Iowa Recycling Facility Study

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SCS ENGINEERS

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SUMMARY DATA SHEET

This section visually summarizes the findings of the Iowa Recycling Facility Study.

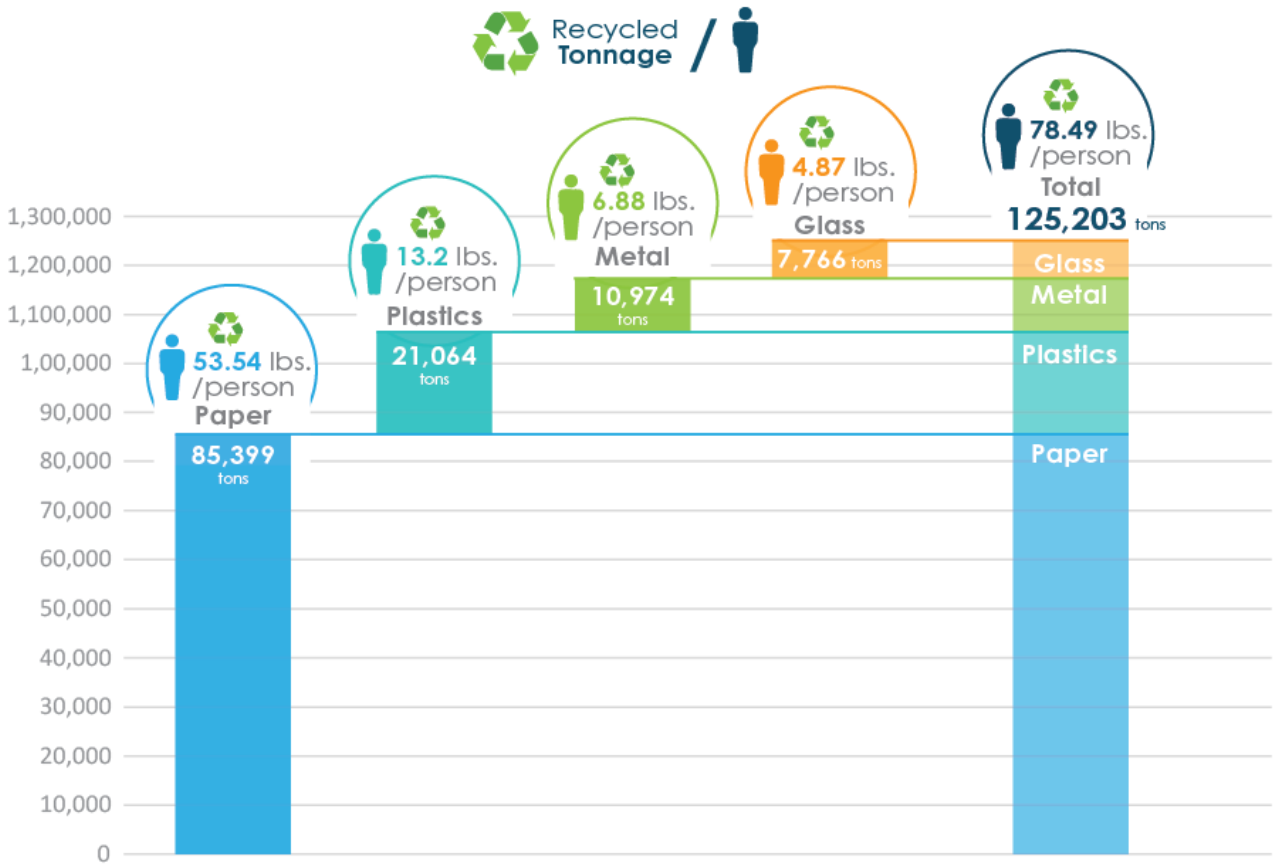
The full report containing the executive summary, background, methodology, and results can be seen following this section.

ANALYSIS

The analysis shows estimates of recycled tons per person, emissions reductions, commodity revenue, and job retention/creation based on responses received from the 2023 Recycling Facility Survey.

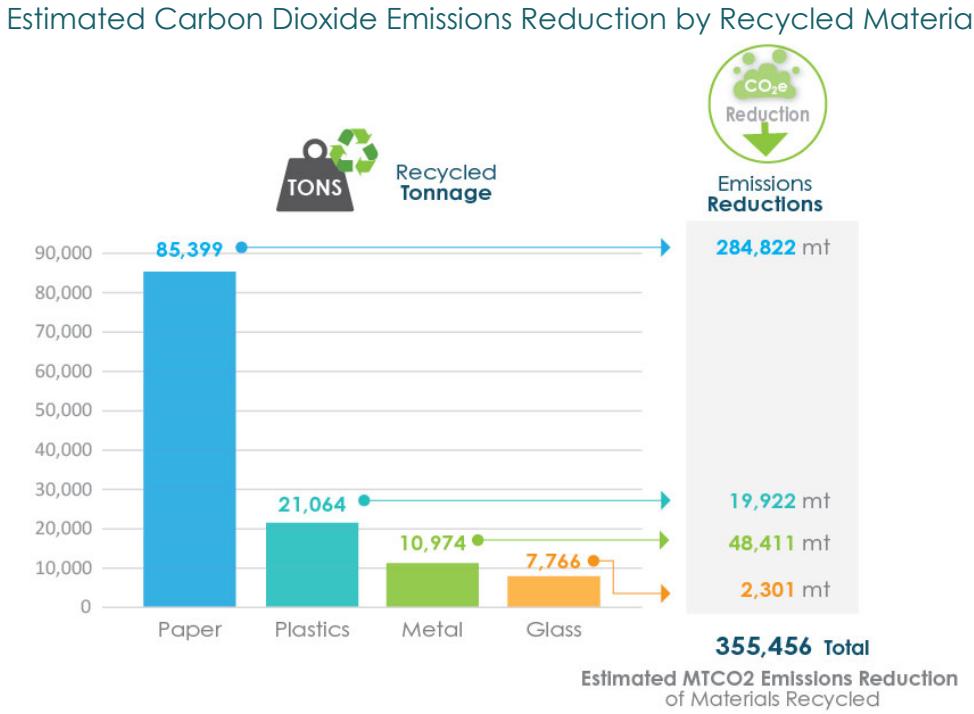
The graphic below displays the pounds of recyclables by material category that are estimated to be recycled per Iowan within a year.

Recycled Tonnage per Iowan per Year

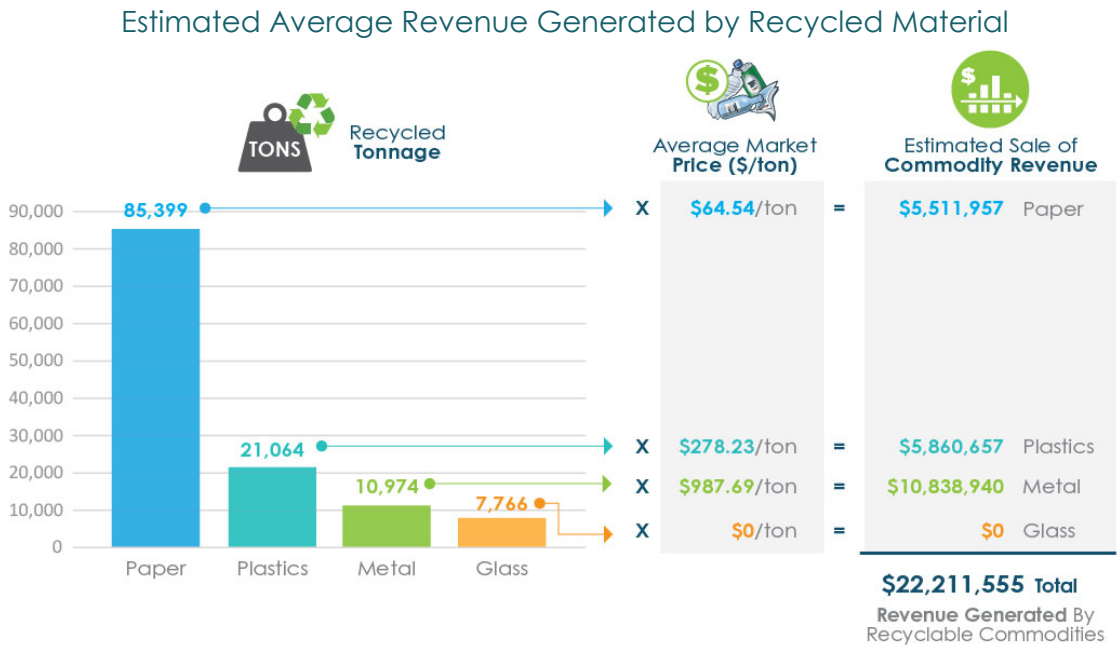


ANALYSIS

The graphic below displays the estimated reductions of carbon dioxide equivalent emissions by material category based on reported recycling tons.



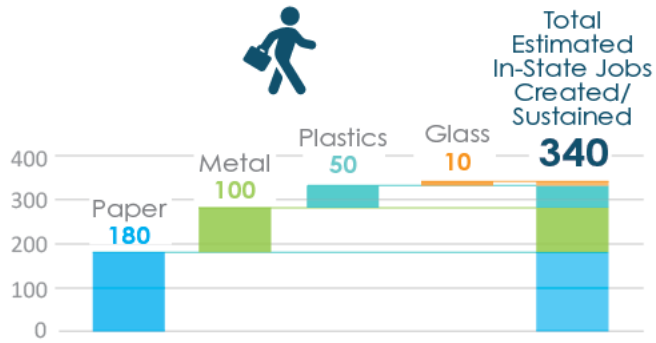
The graphic below displays the five-year average market price per ton of material and calculates the estimated sale of commodity revenues by material category.



ANALYSIS

The graphic below shows the number of jobs by material category that may be created or retained through recycling in-state.

In-State Job Creation and/or Retention Through Recycling

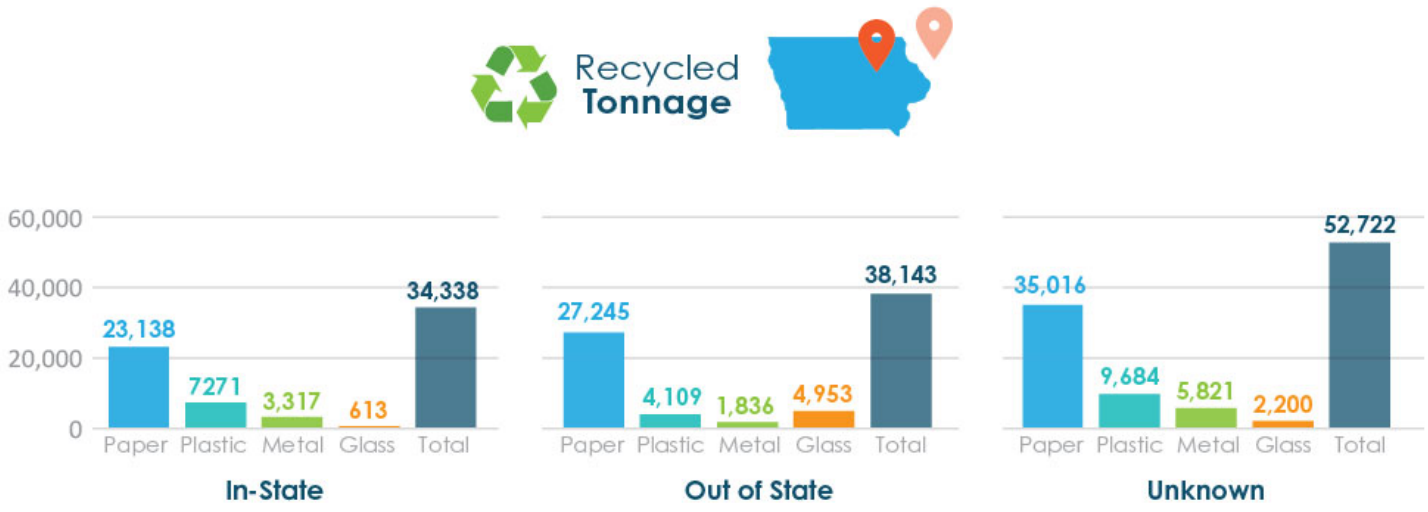


SURVEY SUMMARY

The survey summary depicts a general overview of the survey responses received through the Recycling Facility Survey.

Below displays the number of tons by material category that is recycled and processed in-state, out of state, and at an unknown location.

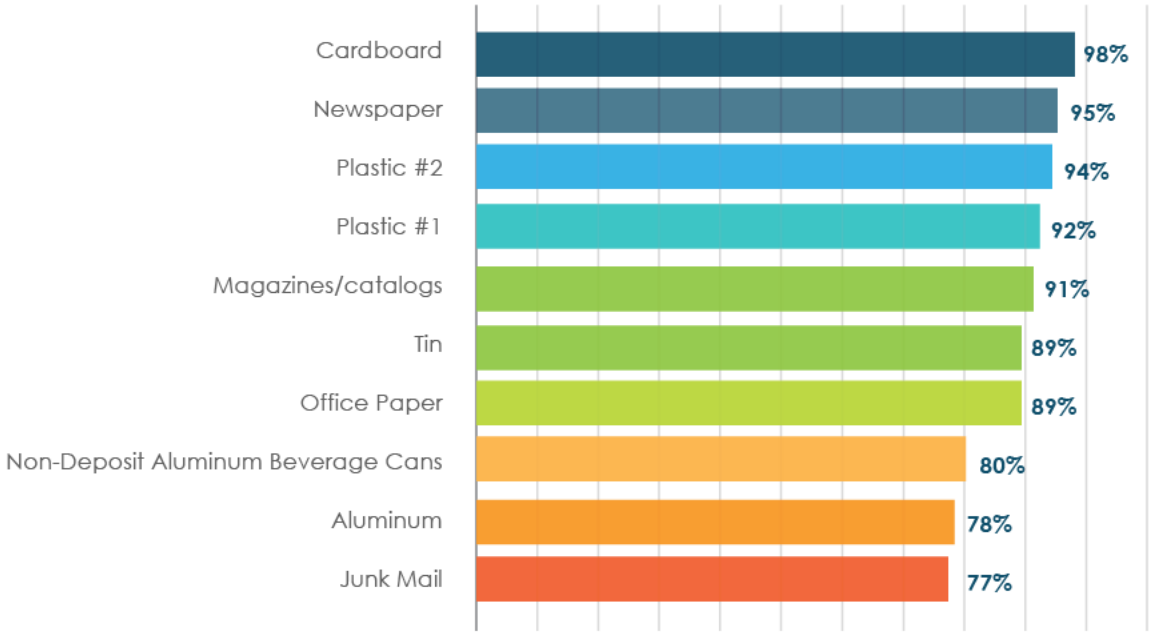
Recycled Tons Processed In-State, Out of State, and Unknown Location



SURVEY SUMMARY

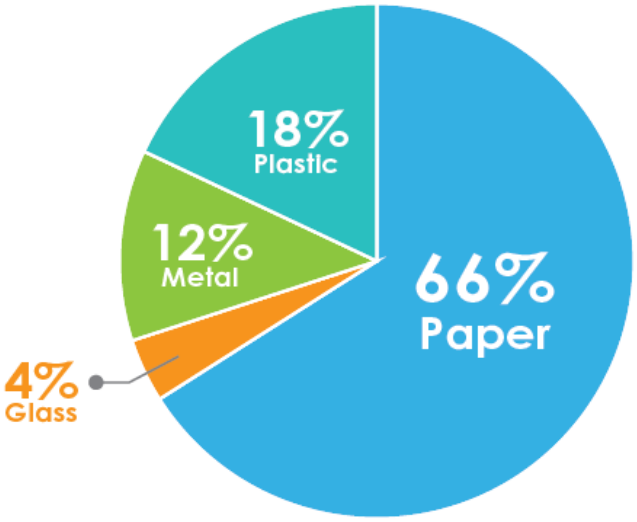
The information displayed below shows the top 10 most accepted materials of accumulators and/or processors of recycling materials.

Top 10 Most Accepted Materials at Recycling Facilities in Iowa



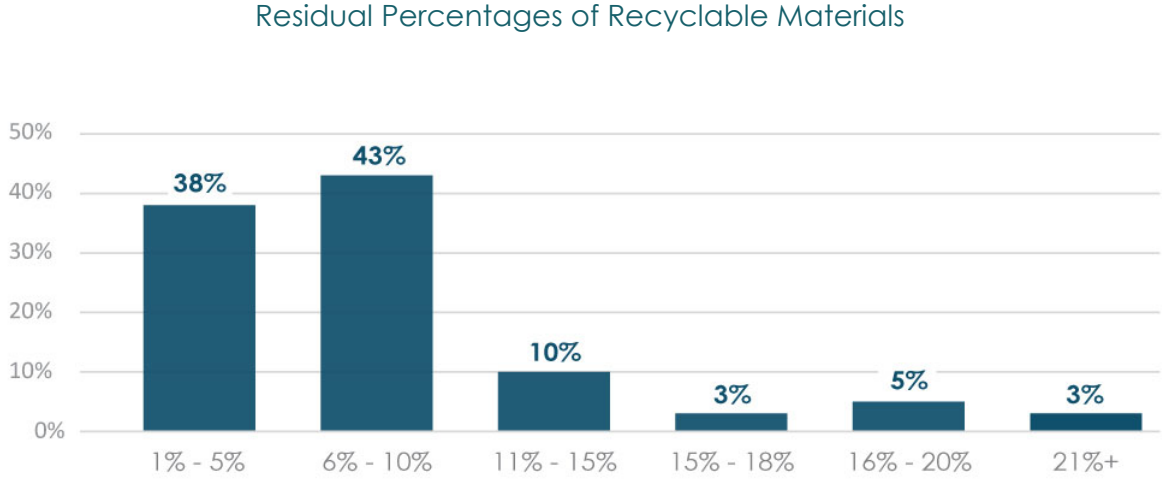
This graphic displays the average percentage of recycling materials accepted at accumulator and/or processing facilities in Iowa.

Average Composition of Recycling Materials at Accumulating and/or Processing Facilities



SURVEY SUMMARY

The residual percentages reported by accumulators and/or processing facilities can be seen below. The percentage of survey respondents selecting a particular range is also displayed.



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ACKNOWLEDGEMENTS

The SCS Engineers (SCS) project team and the Iowa Department of Natural Resources (DNR) staff would like to thank the resource and integrated solid waste management professionals which assisted with the development of the surveys used to obtain data for this Iowa Recycling Facility Study. Their input informed and improved the manner and methods for which important recycling program data was requested. The SCS project team would also like to thank the recycling facility and program managers which were able to complete and submit survey responses.

1.0 EXECUTIVE SUMMARY

The State of Iowa (State) does not permit or license Iowa recycling facilities that manage and/or process traditional recyclable materials (i.e., paper, plastics, metal, and glass) and these facilities are not required to provide operational data (i.e., tons, materials accepted, etc.). Unlike other states, Iowa does not have a formal system for facilities to voluntarily report this information. States that do have either voluntary or required reporting systems are able to track this information on a regular basis and consistently capture data to evaluate recycling trends. The State is investigating the possibility of establishing a data reporting system that helps to consistently track important operational data.

