



RRS

Kansas City Circular Organics Economy

A STRATEGIC PLAN FOR ORGANICS RECOVERY AND FOOD RESCUE

PREPARED BY RRS FOR CITY OF KANSAS CITY, MISSOURI
CONTRIBUTION FROM FOUNDATION FOR REGENERATION

APRIL 24, 2026

Acknowledgements

This report was made possible through the leadership, collaboration, and commitment of many individuals and organizations dedicated to building a more sustainable and equitable Kansas City.

Resource Recycling Systems (RRS) is grateful to the City of Kansas City, Missouri for commissioning this work and for its ongoing commitment to advancing a circular organics economy. In particular, we thank Jensen Adams, Chief Environmental Officer, Brooke Freeman, Food Systems Coordinator, and Stephanie Dresen, Natural Systems Coordinator, for their guidance, coordination, and dedication throughout this project.

We also thank the Foundation for Regeneration for their partnership and contributions to this effort. The Foundation's deep roots in Kansas City and its commitment to regenerative systems thinking helped shape the vision underlying this plan. Special thanks to Brian Weinberg, Executive Director, Bob Berkebile, Co-founder, and Darren Beck, Circular Economy Lead, for their engagement and insight throughout the process.

Finally, this report would not have been possible without the time, expertise, and candor of the many stakeholders who participated in interviews and provided feedback. Their knowledge of Kansas City's food and organics system and their commitment to improving it is reflected throughout this plan.

Disclaimer

The recommendations, findings, and conclusions presented in this report reflect the independent analysis and professional judgment of Resource Recycling Systems (RRS) and do not necessarily represent the views, positions, or endorsements of any stakeholder, interviewee, or participating organization. Stakeholder participation in the research process, including interviews, feedback sessions, and document review, should not be interpreted as agreement with or support for any specific recommendation contained in this report. Individual stakeholders may hold views that differ from those expressed herein.

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Executive Summary

Historically, the U.S. has relied on a linear system for managing materials, following a take-make-waste model. In a circular economy, by contrast, materials are made, used, reused, repaired, and recycled to their highest and best use before disposal is considered. This approach shifts the system away from burying or burning valuable resources and toward capturing their full value through local job creation, economic activity, and conservation of natural resources. This report applies the core principles of the circular economy to Kansas City, Missouri's food system, illustrating how the region can transition from a take-make-waste model to a circular organics economy.

At the heart of a circular economy is the core tenet that resources have value and capturing that value drives local economic growth. Consider what we choose to do with 1,000 tons of surplus food. Recovering these tons to feed people in need generates approximately 4 local jobs, reduces food insecurity, and cuts greenhouse gas emissions (ReFED, 2025b). Composting that same material creates roughly half a full-time job and returns vital nutrients to the soil (ILSR, 2013). Disposing of it in a landfill generates just 0.1 jobs, and the resource's value is gone entirely (Tellus Institute, 2008). The economic case for a circular organics economy is as strong as the environmental one. Communities that embrace this model create local jobs, build resilience, and advance sustainability not as competing goals, but as one unified strategy.

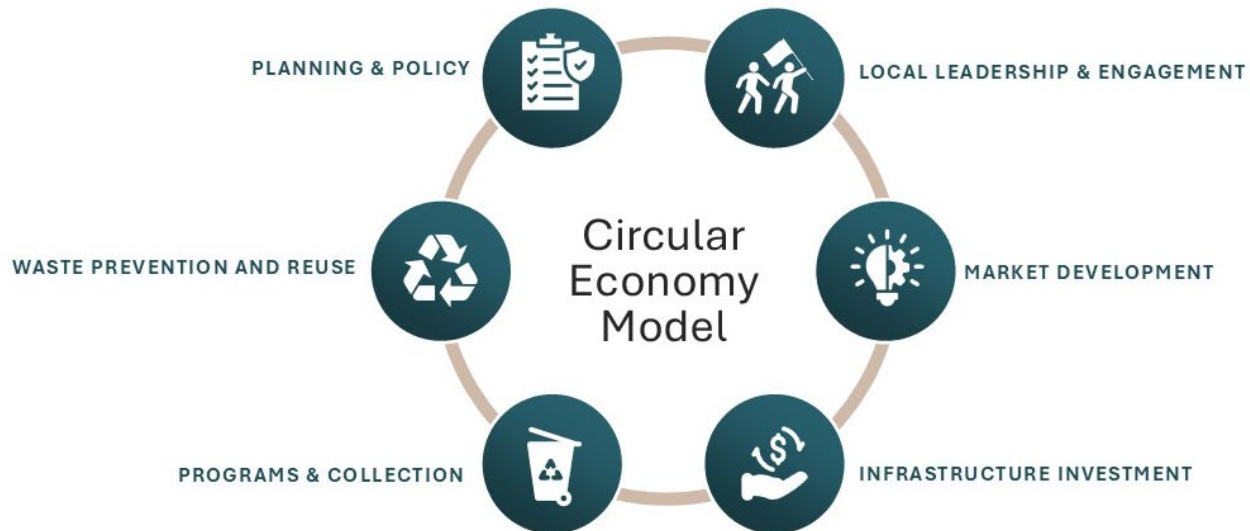
Going further, a Social Return on Investment (SROI) analysis estimates that if Kansas City, Missouri was to implement the full suite of recommendations presented in this report the circular organics economy would return \$11 to \$13 in social value for every \$1 invested. The SROI analysis includes the value generated across five benefit streams: avoided disposal costs, reduced greenhouse gas emissions, job creation, the retail value of rescued food, and the market value of finished compost. While these metrics capture a lot of value, they do not capture the full value of the circular organics economy which extends to food security benefits of feeding hungry residents and associated improvements in public safety and community wellbeing, indirect and induced job creation, reduced synthetic fertilizer demand, improved agricultural soil water retention, and the avoided upstream costs of food production, including the water, energy, and land embedded in food that would otherwise go to waste, meaning the true social return is likely considerably higher than these estimates suggest. Taken together, these estimates make a compelling case that Kansas City's circular organics economy delivers value far beyond what any single metric can capture and that the case for action has never been stronger.

A circular organics
economy in Kansas City,
Missouri would generate
**\$11 to \$13 of value
for every \$1 invested**

The Circular Economy

An effective circular economy relies on six interconnected pillars working together to drive lasting impact: Planning and Policy, Waste Prevention, Programs and Collection Systems, Infrastructure Investment, Market Development, and Local Leadership and Engagement (Figure 1). Because the pillars are mutually reinforcing, progress in each area is essential to create a durable, efficient, and community-centered circular economy.

Figure 1: Six Pillars of the Circular Economy Model



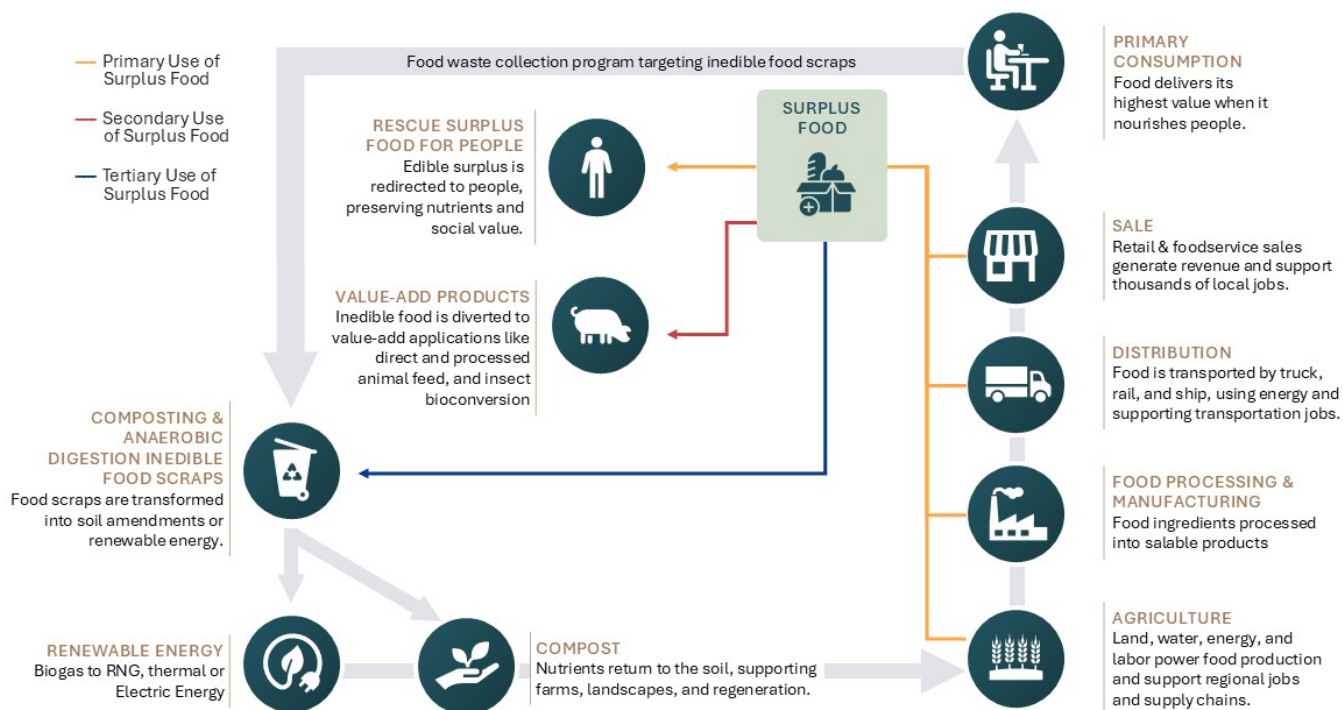
The circular economy pillars can be applied to any waste stream. The bullets below describe how each pillar applies to food in the waste stream and how, together, they can help reduce wasted food and support a circular food economy.

- **Planning and policy:** Build the foundation through stakeholder-informed planning, clear goals, pilots, adaptive learning, and supportive policy that reduces barriers and creates regulatory clarity.
- **Waste prevention and reuse:** Prioritize preventing waste and establishing reuse pathways to preserve the highest economic, social, and environmental value of materials.
- **Programs and collection systems:** Provide convenient, flexible, and accessible collection options that reflect real community needs and increase participation.
- **Infrastructure investment:** Invest in the facilities and equipment needed for reuse and recycling at scale and build a resilient, scalable system.
- **Market development:** Strengthen demand for recycled material and products to support long-term financial viability.
- **Local leadership and engagement:** Rely on trusted local partners, community-based outreach, workforce development, and food literacy to drive participation and equitable outcomes.

The Circular Organics Economy

In a circular organics economy, food is managed according to a hierarchy of value. The highest priority is preventing surplus and ensuring edible food reaches people. When surplus food is generated, it should first be redirected for human consumption through food rescue and donation programs. Food that is not suitable for human consumption can still be converted into value-added products through several pathways. Direct animal feed is a long-established practice in which food scraps and surplus food are fed directly to livestock as a substitute for, or supplement to, conventional feed. However, this approach can be challenging in modern livestock systems, which often rely on carefully formulated feed to manage cost and optimize animal growth. In response, processed animal feed products have emerged that convert surplus food into more standardized, nutrient-dense feed ingredients. Another value-added pathway is insect bioconversion, in which surplus food is used to grow insects that convert the material into protein, oils, and other useful products primarily for animal feed. Finally, remaining food scraps are best managed through composting or anaerobic digestion, returning nutrients to soils and supporting agricultural productivity and in the case of anaerobic digestion creating biogas. Figure 2 illustrates a simplified diagram of how these pathways fit together within a circular organics model.

Figure 2: The Circular Organics Economy Primary and Secondary Value Chain



Kansas City Advancing Circular Organics Economy

KANSAS CITY PROGRESS ON CIRCULAR ORGANICS

Momentum is building in Kansas City to transition from a predominantly linear system – where most organic waste is destined for landfills – toward a circular organics economy that nourishes people, reduces greenhouse gas emissions, strengthens the local economy, creates jobs, and builds more resilient neighborhoods. Kansas City benefits from a robust and growing network of regional partners, processors, nonprofits, and community organizations that collectively form the backbone of its emerging circular organics economy. At the policy and planning level, the City of Kansas City, Missouri, the Mid-America Regional Council (MARC), and regional food policy groups have established a strong foundation through climate planning, waste flow analysis, zoning modernization efforts, and grant programs that expand recycling, composting, and food recovery capacity across the metro. These entities provide governance, data, and coordination that underpin regional progress, even in the absence of formal organics diversion mandates.

A circular organics economy can lead to:

	Increased food access and food security
	Local job creation
	Cost savings for households and businesses
	Improved soil health
	Reduced greenhouse gas emissions
	Strengthened community resilience and local self-reliance
	Advances equity in the food and waste systems

Across the food system, Kansas City is home to an active set of food recovery leaders including Pete's Garden, Kanbe's Markets, Urban Produce Push, Harvesters, and the app-based marketplace Too Good To Go, each working to capture edible surplus before it becomes waste. Collectively, they recover hundreds of tons of food annually, redirecting prepared meals, cosmetically imperfect produce, and gleaned farm crops to families, corner stores, and community agencies. While highly effective, these programs highlight both the strengths and bottlenecks of the region: strong community infrastructure exists, but scaling recovery is constrained by cold-chain capacity, transportation logistics, labor, and data gaps.

Kansas City also continues to expand organics collection access, combining private subscription curbside services (Compost Collective KC, KC Can Compost) with public drop-off options, solar-powered "Smart Cans," and Mill dehydrator-based food scrap stations deployed across public buildings. These programs demonstrate innovative, multi-channel collection strategies intended to serve residents across income levels and housing types; however, challenges persist related to contamination, public awareness, and equitable access, particularly within multi-family housing.

On the processing side, the region is anchored by Missouri Organic Recycling, the area's primary food-waste composting facility, which manages tens of thousands of tons of material annually, including packaged food waste via depackaging technology. This effort is complemented by KC Water's major investment in the Blue River Thermal Hydrolysis System, which will convert wastewater biosolids into Class A soil products and renewable energy. Together, these facilities provide substantial processing capacity and demonstrate leadership in technology adoption, although long-term resilience will require additional, distributed infrastructure to reduce single-facility vulnerability.

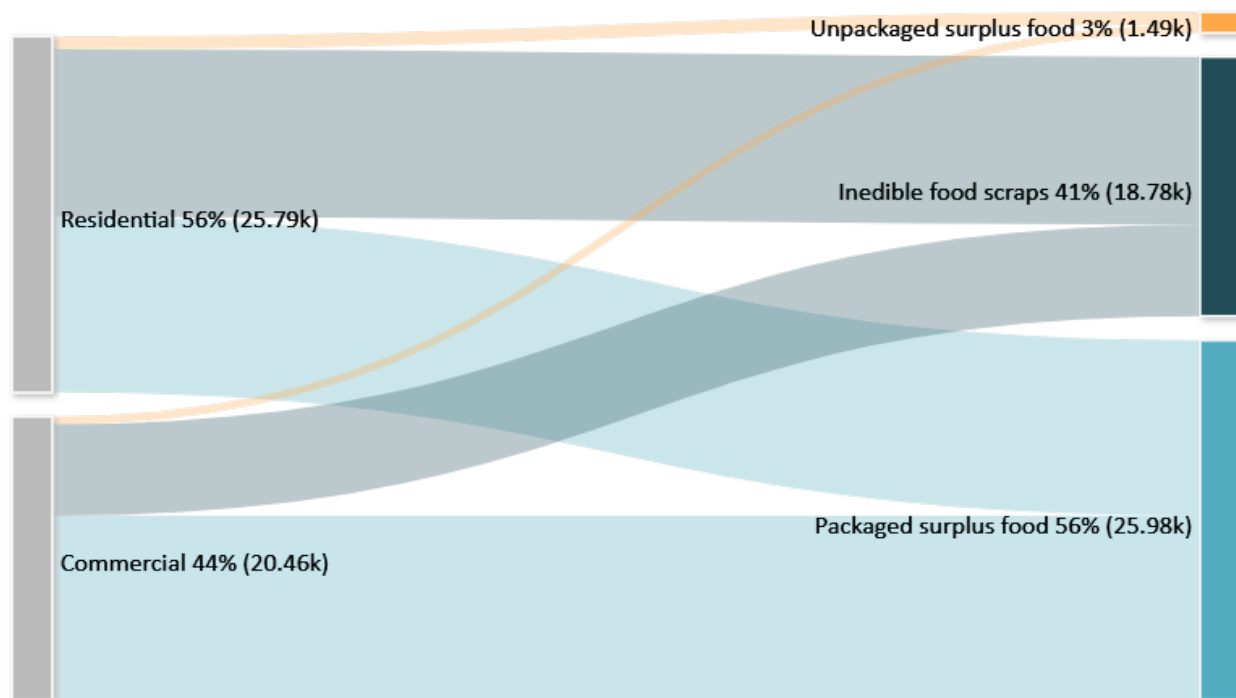
While these organizations perform different, essential functions in the circular organics economy, co-location allows for intentional cross-collaboration, substantially increasing their effectiveness. Kanbe's Markets and KC Can Compost share neighboring facilities, creating a closed-loop system where unsellable produce flows directly from food access to composting.

Finally, the region's end-market and community leadership ecosystem reinforces the importance of keeping organic materials in productive use. Urbavore Urban Farm demonstrates a hyperlocal circular model, composting community food scraps to grow fruit, vegetables, and pasture-raised livestock, while Birmingham Farm converts municipal biosolids into nutrients for over 1,400 acres of cropland, generating significant annual revenue. These regional assets highlight the strong agricultural and community-based demand for compost and soil amendments, even as broader end-market reliability remains a challenge for processors.

OPPORTUNITY TO GROW CIRCULAR ORGANICS ECONOMY IN KANSAS CITY

Despite the strong regional momentum, significant opportunity remains to reduce wasted food in Kansas City. Approximately 52,000 tons of surplus food is generated each year, yet only about 9% is currently recovered for people or composted, leaving 46,200+ tons that are still sent to disposal. Of the food that ends up discarded, 59% could have been eaten, with the majority of that food still in its packaging, highlighting major gaps in prevention, donation, and recovery systems. The remaining 41% of disposed food consists of inedible food scraps that could be diverted into productive organics processing pathways such as composting or anaerobic digestion rather than landfilling (Figure 3)¹. Together, these figures underscore Kansas City's substantial untapped potential to reduce waste, strengthen recovery networks, and further advance a circular organics economy.

Figure 3: Breakdown of Food Disposal by Type and Generator



¹ More detail and references to sources is provided in the main body of the report and the appendix.

A circular organics economy recognizes this value by prioritizing the highest and best use of food by first feeding people and preventing avoidable surplus, then redirecting edible food to animal feed where appropriate, and finally diverting remaining food scraps to composting or anaerobic digestion to support soil restoration. Figure 6 illustrates the value chains for food within a circular organics model.

Stakeholder Input

Stakeholder feedback throughout the report paints a consistent picture of a community that is highly committed, deeply knowledgeable, and already doing much of the hard work required to build a circular organics economy, yet is facing structural, financial, and coordination barriers that limit progress. Across interviews with food recovery organizations, processors, haulers, program operators, planners and policy experts, and local leaders, stakeholders repeatedly emphasized that Kansas City has strong individual programs but lacks the cohesive systems and long-term investments needed to scale them.

A dominant theme was the need for stronger policy alignment and citywide coordination. Stakeholders consistently called for clear diversion and recovery targets, stable funding streams, and better internal collaboration across City departments. Many described the current system as fragmented. Effective programs exist, but they operate in silos, creating inefficiencies and limiting citywide impact. They also highlighted zoning and permitting barriers, inconsistent donor participation, and the absence of required diversion space in new developments as major obstacles to growth.

Across all pillars, stakeholders identified infrastructure gaps in cold-chain capacity, depackaging capabilities, and distributed processing sites as critical constraints. Food recovery leaders described a fragile logistics chain where refrigerated trucks, cold storage, and labor shortages bottleneck otherwise abundant edible surplus. Processors stressed that contamination, weak end markets, and multimillion-dollar capital costs make expansion difficult without public support or procurement commitments.

Another recurring theme was the importance of education, awareness, and trusted messengers. Residents and businesses often do not know how to participate in diversion programs, how to handle packaging, or where material goes. Stakeholders emphasized that participation increases most when education is simple, repeated, culturally relevant, and delivered by community-based leaders already trusted by neighborhoods. This is especially true in historically disinvested areas where food access challenges are intertwined with long-standing inequities.

Stakeholders also stressed the essential role of workforce development, noting that organics recovery, composting, hauling, and processing offer stable, living-wage jobs (\$25–\$40/hour) and could expand economic opportunity if intentional pipelines are created. Without clear coordination, however, these jobs risk benefiting only the largest operators instead of communities most affected by food insecurity and disinvestment.

