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Approximately half of global greenhouse gas emissions are the result of natural resource extraction and processing. Increasing recycling reduces climate, environmental, and social impacts of materials use, and keeps valuable resources in use instead of in landfills. Municipal solid waste management has long suffered from a lack of investment. Some communities that lack waste management infrastructure do not have curbside waste collection services, recycling, or composting programs, which increases the burden on our landfills, decreases their capacity, and increases greenhouse gas emissions.

To reduce the impacts of materials use and strengthen the U.S. recycling system, the Environmental Protection Agency (EPA) and others have undertaken significant efforts to advance the circular economy in the United States. In 2015, the U.S. Department of Agriculture and the EPA announced the United States 2030 Food Loss and Waste Reduction Goal,<sup>2</sup> the first ever domestic goal to reduce food loss and waste by 50 percent by the year 2030. In 2020, the EPA announced the U.S. National Recycling Goal<sup>3</sup> to increase the U.S. recycling rate to 50 percent by 2030 and to galvanize efforts to strengthen the U.S. recycling system. One year later, the EPA released the National Recycling Strategy: Part One of a Series on Building a Circular Economy for All.<sup>4</sup>

Funding was made available to support the National Recycling Strategy when the Infrastructure Investment and Jobs Act, Public Law 117-58 (also known as the Bipartisan Infrastructure Law or "BIL") was signed into law providing the EPA with \$275 million in funding to implement the National Recycling Strategy through the Solid Waste Infrastructure for Recycling (SWIFR) Grant Program authorized by section 302(a) of the Save Our Seas 2.0. Section 70402 of BIL also authorized the Consumer Recycling Education and Outreach Grant Program, and EPA received \$75 million in funding for the program through BIL. Further, section 70401 of BIL provided \$10 million to develop battery recycling best practices and \$15 million to develop voluntary battery labeling guidelines. The National Recycling Strategy proposes building a circular economy to reduce materials use, redesign materials to be less resource intensive, and recapture "waste" as a resource to manufacture new

Data from the 2019 Global Resources Outlook Report published by UN Environment. <u>Global Resources Outlook</u> 2019: Natural Resources for the Future We Want - Summary for Policymakers (unep.org)

Please see: <a href="https://www.epa.gov/sustainable-management-food/united-states-2030-food-loss-and-waste-reduction-goal">https://www.epa.gov/sustainable-management-food/united-states-2030-food-loss-and-waste-reduction-goal</a>.

<sup>3</sup> Please see: <a href="https://www.epa.gov/circulareconomy/us-national-recycling-goal">https://www.epa.gov/circulareconomy/us-national-recycling-goal</a>.

<sup>4</sup> Please see: <a href="https://www.epa.gov/circulareconomy/national-recycling-strategy">https://www.epa.gov/circulareconomy/national-recycling-strategy</a>.

materials and products. This vision and strategy for a circular economy aligns with the language and the goals identified in BIL regarding solid waste infrastructure and management in the United States.

House Report 116-448 directs the EPA to "begin a comprehensive data collection effort to strengthen residential recycling and accelerate the move towards a circular economy" (p.95) and prepare "an updated strategy with recommendations." This report details the results of the data collection efforts, while the Assessment of the U.S. Recycling System: Financial Estimates to Modernize Material Recovery Infrastructure report provides the estimates to achieve consistent collection across the nation and maximize the efficient delivery of materials to the circular economy. The requested information from the language in the report is:

- Number of community curbside programs;
- Number of community drop-off programs;
- Total amount of residential packaging materials collected through deposit programs; Total amount of residential materials collected;
- Types of materials accepted by each program;
- Number of citizens with access to recycling services on par with access to disposal; Inbound contamination and capture rates of community recycling programs;
- Data on single use plastics;
- Types of single-use plastics currently in commerce; Recyclability of these plastic types;
- Rates at which these plastics are currently recycled by plastic type and by region; Data on aluminum;
- Rates at which aluminum cans are recycled;
- Investment required to modernize material recovery infrastructure; and
- Amounts of investment needed to provide all citizens with access to recycling services on par with access to disposal.

This report serves as an opportunity to gain a deeper understanding of the current state of recycling data as well as the recycling needs across the U.S. as we move towards a circular economy. It begins with an introduction of the data collection efforts, explains the survey administration process, and presents an overview of results as a whole and by specific survey question. In addition, the Agency also prepared the recommendations to improve U.S. circular economy measurement as part of the National Recycling Strategy: Part One of a Series to Build a Circular Economy,<sup>6</sup> which is focused on advancing the U.S. Recycling System by identifying a series of deliberate objectives and stakeholder-led actions to create a stronger, more resilient, less impactful, and more cost-effective recycling system. This report meets the direction in House Report 116-448, which requests an updated strategy with recommendations.

<sup>5</sup> Please see: https://www.congress.gov/116/crpt/hrpt448/CRPT-116hrpt448.pdf.

<sup>6</sup> Please see: <a href="https://www.epa.gov/circulareconomy/national-recycling-strategy#NRS%20Part%201">https://www.epa.gov/circulareconomy/national-recycling-strategy#NRS%20Part%201</a>.

The initial results of the needs survey indicate that, while at least half of the states and territories collect data on some of these fundamental recycling measures, the consistency and completeness of data is variable. For example, data may be collected through voluntary surveys, or it may be collected infrequently and may only cover certain facility types or communities. Key highlights of the results include:

- Approximately 50 percent of states and territories collect data on the number of community curbside recycling programs while just over 60 percent collect data on the number of drop-off programs.
- 80 percent of states and territories do not have deposit programs. Of those that do have deposit programs, two thirds collect data on the amount of residential packaging materials collected through the programs.
- Only 15 percent of states and territories collect data on the capture rates of community recycling programs.
- 88 percent of states and territories do not collect data on the type of single-use plastics currently in commerce.
- About 50 percent of states and territories measure an overall recycling rate, with an average recycling rate estimate of roughly 30 percent.
- The most common materials accepted by the majority of state and territory recycling programs are paper products, HDPE plastics (plastic type 2), PET plastics (plastic type 1), and aluminum.

Overall, the results of the Recycling Needs Survey and Assessment highlight the need to enhance recycling data collection infrastructure nationally. Encouraging standardization of metrics and promoting a regular data collection and reporting schedule for the states, territories, and EPA is needed to facilitate tracking of progress with respect to access and recovery rates. Specific examples of these data gaps include the fact that many states and territories do not have the capacity to collect recycling details annually, do not have the ability to properly collect inbound contamination rates, have inconsistent collection and reporting protocols, and do not have granular data on single use plastics and types of materials in the recycling stream.



To help address these gaps, the Agency is proposing two key activities that will support a transition to a circular economy: utilizing the SWIFR grant funds for data collection activities and continuing to collect data through the development of an Information Collection Request (ICR).



The Environmental Protection Agency (EPA) was directed by Congress (H.R. 116-448)<sup>7</sup> to begin a comprehensive data collection effort to strengthen residential recycling and accelerate the move towards a circular economy. The Agency prepared an Emergency Information Collection Request (E-ICR) package to send to the Office of Management and Budget (OMB) for approval to start the data collection process. The specific language in the report directs the Agency to "begin a comprehensive data collection effort to strengthen residential recycling and accelerate the move towards a circular economy." The requested information from the House Report language is:

- Number of community curbside programs;
- Number of community drop-off programs;
- Total amount of residential packaging materials collected through deposit programs; Total amount of residential materials collected;
- Types of materials accepted by each program;
- Number of citizens with access to recycling services on par with access to disposal; Inbound contamination and capture rates of community recycling programs;
- Data on single use plastics;
- Types of single-use plastics currently in commerce; Recyclability of these plastic types;
- Rates at which these plastics are currently recycled by plastic type and by region; Data on aluminum;
- Rates at which aluminum cans are recycled;
- Investment required to modernize material recovery infrastructure; and
- Amounts of investment needed to provide all citizens with access to recycling services on par with access to disposal.

In response to this request, the EPA developed a survey and coordinated with OMB to secure approval to administer the survey under the E-ICR. The survey was designed to be administered at the state and territory level. Before starting the survey, the EPA solicited input on the approach and

<sup>7</sup> Please see: https://www.congress.gov/116/crpt/hrpt448/CRPT-116hrpt448.pdf.

questionnaire from several stakeholder groups, including the Association of State and Territorial Solid Waste Management Officials (ASTSWMO), the Northeast Waste Management Officials Association (NEWMOA), the Environmental Research & Education Foundation (EREF), and The Recycling Partnership (TRP).

We note that the EPA will address the final two information elements listed above ("investment required to modernize...." and "amounts of investment needed to provide citizens with access....") in a separate document entitled the Assessment of the U.S. Recycling System: Financial Estimates to Modernize Material Recovery Infrastructure.

#### Survey Administration

The questionnaire was programmed for online administration. The EPA distributed requests tocomplete the online survey by e-mail to relevant agencies in all 50 states, the District of Columbia (D.C.), and 11 territories.<sup>8</sup> The survey was active for approximately three weeks. The EPA distributed follow-up reminders after the first week to encourage participation. Ultimately, all 50 states, D.C., and the majority of the territories submitted responses, a roughly 95 percent response rate.<sup>9</sup>

#### Overview of Results

The primary purpose of this information collection effort was to determine the degree to which U.S. states and territories collect and maintain data on recycling program coverage, volumes and materials collected, and recycling rates. The initial results indicated that, while at least half collect data on some of these fundamental recycling measures, the consistency and completeness of data is variable. For example, data may be collected through voluntary surveys, or it may be collected infrequently and may only cover certain facility types or communities. Key highlights of the results include:

- Approximately 50 percent of states and territories collect data on the number of community curbside recycling programs while just over 60 percent collect data on the number of drop-off programs.
- 80 percent of states and territories do not have deposit programs. Of those that do have deposit programs, two thirds collect data on the amount of residential packaging materials collected through the programs.
- Only 15 percent of states and territories collect data on the capture rates of community recycling programs.
- 88 percent of states and territories do not collect data on the type of single-use plastics currently in commerce.

Puerto Rico, Virgin Islands, American Samoa, Commonwealth of the Northern Mariana Islands, Guam, Marshall Islands, Republic of Palau, and Pohnpei, Yap, Kosrae, and Chuuk of the Federated States of Micronesia.

<sup>9</sup> Responses were not received from the Commonwealth of the Northern Mariana Islands, and Pohnpei and Kosrae of the Federated States of Micronesia.

- About 50 percent of states and territories measure an overall recycling rate, with an average recycling rate estimate of roughly 30 percent.
- The most common materials accepted by the majority of state and territory recycling programs are paper products, HDPE plastics (plastic type 2), PET plastics (plastic type 1), and aluminum.

#### Overview of Results by Survey Question

This section provides a brief summary of responses, including open-ended comments, organized by survey question. Appendix A presents distributions of responses by location, as well as the complete open-ended comments. A copy of the questionnaire as it appeared in online format is attached as Appendix B.

**Question 1:** Does your state or territory collect data on the number of community curbside recycling programs in the state or territory?

This question had a 100 percent response rate among the 59 states and territories that completed the survey; 48 percent (28) indicated that they do not collect these data, while 52 percent (31) of respondents do collect these data. Related comments described various data collection mechanisms, such as voluntary surveys (Arizona), direct communication with local governments/ tracking collection systems (Washington), or collection by regional authorities (Arkansas). See page A-2 for additional detail.

**Question 2:** Does your state or territory collect data on the number of community drop-off recycling programs in the state or territory?

This question had a 100 percent response rate among the 59 states and territories that completed the survey; 37 percent (22) indicated that they do not collect these data, while 63 percent (37) of respondents do collect these data. Related comments described various data collection mechanisms, such as voluntary data submitted through municipal measurement programs (Georgia), voluntary reporting by counties (Maryland), or tracking facilities (New Mexico). See page A-6 for additional detail.

**Question 3:** If your state or territory has deposit programs,<sup>10</sup> do you collect data on the total amount of residential packaging materials collected through those programs?

This question had a 100 percent response rate among the 59 states and territories that completed the survey; 80 percent (47) of respondents indicated that they do not have deposit programs, seven percent (4) indicated that they do have deposit programs, but they do not collect these data, and 13 percent (8) of respondents collect these data. Related comments described various caveats to the responses, including data collection for certain materials only (Iowa), while others provided details on the data collection methods (California). See page A-9 for additional detail.