Recycling Facility operational data informs resource management professionals on the current and potential future capabilities and challenges of recycling programs at the local and statewide level. Operational data also can be used to help increase recycling participation, decrease contamination rates, and help make recycling more accessible in Iowa.

The DNR contracted with SCS Engineers (SCS) in 2023 to conduct an Iowa Recycling Facility Study (Study). This Study was to provide an update to select data previously collected as part of the 2017 Rural Iowa Hub and Spoke Recycling Project.

The focus of this Study was to document tons of traditional recyclables managed in Iowa and the flow of these materials throughout the state. This Study continued the DNR's pursuit of a Sustainable Materials Management (SMM) approach of solid waste materials to learn more about Iowa's recycling infrastructure which manages traditional recyclable materials and to better understand programs available to divert textiles from disposal.

As a part of the Study, SCS performed the following tasks:

- Collect data from accumulators and processors of traditional recyclable materials.
- Research textile reuse and recycling within the State and country.
- Create a GIS database for the DNR to utilize for an interactive map displaying the types, quantities, and movement of traditional recyclable materials in Iowa.

To collect data from accumulators and processors of traditional recyclable materials, SCS sent out two surveys – the Planning Area Member Survey (with an audience of solid waste planning agencies) and the Recycling Facility Survey (with an audience of facilities that may manage traditional recyclables). The survey response rate for the Planning Area Member Survey was 48 percent, whereas the response rate for the Recycling Facility Survey was 73 percent.

Survey respondents were asked to identify the facilities they send traditionally recyclable materials (i.e., paper, plastic, metal, and glass) to by material category. The conclusion of the surveys is displayed in Table 1 (next page), documenting 125,203 tons of recyclable materials processed from Iowa. The rows show if the material is being processed in-state, out of state, or is processed at an unknown location. An unknown location identifies recyclable materials of which the destination was not revealed for various reasons including a lack of knowledge (i.e., an accumulator may work with a broker and the destination is unknown) or the information was considered proprietary by the survey respondent. The unknown location is the largest outlet for processing recyclables. The largest commodity that is processed for recycling is paper materials. Glass is the commodity with the largest portion leaving the state to be processed for recycling.

Table 1. Recyclable Tons Processed

	Plastic	Paper	Metal	Glass	Total
In-State	7,271	23,138	3,317	613	34,338
Out of State	4,109	27,245	1,836	4,953	38,143
Unknown	9,684	35,016	5,821	2,200	52,722
Total	**21,064**	**85,399**	**10,974**	**7,766**	**125,203**

The number of tons of recycling documented as being processed in 2023 is 125,203 tons after receiving information from 77 Recycling Facility Survey participants. In 2017, 45 participants responded and documented 55,863 total tons of processed recycling. It is important to note that for both years, this information was identified through the Recycling Facility Survey, and there is likely more tons being processed that were not identified by the survey. Additionally, the 2023 reported total tons processed has residual tonnage materials (i.e., materials received for processing but are contaminated or prohibited) removed, only accounting for actual processed traditional recyclable materials.

2.0 INTRODUCTION AND BACKGROUND

This report provides the methods used to collect information from traditional recycling accumulators and processors, as well as the results of this Study.

The report is organized in the following sections:

- Background
- Methodology
- Survey Results and Analysis
- Conclusions
- Appendices

2.1 BACKGROUND

The DNR is making a shift from traditional integrated waste management system to a sustainable materials management (SMM) approach. In 2016, the DNR contracted with SCS to conduct the 2017 Iowa Statewide Waste Characterization Study. This study found that nearly 70 percent of materials in the waste stream were either recyclable, compostable, or potentially recoverable through additional programs.

Shortly after this, the DNR contracted with SCS in 2017 to perform the Rural Iowa Hub and Spoke Recycling Project to identify existing recycling operations within rural Iowa and assess the feasibility of creating rural partnerships with a hub and spoke type of system. The study found more than sufficient recycling infrastructure in the state.

These two studies provided background knowledge on waste and recycling generation within the state and informed the 2018 Phase I Sustainable Materials Management Vision for Iowa. The goal of this project was to gather additional feedback on the status of waste management in Iowa and vision

cast a future system. This project found stakeholder interest and support for the transition to an SMM approach for waste management.

In 2020, the DNR contracted with SCS to begin a Phase II SMM Vision for Iowa to work with stakeholders to identify potential strategies for Iowa to achieve an SMM approach to waste and resource management. This project heavily relied on stakeholder input and subcommittee meetings to develop short, medium, and long-term steps to accomplishing an SMM system. Plastics was one of the identified priority material categories for reduction and diversion goals and a Plastics Subcommittee was formed of industry leaders to help evaluate and identify potential implementation strategies. One of the Plastics Subcommittee's selections was a short-term (0-3 years) implementation strategy which was to update the 2017 Iowa DNR Hub and Spoke Study to confirm current recyclers and update operational data previously obtained.

3.0 METHODOLOGY

This section discusses the methodology of the development and implementation of the Planning Area Member Survey and the Recycling Facility Survey.

3.1 SURVEY AND AUDIENCE DEVELOPMENT

The Study began with collaborating with the DNR staff to obtain information on existing recycling activities through Iowa's 44 Solid Waste Planning Areas and utilizing the contacts identified through the 2017 study. The DNR selected which materials to obtain operational information, defining them as traditional recyclable materials. Deposit and non-deposit materials are separated in the material list to identify facilities that accept deposit bottles and cans. This information may inform the DNR of deposit materials not being redeemed, or rather facilities that may be separating out these materials to use as additional revenue streams. If this information is regularly updated, there is an ability to show trends either decreasing or increasing deposit materials found in recyclables. These materials and textile materials (Table 2) were the basis for the survey development. SCS also worked with the DNR staff to develop a draft Recycling Facility Survey that mirrored elements of the 2017 survey, while focusing on accomplishing the targeted objectives of this Study.

Once a draft of the Planning Area Member Survey and Recycling Facility Survey was formed, SCS engaged with three publicly owned and three privately owned facilities as stakeholders to provide feedback on the questions and format for the Recycling Facility Survey. The stakeholders aided in reducing the number of questions in the survey to avoid survey fatigue, develop the survey such that facilities would find the survey productive and reasonable, and confirm there was not additional questions or materials to add to the surveys.

Table 2. Targeted Materials

Material Category	Material Types	Material Category	Material Types
Plastic	Plastic #1	Paper	Newspaper
	Plastic #2		Cardboard
	Plastic #3		Boxboard
	Plastic #4		Magazines/catalogs
	Plastic #5		Office paper
	Plastic #6 (non-foam)		Junk mail
	Plastic #6 (expanded polystyrene foam)		Colored paper
	Plastic #7		Kraft paper/kraft paper bags
	Plastic bags/plastic film		Aseptic containers
	Deposit plastic beverage containers		Gable top containers
Metal	Deposit aluminum beverage cans	Glass	Deposit glass beverage containers
	Non-deposit aluminum beverage cans		Non-deposit glass beverage containers
	Aluminum		Glass jars
	Tin	Textiles	Carpet
	Steel		Clothes
	Metal hangers		Upholstery
			Fabrics
			Blankets

3.1.1 Planning Area Member Survey

The Planning Area Member Survey was developed to be a short survey to identify any recycling facilities and infrastructure within a Solid Waste Planning Area and to help promote and establish support for the Recycling Facility Survey from industry leaders. A Solid Waste Planning Area consists of cities and counties that form a coalition to plan for and help manage waste and recyclables within their area. Surveys were sent to the main contacts of these planning areas.

Survey recipients were asked to list contact information of facilities or entities within their Solid Waste Planning Area that manages traditional recyclable materials. The results of this survey helped identify previously unknown recycling facilities which should receive a Recycling Facility Survey. SCS contacted these identified recycling facilities to participate in the survey.

3.1.2 Recycling Facility Survey

The Recycling Facility Survey was constructed to obtain operational information of recycling facilities in Iowa. Initial questions asked the respondent to select the type of facility and/or entity which describes their operations. Many facilities identify with more than one type listed; therefore, respondents were able to select multiple options. The facility/entity selection classifications are listed in Table 3.

Table 3. Facility/Entity Classifications

Landfill	Beverage Redemption Center
Transfer Station	Distributor
Citizens Convenience Center	Retailer
Recycling Collection Center	Drop-Off Location
Materials Recovery Facility	Charity
Recyclable Material Re-Manufacturer	Broker
Other (please specify)	

This initial question, along with the question of what facilities are doing with recyclable materials helped inform if facilities were accumulators or processors.

Accumulators are defined as facilities who receive traditional recyclable material from consumers and/or haulers and store the materials for transport to a processor. These facilities may process one or two materials (i.e., cardboard) as a source of revenue, although the majority of materials received are sent to a facility for processing. Recycling transfer stations or drop-off recycling locations are examples of an accumulator.

Processors are defined as facilities who receive traditional recyclable material from accumulators, consumers and/or haulers, and sort, bale, clean, and prepare materials for remanufacturing. Examples of processors include material recovery facilities or remanufacturers. In some cases, a respondent was classified as both accumulator and processor, which would later be identified on the recycling infrastructure map.

The rest of the Recycling Facility Survey questions were tailored to understand the type and quantities of traditional recyclable materials that are managed within the state and where materials are being sent to be processed or remanufactured. Below is a summary list of information the Recycling Facility Survey sought to obtain from respondents:

3.2 AQUIRING DATA

The contacts that received the Planning Area Member Survey and/or the Recycling Facility Survey were identified in multiple ways. The contacts receiving the Planning Area Member Survey were determined by collecting the Solid Waste Planning Area contacts provided by the DNR. Those that received the Recycling Facility Survey were identified through the 2017 Hub and Spoke, provided by the DNR, were identified through the Planning Area Member Survey results, and through completed Recycling Facility Surveys which identified new facilities. In some instances, contacts received both the Planning Area Member Survey and the Recycling Facility Survey.

Once the list of contacts was determined, SCS utilized SurveyMonkey to email the surveys. SCS staff provided several reminders to survey recipients, called facilities to encourage participation, and in some cases, visited in-person with facility representatives on-site or at industry events.

During this time, other methods of promoting the survey were utilized to provide multiple opportunities for entities to be made aware of and to complete the survey. The DNR, Iowa Recycling Association (IRA), and Iowa Society of Solid Waste Operations (ISOSWO) provided email notifications or newsletters promoting the survey and encouraging participation. Additionally, the DNR and SCS promoted the surveys at the Iowa Recycling & Solid Waste Management Conference of 2023.

Table 4 displays the number of facilities contacted, attempts to notify the participant of the survey, and participation rate for each survey.

Table 4. Data Contact and Response Rate

Activities	Planning Area Member Survey	Recycling Facility Survey
Number of Facilities Contacted	58	105
Emails	142	589
Phone Calls	0	78
In-Person Visits	0	12
Response Rate	48%	73%

4.0 SURVEY RESULTS AND ANALYSIS

This section discusses the survey results from the Planning Area Member Survey and Recycling Facility Survey.

4.1 PLANNING AREA MEMBER SURVEY

The goal of the Planning Area Member Survey was to engage with industry leaders and ask their support for the survey efforts and to help identify facilities that accept or process recyclable within their Solid Waste Planning Area. The results of this survey helped identify additional facilitates to contact for participation in the Recycling Facility Survey. In addition to the additional facilities, multiple clothing donation and beverage redemption facilities were also disclosed.

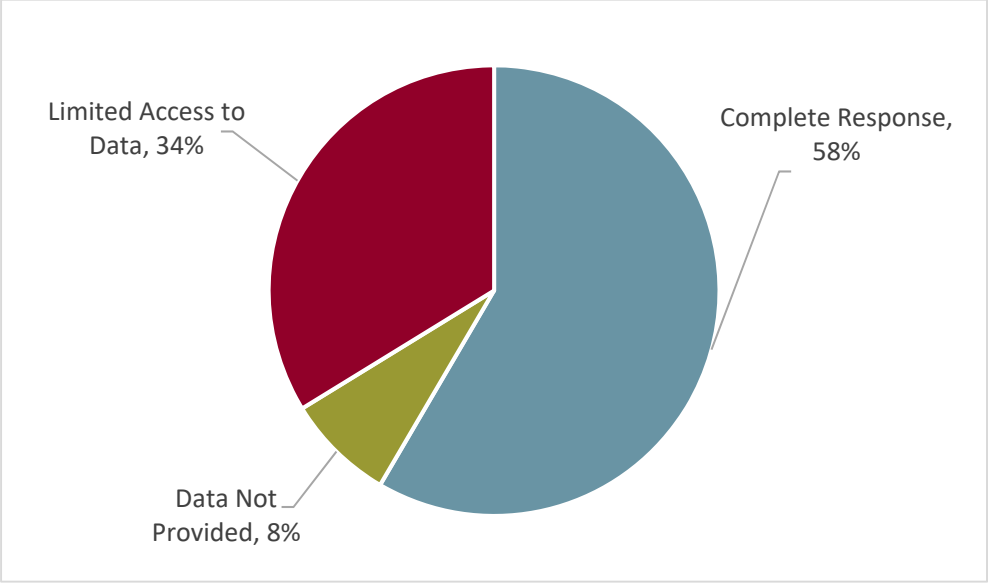
As indicated in the Methodology section above, many facilities received both the Planning Area Member Survey and the Recycling Facility Survey. Sending the Planning Area Member Survey first allowed respondents to have background knowledge of the project, and in turn helped to strengthen the validity of the Recycling Facility Survey.

4.2 RECYCLING FACILITY SURVEY

Each facility was unique in their type of responses, access to their operational information, and their ability to provide this information. SCS received 77 responses and classified them into the categories listed below. The percentage breakout is shown in Exhibit 1.

- Complete Response – All information is provided.
- Limited Access to Data – Known and tracked information provided, but the facility does not have access to or track various data points.
- Data Not Provided – Facility did not complete the survey or provide all available information.

Exhibit 1. Type of Survey Responses

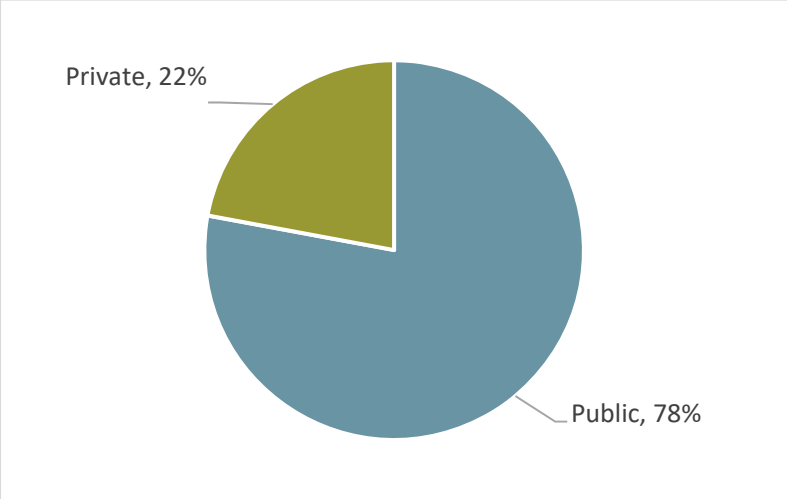


The following sections of the results will indicate the number of responses to the question, as there were limitations on data or non-responses. Full facility responses can be seen in Appendix A.

4.2.1 General Information

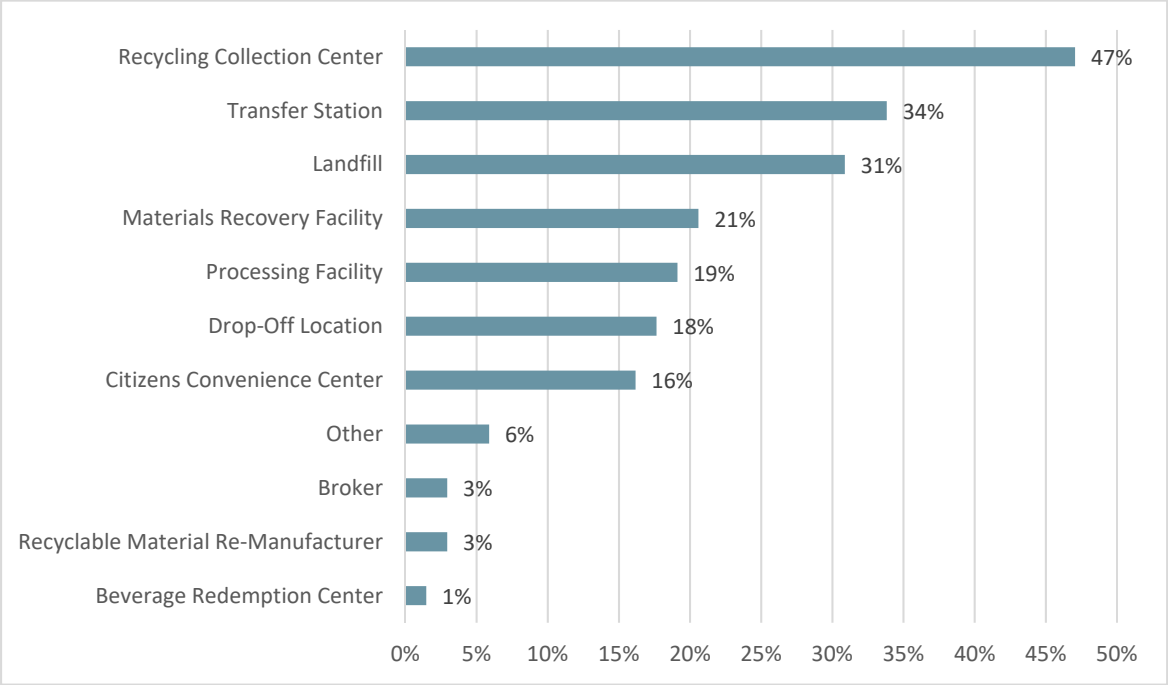
The purpose of the first question was to gather general information of the respondent. Respondents were asked to select if they are a public or private entity. Of the 77 respondents, 22 percent were private, and 78 percent were public entities.

Exhibit 2. Private and Public



As indicated in the Methodology section, the survey asked respondents to select which facility type(s) represent their operations. In Iowa, many facilities perform multiple activities such as household hazardous waste collection, waste disposal, recycling, etc. Based on the feedback received from the stakeholders during the survey development, SCS provided the opportunity for facilities to select multiple facility types. Additionally, respondents were able to write in a text box to indicate their facility type if it was not a selection option. Received responses are displayed in Exhibit 3 on the next page.