Finally, participants across sectors emphasized that Kansas City's progress is real but uneven. Powerful pockets of innovation such as urban farms, neighborhood compost sites, local food hubs, and grassroots recovery organizations are demonstrating what is possible. But without unified direction, stable investment, regional end-market development, and strong City leadership, stakeholders fear the system will remain patchworked rather than fully circular.

Recommendations

This report takes insights from Kansas City, Missouri's progress towards a circular organics economy along with key learnings from stakeholders to develop a set of recommendations based around the circular economy pillars. A summary of each the recommendations for each pillar is presented below with more detailed recommendations provided in the body of the report. The full recommendation tables provide greater description of each recommendation along with additional metrics to assess recommendation impact.

RECOMMENDATION STRUCTURE

Recommendation System Stage

Recommendations are organized by circular economy system stage, as summarized in Table 1. This staging helps clarify sequencing, readiness, and how actions build on one another over time.

Table 1: Circular Economy System Stage Descriptions

Circular Economy System Stage	Description
Activation	Actions that are well-defined, feasible under current conditions, and can be advanced immediately. These recommendations do not require significant prerequisite actions and can be implemented in the near term to deliver early progress and momentum.
Building	Actions that are equally important but require specific enabling conditions to be in place, such as exploratory or feasibility studies to inform decision-making, infrastructure development, policy alignment, or coordination across partners. These recommendations should be actively planned for and advanced as prerequisites are completed. Appropriate sequencing is critical to build stakeholder trust, reduce implementation risk, and establish the foundation for long-term system performance.
Growing	Actions that support the long-term growth, resilience, and durability of the circular system once core structures are established. These strategies advance system-wide transformation and may require sustained policy evolution, long-term behavior change, market development, and ongoing coordination across City departments and external stakeholders to ensure lasting, citywide impact.

Recommendation Priority Indicators

In addition to system stage, recommendations are flagged to highlight their strategic importance:

Table 2: Recommendation Symbol Key

	Underway: Recommendations that Kansas City has already begun to implement
	Foundational: Recommendations that are critical to early success and should be prioritized during the activation stage. These actions establish the conditions necessary for subsequent building and growth. Foundational recommendations are indicated by a key icon
	High Impact: Recommendations expected to deliver substantial waste prevention, food recovery, or organics diversion outcomes and significantly improve overall diversion metrics. High-impact recommendations are indicated by a rightward arrow icon
	Future Focus: Recommendations that will be important for building the circular economy over time and could be pursued after underway, foundational, and high-impact actions are in motion.

The summary recommendation tables provide a cost range and type for each recommendation. The cost types are as follows:

- **Annual:** A recurring cost that repeats each year to sustain ongoing program activity. Examples include education and outreach campaigns, staff coordination roles, and annual collection program operations.
- **Capital:** A one-time investment in physical infrastructure or equipment with a useful life extending beyond the year of purchase. Examples include composting facility construction, collection vehicles, and residential organics carts.
- **One Time:** A non-recurring expenditure that is consumed in the period it occurs but does not produce a lasting physical asset. Examples include feasibility studies, planning assessments, policy development, and program design work.
- **Mixed:** A combination of capital investment and ongoing annual operating costs. Examples include food rescue pilots and organics collection programs that require both upfront equipment or infrastructure and sustained operations.

PLANNING AND POLICY

Planning and Policy provide the foundational structure for a circular organics economy, setting the priorities, regulatory conditions, and governance needed to align public and private actions toward waste prevention, food recovery, and organics diversion. Stakeholder feedback highlighted that while Kansas City has made meaningful progress, major gaps remain: the City lacks clear food recovery and diversion targets, cohesive cross-department coordination, and stable long-term funding, making it difficult to scale existing programs or evaluate progress. Structural barriers like zoning and permitting hurdles that restrict composting and urban agriculture, and the absence of required diversion space in new multi-family and commercial developments further limit community participation and infrastructure expansion. Recommendations to address these gaps are presented in Table 3 below.

Table 3: Planning and Policy Recommendations

Action	System Stage	Action Key	Target Sector	Cost Range & Type
Primary Focus Actions				
Review zoning laws to ensure support for backyard, small-scale, and community composting and urban farming opportunities	Activation	 Underway	All Generators	<\$30K One Time
Establish cross-department task force and create drive and accountability	Activation	 Underway	All Generators	\$30K – \$300K Annual
Build stable funding mechanism	Activation	 High Impact	ICI	\$300K – \$3M Annual
Establish food recovery and diversion goals for Kansas City	Activation	 Foundational	All Generators	\$30K – \$300K One Time
Large generator recovery and diversion requirement	Building	 High Impact	ICI	\$30K – \$300K One Time
Future Focus Actions				
Develop a local food donation and diversion credit or rebate program	Growing	 Future Focus	ICI	\$300K – \$3M Annual
Advocate at the State Level for Missouri Tax Credit	Growing	 Future Focus	ICI	\$30K – \$300K Annual
Building code update to require enough space for trash, recycling, and composting at multi-family and commercial properties	Growing	 Future Focus	All Generators	\$30K – \$300K One Time

WASTE PREVENTION AND FOOD RECOVERY

Waste prevention and food recovery sit at the top of the circular organics value hierarchy, preserving the highest economic, social, and environmental value of food by reducing avoidable surplus and redirecting edible food to people before it becomes waste. Effective prevention requires practical, accessible education and behavior-change strategies, while food recovery depends on strong donor participation, cold-chain logistics, and coordinated redistribution systems. Yet Kansas City's takeaways reveal major unmet opportunity. Although grassroots organizations collectively recover hundreds of tons each year, more than 27,400 tons of edible food are still disposed of annually. Gaps identified by stakeholders that limit recovery organizations' ability to expand operations include financial vulnerability, low donor participation, limited cold-chain and storage capacity, logistical complexity, and significant data gaps that obscure where surplus food is generated and where it flows. These barriers limit scalability and prevent recovery networks from matching the true volume of surplus food available. Recommendations to address these gaps are presented in Table 4 below.

Table 4: Waste Prevention and Food Recovery Recommendations

Action	System Stage	Action Key	Target Sector	Cost Range & Type
Primary Focus Actions				
Collaborated with MARC and Kansas City Food Wise to conduct a City supported distribution equity assessment in collaboration with food rescue organizations	Activation	 Underway & Foundational	ICI	\$30K – \$300K One Time
Residential outreach and education campaign to reduce food waste	Activation	 High Impact	Residential	\$30K – \$300K Annual
City requirement to divert food from government events	Building	 High Impact	ICI	<\$30K One Time
Future Focus Actions				
Develop Best Practices Playbook for ICI Generators	Activation	 Future Focus	ICI	<\$30K One Time
City to facilitate the pilot of food rescue program drawing from findings from rescue distribution equity assessment	Building	 Future Focus	ICI	\$300K – \$3M Mixed
City to facilitate the roll out hub and spoke food rescue program across City	Growing	 Future Focus	ICI	\$300K – \$9M Mixed

ORGANICS COLLECTION PROGRAMS

Organics collection programs provide the essential pathways for capturing food scraps and surplus food that can no longer be used for human consumption. Kansas City's system includes a growing mix of subscription-based curbside services, such as Compost Collective KC and KC Can Compost, along with public drop-off sites, solar-powered Smart Cans, and Mill food-dehydrator stations placed at community facilities. Together, these programs offer multi-channel access designed to meet the diverse needs of households and businesses across the City and demonstrate Kansas City's commitment to expanding convenient, community-centered organics recycling options.

However, the takeaways and gaps from stakeholder feedback show that the current system captures only a fraction of the City's food waste potential. In 2024, about 4,700 tons of food was diverted, yet more than 46,000 tons still went to landfills. Stakeholders emphasized several barriers limiting wider participation: low awareness and understanding of how to compost, cost and convenience constraints, especially for lower-income residents, limited access for multi-family housing, and contamination, which remains a major challenge due to confusion around packaging and proper sorting. These issues reduce program effectiveness and constrain growth. Recommendations to address these gaps are presented in Table 5 below.

Table 5: Organics Collection Programs Recommendations

Action	System Stage	Action Key	Target Sector	Cost Range & Type
Primary Focus Actions				
Pilot zero-waste events	Activation	 Underway	ICI	\$30K – \$3M Mixed
Continue to support current collection infrastructure	Activation	 Underway	All Generators	\$30K – \$3M Mixed
Citywide residential curbside organics collection feasibility study	Activation	 Foundational	Residential	\$30K – \$300K One Time
Pilot zero-waste zones in commercial districts of Kansas City	Building	 High Impact	ICI	\$300K – \$3M Mixed
Pilot universal residential organics collection program in select neighborhoods	Building	 Foundational	Residential	\$300K – \$3M Mixed
Rollout citywide residential organics collection program	Growing	 High Impact	Residential	\$3M – >\$9M Mixed
Future Focus Actions				
City wide municipal building organics diversion program	Building	 Future Focus	ICI	\$30K – \$300K Mixed
Support Master Gardeners Program	Building	 Future Focus	Residential	<\$30K Annual
City funding support in exchange for data tracking and measurement	Growing	 Future Focus	ICI	\$300K – \$3M Annual
Establish Green Dining Alliance in Kansas City	Growing	 Future Focus	ICI	<\$30K Annual
Citywide k-12 organics diversion programs	Growing	 Future Focus	ICI	\$300K – \$9M Mixed

ORGANICS INFRASTRUCTURE INVESTMENT

Organics infrastructure provides the processing backbone of a circular organics economy, ensuring that collected food scraps, yard waste, and biosolids are transformed into productive resources such as compost, soil amendments, other valuable products, or renewable energy. Kansas City's yard and food waste processing is anchored by Missouri Organic Recycling, which processes tens of thousands of tons annually, including packaged food waste through depackaging technology. The KC Water Blue River Thermal Hydrolysis System provides processing for biosolids by converting them into Class A fertilizer and renewable energy as it reaches full operation.

However, stakeholders identified gaps that limit the City's ability to scale diversion. Kansas City's organics processing has been anchored by a single large processor for food and yard waste. While that operator has a strong and beneficial partnership with the City, the reliance on a single processor creates concentration risk, and expanding the system will require broadening processing capacity to support future growth. Contamination, particularly from commercial routes, remains a challenge that raises operational costs and has the potential to impact compost quality. High capital costs for compost facilities also constrain expansion, particularly in the absence of strong, reliable end markets. Recommendations to address these gaps are presented in Table 6 below.

Table 6: Organics Infrastructure and Investment Recommendations

Action	System Stage	Action Key	Target Sector	Cost Range & Type
Primary Focus Actions				
Continue support recycling and reuse infrastructure through MARC	Activation	 Underway	All Generators	<\$30K Annual
Capacity Expansion Assessment	Activation	 Underway & Foundational	All Generators	\$30K – \$300K One Time
City–Processor Partnership to Reduce Contamination in the Organics Stream	Activation	 Foundational	All Generators	\$30K – \$300K Annual
Long-term expansion of food-waste processing capacity	Building	 High Impact	All Generators	\$3M – >\$9M Capital
Future Focus Actions				
Community compost imitative	Activation	 Future Focus	All Generators	\$30K – \$3M Mixed
Build initiative to support backyard composting	Activation	 Future Focus	Residential	\$30K – \$300K Annual
Develop food waste specific grant opportunities	Building	 Future Focus	ICI	\$300K – \$3M Annual
Market Development Incubator	Growing	 Future Focus	ICI	\$30K – \$3M Annual

REGIONAL END MARKETS

End markets ensure that compost, soil blends, and biosolids products have stable buyers, closing the loop and making the circular system economically viable. While Kansas City benefits from strong examples such as Urbavore Urban Farm and Birmingham Farm, which demonstrate the agricultural value of compost and biosolids, stakeholders emphasized that market demand remains inconsistent and underdeveloped. Processors often must blend compost into engineered soils due to limited demand for straight compost, constraining throughput and financial stability.

Stakeholders consistently described weak end markets as one of Kansas City's most significant bottlenecks. Without reliable, long-term offtake agreements, processors cannot justify major capital investments, and the system remains vulnerable. Stakeholders noted that public-sector procurement is currently underutilized, despite its ability to absorb large volumes for landscaping, stormwater, and soil restoration projects. Emerging markets such as biochar or carbon-rich soil amendments show promise but require pilot projects and market validation. Recommendations to address these gaps are presented in Table 7 below.

Table 7: Regional End Market Recommendations

Action	System Stage	Action Key	Target Sector	Cost Range & Type
Primary Focus Actions				
Conduct broader market assessment plan	Activation	 Foundational	All Generators	\$30K – \$300K One Time
Establish finished compost procurement policy	Activation	 High Impact	All Generators	<\$30K One Time
Incentivize use of finished compost	Building	 High Impact	All Generators	\$30K – \$300K Annual
Require Compost Use in City-Funded Grants	Building	 High Impact	All Generators	<\$30K Annual
Future Focus Actions				
Create "Green Building" Certification program or "Heat Island Mitigation" program	Building	 Future Focus	All Generators	\$30K – \$300K Annual
Contractor compost use education program	Growing	 Future Focus	All Generators	\$30K – \$300K One Time
Launch community soil health initiative	Growing	 Future Focus	All Generators	\$30K – \$300K Annual
Beyond Finished Compost	Growing	 Future Focus	All Generators	\$30K – \$300K One Time

LOCAL LEADERSHIP AND ENGAGEMENT

Local leadership and community engagement serve as the connection point of a circular organics system, ensuring that programs reflect community needs, build trust, and reach residents where they live and work. Kansas City benefits from a strong ecosystem of local leaders such as Rooted & Reaching, Ivanhoe Neighborhood Council, Cultivate KC, Green Works KC, and others who advance food access, education, environmental stewardship, and neighborhood-scale composting and recovery efforts.

Yet stakeholder feedback reveals uneven access, fragmented leadership, and limited coordination across neighborhoods. Many successful initiatives operate in isolation, reducing their collective impact. Workforce development was highlighted as both a major opportunity and a current gap: organics jobs offer strong wages, but intentional pathways are needed to connect residents, especially in historically disinvested neighborhoods, to these opportunities. Education and awareness gaps also persist, with stakeholders noting that residents and businesses often lack clear, culturally relevant guidance on food recovery and composting. Recommendations to address these gaps are presented in Table 8 below.

Table 8: Local Leadership and Engagement Recommendations

Action	System Stage	Action Key	Target Sector	Cost Range & Type
Primary Focus Actions				
Food as a community resource campaign	Activation	 Underway	All Generators	<\$30K Annual
City staff champion for food rescue and diversion coordination	Activation	 Foundational	ICI	\$30K – \$300K Annual
Workforce development	Building	 Foundational	All Generators	\$30K – \$300K Annual
Champion the value of circular organics with local and state level decision makers	Growing	 Foundational	All Generators	<\$30K Annual
Future Focus Actions				
ICI focused diversion education and outreach	Activation	 Future Focus	ICI	\$30K – \$300K Annual
Conduct a fresh food access needs assessment and develop incentives that support long-term success in underserved areas	Activation	 Future Focus	ICI	\$30K – \$300K One Time
Support and expand local-sourcing through institutional procurement partnerships	Building	 Future Focus	ICI	\$30K – \$300K Annual
Establish local champions	Building	 Future Focus	All Generators	\$30K – \$300K Annual
Support long-term access and stability of fresh food in underserved neighborhoods	Building	 Future Focus	All Generators	\$300K – \$3M Mixed
Cultivate food wisdom in K-12 education	Growing	 Future Focus	ICI	\$30K – \$300K Annual

Implementation Impacts

Implementing the full suite of recommendations across the Activation, Building, and Growing stages yields measurable and compounding benefits for Kansas City's circular organics system. When taken together, these actions significantly increase organics diversion, reduce greenhouse gas emissions, and expand local green-sector employment. The Implementation Impacts analysis shows that coordinated, phased action leads to clear system-wide gains. In the Activation stage alone, approximately 10,100 tons of material are diverted, 18,600 MTCO₂e are avoided, and about 15 new jobs are supported. The added impacts at the Building stage include 10,800 more tons diverted, 21,400 additional MTCO₂e are avoided, and 17 more jobs created; and by the Growing stage another 16,600 tons are diverted, 42,200 MTCO₂e are avoided, and 25 more jobs created. In total, 37,500 tons of surplus food could be diverted from disposal, 82,200 MTCO₂e avoided, and 56 jobs created (Figure 4 and Table 9).

Figure 4: Circular Organics Economy Implementation Impacts

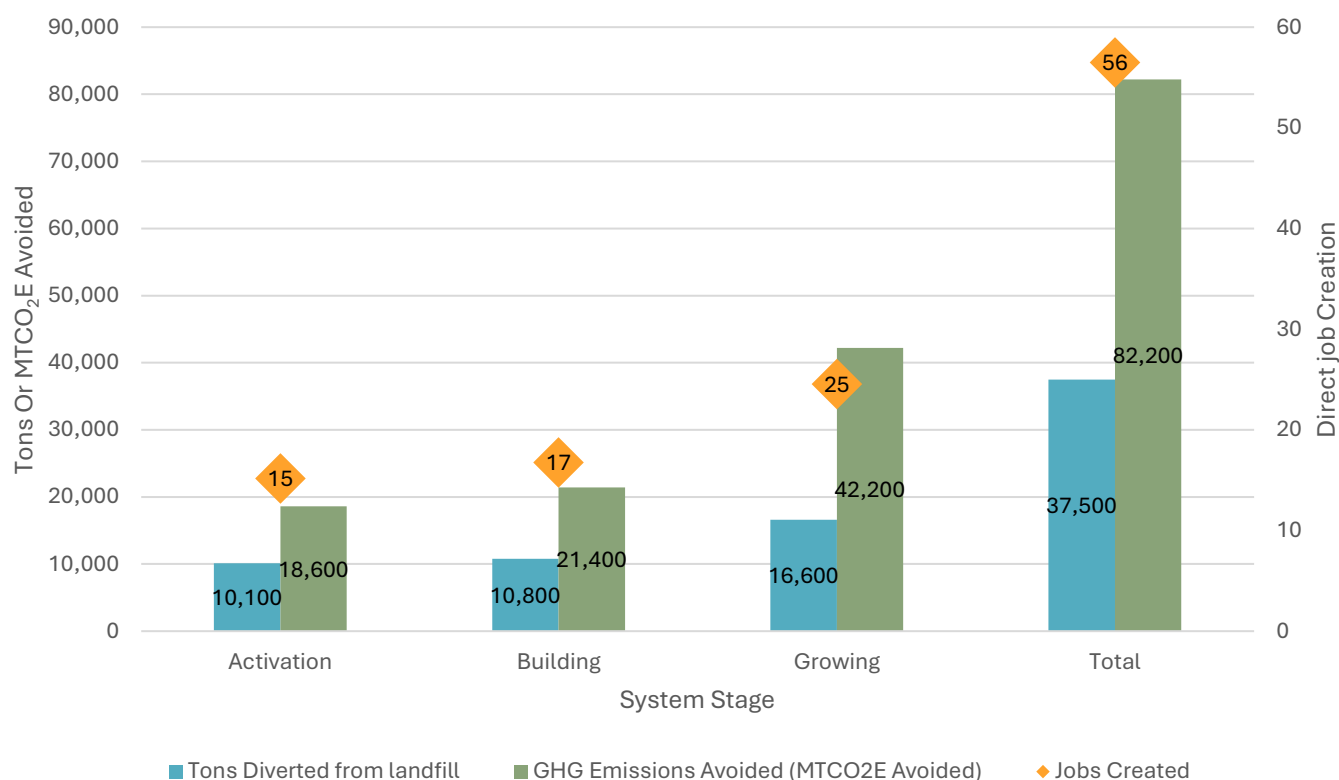


Table 9: Circular Organics Economy Implementation Impacts

System Stage	Prevention & Recovery			Organics Processing		
	Tons Diverted from landfill	GHG Emissions Avoided (MTCO ₂ E)	Direct Jobs Created	Tons Diverted from landfill	GHG Emissions Avoided (MTCO ₂ E)	Direct Jobs Created
Activation	3,700	15,400	6	6,400	3,200	9
Building	4,400	18,300	8	6,400	3,100	9
Growing	8,100	33,700	13	8,500	8,500	12
Total	16,200	67,400	27	21,300	14,800	30

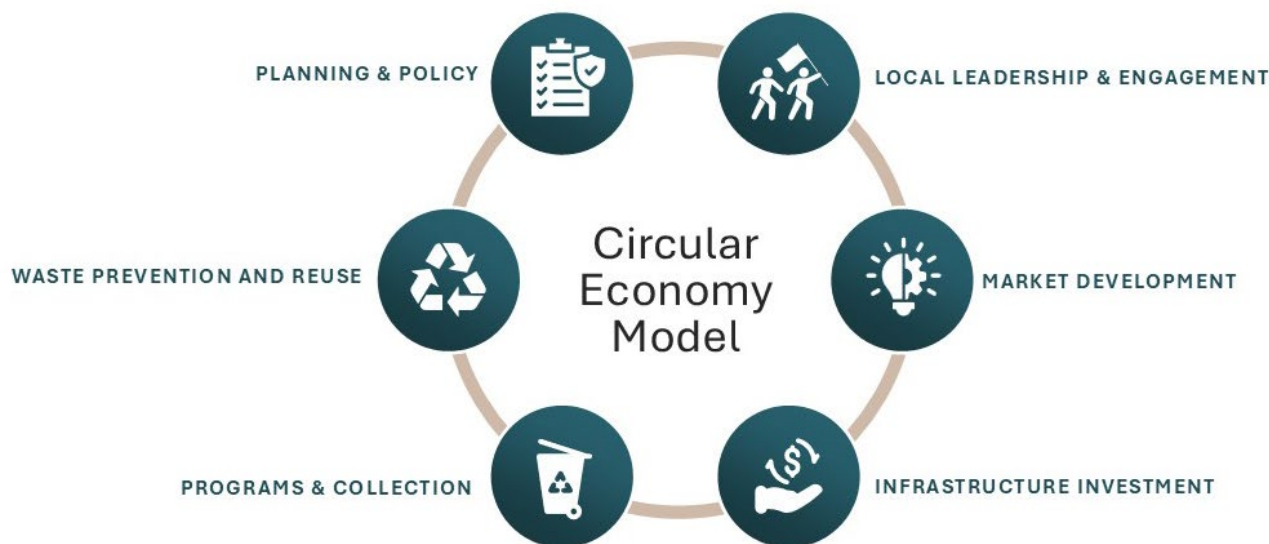
Introduction

For much of its history, the U.S. has managed materials through a linear system built on extraction, consumption, and disposal. In that model, resources are taken, made into products, used briefly, and then discarded. A circular economy offers an alternative framework, one that seeks to keep materials in use for as long as possible and direct them to their highest and best use before disposal is considered. Rather than treating discarded materials as waste, it recognizes them as resources that can support economic activity, strengthen local systems, and reduce pressure on natural resources.

