

2020

SOUTHEAST NEBRASKA HUB & SPOKE RECYCLING PROJECT

Prepared by

Nebraska Recycling Council



**NEBRASKA
RECYCLING
COUNCIL**

SOUTHEAST NEBRASKA HUB AND SPOKE RECYCLING PROJECT

The Southeast Nebraska Hub and Spoke Recycling Project was funded by a grant from the Nebraska Department of Environment and Energy. The project included twenty counties from the southeast including Butler, Cass, Clay, Fillmore, Gage, Hamilton, Jefferson, Johnson, Lancaster (excluding the City of Lincoln), Nemaha, Nuckolls, Otoe, Pawnee, Polk, Richardson, Saline, Saunders, Seward, Thayer, and York. Research, meetings, and assessments of recycling programs and access were conducted by the Nebraska Recycling Council.

The Nebraska Recycling Council (NRC) is a statewide, member-based 501(c)(3) nonprofit supporting collaboration between communities, businesses, and solid waste and recycling industries to improve waste management, recycling collection, and infrastructure. Our mission is to maximize the economic and environmental benefits of resource recovery in Nebraska.



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The Nebraska Recycling Council graciously thanks the commitment of the clerks and Public Works staff that were instrumental in completing this assessment as well as Haley Nolde, NRC intern, whose work on this project was critical in its completion.

HUB AND SPOKE RECYCLING: AN OVERVIEW

Successful recycling programs depend on efficient collection and processing of materials. Often, especially in rural areas, success is achieved by sharing resources. Hub and spoke recycling as a concept was developed to provide the most efficient means of gathering and processing recyclables from both a financial and operational perspective.

The hub and spoke model creates or further develops regional recycling centers that serve as the “hub” (or collection point) and encourages smaller communities, or “spokes,” to deliver their collected material to these hubs. The hubs invest in equipment and infrastructure needed to create and store the high-density bales that re-manufacturing markets require, while spokes invest in collection trailers or containers and transportation to the hub.

In rural communities, this model allows municipalities to pool recyclable material to reduce the need to store material for long periods of time or sell partial loads to markets, which would lower the value of the materials, reducing any return or making delivery more costly. Hub and spoke recycling requires less start up operational costs than conventional recycling programs as costs are shared between communities.

Regional recycling partnerships may not be the best option in areas that are already well-served or over-served, such as by either private haulers providing recycling services or established recycling programs. It is not the goal of hub and spoke recycling to create programs that are competing for a limited volume of material, but to create programs that work to capture the region’s recyclables.

The advantages for hub and spoke regional recycling can include job creation, landfill tip fee savings, material sales revenue at hubs, cost avoidance for spokes, transportation efficiencies, and pleased residents. In a 2020 study by the Recycling Partnership, 85% of respondents were supportive of recycling with 83% that believe recycling should be made a priority.¹ Recycling is often seen by residents as not only a beneficial service, but an essential service that improves the community.

Hub and spoke partnerships can stretch public funds for greater benefit. On a county level, funding can be strategically directed to foster regional partnerships as opposed to creating competition for limited materials. Local grants that fund recycling programs such as the Waste Reduction and Recycling Grant from the Nebraska Department of Environment and Energy (NDEE), Recycling Equipment Grants dispersed by the Nebraska Recycling Council, and grants from the Nebraska Environmental Trust could give priority to projects that include collaboration with other communities or regional partnerships. See Appendix C for a full list of regional and national funding opportunities.

¹ The Recycling Partnership. “Americans Strongly Believe in Recycling.” <https://recyclingpartnership.org/americans-strongly-believe-in-recycling/>. 2020

RECYCLING PROGRAMS IN SOUTHEAST NEBRASKA

As part of this assessment, each incorporated municipality in 20 southeast counties were surveyed to include Butler, Cass, Clay, Fillmore, Gage, Hamilton, Jefferson, Johnson, Lancaster, Nemaha, Nuckolls, Otoe, Pawnee, Polk, Richardson, Saline, Saunders, Seward, Thayer, and York. The City of Lincoln in Lancaster County was excluded from this assessment. The survey was sent to 168 incorporated municipalities with connected phone lines and published emails on February 14th, 2020. Follow up phone calls began March 2nd, and respondent answers were logged through the survey. See Appendix B for the full survey.

SOUTHEAST DATA

At the time of this report, 113 of 168 incorporated had responded to the survey. The survey assessed municipal solid waste management models, existing equipment and infrastructure, hauler territories, proximity to markets, residential trash and recycling budgets, community will and motivated stakeholders, contamination, composting availability, and history of recycling.

Many communities differed in recycling terminology. Community drop off containers are frequently referred to as trailers, recycling dumpster, or recycling centers. For the purpose of this report and clarified within the survey, drop off containers are referred to as trailers and recycling centers are specific locations where material is baled or transferred to a processing center or material recovery facility, herein referred to as MRF.

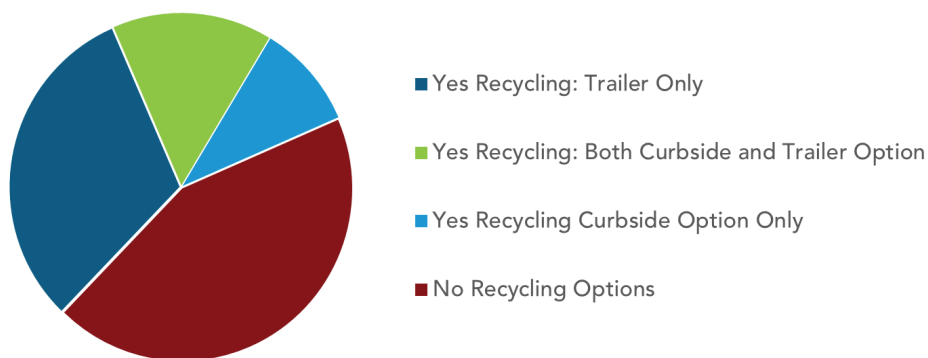
Recycling Access and Response

Over half (56.6%) of southeast Nebraska municipalities provide one or more recycling options to their residents; within the communities that offer recycling, 56% only provide a drop off container (often called a trailer, dumpster, or recycling center), 17% offer only curbside pick-up that residents subscribe to through their waste provider, and 27% provide both options. Recycling availability is highest within 29.5 miles of a recycling center or MRF.