<sup>10</sup> A deposit program refers to a community drop-off recycling program.



## **Question 4:** Does your state or territory collect data on the total amount of residential materials collected through curbside programs annually?

This question had a 100 percent response rate among the 59 states and territories that completed the survey; 54 percent (32) of respondents indicated that they do not collect these data, while 46 percent (27) of respondents do collect these data. Related comments described various data collection mechanisms, including surveys, mandatory reporting, voluntary submission, and other methods. See page A-11 for additional detail.

## **Question 5:** Does your state or territory collect data on the types of materials accepted by each recycling program in the state or territory?

This question had a 100 percent response rate among the 59 states and territories that completed the survey; 36 percent (21) of respondents indicated that they do not collect these data, while 64 percent (38) of respondents do collect these data. Related comments described various data collection mechanisms, including surveys, mandatory reporting, voluntary submission, and other methods. See page A-14 for additional detail.

## **Question 6:** Does your state or territory collect data on the number of citizens with access to recycling services on par with access to waste disposal?

This question had a 100 percent response rate among the 59 states and territories that completed the survey; 64 percent (38) of respondents indicated that they do not collect these data, while 36 percent (21) of respondents do collect these data. Related comments described various state laws that expand access to recycling services, as well as metrics used to track access. See page A-17 for additional detail.

## **Question 7:** Does your state or territory collect data on the inbound contamination rates of community recycling programs?

This question had a 100 percent response rate among the 59 states and territories that completed the survey; 85 percent (50) of respondents indicated that they do not collect these data, while 15 percent (9) of respondents do collect these data. Related comments described attempts to collect these data and, in many cases, associated obstacles (e.g., community recycling programs do not know the inbound contamination rates). See page A-20 for additional detail.

## **Question 8:** Does your state or territory collect data on the capture rates of community recycling programs?

This question had a 100 percent response rate among the 59 states and territories that completed the survey; 85 percent (50) of respondents indicated that they do not collect these data, while 15 percent (9) of respondents do collect these data. Related comments described attempts to collect these data. However, it is not clear that all respondents follow a standard definition of "capture rates." Ohio, for example, commented that it is unclear what the term refers to. See page A-23 for additional detail.

## **Question 9:** Does your state or territory collect data on the types of single-use plastics currently in commerce in the state or territory?

This question had a 100 percent response rate among the 59 states and territories that completed the survey; 88 percent (52) of respondents indicated that they do not collect these data, while 12 percent (7) of respondents do collect these data. Related comments described future plans to collect these data (Oregon, California), or described current data collection mechanisms (Minnesota, Tennessee). See page A-25 for additional detail.

### **Question 10:** Does your state or territory collect data on the rates at which single-use plastics are recycled in the state or territory?

This question had a 100 percent response rate among the 59 states and territories that completed the survey; 80 percent (47) of respondents indicated that they do not collect these data, while 20 percent (12) of respondents do collect these data. Related comments described caveats to the responses, most commonly that data are only collected for certain types of single- use plastics. See page A-27 for additional detail.

## **Question 11:** Does your state or territory collect data on the rates at which single-use plastics are recycled in the state or territory by plastic type?

Of the 12 states and territories that indicated they collect relevant data in Question 10, six respondents indicated that they do not collect these data, while six do collect these data. Related comments described the types of single-use plastics for which these data are collected. See page A-30 for additional detail.

## **Question 12:** Does your state or territory collect data on the rates at which aluminum cans are recycled in the state or territory?

This question had a 100 percent response rate among the 59 states and territories that completed the survey; 61 percent (36) of respondents indicated that they do not collect these data, while 39 percent (23) of respondents do collect these data. Related comments described the degree to which they do or do not collect data on the capture rates of aluminum cans (e.g., collecting data on the capture rate of aluminum as a category, but not breaking out aluminum cans in reporting). See page A-32 for additional detail.

### Question 13a: Does your state or territory measure a recycling rate at the state or territory-level?

This question had a 100 percent response rate among the 59 states and territories that completed the survey; 49 percent (29) of respondents indicated that they do not measure a rate at that level, while 51 percent (30) of respondents do. Related comments described caveats to the responses, such as measuring a "recovery rate" including limited materials burned for energy (Washington, Oregon) or compiling "diversion rates" which include components of recycling (Vermont, Ohio). See page A-35 for additional detail.

#### **Question 13b:** State or territory-level recycling rate:

Of the 30 states and territories that indicated they measure a rate in Question 13a, 29 provided a response to this question. The minimum reported recycling rate was nine percent and the maximum was 56 percent. Responses indicate a mean state or territory-level recycling rate of 32 percent. Related comments described how the state or territory-level recycling rate is calculated. See page A-38 for additional detail.

**Question 14:** Please provide your best estimate of the percentage of all communities in your state or territory that have access to curbside recycling programs:

This question had an 88 percent (52) response rate among the 59 states and territories that completed the survey. Reported estimates ranged from 0 to 100 percent. Responses indicate a mean estimated level of community access to curbside recycling programs of 44 percent. See page A-42 for additional detail.

**Question 15:** Please provide your best estimate of the percentage of all communities in your state or territory that have access to drop-off recycling:

This question had an 87 percent (51) response rate among the 59 states and territories that completed the survey. Reported estimates ranged from 0 to 100 percent. Responses indicate a mean estimated level of community access to drop-off recycling of 62 percent. See page A-43 for additional detail.

**Question 16:** Please provide your best estimate of the percentage of all communities in your state or territory that do not have access to recycling services:

This question had an 83 percent (49) response rate among the 59 states and territories that completed the survey. Reported estimates ranged from 0 to 100 percent. Responses indicate a mean estimated level of 28 percent of communities without access to recycling services. See page A-44 for additional detail.

**Question 17:** Please provide your best estimate of the total recycling tonnage collected in your state or territory:

This question had an 80 percent (47) response rate among the 59 states and territories that completed the survey. The minimum estimate was five tons (American Samoa), and the maximum estimate was 19.6 million tons (Florida). Responses indicate a mean estimated total recycling tonnage of 2.8 million tons. See page A-45 for additional detail.

**Question 18:** Please provide your best estimate of the percentage of total recycling tonnage that is collected through curbside recycling programs:

This question had a 59 percent (35) response rate among the 59 states and territories that completed the survey. The minimum estimate was zero (Yap, American Samoa, Palau, Virgin Islands) and the maximum estimate was 90 percent (Utah). Responses indicate a mean estimate of 34 percent of total recycling tonnage that is collected through curbside recycling programs. See page A-46 for additional detail.

**Question 19:** Please provide your best estimate of the percentage of total recycling tonnage that is collected through your state's or territory's deposit program:

Of the 12 states and territories that indicated they have a deposit program (Question 3), seven provided a response to this question. The minimum estimate was five percent (Oregon) and the maximum estimate was 85 percent (California). Responses indicate a mean estimate of 41 percent of total recycling tonnage that is collected through deposit programs. See page A-47 for additional detail.

## Question 20: Please provide your best estimate of the overall recycling rate in your state or territory:

This question had a 75 percent (44) response rate among the 59 states and territories that completed the survey. The minimum estimate was one percent (Virgin Islands), and the maximum estimate was 80 percent (Palau). Responses indicate a mean estimated recycling rate of 29 percent. See page A-48 for additional detail.

**Question 21:** To the best of your knowledge, which of the following materials are accepted by the majority of recycling programs in your state or territory?

This question had a 100 percent response rate among the 59 states and territories that completed the survey. The most commonly accepted materials are paper products, HDPE plastics (Type 2), PET plastics (Type 1), and aluminum, with 49, 52, 55, and 58 respondents selecting these materials, respectively. The least commonly accepted material is mattresses (four respondents). See page A-49 for additional detail.

**Question 22:** To the best of your knowledge, which of the following types of single-use plastics are accepted by the majority of recycling programs in your state or territory?

This question had a 100 percent response rate among the 59 states and territories that completed the survey. The most commonly accepted single-use plastics are plastic beverage bottles (56 respondents). Stirrers, food wrappers, plastic utensils, straws, and sandwich/freezer bags were all selected by four or fewer respondents. See page A-50 for additional detail.

#### Recommendations

Overall, the results of the Recycling Needs Survey and Assessment highlight the need to enhance recycling data collection infrastructure nationally. Encouraging standardization of metrics and promoting a regular data collection and reporting schedule for the states, territories, and EPA will need to facilitate tracking of progress with respect to access and recovery rates. Specific examples of these data gaps include the fact that many states and territories do not have the capacity to collect recycling details annually, do not have the ability to properly collect inbound contamination rates, have inconsistent collection and reporting protocols, and do not have granular data on single use plastics and types of materials in the recycling stream.

To help address these gaps, the Agency is undertaking two activities that will support a transition to a circular economy: utilizing the Solid Waste Infrastructure for Recycling (SWIFR) grant funds for data collection activities and continuing to collect data through the development of an Information Collection Request (ICR).

Each of the 56 eligible states and territories have received a SWIFR grant to help develop their programs. The Agency determined that one of the eligible activities as part of the SWIFR grants for states and territories is to develop, strengthen, and/or implement comprehensive data collection efforts that demonstrate progress towards the EPA's National Recycling Goal and Food Loss and Waste Reduction Goal. Data collection and measurement efforts should be designed to improve the state's ability to track progress towards national and state recycling and/or circular economy goals. Data collection efforts could include state-wide or other targeted waste characterization studies.

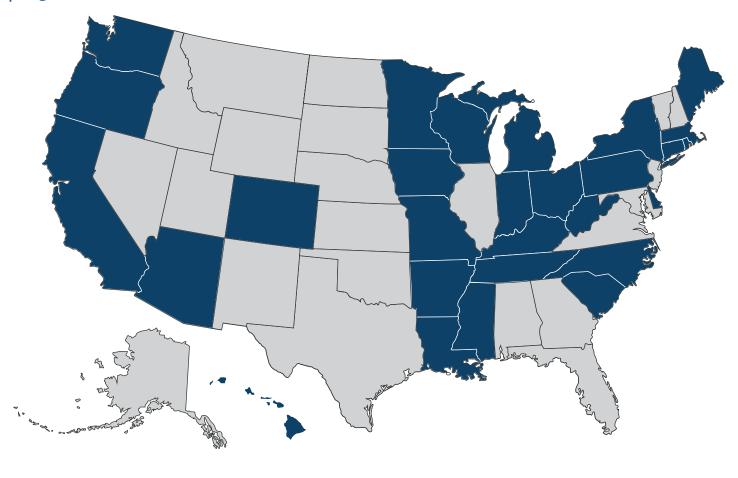
In addition, the EPA is in the process of obtaining an ICR to continue collecting data from states and territories. As part of this process, and in coordination with our grants for states and territories, the Agency anticipates that it will conduct consultations with states and territories to solicit input on barriers to consistent and timely data collection. With this activity the Agency will be able to show progress on a national level in the transition to a circular economy.

Performing the Recycling Needs Survey and Assessment provided incredibly useful information about the state of recycling nationwide. The Agency continues to work in partnership with states and territories to understand existing challenges, evaluate roadblocks, and identify and facilitate the sharing of best practices. The Agency will continue to make progress on these activities as we further our goal on building a circular economy for all.



The following surveys reflect direct answers from states; as such, EPA has not made any grammatical or editorial changes so as not to affect the integrity of the original responses. However, we have updated some of the website links where appropriate.

## Q.1. Does your state collect data on the number of community curbside recycling programs?





Response rate: 100%

Yes: 52% No: 48%

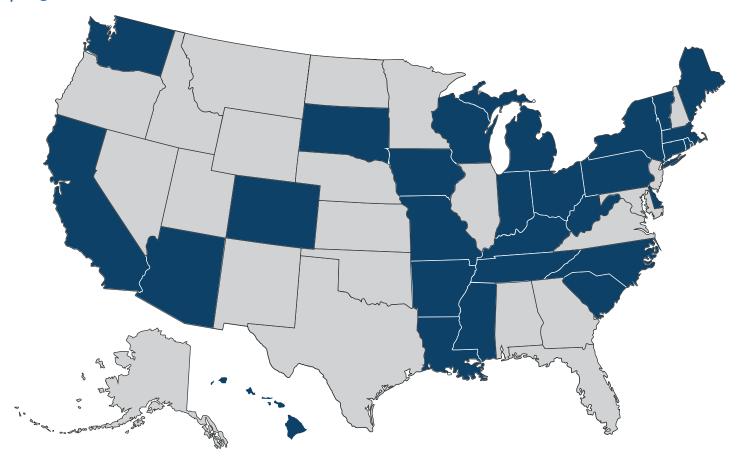
**Note:** Surveys were not submitted from representatives for Commonwealth of the Northern Mariana Islands, Federated States of Micronesia – Kosrae, Federated States of Micronesia – Pohnpei. These territories are not included in the results described in this report.