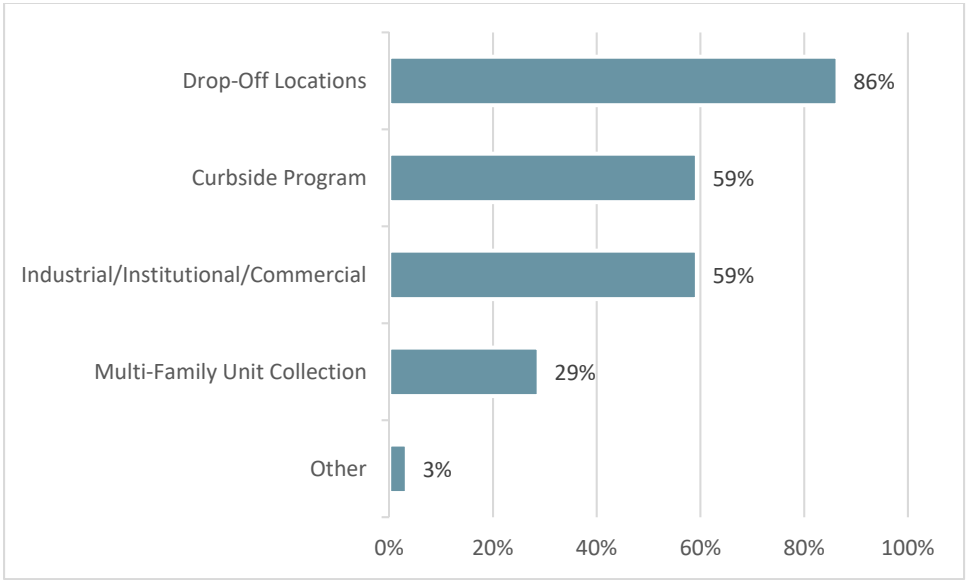
Exhibit 3. Facility Type



Of the 77 survey responses, 68 respondents selected facility types. The most common answer was Recycling Collection Center at 47 percent. The 6 percent of respondents that entered another answer indicated types such as hauling service or household hazardous waste facility.

Exhibit 4 below displays the percentage of respondents that accept traditional recyclable material through the listed collection programs. Many facilities accept traditional recyclable materials from a variety of collection programs. Therefore, the percentages will not total 100 percent.

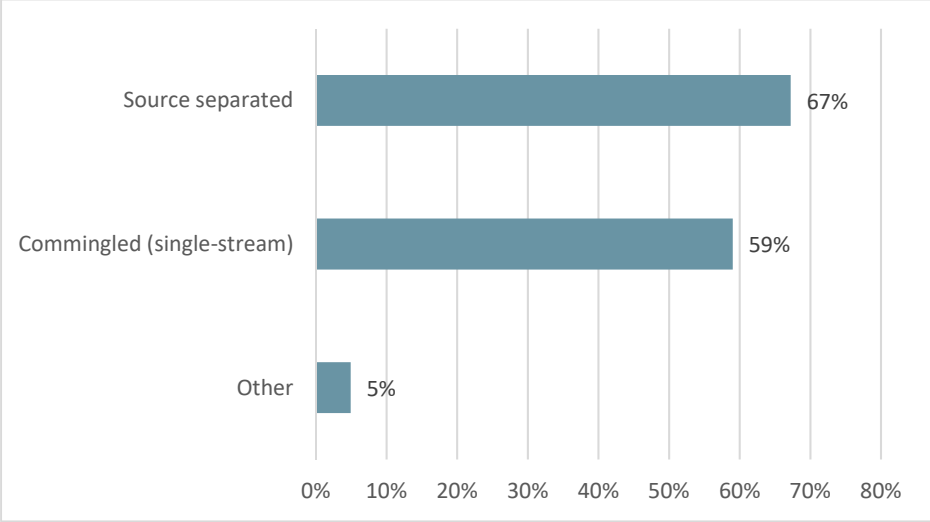
Exhibit 4. Programs Material is Collected Through



Drop-off collection programs were the most common method of receiving recyclable materials with 86 percent of facilities selecting this method. Multi-family unit collection programs were the least common method of receiving recyclable material with 29 percent facilities selecting this response.

Of the 66 survey respondents that indicated they accumulate and/or process traditional recyclable materials, 61 respondents answered the question on the method of materials collected. This information is detailed in Exhibit 5. Some facilities accept traditional recyclable materials from multiple collection methods, therefore the figures will not equal 100 percent.

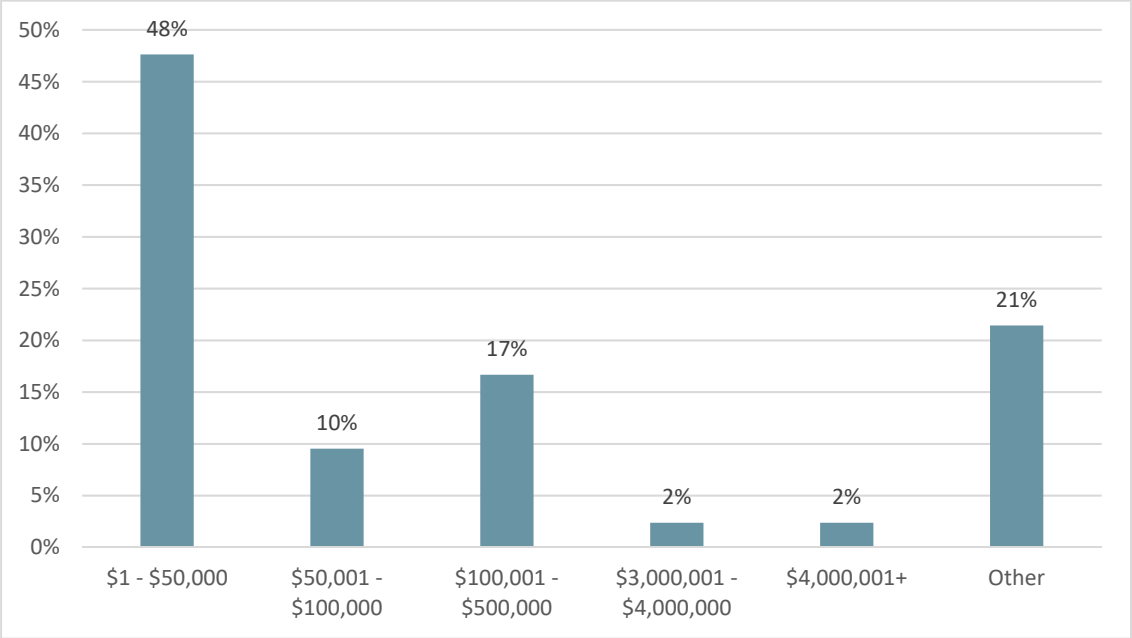
Exhibit 5. Method of Materials Collected



A small majority of the respondents (67 percent) indicated that their facility accepted traditional recyclable material from programs that required source separation.

To understand the potential value of traditional recyclable materials, respondents were asked to select a range of annual gross revenue generated from the sale of these materials. Exhibit 6 displays the results received.

Exhibit 6. Annual Gross Revenue Generated by Recyclables



Of the 66 respondents that indicated they accumulate and/or process traditional recyclable materials, 42 selected a range of annual revenue or wrote in an answer. The majority of facilities generate $1 - $50,000 of revenue from recyclable materials per year. Twenty-one percent of respondents wrote in an answer and most of these indicated the facility did not profit from recyclable materials or that the facility does not sell materials.

Using the revenues reported by the survey respondents, the revenues received for the sale of recyclables materials in Iowa averages $281,000 per year, which is an average of $2.24/per ton of recyclables. This figure does not account for any additional revenue sources (i.e., processing fees).

4.2.2 Materials

The Recycling Facility Survey asked respondents to identify the material categories accepted at their facility, estimate the percentage of materials accepted, and estimate the percentage of residual material received. Residuals consist of materials received by the facility but are not acceptable for recycling such as contaminated or prohibited materials.

This section is based on 66 survey responses of facilities that accumulate and/or process recyclable materials.

Accepted Materials

Of the 66 survey responses from facilities that accumulate and/or process recyclable materials, 64 respondents selected the recyclable material types that are accepted at the facility. Exhibit 7 displays the percentage of respondents that accept the material types listed from most common to least common. This information is also broken out into material categories (as seen in Exhibit 8 – Exhibit 12).

Exhibit 7. Accepted Recyclable Materials

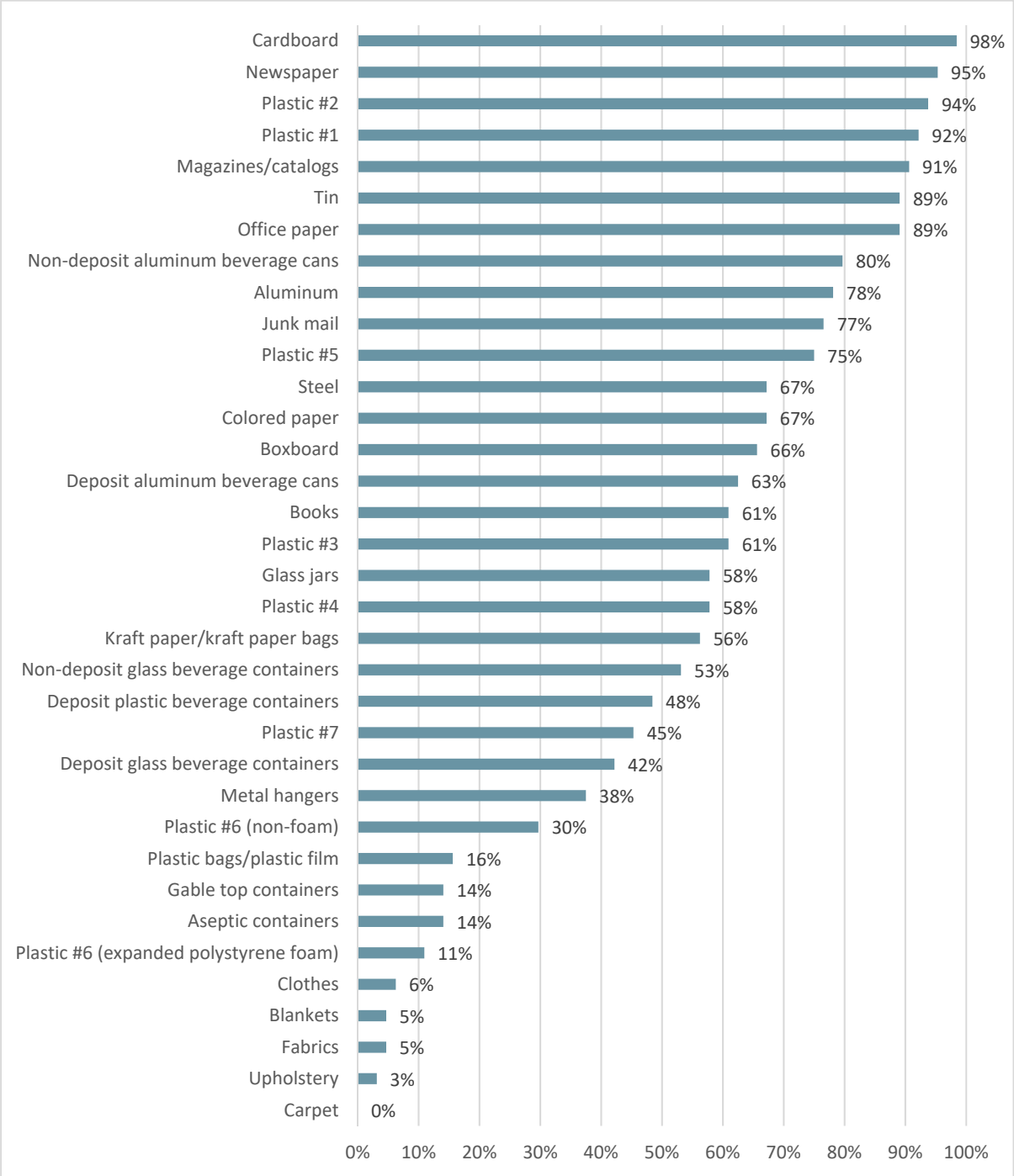


Exhibit 8 displays the accepted materials for the plastic category. Of the plastic materials, the most accepted is plastic #2, with plastic #1 being two percent less. The least commonly accepted material is plastic #6 (expanded polystyrene foam).

Exhibit 8. Accepted Materials – Plastic

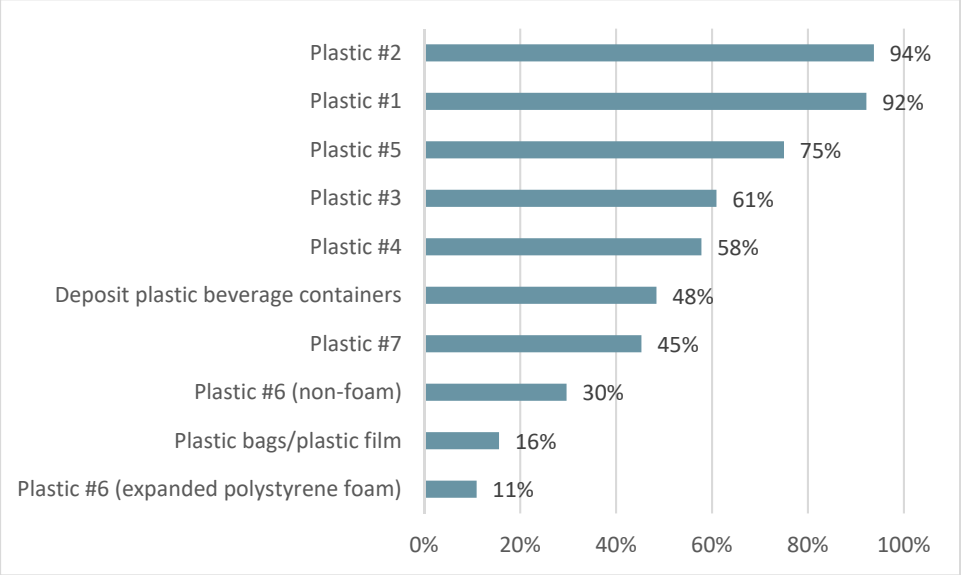


Exhibit 9 displays the accepted materials for the paper category. Cardboard is the most accepted material of 98 percent. The least accepted materials in the paper category are aseptic containers and gable top containers each with a percentage of 14.

Exhibit 9. Accepted Materials – Paper

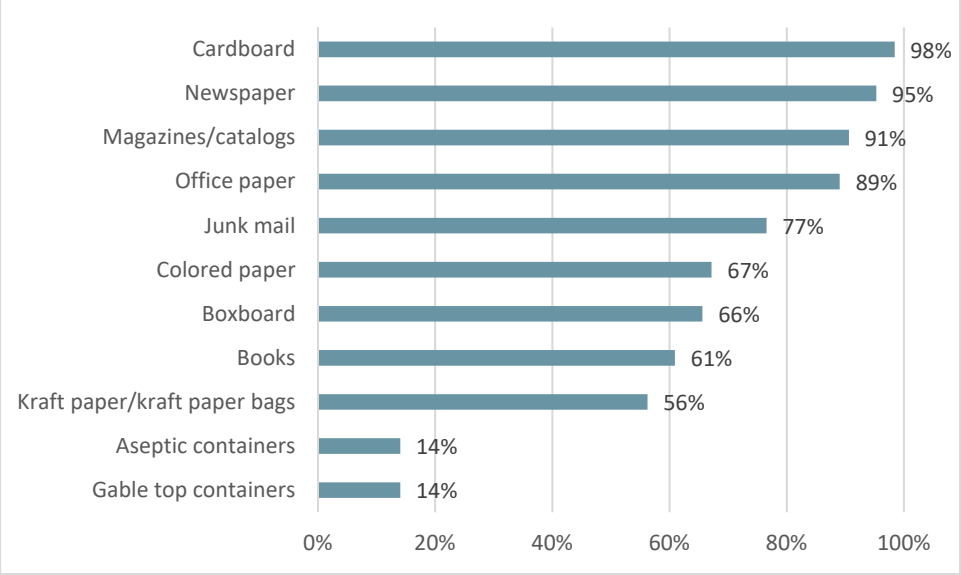


Exhibit 10 displays the accepted materials for the metal category. Tin is the most accepted material at 89 percent, with metal hangers being the least accepted with a percentage of 38.

Exhibit 10. Accepted Materials – Metal

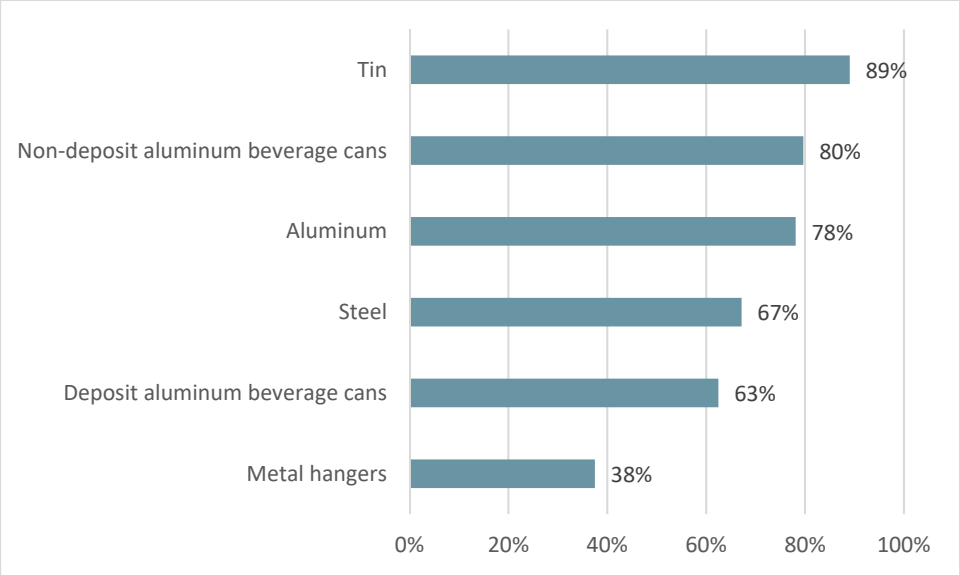


Exhibit 11 displays the accepted materials for the glass category. Slightly over half of the 64 respondents accept glass jars (58 percent) and non-deposit glass beverage containers (53 percent). Deposit glass beverage containers are the least accepted material in the glass category.