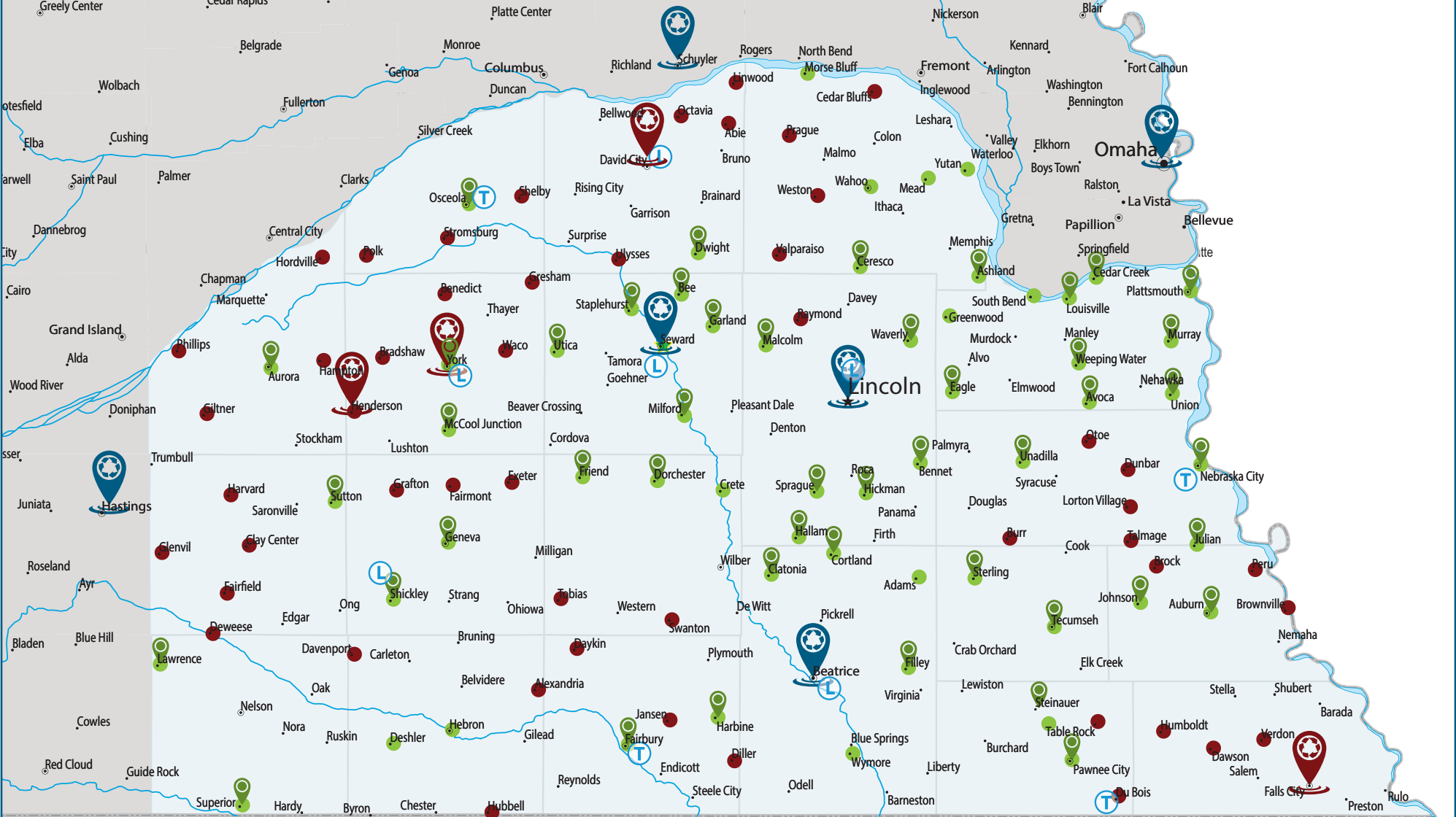
Responding city officials were asked to assess their community's motivation to recycle based on community feedback as well as level of contamination, based on reports from their hauler or observed from their maintenance technician. Where recycling was available, 78% of respondents said their residents were highly motivated or somewhat motivated to recycle. 22% were unsure on motivation and no official stated that residents were unmotivated to recycle. Responses to contamination were more varied, indicating threats to the community's recycling program. Only 25% of municipal officials responding to the survey stated their recycling was somewhat or very clean. 14% stated the community's recycling was somewhat or very contaminated. 60% were unsure on whether their material intake was contaminated or not, which could have implications on the success of the program overall.

Seven southeast communities have one or more recycling centers with recycling equipment to bale and send to end markets or MRFs. Four are currently not operating due to a variety of barriers, including access to markets and equipment issues. Challenges and recommendations will be detailed in the upcoming sections.

Graph 1. Distribution of Recycling Options in Southeast Nebraska



RECYCLING AVAILABILITY IN SOUTHEAST NEBRASKA



MAP KEY



Operating Recycling Center



Non-operating Recycling Center



Recycling Not Available



Recycling Available



Recycling Trailer



 Transfer Station



L Landfill

Figure 1: Recycling Availability

Currently Operating Recycling Centers

Within the 20 counties assessed in southeast Nebraska, there are eight recycling centers equipped to accept residential and commercial recyclable materials. Only three communities have recycling centers that are currently accepting materials.

Within the City of Lincoln, two recycling centers are operating: Green Quest and Recycling Enterprises.

The City of Beatrice owns the recycling facility and contracts with Sanitary Garbage to operate it. The company services the recycling for the majority of Gage County. Of the six responding communities from Gage County, all reported having recycling service, either in the form of a trailer or curbside pickup.

The City of Seward operates a small recycling center that collects from the city residents and commercial businesses as well as drop off collection from residents outside of the city. The city operates the recycling center as a public service. At the time of this report, it is not expanding service to neighboring communities.

Recycling availability is highest within 29.5 miles of a recycling center or material recovery facility

Not Currently Operating Recycling Centers

David City in Butler County operated as a hub for Butler communities but recently suspended recycling services due to an inability to sell the stockpiled materials at a rate that was within budget for the community after the price of materials fluctuated too steeply. The city owns and operates the facility and accepted plastics #1 and #2, aluminum, tin, cardboard, and paper.

The recycling center in Falls City is owned and operated by a private waste management company, Hamilton Recycling and Disposal. Due to equipment failure, limited staffing, and complications from the COVID-19 pandemic, the facility has not operated recycling services since December 2019. Management plans to return to recycling in the latter half of 2020.

The York recycling center has been nonoperational since the beginning of 2019. The nonprofit MOSAIC operated the site as an employment opportunity for adults with disabilities. The recycling center is owned by the City of York, situated next to the city-owned landfill. Prior to its closure, the York recycling center acted as a hub for 16 communities surrounding the city. After MOSAIC was no longer able to continue its operation of the recycling center, very few of the spoke communities have been able to access recycling. According to the York city manager, Joe Frei, the facility is available to lease and the equipment is still functioning and intact.

Burton Enterprises is a private hauler operating a facility in Henderson, in York County. Several communities in Fillmore, York, and Thayer counties established an arrangement with Burton Enterprises after the closure of the York recycling center. Burton Enterprises is a small operation and has experienced challenges in storing and selling the material. It has suspended collection in all but four communities.

Solid Waste Management Options

This assessment requested information on whether the residents of each municipality had the option of curbside garbage collection, and if so, whether this service was operated by the municipality, if the village or city contracted with a private hauler, or if residents subscribed to a hauler of their choosing. The availability of curbside garbage collection and the method in which the village or city manages solid waste collection has implications in the availability of recycling options.

Of the responding communities:

- 54 contracted garbage collection with a private hauler.

23 of these municipalities with a private contract utilized the hauler for recycling collection, either with a curbside option or by managing the trailer.

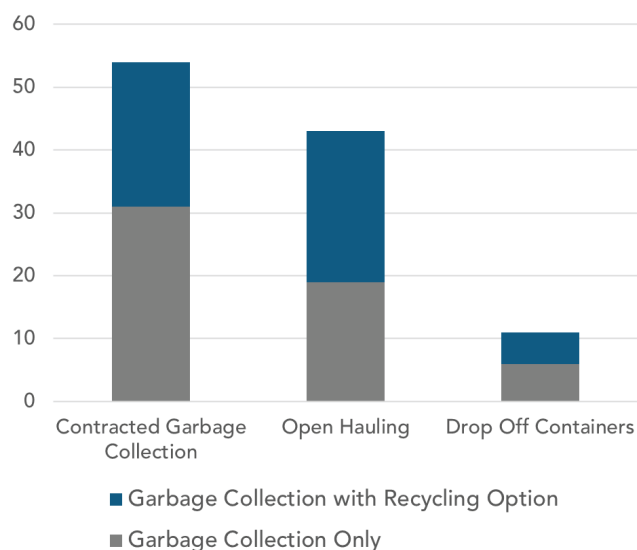
- 43 allowed open hauling and residents subscribed to solid waste collection on their own.

24 of these municipalities with open hauling also had recycling options operated by the hauler.

- 11 did not offer curbside pickup or indicated that any haulers operated in the area but instead had a community dumpster for garbage collection. These dumpsters were serviced by a private hauler.

5 of these communities with no curbside option for MSW collection also had a recycling trailer, usually serviced by the same hauler or was hauled to a processing center by a maintenance technician.

Graph 2. Municipal Solid Waste Collection Methods with Recycling Options



Given these figures, the most significant determining factors that influence access to recycling are based on the hauler operating in the region of the municipality, as well as the municipality's proximity to a processing center. As can be seen from Figure 1, the counties with the greatest number of municipalities with access to recycling are closest to regional MRFs and large, stable recycling centers, including Cass, Gage, Lancaster, Otoe, Saline, Saunders, and Seward.

Excluding the City of Lincoln, 37 waste management companies were reported operating in the southeast region (see Table 1). 18 of these 37 offer recycling services. 30% of trailers are maintained by the municipality, with a maintenance technician, village board member, or a volunteer hauling the trailer to the processing center.

