



# COSTS AND APPROACHES FOR MUNICIPAL SOLID WASTE RECYCLING PROGRAMS

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# OUTLINE

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- Current EPA Initiatives
  - Congressional and Policy Drivers
  - Challenges of the U.S. recycling system and the National Recycling Strategy
  - Bipartisan Infrastructure Law (BIL) grant programs
- NASEM & EPA's collaborative study
  - Legislative Scope
  - Background Information
  - Headline Questions and Intended Outputs of NASEM Recycling Study
- Questions and discussion



# CONGRESSIONAL AND POLICY DRIVERS: EPA'S MATERIALS MANAGEMENT WORK

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- **2020 Save Our Seas 2.0 Act:** provides authority for grants, reports and a strategy on post-consumer materials management
  - EPA released the ***Draft National Strategy to Prevent Plastic Pollution*** in **April 2023!**
- FY2020 Congress directed EPA to produce a national recycling strategy
  - EPA released the ***National Recycling Strategy: Part One of a Series on Building a Circular Economy*** in **November 2021!**
  - EPA released the ***Draft National Strategy for Reducing Food Loss and Waste*** in **December 2023!**
- **2021 Bipartisan Infrastructure Law:** provides funding for solid waste infrastructure and education and outreach projects across the U.S.
  - \$275 million in funding for the Solid Waste Infrastructure for Recycling Grant Program
  - \$75 million in funding to support Recycling Education and outreach Grant Program
  - \$25 million in funding to support battery recycling initiatives
- **More to come:** Recycling Measurement Guide, U.S. Infrastructure Assessment, Other pieces of proposed recycling legislation



# CHALLENGES OF THE U.S. RECYCLING SYSTEM

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- Confusion about what materials can be recycled
- Outdated recycling infrastructure
- Reduced markets for recycled materials
- Lack of consistency in measuring recycling system performance



# CHALLENGES OF THE U.S. RECYCLING SYSTEM

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- Confusion about what materials can be recycled
  - Promote education and outreach
- Outdated recycling infrastructure
  - Fund infrastructure improvements
- Reduced markets for recycled materials
  - Strengthen markets on both the supply and demand side for recycled materials
- Lack of consistency in measuring recycling system performance
  - Provide guidance on standardizing measurement practices to compare recycling system performance across jurisdictions



# SUPPORT FOR BUILDING A CIRCULAR ECONOMY





# RECYCLING INFRASTRUCTURE AND EDUCATION & OUTREACH GRANTS

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Solid Waste  
Infrastructure for  
Recycling (SWIFR)

Recycling  
Education &  
Outreach  
(REO)

Grants  
for  
Communities

Grants for  
States and  
Territories

Grants for  
Tribes and  
Intertribal  
Consortia



# RECYCLING INFRASTRUCTURE GRANTS (SWIFR) COMMUNITIES

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- Grant recipients to invest in a **range of project types**, such as:
  - **Purchase of new fleet** of recycling collection vehicles to provide curbside pickup to communities that lack access
  - **Construction of recycling drop-off stations** in rural areas where curbside collection is not feasible
  - Updating **statewide solid waste management or circular economy plans** and performing **waste characterization studies**
  - Construction to establish **new composting facilities** to increase capacity at existing facilities
- **76% of funding for communities will benefit disadvantaged communities**