Exhibit 11. Accepted Materials – Glass

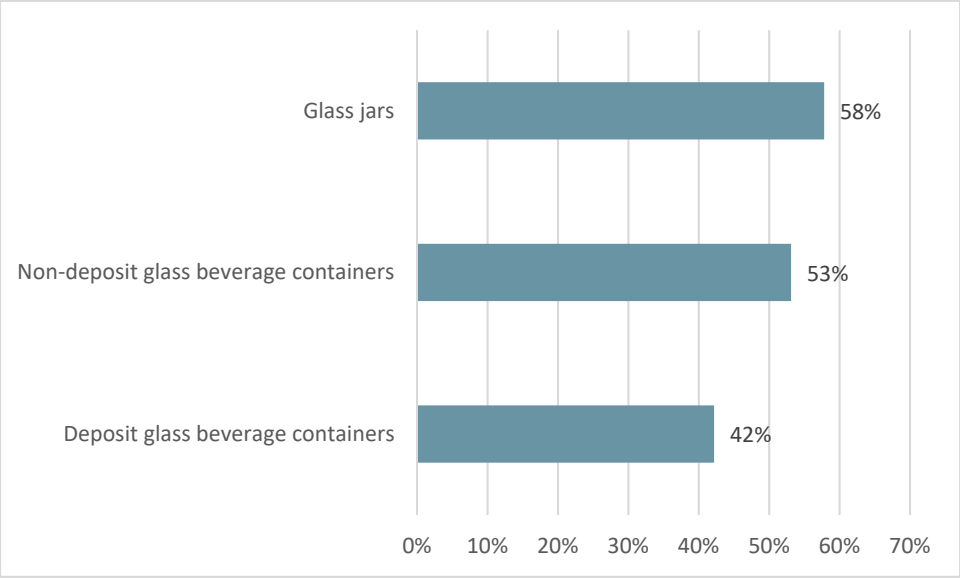
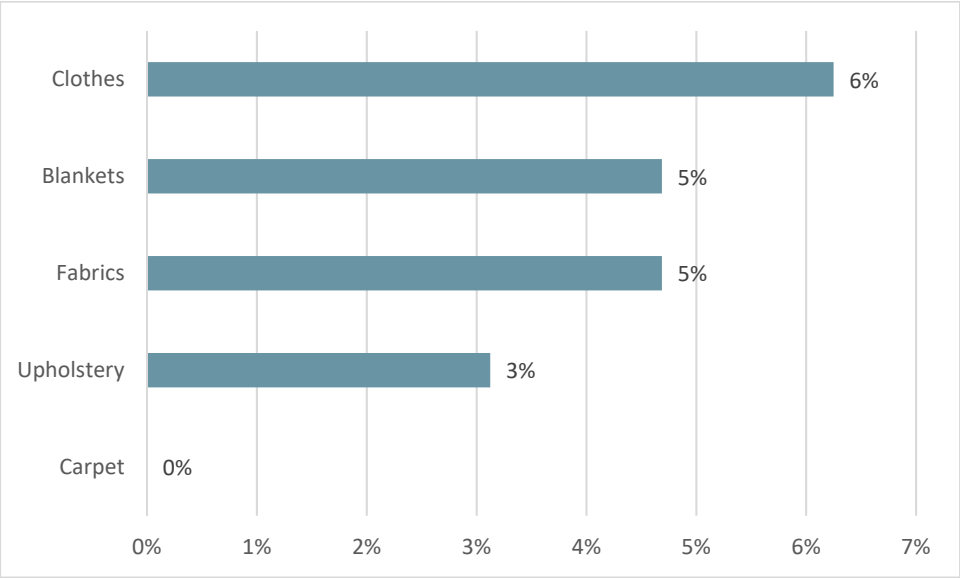


Exhibit 12 displays the accepted materials for the textile category. A low percentage of the 64 respondents accept textile materials. Clothes (6 percent), blankets (5 percent), fabrics (5 percent), and upholstery (3 percent) are the textile materials that are accepted. No respondent indicated they accept carpet for recycling.

Exhibit 12. Accepted Materials – Textiles



Recycling Material Composition

Of the 66 respondents that accumulate or process traditional recyclable materials, 39 facilities were able to provide information about the composition (individual material types accepted based on percentage of total materials accepted) of accepted and/or processed materials. Exhibit 13 – Exhibit 17 shows the various recycling material categories that were observed in the recycling composition based on the 39 facility responses.

Exhibit 13 (next page) displays the average percentage of recycling materials accepted at the Recycling Facilities. The largest percentage of these recycled materials is paper with 66 percent. The smallest percentage is glass, comprising 4 percent of recycling materials accepted at the participating Recycling Facilities.

Exhibit 13. Average Percentage of Recycling Material Composition

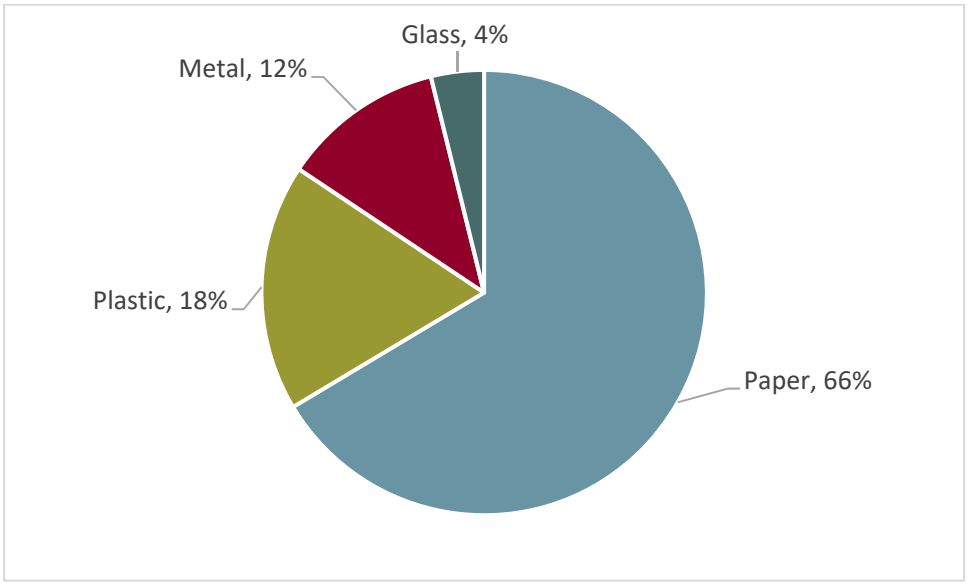


Exhibit 14 displays the plastic recycling material composition based on the results of the 39 facility responses. Plastic #2 is the most common recyclable plastic with a percentage of 19. The second most common material is plastic #1 (18 percent) and third being plastic #5 (12 percent).

Exhibit 14. Plastic Recycling Material Composition

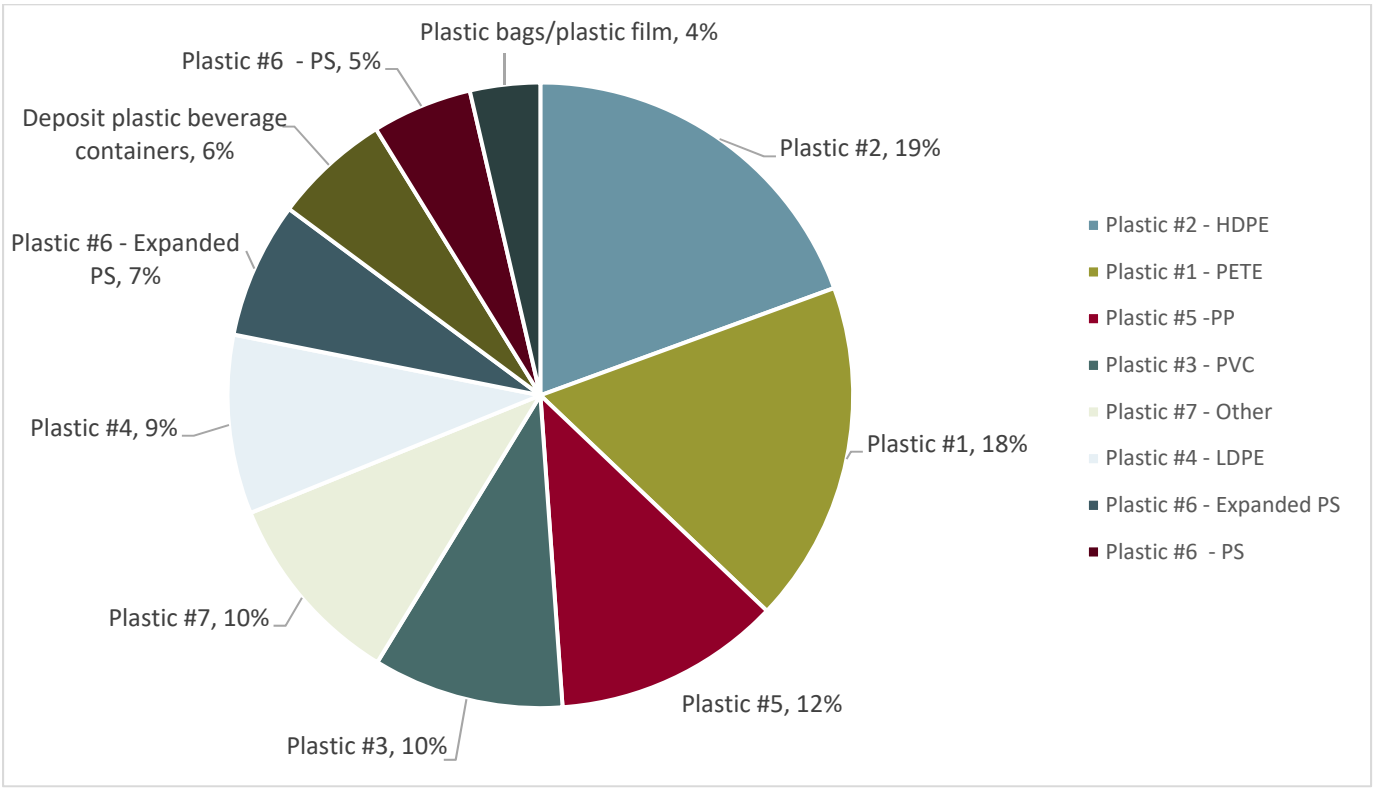


Exhibit 15 displays the paper recycling material composition. Cardboard is the largest percentage of paper recycling materials with a percentage of 58. The "Other" paper category accounts for 15 percent of this material category and includes the following:

- Magazines/catalogs, 4 percent
- Junk mail, 3 percent
- Books, 2 percent
- Colored paper, 2 percent
- Kraft paper/Kraft paper bags, 2 percent
- Aseptic containers, 1 percent
- Gable top containers, 1 percent

Exhibit 15. Paper Recycling Material Composition

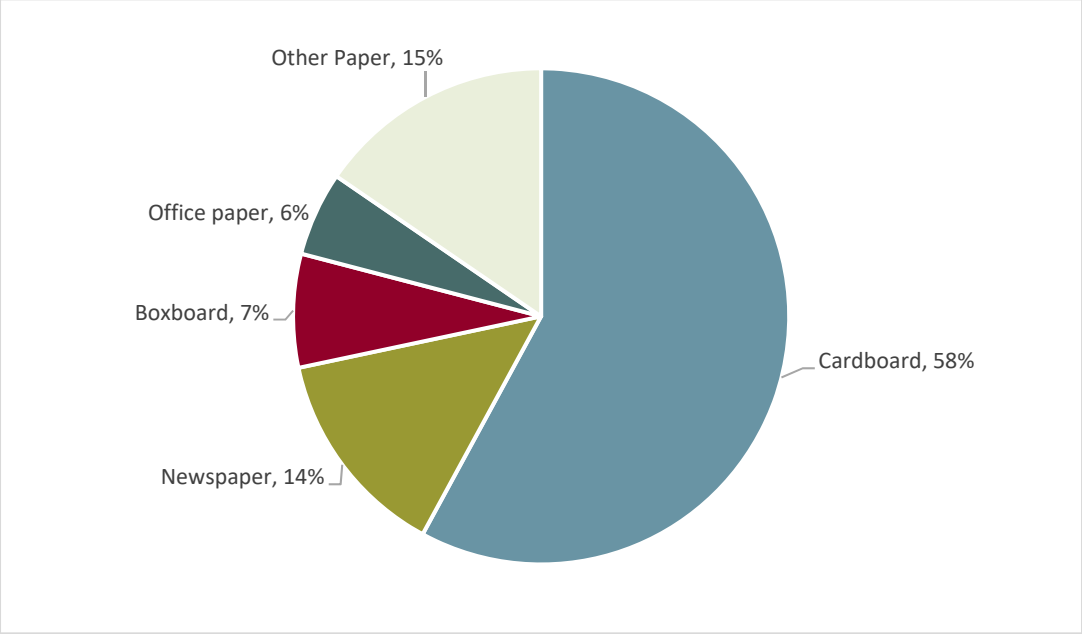


Exhibit 16 (next page) displays the metal recycling material composition. Steel is the most common recyclable in metal recycling materials with 52 percent. Aluminum is the second largest material category at 21 percent. Exhibit 16 breaks down aluminum into three categories (deposit, non-deposit, and aluminum. Tin is the third largest material category at 16 percent.

Exhibit 16. Metal Recycling Material Composition

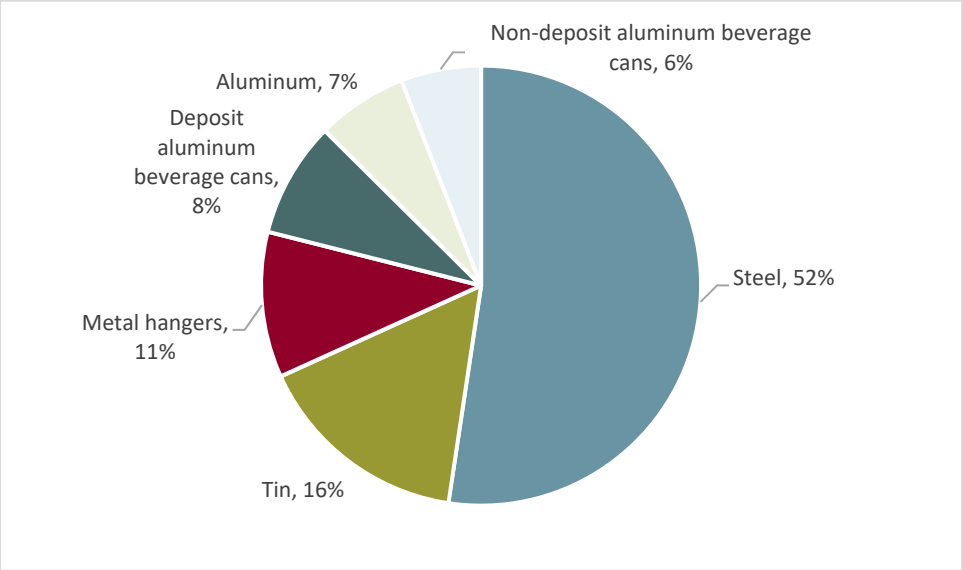
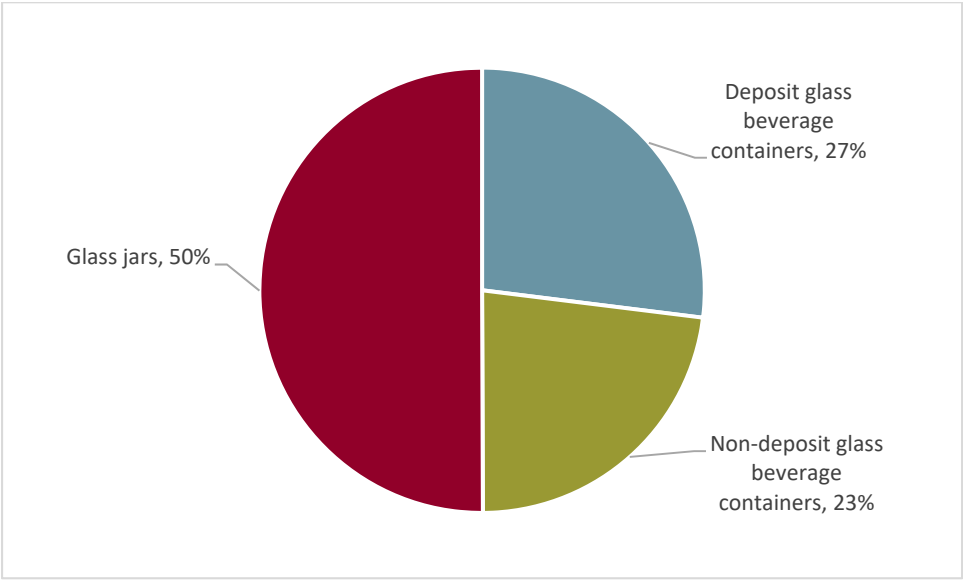


Exhibit 17 displays the glass recycling material composition. Fifty percent of the glass recycling material is comprised of glass jars. The remaining glass materials are nearly split in half for deposit glass beverage containers (27 percent) and non-deposit glass beverage containers (23 percent).

Exhibit 17. Glass Recycling Materials Composition



4.2.3 Tonnage

The Recycling Facility Survey asked respondents to indicate the tonnage of materials accumulated and/or processed at the facility.

Reported Tons

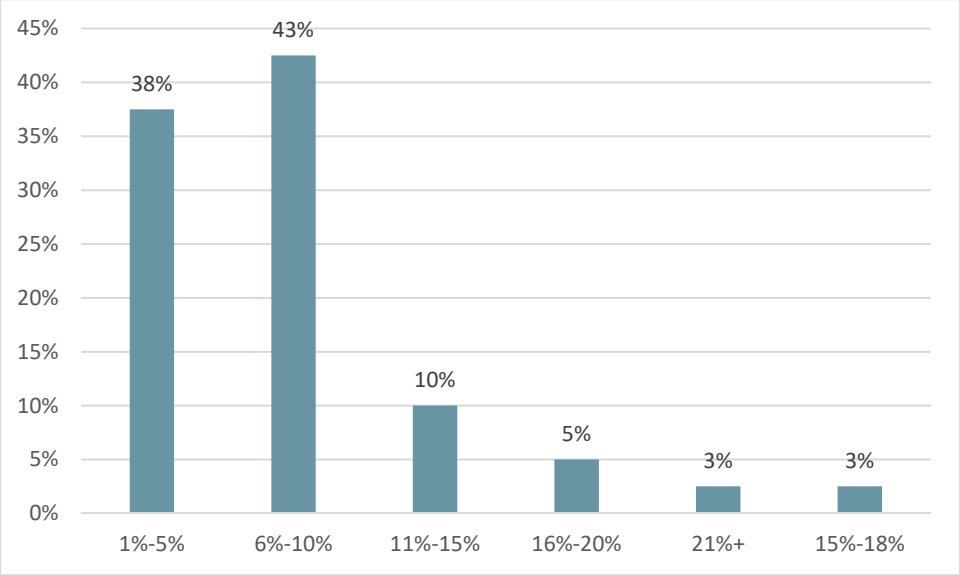
Of the 66 respondents that accumulate or process traditional recyclable materials, 49 reported the total tons of recyclable materials they accepted and/or processed. The total amount of tonnage of materials (recyclable materials and residuals) accumulated and/or processed by facilities in Iowa equals 130,240 tons.

The average amount of total materials accumulated/processed at a facility is 2,658 tons. The largest number of total materials accumulated/processed at a single facility is 46,000 tons at Quincy Recycle Paper, Inc. which calculates to 35 percent of the overall reported tons. Information relating to the amount of reported recycling tons can be seen in Appendix A.

