminating Barriers to Recycling
  - Report on Ways to Spur Markets for Recycled Plastic
  - Report on Opportunities for Innovative Uses of Plastic Waste
  - Study on How to Create Less Plastic Waste

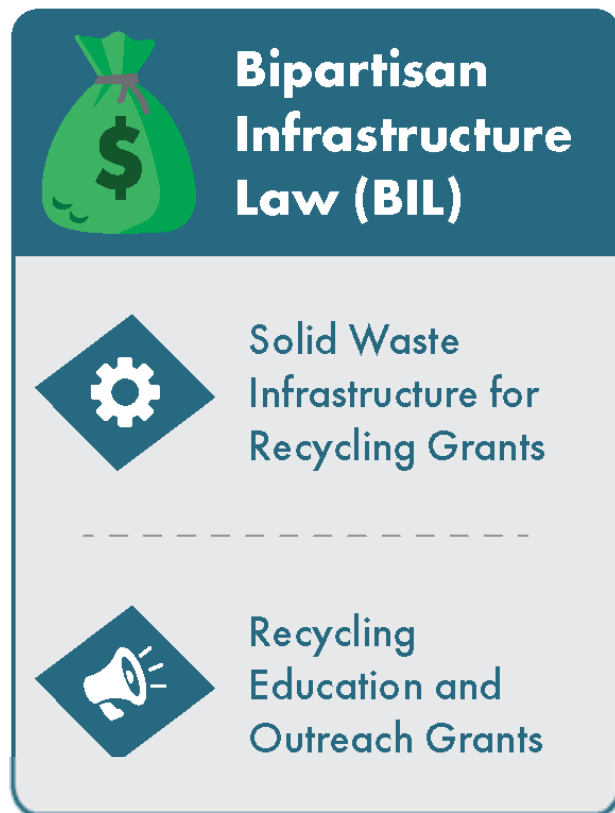


## National Recycling Strategy: Part One of a Series on Building a Circular Economy for All

1. Focuses on enhancing the national municipal solid waste (MSW) or “household” recycling system
2. Identifies stakeholder-led actions to create a stronger, more resilient, more equitable and more cost-effective MSW recycling system
3. Acknowledges recycling is only one part of what is needed to achieve a circular economy

For more information visit: <https://www.epa.gov/recyclingstrategy>

## Circular Economy Strategy Series



### Objectives:

- A. Improve Markets for Recycling Commodities
- B. Increase Collection and Improve Materials Management Infrastructure
- C. Reduce Contamination in the Recycled Materials Stream
- D. Enhance Policies to Support Recycling
- E. Standardize Measurement and Increase Data Collection

*EPA is establishing a 10-year vision that embraces circularity, sustainable materials management, addresses climate change, and environmental justice.*



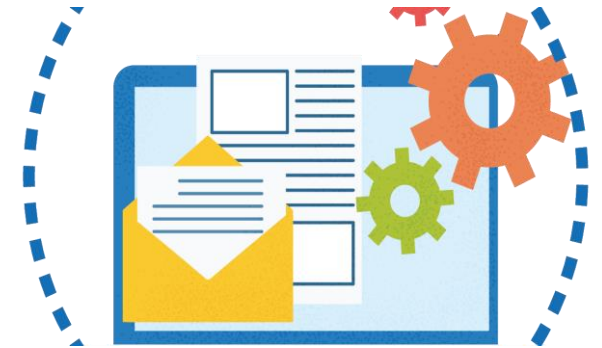
# Solid Waste Infrastructure for Recycling Grants

## Total Funding: \$275M

- \$55 million/year from FY22-FY26
- Available until expended

## Goals:

- Support improvements to recycling programs, post-consumer materials management, and waste management infrastructure
- Justice40 covered program



## Eligible Entities:

- U.S. States and political subdivisions of states
- Puerto Rico, Virgin Islands, Guam, American Samoa, Commonwealth of Northern Mariana Islands
- District of Columbia
- Federally recognized tribal governments
- Former tribal reservations in Oklahoma (as determined by the Secretary of the Interior)
- Alaskan Native Villages as defined in Public Law 92-203
- Intertribal Consortia consistent with the requirements in 40 CFR 35.504(a)

# Recycling Education and Outreach Grants

## Total Funding: \$75M

- 15 million/year from FY22-FY26
- Available until expended

## Goals:

- Support education and outreach on consumer recycling and waste prevention
- Inform public on what is accepted in community recycling program
- Increase collection rates and decrease contamination in recycling
- Justice40 covered program (in addition to 20% minimum legislative set-aside for low-income, rural, or communities identified as Native American)

## Eligible entities:

- U.S. States, including the District of Columbia
- Puerto Rico, Virgin Islands, Guam, American Samoa, Commonwealth of Northern Mariana Islands
- Local governments
- Federally recognized tribal governments
- Native Hawaiian organizations, Department of Hawaiian Home Lands, Office of Hawaiian Affairs
- Non-profit organizations
- Public-private partnerships



# Battery Collection Best Practices

## Best practices will focus on:

- Identifying and increasing accessibility to battery collection locations
- Promoting consumer education
- Reducing hazards from improper disposal (fires)

## Best practices will be:

- Technically and economically feasible
- Environmentally sound and safe for workers
- Beneficial to increasing the recovery of critical minerals

# Battery Labeling Guidelines

- **Labeling guidelines** for end-of-life batteries
- **Communicate** on reuse and recycling of critical materials from batteries for:
  - battery producers
  - consumers
  - other stakeholders



*Example of a battery label*



# Inflation Reduction Act

## **Reduce Pollution**

- Creates Climate and Environmental Justice Block Grants
- Funding for fence-line monitoring
- Monitor and reduce pollution at public schools

## **Improve Clean Transit**

- Addresses diesel emissions
- Cleans up ports for zero-emissions plans
- Creates Neighborhood Access and Equity Grants

## **Improve Access to Clean Energy**

- Spur solar project development
- Clean Energy and Sustainability Accelerator
- Improving Energy Efficiency or Water Efficiency or Climate Resilience of Affordable Housing
- Expanding access to affordable, clean energy in Indian country

## **Strengthen Resilience to Climate Change**

- Boost resilience of Tribal and Native Hawaiian communities, and of affordable housing
- Establish community and urban forests

# Next Steps

- Finalize BIL grant programs
- Continue implementing Circular Economy Strategy Series
- Publish SOS 2.0 Reports

# THANK YOU!