American Samoa	No	Marshall Islands	No
District of Columbia	Yes	Puerto Rico	Yes
Federated States of Micronesia – Chuuk	No	Republic of Palau	No
Federated States of Micronesia – Yap	No	Virgin Islands (US)	No
Guam	Yes		

Florida	We do collect information on Single Family, Multi-Family and Commercial participation.
Yap, Federal States of Micronesia	The Yap State Recycling Program does collect recyclables through a curbside recycling program. There is one Materials Recovery Facility in the State, located on the main island, where residents directly bring and turn in their recyclables.
Maine	Biennial Municipal Recycling report asks how recyclables are collected; poor compliance rate with reporting means incomplete data.
Arizona	Our recycling data is collected through a voluntary survey sent to municipalities, counties and Tribes. Data is not representative of all recycling taking place in Arizona.
Hawaii	Currently there is only one curbside recycling program in the State (City & County of Honolulu)
South Dakota	While our state does not collect this data, we do try to keep track of communities that have some type of recycling opportunities for their residents
Washington	We have been tracking this data for years through various methods. We currently have an Excel document we are updating by emailing local governments, tracking collection system types, materials collected, frequency, bin color, organics, haulers, MRFs, etc.
Georgia	We rely on voluntary reporting submitted through the Georgia Municipal Measurement Program. This is limited to the enrolled participating MMP members. GA does not require recycling data to be submitted to the state.
Minnesota	This is collected on a 5-year period by County and is self-reported by the local units of government. Our most recent survey was 2019.
Oregon	We compile information on what cities and some unincorporated areas are doing.
Maryland	Some counties may report voluntarily.
Delaware	In 2010 Delaware enacted the Universal Recycling Law which requires that any customer that is provided (municipally or contracted) curbside trash service is provided a cart for recycling and a minimum of every other week recycling pickup. At this point approximately 80% of the State (approx. 220,000 households) participates in curbside service.
South Carolina	We have 68 programs across the state.
Indiana	Survey results in 2020 showed 197 curbside recycling programs and 313 drop-off recycling locations for the residential sector. This was conducted as part of the Indiana Recycling Infrastructure and Economic Impact Study.

Rhode Island	Rhode Island Resource Recovery (RIRRC), RI's quasi-public agency collects this information.
Tennessee	We do not require annual "recertification" of program numbers if their plan has not changed and may be assumed to be carried forward in most cases until changed.
Colorado	We try to survey the cities and counties every few years.
California	CA collects data on the number of curbside recycling programs per jurisdiction, and can differentiate between single stream, dual, mixed waste, and source separated.
West Virginia	Information is gathered every 2 years for publication in the West Virginia Solid Waste Management Plan.
Arkansas	This data is collected from the State's nineteen (19) Regional Solid Waste Management Districts (RSWMDs)
Connecticut	CT DEEP has data on this, but not sure of most recent year we have data. Residents in every CT community have access to curbside recycling programs. In some communities, that service is provided by the municipality. In others, residents can choose to subscribe with a private hauler for curbside service. We gather this data from our Part 6 survey that goes out to municipalities annually. Not all towns respond every year.
Montana	We try to keep track of who is doing curbside. We do not require reporting.
Chuuk, Federated States of Micronesia	We collect general waste data.
Wyoming	The State of WY does not require recycling data of any kind to be submitted as part of a landfill or recycling center permit.
Mississippi	Our collection of data at present is voluntary and is conducted through Re-Trac Connect's MMP survey program. Because the current program response is voluntary we do not receive complete data or information.
Missouri	We use assessment inventory reporting through ReTrac.
District of Columbia	Residential Only with 3 or less units.
Michigan	Periodically however not comprehensively.
Nebraska	NDEE does not collect this data.

# Q.2. Does your state collect data on the number of community dropoff recycling programs?





Response rate: 100%

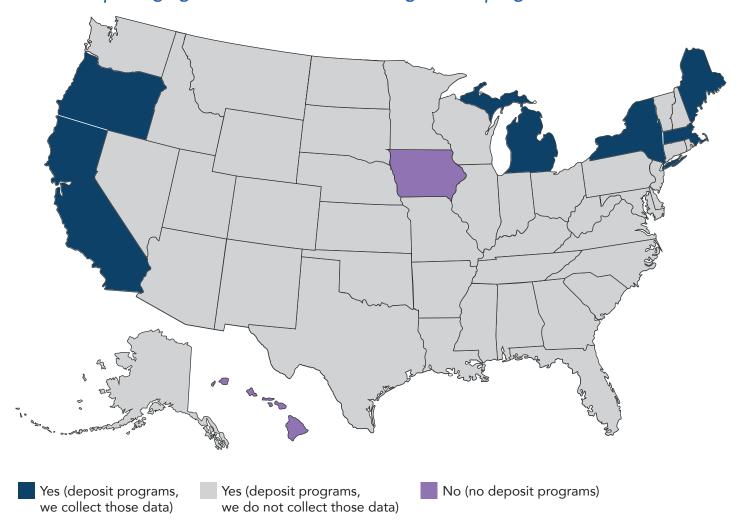
Yes: 63% No: 37%

American Samoa	Yes	Marshall Islands	Yes
District of Columbia	Yes	Puerto Rico	Yes
Federated States of Micronesia – Chuuk	No	Republic of Palau	Yes
Federated States of Micronesia – Yap	Yes	Virgin Islands (US)	Yes
Guam	Yes		

Marshall Islands	PET bottles, Glass bottles and aluminum cans up to 32oz.
Yap, Federal States of Micronesia	Yes, please see explanation to previous question as well. Data collection for Yap State is compiled by Yap State EPA for the Recycling Program, which operates one MRF for drop off or turning in of recyclables.
Maine	Biennial Municipal Recycling report asks how recyclables are collected; poor compliance rate with reporting means incomplete data.
Hawaii	The State administers the Deposit Beverage Container, Electronic Waste, and Glass Advance Disposal Fee Programs and collects data on these three recycling programs that implement drop-offs.
Nevada	Although we don't collect data, we have a pretty good idea as there are not that many municipalities that have recycling drop-off.
South Dakota	Drop-off recycling programs are entered in our recycling database which is connected to our GIS recycling facility map. This map shows locations of recycling facilities and/or businesses that accepts materials for recycling.
Washington	Drop boxes and MRFs collecting from the public are required to submit annual reports to our agency for recyclables and disposed materials collected.
Georgia	As with the first question, we rely on voluntary data submitted through the Georgia Municipal Measurement program for drop-off data; this is limited to enrolled members.
Minnesota	This is collected on a 5-year period by County and is self-reported by the local units of government. Our most recent survey was 2019.
Oregon	We know where a lot of drop-offs are, and require some by state law.
Maryland	Counties may report voluntarily.
Delaware	The Delaware Solid Waste Authority operates thirteen (13) drop-off centers throughout Delaware that receive residential recycling. Via their scale system and punch cards they can determine a number of users. DNREC would need to request this information, but it is available.
South Carolina	All counties are required to have at least one drop-off site.
Indiana	Survey results in 2020 showed 197 curbside recycling programs and 313 drop-off recycling locations for the residential sector. This was conducted as part of the Indiana Recycling Infrastructure and Economic Impact Study.
Rhode Island	Rhode Island Resource Recovery, RI's quasi-public agency collects this information.
Tennessee	We gather local drop-off convenience center counts and appropriate qualitative information for the sites.

California	CA collects data on the number of drop-off recycling programs via tracking certification. This can be differentiated between buyback recycling centers, residential curbside programs, and drop-off, collection, and community service programs (CP/SP).
American Samoa	We collect the data but our territory does not have a drop-off recycling program as of now.
Republic of Palau	We drop off recyclables at redemption centers.
Arkansas	This data is collected from the State's 19 RSWMDs.
Virgin Island (US)	VI WMA created a waste diversion guide that lists these Programs.
Connecticut	CT DEEP has data on this. Not all transfer stations collect recyclables but many do.
Montana	We only track recyclers who are licensed and report tonnage of recycling.
Mississippi	This is the same response. We promote reporting through on all curbside and drop off programs through Re-Trac connect's MMP program.
Missouri	But it has varying accuracy.
New Mexico	No, but we do track collection centers in the state, which typically include recycling drop-off.
District of Columbia	DPW run only.
Michigan	We are in the process of gathering this data. It will be available in Fall of 2022.
Nebraska	NDEE does not collect this data.

### Q.3. If your state has deposit programs, do you collect data on the total amount of residential packaging materials collected through those programs?



Response rate: 100%

Yes, we have deposit programs and we collect those data: 13%

Yes, we have deposit programs but we do not collect those data: 7%

No, we do not have deposit programs: 80%

American Samoa No, we do not have deposit programs District of Columbia No, we do not have deposit programs Federated States of Micronesia - Chuuk

No, we do not have deposit programs

Yes, we have deposit programs and we collect those data Federated States of Micronesia – Yap

No, we do not have deposit programs

Yes, we have deposit programs and we collect those data

No, we do not have deposit programs

No, we do not have deposit programs

No, we do not have deposit programs

Guam

Marshall Islands

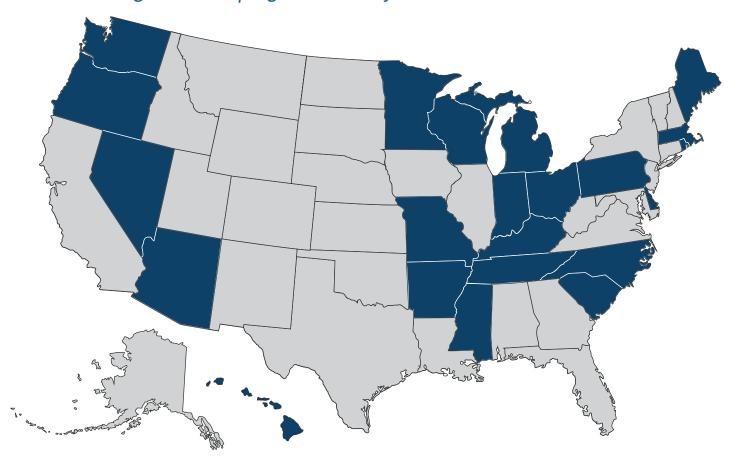
Puerto Rico

Republic of Palau

Virgin Islands (US)

Yap, Federated States of Micronesia	Yes, the Yap State Recycling Program is a Container Deposit. Legislation (CDL) type model of recycling program with the Yap State EPA compiling information of recyclable materials/categories turned into the Program. Yap State EPA also compiles information regarding importation of these recyclable categories into Yap State through the State Division of Tax and Revenue, a division of the State Office of Administrative Services.
lowa	Deposit program for certain beverage containers only.
Delaware	Universal Recycling in Delaware supplanted our deposit program which sunset in 2014.
New York	NYS has a Returnable Container Act.
California	CA uses the deposit system for California Refund Value (CRV) beverage containers to track the proportion of beverage containers returned for recycling that are handled through different programs, including buyback recycling centers.
Massachusetts	The MA Department of Revenue collects data pursuant to the MA bottle deposit law. MassDEP regularly receives this data from DOR.
Connecticut	CT has a deposit program for deposit containers, but does not collect data on the materials redeemed (e.g., glass, plastic, aluminum). The only data that CT DEEP gets is the total # of containers sold and redeemed on a quarterly basis.
Chuuk, Federated States of Micronesia	Container deposit (\$0.05) goes directly to general account which tax and revenue collects such data.
Michigan	We estimate the amount of glass, metal and plastic collected through the beverage container deposit law.

# Q.4. Does your state collect data on the total amount of residential materials collected through curbside programs annually?





