

The State of Residential Recycling in Georgia and Opportunities for Improvement

April 30, 2024



**The Recycling
Partnership**
Solving for Circularity

We mobilize people, data, and solutions across the value chain to reduce waste and our impact on the environment while also unlocking economic benefits.

Thank You to Our Partners!



Five Requirements of an Effective Recycling System

For the U.S. Residential Recycling System to Function Effectively, Five Requirements Must Be Met



Factors that Determine System Performance (and the Fate of Materials)



Example Calculation

Access = 70%

Material Acceptance = 80%

Participation = 75%

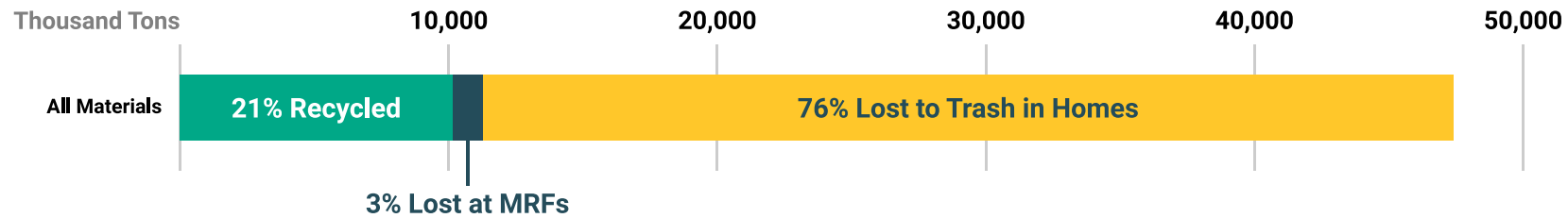
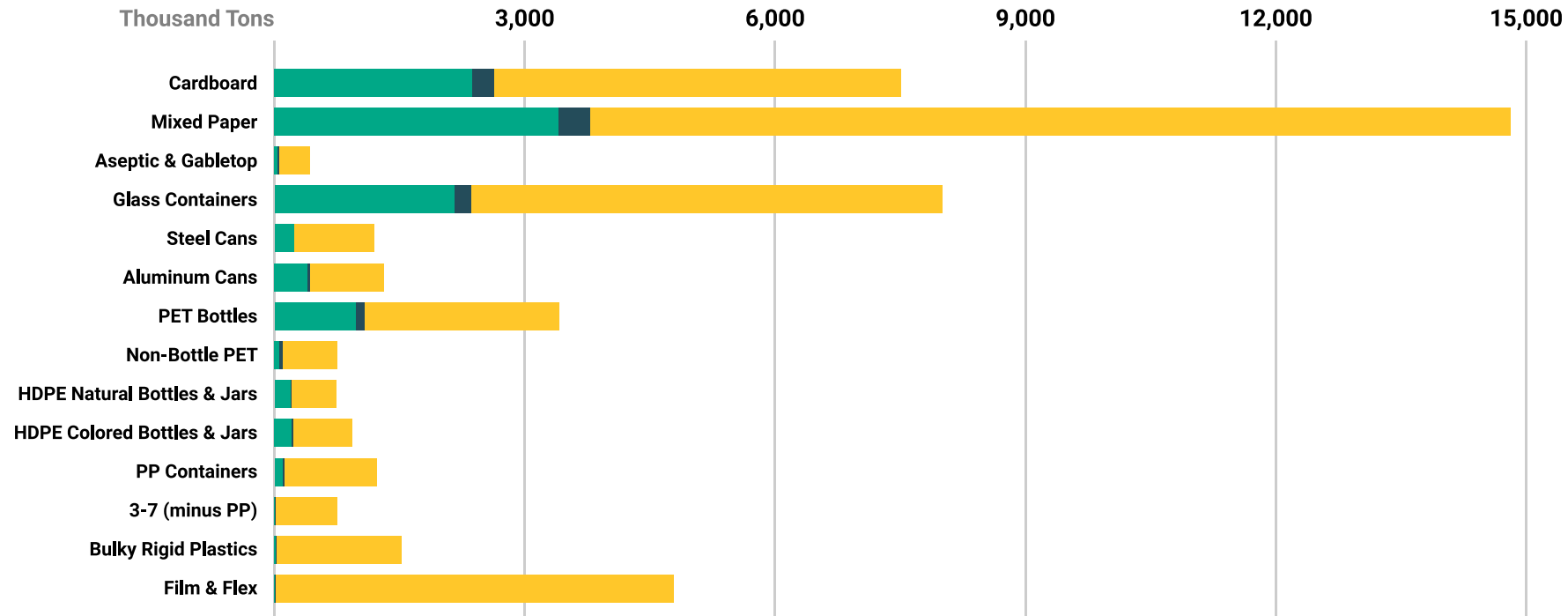
Participant Capture = 65%

MRF Capture = 90%

$$70\% * 80\% * 75\% * 65\% * 90\% = 25\%$$

In a theoretical state where 1 million tons of recyclable packaging and paper enters households, 250,000 tons would exit the back of MRFs and head to market