The transition to a circular economy is not only an environmental opportunity but an economic one. Linear systems extract value from resources once and discard the rest, leaving significant economic potential unrealized. Circular systems, by contrast, capture that value repeatedly, generating local jobs, reducing costs for households and businesses, and reinvesting resources back into the communities that produce them. Research consistently shows that reuse, repair, remanufacturing, and organic material recovery create substantially more employment per ton than landfilling or incineration. Beyond job creation, circular approaches reduce dependence on volatile commodity markets and global supply chains, building a more stable and self-reliant local economy. In this way, the circular economy reframes sustainability not as a cost to be managed but as a driver of long-term economic strength.

Achieving that kind of system requires coordinated progress across six core pillars: Planning and Policy, Waste Prevention, Programs and Collection Systems, Infrastructure Investment, Market Development, and Local Leadership and Engagement. Together, these pillars provide the structure needed to build a durable, practical, and community-centered circular organics economy (Figure 5). It is important to note that these six pillars are mutually reinforcing. Policy enables investment, investment supports programs, programs generate material flows, markets absorb outputs, and community engagement drives participation across the system. Weakness or absence in any one pillar limits the effectiveness of the others.

Figure 5: Six Pillars of the Circular Economy Model



The Circular Organics Economy

This report uses the circular economy framework to examine Kansas City, Missouri's food system and the opportunities to reduce wasted food while building a more circular organics economy. The six circular economy pillars are described below in the context of food waste.

Planning and Policy

Planning and policy provide the foundation for a successful circular organics economy. Clear planning that engages stakeholders and community voices, anticipates near- and long-term needs, and responds to lived experience is essential for building public trust and ensuring sustained growth. Effective planning includes conducting detailed research to understand gaps and opportunities, setting realistic food recovery and organics diversion targets, piloting new approaches, and adapting programs based on what works in practice.

Supportive policy reinforces planning by creating conditions under which circular solutions can scale. Zoning and permitting that allow backyard and community composting, urban agriculture, and food recovery operations reduce structural barriers to participation. Public procurement incentives, measurement and reporting requirements, and regulatory clarity around food donation and recovery reduce uncertainty for private and nonprofit partners, help address liability concerns, and align public and private action around shared circular economy goals.

Waste Prevention and Food Recovery

Waste prevention and food recovery sits at the top of the circular organics value hierarchy because it preserves the full economic, social, and environmental value of food. Food represents an investment of land, water, energy, labor, and capital long before it ever reaches a plate. When food is wasted, that embedded value is lost, and additional costs are incurred through disposal, hauling, and greenhouse gas emissions. However, these costs are often invisible to households and businesses, which can make the act of throwing food away feel inconsequential despite its real economic and environmental impacts.

Effective waste prevention efforts help make the value of food visible and relevant to daily decision-making. Convenience, time constraints, perceived lack of value, and limited awareness of alternatives are major barriers to participation. Education and outreach must therefore be practical, accessible, and focused on real-world behaviors, such as shopping, storage, cooking, and preservation. Messaging that emphasizes cost savings, simple preparation techniques, food literacy, and time-saving strategies has proven particularly effective.

Programs and Collection Systems

Inedible food scraps and food that can no longer be used for human consumption still retains value in the potential to nurture soils and thus convenient and accessible organics collection options are essential to keeping this material out of landfill. Program success depends on how well a program meets people where they are. Barriers such as limited transportation, long or irregular work hours, childcare responsibilities, and lack of trust in public systems can prevent residents and businesses from engaging in diversion efforts, even when programs are available. Collection programs therefore must be designed with these realities in mind. A mix of curbside service, drop-off locations, and community-based collection points can help accommodate different needs and circumstances. Program design, outreach, and ongoing education directly influence participation rates, contamination levels, and equity of access. Collection systems that are flexible, visible, and easy to use are more likely to earn trust, increase participation, and ensure that organics diversion opportunities are accessible to all Kansas City residents and businesses.

Infrastructure Investment

Infrastructure investment enables the circular system to function at scale. This includes food recovery processing capacity, cold storage, depackaging equipment, composting and anaerobic digestion facilities, and distributed options such as backyard and community composting. Infrastructure must be matched to material types, volumes, and community needs, recognizing that not all food can be recovered and that some portion will ultimately require composting or digestion. It is also crucial that investments focus on reducing bottlenecks and building a resilient system rather than relying on a single solution.

Market Development

Strong end-markets for compost, soil amendments, and renewable energy are essential for financial sustainability of the circular economy. Market development closes the loop by ensuring there are viable and reliable uses for recovered food and processed organic materials. Things like procurement commitments and/or requirements and innovation hubs help create demand, attract private investment, and support local entrepreneurs. Market development also drives workforce growth as each new use for recovered organics creates jobs across processing, agriculture, distribution, and research and development.

Local Leadership and Engagement

Local leadership and engagement connect all pillars and ensure the circular organics economy reflects community needs and priorities. Dedicated field staff, trusted messengers, and partnerships with organizations already embedded in communities are critical for overcoming barriers related to trust, awareness, and participation. Engagement must occur where people interact with food every day, at home, at work, and when dining out.

Workforce development, skills training, and food literacy education strengthen the system by building capacity across food recovery, composting, urban farming, and meal preparation. Engagement also supports equity by recognizing differences in time, resources, cooking knowledge, and access, and by ensuring that benefits such as food access, jobs, and neighborhood investment are shared broadly.

Circular Organics in Kansas City

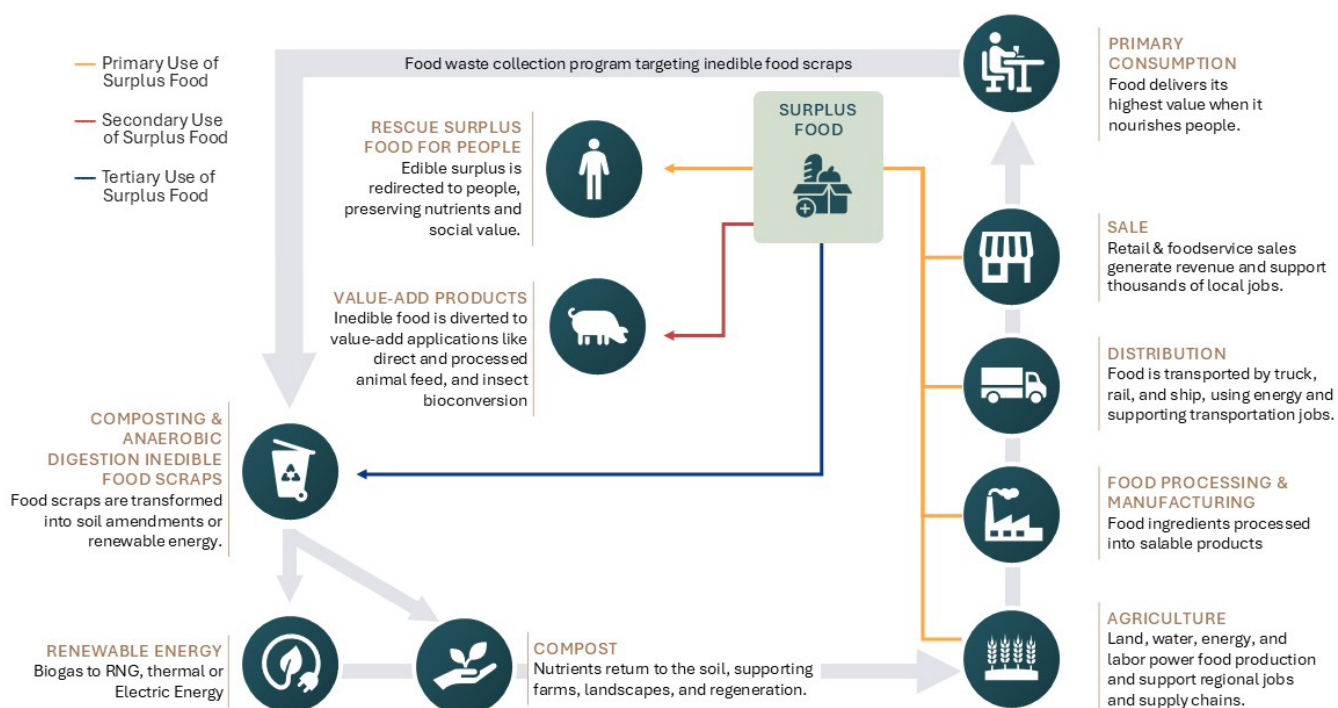
Food is one of Kansas City's most valuable resources. Its primary purpose is to nourish people, and when managed intentionally, food also has the capacity to strengthen neighborhoods, support local businesses, and regenerate soils. A circular organics economy recognizes this value by prioritizing the highest and best use of food by first feeding people and preventing avoidable surplus, then redirecting edible food to animal feed where appropriate, and finally diverting remaining food scraps to composting or anaerobic digestion to support soil restoration. Figure 6 illustrates the value chains for food within a circular organics model.

The goal of the Kansas City, Missouri Organics Circular Economy Plan is to establish this framework through a locally grounded strategy that also positions Kansas City as a model for innovation and best-practice programming. When a circular organics system is functioning well, it reduces wasted food and landfill disposal while delivering multiple co-benefits: increased food access, local job creation, cost savings for households and businesses, improved soil health, and reduced greenhouse gas emissions. In addition, by reinvesting organic materials back into productive use, the system can also support neighborhood revitalization through urban farming, local enterprise development, and stronger community connections.

A circular organics economy can lead to:

	Increased food access and food security
	Local job creation
	Cost savings for households and businesses
	Improved soil health
	Reduced greenhouse gas emissions
	Strengthened community resilience and local self-reliance
	Advances equity in the food and waste systems

Figure 6: The Circular Organics Economy Primary and Secondary Value Chain



Kansas City has already built important momentum toward this vision. Regional coordination tools, including the KC Food Wise food system map, increase visibility and coordination across the organics and food access network. Food recovery organizations such as Pete's Garden, Kanbe's Markets, Urban Produce Push, and Harvesters demonstrate the capacity to recover edible food and redirect it to community needs, while newer marketplace models including Too Good To Go expand options for keeping food in circulation. On the recycling side, Kansas City has expanded access to organics collection through free City drop-off locations, partnerships with KC Can Compost Smart Cans and other drop-off programs, and the deployment of Mill Food Recycling Stations at public sites. The region's processing and recovery capacity is anchored by Missouri Organic Recycling, including its depackaging capability, and by major infrastructure investments such as KC Water's Blue River Thermal Hydrolysis System and anaerobic digestion upgrades that will convert biosolids into Class A products and renewable energy. A major strength of Kansas City's organics ecosystem is the deliberate co-location of complementary organizations working together. Kanbe's Markets and KC Can Compost share neighboring facilities, enabling a closed-loop system in which fresh produce that cannot be sold through Kanbe's corner stores is passed directly to KC Can Compost for diversion from the landfill, with the resulting compost processed by Missouri Organic Recycling and returned to local farms and gardens. Among Kansas City's food recovery organizations, Kanbe's Markets operates the nation's only full-stack perishable logistics network — managing surplus produce from wholesaler recovery through neighborhood retail distribution, with secondary pathways to animal feed and composting. This end-to-end model is a unique Kansas City asset and leveraging Kanbe's as the infrastructure backbone of the hub-and-spoke system recommended in this plan accelerates implementation for large generator diversion, cold-chain expansion, and fresh food access in neighborhoods where traditional grocery retail has proven unsustainable.

Kansas City's momentum toward a circular organics economy is further strengthened by the City's receipt of a federal Solid Waste Infrastructure for Recycling (SWIFR) grant. The SWIFR award supports expansion of local capacity for waste diversion and recycling through planning, infrastructure investment, and market development, with an explicit focus on materials that make up a significant portion of the waste stream, including organic materials. As outlined by the City, SWIFR-funded activities include efforts to expand and improve food waste and organics diversion through composting-related infrastructure, community drop-off access, and education and outreach designed to reduce contamination and increase participation. By investing in composting and organics diversion as part of a broader recycling infrastructure strategy, the SWIFR grant provides both near-term resources and longer-term planning support that will help Kansas City advance food waste reduction, strengthen composting pathways, and build the foundation for a more resilient circular organics system.

This report documents Kansas City's progress toward a circular economy for organics, identifies systemic gaps, and presents recommendations and an implementation roadmap to support continued growth, resilience, and long-term performance.

Kansas City Surplus Food Generation, Recovery, and Disposal

A critical component of understanding the potential for a circular organics economy in Kansas City is quantifying the total amount of surplus food generated and how that material is currently managed. This includes estimating the share of surplus food recovered for human consumption, diverted to animal feed or composting, and ultimately disposed. Together, these figures provide a baseline to evaluate current system performance and future opportunity.

The following section presents a breakdown of available data on surplus food and yard waste generation in the municipal solid waste (MSW) stream and management in Kansas City. It examines organics generation across residential and institutional, commercial, and industrial (ICI) sectors, with particular attention to disposed food that at some point could have been eaten

by people. The analysis also explores where food waste is concentrated within the ICI sector, helping to identify high-impact opportunities for prevention, recovery, and diversion.

It should be noted that this section focuses on food and yard waste generated in the MSW stream and does not consider other organic material such as biosolids and sludge.

Organics Generation and Management Method

Table 10 shows the estimated organics generation and management method for food and yard waste in Kansas City. Kansas City demonstrates strong leadership in food recovery through organizations such as Pete’s Garden, Kanbe’s Food, Urban Produce Push, and Harvesters which collectively recover a minimum estimated 1,370 tons of edible food each year within Kansas City, Missouri. While diversion of food scraps to animal feed is officially recorded at just 150 tons, this figure likely represents a significant undercount. ReFED estimates that 90% of food waste from manufacturing is diverted to animal feed. However, because this study focused on residential and ICI generators where solutions are less established, manufacturing diversion is not fully captured here. Finally, another 4,730 tons of food waste is sent to compost from Kansas City.

Despite these efforts to rescue and divert food from landfills, 46,270 tons of food waste ends up disposed annually from Kansas City, Missouri so that only approximately 12% of that food is rescued to feed people, used to feed animals, or composted while the remaining 88% ends up landfilled.

This is in contrast to yard waste where 97% of generated yard waste is sent to composting, reflecting the strength of Missouri’s yard waste landfill ban and Kansas City’s yard waste collection and processing infrastructure.

Table 10: Estimated Annual Organics Generation and Management Method for Kansas City, Missouri

Organic Type	Management Method	Overall	Residential	Commercial
Food	Rescued to Feed People ²	1,320	0	1,320
	Feed Animals ³	150	0	150
	Composted ⁴	4,730	750	3,980
	Disposed ⁵	46,270	25,800	20,470
	Diversion Rate	12%	3%	21%
Yard	Composted ⁴	68,960	31,000	37,960
	Disposed ⁵	2,300	1,870	420
	Diversion Rate	97%	94%	99%

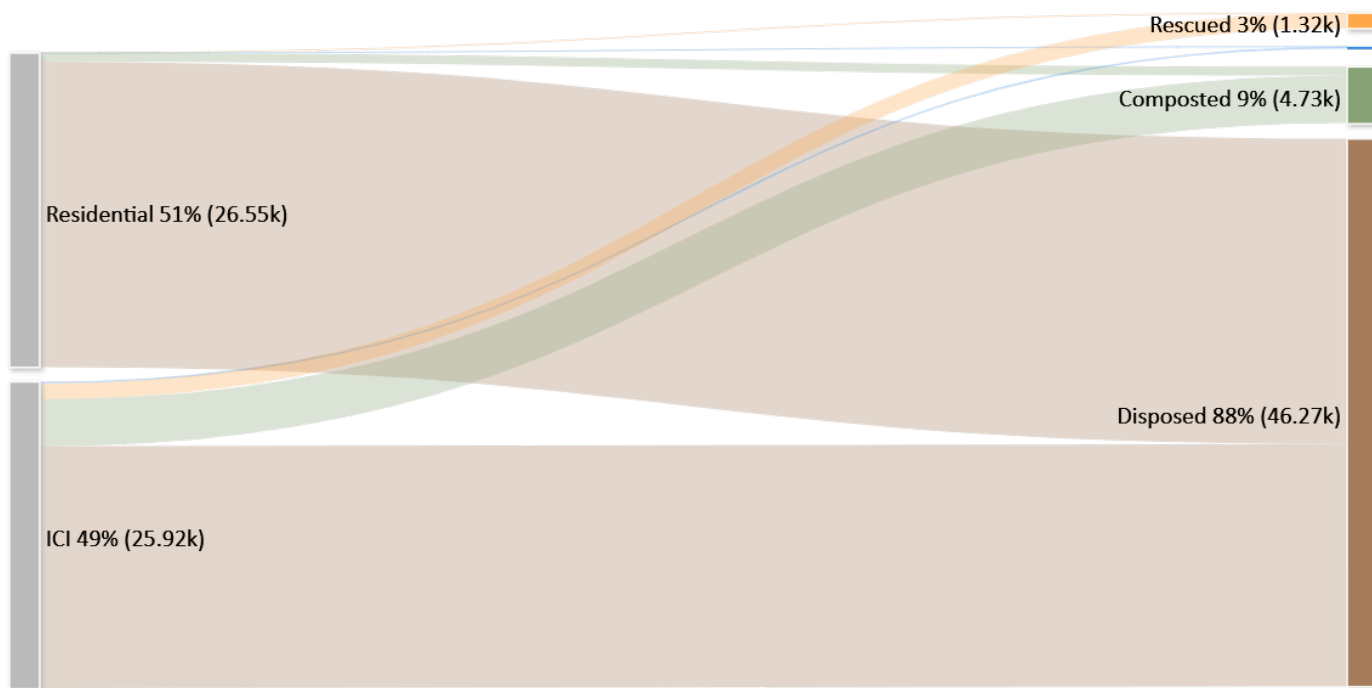
² Rescue food volumes were derived from published online data from rescue organizations operating in Kansas City such as Kanbe’s Markets and Pete’s Garden along with conversations from service providers. This is likely an underestimate to the volume of food rescued in Kansas City due to the challenge of attributing rescued tons to the City of Kansas City only for organizations that work on a regional level.

³ The volume of food sent to animal feed was based on input from stakeholder interviews and likely does not reflect all food that is sent to animal feed in Kansas City.