Table 1. Recycling Haulers in Southeast Nebraska by County

County	Recycling Provider	Communities Served
Butler	Waste Connections	David City
Cass	Ashland Disposal Service	Ashland
	Cass County Refuse	Eagle, Avoca, South Bend
	Gretna Sanitation	Cedar Creek
	Papillion Sanitation	Plattsmouth, Union, Louisville
	Premier Waste Solutions	Plattsmouth, Murray,
Clay	Burton Enterprises	Sutton
	Woodwards	Fairfield, DeWeese, Glenvil
Fillmore	Burton Enterprises	Exeter, Fairmont, Geneva, Grafton, Shickley
Gage	Sanitary Garbage	Filley, Cortland
	Temps Disposal	Wymore
	Von Busch	Beatrice

Gage cont.	Waste Connections	Adams
Hamilton	Mid-Nebraska Disposal	Aurora
Lancaster	Lancaster County Waste	Malcolm
	Uribe	Hallam, Sprague, Bennet
Nemaha	American Recycling and Sanitation	Nebraska City, Auburn, Johnson, Julian
Nuckolls	Woodwards	Lawrence
Otoe	Papillion Sanitation	Unadilla, Otoe
Polk	Waste Connections	Ainsworth
Richardson	Falls City Sanitation	Humboldt
Saline	Lancaster County Waste	Friend
	The Garbage Company	Crete
	Waste Connections	Dorchester, Friend
Saunders	Gretna Sanitation	Yutan
	Papillion Sanitation	Ashland
	Waste Connections	Ceresco, Wahoo, Mead
Seward	Lancaster County Waste	Seward
	Uribe	Seward, Garland, Milford
Thayer	Burton Enterprises	Hebron
	Sanitary Garbage	Alexandria
	The Garbage Company	Deshler, Davenport
	Woodwards	Hebron
York	Burton Enterprises	Henderson
	Kopchos Sanitation	York

RECYCLING AND MUNICIPAL SOLID WASTE BUDGETING AND RESOURCES

Hauler Agreements

For municipalities that contract with a single hauler for residential garbage collection, the average cost per household is approximately \$15.27 per month. The median cost is \$15.00 (n=29). For contracted curbside garbage with recycling included, the average cost is \$16.19 per month. The median cost is \$13.00 (n=7).

Pricing for curbside garbage collection with recycling has more significant variation than a contract for garbage collection alone. Contracted recycling collection may have lower costs if a community is close to a recycling center or MRF, which reduces the cost of freight. Costs may be higher or lower depending on the size of the community and the frequency of service.

Budgeting for a Recycling Trailer

Within communities that managed their recycling trailer through a hauler, the average cost of service was \$2,775 annually, with a median cost of \$3,000. The average cost to have a trailer picked up was

Though communities with open hauling MSW collection have slightly greater access to curbside recycling, they may be less likely to subscribe to this option as the costs associated with subscription-based curbside recycling collection is often much higher than if the community were to contract collection.

\$200, with a median cost of \$165. The majority of the trailers were serviced twice a month, up to every six weeks with the longest time between service at 3-4 months.

Budgets for managing recycling trailers varied significantly. For communities located near a recycling center or MRF, many opted to haul the trailer without a privately operated waste professional, assigning the task to municipal employees or in some cases, a community volunteer or board member. Some communities creatively applied their budget to combat contamination. For example, the village of Deshler in Thayer County paid a small annual stipend of \$600 to a volunteer to collect and review recyclables at the trailer during open operating times during the weekends.

County Support

Many of the communities surveyed relied on the county and various agencies for special recycling events, including household hazardous waste (HHW), appliances, scrap metal, electronics, and tires. Many of the counties relied on Resource, Conservation, and Development (RC&D) agencies for support in grant writing and administration of these events, which generally occur once a year or may be shared across counties.

County support varies considerably and has a significant impact on recycling availability within each county. For counties with fewer resources or capacity for recycling and municipal solid waste support, these counties often partner with a government agency or nonprofit to provide annual recycling or disposal events for residents.

Nonprofit partnership

Cass County has been a long supporter of recycling programming, beginning in 2008 when county commissioners were awarded a grant for the purchase of recycling trailers that were to be shared between communities. Since that time and with the help of Keep Cass County Beautiful, several communities have acquired their own trailers so that moving the original grant-purchased trailers is no longer necessary.

Keep Nebraska Beautiful Affiliates have played a critical role in recycling and litter management. In the southeast region, affiliates include Keep Lincoln/Lancaster Beautiful, Keep Beatrice Beautiful, Keep Nebraska City Beautiful, Keep Cass County Beautiful, and the Grand Island Area Clean Community System. These affiliates have supported and promoted grant opportunities and unique clean up days for specific materials collections.

Resource, Conservation, & Development Councils

Many counties partnered with a Resource, Conservation & Development (RC&D) council to host one to two recycling or clean up events every one to two years. Of the responding counties, Cass, Clay, Fillmore, Johnson, Nuckolls, and Thayer reported robust support from the Five Rivers RC&D, particularly regarding annual household hazardous waste and electronics recycling. While the electronic recycling event is irregular, household hazardous waste collection is a yearly event in each county.

Government Agencies

Two government agencies provided strong support for the northern and central parts of the region that are outside the RC&Ds region. The Four Corners Health Department serves Polk, Butler, York, and Seward counties. The agency provides two household hazardous waste collection events each year in two alternating counties. They are also available to answer questions on where to take household hazardous waste at all times during the year.

The Saline/Seward County Solid Waste Management Agency is a unique agency developed to implement a Solid Waste Management Plan and to coordinate resources to fulfill responsibilities under the Waste Management Act within the two counties through an interlocal agreement. The organization hosts an annual cleanup day that includes appliances and electronic recycling. Depending on grant funding, hazardous materials or tires are accepted.

Uniquely, the Saline/Seward County Solid Waste Management Agency administers a reimbursement program for recycling projects and the expense of managing a recycling drop off container. Currently, participating communities are reimbursed at 100% for their recycling expenses, if receipts are brought to quarterly meetings.

State Programs

Many communities were able to offset recycling costs or meet responsible waste management goals through various state supported programs. Below is a brief description of each program.

Tire Recycling

Several communities took advantage of the NDEE Scrap Tire Management Grants which assists in financing scrap tire programs and projects, such as partial payment for tire-derived products or crumb rubber, collection site cleanups, equipment to shred, grind, and process scrap tires or cost-sharing for these efforts. Most counties hold tire recycling events every year or every other year. The Village of Steinauer is currently applying for reimbursement for crumb rubber. The grant has made tire recycling the most frequent of special collections events.

Litter Reduction Grant

The Litter Reduction and Recycling funds are awarded to support public education, cleanup, and recycling. Each year approximately 1.8 million dollars is awarded.

Adopt a Highway

The Nebraska Department of Roads maintains the Adopt-A-Highway program. Adopt-A-Highway groups in Nebraska top 900 and are strongly represented in the southeast. The Village of Steinauer's community groups have adopted ten miles of highway and have combined this program with their Litter Reduction Grant, maintained by the Steinauer Community Club.

Landfill Disposal Fee Rebate Program

The Nebraska Legislature has set aside a portion of the Waste Reduction and Recycling Fund to provide a rebate to municipalities that have developed and are implementing a written purchasing policy requiring a preference for purchasing products, materials or supplies that are manufactured or produced from recycled material. Rebates are paid on a quarterly basis.

Composting

Composting or other reuse of organic materials has many economic and environmental benefits for communities. Food waste and yard waste comprise 19.47% of the total weight per household thrown out with food waste making up most of this waste at 16.64%.² Robust compost programs can save municipalities

² State of Nebraska Department of Environmental Quality. "Final Report State of Nebraska Waste Characterization Study." 2009.

on landfill tip fees by diverting the weight of organic materials. Further, yard waste can be allowed to decompose for beneficial groundcover for gardens and lawns, while larger material can be chipped for weed suppression on trails and parks or for playground materials.