National View: Fate of Material by Major Category



National Residential Recycling Rates by Material Category*

(in Tons Per Year)

| Material | Tons Generated | Tons Recycled | Recycling Rate | Total Tons Lost (Homes & MRFs) | % Lost (Homes & MRFs) |
|--------------------------|-------------------|-------------------|----------------|--------------------------------|-----------------------|
| Cardboard | 7,509,483 | 2,371,572 | 32% | 5,137,912 | 68% |
| Mixed Paper | 14,814,158 | 3,401,524 | 23% | 11,412,635 | 77% |
| Aseptic & Gabletop | 422,553 | 35,762 | 8% | 386,791 | 92% |
| Glass Containers** | 8,000,677 | 2,152,303 | 27% | 5,848,374 | 73% |
| Steel Cans | 1,198,282 | 231,156 | 19% | 967,126 | 81% |
| Aluminum Cans** | 1,308,956 | 393,488 | 30% | 915,469 | 70% |
| PET Bottles** | 3,412,310 | 971,215 | 28% | 2,441,095 | 72% |
| Non-bottle PET | 748,974 | 58,443 | 8% | 690,531 | 92% |
| HDPE Natural Bottles | 739,178 | 188,704 | 26% | 550,474 | 74% |
| HDPE Colored Bottles | 928,780 | 208,624 | 22% | 720,155 | 78% |
| Polypropylene Containers | 1,225,325 | 94,881 | 8% | 1,130,444 | 92% |
| Plastics #3-7 (minus PP) | 754,006 | 8,909 | 1% | 745,097 | 99% |
| Bulky Rigid Plastics | 1,516,711 | 17,231 | 1% | 1,499,479 | 99% |
| Film & Flexible | 4,787,126 | 4,569 | <1% | 4,782,556 | >99% |
| TOTAL | 47,366,519 | 10,138,381 | 21% | 37,228,139 | 79% |

Generics Factors Used For Georgia (and all States)



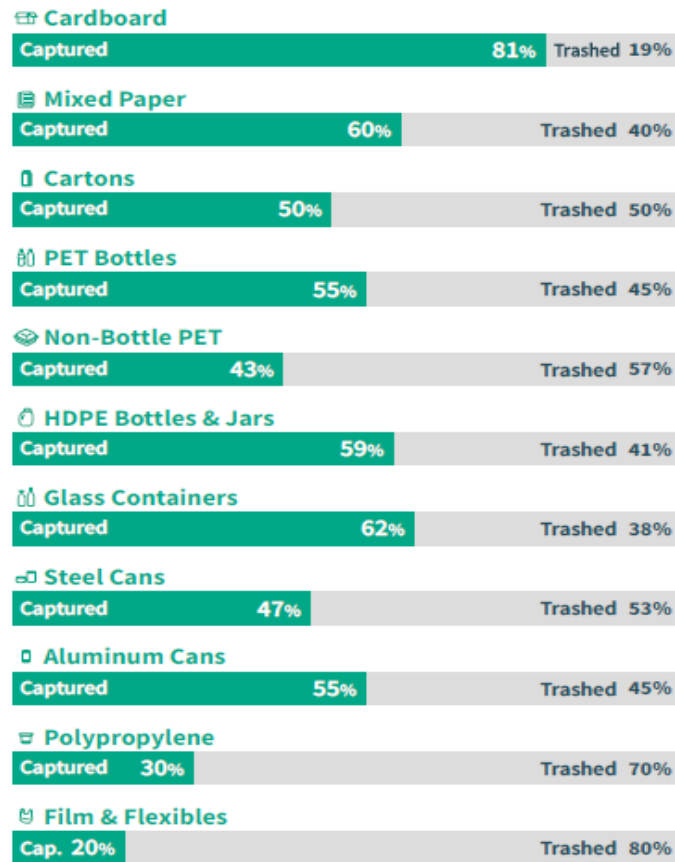
Participation

Summary of Participation Rates Used in the Report

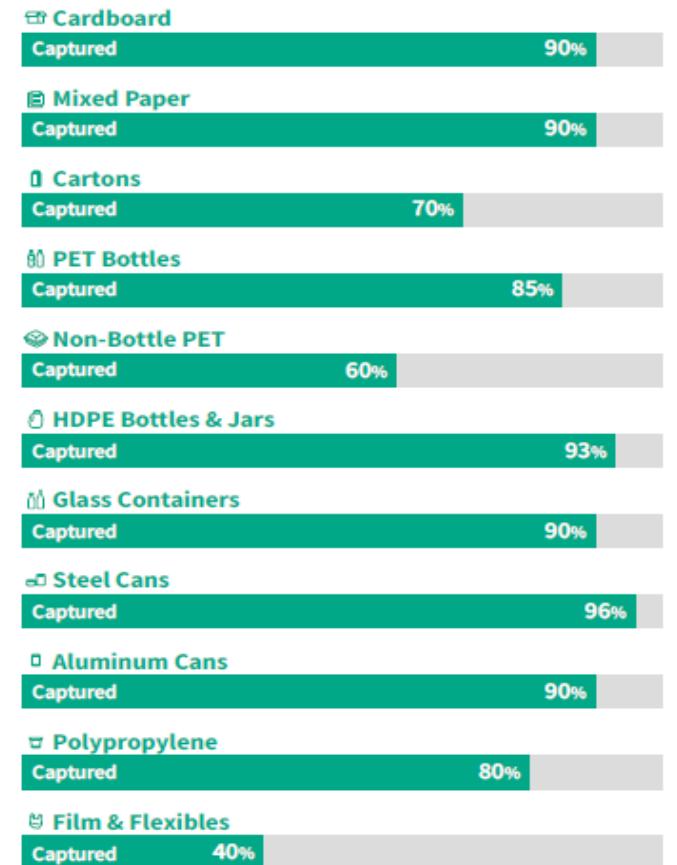
| | |
|------------------------------------|------|
| Single-Family Subscription | 100% |
| Single-Family Curbside with Carts | 72% |
| Single-Family Curbside (not Carts) | 60% |
| Single-Family Drop-Off | 30% |
| Multifamily | 50% |