Residuals

The respondents were asked to identify the percentage of residuals of the total tonnages accepted at the facility. Of the 66 respondents that accumulate or process traditional recyclable materials, 40 answered this question. Exhibit 18 displays the percentage of respondents that selected the various ranges of residual amounts. The most common residual range is 6 to 10 percent. Of the selected ranges of residual amounts, the state of Iowa has an average residual amount of 8 percent. Based on the survey results, recycling facilities are managing an estimated nearly 11,000 tons of residuals per year as part of the materials they receive.

Exhibit 18. Percentage of Residuals



Processed Tons

A goal of this Study was to determine the type and volumes of recyclables managed within Iowa and the number of recyclables being sent out of state for processing. Forty-three respondents were able

to identify the facilities or entities they sent recyclable materials to for processing. If a respondent did not report this information, the tonnage was placed into the unknown category.

Table 5 displays the total reported tonnage of Iowa recyclables processed. The tons can be viewed by primary material category and whether the material is processed in-state, out of state, or an unknown location. This information removes both the residual amounts from the reported total tonnages received and any tons that were sent to a processing facility which also reported total tons. This method was used to estimate the total recyclable material tonnage processed.

The following items are observations of Table 5:

- There is a total of 125,203 tons of recyclable tons documented in Iowa that are processed.
- Of the reported processing destinations, plastic and metal materials are largely processed within the state, whereas paper and glass materials are processed out of state.
- Paper is the largest material category of recyclables for processing.

Table 5. Recyclable Tons Processed

	Plastic	Paper	Metal	Glass	Total
In-State	7,271	23,138	3,317	613	34,338
Out of State	4,109	27,245	1,836	4,953	38,143
Unknown	9,684	35,016	5,821	2,200	52,722
Total	**21,064**	**85,399**	**10,974**	**7,766**	**125,203**

4.3 RECYCLING ACCUMULATOR AND PROCESSOR MAP

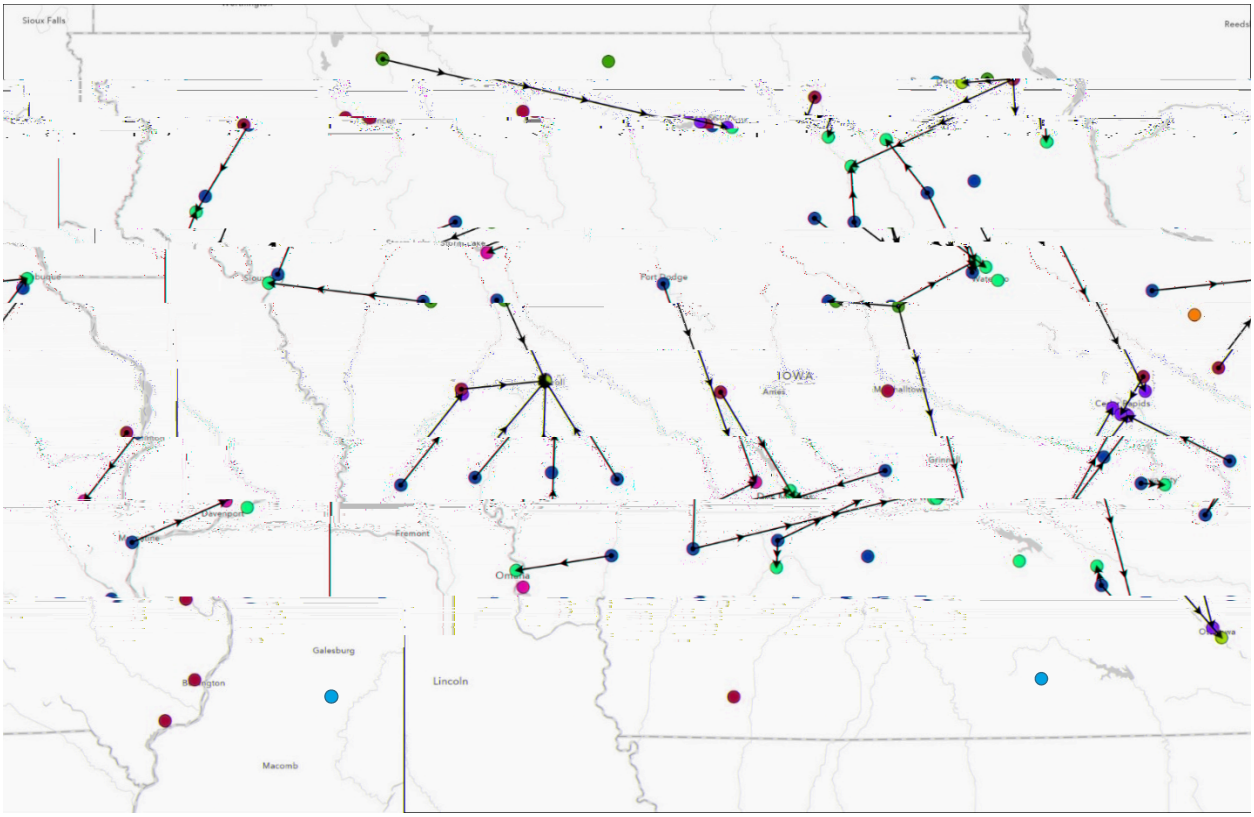
The final product for this Study was to develop an interactive GIS map. The Iowa Recycling Facility Interactive Map is posted to the DNR's website. An example of what this map looks like can be seen in Figure 1.

Below lists the legend for Figure 1:

- Green circle – Accumulator
- Blue circle – Accumulator/Processor
- Orange circle – Processor
- Line – Indicates movement of recyclables between facilities (i.e. accumulator to processor, accumulator to accumulator)

The Iowa Recycling Facility Interactive Map contains multiple features and various information. A user can select a circle on the map to see additional information. An accumulator circle displays the name of the facility, total tons received, and percent of total tons accepted of primary material categories (plastic, paper, metal, glass, textiles). The information displayed for a processor or accumulator/processor facility is the name and total tons received and processed. A user can select a line to view the tons by material type traveling to that facility.

Figure 1. Accumulator and Processor Map



5.0 HISTORICAL COMPARISON

This section provides a historical comparison of the 2017 Rural Iowa Hub and Spoke Study to the results of this Study.

With the increase in respondents compared to the 2017 study, there were additional facilities identified that accumulate and/or process recyclable materials. There were some facilities that responded in 2017 that indicated the facility did not accept or process recyclable materials, that do have recycling activity today. Conversely, the survey revealed a few facilities that used to accumulate and/or process recyclable materials no longer perform this service.

Both the 2017 and 2023 surveys asked respondents to indicate the method of materials collected. Exhibit 19 displays the comparison of the answers for this question. There has been an increase in the number of facilities that accept materials from both commingled and source separated programs. It is important to note that the percentages in this exhibit will not add to 100 percent as facilities were able to select both options of collection in their response.

Exhibit 19. Methods of Materials Collected Historical Comparison

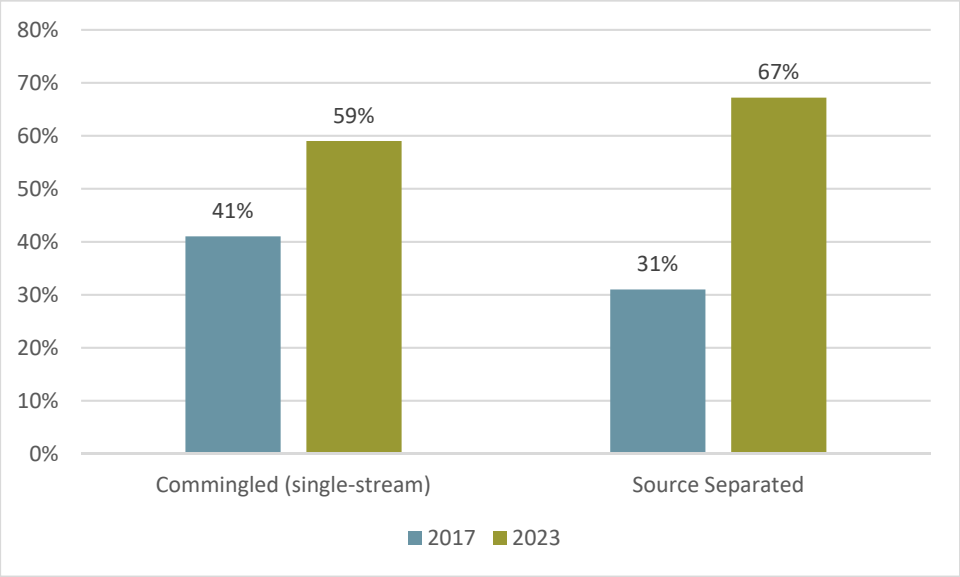
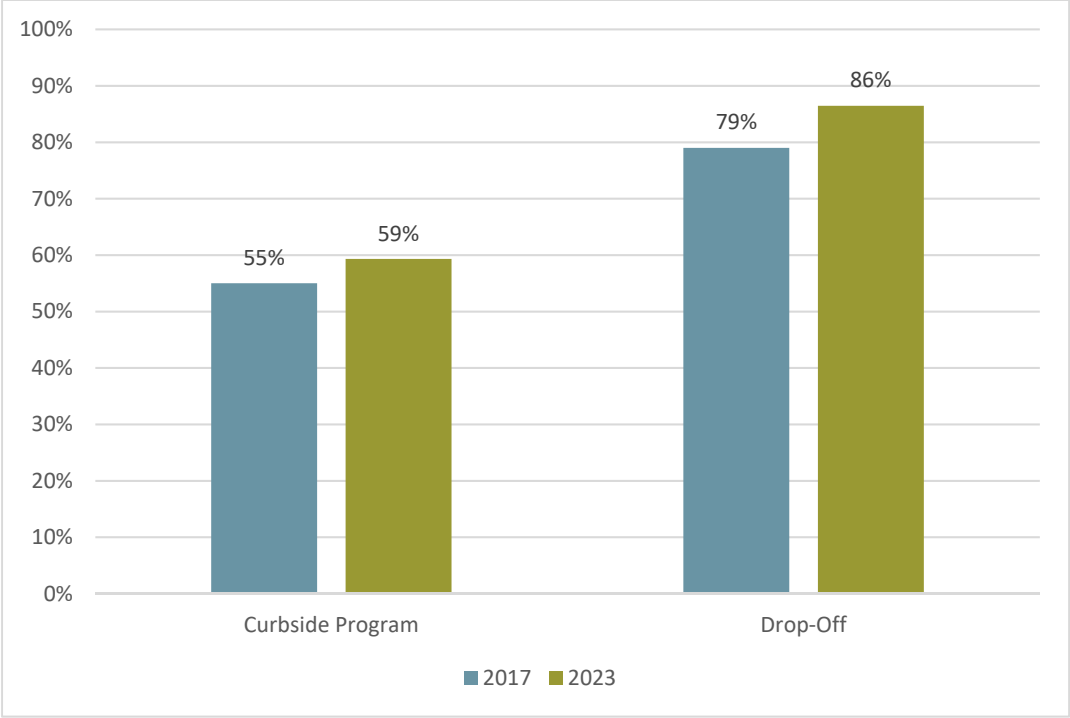


Exhibit 20 shows the comparison of respondents that accept recyclable materials through curbside collection programs and drop-off areas. There has been a slight increase in facilities accepting materials through curbside programs since 2017. There has been a 7 percent increase in facilities accepting materials through drop-off programs. It is important to note that the percentages in this exhibit will not add to 100 percent as facilities were able to select both options of programs in their response.

Exhibit 20. Program Materials are Collected Through Historical Comparison



In the 2017 study, 27 survey respondents indicated the tons of household recyclable materials that are processed at that facility. In 2023, 49 respondents indicated the tons of traditional recyclable materials accumulated or processed.

6.0 TEXTILE RECOVERY AND RECYCLING

In addition to the traditional recycling materials, the DNR selected textile materials to research the methods and programs used to manage this material in Iowa and beyond. This decision was motivated by the findings of the 2022 Iowa Statewide Material Characterization Study. The DNR contracted with SCS to perform the 2022 Iowa Statewide Material Characterization Study that examined the waste composition across 10 host facilities to obtain an accurate picture of disposed materials in Iowa. The study found that the textiles and leather material component accounted for five percent (160,124 tons) of the overall municipal solid waste composition (Table 6). This percentage places textiles and leather as the fifth largest material component disposed in Iowa according to the characterization study results. These results prompted the DNR to include textile collection, recovery, and recycling as a part of this Study.

Table 6. Predominant Material Components 1998 – 2022

2022		2017		2011		2005		1998	
Pct.	Material	Pct.	Material	Pct.	Material	Pct.	Material	Pct.	Material
19.1%	Food Waste	20.0%	Food Waste	13.0%	Food Waste	10.6%	Food Waste	10.7%	Food Waste
7.7%	Plastic Film	8.7%	Plastic Film	9.0%	OCC and Kraft Paper	8.5%	OCC and Kraft Paper	10.3%	Non-Rec. Paper
7.5%	OCC and Kraft Paper	7.6%	Compostable Paper	6.7%	Plastic Film	7.0%	Mixed Rec. Paper	8.5%	OCC and Kraft Paper
5.5%	Fines	6.1%	Mixed Rec. Paper	6.1%	Compostable Paper	6.6%	Plastic Film	7.5%	Other Plastic Products
5.0%	Textiles and Leather	4.8%	Fines	5.4%	Untreated Wood	6.5%	Compostable Paper	5.4%	Mixed Rec. Paper
5.0%	Compostable Paper	4.6%	OCC and Kraft Paper	5.4%	Construction/ Demolition	6.0%	Other Plastic Products	5.2%	Fines
4.9%	Wood - Treated	4.1%	Other Organic	5.3%	Other Plastic Products	5.5%	Construction/ Demolition	4.8%	Construction/ Demolition
4.4%	Mixed Recyclable Paper	4.1%	Textiles and Leather	4.6%	Yard Waste	4.9%	Textiles and Leather	4.8%	Plastic Film
3.0%	Diapers	3.5%	Diapers	4.1%	Textiles and Leather	4.6%	Wood - Treated	4.2%	Textiles and Leather
2.9%	Other Ferrous Scrap Metals	3.1%	Other Plastic Products	3.8%	Wood - Treated	4.0%	Newsprint	3.6%	Wood - Treated
65.1%	**2022 Cumulative Percent**	**66.6%**	**2017 Cumulative Percent**	**63.7%**	**2011 Cumulative Percent**	**68.4%**	**2005 Cumulative Percent**	**65.0%**	**1998 Cumulative Percent**

According to the EPA, only 15% of generated textiles are collected for resale or recycling. The remaining 85% is directly discarded in landfills or incinerated.[1] This suggests that most people throw away unwanted textiles, regardless of condition. This section will discuss current textile waste generation, management strategies of retailers, information on recycling techniques, and potential steps to reduce textile waste in Iowa's waste stream.

6.1 TEXTILE WASTE GENERATION

6.1.1 Sources

Textile waste refers to any material or product made from fabric or fibers that is discarded or no longer needed. Distinctions are often made between categories of textile waste generation, such as the following:

- **Pre-consumer:** Pre-consumer textile waste is typically generated by manufacturers, designers, and other businesses within the textile supply chain. It typically includes:
  - Scraps and trimmings generated during cutting;
  - Defective, misprinted, or off-cut materials;
  - Unsold or excess inventory, deadstock, and returns; and
  - Samples and prototypes.
- **Post-consumer:** Refers to textiles that have been used by consumers and are then discarded. This category can be further divided into:
  - **Residential:** Post-consumer textiles worn by general consumers or used in residential settings. This waste typically includes clothing, shoes, and other accessories or household textiles such as bedding, curtains, and towels.
  - **Non-residential:** Post-consumer textiles used in industrial, commercial, and institutional (ICI) applications such as professional uniforms and workwear, hospital and hotel linens, and medical textiles.

6.1.2 Generation Rate

The Environmental Protection Agency (EPA) estimates that Americans generate more than 17 million tons of textile waste annually, which is about 104 pounds per person per year. According to EPA data, textiles comprised 5.83 of total municipal solid waste (MSW) generated in the U.S. in 2018.

Textile waste generation has increased significantly over the last two decades. In the year 2000, textiles comprised 3.8 percent of MSW (just over 9 million tons). While waste generation increased by 20% from 2000 to 2018, textile generation increased by 80% during the same period. Comparatively, each American discarded an average of 67 pounds of textiles in 2000.[2]

According to The Ellen MacArthur Foundation, clothing sales have more than doubled just since 2000, but the number of times an item of clothing is worn has decreased by about 36%.[3]

[1] https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/nondurable-goods-product-specific-data#ClothingandFootwear
[2] https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/nondurable-goods-product-specific-data#ClothingandFootwear
[3] https://www.ellenmacarthurfoundation.org/a-new-textiles-economy

In Iowa, textiles comprise 5.0% of MSW (roughly 127,083 tons in 2022). There are differences in the percentage of textiles found in the residential and industrial, commercial, and institutional (ICI) waste streams. Textiles averaged 6.3% in the residential waste stream while averaging 4.1% in the ICI waste stream.[4] Based on these results, an average of 79 pounds of textiles was disposed of in 2022 per person in Iowa.

6.1.3 Composition

The Sorting for Circularity Europe Project analyzed more than 20,000 kg of used textiles collected from six countries (Belgium, Germany, the Netherlands, Poland, Spain, and the United Kingdom) to assess the recycling potential of the textiles.[5] The breakdown of textile types found were:

- Jackets, Blazers, and Trousers: 31%
- Home Textiles: 6%
- Sweaters and Cardigans: 24%
- T-shirts and Singlets: 16%
- Coats: 8%
- Underwear and Nightwear: 6%
- Shirts and Blouses: 5%
- Stockings and Socks: 2%

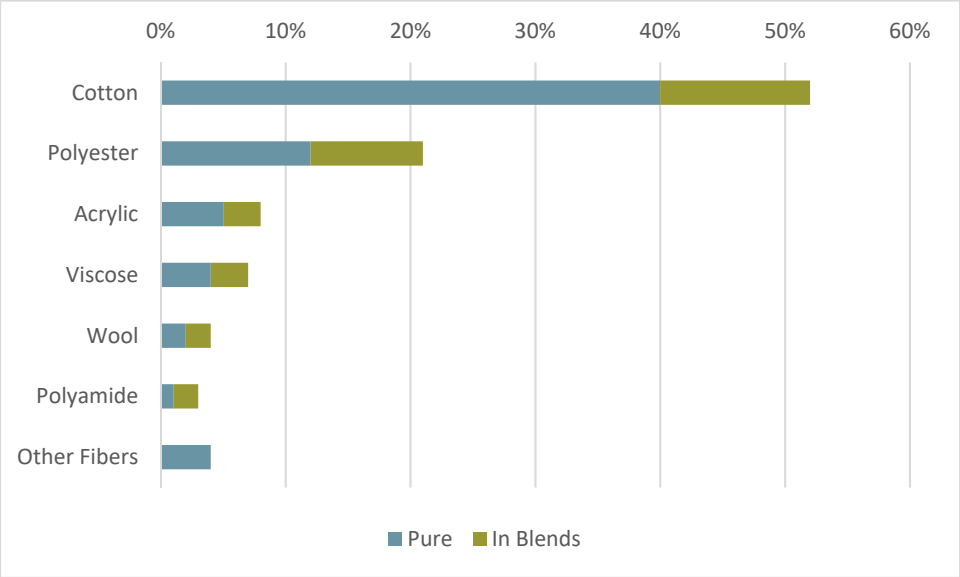
An estimated 93 percent of the garments collected were categorized as “mono-layer” or made from a single layer or type of textile. The remaining 7 percent of the garments consisted of multi-layered items like jackets or coats and were excluded from further study because they would require manual disassembly to be recycled. The mono-layer items were further studied using Near Infrared (NIR) technology. This technology allowed for the identification of material composition, highlighting that 42 percent of the analyzed textiles were cotton and 31 percent were material blends with polycottons being a significant component:

- Cotton: 42%
- Polyester: 11%
- Polycotton: 12%
- Other Blends: 19%
- Other Fibers: 16%

The presence of various fiber types, as pure materials or as in blends, is shown in Exhibit 21.