⁴ The estimated volume of composted food and yard waste in Kansas City was derived by extrapolating regional data on food waste acceptance at organics processing facilities and scaling that estimate to Kansas City’s population.

⁵ The estimated disposed volume of food and yard waste was calculated by applying Missouri’s statewide per capita MSW disposal estimate to the share of food waste identified in the 2024 Springfield, Missouri waste characterization study.

Figure 7: Flow of Surplus Food from Residential and ICI Generators



To better understand the composition of disposed food waste, data from a 2024 regional waste characterization study conducted in Springfield, Missouri were used to classify food waste into three groups: inedible food scraps, unpackaged surplus food, and packaged surplus food.

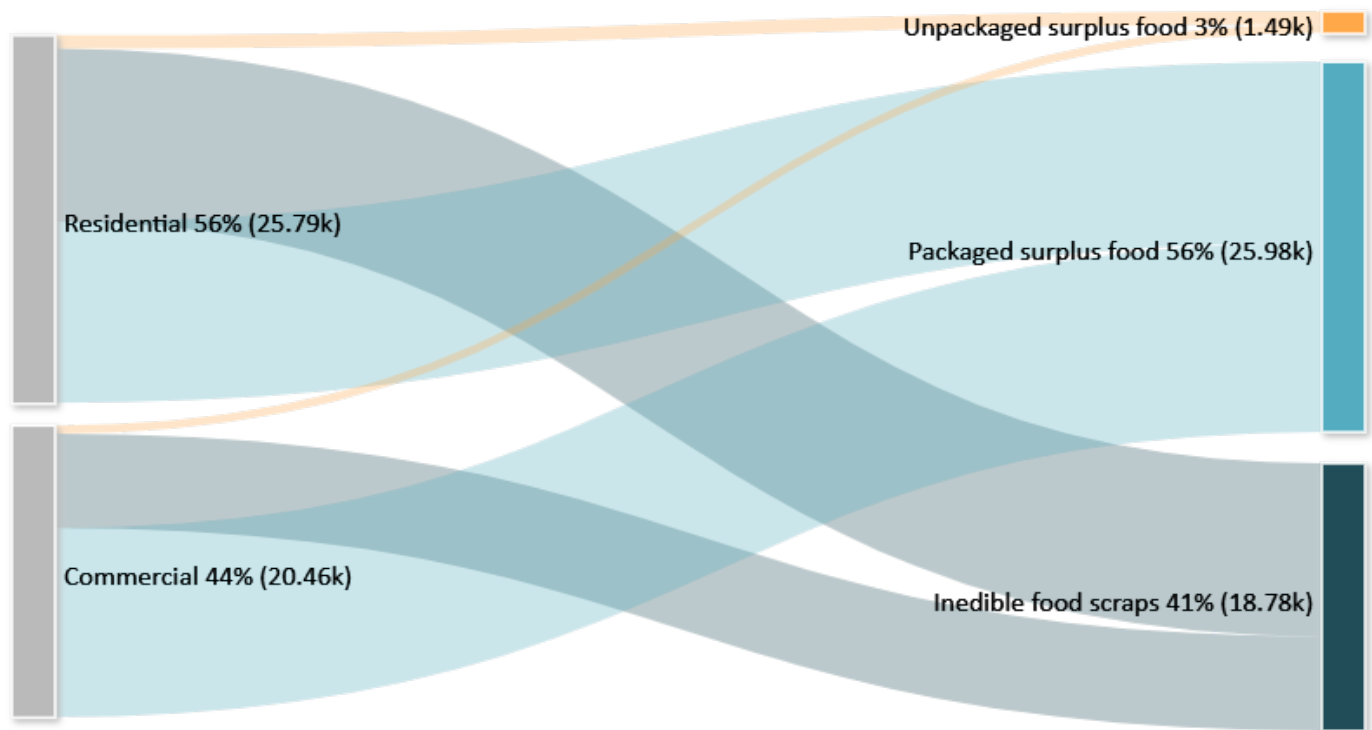
As illustrated in Table 11 and Figure 8, the composition of disposed organics in Kansas City varies significantly by material type and generator sector. Packaged food waste represents the largest single category, totaling approximately 25,980 tons. Of this amount, ICI generators account for 12,710 tons, while residential sources contribute 13,270 tons. Unpackaged inedible food waste is the second-largest category, totaling more than 18,790 tons, with households generating 12,150 tons and businesses generating 6,630 tons.

Unpackaged surplus food waste represents a much smaller share of disposed material at approximately 1,500 tons, with 930 tons generated by the ICI sector and 560 tons coming from Kansas City households.

Table 11: Estimated Composition of Disposed Organics in Kansas City

Organics by Type	Disposed Organics (Tons)	Proportion
Inedible food scraps	18,790	41%
Unpackaged surplus food	1,500	3%
Packaged surplus food	25,980	56%
Total	46,270	100%

Figure 8: Breakdown of Organic Disposal by Type and Generator



Organics Generation in the Institutional, Commercial, and Industrial Sectors

The ICI sector in Kansas City generates an estimated 25,450 tons of food waste each year. However, this generation is not evenly distributed across business types. The proportion of food waste varies widely depending on the nature of operations. For example, food manufacturing and restaurants may have food waste making up nearly half of their total waste stream, while industries such as durable wholesale and trucking generate only about 2% of their waste as food.

Understanding these differences is essential for identifying the greatest opportunities to divert organics from disposal. Kansas City has more than 7,100 ICI establishments employing approximately 157,900 workers (U.S. Census Bureau, 2022). Of these, nearly 1,900 businesses and institutions have some food-related activity based on their NAICS codes, including:

- Food and beverage retail stores
- Arts, entertainment, and recreation centers
- Hotels and lodging
- Medical and health facilities
- Educational institutions
- Restaurants
- Food manufacturing

Together, these food-related sectors are estimated to generate 65% of the city's total ICI food waste⁶. The largest contributions come from food and beverage retail and arts, entertainment, and recreation, followed by hotels and lodging. Table 12 and Figure 9 provide a detailed breakdown of estimated food waste generation by industry sector.

Table 12: Institutional, Commercial, and Industrial Food Waste Generation By Sector for Largest Contributors

ICI Sector	Number of Establishments	Number of Employees	Food Waste Generation (Tons)
Retail Trade - Food & Beverage Stores	280	5,110	5,910
Arts, Entertainment, & Recreation	280	6,370	3,440
Hotels & Lodging	150	5,500	1,870
Medical & Health	270	18,050	1,560
Education	330	16,820	1,470
Restaurants	160	1,370	1,070
Manufacturing - Food & Nondurable Wholesale	40	1,580	760
Public Administration	230	9,260	300
Services - Management, Administrative, Support, & Social	150	2,370	260
Total	1,890	66,430	16,630

⁶ The detailed methodology used to estimate food waste generation in ICI is provided in the Appendix.

Figure 9: Institutional, Commercial, and Industrial Food Waste Generation By Sector

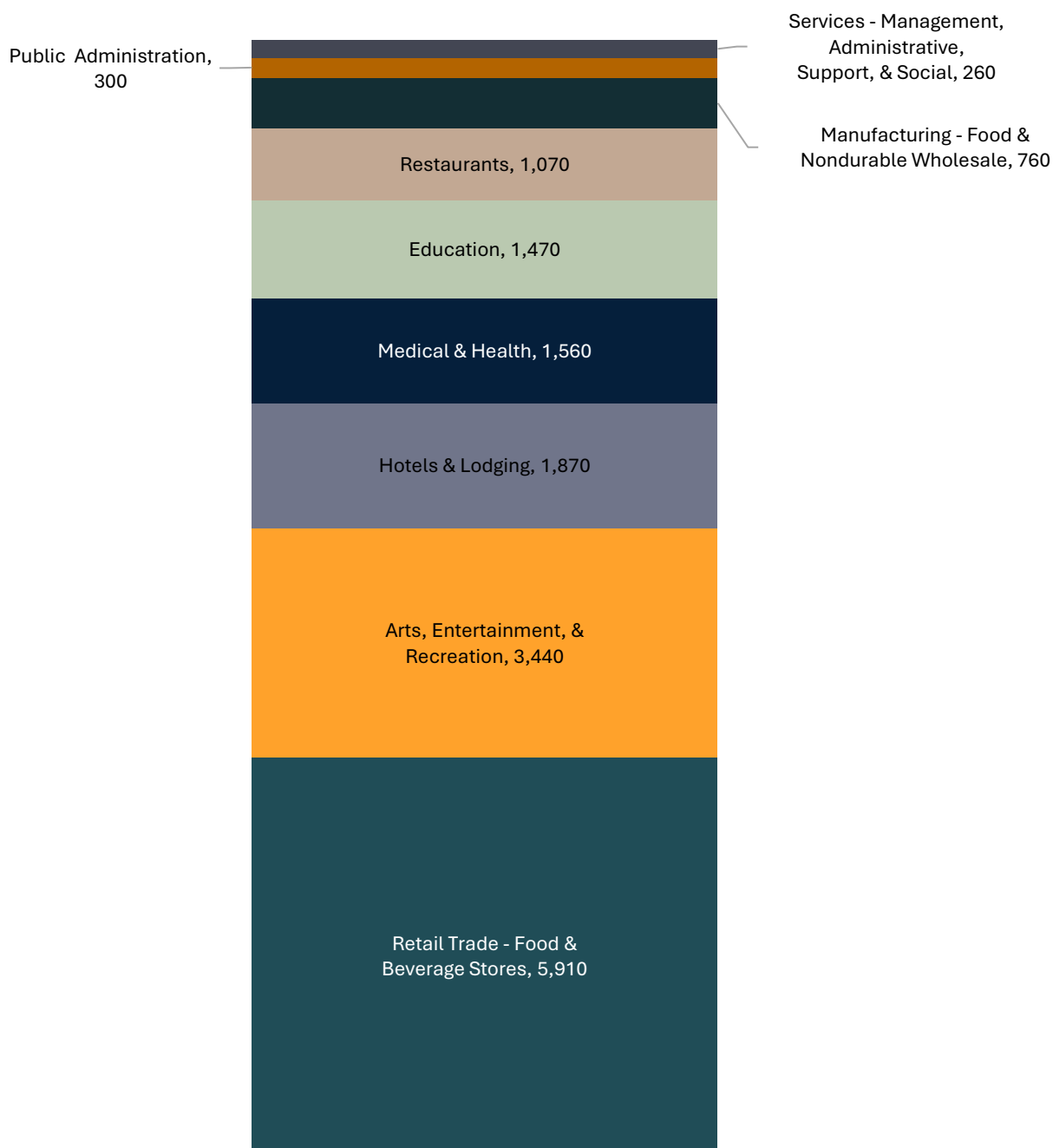


Figure 10 illustrates estimated ICI food waste generation rates by ZIP code across Kansas City. The spatial distribution indicates that generation is uneven across the City, with concentrations emerging in key commercial and hospitality corridors.

The highest generating ZIP code, 64161, is in the northeast portion of Kansas City, bounded on the west by I-435 and bisected by Missouri State Route 210. Although this area contains only about ten high-generating businesses, it produces a substantial

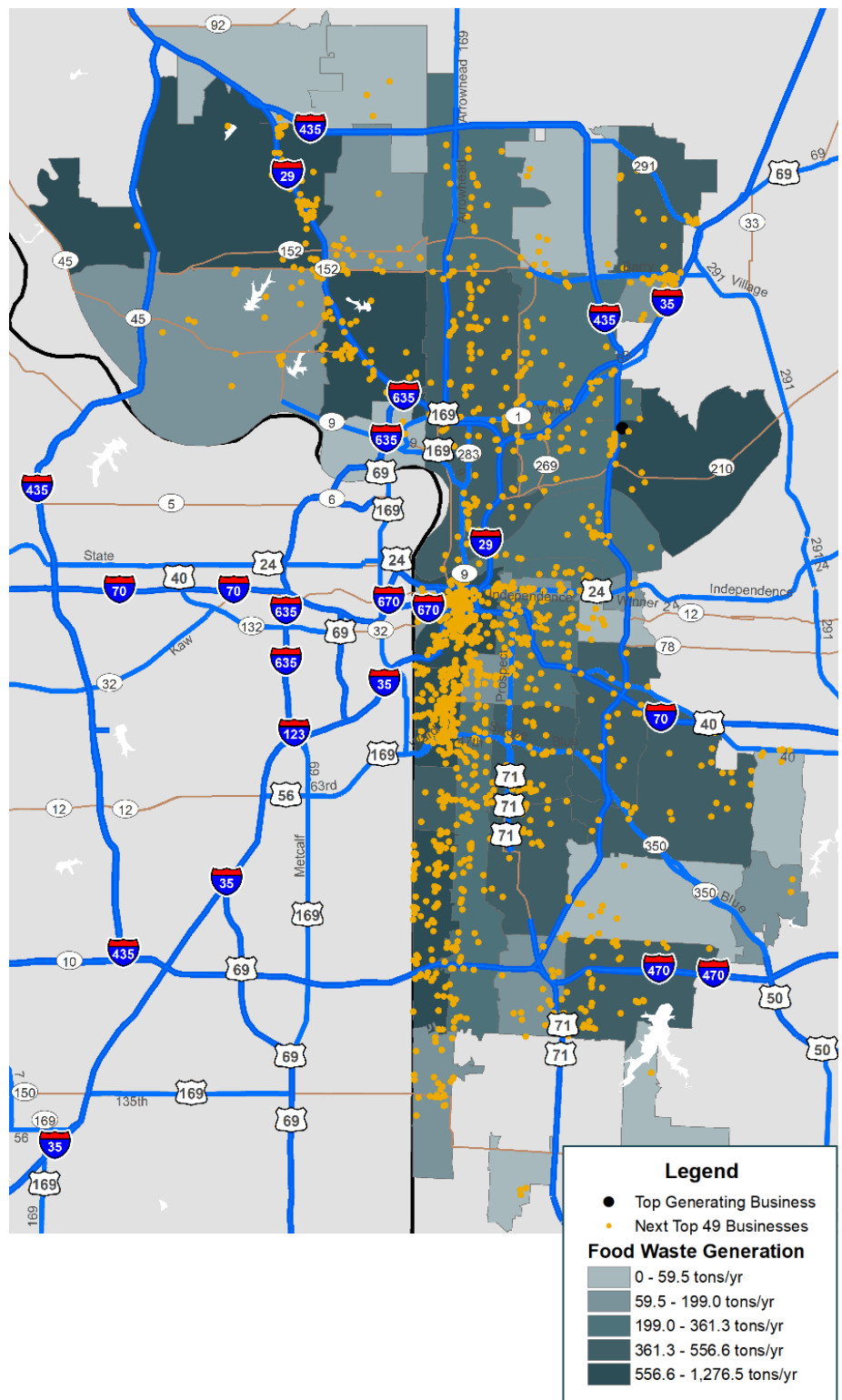
volume of food waste, largely attributed to activity from amusement and theme parks, hotels, and related entertainment establishments.

Another area of concentrated ICI generation is in the northwest portion of the City, encompassing the Kansas City International Airport and bounded by I-29, I-435, and Missouri State Route 152. This area's high generation reflects the presence of numerous restaurants, hotels, and service businesses that cater to airport travelers and logistics operations.

In contrast, ZIP code 64114, located in the southwest part of Kansas City and bounded on the west by the Missouri-Kansas state line with I-470 running through its southern portion, represents the second-highest ICI food waste generating area. This ZIP code encompasses more than 100 high-generating businesses spanning a wide range of sectors, including grocery stores, childcare centers, schools, restaurants, and nursing care facilities.

Notably, a relatively small number of businesses account for a disproportionate share of total food waste generation. The top 50 generating businesses collectively produce approximately 8,270 tons of food waste, representing about half of the total estimated ICI food waste generation citywide. This underscores both the potential impact of targeted diversion initiatives and the importance of engaging high-volume generators in future recovery and reduction programs.

Figure 10: ICI Food Waste Generation by Zip Code



How this Report is Organized

REPORT SECTIONS

The remainder of this report is structured around the six pillars of the circular organics economy framework described above. Each section examines how Kansas City is currently performing, where gaps remain, and what actions are needed to advance a more circular system.

For each pillar, the report includes:

- **Regional Highlights**
 - » Documents existing programs, organizations, and initiatives active in Kansas City
- **Stakeholder Feedback**
 - » Summarizes insights gathered from community organizations, businesses and institutions, and public agencies
- **Takeaways and Gaps**
 - » Identifies structural, operational, and equity-related barriers
- **Recommendations**
 - » Outlines specific, actionable strategies to address identified gaps, including target sectors, anticipated resiliency benefits, and relative cost magnitude
- **Case Studies**
 - » Each section contains two to three case studies that exemplify a successful implementation of a recommendation listed in that section.

STAKEHOLDER FEEDBACK PARTICIPANTS

Throughout this report, stakeholder feedback plays a central role in capturing local dynamics and informing recommendations from individuals and organizations actively working to advance a circular organics economy in Kansas City. Stakeholders were grouped based on the circular organics pillar that most closely aligned with their primary area of work. However, because the pillars are inherently interconnected, many interviews touched on multiple aspects of the system.

Each section of the report includes a synthesis of stakeholder feedback relevant to that topic, along with selected quotes that allow stakeholders to describe challenges and potential solutions in their own words. Table 13 summarizes the stakeholders interviewed for this work and identifies the primary circular organics pillar associated with each interviewee.

Table 13: Stakeholder Interview List by Circular Organics Economy Pillar

Circular Organics Economy Pillar	Stakeholders Interviewed
Planning and Policy	• Dianna Bryant, Solid Waste Management District Program Manager and Matt Riggs, Outreach Coordinator, at Mid-America Regional Council (MARC). • Sarah Burnett, Executive Director ReFED • Angela Powell, Missouri market Development Director at the Market Development Program • Tricia Jenkins, Assistant Professor Kansas State University (KSU) • Molly Davies, Associate Professor University of Missouri-Kansas City (UMKC) • Rebekkah Stuteville, Dean of Instruction Metropolitan Community College
Waste Prevention and Food Recover	• Tamara Weber, Founder & Executive Director of Pete's Garden • Michael Watson, Executive Director of Urban Produce Push • Max Kaniger, Founder of Kanbe's Markets
Programs and Collection Systems	• Dan Heryer, Owner of Compost Collective KC • Kristan Chamberlain, CEO and Co-Founder of KC Can Compost
Infrastructure Investment	• Kevin Anderson, CEO Missouri Organic Recycling
Market Development	• John Michaels, Principal Strategist at Cirque Renewable
Local Leadership and Engagement	• Damon Lee Patterson, Dunbar Neighborhood Conservation Steward with Rooted & Reaching • Emily Randal, Managing Director Climate Action KC

RECOMMENDATIONS STRUCTURE

Recommendation System Stage

Recommendations are organized by circular economy system stage, as summarized in Table 14. This staging helps clarify sequencing, readiness, and how actions build on one another over time.

Table 14: Circular Economy System Stage Descriptions

Circular Economy System Stage	Description
Activation	Actions that are well-defined, feasible under current conditions, and can be advanced immediately. These recommendations do not require significant prerequisite actions and can be implemented in the near term to deliver early progress and momentum.
Building	Actions that are equally important but require specific enabling conditions to be in place, such as exploratory or feasibility studies to inform decision-making, infrastructure development, policy alignment, or coordination across partners. These recommendations should be actively planned for and advanced as prerequisites are completed. Appropriate sequencing is critical to build stakeholder trust, reduce implementation risk, and establish the foundation for long-term system performance.
Growing	Actions that support the long-term growth, resilience, and durability of the circular system once core structures are established. These strategies advance system-wide transformation and may require sustained policy evolution, long-term behavior change, market development, and ongoing coordination across City departments and external stakeholders to ensure lasting, citywide impact.

In addition to system stage, select recommendations are flagged to highlight their strategic importance:

Table 15: Recommendation Symbol Key

	Underway: Recommendations that Kansas City has already begun to implement
	Foundational: Recommendations that are critical to early success and should be prioritized during the activation stage. These actions establish the conditions necessary for subsequent building and growth. Foundational recommendations are indicated by a key icon
	High Impact: Recommendations expected to deliver substantial waste prevention, food recovery, or organics diversion outcomes and significantly improve overall diversion metrics. High-impact recommendations are indicated by a rightward arrow icon
	Future Focus: Recommendations that will be important for building the circular economy over time and could be pursued after underway, foundational, and high-impact actions are in motion.

Recommendation Metrics

Each recommendation also includes a standardized set of metrics, summarized in Table 16, to support transparency, prioritization, and decision-making.