Response rate: 100%

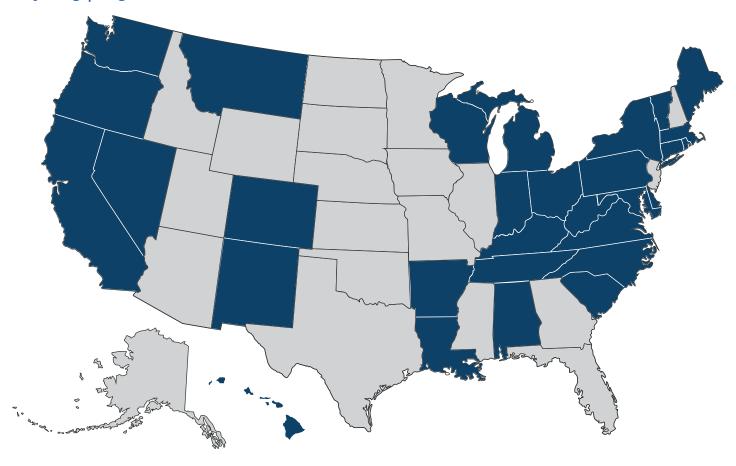
Yes: 46% No: 54%

American Samoa	Yes	Marshall Islands	Yes
District of Columbia	Yes	Puerto Rico	No
Federated States of Micronesia – Chuuk	Yes	Republic of Palau	No
Federated States of Micronesia – Yap	No	Virgin Islands (US)	No
Guam	Yes		

Florida	We do collect data on the total amount of municipal solid wasted collected (or generated) for the entire state.
Maine	We get the summary of the entire tonnage for any given facility, however this data is not broken down by curbside vs. drop off. Other caveats apply as well.
Nevada	The data we collect includes residential and commercial.
Washington	Our sector data is available through 2018 on our website.
Georgia	Landfill data is required to be submitted to the state. Recycling is not required, and we utilize the MMP for voluntary submission of this data, which is limited to the enrolled members.
Minnesota	Per Minn. S. 115A.93, "A collector of mixed municipal solid waste or recyclable materials shall separately report to the agency on an annual basis information including, but not limited to, the quantity of mixed municipal solid waste and the quantity of recyclable materials collected: (1) from commercial customers; (2) from residential customers; (3) by county of origin; and (4) by destination of the material."
Vermont	Our data is collected through our solid waste facility reporting. Therefore we do incidentally collect the curbside data, but we are unable to separate it from other collected waste (direct drop-off, industrial/commercial etc.)
Alabama	Alabama tracks recycled materials reported by all registered recycling facilities, inclusive of residential collection programs. Currently, this data is no easily extrapolated.
Delaware	We require all solid waste transporters to report residential and commercial collection by material and the disposal facility utilized to manage the collected wastes annually.
South Carolina	Predominately single stream.
Indiana	Indiana has seven MRFs that supply nearly all the in-state sorting of single stream recyclables. Total shipments of recyclables sorted by these MRFs were 207,384 tons in 2020, down from 218,796 tons in 2019. For more information, see the IDEM 2020 Recycling Index Report (IDEM: Recycle Indiana: Recycling Activity Reporting).
Ohio	The data collected is not comprehensive of all programs.
Rhode Island	Rhode Island Resource Recovery, RI's quasi-public agency collects this information.
Tennessee	Yes, we collect local government (region/county/municipality), households, and materials serviced. We also ask about franchise/open market/managed competition contracting, types of collection receptacle and frequency.
Colorado	Residential is not separated from commercial in our reporting.

New York	Our data is provided by our recyclables handling and recovery facilities and is a total of all residential, commercial and institutional materials collected.
California	CA does track the source sector of solid waste as a whole through the Recycling and Disposal Reporting System, but not source sector of materials for recycling specifically.
Massachusetts	MassDEP collects curbside data from municipalities through the Sustainable Materials Recovery Program (SMRP). In order to be eligible for SMRP grants, communities must submit this data.
Wisconsin	Total residential recycling includes curbside only, drop-off only and those with both. Total recycling tonnage includes residential and some commercial processed at MRFs which also receive residential material.
Kentucky	This data is not always clearly separated from commercial totals.
Arkansas	This data is collected from the State's 19 RSWMDs.
Connecticut	CT DEEP collects data on the total amount of recyclable materials collected in the state, but granularity is lacking to accurately determine the amount of materials collected on the residential level or on a curbside basis.
Chuuk, Federated States of Micronesia	Through a waste generation survey.
Wyoming	The State of WY does not require recycling data of any kind to be submitted as part of a landfill or recycling center permit.
Mississippi	Only voluntary and so it is incomplete.
Missouri	We collect data for solid disposal, but we do not require reporting of recycling, unless it collected with grant funding.
New Jersey	Our collection data does not specify curbside vs. drop-off.
<b>District of Columbia</b>	Residential collected by DPW only with 3 or less units.
Nebraska	NDEE does not collect this data.

## Q.5. Does your state collect data on the types of materials accepted by each recycling program?



Yes No

Response rate: 100%

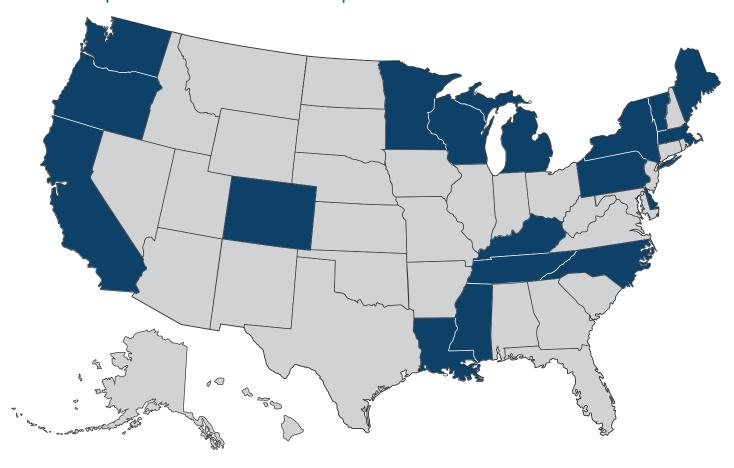
Yes: 64% No: 36%

American Samoa Marshall Islands Yes Yes Puerto Rico District of Columbia Yes Yes Federated States of Micronesia - Chuuk Republic of Palau Yes Yes Virgin Islands (US) Federated States of Micronesia – Yap Yes No Guam Yes

Yap, Federated States of Micronesia	Yes, for Yap State.
Maine	Granularity of this data is variable.
South Dakota	South Dakota has performed voluntary surveys in the past to determine the amount materials that were recycled during a particular year. Surveys are not done on an annual basis.
Washington	If you mean which local government programs are collecting what materials, then yes. It is in the dataset of curbside programs, also this data is collected for each drop box and MRF.
Georgia	We have some data collected through voluntary submission in the MMP and data is limited to enrolled members.
Minnesota	We receive annual reports by County recycling program, individual city or township programs would be rolled up in the larger county reporting which is submitted annually on April 1st. The types of materials accepted vary greatly by hauler and program.
Alabama	This number is directly reported by all registered recycling facilities on a semiannual basis.
Delaware	Under Delaware's Universal Recycling Law, we have a single statewide recycling program which is single stream. The only deviation is where commercial sector entities might do source separated material collection, however, if they produce other single stream materials, they should have single stream in addition to any other individual commodity programs.
Indiana	Indiana has a 50% recycling goal for municipal waste and requires mandatory reporting of solid waste and recycling data to track progress. Shipments of recyclables by material type from the MRFshed are reported through the Re-TRAC, IDEM Solid Waste and Recycling Data Reporting Program. For more information, see the IDEM 2020 Recycling Index Report IDEM: Recycle Indiana: Recycling Activity Reporting.
Ohio	For most programs.
Rhode Island	We collect data from RIRRC, which is the main recycling facility in RI that is qusai-puclic agency. Most of RIs recyclables go here, however if there are recycling facilities that do not bring their waste here, we dont collect that information since they are not regulated facilities.
Tennessee	Yes, we collect data on recycling, diversion, and disposal by region/county/ or municipality program. Materials collected service type. We also ask about franchise/open market/managed competition contracting, types of collection receptacle and frequency.

California	CA tracks the material types accepted by each recycling program using entity reporting in the Local Government Information Center (LoGIC) system. Reporting entity users represent CA local jurisdictions.	
Massachusetts	This information is also collected through SMRP reporting.	
Arkansas	This data is collected from both the State's RSWMDs and the State's Permitted Transfer Stations.	
Connecticut	CT encourages all municipalities in the state to follow a universal list of acceptable materials for residential programs. This list can be found at www.recyclect.com.	
Montana	We have a survey and it is broken out by types of commodities	
Mississippi	Again because our current reporting efforts are voluntary we do not collect them from each program in the state.	
Missouri	We do track it if Solid Waste district grant funds are used.	
District of Columbia	DPW only and limited data.	
Nebraska	NDEE does not collect this data.	

## Q.6. Does your state collect data on the number of citizens with access to recycling services on par with access to waste disposal?





Response rate: 100%

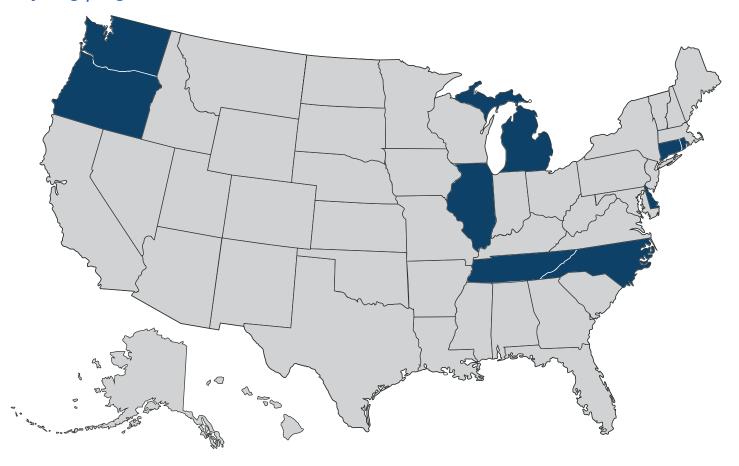
Yes: 36% No: 64%

American Samoa	No	Marshall Islands	Yes
District of Columbia	Yes	Puerto Rico	No
Federated States of Micronesia – Chuuk	Yes	Republic of Palau	No
Federated States of Micronesia – Yap	No	Virgin Islands (US)	No
Guam	No		

Florida	We collect data on the number of single family homes, multi-family homes and commercial establishments have access to recycling and how many participate.		
Maine	Theoretically, we could calculate this if we had full reporting compliance.		
Washington	The last time we updated this dataset was 2016.		
Minnesota	This is collected on a 5-year period by County and is self-reported by the local units of government. Our most recent survey was 2019.		
Oregon	Approximate.		
Vermont	All waste haulers, drop-off centers and transfer stations that offer trash collection services are required to offer recycling, the only exception to this is for haulers in a small portion of rural Vermont.		
Delaware	Under the Universal Recycling Law, whether delivered via curbside service or using a drop-off service, 100% of Delaware residents have access to both waste and recycling services.		
South Carolina	We report on population.		
Ohio	There is not any tracking of # with access to waste services.		
Tennessee	We ask for households serviced by program (county or municipality). Some calculation or interpretation may occur as access data needs are derived on an as needed basis.		
North Carolina	We collect data on the # of households in the jurisdiction and the # of HH served by recycling programs.		
California	CA collects information on recycling and disposal services by jurisdiction through the Electronic Annual Report (EAR) and the Local Government Information Center (LoGIC). While we do not track population data directly, we can associate these programs with census or other population data by jurisdiction.		
Kentucky	We count number of households, not number of citizens.		
Connecticut	We do not directly collect this data, but by law, CT residents are supposed to have parallel collection of trash & recyclables (e.g., if a municipality provides curbside collection of trash for its residents, it should also provide curbside collection of recyclables).		
Chuuk, Federated States of Micronesia	Number of households involved in collection services.		
Pennsylvania	Recycling services yes. Those with waste service but not recycling services do not have to report.		

Mississippi	We develop data but we do not "collect" the data. Meaning we know who offers recycling in the state and we measure the access that the citizens have in that program area and record this access ourselves. We do not collect this data from other sources.	
<b>District of Columbia</b>	For DPW Residential Only with 3 or less units.	
Michigan	We are using a benchmark recycling standard to define access	
Nebraska	lebraska NDEE does not collect this data.	