Some options, such as community composting of yard waste, can be implemented quickly and inexpensively. Other communities have the option of more advanced compost operations, such as biomass composting, using the organic material from wastewater; or utilizing manure or animal byproduct to create nutrient rich compost that can be sold to area farms or residents. 67 municipalities responded to the question on composting process of organic material.

Of the responding communities:

- 34 municipalities burn yard waste that is dropped off by residents.
- 32 had a brush and yard waste pile with contents allowed to decompose for garden nutrients, which is available for residents to use or chipped for trail, park, and playground use.

Several respondents indicated that illegal dumping was a frequent problem at the brush site. The village of Filley (pop. 127, Gage County), the village of Cedar Bluffs (pop. 585, Saunders County), and the City of Tecumseh (pop. 1620, Johnson County) indicated their yard waste and brush was fenced or otherwise monitored. Cedar Bluffs has effectively limited dumping and monetized the disposal of yard waste and small branches by selling an annual key to residents at \$15 for the first year, then \$10 for the following years. 80 keys have been sold this year.

Flooding within the past five years has ended even limited composting options for communities in flood plains, largely along the Missouri river.

The City of Beatrice and the City of Lincoln operate a licensed biomass composting operation, in which organic material from the cities' sewers is diverted, cleaned of harmful bacteria, and processed to remove non-putrescent material before it is taken to a compost operation off-site where it is mixed with green materials, often yard waste, and turned to create compost for residents and the Parks Department at no charge.

Currently, no private waste hauler offers a food composting service in southeast Nebraska outside of the City of Lincoln.

Several communities have creatively utilized their organic matter. The villages of Avoca (pop. 248, Cass County) and Louisville (pop. 1295, Cass County), work with Soil Dynamics to chip wood at no cost and then sells the material back to the communities at a low price to cover the cost of transport and processing. The village of Exeter (pop. 527, Fillmore County) sells grass to neighboring agriculture operations. The City of Geneva (pop. 2107, Fillmore County), has a similar process, having separated tree and grass sites, and leases the grass site through a bid process. The awardee sells the grass to nearby agriculture operations as well.

Community Collaboration

Many villages and cities reported that their recycling and resource management programs were greatly supported by community groups. Girl Scouts of America, Boys Scouts of America, Future Farmers of America, high school clubs, and 4-H school enrichment programs have been critical for many villages. 31% of responding communities reported that one or more of these youth-based organizations actively collected materials, educated community members, or sorted and cleaned community trailers.

Several villages and cities detailed materials collection from community organizations and clubs as well, including Region Five, Lions Club, Kiwanis, and Knights of Columbus. Many communities reported commercial support such as shred days from area banks or agriculture related businesses breaking down shrubs and yard waste.

DEVELOPING A REGIONAL RECYCLING STRATEGY: MARKETS, COLLECTION & PROCESSING

Recycling is a process involving a series of steps from the point of generation and collection of materials, to processing and transporting materials as commodities to be manufactured into new products. Successful programs require a sufficient accumulation of material to achieve an economy of scale that allows for efficiencies in each step along the way.

According to the Association of Plastics Recyclers,³ the demand for recyclable material is far greater than the current supply. However, many rural communities struggle when commodity prices fluctuate sharply or drop off collection steeply increases, such as when residents respond to recycling closures elsewhere. Consistency and volume of supply is key to a successful and meaningful recycling program. Determining where materials will go and how they will be collected should be consistently re-evaluated to inform the overall cost of the program, leading to a long-term sustainable plan.

The questions guiding recycling program development begin with:

How will the community collect materials from residents and businesses?

How will the community process materials responsibly and at an affordable cost?

How will the community ensure consistent quantity and quality of materials?

MATERIALS COLLECTION AND PROGRAM FUNDING

Methods of Material Collection

The most common methods of collecting residential materials are curbside collection and drop off collection and either may be single stream, dual stream, or separated by material. Each variation of the process has unique advantages and the method a program adopts will influence how much a community recycles and the quality of the materials. As with market determination, a community can choose a variety of strategies and the chosen strategy may depend on the method of moving materials.

Source-separated collection programs have been pre-sorted by the consumer. These materials require little to no additional sorting and are ready to bale or store in bunkers for shipment with similar commodities or material. This method depends on the diligent and educated actions of the resident and when done properly, is the most cost-effective option for the processor and hauler.

Dual stream collection manages fiber material (cardboard and mixed paper) separately from rigid material, such as metal and plastic, and helps to reduce contamination and deterioration of fiber products. The advantage for the processor in this method includes maintaining clean fiber stock, having separated it from materials that frequently transmit moisture or food contaminants from rigid containers, as well as allowing for easier sorting at the processing facility, thereby saving time and resources. This method is challenging for residents and is the least common procedure for curbside pick-up. No community in the southeast reported utilizing this method.

Single stream recycling allows residents to collect their materials in one container or tote, requiring the recycling or processing center to sort at the site. This process is among the most common, can result in the most contamination, and is the most expensive for the processing center or recycling center to sort. However, it is the simplest process for the resident. See Table 2 for an overview of advantages and disadvantages on the recycling systems.

3 Association of Plastic Recyclers. "Designing for Recyclability in a Circular Economy." Indiana Recycling Conference, 2020.

Table 2. Strengths and Weaknesses of Recycling Systems

System	Source-Separated	Dual Stream	Single Stream
Materials collected and received by processing facility	Recyclables separated by the residents	Fiber and rigid materials separated	All recyclables mixed together
Convenience for residents/businesses	Low	Medium-High	High
Sorting equipment expense	Low	Moderate	High
Quality of resulting materials	High	Medium-High	Medium-Low
Markets for resulting materials	Strong	Strong	Medium-Weak
Market value for resulting materials	High	High	Medium-Low
Preferred by waste haulers	No	No	Yes
Preferred by end markets	Yes	Yes	No

Funding Recycling Programs

Recycling can be seen as both a utility and a commodity. It is a valued and valuable community service and because material prices fluctuate, municipalities cannot rely on material revenue to cover the operations. Establishing a funding source from property taxes or from another utility service puts a program at less risk of suspending services or forcing collection changes when markets fluctuate.

County Level Support

In Nebraska, there are several cases of county funds allocated for recycling programs. The most prominent example is that of Custer County in north central Nebraska, which operates a recycling center in Broken Bow that is funded by property taxes and amounts to two percent of the county budget. The cost to residents is estimated to be \$12 per household annually.⁴ This recycling center acts as a hub for the communities within Custer County.

Solid waste management agencies are cooperative agreements between the county and participating municipalities to act as a central point of contact for all solid waste issues. These agencies often have funding authority, such as in the case of Saline/Seward, which has the ability to negotiate with the Milford landfill to implement a fee that helps fund recycling reimbursements. Other examples of potential powers for solid waste management agencies include mutual rate setting systems, administering a program fee to participating communities, and enact recycling, household hazardous waste, and compost or refuse provisions.

State Level Support

Many communities begin their program with support from the state or state-wide nonprofits. NDEE's Waste Reduction and Recycling Grants funded the initial purchase of the recycling drop-off containers in Cass County and their other grants support many one-time events for disposal of special materials. Grants from the Nebraska Environmental Trust and NRC for recycling equipment, communication, and signage are also an option. When starting a program, communities must consider how to sustain the potential expenses.

⁴ Barnett, E.; Higgins, G. "Overwhelming Support of Custer County Recycling Center Displayed at Public Hearing." Sandhills Express. 2019.

DETERMINING A MARKET

Selling directly to end markets or mills, using brokers, or sending material to a MRF are all options for recycling programs to move materials, and many programs will choose a variety of options. Local markets for recycled materials include MRFs such as First Star Recycling in Omaha and Green Quest in Lincoln; end markets such as Greenfiber in Norfolk and Ripple Glass in Kansas City, MO; and brokers who can be intermediaries between recycling programs and mills.

All recycling programs, whether new or established, must continually evaluate the end market, broker, or MRF to be able to accurately evaluate the financial feasibility of the program. Without a thorough understanding of the markets and specifically the average value of the materials, a community recycling program is at risk of stockpiling materials that will be bound for the landfill due to material degradation caused by exposure to sunlight or moisture.