Table 16: Recommendation Metrics Description

Metric Name	Metric Description
Targeting Sector	Identifies whether the recommendation applies to residential generators, institutional/commercial/industrial (ICI) generators, or both.
Addressed Gap	Identifies which gaps from the <i>Takeaways and Gaps</i> section the recommendation is intended to address.
Resiliency Impact	Indicates alignment with relevant actions in the <i>Kansas City, Missouri Climate Protection and Resiliency Plan (2022)</i> . See Table xx in Appendix for list of all resiliency impact actions.
Cost Magnitude	Provides a high-level estimate of implementation cost, categorized as: • Very Low: <\$30K • Low: \$30K to \$300K • Medium: \$300K to \$3M • High: Greater than \$3M to \$9M • Very High: Greater than \$9M
Cost Type	Provides information on the type of cost for each recommendation: • Annual Expense (Annual): A recurring cost that repeats each year to sustain ongoing program activity. Examples include education and outreach campaigns, staff coordination roles, and annual collection program operations. • Capital Expense (Capital): A one-time investment in physical infrastructure or equipment with a useful life extending beyond the year of purchase. Examples include composting facility construction, collection vehicles, and residential organics carts. • One Time Expense (One Time): A non-recurring expenditure that is consumed in the period it occurs but does not produce a lasting physical asset. Examples include feasibility studies, planning assessments, policy development, and program design work. • Mixed Capital and Annual (Mixed): A combination of capital investment and ongoing annual operating costs. Examples include food rescue pilots and organics collection programs that require both upfront equipment or infrastructure and sustained operations.

CIRCULAR ECONOMY IMPLEMENTATION IMPACTS

The final section of this report presents implementation impacts and an SROI analysis that brings together recommendations across all six to demonstrate the impact to diversion, reduced greenhouse gas emissions, job creation, and other key value metrics of a circular organics economy in Kansas City. The implementation impacts are designed to support decision-makers by sequencing actions from the foundation to the growth phase and highlighting how investments build on one another as the system moves from activation, to building, and ultimately to sustained growth.

Planning and Policy

Policy and planning provide the foundation for a successful circular organics economy by shaping the system towards a circular economy. It is critical then that policy outlines clear priorities, aligns public and private action, and reduces barriers to achieving circular economy goals. Effective policy sends consistent signals and establishes accountability to residents, businesses, and institutions about how food and organic material should be managed, from prevention and recovery through processing.

Kansas City has already taken important steps toward this foundation through several studies and cross-functional groups including climate planning, food system planning, and regional coordination. At the same time, stakeholder input consistently highlighted that advancing the next phase of the circular organics economy will require moving beyond isolated initiatives toward a more coherent and intentional policy framework, one that prioritizes prevention and diversion over disposal, aligns departments and regulations, stabilizes funding, and supports market development and infrastructure investment.

The following section examines Kansas City's existing policy and planning context related to circular organics, summarizes stakeholder-identified gaps and barriers, and presents policy recommendations designed to strengthen coordination, clarify regulatory pathways, and create the conditions needed for sustained growth in food recovery, organics diversion, and end-market development to scale effectively and equitably across the City.

Regional highlights

KANSAS CITY, MISSOURI

The City of Kansas City has established a policy framework that indirectly supports circular organics principles through adopted climate, sustainability, and solid waste planning documents. While the City has not adopted a standalone organics or food waste diversion ordinance, several existing policies recognize the environmental and community impacts of waste generation and disposal and create a foundation for future organics-focused planning.

Kansas City's 2022 *Climate Protection and Resiliency Plan* establishes greenhouse gas reduction, climate adaptation, and neighborhood resilience as core municipal priorities. Because organic materials generate methane when landfilled, the plan implicitly positions food waste prevention, composting, and other organics diversion strategies as tools for achieving climate mitigation goals. The plan also emphasizes co-benefits such as improved public health, reduced environmental burdens, and increased resilience in historically underserved neighborhoods, all of which align with circular organics approaches focused on soil health, green infrastructure, and local resource recovery.

The City has also relied on data-driven policy analysis through the 2024 *Material Flow Analysis of Discarded Materials in the Kansas City Metropolitan Area* (MFA). The MFA provides a quantitative understanding of the composition of the waste stream and identifies organic materials as a significant share of discarded materials. While the MFA does not prescribe specific policy actions, it establishes a technical and analytical foundation for evaluating the potential impact of waste prevention, food recovery, composting, and other organics management strategies within the broader waste system.

The City's policy landscape is further informed by 2021 *From the Ground Up: Planning and Zoning for Urban Agriculture in Greater Kansas City*, a regional planning report that examines how zoning, land-use regulations, and municipal policies shape opportunities for urban agriculture. The report identifies soil quality, access to compost and organic amendments, and compatibility of agricultural uses within urban zoning districts as key factors influencing the success of urban food production.

While the report focuses on agriculture rather than waste management, it reinforces the role of compost and healthy soils as critical inputs to local food systems and highlights how planning and zoning policies can either enable or constrain circular organics pathways that return organic material to productive use.

Together, these planning efforts demonstrate Kansas City's commitment to climate resilience, food security, healthy neighborhoods, and principles of the circular economy. While the City's current policy framework does not mandate organics diversion or compost procurement, it establishes a clear foundation for integrating circular organics strategies into future planning initiatives, regulatory updates, and capital decision-making processes.

MID-AMERICA REGIONAL COUNCIL (MARC)

The Mid-America Regional Council (MARC) is a nonprofit association of city and county governments and the metropolitan planning organization for the Kansas City region. Funded through federal, state and private grants, local contributions and earned income, it plays a central role in regional planning related to solid waste, recycling, and organics management across the nine-county Kansas City metropolitan area. As the designated Solid Waste Management District for Cass, Clay, Jackson, Platte, and Ray counties in Missouri, MARC is responsible for coordinating regional solid waste planning, data collection, and stakeholder engagement, providing a shared framework that supports waste reduction, recycling, composting, and organics diversion efforts across jurisdictions.

In October 2023, the Mid-America Regional Council (MARC) released the *Kansas City Regional Food Loss and Waste Reduction Action Plan*. This report comprehensively addressed the scale of food waste challenges at the national and regional levels, including Missouri and Kansas. It presented a set of strategies to address food waste through prevention, food recovery, and organics recovery. Many of the recommendations from the Action Plan align with those in this report; however, this report builds on that foundation by quantifying the magnitude of food waste specifically within Kansas City and estimating the impacts in terms of total tons diverted, cost, GHG emissions avoided, and employment of implementing the recommended changes.

In addition to planning and coordination, MARC provides direct financial support for waste diversion initiatives through its Solid Waste Management District (SWMD) grant program. Since 1993, the program has awarded annual and small project grants that have significantly contributed to the development of the region's recycling, reuse, and composting infrastructure. Grant recipients have included municipalities, nonprofit organizations, and private-sector partners such as Ripple Glass, Flourish Furniture Bank, Habitat for Humanity ReStores, Sleepyhead Beds, Kanbe's Markets, KC Can Compost, Missouri Organic Recycling, the City of Kansas City, Missouri, the City of Lee's Summit, and the Kansas City Chiefs, among others.

Funded projects have supported a wide range of activities relevant to a circular economy, including glass recycling containers, construction and demolition recycling facilities, food waste recovery and composting programs, mattress reuse and recycling initiatives, drop-off recycling facilities, and public education campaigns. The program provides funding for waste reduction, reuse, recycling, composting, collection and processing infrastructure, research and development, and market development for products made with diverted materials. By supporting both early-stage pilots and established programs, MARC's grant program has helped advance diversion-focused projects while enabling innovation and capacity-building within the district.

Together, MARC's regional planning role and grantmaking authority provide an important policy and funding foundation for organics management in the Kansas City region. The combination of coordinated planning, technical assistance, and targeted financial support has enabled communities and organizations to test new approaches, expand diversion programs, and strengthen local markets for recovered materials, even in the absence of formal organics mandates.

GREATER KANSAS CITY FOOD POLICY COALITION

The Greater Kansas City Food Policy Coalition is a multi-stakeholder network convened by Cultivate KC that brings together community organizations, advocates, farmers, public agencies, and institutions to advance equitable food policy across the Kansas City region. The Coalition serves as a forum for collaboration and policy alignment on issues including food access, urban agriculture, land use, workforce development, and environmental sustainability, with an emphasis on elevating community voices and lived experience in policy conversations.

The Food Policy Coalition plays a key role in shaping the policy environment that supports a circular food and organics system by identifying regulatory barriers, developing shared policy priorities, and advancing recommendations related to zoning, land access, soil health, and food system resilience. Through working groups, research, and coordinated advocacy, the Coalition has helped frame food as a cross-cutting policy issue that intersects with public health, economic development, climate resilience, and neighborhood revitalization.

MISSOURI DEPARTMENT OF NATURAL RESOURCES

At the state level, the Missouri Department of Natural Resources (MDNR) provides the regulatory and planning framework for solid waste and organics management. MDNR oversees solid waste management districts, landfill regulations, and composting facility permitting, and supports statewide waste reduction and recycling planning efforts.

Missouri's policy framework emphasizes voluntary participation, market development, and regional flexibility rather than statewide organics mandates. This approach has enabled local governments and private processors to pilot composting and food waste diversion programs while also placing greater responsibility on local planning and partnerships to advance organics infrastructure and end markets.

Stakeholder Feedback

Stakeholder input consistently emphasized that Kansas City's next phase of progress toward a circular organics economy will depend less on isolated programs and more on a coherent policy framework that removes structural barriers, aligns departments, and provides clear signals to residents, businesses, and institutions. Across interviews, stakeholders highlighted zoning, regulatory clarity, funding stability, and accountability as foundational policy levers that shape what is feasible at scale.

One of the foundational needs to ensure a coherent policy framework and collaborative progress is strong internal coordination across City departments. Advancing circular organics strategies touches multiple municipal functions, including public works, parks, planning, housing, health, and neighborhood services. Without formal coordination mechanisms, policies risk being implemented unevenly or working at cross-purposes.

"[In the city context], different divisions [and] departments, have to work together to make the city run. It's the same thing in the food system." –Dan Heryer, Compost Collective KC

"I think actually you should pick a slightly more aggressive target to put some pressure on the system. But you also recognize that by making that public statement and by creating that, then hopefully you'll attract some of that [infrastructure investment]." –Sara Burnett, ReFED

The next fundamental component of the circular organics economy policy is to lay out clear targets and accountability measurements to track progress. Stakeholders noted that, in the absence of defined food recovery and organics diversion goals, it is difficult to measure improvements, prioritize investments, or evaluate the effectiveness of policies over time. Establishing citywide targets with defined timelines would create shared expectations across departments and partners, support data-driven decision-making, and provide transparency to the public.

Beyond numeric targets, stakeholders emphasized the importance of using policy to clearly signal that waste prevention and diversion are prioritized over disposal. Participants noted that policies, standards, and system design choices all communicate values and can either reinforce or undermine the waste hierarchy in practice.

"If all of city hall and the courthouse recycled and composted, a lot of people would pay attention to it... if they were adopting these ideas about waste in their facilities, in their day-to-day operations, I think that's a form of leadership that...would catch on." –Damon Lee Patterson, Dunbar Neighborhood Conservation Steward with Rooted & Reaching

"How about making [waste] bins smaller and keeping the big ones for recycling. Right now, everybody [receives] two [waste and recycle bins] of equal size and that was the wrong message." –Molly Davies, Associate Professor University of Missouri-Kansas City (UMKC)

Stakeholders discussed how the City's decisions around infrastructure design, service standards, and requirements can implicitly shape behavior by making certain choices easier, more visible, or more normalized. When prevention and diversion are embedded into the default conditions of service rather than treated as optional add-ons residents and businesses are more likely to align with those priorities. Stakeholders suggested that aligning physical infrastructure, service specifications, and policy

requirements with the waste hierarchy would help communicate the City's commitment to reduction and recovery, particularly as Kansas City considers expanding organics diversion alongside existing waste and recycling systems.

Funding stability emerged as another critical policy issue. Many food recovery and organics diversion efforts currently rely on short-term grants or emergency funding, which limits long-term planning and scalability. Stakeholders stressed the importance of establishing durable funding mechanisms that treat food waste reduction and food insecurity as ongoing systems challenges rather than temporary crises. Suggested approaches included dedicated public funding streams, public-private financing models, and performance-based funding structures that reward measurable diversion and recovery outcomes.

"I would love to see something like a half cent sales tax that goes directly to the food system. You [need] your own rescue plan as a city. If you don't have a rescue plan for feeding people, the violence is going to go up." –Michael Watson, Urban Produce Push

For some businesses: “...saying that they’re going to get a massive tax write off, that’s what helps them.” –Tamara Weber, Pete’s Garden

For other businesses: “The enhanced deduction for food just doesn’t seem to really matter... it takes more paperwork... has a cap... donors don’t really care.” –Max Kaniger, Founder of Kanbe’s Markets

Economic incentives were widely viewed as an important policy lever for increasing food donation, with tax incentives frequently cited as a common tool. Stakeholders, however, expressed differing perspectives on their effectiveness. For some food generators, particularly larger institutions and businesses with dedicated accounting capacity, existing tax deductions and liability protections were described as meaningful drivers that make food donation financially attractive and operationally justifiable. In contrast, other stakeholders emphasized that tax incentives alone are often insufficient to motivate participation, especially for smaller businesses or those facing tight margins, staffing constraints, or logistical challenges.

Stakeholders noted that the costs associated with food donation and diversion such as transportation and labor can outweigh the benefits of tax incentives without additional support. As a result, City policy was identified as a critical mechanism to help offset these costs, reduce operational barriers, and reinforce desired behaviors through clearer expectations, supportive infrastructure, and complementary non-tax incentives that expand participation across a broader range of businesses.

“There certainly could be waivers or fee reductions or something to make people actually serving rescued food to people more affordable for them” –Dianna Bryant, MARC

“The zoning piece is front and center in our minds. When we’re looking at sites for composting around the region in KCMO or KCK, that zoning question is always something we run up against. If we want to collect and process more waste streams, we need the ability to set up facilities to do that, and it shouldn’t just be expensive manufacturing real estate. It should be happening in communities and neighborhoods.” –Dan Heryer, Compost Collective KC

Stakeholders also touched on challenges with processing. One of the most frequently cited policy barriers relates to land use and zoning. Stakeholders consistently described zoning uncertainty as one of the most consequential obstacles when evaluating potential composting sites, effectively narrowing feasible locations to a limited set of industrial parcels and increasing competition for already scarce land. This lack of siting flexibility constrains the development of a distributed composting network, reduces system redundancy, limits geographic access to processing, and increases the risk that disruptions at a single facility could cascade across the regional system.

Stakeholders further noted that existing zoning codes can unintentionally restrict backyard composting, neighborhood-scale composting sites, and urban agriculture through accessory-use limitations, setback requirements, volume caps, or unclear definitions of permissible activities. These constraints limit opportunities to process and reuse organic materials closer to where they are generated. Stakeholders emphasized that clearer by-right allowances, performance-based standards addressing odor and pests, and streamlined approval processes paired with meaningful neighborhood engagement would help normalize composting as a compatible land use rather than treating it as an exception.

“In Portland...I took my food scraps to a single-family home with a very organized and tidy three bin system on the rumble strip between the sidewalk and the street [with] signage.” –Molly Davies, Associate Professor University of Missouri-Kansas City (UMKC)

Regarding a new apartment building in KC: *“Before any of that was built, they were going to put composting a space for compost right in all of those kitchens [but], it ended up getting chopped at the last minute because of money, which was really sad.”*—Kristan Chamberlain, CEO and Co-Founder of KC Can Compost

Finally, stakeholders highlighted the role of building codes and development standards in shaping long-term diversion outcomes. Ensuring that new multi-family, mixed-use, and commercial developments include adequate, dedicated space for trash, recycling, and composting was viewed as a foundational policy step. Clear requirements for storage space, accessibility, ventilation, and container capacity would reduce operational barriers for property managers and tenants and make participation in diversion systems more feasible as the City grows.

Taken together, stakeholder feedback indicates that Kansas City is well positioned to advance circular organics through targeted policy actions that align departments, stabilize funding, clarify permissions, and embed diversion considerations into zoning, building codes, and regulatory frameworks. These policy tools can create the conditions needed for programs and infrastructure to succeed, while supporting long-term climate, equity, and community resilience goals.

Takeaways and Gaps

- **Limited Policy Support for Food Recovery and Diversion:** Kansas City lacks clear policy standards that prioritize food recovery and organics diversion over disposal. Without explicit policy signals, prevention and recovery efforts can appear optional rather than integral to the waste management system
- **Lack of Clear Targets, Accountability:** The absence of defined food recovery and organics diversion goals and accountability mechanisms makes it difficult to track progress, align investments, and reinforce the waste hierarchy through policy and system design.
- **Unsustainable and Short-Term Funding Structures:** Many food recovery and organics diversion efforts rely on short-term or emergency funding, which limits long-term planning, scalability, and system reliability.
- **Tax Incentives Alone Are Not Sufficient:** While tax credits and rebates can encourage participation, incentives alone do not address structural barriers such as infrastructure gaps, operational costs, and lack of clear expectations, limiting their effectiveness at scale.
- **Regulatory and Permitting Barriers:** Zoning and permitting uncertainty limits where composting and organics processing facilities can be sited, often confining them to a narrow set of industrial parcels. Existing codes can also unintentionally restrict backyard composting, neighborhood-scale sites, and urban agriculture, constraining the development of a distributed and resilient organics system.
- **Lack of Dedicated Diversion Space Requirements:** Current building and development codes do not consistently require adequate, dedicated space for trash, recycling, and composting in new multi-family and commercial developments, creating long-term operational barriers to participation in diversion programs.

Recommendations

Table 17 provides recommendations to activate, build, and grow the waste prevention and food recovery pillar of the circular organics economy in Kansas City.