# Q.7. Does your state collect data on the inbound contamination rates of community recycling programs?





Response rate: 100%

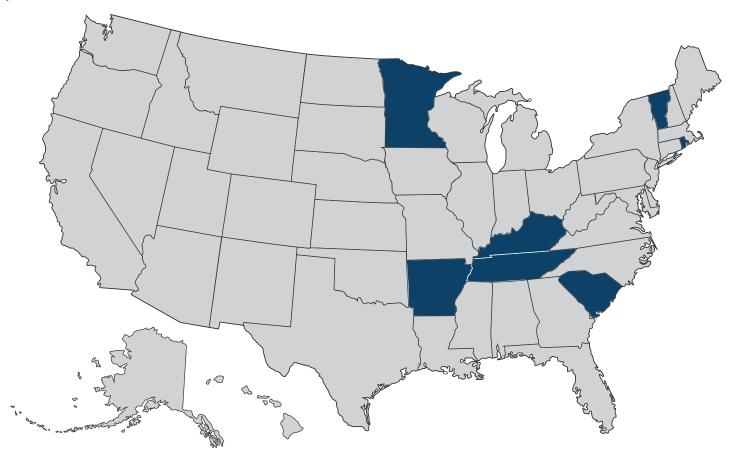
Yes: 15% No: 85%

American Samoa	No	Marshall Islands	No
District of Columbia	No	Puerto Rico	No
Federated States of Micronesia – Chuuk	No	Republic of Palau	No
Federated States of Micronesia – Yap	No	Virgin Islands (US)	No
Guam	No		

Maine	Some individual facilities do track contamination as they are attempting to create marketable product.
Nevada	I can get the data from the haulers, but we don't collect the data ourselves.
Washington	We have collected this data from some jurisdictions that have
	done sampling studies, and we use it for estimating statewide contamination rates. We released an RFP to do a statewide study that will sample at MRFs around the state and estimate regional and statewide contamination rates.
Georgia	There is some information to support this in the MMP based on voluntary submitted data from enrolled members. We do not have a state-wide picture.
Minnesota	We collect contamination rates for commingled recyclables that are reported by permitted solid waste facilities and that is required as part of the annual report.
Delaware	DSWA has recently implemented a new inspection procedure that is focused on inbound contamination. Prior to this process it was not tracked. MRFs were required to report outthrow percentages and stay within 15% annually. We anticipate that starting in July 2022 and beyond, we'll have good inbound contamination numbers to report.
Ohio	We have some data on contamination rates, but it is not part of reporting requirements.
Rhode Island	Rhode Island Resource Recovery, RI's quasi-public agency collects this information.
Tennessee	We previously captured this information anecdotally when we solicited certain process and collection grants but did not capture data for long term use only grant rating.
North Carolina	We ask community recycling programs to report this information, but many do not know this. To assist in estimating contamination rates statewide, we survey MRFs in our state for their average facility's contamination rate.
Texas	Texas does not collect annual data on recycling. However, the 2019 Recycling Market Development Plan Study reported a 22.4 percent contamination rate for single stream MRFs. See <a href="www.TXRecyclingStudy.org">www.TXRecyclingStudy.org</a> for more information.
New York	NYS recyclables handling and recovery facilities report the amount of residue after recyclable material has been processed.
California	CalRecycle does not have authority to track this.
Connecticut	Our recycling facilities report to DEEP the amount of residuals collected at their facilities.

Mississippi	Only what Re-Trac connect survey provides.	
Michigan	Individually, not comprehensively.	
Nebraska NDEE does not collect this data.		

# Q.8. Does your state collect data on the capture rates of community recycling programs?





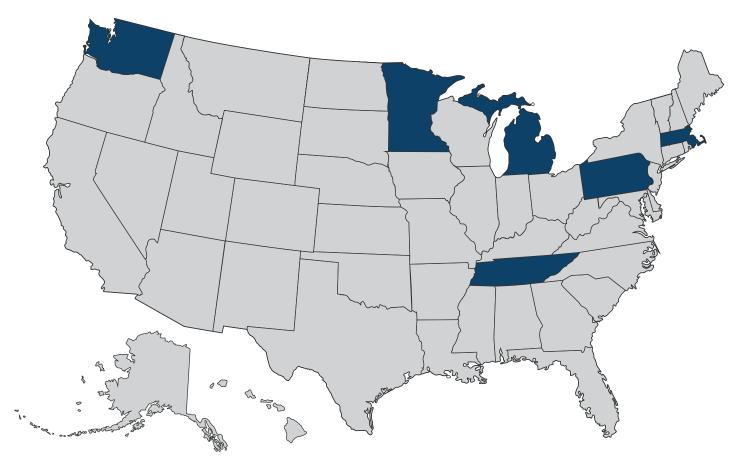
Response rate: 100%

Yes: 15% No: 85%

American Samoa	No	Marshall Islands	No
District of Columbia	Yes	Puerto Rico	No
Federated States of Micronesia – Chuuk	No	Republic of Palau	No
Federated States of Micronesia – Yap	No	Virgin Islands (US)	No
Guam	Yes		

Arizona	Some municipalities will provide diversion rates which they have chosen the method to calculate.	
Georgia	There is some information to support this in the MMP based on voluntary submitted data from enrolled members. We do not have a state-wide picture.	
Minnesota	We calculate capture rates using the data reported to us by our county partners using our 2013 MSW Statewide Waste Composition study but we do not actively request capture rates from our community recycling programs.	
Oregon	We have data for tonnage recycled by county, but we only have waste disposal composition data for a few of the larger jurisdictions - Portland Metro area, Lane County, Marion County.	
Vermont	During our recurring five year waste composition study, capture rate is assessed.	
Maryland	Recycling rates are reported by county. all programs operated by counties.	
Delaware	We do not get data from the haulers that outlines the participation rate by customers. Even though they are required to provide 100% of customers with access to recycling, we do not know what percentage actively participates.	
Ohio	Not included in our required reporting.	
Rhode Island	Unclear what capture rates refer to Rhode Island Resource Recovery, RI's quasi-public agency collects this information.	
Tennessee	We captured this information anecdotally previously when we solicited grants but did not capture data for long term use.	
Kentucky	We collect data on tonnage disposed and tonnage recycled and calculate recycling rate from that.	
Arkansas	We require RSWMDs to complete annual recycling surveys.	
Connecticut	We do not collect this data from municipalities due to inconsistencies in calculating capture rates.	
Montana	Only collect numbers from licensed facilities.	
Mississippi	This again is subject to what the MMP program in Re-Trac Connect collects.	
Missouri	Only if solid waste district grant funds are used.	
District of Columbia	DPW service areas only during a pilot program.	
Nebraska	NDEE does not collect this data.	

### Q.9. Does your state collect data on the types of single use plastics currently in commerce?





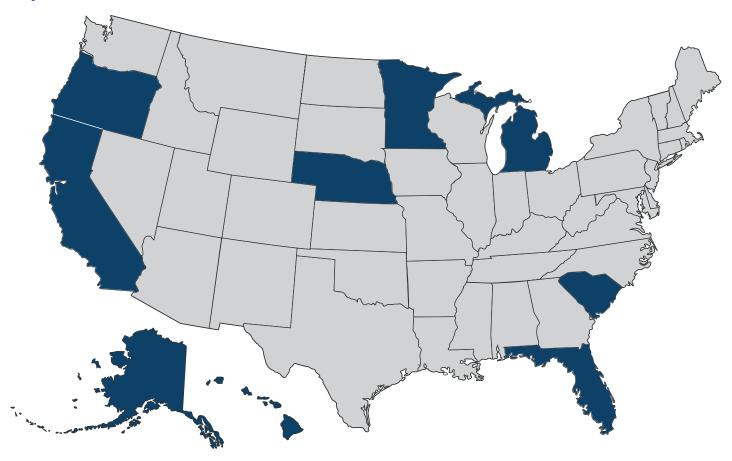
Response rate: 100%

Yes: 12% No: 88%

American Samoa	No	Marshall Islands	No
District of Columbia	No	Puerto Rico	No
Federated States of Micronesia – Chuuk	Yes	Republic of Palau	No
Federated States of Micronesia – Yap	No	Virgin Islands (US)	No
Guam	No		

Marshall Islands	Single use plastics were banned in 2018.
Minnesota	As part of the required annual report for facilities that manage recyclable materials, they are required to provide the type and weight of materials handled at the facility; and the distribution of materials by weight, i.e., what weight of recyclable material received went to an end market, a broker/processor, or was managed as mixed municipal solid waste.
Oregon	We will likely be getting these data later, as we implement Oregon's Recycling Modernization Act (SB 582 - 2021).
Vermont	Vermont does have a single-use products law banning plastic bags at retail check-out, straws, stirrers and expanded polystyrene.
Delaware	We do not collect this kind of data currently.
Tennessee	Yes, we collect both broadly (at the convenience center location level with yes/no question) and detailed by program, and quantitatively within our County Recycling Reports (CRR) by program reporting. These materials are not split out specifically.
California	Pending passage of new legislation, this may be tracked in CA in the future.
Massachusetts	MassDEP hosts a "Recyclopedia" in an attempt to educate residents on what to do with certain materials - putting it together required a great deal of research on what is out there.
Connecticut	We do not collect specific data regarding the types of single use plastics in commerce in the state but do collect information as available on such plastics.
Chuuk, Federated States of Micronesia	Recently enacted "clean environment act" banning single-use plastics and others.
Michigan	Limited.
Nebraska	NDEE does not collect this data.

# Q.10. Does your state collect data on the rates at which single use plastics are recycled?





Response rate: 100%

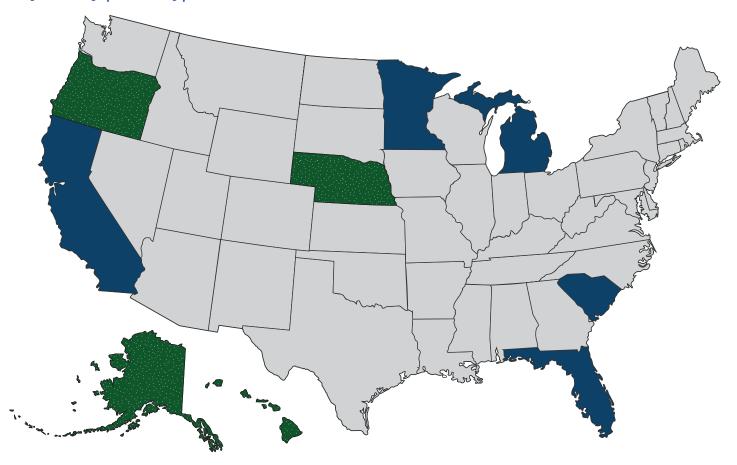
Yes: 20% No: 80%

American Samoa	No	Marshall Islands	No
District of Columbia	No	Puerto Rico	Yes
Federated States of Micronesia – Chuuk	No	Republic of Palau	No
Federated States of Micronesia – Yap	Yes	Virgin Islands (US)	No
Guam	Yas		

To an extent, we have generated, recycled, combusted and landfilled data
on plastics bottles (1's & 2's) and all other plastics not included in plastic bottles. We only count municipal solid waste.
Yes, however for only two specific single use plastics categories ie PET beverage container and PET cooking oil containers which are included in the State Recycling Program.
Specifically as it relates to single-use plastic beverage containers (i.e., bottled water), not for other types of single-use plastics.
Past voluntary survey separated total tonnages of materials into categories including plastics into PET, HDPE, or mixed plastics.
We calculate the rates at which these types of plastics are recycled, however the data does not specify single use: PET, HDPE, LDPE, and All Plastics.
There is some data in the MMP based on the accepted plastic materials per community, but again this is limited to the enrolled members that voluntarily submit this data. We do not have a statewide picture.
We calculate capture rates using the data reported to us by our county partners using our 2013 MSW Statewide Waste Composition study but we do not actively request recycling rates from our permittees or local partners.
We collect annual data on recycling tons for 3 classes of plastic: rigid plastic containers (almost all single-use), other rigid plastic (other packaging and product, some of which might be more durable), and film plastic. We collect disposal data on many subcategories of the above, but only every 6 years. We are about to launch a statewide recycling and disposal composition study that will give us much more data, especially on the make-up of those 3 groups of plastic.
We do estimate the recycling rates of plastic containers based upon national averages.
As part of our Annual Recycling Reporting we pull out the following plastics categories: Plastic Film/Wrap, Retail Bags, Plastic Containers and Polystyrene Packaging. Unfortunately in all cases except Retail Bags, this is a mix of various resins and/or objects that are in each of these categories.
We collect data on the types of plastics (#1-#7).
Tonnage amounts of "plastics" as shipped from the MRFshed are tracked (supply side). The reporting does not cover manufacturers/end users that use recyclables as a feedstock for production of basic products such as plastic processors for flake and pellet resins.