# RECYCLING INFRASTRUCTURE GRANTS (SWIFR) COMMUNITIES

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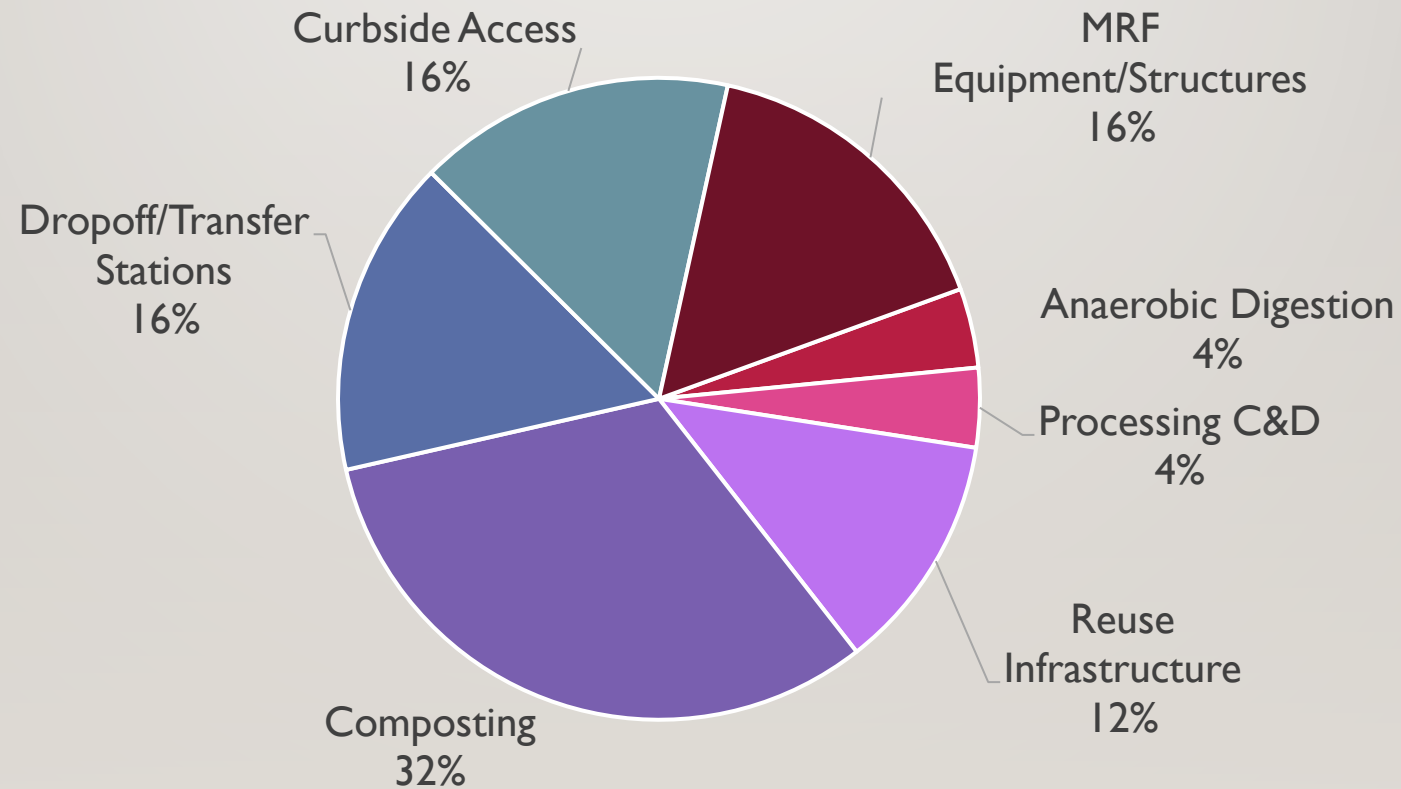
- The SWIFR grants are the **largest EPA investment in recycling infrastructure in over 30 years** and the **most significant investments** in support of the *National Recycling Strategy*
- Other objectives include:
  - Reducing the impact that materials have on the climate by **reducing greenhouse gas emissions** and **keeping valuable materials out of the landfill**
  - **Creating jobs** in both rural and urban communities, including union jobs and jobs that don't require 4-year degrees
  - **Improve local waste management systems** and **strengthen supply chains**