Participant Capture of Different Material Types*



MRF Capture Rates



Specific Data Used For Georgia



Recycling Access

Single Family Households

- **with Active Curbside: 1,099,165 (38%)**
- **with Drop-off Access: 1,081,373 (38%)**
- **not subscribing to offered subscription service: 437,947 (15%)**
- **with no recycling service available: 252,407 (9%)**

Multifamily Households:

- **With On-property Access: 177,773 (19%)**
- **With no on-property access: 781,283 (81%)**



Material Acceptance

| Material | Acceptance Rate for Households with Curbside | Acceptance Rate for Households with Drop-off | Acceptance Rate for Households with Multifamily On-Property |
|----------------|--|--|---|
| Cardboard | 99% | 87% | 95% |
| Mixed Paper | 98% | 91% | 94% |
| PET Bottles | 98% | 82% | 94% |
| Non-bottle PET | 54% | 52% | 81% |
| HDPE Natural | 98% | 82% | 94% |
| HDPE Colored | 98% | 82% | 94% |
| Polypropylene | 46% | 38% | 75% |
| Aluminum Cans | 98% | 88% | 95% |
| Steel Cans | 97% | 82% | 94% |
| Glass | 34% | 64% | 75% |
| Bulky Rigids | 0% | 1% | 0% |

State-by-State Overall Material Acceptance* With and Without Film and Flexible Material**

| | Material Acceptance with Film | Material Acceptance without Film |
|----------------------|-------------------------------|----------------------------------|
| Alabama | 59% | 64% |
| Alaska | 58% | 63% |
| Arizona | 74% | 82% |
| Arkansas | 57% | 63% |
| California | 82% | 90% |
| Colorado | 75% | 83% |
| Connecticut | 82% | 91% |
| Delaware | 85% | 95% |
| District of Columbia | 88% | 98% |
| Florida | 72% | 80% |
| Georgia | 66% | 73% |
| Hawaii | 46% | 51% |
| Idaho | 65% | 69% |
| Illinois | 79% | 88% |
| Indiana | 76% | 84% |
| Iowa | 72% | 80% |
| Kansas | 75% | 83% |
| Kentucky | 60% | 67% |
| Louisiana | 58% | 64% |
| Maine | 69% | 77% |

| | Material Acceptance with Film | Material Acceptance without Film |
|----------------|-------------------------------|----------------------------------|
| Maryland | 61% | 68% |
| Massachusetts | 81% | 90% |
| Michigan | 77% | 85% |
| Minnesota | 79% | 88% |
| Mississippi | 55% | 60% |
| Missouri | 68% | 75% |
| Montana | 61% | 66% |
| Nebraska | 60% | 67% |
| Nevada | 79% | 88% |
| New Hampshire | 79% | 88% |
| New Jersey | 76% | 85% |
| New Mexico | 70% | 77% |
| New York | 80% | 89% |
| North Carolina | 74% | 82% |
| North Dakota | 69% | 76% |
| Ohio | 72% | 80% |
| Oklahoma | 69% | 76% |
| Oregon | 63% | 70% |
| Pennsylvania | 70% | 78% |
| Rhode Island | 84% | 94% |

| | Material Acceptance with Film | Material Acceptance without Film |
|----------------|-------------------------------|----------------------------------|
| South Carolina | 70% | 78% |
| South Dakota | 61% | 68% |
| Tennessee | 68% | 76% |
| Texas | 66% | 74% |
| Utah | 66% | 74% |
| Vermont | 75% | 83% |
| Virginia | 63% | 70% |
| Washington | 73% | 81% |
| West Virginia | 55% | 61% |
| Wisconsin | 75% | 83% |
| Wyoming | 64% | 70% |
| National | 72% | 80% |

Numeric Results for Georgia using Generic Factors

| | Participating in Recycling | Percentage of those with Access | Percentage of all Households |
|--|----------------------------|---------------------------------|------------------------------|
| Single Family Households - Curbside | 813,232 | 74% | 28% |
| Single Family Households - Drop-off | 324,412 | 30% | 11% |
| Multifamily Households | 88,887 | 50% | 9% |
| TOTAL | 1,226,531 | 52% | 32% |