[4] https://www.iowadnr.gov/Portals/idnr/uploads/waste/faba_wastecharacterization2022.pdf
[5] https://reports.fashionforgood.com/report/sorting-for-circularity-europe/

Exhibit 21. Presence of Fiber Types



The study also evaluated the presence of elements such as buttons, fasteners, zippers, and other aesthetic appliques on garments single-layered items that could disrupt the recycling process:

- 32% of the items evaluated did not have disruptors.
- 19% of the items had disruptors that could be manually removed.
- 49% of the items had non-removable disruptors.

6.2 TEXTILE WASTE MANAGEMENT

6.2.1 Waste Prevention: Pre-Consumer Textiles

Retailers, including those operating in Iowa, are adopting various strategies to reduce textile waste, from both clothing they purchase and retail brands they manufacture, and are beginning to use more recycled and recyclable materials in their products. Following are examples of programs to minimize pre-consumer textile waste:

- Design – Retailers are incorporating more sustainably sourced fibers and recycled polyester in clothing garments. Through the design process, various designers and manufacturers have committed to designing for durability and/or recycling to reduce textile waste. Additionally, some brand retailers utilize digital designs rather than physical samples in the production process to reduce textile waste during production.
- Inventory – Overproduction of fabrics and clothing generates much of the excess materials in the fashion industry. Retailers are assessing smart trend prediction tools and inventory management technology to minimize excess production. To manage excess inventory, companies participate in partnerships to upcycle clothing, donate to non-profit organizations, or sell material to discount outlet stores.
- Extending Item Life – Some companies have programs in place to support the lifespan of garments created through programs such as repair services, resale programs for returned items, and online clothing rental services.

6.2.2 Collection: Post-Consumer Textiles

In Iowa, popular textile collection generally includes thrift stores and charities (e.g., Goodwill, Salvation Army, Many Hands) and drop-off opportunities at recycling centers. There are additional methods for reducing textile waste through donation bins, such as Fill the Bins with Clothes and Shoes Recycling Bins, and retail store takeback programs.

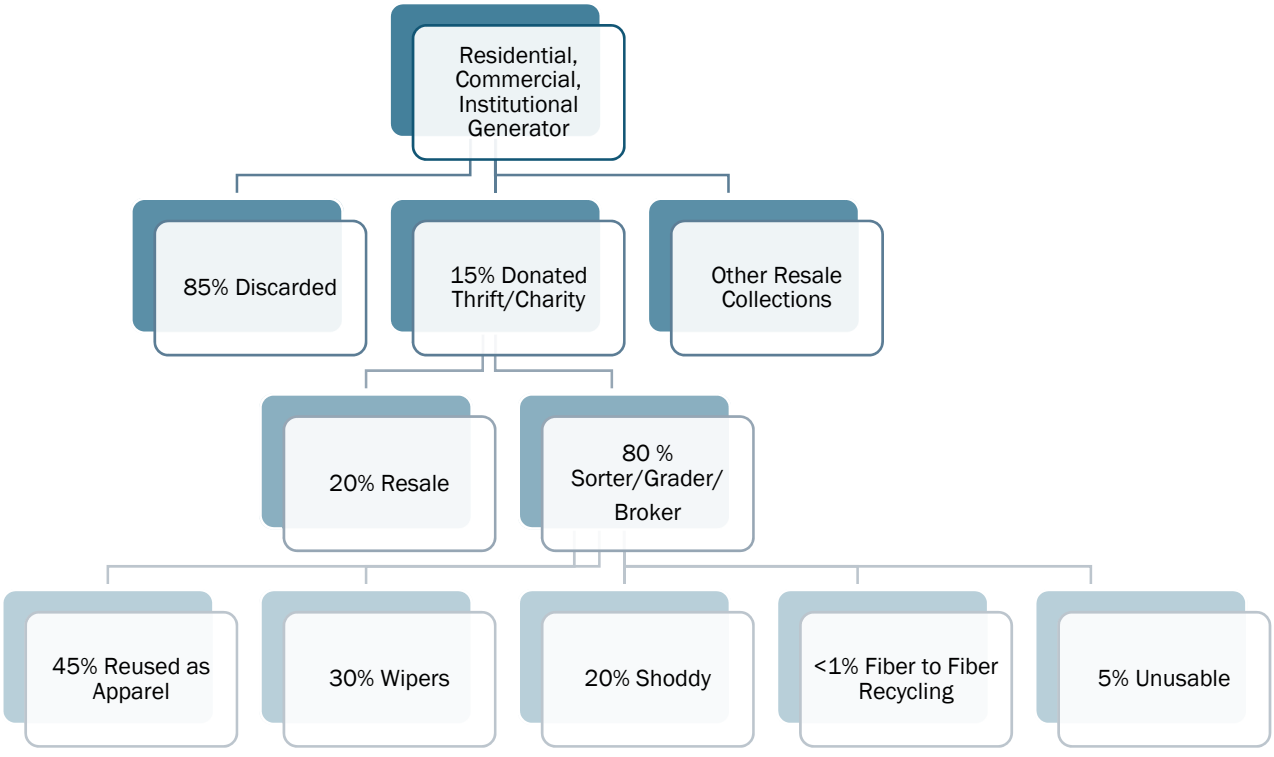
Thrift Stores

It is estimated that thrift and charity stores sell approximately 20% of textile donations, while the remainder is sold to sorters and graders who evaluate the textiles based on quality and sell them to various end markets. This material is then exported for resale, cut and packaged as wiping materials, turned into shoddy (shredded fibers used for stuffing and insulation), or recycled back into fibers. The remainder of the textiles are generally unusable if they are moldy or otherwise contaminated. Exhibit 22 illustrates the flow of textiles managed by thrift stores and charities in the U.S.[6]

Shifts in clothing donations, however, may have an impact on the future of thrift store sales through increased resale of higher-end and everyday clothing directly on consignment sites such as ThredUp and Poshmark, or an influx of donations of low-quality, inexpensive fast-fashion items.

If the quality of donations declines too much, it may become more difficult for thrift and charity stores to sell the merchandise leading to more items being sent to sorters and graders.

Exhibit 22. Textile Management by Thrift Stores



[6] https://www.smartasn.org/SMARTASN/assets/File/resources/SMART_PressKitOnline.pdf

Several Iowa for-profit and non-profit thrift stores were interviewed for this Study. While there were some differences in operations, most generally followed a similar process. Once thrift stores receive materials from consumers, they typically perform a primary in-house sort to distinguish materials suitable for in-store or e-commerce resale. Items that are deemed unsuitable for retail (e.g., ripped, torn, or stained) may be immediately baled and shipped to a broker and other items will be disposed of (e.g., wet, moldy). If the selected items do not sell within a reasonable amount of time, thrift stores may:

- Progressively discount prices at the store for several weeks before selling to a broker;
- Donate unsold items to organizations such as homeless shelters; or
- Send items to outlets where they are sold by the pound. Materials that do not sell from the outlets are baled and shipped to brokers.

One thrift store chain interviewed for this effort estimated that about 20% of incoming textiles were ultimately sold to brokers. Responding stores reported that prices paid by brokers are generally $0.10 to $0.20 per pound depending on the type and quality of the baled material. Brokers then sell the materials to domestic and non-domestic markets.

Drop-Off Centers

Municipal drop-off programs for textiles are initiatives organized by local governments to encourage textile collection within communities. These programs typically provide designated collection points, such as recycling centers, where residents can drop off unwanted clothing. The following are examples of clothing drop-off programs operating in Iowa found through research and identified in the Recycling Facility Survey:

- The Cedar Rapids Linn County Solid Waste Agency and Thrift World have partnered to accept clothing and shoes, regardless of condition, as long as they are clean and dry. All donated materials are taken to Thrift World for processing and sorting. Thrift World sells items in their stores and unsold items are recycled or exported to developing countries. (https://www.solidwasteagency.org/recycling/clothing-other)
- Iowa County residents may drop off clothing and shoes at the Iowa County Landfill at no charge. Items do not have to be in good condition, but they must be clean and dry. The landfill is partnering with local organizations and the Cedar Rapids Linn County Solid Waste Agency. Textiles that are not useful locally will be recycled through the Agency's partnership with Thrift World.[7]
- Ames and Story County has a Clothes Bin drop box, as do many other Iowa communities located at the Resource Recovery Plant. Clothes Bin is a for-profit recycling franchise and items collected in the bin are sold as-is to buyers who then in turn grade, sort, and analyze the clothing.[8]

[7] https://wasteadvantagemag.com/iowa-county-ia-landfill-launches-textile-recycling-program/
[8] https://www.cityofames.org/government/departments-divisions-i-z/resource-recovery-system/recycling-in-ames-and-story-county

Donation Bins

Clothing donation bins (e.g., Clothes Bin) are a common sight in many communities. They are typically placed in convenient, publicly accessible locations such as shopping centers, parking lots, or near schools and churches. Users can drop off their used clothing, shoes, and other textiles into the bin at any time. The bin is typically serviced by a donation center or for-profit company, which will periodically collect the donations from the bin and transport them to a sorting or processing facility. Depending on the owner of the bin, the collected donations will be either sorted and sold at a thrift store or sold directly to a broker. For-profit bin owners will generally donate a percentage of proceeds to local schools or other charitable organizations.

Retail Store Takeback Programs and Mail Back Systems

Some retailers have introduced take-back programs where customers can return old clothing that is offered for resale on their private secondhand marketplace. Others, such as H&M offer in-store clothing recycling bins to collect textiles or accessories of any brand.

Other models allow for direct shipment of used textiles to local charities. For example, Give Back Box is an organization that partners with retailers, such as Kohls, to allow consumers to reuse cardboard shipping boxes and donate unwanted textiles. Give Back Box will identify a local charity and provide a prepaid shipping label. The boxes are routed to a participating local charity where goods are sorted and sold with revenue being used to help fund community-based programs.

6.3 SORTING AND GRADING

After collection through thrift stores, drop-off locations, or donation bins, textiles are generally sorted and "graded" to determine what can be resold and what can be recycled. The sorting process includes classifying items as suitable for repurposing or recycling, whereas grading involves placing cleaned textiles into categories based on quality, color, and fiber content.

Sorting can be performed either manually or through automated systems. Currently, the majority sorting of textiles is carried out manually, and sorters rely primarily on the feel of the material or analyzing the garment's tags and labels (when still present and readable) to determine its composition. Color, fabric type (e.g., leather, wool, cotton, denim), quality, and style, are some of the factors that are considered during manual sorting.

Determining the fiber content of clothing can be a complicated task. As discussed earlier, clothing is often made of different fibers, including combinations of natural and synthetic fibers. Even when clothing is made from a single material, such as cotton, it can still contain components that are made of synthetic fiber. For example, polyester stitching threads are generally used in construction because of their strength and durability, even if the rest of the garment is made from cotton. As an example, wool garments, such as jackets, often have a polyester lining.

Automated sorting through technologies are increasingly being employed, particularly to aid in fiber identification. Near-infrared (NIR)-spectroscopy is one such technology, which is widely used in automated sorting applications for other segments of the recycling industry, such as PET recycling. One of the challenges facing the use of this technology, however, is that postconsumer textiles often consist of different fiber blends.

6.4 RECYCLING

In Iowa, currently there are no textile recycling facilities. Additionally, within the US, there are very few textile recycling facilities that exist. For those that are in operation, this information provides insight into the textile recycling process.

There are two dominant textile recycling methods: mechanical processing and chemical processing. Mechanical processing is mainly performed on regular fibers, while chemical processing focuses on synthetic fibers. The suitability of textiles as feedstock for the appropriate recycling technology can be dependent on the characteristics of the item:

- Composition of the product's fabric.
- The presence of "disruptors," such as buttons and zippers. Mechanical recycling can only manage textiles without disruptors or items with removable disruptors. Disruptors are not a problem for chemical recycling.
- Color, particularly for mechanical or fiber-to-fiber recycling.

Data was captured on these characteristics during the analysis performed by the Sorting for Circularity Europe Project. The study concluded that 21 percent of the materials analyzed were deemed suitable as feedstock for mechanical recycling, while 53 percent were deemed suitable for chemical recycling.

- Mechanical recycling: This method involves breaking down the textile fibers into their raw materials, which can then be used to produce new textiles. This process can involve chopping, shredding, or grinding the textiles, and then spinning the fibers into new yarn.
- Chemical recycling: Uses advanced processes that break down synthetic and natural fibers into their basic chemical components:
    - Depolymerization involves breaking down polymer chains into monomers or oligomers which can then be repolymerized to produce new fibers. This process is mainly used for synthetic fibers, such as polyester and nylon.
    - Cellulosic fibers like cotton and viscose can be chemically recycled through processes that dissolve the cellulose and regenerate it into new fibers.
    - Recycling mixed fibers such as cotton polyester blends presents unique challenges due to the different chemical properties of natural and synthetic fibers. Several methods include partial depolymerization, solvent-based separation to dissolve the polyester and glycolysis.

  Once the fibers have been repolymerized or regenerated they can be spun into yarns, which are then woven or knitted into fabrics or used for non-woven fabric production.

6.5 OPTIONS TO SUPPORT TEXTILE RECYCLING INITIATIVES

Policy options can be used at the state level to facilitate textile recycling including:

- Extended Producer Responsibility (EPR) policies make manufacturers responsible for the entire lifecycle of their products, including post-consumer disposal. An extended producer responsibility would require fashion brands and textile manufacturers to fund and manage the collection, recycling, and disposal of textile waste. An EPR bill under

consideration in California would also require manufacturers to submit a plan for repairing items. A New York EPR bill requires considerations for the reuse of textiles.
- Public awareness campaigns can educate consumers about the environmental impact of textile waste, how to reduce purchases, and how to donate or recycle unwanted clothing.
- Investments in recycling infrastructure to make textile donation and recycling more accessible and efficient. Measures can include funding for local collection programs and developing partnerships with nonprofit and private companies to expand recycling capabilities.
- Incentives to promote business models that focus on the reuse, repair, and remanufacturing of textiles, such as clothing rental services, resale platforms, and repair workshops.

7.0 CONCLUSIONS

The state of Iowa continues to have multiple opportunities of accumulation and processing infrastructure in the state to recover recyclables. As mentioned in the executive summary, recycling facilities are not permitted or licensed in Iowa, therefore, are not required to submit operation information related to recycling. Without annual reporting, this Study and the study performed in 2017 are critical to understanding the recycling infrastructure, management capacities, types of materials accepted, and potential operational and/or market challenges within Iowa. This information enables facilities to evaluate programs, encourages the public to participate in recycling activities, and provides the professional resource management planners context and reasoning for supporting the continued growth of recycling in Iowa. This data allows planners to assess opportunities for additional recycling material, encourage and promote remanufacturers and technologies to invest in Iowa, and create additional support for those currently recycling and processing materials.

SCS performed a Landfill Material Analysis which included a recoverability analysis based on the results of the 2022 Iowa Statewide Material Characterization Study and found that 24 percent (630,787 tons) of the total tons disposed in Iowa consisted of recyclable paper, plastic, metal, or glass. Additionally, the recoverability analysis determined that nearly two percent (40,528 tons) of municipal solid waste disposed in 2022 were bottle bill items that could have been redeemed. It is important to note that the recoverability analysis includes 100 percent of these material types as recyclable and does not account for any contamination that may have occurred at the generator level. This information indicates that over one quarter of municipal solid waste disposed could have potentially recovered for recycling. This provides an opportunity for additional diversion of these materials, leading to a greater recycling market and a positive effect on the economy and the environment.

In addition to the increase in materials managed, this may create an increase in the number of jobs needed to support this expansion, leading to a stronger job market within the State. The Landfill Material Analysis performed by SCS also included a job analysis to evaluate the number of jobs that could be created with the diversion of recyclable materials. With the diversion of recyclable materials and bottle bill materials, the analysis found that 6,090 jobs may be created to support the increase in recycling. Full details of the recoverability and job analysis can be found in the Landfill Material Analysis report.

Conversely, if the totality of these tons were diverted and sent for processing, this would be a significant increase in recyclable material that is handled within Iowa. Excluding bottle bill material

tons, this would be an increase of the reported 125,203 tons in this Study as managed recyclable materials in Iowa to approximately 755,000 total tons per year. It is important to note that the 125,203 tons is only documenting the responses received from the Recycling Facility Survey and does not include all tons that are recycled within Iowa. To sustainably manage this potential increase in recyclable material tonnages managed, there would need to be significant infrastructure improvements and/or expansions and changes in material collection programs (drop-off, curbside, etc.).

There is a potential to increase the textile recycling infrastructure within Iowa. There are multiple resale opportunities within the state, however, 5 percent of the statewide material composition identified in the 2022 Study is textiles and leather. This totals nearly 131,000 tons disposed of in 2022 in Iowa. From the surveys, there were four facilities that reported to have textile recycling programs, through partnerships with for profit and non-profit entities, that do not track data of material types or tonnage related to this. There is an opportunity for expanded programs, infrastructure, and data management for textile recovery and recycling operations.