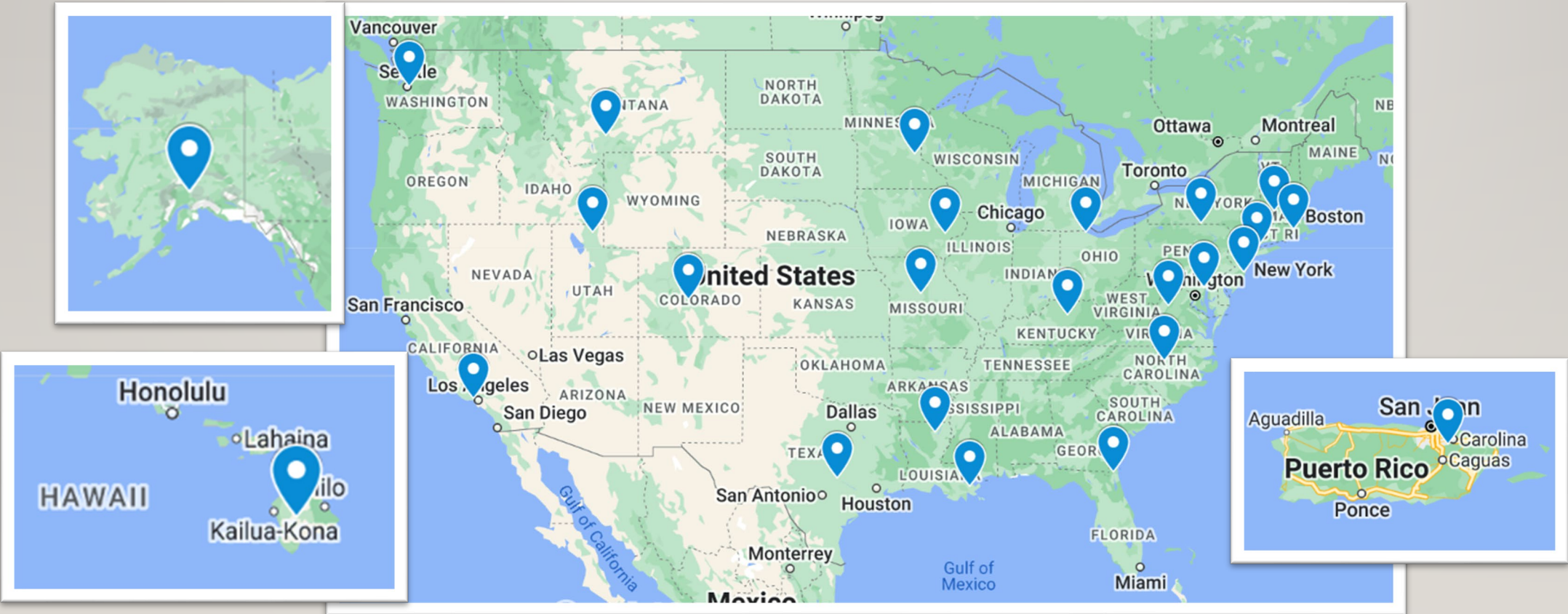


# SWIFR GRANTS FOR COMMUNITIES: SELECTED PROJECT TYPES

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# SWIFR GRANTS FOR COMMUNITIES: 25 TOTAL SELECTIONS



<https://www.epa.gov/infrastructure/recycling-grant-selectees-and-recipients>



# RECYCLING INFRASTRUCTURE GRANTS (SWIFR) STATES AND TERRITORIES

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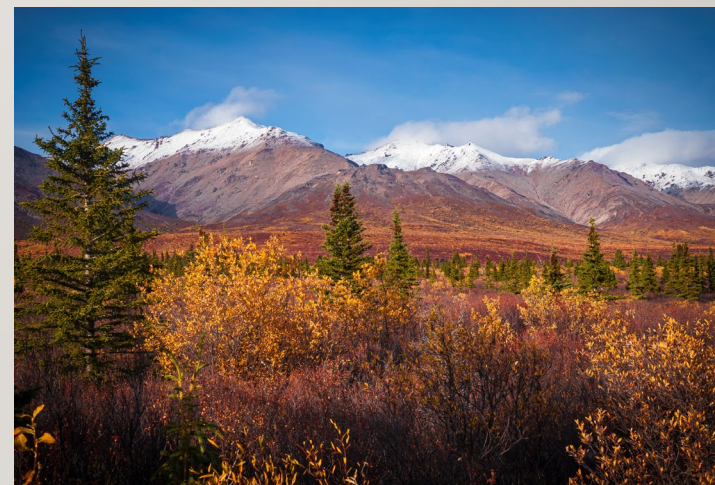
- Fund projects to support **planning, data improvement, and implementation needs** for solid waste management programs
- Eligible activities include:
  - **Planning:** develop or update plans to advance post-consumer materials management
  - **Data collection:** develop, strengthen, and/or implement comprehensive data collection efforts that demonstrate progress towards EPA goals