Table 17: Planning and Policy Recommendations

Review zoning laws to ensure support for backyard, small-scale, and community composting and urban farming opportunities:



Conduct a comprehensive review of Kansas City, Missouri's zoning code to ensure it actively supports backyard, small-scale, and community composting and urban agriculture, rather than unintentionally restricting them. This review should examine existing urban agriculture provisions and composting thresholds, including accessory-use limits, setback requirements, and volume caps, while streamlining approvals for neighborhood-level sites and on-site composting at gardens. The City should also clarify by-right allowances with clear performance standards for odor, pests, and aesthetics, and, where feasible, provide model language that HOAs and landlords can adopt to permit compliant backyard composting and small urban farms while addressing legitimate nuisance concerns. It is critical that this process include meaningful engagement with neighbors and community members to ensure concerns are heard and addressed, while also building support for a distributed composting network across Kansas City.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	All Generators	Regulatory and Permitting Barriers	F-1.1, F-1.2, F-1.3, W-1.5, W-1.6, W-2.1	<\$30K One Time

Establish cross-department task force and create drive and accountability:



Advancing a circular organics economy in Kansas City will require coordinated action across multiple City departments, including Public Works, Parks and Recreation, Neighborhood Services, Housing and Community Development, Health, and City Planning and Development, among others. Each department plays a distinct role across the pillars of the circular economy, and effective implementation depends on alignment across policy development, service delivery, infrastructure planning, and community engagement. To ensure coordination and maximize impact, the City could establish a cross-departmental task force led by a designated City coordinator. This body would facilitate communication, align departmental roles and responsibilities, and ensure that circular organics initiatives are implemented in a cohesive and mutually reinforcing manner.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	All Generators	Limited Policy Support for Food Recovery and Diversion	F-2.1, F-2.4, F-2.6, W-1.5	\$30K – \$300K Annual

Build stable funding mechanism:

Develop a durable funding structure for food recovery by combining public-private financing models, such as partnerships, endowments, or pay-for-performance programs, with dedicated public funding streams. Stakeholders emphasized the need for a reliable, non-emergency funding base and proposed options such as a half-cent sales tax, an annual city budget allocation for food systems, or a FEMA-like framework that treats food insecurity as a systemic challenge requiring sustained resources.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	ICI	Unsustainable Funding	F-2.1, F-2.4, F-2.6, W-1.5	\$300K – \$3M Annual

Establish food recovery and diversion goals for Kansas City:

To provide incentive and momentum toward reducing wasted food, Kansas City could establish food recovery and organics diversion targets with defined timeframes to guide program development, track progress, and align investments across departments and partners. Currently, food donation in Kansas City represents approximately 3% of total commercially generated edible food, and overall diversion of wasted food is approximately 9%. Establishing diversion targets creates a shared framework for evaluating program performance and supports data-driven decision-making.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	All Generators	Limited Policy Support for Food Recovery and Diversion	F-2.1, F-2.4, F-2.6, W-1.5	\$30K– \$300K One Time

Large generator recovery and diversion requirement:

Establish a food waste recovery and diversion requirement for large generators in Kansas City, such as grocery stores, institutional kitchens, universities, hospitals, food manufacturers, and large restaurants, mandating that surplus edible food be donated and that remaining food scraps be diverted to composting, anaerobic digestion, or animal feed rather than landfilled. The City should phase in requirements by generator size, provide clear guidelines and compliance support, and coordinate with local food recovery organizations to ensure capacity for increased donations. Critically, the City should work with food recovery organizations during the design and implementation of any mandate to establish clear quality standards for donated food, ensuring that requirements do not inadvertently incentivize the donation of food that recipient organizations cannot use or distribute. Experience from similar mandates in other states has shown that without quality guidelines and recipient capacity planning, diversion requirements can shift the burden of managing unusable food onto recovery organizations rather than reducing it.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Building	ICI	Limited Policy Support for Food Recovery and Diversion	F-2.1, F-2.4, W-1.5	\$30K – \$300K One Time

Develop a local food donation and diversion credit or rebate program:

Kansas City could provide a city-level tax credit or rebate to businesses that donate surplus food to cover the value of the donated food and associated delivery and logistics costs.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Growing	ICI	Tax incentives alone aren't enough, Limited Policy Support for Food Recovery and Diversion	F-2.1, F-2.4, F-2.6, W-1.5	\$300K – \$3M Annual

Advocate at the State Level for Missouri Tax Credit:

Publicly support state-level legislation creating a food donation and diversion tax credit aligned with Kansas City's economic and waste-reduction goals. Kansas City could provide examples of the impact of the local food donation and diversion credit and impact to food donations and diversion to support this effort.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Growing	ICI	Limited Policy Support for Food Recovery and Diversion	F-2.6	\$30K – \$300K Annual

Building code update to require enough space for trash, recycling, and composting at multi-family and commercial properties:

Update Kansas City's building code to ensure that all new multi-family, mixed-use, and commercial developments include adequate, dedicated space for trash, recycling, and composting collection. Clear requirements for interior and exterior storage areas, such as room dimensions, ventilation, accessibility, and container capacity, will make it easier for property managers and tenants to participate in diversion programs.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Growing	All Generators	Lack of dedicated diversion space requirements	W-1.5, W-1.6	\$30K – \$300K One Time

Case Studies

SAN MATEO COUNTY, CALIFORNIA DEDICATED SALES TAX TO SUSTAIN FOOD ACCESS BEYOND ELIGIBILITY GAPS

Identified Challenge: In San Mateo County, high living costs and restrictive eligibility requirements for state and federal nutrition programs have left many households food insecure despite employment or partial income stability. Immigrant households and residents with incomes just above CalFresh eligibility thresholds are particularly vulnerable. Prior to the adoption of a dedicated funding source, food assistance organizations faced uncertainty tied to short-term grants and emergency funding, limiting their ability to plan and scale services (San Mateo County, 2023).

Solution Implementation: In 2016, voters in San Mateo County approved an extension of the Measure K half-cent countywide sales tax through 2043, creating a long-term, flexible funding source for community priorities, including food access. Measure K revenues support organizations such as Second Harvest of Silicon Valley, which provides food distribution and nutrition assistance to residents who may not qualify for CalFresh. Unlike state and federal programs, Second Harvest does not require citizenship and allows higher income eligibility, enabling it to reach households otherwise excluded from public benefits. During the 2023–2024 fiscal year, Second Harvest distributed approximately 36 million pounds of fresh food and served more than 125,000 individuals each month, supported in part by Measure K funding (San Mateo County, 2023).

Key Learnings for Kansas City: San Mateo County's use of a voter-approved sales tax demonstrates how dedicated, long-term public funding can stabilize food assistance systems and close gaps left by state and federal programs. By providing predictable, flexible resources, Measure K allows food access organizations to plan, scale, and respond to community needs without relying solely on emergency or philanthropic funding. For Kansas City, this case highlights the potential role of dedicated local revenue in building durable food recovery and access systems that are inclusive, resilient, and aligned with community needs.

MASSACHUSETTS LARGE GENERATOR FOOD WASTE RECOVERY AND DIVERSION REQUIREMENT

Identified Challenge: Prior to policy intervention, Massachusetts faced high levels of edible food waste generated by large commercial entities such as grocery stores, universities, hospitals, food manufacturers, and institutional kitchens. While food recovery organizations operated across the state, participation in food donation was inconsistent and largely voluntary, and significant quantities of edible food continued to be landfilled. At the same time, the state confronted shrinking landfill capacity, rising disposal costs, and the need to reduce greenhouse gas emissions. Policymakers also recognized that without predictable material flows, private investment in organics processing and food recovery infrastructure would remain limited.

Solution Implementation: In response, Massachusetts implemented a Commercial Food Waste Disposal Ban, beginning in October 2014. The policy prohibits large generators from disposing of food waste in landfills or incinerators and establishes a clear hierarchy that prioritizes food waste prevention and edible food donation, followed by diversion of remaining food scraps to composting or anaerobic digestion.

The ban was intentionally phased in over time to align regulatory requirements with available infrastructure capacity. Initially, the policy applied to generators producing one ton or more of food waste per week. In 2022, the threshold was lowered to one-half ton per week, expanding applicability to a broader set of large food businesses as processing and food recovery capacity grew.

Massachusetts paired the disposal ban with extensive compliance support to reduce burden on regulated businesses. The state provides technical assistance, waste audit tools, compliance guidance, and directories of food recovery organizations and organics processors to help generators understand requirements and identify feasible diversion pathways. This support-focused approach emphasized education and market development over punitive enforcement, particularly during early implementation (Massachusetts Department of Environmental Protection, 2026).

Since implementation, the disposal ban has spurred substantial growth in the state's organics diversion and reuse industry. Two economic impact studies from the Massachusetts Department of Environmental Protection found that the policy helped create nearly 1,700 jobs, generate approximately \$143 million in labor income, produce \$194 million in economic value, and support \$390 million in total industry activity statewide. These outcomes reflect increased private-sector investment, workforce expansion, and market stability driven by predictable material flows (Massachusetts Department of Environmental Protection 2016; 2025).

Key Learnings for Kansas City: For Kansas City, this case illustrates how a phased, large-generator recovery and diversion requirement, paired with technical assistance and infrastructure support, can normalize food donation and organics diversion while strengthening local markets and creating jobs. By starting with the largest generators, providing clear guidance, and coordinating with food recovery organizations to ensure capacity, Kansas City could reduce organic waste disposal, support economic growth in the organics sector, and build a more resilient, circular food system without placing undue burden on small businesses.

Waste Prevention and Food Recovery

Preventing surplus food from being generated and rescuing edible food before it enters the waste stream preserves the highest value use of food by feeding people, reducing disposal costs, and avoiding greenhouse gas emissions. A few organizations are working every day to recovery edible surplus food otherwise bound for landfill to feed hungry people including Pete's Garden, Kanbe's Food, Urban Produce Push, Kansas City "Too Good to Go", and Harvesters. These organizations provide an essential and needed service in Kansas City, and yet it is clear there is significant opportunity to grow. The organics generation data highlight food recovery and waste prevention as the most immediate and high-impact opportunities within Kansas City's circular organics economy. Each year, more than 27,000 tons of food that was at some point edible are disposed in Kansas City, representing a substantial loss of economic, social, and environmental value. Half of this edible disposed food originates from the ICI sector, where approximately 1,800 establishments account for most of the food-related activity and likely surplus generation. This concentration of food waste among a relatively small number of generators presents a clear opportunity to scale food recovery and prevention efforts through targeted, upstream interventions.

The following section examines Kansas City's existing food recovery and waste prevention efforts, identifies key gaps and barriers to participation and scale, and presents recommendations to expand recovery, improve coordination, and strengthen food recovery as a core pillar of the City's circular organics economy.

Regional Highlights

PETE'S GARDEN

Pete's Garden (<https://petesgarden.org/>) is a nonprofit organization whose mission is to make it easier for families to share wholesome meals together at home. Pete's Garden operates a food recovery program to recover surplus prepared foods from Kansas City area caterers, restaurants, and food service operations and partners with local sports teams, stadiums, event venues, and convention centers. Volunteers package the donated food into family-sized meal portions using reusable take-home containers. These take-home meals are distributed free through social service organizations that serve families with children, including Head Start and after-school programs and low-income family housing communities. In 2026, Pete's Garden will partner with FIFA Kansas City to provide food recovery for the World Cup. Surplus prepared food from the World Cup, along with regular food donors, will result in approximately 260,000 pounds of prepared food diverted from landfills to family dinner tables. Over 1,000 families take home a complete, wholesome Pete's Garden meal at least once per week. In addition to food recovery, Pete's Garden operates a school-based service-learning program, Kids Feeding Kids (<https://kidsfeedingkids.org/>). This program teaches students in grades 7-12 about the root causes of food insecurity and the impact of food waste while engaging them in preparing scratch-made, take-home meals for families in their communities. Educators receive lesson plans along with all the ingredients and supplies they need to help their students prepare up to 1,000 take-home meal servings that are distributed free to families. For the 2025-26 school year, KFKids is operating in 45 schools across 6 states. To date, over 4,000 students have planned, prepared and distributed approximately 40,000 KFKids meals to families.

KANBE'S MARKETS

Kanbe's Markets (<https://www.kanbesmarkets.org>) is a nonprofit building a more inclusive food system by transforming food loss into food access. Kanbe's partner with local wholesalers to recover produce that would otherwise go to landfill and redirect it across four pathways:

- Grocery store-quality produce goes to Kanbe's Healthy Corner Store network.
- Produce with cosmetic imperfections is donated through a regional nonprofit network for emergency hunger relief.
- Food past human consumption is directed to local animal sanctuaries and farms.
- Inedible fruits and vegetables — stripped of all packaging — go to composting partners to produce nutrient-dense compost for agricultural use.

Kanbe's has achieved a reduction of nearly 2M lbs. of food waste per year. Seventy percent of recovered food feeds people; 15% becomes animal feed; 15% is composted. In 2025, Kanbe's redirected over one million pounds of produce — a value of nearly \$2M — into Kansas City's emergency food system, while providing fresh food access to 67% of the city's Low Income, Low Access census tracts through our Healthy Corner Store program.

URBAN PRODUCE PUSH

Urban Produce Push (<https://uppkc.org/>) reports recovery of 1M pounds in 2024 compliments of a partnership with Kanbe's markets to get edible Recovered produce sold. The organization also brings in volunteers to sort inventory and, as After the Harvest did for many years, brings people along on "gleaning" trips, where leftover crops on local farms are harvested for people in need.

KANSAS CITY "TOO GOOD TO GO"

Kansas City now participates in the Too Good To Go program (<https://www.toogoodtogo.com/>) which claims to be the world's largest marketplace for surplus food. The app connects local food businesses with surplus food to consumers who can buy Surprise Bags of that food for half the retail price, helping businesses recovery lost revenue and reducing food waste's environmental toll.

The core of the Too Good To Go model is the Surprise Bag, a one-of-a-kind curated collection of a business's surplus food, ranging from baked goods to prepared meals, that consumers can purchase for a fraction of the retail cost. For each Surprise Bag sold, businesses keep food from being wasted and customers receive a discounted meal.

HARVESTERS

Harvesters (harvesters.org) is a regional food bank serving a 27-county area across northeast Kansas and northwest Missouri, including the Kansas City metro. Harvesters operates a multi-channel produce distribution and food recovery system designed to move donated food quickly and efficiently to community members in need while diverting as much as possible from landfills.

Produce donated by Harvesters' network of regional donors is received into their system and routed through Mobile Distribution where Harvesters trucks and drivers deliver a curated mix of available produce directly to partner agencies, where it is distributed to the community. In parallel, approximately 100 agency partners are trained and enabled to conduct retail rescue pickups on Harvesters' behalf, collecting produce directly from grocery and retail stores and delivering it straight to their communities, maximizing shelf life and freshness. Agency partners also recover refrigerated, bread, and frozen products through this program. Any produce deemed unusable is redirected to Missouri Organic for composting.

The remaining produce volume moves through Harvesters' Mobile Pantries, government programs, and a produce shopping floor where agencies can schedule pickups of high-abundance items. Last year, Harvesters distributed 18 million pounds of produce through these channels. Agency-enabled retail rescue partners contributed an additional 2 million pounds of produce, and nearly 8 million pounds of total product, including refrigerated, bread, and frozen items, kept out of landfills through their efforts.

Stakeholder Feedback

Interviews with food recovery organizations and regional coordinating partners underscore both the momentum Kansas City has built and the structural challenges that continue to limit the scale of recovery. Stakeholders consistently emphasized that existing food recovery programs are effective and impactful, yet constrained by capacity, resources, and system fragmentation. Collectively, these organizations are redirecting hundreds of tons of edible food each year, but all noted that this represents only a small share of the surplus food available across the City. Stakeholders also emphasized that convenience and time are critical determinants of participation and represent an important equity consideration within food recovery and waste prevention systems. MARC staff noted that when food recovery or waste prevention is perceived to require additional steps, coordination, or time, participation drops sharply, particularly for households and businesses already operating under significant time constraints.

“There’s food everywhere around the city...but without a connection, it still goes to waste.” –Max Kaniger, Kanbe’s Markets

“We received a grant...we got our first walk-in, but now we’re looking at installing a brand new one...that will be necessary before 2027 given the projected growth.”

–Tamara Weber, Pete’s Garden

A central theme across interviews was the fragility of current operations. Food recovery is a three-part system that must function in balance: willing food donors,

“It’s the openness of the places you can rescue food from, the capacity of the processors taking it, and then the receivers. All three have to grow together.”

–Matt Riggs, MARC

sufficient processing and redistribution capacity, and accessible recipient organizations. Constraints at any one point, most notably refrigerated transportation and cold storage, create system-wide bottlenecks that restrict recovery even when surplus food is available. Food recovery organizations rely heavily on grants, donations, and short-term partnerships to support staffing, transportation, and cold storage. While recent grant funding has enabled important upgrades, stakeholders described uncertainty around long-term planning and the ability to scale in response to growing demand or major events. Limited access to capital for facilities, equipment, and technology was repeatedly identified as a primary constraint on growth.

“The logistics...being able to coordinate a refrigerated truck an hour and 15 minutes away...that’s the biggest gap.” –Michael Watson, Urban Produce Push (UPP)

Stakeholders also highlighted logistical complexity as a defining challenge. Coordinating refrigerated transportation, aligning pickup and delivery timing, and matching food types with appropriate recipients require significant operational capacity. These challenges are compounded by limited infrastructure, particularly cold storage and depackaging capacity, which create bottlenecks that restrict how much food can be recovered even when supply is available.

Low participation among potential food donors further limits recovery. Interviewees described persistent barriers including time constraints, perceived and actual costs, uncertainty around food safety and liability, and lack of awareness of donation options. For many businesses, especially smaller establishments, food recovery is not yet perceived as convenient or integrated into daily operations, despite interest in reducing waste.

“A huge part of my job is still educating people about the Good Samaritan Act...I cannot tell you how many times restaurant managers say, ‘I would love to donate, but it’s illegal.’” –Tamara Weber, Pete’s Garden

“Donation and distribution [need] a story...what does it mean when we're rescuing millions of pounds? Who is that food going to? What kind of food is that? How many people are actually being fed?” – Michael Watson, Urban Produce Push (UPP)

Across organizations, there was also a shared recognition of data limitations. Food recovery activity is not consistently tracked across generators, recovery models, or distribution pathways, making it difficult to quantify total surplus, measure outcomes beyond pounds recovered, or communicate the full impact of recovery efforts. Stakeholders noted that better data and storytelling are essential for securing funding, engaging donors, and aligning efforts across the system.

Together, the stakeholder feedback reinforces that while Kansas City has strong food recovery models in place, recovery volumes remain modest relative to the more than 46,000 tons of edible food disposed annually. Addressing financial vulnerability, infrastructure constraints, logistics, participation barriers, and data gaps will be critical to unlocking the next phase of growth and realizing the full potential of food recovery as a cornerstone of the City's circular organics economy.

Takeaways and Gaps

Kansas City's grassroots food recovery organizations are making considerable progress, redirecting an estimated 1,320 tons of edible food in 2024, and continuing to expand operations. However, the represents only a fraction of what is possible. More than 27,000 tons of edible food was disposed of in 2024, revealing a significant opportunity for recovery efforts to grow.

To unlock the potential, several critical barriers must be addressed:

- **Financial vulnerability:** Organizations rely heavily on grants, donations, and local supply partnerships, creating operational uncertainty and limiting long-term planning.
- **Limited Data:** Food recovery activity is not consistently tracked across organizations, generators, or distribution models, limiting visibility into where surplus food is generated, how much is recovered, and where it ultimately flows.
- **Low participation:** Participation among potential food donors remains limited. Barriers include time constraints, perceived and actual costs, uncertainty around food safety and liability, lack of awareness of donation options, and the additional effort required to separate, store, and coordinate surplus food.
- **Limited scalability:** Current infrastructure and capacity constrain growth, with investment needed in facilities, equipment, and technology.
- **Logistical complexity:** Efficient food recovery at scale requires sophisticated logistics for collection, distribution, and coordination between organizations.
- **Modest recovery volumes:** While existing programs demonstrate effective models, the volume of recovered food remains modest compared to available surplus in the community.

Recommendations

Table 18 provides the recommendations to activate, build, and grow the waste prevention and food recovery pillar of the circular organics economy in Kansas City.

Table 18: Waste Prevention and Food Recovery Recommendations

Collaborated with MARC and Kansas City Food Wise to conduct a City supported distribution equity assessment in collaboration with food rescue organizations:



Foundational & Underway

The City could fund and/or coordinate a citywide, geospatially informed assessment of the food rescue system that builds on existing regional food system mapping and planning efforts led by KC Food Wise and the Mid-America Regional Council (MARC). This effort could extend and operationalize existing data to better understand where donatable food is generated, how rescued food currently flows, and where service gaps or logistical mismatches exist, by mapping food generators, rescue and distribution sites, and transportation patterns alongside indicators such as food insecurity, vehicle access, and proximity to grocers and pantries. The assessment could also quantify the types and approximate volumes of donatable food across major generator categories and identify operational or logistical barriers to donation, with the City working in close coordination with KC Food Wise, MARC, and food rescue operators to ensure the findings are actionable, non-duplicative, and aligned with ongoing regional initiatives.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	ICI	All Gaps	F-2.1, F-2.4, W-1.5, F-1.4	\$30K – \$300K One Time

Residential outreach and education campaign to reduce food waste:



High Impact

The City could implement a resident-focused food waste prevention initiative that integrates education with measurement. The initiative could begin with a baseline assessment of household food waste using residential surveys and/or pre-sorted trash analyses to establish current disposal patterns and benchmark waste levels. Residents could then be provided with a “Waste Less Toolkit” that includes practical behavior-change resources such as meal-planning cards, “eat-first” fridge zone cards, school-to-parent communication channels, and a 30-day “Waste Less KC” challenge with self-weigh kits. Following the education campaign, the City could conduct follow-up residential surveys and/or post-campaign trash analyses to measure program impacts and report on results.