Appendix A

Recycling Facility Survey Responses

Facility Name	Contact Name	Street	City	State	Zip Code	Phone	Public/ Private	Type of Facility	Source of Materials	Method of Materials Collected
Absolute Waste Removal	David Massey	4005 7th Ave N	Clear Lake	IA	50428	(515) 400-2879	Private	Materials Recovery Facility, Processing Facility	Curbside Program, Multi-Family Unit Collection, Industrial/Institutional/ Commercial	Commingled, Source Separated
Adair County Landfill	DJ Luhrs	1645 IA-25	Menlo	IA	50164	(641) 743-8343	Public	Transfer Station, Recycling Collection Center	Drop-Off Locations	Commingled, Source Separated
Allamakee Solid Waste and Recycling	David Mooney	869 Hwy 9	Waukon	IA	52172	(563) 568-4806	Public	Citizens Convenience Center	Drop-Off Locations	Commingled, Source Separated
Area Recyclers/DMC Regional Waste Commission	Darven Kendall	1818 W Burlington Ave	Burlington	IA	52601	(319) 753-8126	Public	Recycling Collection Center, Drop-Off Location	Curbside Program, Drop-Off Locations, Industrial/Institutional/ Commercial	Source Separated
Audubon County Solid Waste Management Commission	Tami Anderson	1881 215th St	Audubon	IA	50025	(712) 563-3589	Public	Transfer Station	Curbside Program, Drop-Off Locations, Industrial/Institutional/ Commercial	Commingled
Bacon Recycling	Curtis Earl Bacon	123 Jackson St NE	Hopkinton	IA	52237	(319) 480-1956	Private	Recycling Collection Center, Materials Recovery Facility, Processing Facility	Drop-Off Locations, Industrial/Institutional/ Commercial	Data not provided, available, or considered private information
Boone County Landfill & Recycling	John Roosa	1268 224th Lane	Boone	IA	50036	(515) 433-0591	Public	Landfill, Recycling Collection Center	Curbside Program, Drop-Off Locations	Commingled
Buena Vista County Solid Waste & Recycling	Lori Dicks	1263 630th St	Storm Lake	IA	50588	(712) 732-7171	Public	Transfer Station, Materials Recovery Facility, Drop-Off Location	Curbside Program, Drop-Off Locations, Industrial/Institutional/ Commercial	Commingled, Source Separated
Butler County Solid Waste	Matt Ramker	25251 Hwy 3 East	Allison	IA	50602	(319) 267-2070	Public	Transfer Station, Recycling Collection Center, Materials Recovery Facility, Processing Facility, Drop-Off Location, Broker	Drop-Off Locations, Multi-Family Unit Collection	Source Separated

Facility Name	Contact Name	Street	City	State	Zip Code	Phone	Public/ Private	Type of Facility	Source of Materials	Method of Materials Collected
Carroll County Solid Waste Management Commission	Mary Wittry	19111 Kittyhawk Ave	Carroll	IA	51401	(712) 792-5001	Public	Landfill, Materials Recovery Facility, Drop-Off Location	Curbside Program, Drop-Off Locations, Multi-Family Unit Collection, Industrial/Institutional/ Commercial	Data not provided, available, or considered private information
Cass County Transfer Station	Brandi Mericle	65928 Jackson Rd	Atlantic	IA	50022	(712) 243-0990	Public	Transfer Station, Recycling Collection Center, Drop-Off Location	Drop-Off Locations	Source Separated
Cedar County Transfer Station	Gary L. Crock	1202 240th St	Tipton	IA	52772	(563) 886-6437	Public	Transfer Station	Drop-Off Locations	Commingled
Cedar Rapids Linn County Solid Waste Agency	Karmin McShane	1954 County Home Rd	Marion	IA	52302	(319) 777-2627	Public	Landfill, Citizens Convenience Center, Recycling Collection Center	Curbside Program, Drop-Off Locations, Multi-Family Unit Collection, Industrial/Institutional/ Commercial	Commingled
Cedar Valley Recycling & Transfer	John Baugus	811 Dearborn Ave	Waterloo	IA	50703	(319) 232-4150	Private	Recycling Collection Center, Processing Facility	Curbside Program, Industrial/Institutional/ Commercial	Commingled, Source Separated
Central Disposal	Todd Halbersma	21265 430th St	Lake Mills	IA	50450	(712) 204-0464	Private	Landfill	Drop-Off Locations	Commingled
City of Cedar Falls	Doyle Smith	1524 State St	Cedar Falls	IA	50613	(319) 273-8629	Public	Transfer Station, Recycling Collection Center	Drop-Off Locations	Source Separated
City of Council Bluffs	Tony Fiala	4441 Gifford Rd	Council Bluffs	IA	51501	(712) 890-5454	Public	Recycling Collection Center, Materials Recovery Facility, Processing Facility	Curbside Program, Drop-Off Locations	Commingled, Source Separated
City of Iowa City	Jennifer Jordan	3900 Hebl Ave SW	Iowa City	IA	50040	(319) 887-6160	Public	Landfill, Citizens Convenience Center, Recycling Collection Center, Drop-Off Location	Curbside Program, Drop-Off Locations, Multi-Family Unit Collection	Commingled, Source Separated
City of Muscatine Transfer Station	David Popp	1000 South Houser	Muscatine	IA	52761	(563) 263-9689	Public	Transfer Station, Drop-Off Location	Curbside Program, Drop-Off Locations	Commingled
City of Spencer	Mark White	3101 West 18th St	Spencer	IA	51301	(712) 580-7200	Public	Transfer Station	Curbside Program, Drop-Off Locations	Commingled
City of Waverly Recycling Center	Justin McGlaun	2800 5th Ave NW	Waverly	IA	50677	(319) 352-6247	Public	Recycling Collection Center	Curbside Program, Drop-Off Locations	Source Separated
Clinton Co. Area Solid Waste Agency	Brad Seward	4292 220th St	Clinton	IA	52732	(563) 243-4749	Public	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information

Facility Name	Contact Name	Street	City	State	Zip Code	Phone	Public/ Private	Type of Facility	Source of Materials	Method of Materials Collected
Cox Sanitation and Recycling Inc	Keya Cox	2226 335th St	North English	IA	52316	(319) 664-3025	Private	Citizens Convenience Center	Curbside Program, Drop-Off Locations, Industrial/Institutional/ Commercial	Source Separated
Crawford County Transfer Station	Chuck Ettleman	2176 Buffalo Rd	Denison	IA	51442	(712) 269-6519	Public	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Dubuque Metropolitan Area Solid Waste Agency	Kenneth Miller	101 Airborne Rd	Dubuque	IA	52003	(563) 589-4354	Public	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
East Bremer Regional Recycling Authority	De Ann Lahmann	300 Pleasant St	Sumner	IA	50674	(319) 939-4953	Public	Recycling Collection Center	Drop-Off Locations	Source Separated
East Central Iowa Council of Governments (ECICOG)	Penny Clayton	703 South 1st St	Estherville	IA	51334	(712) 362-7771	Public	Transfer Station, Recycling Collection Center	Curbside Program, Industrial/Institutional/ Commercial	Source Separated
Fayette County Recycling Center	Joan Swenka	18525 Lane Rd	Fayette	IA	52142	(563) 425-3037	Public	Recycling Collection Center, Drop-Off Location	Drop-Off Locations	Commingled
Floyd Mitchell Chickasaw Solid Waste Agency	Christian Fox	3354 330th St	Elma	IA	50628	(641) 982-4302	Public	Landfill	Drop-Off Locations, Multi-Family Unit Collection, Industrial/Institutional/ Commercial	Commingled, Source Separated
Greystone Logistics	Joe Carter	2601 Shoreline Dr	Bettendorf	IA	52722	(563) 332-0052	Private	Processing Facility, Recyclable Material Re-Manufacturer	Industrial/Institutional/ Commercial	Source Separated
Great River Regional Solid Waste Authority (GRRSWA)	Austin Banks	2092 303rd Ave	Fort Madison	IA	52627	(319) 372-6140	Public	Landfill, Citizens Convenience Center, Recycling Collection Center	Curbside Program, Drop-Off Locations, Multi-Family Unit Collection, Industrial/Institutional/ Commercial	Commingled, Source Separated
Grundy County Citizen Convenience Center	Chad Brown	20434 220th St	Grundy Center	IA	50638	(319) 824-6967	Public	Citizens Convenience Center, Recycling Collection Center	Drop-Off Locations	Source Separated
Guthrie County Transfer Station	Jotham Arber	2349 Jaguar Trail	Guthrie Center	IA	50115	(641) 747-3972	Public	Transfer Station, Recycling Collection Center	Curbside Program, Drop-Off Locations, Industrial/Institutional/ Commercial	Source Separated

Facility Name	Contact Name	Street	City	State	Zip Code	Phone	Public/ Private	Type of Facility	Source of Materials	Method of Materials Collected
Hardin County Solid Waste/Recycling	Susan K. Engelking	20482 M Ave	Eldora	IA	50627	(641) 939-5808	Public	Recycling Collection Center	Curbside Program, Drop-Off Locations, Multi-Family Unit Collection, Industrial/Institutional/ Commercial	Commingled, Source Separated
Harrison County Landfill	Tyler Hinkel	2812 Hwy 30	Logan	IA	51546	(712) 644-3093	Public	Landfill, Recycling Collection Center	Drop-Off Locations	Source Separated
Ida County Citizens Convenience Center	Justin Georg	2078 US Hwy 59	Ida Grove	IA	51445	(712) 369-1677	Public	Citizens Convenience Center	Curbside Program, Drop-Off Locations, Multi-Family Unit Collection, Industrial/Institutional/ Commercial	Source Separated
International Paper	Data not provided, available, or considered private information	2800 Dixon St	Des Moines	IA	50316	(515) 829-7423	Private	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Joe Brown Town & Country Sanitation LLC	Karen Brown	517 N DePot St	Knoxville	IA	50138	(641) 842-4170	Private	Recycling Collection Center, Materials Recovery Facility, Processing Facility, Drop-Off Location	Curbside Program, Drop-Off Locations, Multi-Family Unit Collection, Industrial/Institutional/ Commercial	Commingled, Source Separated
Jones County Transfer Station	Jack O'Brien	13859 Edinburgh Rd	Scotch Grove	IA	52310	(563) 487-5160	Public	Data not provided, available, or considered private information	Drop-Off Locations, Industrial/Institutional/ Commercial	Commingled, Source Separated
Kluesner Sanitation	Doug Miller	2372 180th Ave	Manchester	IA	52057	(563) 927-5977	Private	Transfer Station	Curbside Program, Drop-Off Locations, Multi-Family Unit Collection, Industrial/Institutional/ Commercial	Commingled, Source Separated
Kossuth County Transfer Station	William Rowland	2900 130th Ave	Burt	IA	50522	(515) 295-3320	Public	Transfer Station, Recycling Collection Center	Curbside Program, Drop-Off Locations, Industrial/Institutional/ Commercial	Data not provided, available, or considered private information
Landfill of North Iowa	Ryan Mitchell	15942 Killdeer Ave	Clear Lake	IA	50428	(641) 357-5452	Public	Landfill, Recycling Collection Center	Drop-Off Locations	Source Separated
Louisa Regional Solid Waste Transfer Station	Joellen Schantz	14048 70th St	Wapello	IA	52653	(319) 523-5271	Public	Transfer Station	Curbside Program	Commingled

Facility Name	Contact Name	Street	City	State	Zip Code	Phone	Public/ Private	Type of Facility	Source of Materials	Method of Materials Collected
Mahaska County Solid Waste	Joe Farris	2979 US-63	Oskaloosa	IA	52577	(515) 336-0354	Public	Landfill	Curbside Program, Multi-Family Unit Collection, Industrial/Institutional/ Commercial	Commingled
Marshall County Sanitary Landfill	Don Ballaltak	2313 Marshalltown Blvd	Marshalltown	IA	50158	(641) 752-0646	Public	Data not provided, available, or considered private information	Drop-Off Locations, Industrial/Institutional/ Commercial	Commingled, Source Separated
Mason City Recycling Center	Heather Eilering	15585 245th	Mason City	IA	50401	(641) 423-1531	Private	Recycling Collection Center, Recyclable Material Re-Manufacturer	Drop-Off Locations	Source Separated
Metro Recycling Facility	Cassie Riley	4185 SE Beisser Dr	Grimes	IA	50111	(515) 244-0021	Public	Materials Recovery Facility	Curbside Program, Drop-Off Locations, Industrial/Institutional/ Commercial	Commingled, Source Separated
Newton Sanitary Landfill	Mike Ward	403 W 4th St N	Newton	IA	50208	(641) 792-6622	Public	Landfill	Curbside Program, Drop-Off Locations, Multi-Family Unit Collection, Industrial/Institutional/ Commercial	Commingled
North Central Iowa Regional Solid Waste Agency	Donna Bice	2151 Gypsum Hollow Rd	Fort Dodge	IA	50501	(515) 955-2781	Public	Landfill, Recycling Collection Center	Curbside Program, Drop-Off Locations, Industrial/Institutional/ Commercial	Commingled, Source Separated
Northwest Iowa Area Solid Waste Agency (NWIASWA)	Larry Oldenkamp	4540 360th St	Sheldon	IA	51201	(712) 540-1697	Public	Landfill	Curbside Program, Drop-Off Locations	Commingled
Ottumwa-Wapello County Recycling Center	Janice Bain	2415 Emma St	Ottumwa	IA	52501	(641) 683-0685	Public	Materials Recovery Facility	Curbside Program, Drop-Off Locations, Multi-Family Unit Collection, Industrial/Institutional/ Commercial	Source Separated
Page County Landfill	Brian Ward	2032 N Ave	Clarinda	IA	51632	(712) 542-4215	Private	Landfill	Drop-Off Locations, Industrial/Institutional/ Commercial	Commingled
Plymouth County Solid Waste Agency	Kent Herbold	34898 150th St	Le Mars	IA	51031	(712) 260-2395	Public	Landfill, Transfer Station, Citizens Convenience Center, Recycling Collection Center, Materials Recovery Facility	Drop-Off Locations	Commingled

Facility Name	Contact Name	Street	City	State	Zip Code	Phone	Public/ Private	Type of Facility	Source of Materials	Method of Materials Collected
Pocahontas County Solid Waste Commission	Larry Northway	PO Box 114	Laurens	IA	50554	(712) 841-2449	Public	Transfer Station	Industrial/Institutional/ Commercial	Commingled
Pottawattamie County Recycling Center	Matthew Wyant	41911 Industrial Dr	Oakland	IA	51501	(712) 328-5792	Public	Transfer Station, Citizens Convenience Center, Recycling Collection Center	Drop-Off Locations	Source Separated
Quincy Recycle Paper, Inc.	Alan Schumacher	6281 N Gateway Dr	Marion	IA	52302	(319) 930-6332	Private	Processing Facility	Industrial/Institutional/ Commercial	Source Separated
REIC/Iowa County Landfill	Diane Yoder	3369 Hwy 6 Trail	Homestead	IA	52236	(319) 828-4943	Public	Landfill	Data not provided, available, or considered private information	Source Separated
Republic Services	Mike Metzger	901 Ingleside Dr SW	Cedar Rapids	IA	52404	(319) 730-2882	Private	Materials Recovery Facility, Processing Facility	Curbside Program, Multi-Family Unit Collection, Industrial/Institutional/ Commercial	Commingled, Source Separated
Sac County Solid Waste	Cliff Frohardt	2430 260th St	Sac City	IA	50583	(712) 662-4895	Public	Transfer Station, Recycling Collection Center	Drop-Off Locations	Source Separated
Schupan	Joseph	2742 E Market St	Des Moines	IA	50317	(651) 600-4695	Private	Transfer Station, Recycling Collection Center, Materials Recovery Facility, Processing Facility, Beverage Redemption Center, Broker	Curbside Program, Drop-Off Locations, Multi-Family Unit Collection, Industrial/Institutional/ Commercial	Commingled, Source Separated
Shelby County Solid Waste	Chris	1129 1200th St	Harlan	IA	51537	(712) 755-5954	Public	Transfer Station	Curbside Program, Drop-Off Locations, Industrial/Institutional/ Commercial	Source Separated
Sioux City Convenience Center	Mike Keeran	5800 28th St	Sioux City	IA	51108	(559) 417-9621	Public	Citizens Convenience Center	Curbside Program, Drop-Off Locations, Multi-Family Unit Collection, Industrial/Institutional/ Commercial	Commingled
South Central Iowa Sanitary Landfill	Marcia Bealer	2490 State Hwy 92	Winterset	IA	50273	(515) 776-8864	Public	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Van's Sanitation	Scott Vander Sluis	1553 18th St SW	Le Mars	IA	51031	(712) 548-4644	Private	Recycling Collection Center, Materials Recovery Facility, Processing Facility, Drop-Off Location	Curbside Program, Drop-Off Locations, Industrial/Institutional/ Commercial	Commingled, Source Separated

Facility Name	Contact Name	Street	City	State	Zip Code	Phone	Public/ Private	Type of Facility	Source of Materials	Method of Materials Collected
Waste Commission of Scott County	Bryce Stalcup	5640 Carey Ave	Davenport	IA	52804	(563) 381-1300	Public	Landfill, Citizens Convenience Center, Recycling Collection Center, Materials Recovery Facility, Processing Facility, Drop-Off Location	Curbside Program, Drop-Off Locations, Industrial/Institutional/ Commercial	Commingled
Winneshiek County Recycling/Landfill	Meghan Scheidel	2510 172nd Ave	Decorah	IA	52101	(563) 382-6514	Public	Recycling Collection Center, Processing Facility, Drop-Off Location	Drop-Off Locations	Source Separated

Appendix A

Recycling Facility Survey Responses Continued

Facility Name	Material Types Accepted	Tipping/ Processing Fee	Assessment of Fee*	Method of Payment for Operations*	Total Tons Recycled	Residuals	Annual Gross Revenue	Methods Handling Materials
Absolute Waste Removal	Plastic #1, Plastic #2, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Deposit glass beverage containers, Glass jars	Yes	Data not provided, available, or considered private information		Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Sort, Bale, Transfer materials (no other handling/processing), Store (minimum 1 week), Sell to brokers
Adair County Landfill	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #6 (expanded polystyrene foam), Plastic #7, Newspaper, Cardboard, Tin, Glass jars	No		Sale of materials/TS revenue	84	1%-5%	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Allamakee Solid Waste and Recycling	Plastic #1, Plastic #2, Newspaper, Cardboard, Non-deposit aluminum beverage cans, Steel, Non-deposit glass beverage containers	No		General property tax	171	6%-10%	$1 - $50,000	Sort, Bale, Sell to brokers
Area Recyclers/DMC Regional Waste Commission	Plastic #1, Plastic #2, Plastic #5, Deposit plastic beverage containers, Newspaper, Cardboard, Magazines/catalogs, Office paper, Junk mail, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Tin, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars	No		Sale of materials/monthly charge for household service	2413	1%-5%	$100,001 - $500,000	Bale, Store (minimum 1 week), Sell to brokers
Audubon County Solid Waste Management Commission	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers, Deposit glass beverage containers	No		Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Bacon Recycling	Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #7, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Aluminum, Tin, Steel, Metal hangers	Yes	Cost/lb		1721	0%	$100,001 - $500,000	Sort, Bale, Grind/chip, Store (minimum 1 week)
Boone County Landfill & Recycling	Plastic #1, Plastic #2, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard,	No		Funds & landfill tipping fees	631	1%-5%	Data not provided,	Transfer materials (no other handling/processing)