Ohio	But we do get some data from big box stores.
North Carolina	We don't have data on all single-use plastics recycling in the state. We do have data on single-use plastic drink and other bottles recycled by communities.
California	CA estimates recycling percentage for single-use plastic beverage bottles in the Beverage Container Recycling Program (BCRP).
Arkansas	There is no distinction between the types of plastics collected and/or recycled.
Pennsylvania	We don't collect or utilize any types of recycling rates.
Michigan	Limited.
Nebraska	NDEE does not collect this data.

Q.11. Does your state collect data on the rates at which single use plastics are recycled by plastic type?





Of the 12 states and territories that indicated they collect relevant data for single-use plastics recycling rate,

Yes: 50% (N=6) No: 50% (N=6)

American Samoa N/A Marshall Islands N/A

District of Columbia N/A Puerto Rico Yes

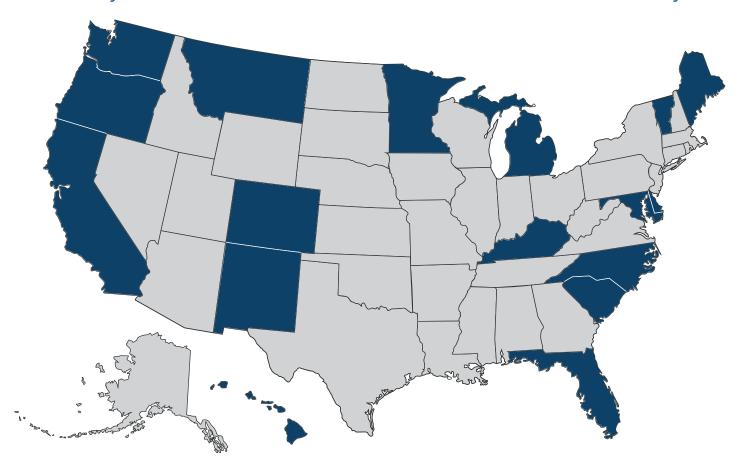
Federated States of Micronesia – Chuuk N/A Republic of Palau N/A

Federated States of Micronesia – Yap No Virgin Islands (US) N/A

Guam No

Florida	To an extent, we have generated, recycled, combusted and landfilled data on plastics bottles (1's & 2's) and all other plastics not included in plastic bottles. We only count municipal solid waste.
Hawaii	Deposit beverage containers made of plastic #1 (PET) or plastic #2 (HDPE) are eligible for redemption recycling in the State, however the plastic container redemption rate is not broken out by plastic type.
Minnesota	Recycling in Minnesota   Minnesota Pollution Control Agency (state.mn.us)
Oregon	Except when we occasionally do a recycling composition study, we do not know the resin make-up of the 3 groups of plastics mentioned earlier.
California	CA estimates recycling percentage for single-use plastic beverage bottles in the Beverage Container Recycling Program (BCRP). These are tracked individually for plastic resin #1-#7.
Michigan	Somewhat.
Nebraska	NDEE does not collect this data.

#### Q.12. Does your state collect data on the rates at which aluminum cans are recycled?





Response rate: 100%

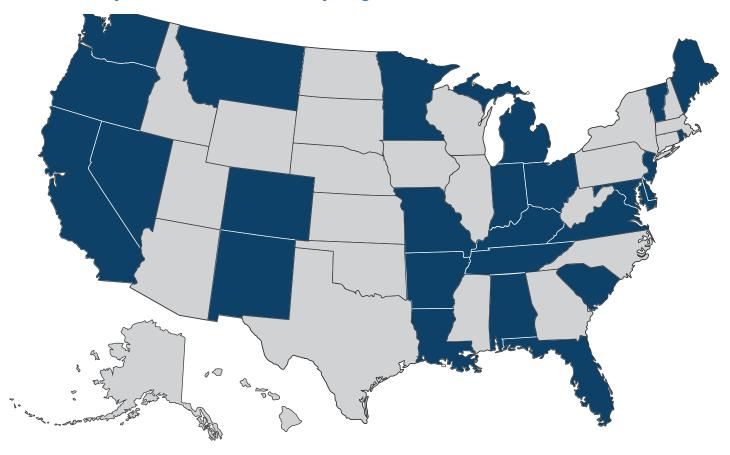
Yes: 39% No: 61%

American Samoa	Yes	Marshall Islands	Yes
District of Columbia	No	Puerto Rico	Yes
Federated States of Micronesia – Chuuk	Yes	Republic of Palau	Yes
Federated States of Micronesia – Yap	Yes	Virgin Islands (US)	No
Guam	No		

Yap, Federated States of Micronesia	Yes, for aluminum beverage containers/cans as one of the categories under the State Recycling Program.
South Dakota	Past voluntary survey separated total tonnages of materials into categories including aluminum cans.
Washington	The aluminum can recycling rate will include a small amount of aluminum foil.
Georgia	See answer for plastic recycling.
Minnesota	We calculate capture rates using the data reported to us by our county partners using our 2013 MSW Statewide Waste Composition study but we do not actively request recycling rates from our permittees or local partners.
Oregon	Comprehensive data for containers recycled through the bottle bill, but for containers recycled through curbside recycling, we do not break out aluminum cans from other types of aluminum.
Vermont	Our material recovery facilities report on the tonnage and end management of all materials, including aluminum. Aluminum cans collected through our bottle bill program has historically been estimated, though some data is increasingly becoming available.
Maryland	We collect recyclables of aluminum. We estimate based upon national generation averages.
Alabama	Aluminum is tracked in Alabama as a single material inclusive of aluminum cans. This data is not easily separated.
Delaware	We do collect Aluminum Cans as a separate annual reporting data point annually.
Indiana	Same as previous question.
Ohio	We receive residential/commercial aluminum tonnages, not specifically cans.
Rhode Island	We can determine the tonnage of recycled cans, but can't calculate how many cans are bought in RI - we would have to rely on national data.
Tennessee	We collect some aggregated data on materials reported and could likely extrapolate some data.
North Carolina	Again, we don't have overall statewide recycling rates for aluminum cans (or any commodity) but we do have recovery data estimated by material type from community recycling programs.
New York	Limited data is available for material that is captured under the NYS returnable container act.

California	CA tracks recycling rates for aluminum cans in the Biannual Report of Beverage Container Sales, Returns, Redemption, and Recycling Rates.	
Kentucky	We collect data on tonnage recycled, but not tonnage generated.	
Arkansas	There is no distinction between the types of metals collected.	
Connecticut	We do have aluminum come through the state's deposit program but that program does not track collection by material; we also receive tonnage data from recycling facilities for aluminum but do not collect data on recycling rates.	
Chuuk, Federated States of Micronesia	Data is collected to assist us in re-establishing a recycling program in the State of Chuuk.	
Pennsylvania	We don't collect or utilize any types of recycling rates.	
Michigan	Estimated.	
Nebraska	NDEE does not collect this data.	
Puerto Rico	2018- 4127.71 tons.	

#### Q.13a. Does your state measure a recycling rate at the state-level?





Response rate: 100%

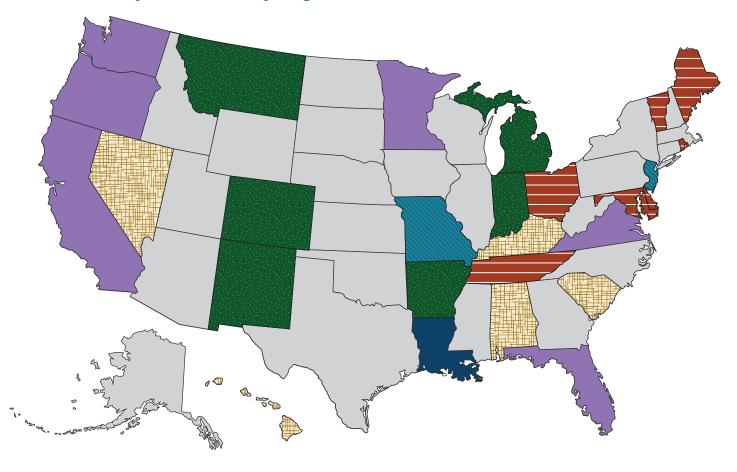
Yes: 51% No: 49%

American Samoa	No	Marshall Islands	No
District of Columbia	No	Puerto Rico	Yes
Federated States of Micronesia – Chuuk	No	Republic of Palau	No
Federated States of Micronesia – Yap	Yes	Virgin Islands (US)	No
Guam	Yes		

Marshall Islands	These data are mostly collected in the capital city of Majuro.
Yap, Federated States of Micronesia	Yes, for the four specific recyclable material categories covered under the State Recycling Program, recyclable rates for these are periodically measured with assistance from Govt of Japan J-PRISM waste management project.
Nevada	We calculate the recycling rate by county and state.
South Dakota	As stated previously, South Dakota has performed a voluntary survey in the past to determine this rate although it is not performed at an annual basis or regular basis. Last survey was in 2011.
Washington	The rate we measure is a "recovery rate", which includes recycling and other beneficially used materials, for example materials anaerobically digested and burned for energy. Up until 2016, we had been measuring an MSW recycling rate, however our methods changed with the 2017 data to focus more on waste generation and recovery.
Georgia	We do not have a statewide picture of recycling.
Minnesota	Minn. S. 115A.551 lays out the materials included and the goals set for our counties to achieve by 2030.
Oregon	We call it a "recovery rate" as it includes limited materials burned for energy recovery.
Vermont	We annually compile a diversion rates, which includes components of our recycling, organics management and waste disposal systems. The recurring five year waste composition work also estimates a recycling recovery rate.
Alabama	Alabama currently measures a Solid Waste Reduction Rate. State of Alabama code established a reduction goal or 25%.
Delaware	We measure recycling at the State level.
South Carolina	Calculated for each county and state-wide.
Indiana	Indiana has a 50% recycling goal for municipal waste and requires mandatory reporting of solid waste and recycling data to track progress. Tonnages for MSW generation are reported through the Re-TRAC, IDEM Solid Waste and Recycling Data Reporting Program. For more information, see the IDEM 2020 Recycling Index Report (https://www.in.gov/idem/recycle).
Ohio	However, Ohio measures diversion rates which include yard waste and reduction activities.
Rhode Island	Rhode Island Resource Recovery, RI's quasi-public agency collects this information.

collect aluminum beverage container recycling data. Capture rates uld have to be derived from characterization study calculations.
cas does not collect annual data on recycling. However, the 2019 cycling Market Development Plan Study reported a 27.5 percent ycling rate. See www.TXRecyclingStudy.org for more information.
have moved towards using a disposal rate metric (lbs of MSW posed/person/day).
tracks the recycling rate annually in the State of Recycling Report. The est report year is 2020.
ssDEP did years ago. We are now focused on overall waste reduction, ile some sectors (for instance, food waste) are asked to report diversion.
nnecticut is trying to move away from using recycling rates and insteading per capita numbers for waste disposal to measure diversion. In the st we have measured recycling rates.
use a diversion rate.
don't collect or utilize any types of recycling rates.
are unable to measure the recycling rate because our current collection data is incomplete due to the voluntary nature of collection.
are working on revising our diversion rate calculator.
torically, yes, but due to several years of staff shortages, we are still rking to compile state-wide recycling rates from 2018 to present.
e District of Columbia can estimate a Citywide Waste Diversion.
EE does not collect this data.