  - **Implementation:** support the state-led implementation of plans to advance post-consumer materials management



# RECYCLING INFRASTRUCTURE GRANTS (SWIFR) TRIBES AND INTERTRIBAL CONSORTIA

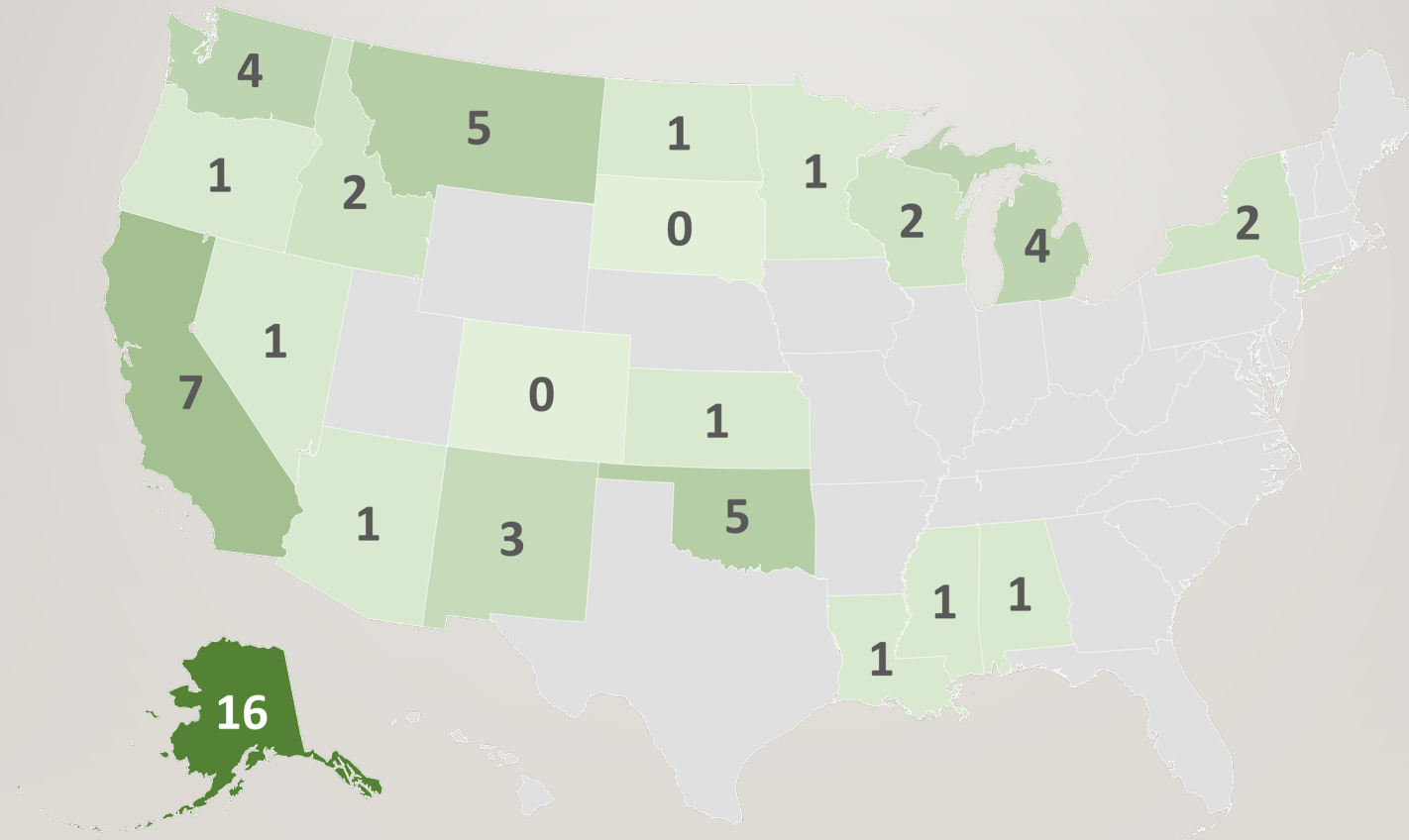
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- **Encourage environmentally sound post-consumer materials management:**
  - Develop or update plans
  - Develop, strengthen, and/or implement comprehensive data collection efforts
  - Establish, increase, or expand materials management infrastructure
  - Establish or identify end-markets for the use of recycled materials
  - Demonstrate an increase in the diversion, recycling rate, and/or quality of materials collected
- **100% of funding will benefit disadvantaged communities**