End Markets and Mills

End markets for recyclables, such as paper mills and plastic processors, use materials as feedstock for their manufacturing process. As such, they can provide the highest price paid per ton. However, they also have the strictest requirements on quality and quantity. Mills generally require a minimum delivery of a truckload, or 40,000 pounds, and prefer a reliable quantity on a regular, consistent basis. Materials will need to be baled and stored. Finished bales are required to be “clean” and meet specifications for the mill, which generally has a strict limit on allowable level of contaminants. Recycling programs that collect source-separated materials can achieve cleaner loads with minimal sorting, but marketing directly to a mill will require labor and equipment for baling and long-term storage capacity.

Brokers

Brokers can access end markets or mills and are used by recycling programs that do not have the connections or ability to market materials themselves. They can be useful in negotiating freight and price and can allow for infrequent truckloads of a material. Brokers generally charge a percentage of the tonnage value for their services, so preparing clean bales of materials will still be necessary to maximize revenue.

Processors

Sending material to a MRF for processing provides the lowest value per ton, but avoids the capital and operational costs of handling, sorting, and baling materials. Source-separated materials are stored loose until a full truckload can be delivered to the MRF. Likewise, dual stream materials can be marketed without processing first. The exception may be for cardboard and other fibers, which could be marketed directly to a mill. A MRF will provide more value for dual-stream materials since they are separated and cleaner than single stream, but hauling may not be as efficient if materials are hauled loose, reducing the volume that can be loaded onto a truck.

A MRF also can be used similar to a broker, and provide higher value for sorted, clean, and baled materials. This would require equipment, labor, and higher operational costs; however, it may provide more financial advantages in the long-term. Unlike end markets, a MRF will accept a load of mixed materials, sorted and baled by material type. Processing and marketing loads to a MRF can provide moderate value on recyclable commodities. Table 3 provides a brief overview of how to utilize each type of market.

Table 3. Markets at a Glance

Market	Quantity	Quality	Value/Ton
Mill/End Market	Prefer consistent, large loads of a specific material.	Strictest requirements on contaminants, typically requires material to be baled.	Best return per ton. May cover or provide freight.
Processor/MRF	No minimum quantity. Accepts mixed loads of baled or loose materials (should remain source-separated).	Can accept loose or baled materials. Moderate allowance for contaminants.	Lowest return per ton. Will not cover or provide freight.
Broker	Larger quantities typically required. Can allow for irregular schedules of loads.	Typically requires material to be baled. May allow moderate contamination.	Moderate to best return per ton. May arrange freight.

BUILDING QUANTITY, MAINTAINING QUALITY

As stated, the relationship a program builds with an end market, broker, or processor is predicated on the stable quantity and quality of the materials being sent. By establishing a consistent commodity, a recycling center will be able to negotiate the best price for materials.

To offset operational costs, rural recycling programs must build higher recycling tonnages to achieve an economy of scale that allows for affordable community recycling. For a rural recycling program to achieve this high volume, it is critical that communities work together, either cost sharing through an interlocal agreement between participating communities or through county-level programming.

Cass County has used Waste Reduction and Recycling Grants to great effect on its 2009 “Going Green” initiative, wherein it purchased 9 shared recycling trailers and funded several studies.⁵ These trailers are operated by volunteers and village board members. However, without a formalized cost-sharing agreement between communities, the closure of a few of the trailers has led to undue burden on those that are still operating, threatening the sustainability of the program.

In many parts of the country, villages or townships opt into a program through an interlocal agreement. As an example, in Cheboygan County, Michigan, 14 townships agree to an annual charge of \$25 per household to pay for the management of their town trailers. This charge covers maintenance of the equipment, hauling, reporting, and community education. By participating in a shared cost, the towns avoid the issues seen in the example above, where certain communities are overloaded with the recyclable materials from residents of communities that have ended their recycling program. This model also provides cost savings by establishing a consistent pick up schedule, allowing an efficient route for the hauler. See Appendix A for an example of an interlocal agreement of this nature.

While increasing material, it is imperative for communities to keep contamination as low as possible to maintain an affordable and effective community recycling program. When loads surpass an acceptable rate of contamination, the entire trailer may be sent to a landfill. This causes greater expense to the processing center which is passed on to the resident or municipality subscribing to the service. In a contracted arrangement with a processing center, programs may be fined contamination fees for excess non-recyclable or dirty materials.

⁵ Cass County Board of Commissioners. “Cass County Resource Management Plan.” 2016.

To avoid this, communities must implement anti-contamination strategies or investments. When considering the cost of a recycling container, communities should include expenses such as large signage with simple, bold images of what is allowed. Clear visuals with minimal text have proven to be more effective than explanative signs and is helpful for residents unable to read text. Using standardized signage will minimize confusion, create efficient separation, and provide constant reminders for reinforcing recycling as residents move between communities. Color-coded signs help to identify trailers as well, especially if these trailers are placed near community trash dumpsters. Many communities use signage from Recycle Across America,⁶ capitalizing on imagery that would be familiar to residents from well-traveled venues such as airports and event centers.⁷

Beyond signage and monitors, other ways communities can reduce contamination is by leveraging community partners. Many communities in southeast Nebraska work with Boy Scouts of America, Girl Scouts of America, Future Farmers of America, among other community organizations to volunteer at the trailers. In some cases, the groups will sort through containers or commit to hours served at the site, educating community members at the drop off site or taking the materials and sorting it for the resident. This model works well for communities that allow limited hours for trailer access.

CURRENT AND POTENTIAL HUB COMMUNITIES

Southeast Nebraska currently has four centers outside of Lincoln that serve as recycling hubs for their surrounding communities or have the potential for serving as hubs.

The prevalence of hub communities greatly increases the ability of a community to recycle. In southeast Nebraska, communities that recycle are within 29 miles of a recycling center on average, with the farthest distance of no more than 55 miles. If the York and Falls City centers were currently operating with surrounding communities contributing at a low-capture rate, it would add an additional 50,000 pounds of recyclable material collected in southeast Nebraska.⁸

Beatrice

The Beatrice recycling center in Gage County has been operated by Sanitary Garbage for many years. The center is owned by the city, which leases the facility in a bid process.

Within Gage County, six communities outside of Beatrice responded to the survey and reported having access to recycling. According to Deb Bell, the recycling manager, the recycling center collects material from all surrounding communities through Sanitary Garbage, third party haulers, and residential drop offs.

The facility has a baler and fork lift for moving bins of material and a sort line. It is staffed by 33 employees, with 10 employees at the recycling site who manually sort material into bins before it is baled and stored. When the facility has approximately 30 bales of material, the material is marketed to a designated mill.

The facility manager describes stable pricing from their end markets as one of the greatest issues for the recycling center. The price of cardboard, as an example, varies significantly, with the mills they contract with paying \$120 per ton at one point within the month to \$10 per ton at another point. Contamination is also an issue. The center limits material to plastics #1 - 7, tin, aluminum, and fiber material. Food contamination and items made of mixed materials has been a specific issue for the facility.

6 Recycle Across America Universal Labels and Bins. <https://www.recycleacrossamerica.org/>.

7 Recycle Lincoln. "Recycling Signage and Labels Fact Sheet. <https://www.lincoln.ne.gov/city/ltu/solid-waste/recycle/commercial/fact-sheets/pdf/recycling-signage.pdf>.

8 Estimation is based off average recycled material per household.

Falls City

The Falls City Recycling Center is privately owned and operated by Hamilton Recycling and Disposal, which provides curbside garbage and recycling collection to subscribing clients in Falls City. In December 2019, the recycling center suspended services due to a broken baler and is now in the process of evaluating its pricing model, with additional recently purchased cost-saving equipment.

Before the closure, the Falls City Recycling Center primarily served Falls City residents and served as a hub for surrounding villages including Humboldt, Verdon, Hiawatha, Auburn, and Nemaha. Falls City has an open hauling model for its solid waste management. Hamilton Recycling and Disposal is one of four haulers in the city and the only solid waste hauler that provided recycling services, which was built into the cost of waste removal for their 400 customers. Residents from the previously named communities would bring their recyclable materials directly to the recycling center.