#### Q.13b. What is your state's recycling rate?





Of the 30 states and territories that indicated they measure a recycling rate,

Minimum: 9%

Maximum: 56%

Mean: 32%

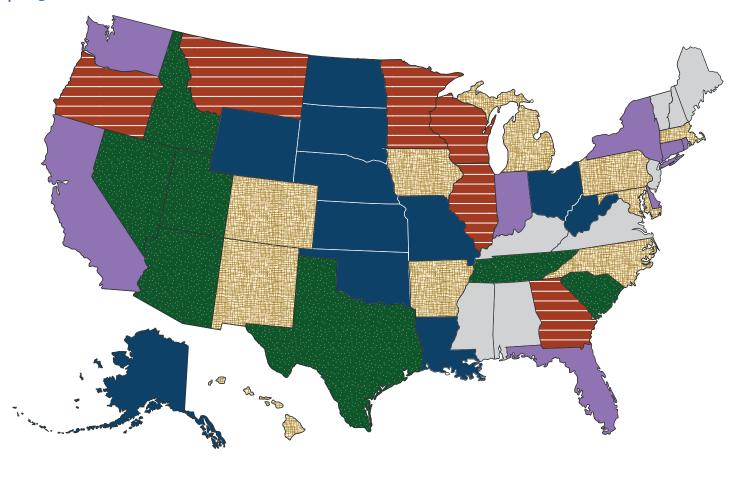
American Samoa	N/A	Marshall Islands	N/A
District of Columbia	N/A	Puerto Rico	15%
Federated States of Micronesia – Chuu	k N/A	Republic of Palau	N/A
Federated States of Micronesia – Yap	No response	Virgin Islands (US)	N/A
Guam	25%		

Florida	Total MSW tons recycled/Total MSW tons collected. Note that Florida counts renewable energy as recycling; however, the recycling rate without renewable energy for 2020 is 42%.
Yap, Federal States of Micronesia	Redemption rates are calculated per recyclable category.
Maine	(Percentage is average 2018 & 2019). We collect data from a variety of sources (landfills, waste-to-energy facilities, recycling establishments, processing facilities, composting facilities, both in & out of state) then use that data to calculate estimated recycling rate. Our statutory diversion goal is based on recycling and composting 50% of our MSW.
Hawaii	Waste generation amounts (in tons) is reported to the State by the four counties. Permitted solid waste management facilities provide data to the State to quantify diversion and disposal tonnage and an overall diversion rate. Incineration tonnage is reported to the State by the City and County of Honolulu, which operates the State's only waste-to-energy plant. If incineration is included in recycling rate calculations, the percentage increases to 53%.
Nevada	We collect diversion data by County where the waste material originated from those that collect and/or process recyclable material by material type. The data is then cross checked to make sure it isn't double counted. Then we calculate the rate by dividing diverted material by the total waste generated.
Louisiana	We collect surveys from municipalities that have recycling programs and average the gathered info for the state %
Washington	The recovery rate calculation includes materials collected for recycling and other forms of recovery in the nominator, and the recoverable portion of solid wastes generated, including municipal solid waste and other waste types disposed in the denominator. Excludes materials collected for reuse.
Minnesota	The recycling rate is the percent by weight of total solid waste generation of material collected for recycling. Please see Minn. S. 115A.551 for more details.
Virginia	Link to calculation; Recycling Reports   Virginia DEQ
Oregon	Above number is for 2020 and is recovery rather than recycling. We do an annual material recovery survey of all recyclers in the state (including private recyclers) and collect data quarterly from Oregon landfills on disposal

Vermont	The diversion rate is calculated primarily through certified solid waste facility reporting on end management and tonnage. Additional components outside of this facility reporting are estimated (e.g. economic recycling) based on Vermont studies, updated at varying frequencies. The methodology is described in our annual Diversion and Disposal report.
Maryland	We estimate an epa recycling rate of 33%.
Alabama	Recycled tons/(recycled tons+landfilled tons) x 100.
Delaware	We use the EPA's MSW Recycling Rate Methodology for calculating our recycling rate.
South Carolina	Amount reported recycled divided by the amount calculated generated multiplied by 100.
Indiana	The recycling rate is calculated by dividing the tons of recyclable materials by the tons of MSW generation. It uses standardized material streams and definitions for MSW and recycling such as set up by U.S. EPA. Materials not part of the MSW definition are not counted in the recycling rate measurement. They include concrete, asphalt, metals from C&D debris, autobodies, coal ash, foundry sand, and alternate daily cover (ADC).
Ohio	Residential/commercial - 28.94%. Industrial - 51.78%.
Rhode Island	Estimated diversion rates for municipal, institutional/commercial/industrial, C&D and total solid waste generated in RI in 2016. Calculated by (diverted materials / diverted materials + SW disposal).
Tennessee	We collect significant amounts of data from our solid waste regions and can calculate across four sectors Public, institutional, commercial, or/and industrial in any and all combinations. However, our primary measure is diversion where recycling is just a subset which can be calculated = Recycle Data/Total Generated or for part of whole recycling= Sector data/Total Recycling Fraction.
Colorado	MSW diversion (compost, recycling, beneficial use)/MSW Diversion +MSW Disposal.
Guam	Total recycling/total recycling +disposal x100.
California	To calculate the statewide recycling rate to track progress towards the 75 percent recycling rate goal as defined by AB 341 (Chesbro), CalRecycle subtracts the amount of material disposed in landfills and six disposal-related activities from estimated total generation. According to CalRecycle calculations and comparison with reported disposal, the department estimates that 32.5 million tons of material were recycled (through source reduction, recycling, and composting) in 2020. California's statewide recycling rate was 42 percent (see Figure 8 in the 2020 State of Recycling Report).

Kentucky	Counties report total recycling and total waste disposal annually.
Arkansas	Total tonnage recycled divided by total tonnage disposed multiplied by 100.
Montana	We use the EPA calculator
Missouri	We are working on revising our diversion rate calculator. At this time we have an outdated calculation.
New Jersey	We use recycling data collected annually from every Municipality and compare it to the SW tonnage we receive monthly from SW facilities.
Michigan	EPA standard method.
Puerto Rico	We consider census, recovered material, disposal and generation. All components are sent in quarterly reports (private industry, comercial and municipalities. This number is directly for 2018.

# Q.14. Percentage of all communities that have access to curbside recycling programs.



0-19% 20-39% 40-59% 60-79% 80-100% No response

Response rate: 88%

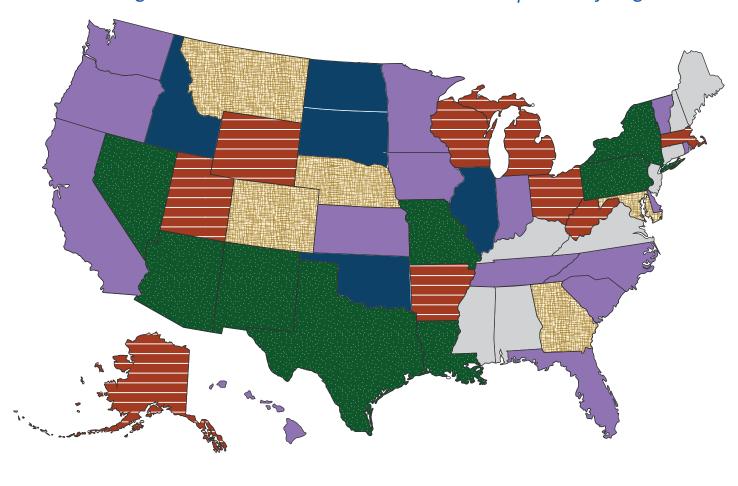
Minimum: 0%

Maximum: 100%

Mean: 44%

American Samoa	0%	Marshall Islands	50%
District of Columbia	100%	Puerto Rico	18%
Federated States of Micronesia – Chuuk	0%	Republic of Palau	0%
Federated States of Micronesia – Yap	0%	Virgin Islands (US)	0%
Guam	45%		

#### Q.15. Percentage of all communities that have access to drop-off recycling.



Response rate: 87%

Minimum: 0%

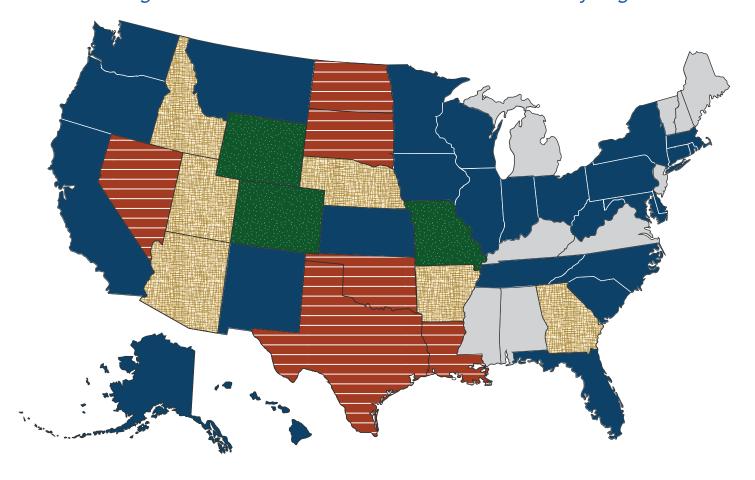
Maximum: 100%

Mean: 62%

American Samoa	0%	Marshall Islands	50%
District of Columbia	100%	Puerto Rico	66%
Federated States of Micronesia – Chuuk	0%	Republic of Palau	75%
Federated States of Micronesia – Yap	64%	Virgin Islands (US)	1%
Guam	100%		

0-19% 20-39% 40-59% 60-79% 80-100% No response

#### Q.16. Percentage of all communities that do not have access to recycling services.



0-19% 20-39% 40-59% 60-80% No response

Response rate: 83%

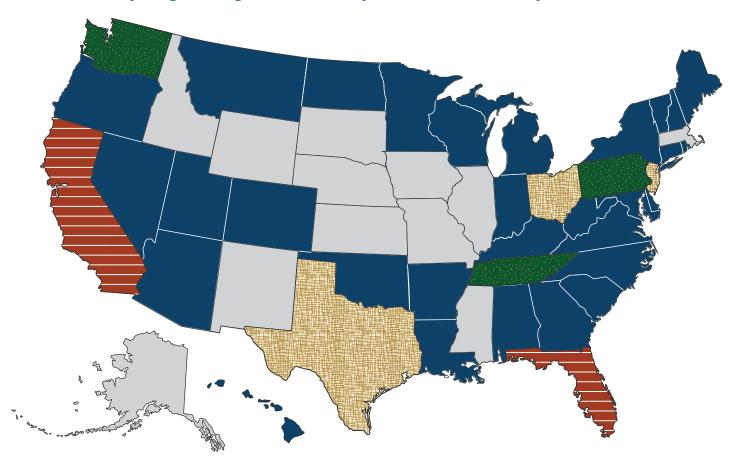
Minimum: 0%

Maximum: 100%

Mean: 28%

American Samoa	100%	Marshall Islands	No response
District of Columbia	0%	Puerto Rico	15%
Federated States of Micronesia – Chuuk	100%	Republic of Palau	25%
Federated States of Micronesia – Yap	36%	Virgin Islands (US)	99%
Guam	0%		

#### Q.17. Total recycling tonnage collected in your state or territory.





Response rate: 80%

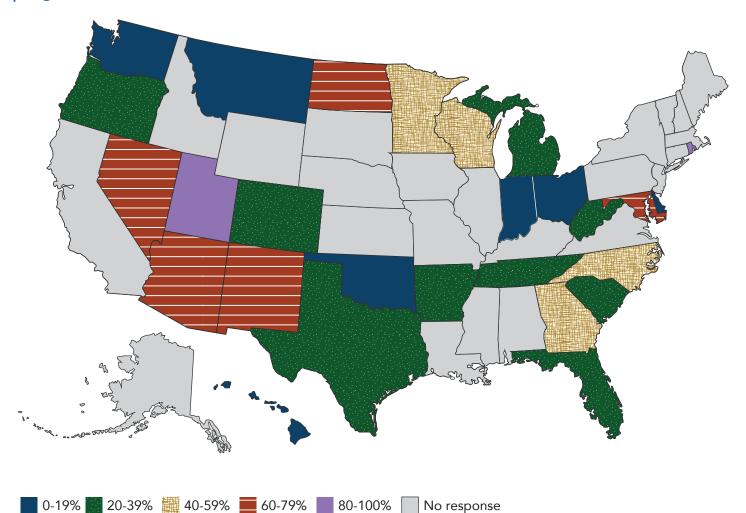
Minimum: 5 tons

Maximum: 19.6 million tons

Mean: 2.8 million tons

American Samoa	5 tons	Marshall Islands	26 tons
District of Columbia	35,697 tons	Puerto Rico	515,604 tons
Federated States of Micronesia -	- Chuuk 8 tons	Republic of Palau	60 tons
Federated States of Micronesia -	- Yap 28 tons	Virgin Islands (US)	18 tons
Guam	32,000 tons		