Tons Lost in MRF Processing: 23,449

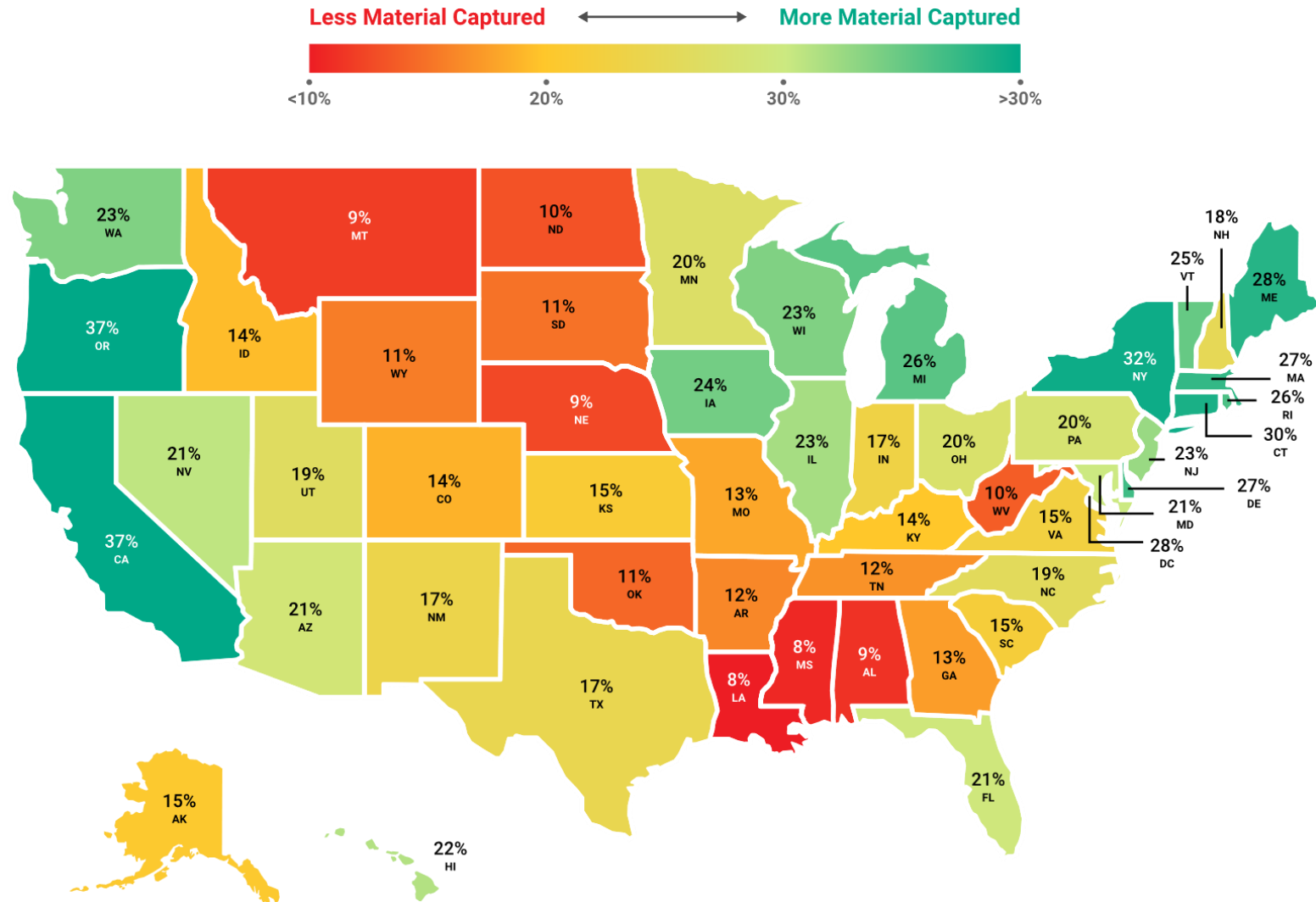
State-by-State Residential Recycling Rates by Commodity

| | Cardboard | Mixed Paper | Aseptic & Gabletop | Glass Containers | Steel Cans | Aluminum Cans | PET Bottles | Non-bottle PET | HDPE Natural Bottles & Jars | HDPE Colored Bottles & Jars | PP | Plastics #3,4,6,7 | Bulky Rigid Plastics | Film |
|----------------------|-----------|-------------|--------------------|------------------|------------|---------------|-------------|----------------|-----------------------------|-----------------------------|-----|-------------------|----------------------|-------|
| Alabama | 18% | 13% | 1% | 2% | 11% | 12% | 11% | 3% | 15% | 13% | 2% | 1% | 0% | 0.2% |
| Alaska | 29% | 21% | 9% | 2% | 16% | 20% | 18% | 1% | 23% | 20% | 2% | 1% | 0% | 0.3% |
| Arizona | 35% | 25% | 11% | 18% | 21% | 24% | 22% | 10% | 28% | 25% | 8% | 0.3% | 0.1% | 0.01% |
| Arkansas | 22% | 15% | 2% | 5% | 13% | 15% | 14% | 2% | 18% | 16% | 1% | 0.4% | 0% | 0.04% |
| California | 46% | 34% | 14% | 58% | 28% | 64% | 61% | 14% | 37% | 33% | 13% | 2% | 2% | 0.5% |
| Colorado | 23% | 17% | 8% | 15% | 14% | 16% | 14% | 6% | 18% | 16% | 7% | 3% | 1% | 0.1% |
| Connecticut | 38% | 28% | 14% | 46% | 23% | 49% | 47% | 12% | 31% | 27% | 12% | 2% | 1% | 0.01% |
| Delaware | 42% | 31% | 20% | 32% | 26% | 29% | 27% | 15% | 35% | 30% | 14% | 1% | 0% | 0.1% |
| District of Columbia | 43% | 32% | 21% | 33% | 27% | 29% | 28% | 15% | 35% | 31% | 14% | 0% | 16% | 0% |
| Florida | 34% | 25% | 11% | 23% | 21% | 23% | 22% | 7% | 27% | 24% | 8% | 2% | 0.2% | 0.03% |
| Georgia | 23% | 17% | 3% | 8% | 14% | 16% | 15% | 5% | 19% | 16% | 4% | 1% | 0.01% | 0.1% |
| Hawaii | 36% | 1% | 0% | 53% | 20% | 58% | 55% | 10% | 27% | 24% | 0% | 1% | 0% | 0% |
| Idaho | 28% | 21% | 1% | 2% | 17% | 19% | 15% | 4% | 19% | 16% | 5% | 0.04% | 0% | 1% |
| Illinois | 36% | 26% | 13% | 24% | 22% | 24% | 23% | 11% | 29% | 26% | 11% | 1% | 0.3% | 0.02% |