The facility accepts cardboard, mixed paper, tin, aluminum, and plastics #1 and #2. It is operated with two full-time employees and one part time employee. The center has a baler, forklift, and a mechanical sort line. The center costs approximately \$42-48,000 to run annually. Management has relationships with several end markets. Fiber and paper products are sent to Sonoco in Hudson, Kansas; plastics are sent to St. Louis; tin and aluminum are sent to St. Joseph, Missouri, to Advantage Metals. There are no formal contracts with any direct mills.

The largest challenge in this region is achieving economies of scale. Because the majority of the region has open hauling for garbage collection with almost no recycling options, the facility is dependent on residents bringing their materials directly. Contamination is also a large issue and a majority of the contamination came from the residential curbside collection when that was available to Falls City residents. Finally, without a contract or agreement with neighboring communities for trailer pick up, the only consistent funding was from subscription to curbside garbage collection.

David City

The David City Recycling Center suspended operations in early 2020. The local government is currently reviewing operations to reopen the site following a new agreement with their processing center, First Star Recycling in Omaha.

David City is a hub to many communities in Butler County. The facility has a baler and forklift. Attached to the center is a storage unit for storing materials until markets are high enough for breakeven costs.

Clayton Keller, the City Administrator states the primary issue is moving the material at a rate that does not negatively impact the city's finances. While material prices were low, particularly for cardboard and plastics #1 and #2, the center suspended operations and stored the materials until new prices and processes were created with First Star.

York

The York Recycling Center has been closed since 2019. It is owned by the City of York and is part of the landfill operation. It was leased and operated by the nonprofit MOSAIC. The center was highly active, unloading 3-4 trailers per day with an annual operating cost of \$100,000-150,000. The materials were sent to Green Quest in Lincoln for processing.

While it was operating, the facility was a hub to 16 surrounding communities including Gresham, Stromsburg, Bradshaw, Benedict, Waco, Friend, Milford, Polk, Hampton, Osceola, Bee, Shelby, Staplehurst, Shickley, Grafton, and Milligan. The majority of the reporting communities are not currently recycling, but still have the trailers for a potential return to recycling.

The center has an operational baler and forklift. City Administrator Joe Frei states that the city government is open to leasing the facility to a private enterprise. Several responding communities indicated that they would be willing to commit to cost-sharing to recycle materials, possibly through an interlocal agreement or contract.

The greatest challenge indicated by this center was that it was not able to absorb the fluctuating market costs of materials. At the time of closure, cardboard prices were as low as \$5 per ton and it is possible that with such a high quantity, the facility was not able to store the materials to wait for a higher price.⁹

⁹ Wilkinson, M. "Future of recycling in York still unknown." York News Times. 2019.

CONCLUSIONS AND RECOMMENDATIONS

In 2019 and early in the year 2020, the southeast region was impacted by several conditions that impeded many communities' access to recycling. The closure of the York recycling center and suspended operations of the David City and Falls City recycling centers created a vacuum of recycling options for approximately 45 communities in the southeast, almost a third of all incorporated municipalities in the recorded region. In communities that maintain recycling, contamination has disrupted hauler relationships and increased hauling costs. Overuse of the trailers from residents outside of the community, which is often in response to the closures of the recycling centers above or the closure of their own community's trailer, has increased trailer pick up in some areas, further increasing costs and threatening the programs in those municipalities.

RECOMMENDATION 1: Cooperation Between Municipalities

Cooperation between communities is essential in maintaining access to a robust and meaningful recycling program. Creating a formal agreement between municipalities can fairly and equitably distribute the cost of recycling between communities of a similar size, stabilizing the programs in each community so one trailer is not overloaded by the material influx caused by a nearby closure in another location. Charging an annual rate for recycling support per household or taking a percentage from property taxes or utilities are both methods that local governments have used to fund recycling programs.

For the spoke communities surrounding York and Falls City, the financial commitment to recycle can build and sustain the operation of the recycling centers for long-term service and growth. For the spoke communities surrounding York, including the counties of Fillmore, Clay, and York, NRC recommends that county commissioners solicit support from the original spoke villages and other interested communities and release an initial commitment to delivering a cost-sharing agreement (see an example in Appendix A). This commitment can be used in a York Request for Proposals for lease of the recycling center, to demonstrate a years-long commitment in funding the center operations.

The privately owned Falls City center has identified issues in building enough quantity of materials for a valuable return in the end markets utilized. An agreement between the neighboring communities within Richardson, Nemaha, and Pawnee counties can provide the quantity needed to maintain the center. Funds leveraged from the agreement can be used to pay for trailer pick-ups and returns, processing of material, and for signage or other communication or anti-contamination strategies the community might need.

RECOMMENDATION 2: Building Quantity and Quality of Material

As municipalities develop partnerships, they must address issues within their own communities. Contamination strategies and education to encourage recycling use will be unique to each village or city. Communities can leverage many resources in addressing contamination, such as the participation of community or youth groups; working with haulers, if applicable, on communicating acceptable materials; utilizing technology or hardware to monitor the site or restrict access at certain times of day or days or the week; and using the Recycling Partnership's Anti-Contamination Toolkit or working with the Nebraska Recycling Council on a comprehensive strategy to review contaminants and develop action steps.

As recycling centers return to their operations, the variety of materials accepted may have changed. It is the responsibility of the municipality to communicate those changes or work with the regional haulers on how to reinforce the messaging in these changes.

RECOMMENDATION 3: Capacity-Building for Recycling Centers

Finally, as municipalities work together to build quantity and quality of materials, recycling centers should reevaluate their relationships with processing centers and end markets continuously. Haulers and recycling

centers may have formal or informal agreements with processing centers and end markets that can be as simple as a predetermined cost per ton delivered. Formal contracts with MRFs can provide consistent and clear expectations and costs for the centers. Some options or benefits when contracting with a MRF include established processing fees, revenue sharing, material audits and communication, education and outreach support, and clear expectations on contamination and contingencies. In this way, MRFs and recycling centers are partners in managing costs, leading to a sustainable program.¹⁰

The twenty counties represented in the southeast have experienced considerable challenges within the last two years in responsibly managing recyclable materials. Fortunately, a majority of the communities surveyed report involved residents that reflect the national viewpoint that recycling is a critical and valued service. There are many resources available to communities, with the most effective being a strong partnership and communication between neighboring municipalities and state support. Recycling in southeast Nebraska has the strong potential to grow and be an innovative example to other communities in the region.

10 The Recycling Partnership "Guide to Community Material Recovery Facility Contracts." 2020.

APPENDIX A: SAMPLE MEMORANDUM OF UNDERSTANDING FOR INTERLOCAL RECYCLING AGREEMENTS

CHEBOYGAN COUNTY INTERLOCAL AGREEMENT REGARDING COUNTY RECYCLING SURCHARGE

THIS AGREEMENT is entered into by and between the County of Cheboygan, a municipal corporation and political subdivision of the State of Michigan, whose address is 870 S. Main Street, P.O. Box 70, Cheboygan, Michigan 49721 (hereafter, "the County") and the Township of _____, whose address is _____ (hereafter, "the Township").

Recitals

- A. Cheboygan County has adopted a Solid Waste Management Plan, as required under Part 115 of the Natural Resources and Environmental Protection Act of 1994, being Act 451 of the Public Acts of 1994, as amended.
- B. A component of the Solid Waste Management Plan is the County's Recycling Program, which encompasses waste reduction and collection of consumer source separated services and related educational programs.
- C. Section 8a(1) of the Urban Cooperation Act of 1967, being MCL 124.508a(1), authorizes the Cheboygan County Board of Commissioners to impose by resolution a surcharge on households within the county of not more than \$25.00 per year per household for waste reduction programs and for the collection of consumer source separated materials for recycling or composting including, but not limited to, recyclable materials, as defined in Part 115 of the Natural Resources and Environmental Protection Act, being MCL 324.11501 to 324.11550, household hazardous wastes, tires, batteries, and yard clippings.
- D. The Cheboygan County Board of Commissioners has imposed an annual surcharge of up to \$25.00 per household within the county as authorized by Section 8a(1) of the Urban Cooperation Act of 1967, for a period of five (5) years, 2018 through 2022, inclusive.
- E. Section 8a(3) of the Urban Cooperation Act of 1967, being MCL 124.508a(3), provides that Cheboygan County shall defer the imposition and collection of the surcharge until the County has entered into interlocal agreements with the local units of government within the county relating to the collection and disposition of the surcharge.
- F. Section 5(a) of the Urban Cooperation Act of 1967, being MCL 124.505(a), provides that an interlocal agreement may provide for the purpose of the interlocal agreement or the power to be exercised and the method by which the purpose will be accomplished or the manner in which the power will be exercised.
- G. Section 5(h) of the Urban Cooperation Act of 1967, being MCL 124.505(h), provides that an interlocal agreement may provide for the fixing and collecting of charges and of the making and promulgation of necessary rules and regulations and their enforcement by or with the assistance of the participating parties to the interlocal agreement.
- H. The parties previously entered into an interlocal agreement relating to the collection and disposition of the surcharge.
- I. The parties therefore desire to fulfill the statutory requirement for interlocal agreements and to specify their respective rights and responsibilities concerning the collection and disposition of the surcharge by entering into this new interlocal agreement, which will cover the time of the newly extended surcharge.