Facility Name	Material Types Accepted	Tipping/ Processing Fee	Assessment of Fee*	Method of Payment for Operations*	Total Tons Recycled	Residuals	Annual Gross Revenue	Methods Handling Materials
	Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars						available, or considered private information	
Buena Vista County Solid Waste & Recycling	Plastic #1, Plastic #2, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars	Yes	Cost/ton		1542	11%-15%	Data not provided, available, or considered private information	Sort, Bale, Sell to brokers
Butler County Solid Waste	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #6 (expanded polystyrene foam), Plastic #7, Plastic bags/plastic film, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars	No		Per capita & tipping fees	291	1%-5%	$1 - $50,000	Bale, Sell to brokers, Sell to end market
Carroll County Solid Waste Management Commission	Plastic #1, Plastic #2, Plastic #5, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars	Yes	Cost/ton		3494	6%-10%	$50,000 - $100,000	Sort, Bale, Store (minimum 1 week), Sell to brokers
Cass County Transfer Station	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #7, Plastic bags/plastic film, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel	No		Per capita & tipping fees	435	11%-15%	$1 - $50,000	Sort, Bale, Sell to brokers
Cedar County Transfer Station	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Newspaper, Cardboard, Magazines/catalogs, Office paper, Tin	No		General taxes	918	Data not provided, available, or considered	Data not provided, available, or considered	Data not provided, available, or considered private information

Facility Name	Material Types Accepted	Tipping/ Processing Fee	Assessment of Fee*	Method of Payment for Operations*	Total Tons Recycled	Residuals	Annual Gross Revenue	Methods Handling Materials
						private information	private information	
Cedar Rapids Linn County Solid Waste Agency	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #7, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Aseptic containers, Gable top containers, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars, Clothes, Upholstery, Fabrics, Blankets	Yes	Cost/ton		4620	6%-10%	$1 - $50,000	Bale, Transfer materials (no other handling/processing)
Cedar Valley Recycling & Transfer	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #7, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin	No		Sale of material	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Central Disposal	Plastic #1, Plastic #2, Cardboard, Magazines/catalogs, Office paper, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars	No		Internal funds	Data not provided, available, or considered private information	6%-10%	$1 - $50,000	Data not provided, available, or considered private information
City of Cedar Falls	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #6 (expanded polystyrene foam), Plastic #7, Plastic bags/plastic film, Newspaper, Cardboard, Office paper, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Tin, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars	No		Enterprise fund	1465	1%-5%	$1 - $50,000	Sort, Bale
City of Council Bluffs	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic bags/plastic film, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Aseptic containers, Gable top containers, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers, Non-deposit glass beverage containers, Glass jars	Yes	Cost/ton		1619	16%-20%	$100,001 - $500,000	Sort, Bale, Sell to brokers

Facility Name	Material Types Accepted	Tipping/ Processing Fee	Assessment of Fee*	Method of Payment for Operations*	Total Tons Recycled	Residuals	Annual Gross Revenue	Methods Handling Materials
City of Iowa City	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #7, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Aseptic containers, Gable top containers, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars, batteries	No		Landfill tipping fees	1148	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
City of Muscatine Transfer Station	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #7, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Deposit glass beverage containers, Non-deposit glass beverage containers	No		Residential fee	116	1%-5%	Data not provided, available, or considered private information	Transfer materials (no other handling/processing)
City of Spencer	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #7, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars	No		Landfill tipping fees	1582	6%-10%	$1 - $50,000	Data not provided, available, or considered private information
City of Waverly Recycling Center	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (expanded polystyrene foam), Plastic #7, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars, used oil, Christmas light strands, electronics	No		User fee based	838	Data not provided, available, or considered private information	$1 - $50,000	Transfer materials (no other handling/processing), Sell to brokers
Clinton Co. Area Solid Waste Agency	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #7, Deposit plastic beverage containers, Newspaper,	No		Landfill tipping fees	2293	Data not provided, available, or	Data not provided, available, or	Data not provided, available, or considered private information

Facility Name	Material Types Accepted	Tipping/ Processing Fee	Assessment of Fee*	Method of Payment for Operations*	Total Tons Recycled	Residuals	Annual Gross Revenue	Methods Handling Materials
	Cardboard, Boxboard, Magazines/catalogs, Office paper, Junk mail, Colored paper, Kraft paper/kraft paper bags, Aseptic containers, Gable top containers, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars					considered private information	considered private information	
Cox Sanitation and Recycling Inc	Plastic #1, Plastic #2, Deposit plastic beverage containers, Newspaper, Cardboard, Magazines/catalogs, Office paper, Books, Junk mail, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Glass jars	No		Sale of materials	696	11%-15%	$100,001 - $500,000	Sort, Bale, Sell to brokers
Crawford County Transfer Station	Plastic #1, Plastic #2, Plastic #5, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Dubuque Metropolitan Area Solid Waste Agency	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	505	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
East Bremer Regional Recycling Authority	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #7, Newspaper, Cardboard, Magazines/catalogs, Office paper, Non-deposit aluminum beverage cans, Tin	No		Sale of materials	437	1%-5%	$1 - $50,000	Bale, Sell to brokers
East Central Iowa Council of Governments (ECICOG)	Plastic #1, Plastic #2, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Tin	No		Sale of materials/TS revenue	312	1%-5%	$1 - $50,000	Sort, Bale, Store (minimum 1 week), Sell to end market
Fayette County Recycling Center	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #7, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Tin	Yes	Per capita		552	6%-10%	$50,000 - $100,000	Sort, Bale, Store (minimum 1 week), Sell to brokers

Facility Name	Material Types Accepted	Tipping/ Processing Fee	Assessment of Fee*	Method of Payment for Operations*	Total Tons Recycled	Residuals	Annual Gross Revenue	Methods Handling Materials
Floyd Mitchell Chickasaw Solid Waste Agency	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #7, Newspaper, Cardboard, Magazines/catalogs, Office paper, Books, Junk mail, Kraft paper/kraft paper bags, Tin, Steel, Metal hangers	Yes	Cost/ton		14	6%-10%	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Greystone Logistics	Plastic #2, Plastic #5	No		Produce end product	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Great River Regional Solid Waste Authority (GRRSWA)	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #7, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers, Non-deposit glass beverage containers, Glass jars	No		Operating fund	805	6%-10%	$1 - $50,000	Bale, Transfer materials (no other handling/processing), Sell to brokers
Grundy County Citizen Convenience Center	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #7, Newspaper, Cardboard, Magazines/catalogs, Aluminum, Tin, Steel	No		General taxes	26	1%-5%	$1 - $50,000	Sort, Bale, Transfer materials (no other handling/processing), Sell to brokers, Sell to end market
Guthrie County Transfer Station	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #6 (expanded polystyrene foam), Plastic #7, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Colored paper, Kraft paper/kraft paper bags, Tin, Steel, Metal hangers	No		Per capita & tipping fees	424	1%-5%	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Hardin County Solid Waste/Recycling	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #6 (expanded polystyrene foam), Plastic #7, Plastic bags/plastic film, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers, Glass jars	Yes	Cost/person /year		1076	6%-10%	$50,000 - $100,000	Sort, Bale, Store (minimum 1 week), Sell to brokers
Harrison County Landfill	Plastic #1, Plastic #2, Plastic #3, Plastic #5, Plastic #7, Plastic bags/plastic film, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office	No		Assessments	386	6%-10%	$1 - $50,000	Bale, Transfer materials (no other handling/processing), Store (minimum 1 week), Sell to brokers

Facility Name	Material Types Accepted	Tipping/ Processing Fee	Assessment of Fee*	Method of Payment for Operations*	Total Tons Recycled	Residuals	Annual Gross Revenue	Methods Handling Materials
	paper, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars, Clothes, Upholstery, Fabrics, Blankets							
Ida County Citizens Convenience Center	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #7, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Aseptic containers, Gable top containers, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers	No		Sale of materials	579	Data not provided, available, or considered private information	$1 - $50,000	Sort, Bale, Transfer materials (no other handling/processing)
International Paper	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Sort, Bale, Sell to end market
Joe Brown Town & Country Sanitation LLC	Plastic #1, Plastic #2, Plastic #5, Newspaper, Cardboard, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Metal hangers, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars	No		Self-Funded	960	<1%	Data not provided, available, or considered private information	Sort, Bale
Jones County Transfer Station	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #7, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel	No		TS tipping fees	441	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Kluesner Sanitation	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #7, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel	Yes	Cost/ton		720	1%-5%	$100,001 - $500,000	Sort, Bale, Grind/chip, Store (minimum 1 week), Sell to brokers

Facility Name	Material Types Accepted	Tipping/ Processing Fee	Assessment of Fee*	Method of Payment for Operations*	Total Tons Recycled	Residuals	Annual Gross Revenue	Methods Handling Materials
Kossuth County Transfer Station	Plastic #1, Plastic #2, Plastic #3, Newspaper, Cardboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Non-deposit glass beverage containers, Glass jars	No		Landfill tipping fees	552	6%-10%	Data not provided, available, or considered private information	Transfer materials (no other handling/processing)
Landfill of North Iowa	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #7, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Junk mail, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers, Usable furnishing and building materials	No		Landfill tipping fees	51	6%-10%	$1 - $50,000	Transfer materials (no other handling/processing)
Louisa Regional Solid Waste Transfer Station	Plastic #1, Plastic #2, Newspaper, Cardboard, Magazines/catalogs, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Non-deposit glass beverage containers, Glass jars	No		Landfill tipping fees	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Mahaska County Solid Waste	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic bags/plastic film, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Junk mail, Colored paper, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers, Non-deposit glass beverage containers, Glass jars	No		Landfill tipping fees	52	6%-10%	$1 - $50,000	Transfer materials (no other handling/processing), Sell to brokers
Marshall County Sanitary Landfill	Plastic #1, Plastic #2, Plastic #5, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars	Yes	Cost/person		Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Mason City Recycling Center	Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Junk mail, Colored paper, Kraft paper/kraft paper bags, Non-deposit aluminum beverage cans, Tin	No		Insulation sales	Data not provided, available, or considered private information	1%-5%	$1 - $50,000	Sort, Bale, Grind/chip, Sell to brokers
Metro Recycling Facility	Plastic #1, Plastic #2, Plastic #3, Plastic #5, Deposit plastic beverage containers, Newspaper, Cardboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Gable top containers,	Yes	Cost/ton		Data not provided, available, or considered	Data not provided, available, or considered	Data not provided, available, or considered	Data not provided, available, or considered private information

Facility Name	Material Types Accepted	Tipping/ Processing Fee	Assessment of Fee*	Method of Payment for Operations*	Total Tons Recycled	Residuals	Annual Gross Revenue	Methods Handling Materials
	Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum				private information	private information	private information	
Newton Sanitary Landfill	Plastic #1, Plastic #2, Plastic #4, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars	No		Built into hauler contract	580	Data not provided, available, or considered private information	$1 - $50,000	Data not provided, available, or considered private information
North Central Iowa Regional Solid Waste Agency	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #7, Plastic bags/plastic film, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars, Rigid plastics	Yes	Cost/ton		1273	21%+	$100,001 - $500,000	Sort, Bale, Store (minimum 1 week), Sell to brokers
Northwest Iowa Area Solid Waste Agency (NWIASWA)	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #7, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Aseptic containers, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel	No		Landfill tipping fees	2760	6%-10%	Data not provided, available, or considered private information	Transfer materials (no other handling/processing)
Ottumwa-Wapello County Recycling Center	Plastic #1, Plastic #2, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars	No		Sale of material, landfill tipping fees, other	1840	6%-10%	$3,000,001 - $4,000,000	Sort, Bale, Store (minimum 1 week), Sell to brokers, Sell to end market
Page County Landfill	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Deposit plastic beverage containers, Newspaper, Cardboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum	No		Landfill tipping fees	2050	16%-20%	Data not provided, available, or considered	Sort, Bale, Sell to brokers

Facility Name	Material Types Accepted	Tipping/ Processing Fee	Assessment of Fee*	Method of Payment for Operations*	Total Tons Recycled	Residuals	Annual Gross Revenue	Methods Handling Materials
	beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars						private information	
Plymouth County Solid Waste Agency	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Junk mail, Colored paper, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Pocahontas County Solid Waste Commission	Plastic #1, Cardboard, Tin	No		Municipality assessment	204	1%-5%	$1 - $50,000	Transfer materials (no other handling/processing)
Pottawattamie County Recycling Center	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #7, Newspaper, Cardboard, Magazines/catalogs, Office paper, Books, Junk mail, Aluminum, Tin, Steel, Metal hangers	No		General taxes	137	11%-15%	$1 - $50,000	Bale, Transfer materials (no other handling/processing), Sell to end market
Quincy Recycle Paper, Inc.	Plastic #1, Plastic #2, Plastic #5, Plastic bags/plastic film, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Aseptic containers, Gable top containers, Aluminum, Tin, Steel, Metal hangers, Non-deposit glass beverage containers, Glass jars	No		Sale of materials	46000	6%-10%	Data not provided, available, or considered private information	Bale, Grind/chip, Sell to brokers, Sell to end market
REIC/Iowa County Landfill	Newspaper, Cardboard, Boxboard, Magazines/catalogs, Aluminum, Tin, Steel, Metal hangers, Glass jars, Clothes, Fabrics, Blankets	No		Landfill tipping fees	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Republic Services	Plastic #1, Plastic #2, Newspaper, Cardboard, Magazines/catalogs, Office paper, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin	Yes	Data not provided, available, or considered private information		Data not provided, available, or considered private information	16%-20%	Data not provided, available, or considered private information	Sort, Bale, Sell to end market
Sac County Solid Waste	Plastic #1, Plastic #2, Plastic #5, Deposit plastic beverage containers, Newspaper, Cardboard, Magazines/catalogs, Office paper, Junk mail, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars	No		Assessments	487	11%-15%	Data not provided, available, or considered private information	Transfer materials (no other handling/processing)

Facility Name	Material Types Accepted	Tipping/ Processing Fee	Assessment of Fee*	Method of Payment for Operations*	Total Tons Recycled	Residuals	Annual Gross Revenue	Methods Handling Materials
Schupan	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #6 (expanded polystyrene foam), Plastic #7, Plastic bags/plastic film, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars	Yes	Operation cost, quality of material, market conditions		Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Sort, Bale, Grind/chip, Transfer materials (no other handling/processing), Store (minimum 1 week), Sell to brokers, Sell to end market
Shelby County Solid Waste	Plastic #1, Plastic #2, Plastic #5, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers, Deposit glass beverage containers, Non-deposit glass beverage containers, Glass jars	No		Per capita & tipping fees	505	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Sioux City Convenience Center	Plastic #3, Plastic #4, Plastic #5, Newspaper, Cardboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel	No		Monthly charge for household service	4556	1%-5%	$50,000 - $100,000	Transfer materials (no other handling/processing)
South Central Iowa Sanitary Landfill	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information
Van's Sanitation	Plastic #1, Plastic #2, Plastic #3, Plastic #4, Plastic #5, Plastic #6 (non-foam), Plastic #7, Deposit plastic beverage containers, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Aseptic containers, Gable top containers, Deposit aluminum beverage cans, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Metal hangers	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information	Data not provided, available, or considered private information

Facility Name	Material Types Accepted	Tipping/ Processing Fee	Assessment of Fee*	Method of Payment for Operations*	Total Tons Recycled	Residuals	Annual Gross Revenue	Methods Handling Materials
Waste Commission of Scott County	Plastic #1, Plastic #2, Plastic #5, Newspaper, Cardboard, Boxboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Aseptic containers, Gable top containers, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Non-deposit glass beverage containers, Glass jars	Yes	Cost/ton & recycling markets		33400	15%-18%	$4,000,001+	Sort, Bale, Sell to brokers, Sell to end market
Winneshiek County Recycling/Landfill	Plastic #1, Plastic #2, Newspaper, Cardboard, Magazines/catalogs, Office paper, Books, Junk mail, Colored paper, Kraft paper/kraft paper bags, Non-deposit aluminum beverage cans, Aluminum, Tin, Steel, Non-deposit glass beverage containers, Glass jars, Clothes	No		Sale of materials/taxes	2480		$100,001 - $500,000	Sort, Bale, Sell to brokers, Sell to end market

**Asking of these two questions was determined by the answer of the Tipping/Processing Fee question. If yes, Assessment of Fee column applies. If no, Method of Payment for Operations column applies.*

Appendix B

Material Destination Facilities

Facility Name	State	Number of Facilities Sending Material to this Facility for Management
Advanced Drainage Systems	IA	1
Alter Metal Recycling	IA	7
American Fibers	IA	1
Can Shed	IA	1
Carroll County Landfill	IA	3
Cedar Falls Transfer Station	IA	1
Cedar Rapids MRF	IA	1
Cedar River Paper Mill	IA	1
Clarion Packaging	IA	1
Clayton County Recycling	IA	1
Clayton Salvage	IA	1
Cox Sanitation	IA	1
Dittmer Recycling	IA	2
Estherville Iron & Metal	IA	1
Green Star	IA	1
International Paper	IA	5
Jendro Sanitation	IA	1
Lakeside Recycling	IA	1
Mason City Recycling	IA	3
Mason's	IA	1
MDK	IA	1
Metro Area Redemption	IA	1
Metro Waste Authority	IA	5
Midwest Sanitation	IA	1
MIW	IA	1
Ottumwa/Wapello Recycling Center	IA	1
Plastic Recycling of Iowa Falls	IA	1
Quandt Salvage	IA	1
Quincy Recycle	IA	2
Republic Services	IA	5
Rural Iowa Waste Management	IA	1
Schau Recycling	IA	1
Schupan	IA	1
Siouxland Recovery	IA	1

Facility Name	State	Number of Facilities Sending Material to this Facility for Management
Waste Commission of Scott County	IA	3
Waste Management	IA	1
Waste Management Recycling	IA	1
Weikert	IA	1
Wemiga Waste	IA	1
Wilken Auto Salvage	IA	2
Winneshiek County Recycling	IA	1
Constellium	AL	1
Green Bay Packaging	AR	1
American Fiber Services	GA	2
GFL	IL	1
Midland Davis	IL	2
Quincy Recycle	IL	11
Cascades Moulded Pulp	IN	1
Gary Works	IN	1
Pratt Industries	IN	1
US Steel Corp	IN	1
Berea Novelis	KY	1
Clean Tech Recycling	MI	1
Liberty Paper	MN	1
Minneapolis MRF (Waste Management)	MN	2
Ripple Glass	MO	6
Envision Plastics	NC	1
Firstar Fiber	NE	2
Green Fiber	NE	2
International Paper	NE	2
Thrift World	NE	2
The Conti Group	NJ	1
The Conti Group	NY	1
Advanced Drainage Systems	OH	1
Prime Recycling Solutions	OH	1
Strategic Materials	TX	1
Beloit Box Board	WI	1
Biron Mill	WI	1
BlackBridge Investments	WI	1
GP Harmon Recycling	WI	1
Green Bay Packaging	WI	2
Strategic Materials	WI	1

Facility Name	State	Number of Facilities Sending Material to this Facility for Management
Town and Country Sanitation	WI	1
Quincy Recycle	WI	1