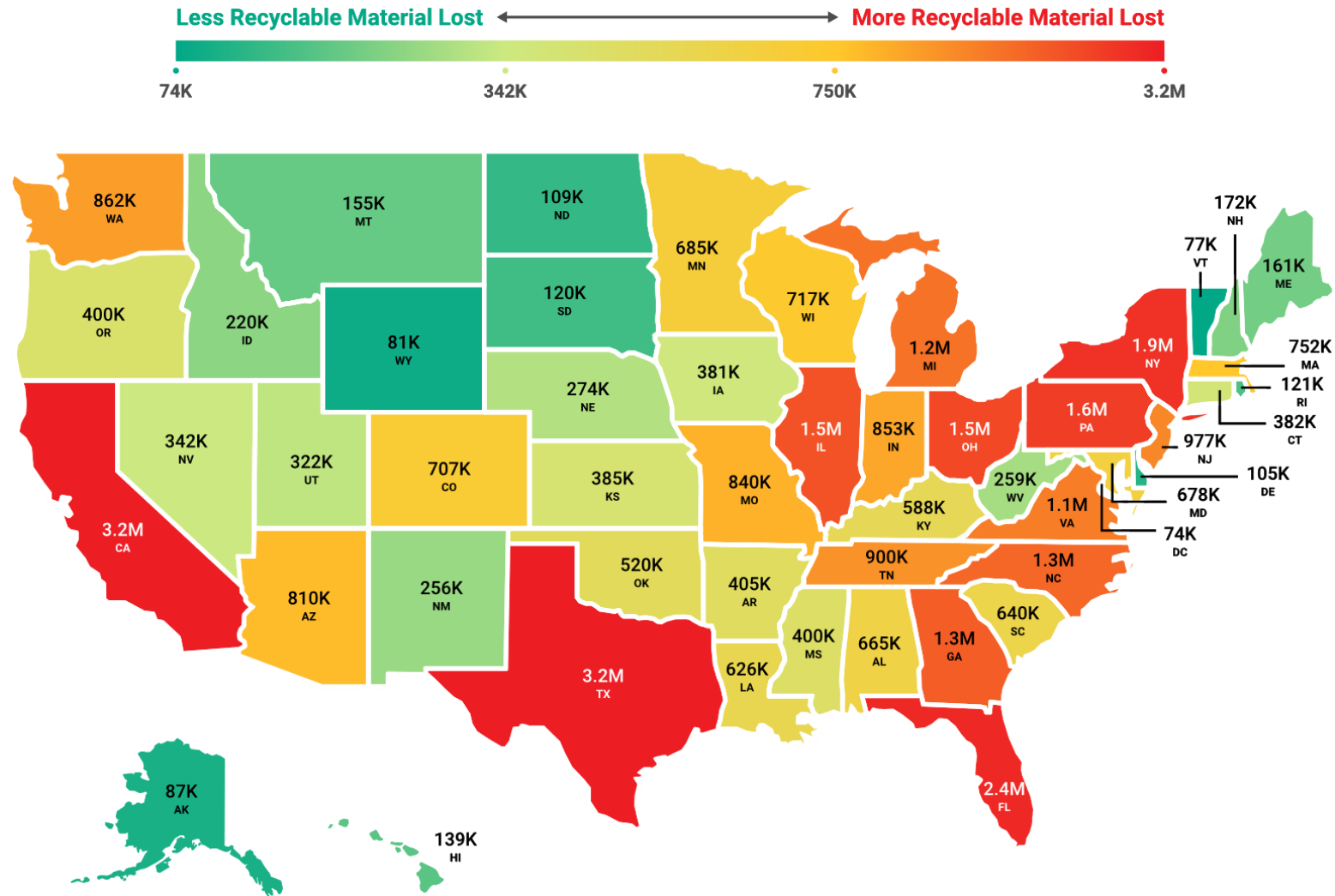
Includes material captured through state deposit return systems

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State-by-State Residential Recycling Rates