Agreement

NOW, THEREFORE, in consideration of the mutual promises contained herein, the parties hereby agree as follows:

1. Surcharge. By entering this Agreement, the Township agrees with the County's imposition of an annual surcharge of up to \$25.00 per household in the Township for waste reduction programs and for the collection of consumer source separated materials for recycling or composting including, but not limited to, recyclable materials, as defined in Part 115 of the Natural Resources and Environmental Protection Act, being MCL 324.11501 to 324.11550, household hazardous wastes, tires, batteries, and yard clippings.
2. Definition of "Household". For purposes of this Agreement and the imposition of the surcharge authorized by Section 8a(1) of the Urban Cooperation Act of 1967, the parties agree that a household shall mean a mobile home and a single unit building or portion thereof, including but not limited to a house, apartment, and condominium unit, which provides complete independent living facilities (permanent provisions for living, sleeping, eating, cooking and sanitation) for one (1) family for residential purposes and which is occupied for residential purposes at any time during the year.
3. Billing, Collection, and Disposition of Surcharge. The Township shall include the surcharge imposed on households within the county by the Cheboygan County Board of Commissioners with the Township's annual winter ad valorem property tax bills for the real property on which the households are located. The Township's treasurer shall collect the surcharge at the time he or she collects the Township's winter ad valorem property taxes. The Township's treasurer shall account for and remit to the Cheboygan County Treasurer the surcharges collected on or before March 1 of the year following the annual winter ad valorem property tax bills.
4. Indemnification. The County hereby agrees to indemnify and hold harmless the Township from any liability and damages of any nature whatsoever resulting from the Township's entering into this Agreement or resulting from the Township's collection and disposition of the surcharge imposed under Section 8a(1) of the Urban Cooperation Act of 1967, being MCL 124.508a(1). In addition, the County hereby agrees to pay the actual and reasonable attorney fees of the Township in the defense of any proceeding, litigation or lawsuit brought against the Township as a result of entering into this Agreement or as a result of its collection and disposition of the surcharge imposed under Section 8a(1) of the Urban Cooperation Act of 1967, being MCL 124.508a(1), or in the alternative and at the sole discretion of the County, to fully defend the Township in any proceeding, litigation or lawsuit arising as a result of entering into this Agreement or as a result of its collection and disposition of the surcharge.
5. Exemption from Surcharge. A Township may exempt a household from a surcharge imposed by the Cheboygan County Board of Commissioners under Section 8a(1) of the Urban Cooperation Act of 1967 if and only if the Township exempts the property owner, in whole or in part, from taxation pursuant to the terms and condition of Section 7u of the General Property Tax Act, being MCL 211.7u, or other similar state law or charter provisions.
6. Effective date; Contingency. This Agreement shall become effective when signed by both parties.
7. Term. Unless terminated as provided in Paragraph 8, the term of this Agreement shall be for up to six (6) years, beginning on the effective date specified in Paragraph 6 and ending on March 31, 2023, or at the expiration of the authorization for the annual surcharge of up to \$25.00 per household within the county as authorized by Section 8a(1) of the Urban Cooperation Act of 1967, whichever occurs later.
8. Termination. Either party may terminate this Agreement by providing the other party written notice of the intent to terminate no less than sixty (60) days prior to the effective date of the termination. Provided, however, the effective date of any such termination shall not be after September 1 in any calendar year. Termination of this Agreement shall not result in a reimbursement of any surcharge funds collected pursuant to this Agreement.
9. Amendments. This Agreement may not be amended, modified or changed in whole or in part in any manner other than by an agreement in writing duly signed by the authorized representatives of both parties.
10. Authority to Sign Agreement. The persons signing this Agreement on behalf of the parties certify by their

signatures that they are duly authorized to sign on behalf of the parties, and that this Agreement has been authorized by the parties.

IN WITNESS WHEREOF, the authorized representatives of the County and the Township have executed this Agreement to be effective as provided herein.

COUNTY OF CHEBOYGAN

TOWNSHIP OF _____

By: _____

By: _____

John B. Wallace

Its: Chairperson

Its:

Date: _____

Date: _____

APPENDIX B: SOUTHEAST NEBRASKA RESOURCE MANAGEMENT ASSESSMENT SURVEY

Introduction

Nebraska Recycling Council

This survey will assess the current accessibility and opportunities for resource management in southeastern Nebraska as part of a Waste Reduction and Recycling Grant with the Nebraska Department of Environment and Energy.

Your responses will help inform the state on current issues and assist the Nebraska Recycling Council in developing recycling models that will improve recycling rates, costs, and efficiencies. Thank you for your responses!

The burden time of this survey is approximately 10 minutes.

Community Information

1. Name and Title
2. Organization
3. Email Contact
4. Phone Number
5. Which community do you represent?
6. Select your county
7. Location of town, village, city. Indicate on map

Waste Management Overview

This section will explore how your community manages landfill waste.

1. Does your municipality provide curbside garbage collection? (Y/N – residents self haul)

IF NO, SKIP TO 10.

IF YES >>

2. Curbside Trash Collection: Please select from the following if your trash service is owned by the city or village, contracted with a private company or non-profit, or if residents choose their own waste management company (open hauling).

- City /Village Owned; Contracted; Open Hauling

IF CITY/VILLAGE OWNED or CONTRACTED >>

- Monthly residential rate for trash collection only (*Recycling rates, if available, will be described in the next section*)

IF OPEN HAULING >>

- How many haulers operate in your community?

3. Please provide the names of the hauler(s) managing your waste site or curbside collection. *Waste site may be a community dumpster, trailer, or transfer station.*
4. Landfill or transfer station utilized
5. Approximate tons of solid waste disposed of per month
6. Landfill or transfer station fee

Recycling Options

This section broad overviews your recycling model and attitudes.

7. Does your community offer recycling options? (Y/N)

IF YES >>

8. Please Select all recycling options residents can choose from:
 - Drop off trailer; curbside collection; recycling center; other, please describe
9. Curbside Recycling Options:
 - City/Village Owned; Contracted; Subscription

IF CITY/VILLAGE OWNED or CONTRACTED >>

- What is the cost for monthly curbside recycling pickup?

10. Please provide the name(s) of the recycling provider(s) operating in your community
11. Is your curbside recycling program single stream or required to be separated (Single Stream/Separated)
12. Recyclable materials:
 - Mixed paper, shredded paper, cardboard, aluminum, tin, plastics 1/2, Plastics 3-7, glass, other
13. Where are your recyclable materials taken?
14. Approximate tons of materials recycled per month
15. Please indicate the most recent annual budget allotted for recycling, if supported
16. Based on feedback from your waste management provider, how contaminated is your recycling intake?
(NRC offers waste audits to assess contamination as well as signage and customized recycling guides specific to your community to assist in improving contamination efforts).
 - Likert scale: very contaminated; somewhat contaminated; unsure; somewhat clean; very clean
17. Based on community feedback, how motivated are your residents to recycle?
 - Likert scale: very unmotivated, somewhat unmotivated, unsure, somewhat motivated, very motivated
18. Offer feedback on challenges or goals your community has on your current recycling program.