# SWIFR TRIBAL: 59 TOTAL SELECTIONS

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# RECYCLING EDUCATION AND OUTREACH (REO) GRANT PROGRAM

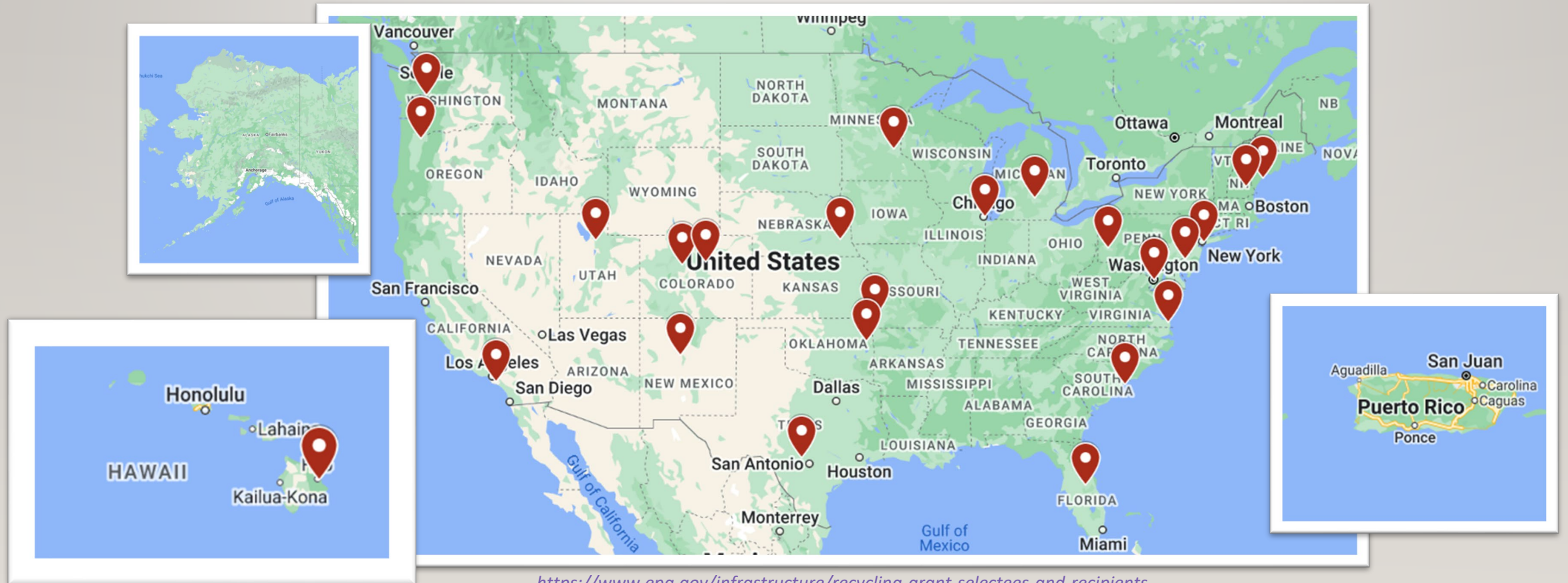
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- Projects must:
  - Inform the public about recycling programs,
  - Provide information about recycled materials, and/or
  - Increase collection rates and decrease contamination.
- Up to 25 awards, ~\$30,000,000
  - At least one award per EPA region with individual amounts ranging from \$250,000 to \$2,000,000
- Justice40: At least 40% of funding (\$12,000,000) will go to projects benefiting disadvantaged communities
- Statutory set-aside: At least 20% of funding (\$6,000,000) must go to projects that serve low-income, rural, or Native American communities