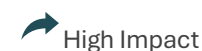
System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	Residential	Limited Data and Logistical Complexity	F-2.1, F-2.4, F-2.6, W-1.5	\$30K – \$300K Annual



Develop Best Practices Playbook for ICI Generators:

The City could adapt national food recovery guidance, such as ReFED's *Scaling Food Recovery and Hunger Relief* and the FDA's *Key Steps for Donating Food*, into a Kansas City-specific best practices playbook for food generators and institutions. This playbook could be developed in partnership with food recovery organizations and City communications staff and used not only to standardize donation practices, but also to reframe food recovery as a business efficiency and climate strategy by highlighting avoided disposal costs, available tax incentives, and measurable greenhouse gas emissions reductions.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	ICI	Low Participation and Financial Vulnerability	F-2.1, F-2.4, W-1.5	<\$30K One Time



City requirement to divert food from government events

Develop and implement a citywide protocol requiring all municipal departments to divert surplus food from government meetings, trainings, and public events through donation, composting, or redistribution to staff. This should include standardized guidance for event planning, vendor requirements that prioritize reusable service ware and food-recovery partnerships, and simple procedures for safely capturing unused food. The City can also create a "Zero-Waste Event Toolkit" with instructions, donation partner contacts, signage, and tracking templates to ensure consistent implementation across all departments.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Building	ICI	Modest Recovery Volumes	F-2.1, F-2.4, W-1.5	<\$30K One Time



City to facilitate the pilot of food recovery program drawing from findings from recovery distribution equity assessment:

Implement a pilot informed by working group outcomes to streamline coordination among generators, recovery organizations, and City staff. Pilot a hub-and-spoke model with investment in cold-chain capacity, logistics, staffing, and data tracking. Kanbe's Markets currently operates the region's most comprehensive perishable redistribution infrastructure and is well-positioned to serve as the operational backbone of a hub-and-spoke pilot. Kanbe's existing warehouse, driver network, and wholesaler partnerships represent shovel-ready hub capacity that the City could formalize and fund, building on existing infrastructure to accelerate implementation.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Building	ICI	Logistical Complexity and Scalability	F-2.1, F-2.4, W-1.5	\$300K – \$3M Mixed

City to facilitate the roll out hub-and-spoke food recovery program across the City:



Future Focus

The City could facilitate the scaling of the existing food recovery pilot into a permanent, citywide network of coordinated donation routes, aggregation hubs, and cold storage sites serving major commercial food generators across the metro area. A natural foundation for this expansion is Kanbe's Markets, whose warehouse, driver network, and wholesaler partnerships already provide the region's most comprehensive perishable redistribution infrastructure and offer a proven, scalable model for citywide implementation. This network could integrate centralized data reporting and City partnerships supported by a City-enabled software platform that allows food recovery organizations to share real-time information on available donations, storage capacity, and distribution needs. A coordinated system could reduce duplication of effort among recovery organizations, improve logistical efficiency, lower overall storage costs, and enhance data analysis, while positioning Kansas City to take a more active, locally driven role in managing its food system at a time of limited state and federal engagement. Insights from the pilot could also be used to ensure recovered food is culturally appropriate and aligned with community needs by supporting direct collaboration between food recovery operators, pantries, and neighborhood organizations to better understand cultural, spiritual, and dietary preferences.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Growing	ICI	Modest Recovery Volumes, Limited Scalability, Logistical Complexity, Low Participation	F-2.1, F-2.4, F-2.6, W-1.5	\$300K – \$9M Mixed

Case Studies

REDUCING WASTED FOOD DELIVERS ECONOMIC RETURNS

Identified Challenge: As mentioned in this report, food loss and waste represent a major source of economic inefficiency, environmental harm, and missed social value across food systems. A 2017 report by Champions 12.3 titled *The Business Case for Reducing Food Loss and Waste* states that globally, approximately one-third of all food produced for human consumption is lost or wasted each year, resulting in an estimated \$940 billion in annual economic losses and contributing roughly 8% of global greenhouse gas emissions. The scale of the problem is often hidden from clear view with costs dispersed across generators making the issue easy to overlook by businesses, households, and governments alike.

Solution Implementation: To shed light on the economic impact of wasting food, the report evaluates food loss and waste reduction efforts across businesses, cities, and national programs, drawing on data from nearly 1,200 sites operated by more than 700 companies in 17 countries. These efforts included a range of practical strategies such as improved inventory management, standardized food handling practices, staff training, food donation partnerships, waste tracking, and consumer education.

The analysis found that 99% of businesses achieved a positive return on investment, with a median benefit-cost ratio of 14:1, meaning companies typically saved \$14 for every \$1 invested in food loss and waste reduction. At the municipal and household level, coordinated public education and behavior change campaigns led to a 21% reduction in household food waste over five years, delivering significant savings for both households and local governments.

Key Learnings for Kansas City: The findings from *The Business Case for Reducing Food Loss and Waste* underscore that food waste prevention and recovery represent a strong economic opportunity alongside their environmental and social benefits. Evidence shows that reducing food waste consistently delivers high financial returns, with many of the most effective strategies requiring only low-cost, operational changes rather than major capital investment. These outcomes highlight the importance of measurement and transparency, as consistent tracking of food loss and recovery is essential for identifying opportunities, demonstrating impact, and sustaining long-term investment. The research also emphasizes the role of public-sector leadership in accelerating progress through clear goal setting, education, and coordination across programs and partners. For Kansas City, positioning food waste reduction as a cost-saving, resilience-building strategy in addition to an environmental initiative can help broaden participation among businesses and institutions, strengthen food recovery systems, and unlock greater economic, environmental, and community benefits.

USING EVENT PERMITTING TO DRIVE FOOD RECOVERY AND ORGANICS DIVERSION

Identified Challenge: The City of San Francisco recognized that large public events such as festivals, parades, sporting events, and conventions generated significant volumes of surplus food and organic waste over short periods of time, however diversion efforts at events are often challenging due to tight event timelines, fragmented responsibilities across vendors, and lack of training for staff and as a result surplus food often went to disposal. City officials recognized that requiring events to recovery and divert organics would not be successful without support.

Solution Implementation: San Francisco adopted a Mandatory Recycling and Composting Ordinance in 2009, requiring source separation of recyclables, organics including food waste, and non-recoverable materials. Building on this foundation, the City added a requirement in 2024 that City-permitted events with 2,000 or more daily attendees must donate all surplus edible food that would otherwise be disposed. Compliance with both recycling and edible food recovery requirements is a condition of receiving an event permit.

To support successful implementation, the City maintains a centralized Zero Waste Resources for Event Producers webpage (<https://www.sfenvironment.org/recycling-composting-resources-event-producers>) that serves as a one-stop resource for event planners and coordinators. The webpage provides clear guidance and tools to help organizers comply with permitting requirements, including:

- A zero-waste event checklist
- Instructions for requesting recycling, composting, and trash services
- Guidance on obtaining containers, signage, permitted food ware, and reusable cups
- Access to free consultation services to help reduce refuse costs and support zero waste event planning and implementation
- Link to food recovery organization partners
- Links to approved greening companies, including contact information

In addition, event planners along with producers, caterers, cleanup crews, and other vendors are required to attend a mandatory zero waste event training workshop. This training helps ensure all parties understand their responsibilities and best practices for food recovery and materials separation.

By pairing clear regulatory requirements with practical tools, technical assistance, and training, San Francisco has integrated food recovery and organics diversion into standard event planning practices. This approach helps normalize circular behaviors at public events and reinforces a broader culture of a circular organics economy across the City.

Key Learnings for Kansas City: San Francisco’s experience offers several important insights for Kansas City as it considers food recovery and organics diversion requirements for City-permitted events. Policy success in San Francisco depended on deliberate sequencing, with the City first establishing years of composting and recycling requirements before layering in food recovery mandates, allowing event organizers and vendors to adapt incrementally. Embedding requirements directly into the event permitting process proved to be the strongest leverage point, creating clarity, consistency, and high compliance without relying on voluntary participation. Equally important, regulatory requirements were paired with technical assistance, clear guidance, and standardized tools, which helped address concerns related to cost, logistics, and food safety. Because public events are highly visible, successful implementation also helped normalize food recovery and organics diversion practices, reinforcing behaviors that extended beyond events into everyday operations.

SCALING FOOD RECOVERY THROUGH A HUB-AND-SPOKE MODEL

Identified Challenge: Stakeholders interviewed for this report noted that there is a large volume of surplus edible food generated across the City, but that many food recovery organizations, smaller food pantries and community organizations lack the infrastructure needed to recover and safely handle perishable food. Limited access to refrigerated vehicles, cold storage, and coordinated logistics constrains food recovery results in significant volumes of nutritious food going to waste, even in communities experiencing high levels of food insecurity. In the Chicago region, this mismatch between food availability and recovery capacity highlighted the need for a more coordinated, scalable approach to food recovery that could overcome infrastructure and logistics barriers while expanding equitable access to recovered food.

Solution Implementation: To address these challenges, the Greater Chicago Food Depository (<https://www.chicagosfoodbank.org/about/how-we-help/>) implemented a hub-and-spoke community food recovery model designed to strengthen regional recovery capacity. Under this model, larger, well-resourced partner pantries serve as “hubs,” equipped with refrigerated vehicles and storage to pick up surplus, edible food directly from nearby retailers and food donors. These hub partners then redistribute recovered food to neighboring “spoke” organizations, including smaller pantries, soup

kitchens, and shelters that lack the ability to conduct direct retail pickups. The Food Depository supports this system by coordinating retailer-partner matches, providing technical assistance, and offering targeted grants to expand cold-chain infrastructure such as refrigerated trucks and storage equipment. Since launching the model in 2021, the Food Depository and its network partners have increased the volume of Recovered food by approximately 30 percent across the Chicago region, significantly improving the recovery of fresh and perishable foods.

Key Learnings for Kansas City: The Greater Chicago Food Depository's experience demonstrates that food recovery can be scaled efficiently by strengthening coordination and shared infrastructure rather than requiring every organization to operate independently. A hub-and-spoke model reduces logistical complexity for retailers, expands participation by smaller community organizations, and maximizes the use of limited cold-chain assets. For Kansas City, this approach highlights the value of investing in regional coordination, refrigerated transportation, and strategic partnerships to overcome capacity gaps and increase recovery volumes. Supporting a small number of well-equipped hub organizations to serve surrounding partners could help Kansas City recover significantly more edible food, particularly from high-volume retail and commercial generators, while improving reliability, equity, and system resilience across the local food recovery network.

Organics Collection Programs

Kansas City offers a growing set of food waste collection options designed to divert organic material from landfill once it can no longer be used for human consumption. Recognizing that no single program can meet the needs of all participants, Kansas City's organics collection landscape includes a mix of subscription-based curbside services and publicly accessible drop-off options. Subscription curbside programs, including Kansas City Compost Collection and KC Can Compost, provide regular door-to-door service for households and businesses seeking a consistent and low-effort option. Drop-off programs, such as KC Can Compost Smart Cans, the Kansas City Composting Program, and KC Mill Food Recovery Bins, offer flexible alternatives for residents and businesses who may face barriers related to cost, housing type, transportation, or scheduling constraints.

The following section examines Kansas City's existing food waste collection programs, identifies key gaps and barriers to participation and scale, and presents recommendations to collection opportunities and participation in the City.

Regional Highlights

COMPOST COLLECTIVE KC

Compost Collective KC is a curbside pickup service for both households and businesses. The collection is subscription-based. Residential subscribers can choose between bi-weekly collection for \$20 per month or weekly collection for \$30 per month. Each household receives a collection bin, compostable liners, and access to free compost givebacks. Plants, food soiled paper, and food scraps such as fruits and vegetables, bread, coffee grounds, tea bags, meat, shellfish and bones, egg and dairy products, and plate scrapings.

Businesses receive 64-gallon carts and extra-large compostable liners. Collection occurs weekly, with pricing per tote and discounted rates for accounts using four or more totes.

Additional Services:

- **Community Bin Composting:** A drop-off program where users pay \$5 per use of drop-off bins secured inside businesses and unlocked with a code.
- **Event Composting:** Includes totes for collection and staffing to educate attendees on composting and monitor contamination.

KC CAN COMPOST

KC Can Compost (<https://kccancompost.com/>) is a nonprofit social enterprise that helps residents, businesses, municipalities, and event hosts across the Kansas City region keep food waste out of the landfill through composting services, education, and workforce development. For residents, KC Can offers a member drop-off program. For businesses, KC Can provides waste audits, tailored composting plans, equipment, signage, staff training, customized collection schedules, and live diversion tracking through a customer portal. KC Can also provide full-service composting for small and large-scale events. In addition, KC Can operates Green Core Training, a workforce development program that creates living wage green job pathways for individuals facing barriers to employment. Through environmental literacy, job readiness training, direct employment support, and U.S. Department of Labor certifications, the program helps participants move into meaningful work while supporting a more just and sustainable regional economy.

KC Can Compost also provides all commercial customers with monthly diversion totals and translates that data into accessible impact metrics, such as the equivalent number of cars taken off the road for one year.

KANSAS CITY CAN COMPOST SMART CAN

Kansas City Community Smart Cans ([Smart Cans](#)) are solar-powered collection bins equipped with sensors that notify the KC Can Compost team when a can is full, helping to optimize pickup logistics and reduce unnecessary trips. These collection points are accessible 24/7 through a smartphone app. Users must download and register for the app, which unlocks the Smart Can when the participant is within approximately 5 to 10 feet of the unit. The initial pilot launched three Smart Cans in October 2024.

KC Can Smart has partnered with Kansas City to become a part of the City's free Compost drop-off program for residents. The program includes other traditional drop-off can locations as well.

KANSAS CITY COMPOSTING PROGRAM

Kansas City sponsors ten drop-off locations where residents can bring compostable materials free of charge ([KC Composting](#)). Accepted materials include plants, food-soiled paper, food waste, and BPI certified compostable items. Two additional sites are under development, and collection volumes have been growing since the program launched in January 2024.

The Kansas City Drop-off program represents an effective approach for serving both residential and commercial accounts. The sustained growth in collection volumes demonstrates the viability of this collection model.

KANSAS CITY 'MILL' FOOD RECYCLING BIN DROP OFF PROGRAM

In July 2025, the Kansas City Mayor introduced a new initiative providing Mill Food Recycling Stations at 50 locations throughout the City, including community centers, municipal buildings, and fire stations.

This program represents a partnership between Mill (San Bruno, CA) and Kansas City. According to Mill, the machine dries and grinds food scraps, removing 80% of the moisture content to create a shelf-stable product. The City will empty and transport their contents to a regional organics processor for processing and use in gardens and farms.

Stakeholder Feedback

Stakeholder interviews confirm that Kansas City has made meaningful progress in expanding organics collection options, but that current programs capture only a small share of the food waste generated citywide. Participants consistently emphasized that offering multiple collection pathways including subscription-based curbside service, free public drop-off locations, and pilot programs such as the Mill Food Recycling Stations has been critical for building early momentum and meeting residents and businesses where they are. However, stakeholders consistently identified three main barriers to increasing organics diversion: knowledge of how to compost and convenience and cost to participating in programs.

"It's always education, education, education" – Kristan Chamberlin, KC Can Compost

contributes directly to contamination, which interviewees described as one of the most persistent operational challenges across collection and processing systems. Confusion around

Awareness and education were repeatedly cited as foundational challenges. Stakeholders noted that many residents and businesses remain unaware that organics collection options exist or are unsure how to participate correctly. This lack of clarity

"Contamination is a huge problem that nobody really understands... it keeps food waste from being utilized more and processed more effectively." – Kevin Anderson, Missouri Organic Recycling

acceptable materials and particularly how to handle food packaging undermines compost quality and increases processing costs. Given that packaged surplus food represents most of the disposed food, stakeholders stressed the need for clear, consistent education, standardized signage, and simple guidance that reflects real-world behaviors and time constraints.

"It's about collection... how you can democratize and make collection easier and distributed throughout a community."

–Sarah Burnett, ReFED

Convenience emerged as a decisive factor in participation. Interviewees emphasized that organics collection must be as easy and routine as trash disposal in order to scale. Programs that require extra steps, travel, or planning were seen as less likely to achieve widespread adoption, even among motivated participants. Multi-family housing was identified as a significant equity gap, as many apartment and condominium residents lack access to building-level organics service and must rely on less convenient

drop-off options, resulting in lower participation despite interest in composting. Stakeholders emphasized that participation increases most reliably when collection is visible, proximate, and embedded into everyday routines.

Cost was identified as a limiting factor across the system, affecting both participation and program expansion. Subscription-based models alone were viewed as insufficient to reach scale, particularly given monthly fees that can deter lower-income households and smaller businesses. On the system side, stakeholders noted that collection, hauling, and processing of organics remain more expensive than disposal, especially where depackaging infrastructure is limited. Processors and planners emphasized that without additional public investment, incentives, or long-term policy signals, it will remain difficult to expand services to high-volume generators such as grocery stores, institutions, and multi-family properties.

"For households, increases in participation... it's both awareness and money. People are on a budget. They can't necessarily afford to do that [pay for subscription service]. If it was free, we'd get a lot more participation. And then the awareness piece is that there's plenty of people that aren't even aware that it's an option."

–Dan Heryer, Compost Collective KC

"It's hard to manage what you don't track." –
Angie Powell, Missouri Market Development
Director

Finally, stakeholders highlighted the need for better data to support scaling decisions. While existing tonnage data provide a useful baseline, interviewees emphasized the importance of tracking participation, contamination rates, and program utilization to understand what is working, where gaps persist, and how education efforts translate into

behavior change. Without more consistent data and storytelling, stakeholders noted it is difficult to demonstrate system-wide impact, justify investment, or make the economic case for expanding organics collection.

Together, stakeholder feedback reinforces that Kansas City's organics collection programs are directionally strong but not yet positioned for citywide scale. Advancing the next phase will require coordinated investment in equitable, convenient collection paired with sustained education and awareness efforts, contamination reduction strategies, expanded processing capacity, and improved data collection.

Takeaways and Gaps: Organics Collection

Kansas City residents and businesses can divert food waste through curbside and drop-off collection programs, and participation has continued to grow. Some programs are still in the pilot phase including the 50 specialized Mill Dehydrator bins deployed across public buildings and fire stations in July 2025. In 2024, approximately 4,700 tons of food waste were diverted from disposal, with 84% from commercial sources. However, more than 46,200 tons of food waste still reached landfills that year, revealing significant room to elevate the program going forward. Key opportunities to close this gap include:

- **Education and Awareness:** Growing participation in food collection programs depends on consistent public education that clarified acceptable materials explains the environmental benefits of composting and teaches proper separation techniques to minimize contamination.
- **Modest Recovery Volumes:** While existing programs demonstrate proof of concept and growing interest, overall recovery volumes remain small relative to the scale of food waste generated citywide. Limited participation, uneven access, and infrastructure constraints collectively restrict diversion outcomes. Scaling recovery will require moving beyond pilots toward system-wide solutions that reach a broader share of households and businesses.
- **Equitable Access:** Existing curbside programs operate on a subscription basis, requiring residents to opt in and pay a monthly fee. While this expands access, they may prevent lower-income households from participating. Subsidized or publicly funded options could help bridge this gap.
- **High Cost:** The cost of organics collection, hauling, and processing remains higher than disposal in many cases, particularly for smaller businesses and multi-family properties. Many restaurant operators are aware of composting options but cannot absorb the additional expense without financial relief. As such, these higher costs can deter participation, especially in the absence of pricing signals or incentives that reward diversion. Stakeholders noted that reducing cost barriers, through subsidies, operational efficiencies, or policy tools, will be essential for scaling participation.
- **Convenient Access for Multi-Family Properties:** Many apartment and condominium residents currently lack access to the subscription-based curbside programs available to single-family households. While all residents can use drop-off sites, participation rates are significantly higher when diversion programs are as convenient as trash collection. Most multi-family properties do not offer comparable service. Expanding shared collection infrastructure such as centralized carts or building-level organics service would help overcome this barrier and capture a substantial share of the City's remaining food waste. To ensure success, any onsite multi-family program would need to be coupled with extensive and ongoing education and outreach to drive participation and limit contamination.
- **Contamination:** Participants, both residential and commercial, face a challenge in properly handling and sorting non-compostable packaging, which constitutes most food-related packaging, to prevent it from entering the organics stream. Increased education, consistent labeling, and standardized collection guidelines are needed to reduce contamination and improve compost quality.

Recommendations

Table 19 provides the recommendations to activate, build, and grow the waste prevention and food recovery pillar of the circular organics economy in Kansas City.