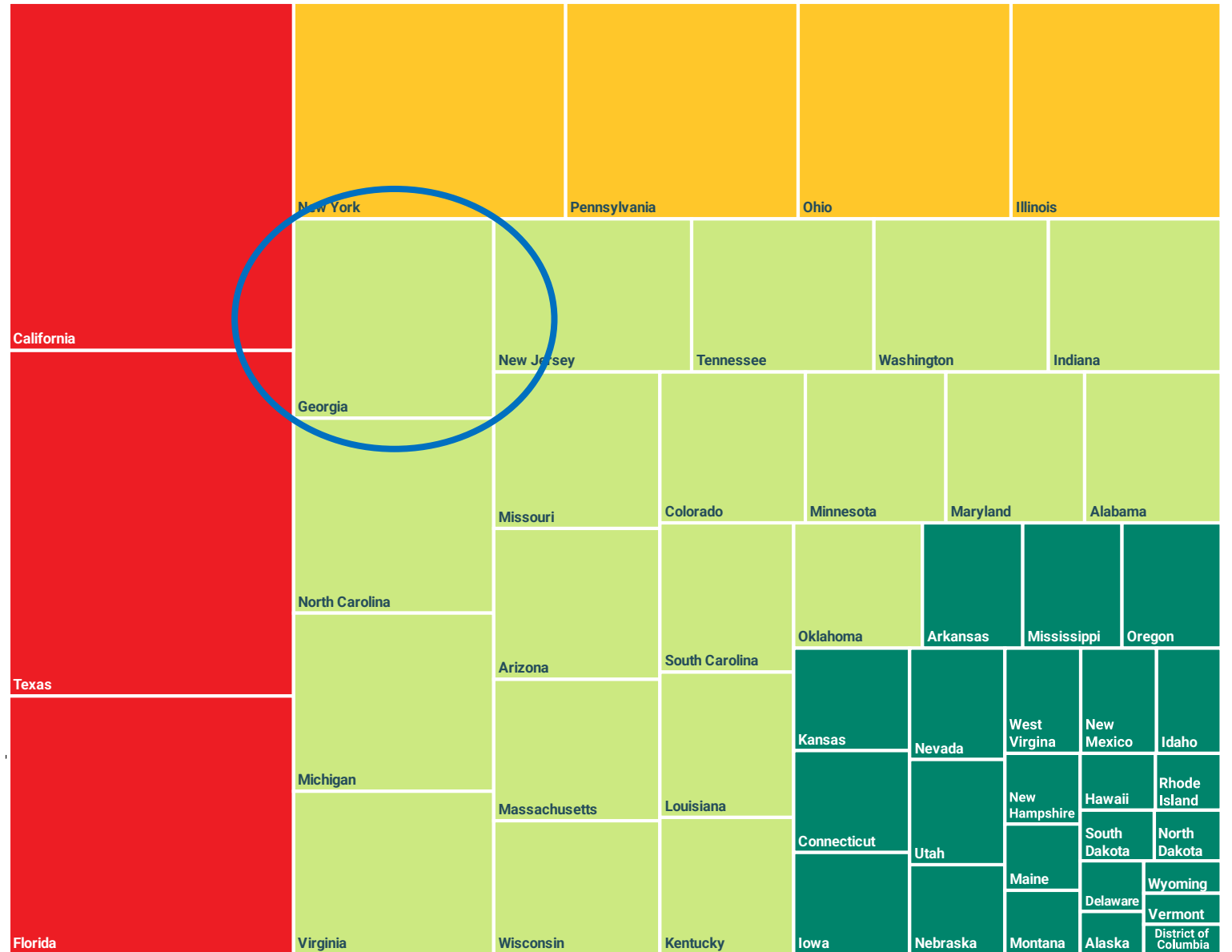
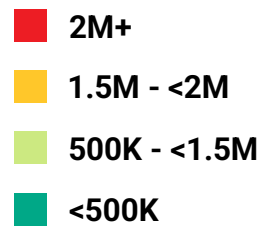


State-by-State Residential Recyclable Material Lost (in Tons Per Year)



Tons Lost Per State Annually

An additional perspective on recyclable material lost by each state highlighting the states that lose the largest and smallest quantities of residential recyclable material in tons per year



Targeted Investments for Maximum Impact

Data-driven, local solutions are key to overhauling the U.S. system



Impact on Two EPR States

Oregon & Colorado: In addition to Maine & California, Oregon & Colorado's recent passage of EPR could bring more than 645,000 tons of recyclables to these two states. Needs assessments, single and multi family access, engagement, and expanded MRF processing activities are areas of need.



Increase in Participation

California loses 3.2 million tons per year largely due to lack of engagement. 95% of Californians have recycling access, but state recycling rate is 37%. As part of its EPR implementation engagement will be key.



Linchpin Cities

Because there are strong end markets and yet limited recycling in **Cleveland, Detroit, Indianapolis, Lubbock, Phoenix, & New Orleans**, these cities are critical for unlocking the regions that surround them. By focusing on access, engagement, and processing in these cities, the greater regions could likely see increased recovery of recyclables.