### Q.18. Percentage of total recycling tonnage that is collected through curbside programs.



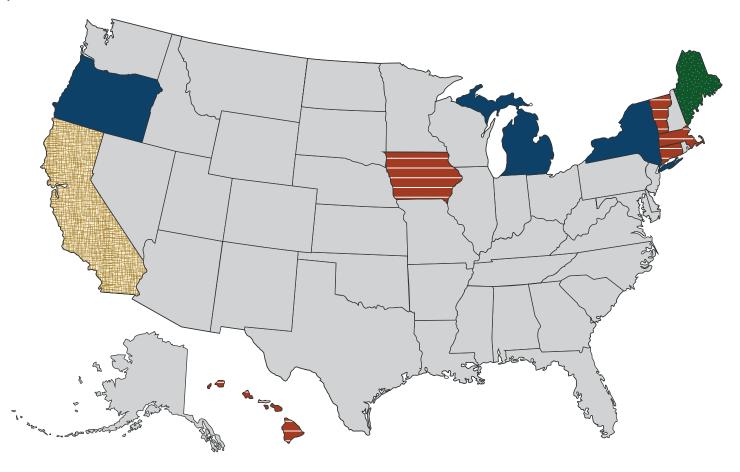
Response rate: 59%

Minimum: 0% Maximum: 90%

Mean: 34%

American Samoa	0%	Marshall Islands	20%
District of Columbia	74%	Puerto Rico	No response
Federated States of Micronesia – Chuuk	20%	Republic of Palau	0%
Federated States of Micronesia – Yap	0%	Virgin Islands (US)	0%
Guam	5%		

# Q.19. Percentage of total recycling tonnage that is collected through deposit programs.





Of the 12 states and territories that indicated they have a deposit program, Response Rate: 58% (N =7)

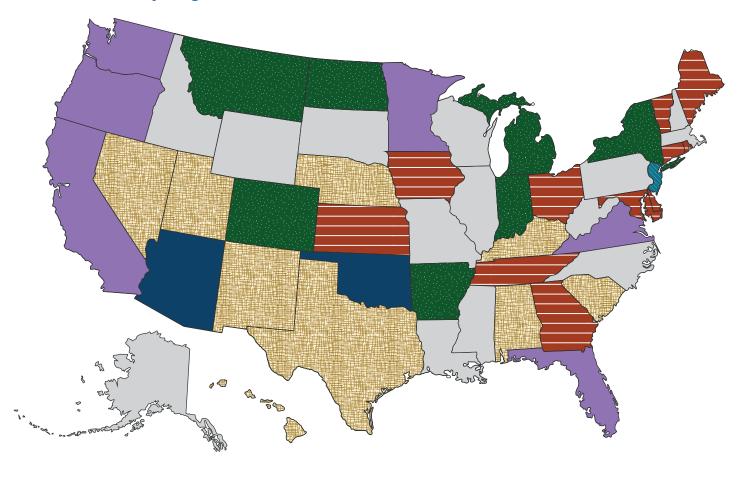
Minimum: 5%

Maximum: 85%

Mean: 41%

American Samoa	N/A	Marshall Islands	64%
District of Columbia	N/A	Puerto Rico	N/A
Federated States of Micronesia – Chuuk	N/A	Republic of Palau	N/A
Federated States of Micronesia – Yap	28%	Virgin Islands (US)	N/A
Guam	N/A		

### Q.20. Overall recycling rate.



0-9% 10-19% 20-29% 30-39% 40-49% 50-60% No response

Response rate: 75%

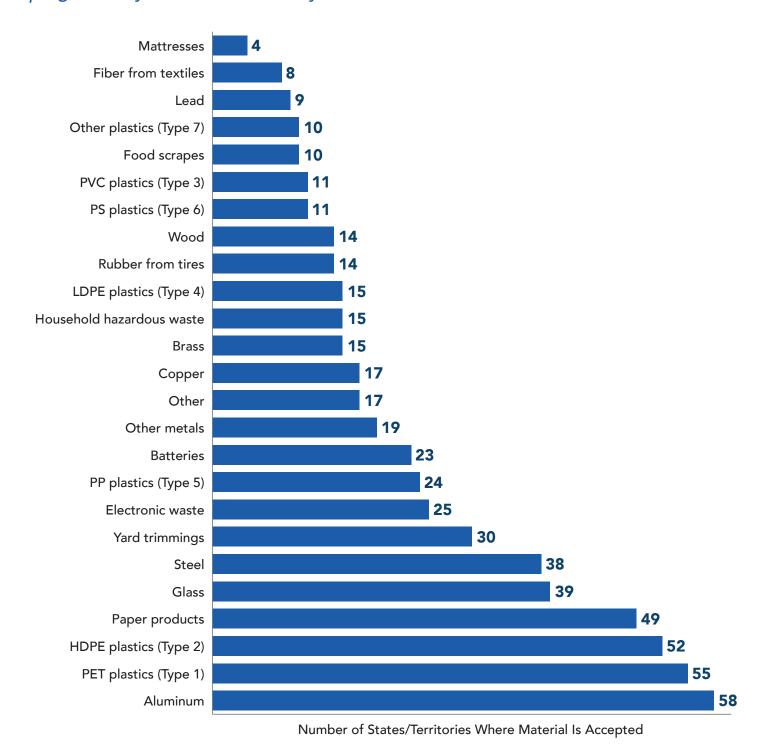
Minimum: 1%

Maximum: 80%

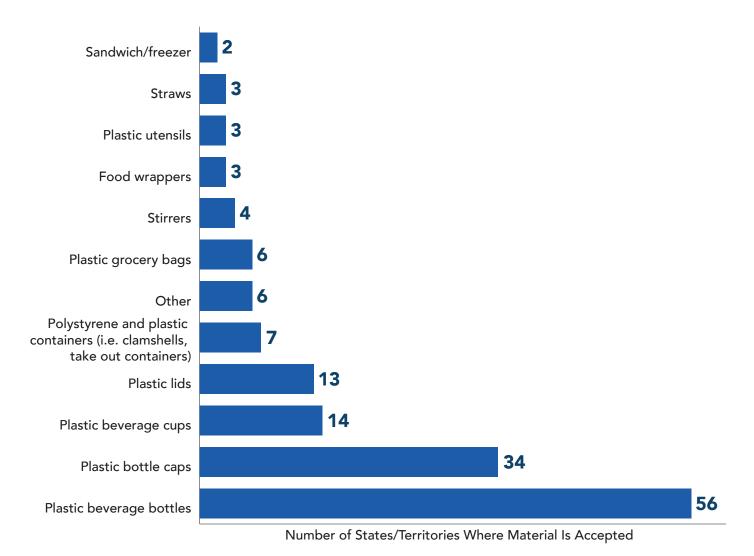
Mean: 29%

American Samoa	5%	Marshall Islands	30%
District of Columbia	16%	Puerto Rico	15%
Federated States of Micronesia – Chuu	k 20%	Republic of Palau	80%
Federated States of Micronesia – Yap	No response	Virgin Islands (US)	1%
Guam	25%		

### Q.21. Which of the following materials are accepted by the majority of recycling programs in your state or territory?



### Q.22. Which of the following types of single-use plastics are accepted by the majority of recycling programs in your state or territory?









#### Welcome to the EPA Office of Resource Conservation and Recovery Survey

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Start





Select your state or territory:		
Alabama		\$
Respondent Contact Information:		
Name		
First Name	Last Name	
Email		
Phone		
2	Save and Resume Later	
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	Progress	

recycling progra	ether your state or territory collects data on different aspects of ms and activities. Additional space is provided below each related comments you might have.
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	Progress

Does your state or territory coll recycling programs in the state (	ect data on the number of community <u>curbside</u> or territory?
Yes	<b>‡</b>
Comments:	
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Ooes your state or territory collect data on the number of community <u>drop-off</u> ecycling programs in the state or territory?	
Yes	<b>\$</b>
Comments:	
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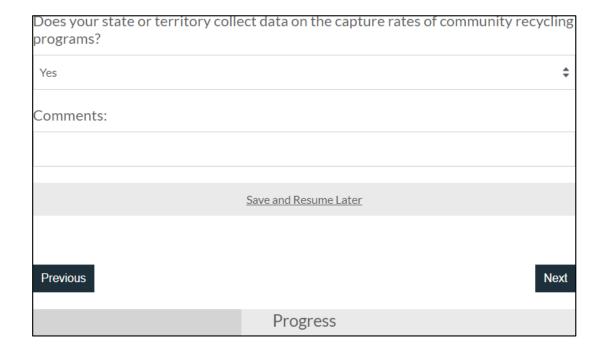
	itory has deposit programs, do you collect data on the total ial packaging materials collected through those programs?	
Yes, we have deposit pr	ograms and we collect those data	\$
Comments:		
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	erritory collect data on the total amount of residential materials Irbside programs annually?
Yes	<b>\$</b>
Comments:	
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Does your state or ter recycling program in tl	ritory collect data on the types of materials accepted by ene state or territory?	each
Yes		<b>\$</b>
Comments:		
	Cours and Decourse Labor	
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	ry collect data on the number of citizens with access to vith access to waste disposal?	
Yes		<b>\$</b>
Comments:		
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Does your state or territory community recycling program	collect data on the inbound contamination rates of ms?	
Yes		\$
Comments:		
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Does your state or territory colle in commerce in the state or territ	ect data on the types of single use plastics currentl tory?	У
Yes		<b>\$</b>
Comments:		
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oes your state or territory collect data on the rates at which single use plastics a cycled in the state or territory?	are
'es	\$
omments:	
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Does your state or territory colle recycled in the state or territory	ect data on the rates at which single use plastics are by plastic type?
Yes	<b>\$</b>
Comments:	
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	Progress

Does your state or territory co recycled in the state or territor	llect data on the rates at which aluminum cans are y?	
Yes		\$
Comments:		
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	Progress	

Does your state or territory measure a recycling rate at the state or territory-level?	,
Yes	\$
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State or territory-level recycling rate:	
%	
Briefly, how is the state or territory-level recycling rate calculated?	
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Progress	

Next, we ask for yo section	ur best estimates of several of the items described in the firs	st
	Save and Resume Later	
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	Progress	

lease provide your best estimate of the percentage of all communities in rterritory that have access to <u>curbside</u> recycling programs:	n your state
%	
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Please provide your best estimate of the percentage of all communities in your state or territory that have access to <u>drop-off</u> recycling:		
%		
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Please provide your best estimate of the percentage of all communities in your state or territory that <u>do not have access</u> to recycling services:		
%		
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	Progress	

Please provide your best estimate of the total recycling tonnage colle state or territory:	ected in your
Tons	
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Progress	

Please provide your best estimate of the percentage of total recycling tonnage that is collected through curbside recycling programs:		
%		
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Progress		

Please provide your best estimate of the percentage of total recycling tonnage that is collected through your state's or territory's deposit program:		
%		
	Save and Resume Later	
	Save and Resume Later	
Previous		Next
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Please provide your best estima territory:	ate of the overall recycling rate in your state or	
%		
	Save and Resume Later	
Previous		Next
	Progress	

To the best of your knowledge, which majority of recycling programs in your	of the following materials <u>are</u> accepted by the r state or territory?
PET plastics (Type 1) HDPE plastics (Ty	rpe 2) PVC plastics (Type 3)
☐ LDPE plastics (Type 4) ☐ PP plastics (Type	e 5) PS plastics (Type 6)
Other plastics (Type 7) Aluminum	Brass Copper Lead Steel
Other metals Glass Electronic w	aste Paper products Batteries
Food scraps Yard trimmings Hou	sehold hazardous waste  Fiber from textiles
Rubber from tires Wood Mattre	sses
Other:	
(Select all that apply)	
Save a	and Resume Later
Previous	Next
	Progress
To the best of your knowledge, which	n of the following types of single-use plastics <b>are</b>
accepted by the majority of recycling	
Plastic beverage bottles Plastic bottle	e caps Food wrappers Plastic grocery bags
Plastic lids Plastic beverage cups	Straws Stirrers Plastic utensils
Polystyrene and plastic containers (i.e. clams	shells, take out containers) Sandwich/freezer bags
None	
Other:	
(Select all that apply)	
Save	e and Resume Later
Previous	Submit Form
	Progress
	11021033