IF NO >>

19. Offer feedback on challenges or goals your community has on your current recycling program. *If your recycling program is not currently operational and you offered it at one time, what led to it ending?*
20. You selected "No" to having recycling options. Please describe your current waste management process and if you would like to work with the Nebraska Recycling Council on developing a program.

Composting, Construction, and Special Events

21. Does your community offer composting options? (Y/N)

IF YES >>

22. What materials are currently composted (listed options)

23. Please describe your composting program and how it could be expanded.

IF NO >>

24. You selected "No" or "Unsure" to having composting options. Please describe your current waste management process and if you would like to work with the Nebraska Recycling Council on developing composting solutions.

25. Does your community have a construction and demolition (C&D) landfill?

26. Please describe any special events or unique programs outside your regular collection for recyclable materials (*Example: Electronic recycling events, tire recycling, household hazardous waste (HHW), CRT Amnesty event, car seat drive, battery drive, etc.*)

27. If applicable, describe any organizations or green teams in your community that assist with recycling efforts. (*Examples may be Boy or Girl Scout Troops, Keep Nebraska Beautiful affiliates, or local clubs or businesses making efforts to recycle, compost, or conserve.*)

Thank you for your responses!

28. Please add any additional feedback or commentary on the resource management available in your area and where you would like to see it improve.

Your responses will be collected into a report that will help NRC and the Nebraska Department of Environment and Energy create more efficient and robust opportunities for resource management.

29. NRC has a membership program that supports businesses, municipalities, and individuals in their recycling goals. Membership includes access to the membership directory, discounts on waste audits, discounted membership to recyclingmarkets.net, and more.

Enter an email to be sent more information.

APPENDIX C: REGIONAL AND NATIONAL FUNDING OPPORTUNITIES

WASTE REDUCTION & RECYCLING ASSISTANCE PROGRAM (WRRAP)

A rebate is available for 50% of the costs to establish a recycling or composting program.

Type: Rebate

Eligibility: Businesses or nonprofit organizations in Lancaster County

Funding: Up to \$750

Deadline: Rolling

More Information: lincoln.ne.gov/city/ltu/solid-waste/recycle/wrrap

CLOSED LOOP FUND/CLOSED LOOP PARTNERS

Funding for replicable and financially viable recycling infrastructure projects across these categories: collection, sortation, and processing/end markets.

Type: Loan, Venture Capital

Eligibility: Municipalities, private companies

Funding: \$250,000 to \$5,000,000

Deadline: Rolling

More Information: www.closedlooppartners.com/apply

THE RECYCLING PARTNERSHIP

Funding is only available for residential curbside recycling programs to fund carts and education.

Type: Grant

Eligibility: Communities with 4,000+ households.

Funding: \$7 per cart (up to \$500,000) plus \$1/household for outreach

Deadline: Rolling

More Information: recyclingpartnership.org/recycling-cart-grant

USDA SOLID WASTE MANAGEMENT GRANTS

Funding for organizations that provide technical assistance or training to improve the planning and management of solid waste sites.

Type: Grant

Eligibility: Communities with a population of 10,000 or less. Nonprofits, municipalities, and academic institutions

Deadline: October 1 - December 31

More Information: www.rd.usda.gov/programs-services/solid-waste-management-grants

ETHEL S. ABBOTT CHARITABLE FOUNDATION

Grants are reviewed for the potential to influence people's lives and to ultimately make a difference in the community.

Type: Grant

Eligibility: Nebraska 501(c)(3)s and government entities with focus in Lincoln, Omaha, and Western NE

Deadline: Rolling

More Information: www.abbottfoundation.org

ABEL FOUNDATION

Emphasis on health and human service, higher education, and community development programs.

Type: Grant

Eligibility: Nebraska nonprofits, primarily Lincoln

Deadline: March 31, July 15 and October 31

More Information: www.abelfoundation.org

KEEP AMERICA BEAUTIFUL/COCA-COLA

Public Spaces Recycling Bin Grant Program Provides recycling bins for public spaces, e.g. downtown areas, athletic fields, venues and parks.

Type: Grant

Eligibility: Municipalities, schools, community organizations, nonprofits

Funding: Grant provides bins instead of money

Deadline: Typically mid-November through December

More Information: kab.org/grants/coca-cola

COOPER FOUNDATION

Program Areas: Arts, Community Improvement, Education, the Environment, Human Services and the Humanities.

Type: Grant

Eligibility: Nonprofits, schools, government entities primarily in Lincoln and Lancaster Cty.

Deadline: January 15, April 1, July 1, October 2

More Information: cooperfoundation.org/for-grantseekers

MID-NEBRASKA COMMUNITY FOUNDATION

Grants for non-profit organizations in the region; areas of interest include Community Development and Environment

Type: Grant

Eligibility: Custer, Dawson, Frontier, Hayes, Keith, Lincoln, Logan, McPherson, and Perkins Counties

Deadline: January 15, April 15, September 15, and December 15

More Information: www.midnebraskafoundation.org

NDEE WASTE REDUCTION AND RECYCLING INCENTIVE GRANTS

Provides grants to assist in financing sound integrated waste management programs and projects.

Type: Grant

Eligibility: Nebraska businesses, organizations, municipalities

Deadline: September

More Information: deq.ne.gov/NDEQProg.nsf/OnWeb/WRRIGP

NDEE LITTER REDUCTION AND RECYCLING GRANTS

Provides funds to support programs to reduce litter, provide education, and promote recycling in Nebraska.

Type: Grant

Eligibility: Nebraska businesses, organizations, municipalities

Deadline: September

More Information: deq.ne.gov/publica.nsf/pages/WAS075

PUBLIC INFORMATION AND EDUCATION (PIE) MINI-GRANT

Grants support the presentation and dissemination of information and perspectives that will stimulate enhanced environmental stewardship.

Type: Grant

Eligibility: Nebraska organizations

Funding: Up to \$3,000

Deadline: January, April, July, October

More Information: nebraskaacademyofsciences.wildapricot.org/PIEGrant

NEBRASKA ENVIRONMENTAL TRUST GRANTS

Funding for multi-year grants for projects in the areas of Habitat, Surface and Ground Water, Waste Management, Air Quality, Soil Management

Type: Grant

Eligibility: Individuals, private organizations, and public entities

Deadline: September

More Information: environmentaltrust.nebraska.gov/grants/index.html

PETER KIEWIT FOUNDATION

We invest in proven and promising programs, systemic solutions, general operations, capital projects, planning and capacity building, and policy development.

Type: Matching Grant

Eligibility: 501(c)(3) organizations and governmental

Funding: Funding for 25%-50% of total project costs

Deadline: January, April, July, October

More Information: peterkiewitfoundation.org/for-grantseekers/application-process

NEBRASKA RECYCLING COUNCIL

Funding to purchase or repair recycling equipment including trailers, containers, forklifts, balers, etc.

Type: Grant

Eligibility: Nebraska organizations, businesses, municipalities

Funding: Up to \$20,000

Deadline: 15th of each month

More Information: www.nrcne.org/equipment-grants

CAPTAIN PLANET FOUNDATION

Support for students to design and implement hands-on environmental solutions are eligible for project funding.

Type: Grant

Eligibility: Schools

Funding: \$500-\$2,500

Deadline: January and July

More Information: captainplanetfoundation.org/grants

NEBRASKA DED FOUNDATION RESOURCE DIRECTORY

This directory provides information on numerous foundations, both in and out of Nebraska

Type: Other

More Information: opportunity.nebraska.gov/program/foundation-resource-directory

LINCOLN COMMUNITY FOUNDATION

Open Door Grants may be applied to operations, programs or capital projects.

Type: Grant

Eligibility: Nonprofits in Lincoln and Lancaster County

Funding: Up to \$10,000

Deadline: Rolling

More Information: www.lcf.org/helping-nonprofits/open-door-grants

CDBG: COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM

CDBG provides grants to states and localities

Type: Grant

Eligibility: States, localities, individuals

Funding: \$5,000 to \$500,000

Deadline: Varies Depending on the Cycle

More Information: opportunity.nebraska.gov/program/community-development-block-grant