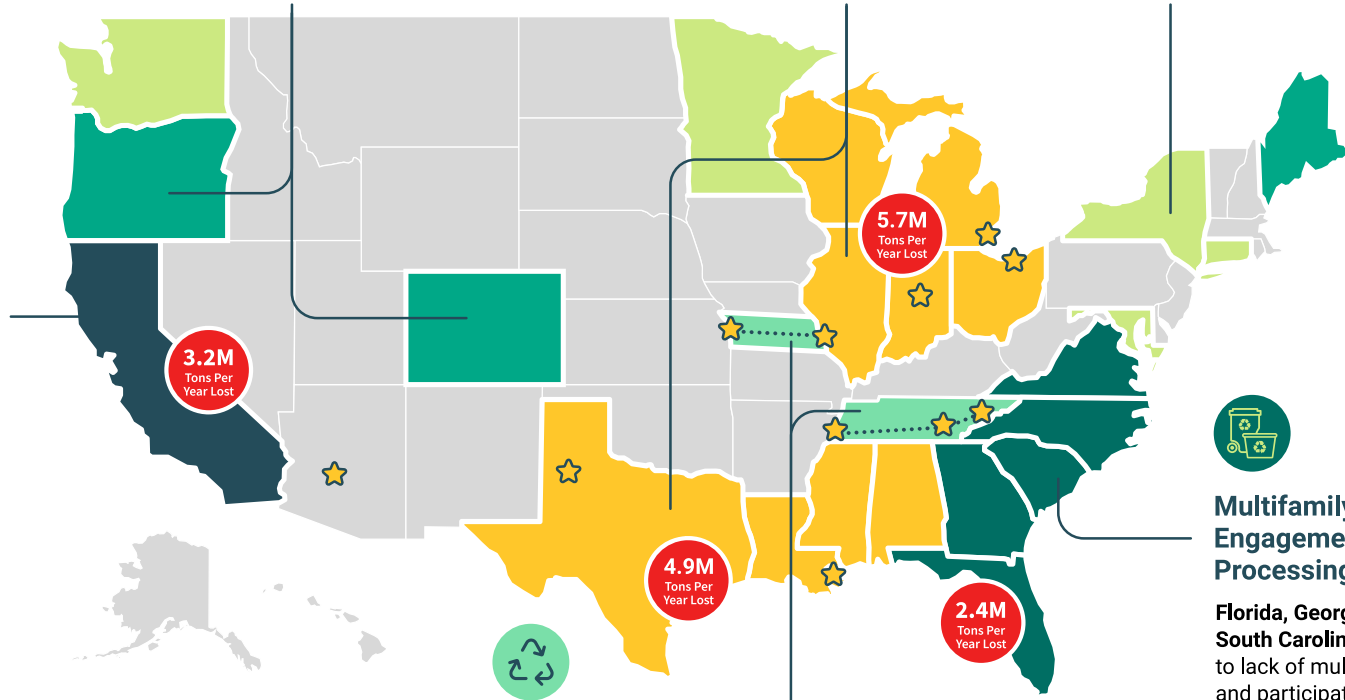
Regional System Change

Gulf Coast & Great Lakes: These two regions collectively lose nearly 10.6M tons of recyclables annually. Comprehensive regional investment in single and multi family access, engagement, and MRF processing to expand recyclables accepted could bring big change for the country as a whole.



Future EPR Opportunities

Connecticut, Illinois, Maryland, Minnesota, New York & Washington: These states, like many, could benefit from future EPR legislation, boosting recovery by more than 3.3 million tons annually.



Micro-Regional System Change

St. Louis - Kansas City Corridor and the Memphis, Chattanooga, & Knoxville Region: Although processing and end markets exist, these metropolitan corridors generate large quantities of unrecovered recyclables. Focusing on access and participation in these regions could produce significant tonnage.



Multifamily Access, Engagement, and Processing

Florida, Georgia, North Carolina, South Carolina, & Virginia: Due to lack of multi-family access and participation, these states have big opportunities to increase recycling rates. For example, Florida has 90% access for single-family homes, but only 16% for multifamily homes, and loses 2.4 million tons per year.



Help:

- Fairly good curbside and drop-off program network
- Generally good Material Acceptance
- Fairly good MRF infrastructure, although specific facility performance unknown
- Growth occurring in areas where curbside should be automatic (e.g. suburban ATL)

Hinder:

- Multifamily access needs improvement
- Some key materials need access improvement – e.g., glass
- Participation rates and participant capture rates need attention

Helping Deliver Equal Access



Strategic Grantmaking

- ✓ Recycle Carts plus Education (Access)
- ✓ Drop-off Centers (Access)
- ✓ Multifamily (Access)
- ✓ MRF Improvements (Access & Capture)
- ✓ Engagement (Capture)

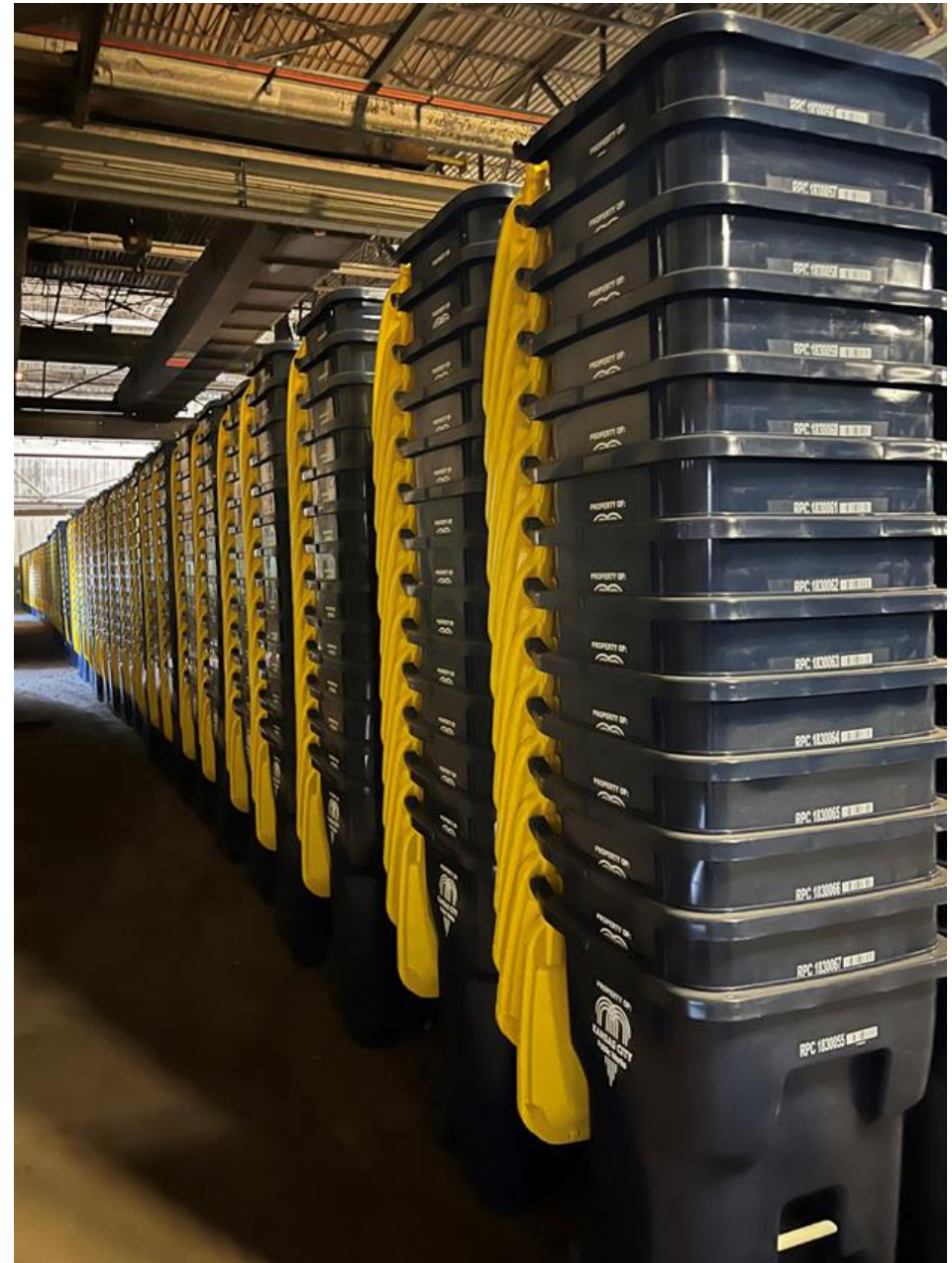
<https://recyclingpartnership.org/grants/>