# 25 TOTAL REO SELECTIONS



<https://www.epa.gov/infrastructure/recycling-grant-selectees-and-recipients>





# SUMMARY OF SWIFR AND REO AWARDS

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## SWIFR Communities

- 25 total awards/selections:
- \$72.8 million in funding
- 76% going to disadvantaged communities

## SWIFR States & Territories

- 56 total awards
- \$32.1 million in funding

## SWIFR Tribes & Intertribal Consortia

- 59 total selections
- \$60 million in funding
- 100% going to disadvantaged communities

## REO

- 25 total selections
- \$33 million in funding
- 74% going to disadvantaged communities

**Total: 165 SELECTIONS/AWARDS TOTALING \$199 MILLION**



# NASEM & EPA'S COLLABORATIVE STUDY

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COSTS AND APPROACHES FOR MUNICIPAL SOLID WASTE RECYCLING PROGRAMS



## LEGISLATIVE SCOPE

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### Consolidated Appropriations Act of 2022:

“The Committees\* provide \$1,500,000 for the [Environmental Protection] Agency to enter into an agreement with the National Academy of Sciences to conduct a study of the costs of recycling programs to State, Tribal, local, and municipal governments (including recycling fees paid directly by residents) and to include policy recommendations. The Agency is directed to provide a report to the Committees within 270 days after enactment of this Act.”

\*“Committees” refers to the House Subcommittee on Interior, Environment, and Related Agencies and the Senate Subcommittee on Interior, Environment, and Related Agencies



## BACKGROUND INFORMATION

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- The benefits of recycling are fairly well-documented in research and literature
  - Creates jobs and revenue, reduces GHG emissions, and conserves natural resources
- However, many cities lack a dedicated recycling program
- Recycling is seen as a pro-environmental, “do good” effort in and of itself, **but it is also a highly localized business activity** where recycled materials are bought and sold as commodities in a market for remanufacturing products
  - Almost everyone is a player in this market, both consumers and producers!
- Overall, there is a need to better understand the costs and benefits of administering local recycling programs

# HEADLINE QUESTIONS AND INTENDED OUTPUTS

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- What are the “true costs” of recycling?
  - Both programmatic and economic
- How do costs, policies, and programs differ across city, county, state, and Tribal governments?
  - How do these differ based on materials?
  - Can we know what the most valuable commodities are?
- What are the economic components of recycling?
  - **Is recycling inherently an economic activity?**
- Expect recommendations from the committee on:
  - How to effectively incentivize and fund recycling activities in an economically sound way
  - Cost implications and time frames for implementing recommendations as well as evaluation metrics
  - Future research needs



## QUESTIONS?

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- Lawrence Doppelt, Economist
- Swarupa Ganguli, Lead Environmental Protection Specialist