Cart Grants



- Grants for cart-based curbside recycling systems
- Funding up to \$15/cart, depending on service type, \$1/HH education
- Technical assistance and design of education/outreach materials
- RFP available on an on-going basis
- Project data



Drop-Off Grants



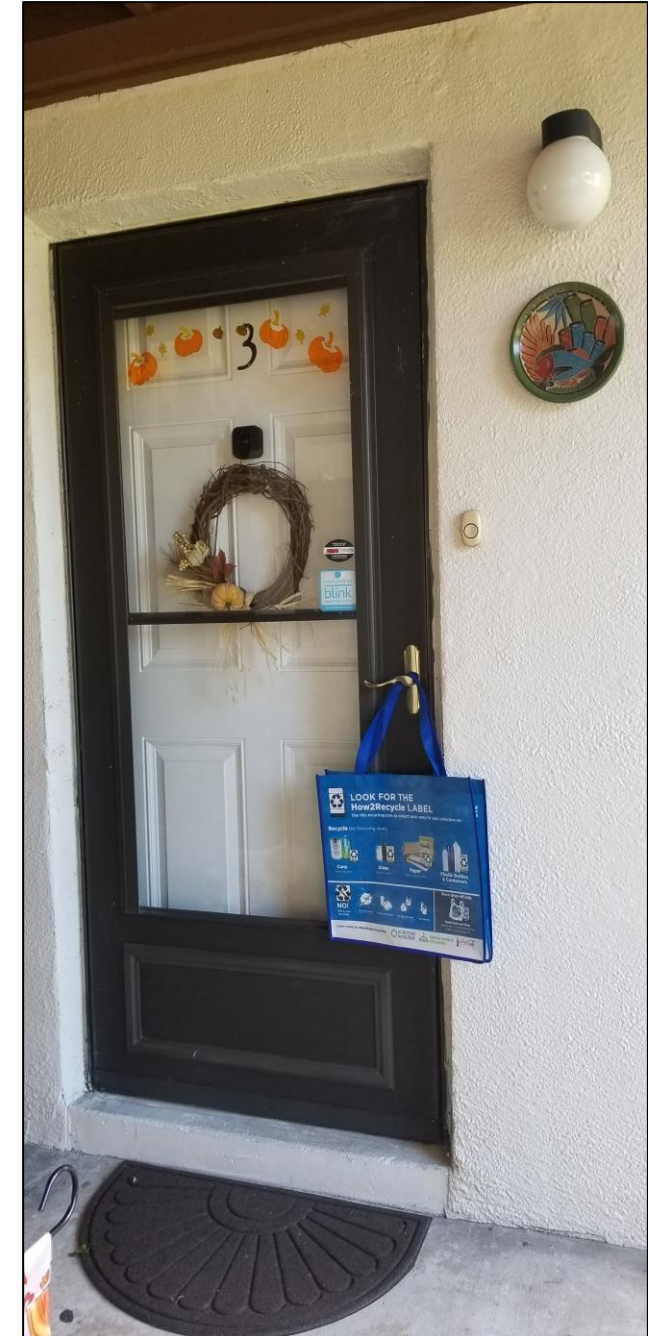
- Site development
- Hub and spoke model
- Collection equipment
- Education and outreach



Multifamily Grants



- Collection equipment
- Recycling stations
- Valet/Doorstep service
- Education and outreach



MRF & Material Specific Grants



- General Technical Assistance
- Controlling Contamination
- Partnering in Measurement

Potential Grant Opportunities

- Polypropylene Recycling Coalition
- PET Recycling Coalition
- UBC Grant Program
- Film and Flexibles Recycling Coalition



Thank You!

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