Table 19: Organics Collection Programs Recommendations

Pilot Zero-Waste Events:



Underway

Leverage Kansas City's role as a 2026 World Cup host to pilot a zero-waste event model for large-scale and recurring public events by requiring comprehensive waste diversion plans, including food recovery, composting, recycling, and reusable service ware. The pilot should require event organizers and vendors to use compostable or reusable food ware, provide clearly labeled three-stream waste stations (landfill / recycling / compost), and partner with local composting and food-recovery organizations for donation or diversion of surplus food and organics. Staff, volunteers, and vendors should receive training on waste sorting and contamination prevention, and event impact should be tracked through diversion metrics and post-event waste audits.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	ICI	Modest Recovery Volumes	W-1.5, W-1.9	\$30K – \$3M Mixed

Continue to support current collection infrastructure:



Underway

Kansas City has growing availability of organics collection initiatives including Compost Collective KC, KC Can Compost, the Kansas City Smart Can Composting pilot, City-sponsored drop-off sites, and Mill Food Recycling drop-off locations. Together, these programs complement each other by providing both curbside and drop-off access for residents and businesses. The City should continue to support and expand these efforts by increasing public education and awareness, adding additional drop-off access where needed, and collaborating with private-sector partners to reduce collection barriers and ensure convenient, equitable access to organics recycling across the community.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	All Generators	Education, Awareness, Equitable Access, Convenience	W-1.5, W-1.6, W-2.1	\$30K – \$3M Mixed



Foundational

Citywide residential curbside organics collection feasibility study:

Initiate a feasibility study to evaluate options for implementing citywide residential curbside organics collection in Kansas City. The study should assess collection models, cost implications, processing capacity needs, cart and routing requirements, equity considerations, potential participation rates, and impacts on landfill diversion. It should also analyze how curbside service would integrate with existing drop-off programs and private-sector collection options. The feasibility study should include an environmental impact assessment that evaluates residential density, consumer readiness, and the net emissions implications of curbside collection in Kansas City's regional context, ensuring that any program that moves forward delivers meaningful greenhouse gas reductions relative to its collection and hauling footprint. A comprehensive feasibility assessment will allow the City to determine the most effective and equitable pathway for expanding residential organics collection in the future.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	All Generators	All Gaps	W-1.5, W-1.6, W-2.1	\$30K – \$300K One Time



High Impact

Pilot zero-waste zones in commercial districts of Kansas City:

Establish pilot zero-waste zones in selected commercial districts of Kansas City where participating businesses are required to divert all food waste from landfill through donation, composting, anaerobic digestion, or animal feed pathways. These zones would test a place-based approach to food waste reduction by concentrating support, outreach, and enforcement in defined areas with high densities of restaurants, retailers, and food service establishments. A zero-waste zone model would allow the City to evaluate operational needs, measure diversion impacts, and develop scalable standards for future citywide implementation. Potential locations could be Crossroads or the Power and Light District.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Building	ICI	Education and Awareness, Modest Recovery Volumes	F-2.6, W-1.5	\$300K – \$3M Mixed



Citywide municipal building organics diversion program:

Establish a standardized organics diversion program across all municipal buildings, including offices, community centers, libraries, and public facilities. This program should provide clearly labeled compost collection bins, vendor or hauler agreements for organics pickup, and staff training on proper sorting and contamination prevention. Implementing consistent organics diversion throughout City facilities will reduce waste sent to landfill, model best practices for the broader community, and generate operational insights that can inform citywide organics policies and future program expansion.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Building	ICI	Education and Awareness, Modest Recovery Volumes	W-1.1, W-1.5	\$30K – \$300K Mixed



Pilot universal residential organics collection program in select neighborhoods:

Launch a pilot universal residential organics collection program in a diverse set of Kansas City neighborhoods to evaluate how a multi-collection approach can expand equitable, convenient, and affordable access for both single-family and multi-family residents. The pilot should combine curbside service, walk-up drop-off stations, decentralized neighborhood collection points, and enhanced access at existing drop-off sites to accommodate different living situations and transportation realities.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Building	Residential	Equitable Access, High Cost	W-1.5, W-1.6, W-2.1	\$300K – \$3M Mixed



Support Master Gardeners Program:

Continue partnership with the Master Gardeners of Greater Kansas City (MGGKC) to expand their role in supporting community composting, circular organics education, and locally grown food initiatives. Building on the program's strong horticultural expertise and volunteer network, the City should work with MGGKC to develop a specific focus for the "Extension Master Gardener" (EMG) role to include urban neighborhood composting site management, backyard composting, promoting the use of finished compost in gardens, and increasing awareness of circular organics practices. The EMGs could also help connect residents to opportunities to grow food locally, integrate compost into food-growing spaces, and support community gardens as key nodes of neighborhood-level circular organics systems.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Building	Residential	Education and Awareness, Contamination	F-1.2, F-1.4, F-2.1, W-1.5, W-2.1	<\$30K Annual

Rollout citywide residential organics collection program:

Following evaluation of the pilot program, establish a phased, citywide residential organics collection service that provides equitable, convenient, and affordable access for all Kansas City households. The rollout should maintain a multi-collection approach including curbside pickup, walk-up drop-off stations, decentralized neighborhood collection points, and expanded access at existing drop-off sites to meet the needs of residents across diverse housing types, including multi-family buildings. Implementation should include strategies to reduce cost barriers, tailored multi-lingual education and outreach for different neighborhoods, and integration with private-sector haulers and community composting partners where appropriate.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Growing	Residential	Modest Recovery Volumes, Equitable Access, Convenience and High Cost	W-1.5, W-1.6, W-2.1	\$3M – >\$9M Mixed

City funding support in exchange for data tracking and measurement:

Encourage commercial businesses and institutions to launch organics diversion programs by offering financial support for startup costs or interim collection services in exchange for their commitment to track and share data on waste diversion. This data-driven incentive program would help the City build a robust understanding of diversion rates, participation levels, contamination levels, and infrastructure needs across sectors. By supporting initial costs and requiring data reporting, Kansas City can lower barriers to entry for businesses, accelerate adoption of organics programs, and use the collected data to guide broader waste management planning, monitor progress, and inform future policy interventions.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Growing	ICI	Modest Recovery Volumes, High Cost	F-2.4, W-1.5	\$300K – \$3M Annual

Establish Green Dining Alliance in Kansas City:

Ensure that the Green Dining Alliance program, developed in partnership with Bridging The Gap, certifies restaurants based on sustainability practices that include food donation, food diversion, staff training, contamination reduction, and reporting requirements.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Growing	ICI	Modest Recovery Volumes, Education and Awareness	F-2.4, F-2.5, W-1.5	<\$30K Annual

Citywide K-12 organics diversion programs:

Establish organics diversion programs across all K–12 schools in Kansas City, pairing compost collection with age-appropriate education that teaches students the value of food, the basics of composting, and the environmental impacts of waste reduction. Schools should be equipped with three-stream bins, staff and student training, simple signage, and partnerships with haulers or community composting sites to ensure proper collection and minimal contamination. Partner with Master Gardener’s EMGs to offer local information on resources and programming.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Growing	ICI	Modest Recovery Volumes, Education and Awareness	W-1.5	\$300K – \$9M Mixed

Case Studies

AUSTIN, TX ZERO WASTE ORDINANCE

Identified Challenge: In 2011, Austin City Council adopted a Zero Waste Strategic Plan with a long-term goal of achieving a 90% diversion rate by 2040 (City of Austin Resource Recovery, n.d.). City leadership recognized early that meeting this goal would require substantial improvements in recycling and organics diversion from the commercial sector, which represents a significant share of total disposed material. However, unlike residential waste collection, the City does not directly provide hauling services to most private businesses and therefore lacked direct operational control over commercial waste management practices. This structural limitation required the City to identify policy mechanisms capable of influencing private-sector behavior and ensuring that adequate recycling and organics services were available citywide.

Solution Implementation: While Austin does not directly haul waste for private businesses, the City identified policy and regulation as critical reminder tools to drive private-sector service provision and align commercial waste practices with City diversion goals. In 2010, Austin adopted the Universal Recycling Ordinance (URO, <https://www.austintexas.gov/uro>), which required commercial and multi-family properties to provide recycling services through licensed haulers. The recycling requirement was phased in over several years based on property size, beginning in 2012 with properties 100,000 square feet or larger, expanding to 50,000 square feet in 2013, 25,000 square feet in 2014, and ultimately applying to all commercial properties regardless of size by 2015.

Building on the URO, the City later adopted the Commercial Organics Diversion requirements (<https://www.austintexas.gov/bizorganics>), which targeted food-permitted businesses such as restaurants, grocery stores, and institutional food service operations. Beginning in 2016, the ordinance required the largest food-generating businesses (100,000 square feet or larger) to implement organics diversion strategies, including food donation, animal feed, composting, or anaerobic digestion. These requirements were phased in over time, reaching businesses 25,000 square feet or larger by 2018.

To ensure compliance, all businesses are required to submit a recycling plan annually and food-permitted businesses are required to submit annual organics diversion plans documenting implementation. These plans include verification of service through licensed recycling and organics haulers, container sizing and collection frequency, container placement, and employee education practices. The City complements enforcement with technical assistance, standardized signage, and education resources to support successful program implementation. The combination of phased requirements, clear documentation standards, inspections, and corrective action pathways has enabled Austin to significantly expand commercial recycling and organics participation while reducing disruption to businesses (<https://www.austintexas.gov/bizorganics>).

Key Learnings for Kansas City: Austin's experience demonstrates that cities can meaningfully influence commercial waste diversion outcomes even without direct control over private hauling services. Phased regulatory approaches tied to property size allow jurisdictions to build capacity gradually, starting with the largest generators where diversion potential is highest. Requiring documentation and annual reporting creates accountability while also generating valuable data for program oversight and continuous improvement.

For Kansas City, this case study highlights the importance of pairing regulatory requirements with technical assistance, education, and clear compliance pathways to reduce burden on businesses and support long-term participation. Austin's approach also shows that targeting food-permitted businesses is an effective entry point for organics diversion, given their high generation rates and relatively consistent material streams. Finally, the City's use of policy to catalyze private-sector service

availability offers a replicable model for Kansas City as it considers how to expand recycling and organics infrastructure in high-impact commercial corridors and districts without assuming direct operational responsibility.

PORTLAND OREGON CURBSIDE ORGANICS COLLECTION PROGRAM

Identified Challenge: The City of Portland, Oregon generates nearly 30,000 tons of municipal solid waste annually, and estimates indicated that about one-third of that waste by weight was fully compostable kitchen waste and food scraps that were previously landfilled. With a goal of increasing the city's overall recycling and recovery rate to at least 75% of total waste, Portland needed a practical way to capture these high-volume organic waste streams from residents and divert them from landfills. Traditional garbage and recycling streams were not capturing this material effectively, and without a system tailored for food waste, Portland's diversion goals would remain out of reach.

Solution Implementation: In May 2010, Portland launched a pilot curbside food waste recycling program with approximately 2,000 households in four neighborhoods. Under the pilot, residents were provided with kitchen food scrap collectors for their homes and the program integrated weekly collection of food scraps together with yard debris, while garbage collection was shifted to every other week to incentivize participation. Once the pilot demonstrated success with strong participation and diversion, the City expanded the same system citywide in October 2011, extending the curbside organics service to about 143,000 residential customers. By the first year following full implementation, residential garbage collected at the curb dropped by 38%, and the volume of compostable yard waste and food scraps collected nearly tripled (Barker, 2014).

Key Learnings for Kansas City: Portland's experience demonstrates the effectiveness of a phased, low-risk approach to residential organics collection that begins with a targeted pilot and scales to full citywide implementation once operational and behavioral factors are well understood. By co-collecting food scraps with existing yard waste services, the City leveraged existing infrastructure and minimized complexity and cost for participants while also capturing a high-volume, previously landfilled material stream. Adjusting the frequency of garbage collection reinforced desired behavior changes and helped drive strong participation without requiring punitive measures. For Kansas City, this case study underscores the importance of designing curbside organics programs that are grounded by early testing and data-driven decision-making, and paired service changes with clear communication and convenient tools that make participation easy and intuitive for residents.

K-12 ORGANICS PROGRAM IN SEATTLE PUBLIC SCHOOLS

Identified Challenge: In 2015, Seattle prohibited food waste and recyclables from the garbage, making effective sorting a compliance and operational priority for schools. The Seattle Public Schools (SPS) both needed to comply with this ordinance and also wanted to foster environmental literacy among students and staff.

Solution Implementation: SPS implemented a comprehensive organics and recycling program that combined mandatory composting and recycling infrastructure with education and student involvement. Schools implemented a three-stream sorting system with compost, recycling, and trash which was rolled out districtwide. This rollout was supported by waste sorting help sheets, standardized signage, and Resource Conservation Specialists to guide implementation. Composting of food scraps including fruits, vegetables, coffee grounds, and food-soiled paper is required under local ordinances, and SPS's resource conservation policies reflect this mandate (Seattle Public Schools, 2026).

To deepen student engagement, some schools established "Green Police" or Green Team programs composed of student volunteers who assist peers with proper sorting during lunch periods and promote awareness of waste reduction practices. These peer-to-peer efforts reinforce correct sorting behaviors while fostering student leadership and ownership of sustainability initiatives. Eric Peters, who leads the Green Team at Stevens Elementary School, described the impact of the program: "The kids like knowing that they're doing something that helps the school and helps the environment. They enjoy

learning about where the waste goes and why this is important, and they love taking on leadership roles” (Seattle’s Child, 2016). Students participating in Green Team activities also have opportunities to conduct waste audits, visit recycling facilities, and serve as lunchroom composting captains.

More recently, SPS piloted enhanced recycling and composting practices at ten schools and documented an average 24% reduction in garbage disposal costs per school. Based on these results, SPS estimates that expanding these improvements districtwide could generate approximately \$100,000 in annual cost savings while further increasing diversion of compostable materials from disposal (Seattle Public Schools, 2026).

Key Learnings for Kansas City: Seattle Public Schools’ organics diversion program demonstrates the value of pairing waste diversion infrastructure with intentional learning opportunities to foster a culture of sustainability. For Kansas City, adopting a similar approach, equipping schools with standardized three-stream bins and clear signage, incorporating age-appropriate waste and compost education, and encouraging student leadership in sorting and sustainability efforts, could significantly improve diversion outcomes while embedding environmental values into students’ daily routines and long-term habits.

Organics Infrastructure and Investment

Organics processing infrastructure options span a wide spectrum, ranging from small-scale community composting to large-scale industrial composting facilities and anaerobic digestion systems. Each approach plays a distinct and complementary role in building resilient regional processing capacity, serving different material types, generators, and geographic contexts.

The following section examines Kansas City’s existing organics processing infrastructure, identifies key gaps and barriers limiting current and future processing capacity, and presents recommendations to both expand total organics processing capacity and diversify processing options across the City.

Regional Highlights

MISSOURI ORGANIC RECYCLING

Missouri Organic Recycling serves as the primary processor of organic materials in the Kansas City metro area, processing both yard and food waste. In 2024, the facility processed approximately 20,000 tons of prepackaged food waste, roughly 10% of total processing volume. The facility offers a variety of products from its compost including soil blends, mulch, and compost. Compost is available for purchase by the cubic yard or bagged. The facility also produces a product called Growing M.O.R., a soil amendment that incorporates plant food, biochar, locally sourced trace minerals, and mycorrhizal bacteria.

Missouri Organic Recycling has the capacity to manage packaged food waste using their depackager investment with the support of a Missouri Market Development Grant.

In April 2025 Missouri Organic Recycling stated that they would no longer collect residential food waste but would continue their commercial collection program and continue to accept residential food waste hauled to them. The facility is interested in expanding and accepting more food waste from the Metro region.

CS CAREY: LANDSCAPE MULCH MANUFACTURER & SUPPLIER

CS Carey, Inc., situated in the central metro area, specializes in manufacturing commercial-grade mulch products exclusively from yard waste. The exact volumes and business details remain confidential.

KANSAS CITY WATER BLUE RIVER BIOSOLIDS FACILITY

The KC Water Blue River Wastewater Treatment Plant (WWTP), built in the 1960s and last upgraded in 1987, currently relies on aging infrastructure for wastewater sludge processing. KC Water plans to replace the existing sludge process, which has historically depended partially on incineration and landfilling, with a Thermal Hydrolysis System (THS) featuring a two-step ‘pressure cooker’ and anaerobic digestion system. This \$150 million THS process will convert sludge into Class A biosolids for enhanced agricultural applications and generate biogas for renewable energy production. Additional future sources of WWTP biosolids include:

- Blue River WWTP
- Westside WWTP
- Birmingham WWTP
- Nelson WWTP
- Athena WWTP
- Mill WWTP

Following decommissioning of the incinerator in 2022, no incineration is included in current projections, and none is anticipated for future operations. The new THS initiated testing in April 2025 and is scheduled for phased operational deployment. Biosolids and biogas production is expected to begin Q4 2025, with full certification expected in Q4 2026. The certification process will include the conversion of the remaining 100,000 tons per year of biosolids from Class B to Class A, in compliance with U.S. Environmental Protection Agency regulations (40 CFR Part 503).

The THS is designed with an annual capacity of 94 tons per day of solids, yielding approximately 34,000 tons per year of finished Class A product from 75 million gallons of input wastewater.

The THS process first treats solids at 320°F for 20 minutes under high pressure at 300psi. Bacteria and other microorganisms are then introduced resulting in biogas and Class A biosolids. These Class A biosolids can be safely land applied as a nutrient rich fertilizer and soil conditioner suitable for farms, landscaping, and gardens. Renewable natural gas (RNG) can be refined as a fleet fuel, returned to the natural gas pipeline grid, or used for internal heat/power. Treated WWTP water is returned to the Missouri River.

Stakeholder Feedback

Stakeholders identified four primary barriers to expanding organics processing capacity in Kansas City: limited food waste processing capacity, contamination that degrades compost quality and increases costs, challenges in siting new facilities, and high capital investment requirements compounded by weak and uncertain end markets for finished compost.

"A really good compost facility is \$10–15 million... and there really isn't interest or funding available" –Kevin Anderson, Missouri Organic Recycling

Currently, Missouri Organic Recycling is the only permitted large-scale food waste composting facility serving the region. While interviewed processors agreed that additional processing capacity is needed, they simultaneously emphasized significant barriers to expansion, particularly zoning constraints⁷ and facility investment costs. Composting facilities designed to handle food waste require significantly higher upfront capital investment than traditional yard waste windrow operations. Stakeholders described multimillion-dollar costs for depackaging equipment, as well as higher construction and operating costs associated with aerated static pile systems, covered composting facilities, and anaerobic digestion. Additional expenses related to hauling equipment, insurance, labor, and regulatory compliance further constrain the ability to scale processing capacity. Interviewees suggested that collaborative approaches such as shared municipal equipment, co-located facilities, or public–private partnerships could help reduce financial barriers, but emphasized that such models would require intentional coordination and supportive policy frameworks to be viable.

Stakeholders also emphasized that high upfront capital costs alone are not necessarily prohibitive if strong, reliable, and long-term end markets for compost and compost-derived products exist. However, interviews consistently highlighted the challenge of weak and inconsistent end markets. Straight compost often struggles to find sufficient demand, requiring processors to blend compost into engineered soils or specialty products to move material at scale. In the absence of stronger policy drivers such as public procurement requirements, soil health incentives, or stormwater regulations that encourage compost use processors face limited revenue certainty.

"There's not a great market for straight compost at this point. There aren't really any mandates [or] recommendations for organic matter in soils, and there's a disconnect when it comes to the utilization of straight compost in the region. We manufacture topsoil because we have to move the compost through the system." –Kevin Anderson, Missouri Organic Recycling

"Contamination is a big challenge for commercial routes." –Dan Heryer, Compost Collective KC

Contamination was also identified as a major barrier affecting both processing costs and end-market viability. Interviewees added important nuance regarding where and why contamination occurs. Operators reported that commercial collection routes tend to experience higher contamination rates than residential subscription-based services, largely due to inconsistent staff training and high employee turnover at commercial generators. Stakeholders also highlighted widespread confusion around compostable packaging, particularly products labeled "biodegradable" or visually resembling compostable materials that do not meet certification standards. These issues increase sorting errors, raise processing costs, and degrade compost quality. Interviewees emphasized that as programs scale to include more complex or mixed waste streams, contamination mitigation increasingly requires capital-intensive preprocessing technologies, such as depackagers,

⁷ Zoning constraints in siting composting facilities is addressed in the planning and policy section of this report

rather than education alone. As a result, contamination simultaneously drives higher processing investments and operating costs while reducing the quality and marketability of finished compost.

Takeaways and Gaps: Organic Processing

Kansas City has facilities that manage food waste, yard waste, or biosolids. These facilities utilize advanced equipment, including depackagers (Missouri Organic Recycling) and Thermal Hydrolysis System (KC Water Blue River Biosolids Facility) to process organic material. In 2024, an estimated 4,700 tons of food waste was diverted from disposal. However, this represents only a fraction of what is possible. An additional 46,200 tons of food waste were still landfilled in 2024, revealing a significant opportunity for organics processing to expand and address additional organics volume.

To address this opportunity, several critical barriers must be addressed:

- **Limited Processing Capacity:** Missouri Organic Recycling remains the only permitted food-waste composting facility serving the Kansas City region. This concentration of capacity creates a single-point-of-failure risk; if operations were to pause or cease, food waste processing capacity would be severely disrupted. The lack of redundant or distributed facilities limits the City's ability to expand organics collection programs and underscores the need for additional regional processing infrastructure.
- **Contamination:** Contamination remains a persistent barrier, increasing operating costs and degrading compost quality. As collection programs extend beyond clean, source-separated generators to more complex ICI streams, contamination rates rise due to inconsistent training, high staff turnover, and confusion around compostable packaging. Managing contamination increasingly requires capital-intensive preprocessing equipment, such as depackagers, rather than education alone, constraining throughput and reducing the marketability of finished compost.
- **Capital intensive startup costs:** Food waste processing facilities such as aerated static pile, covered aerated static pile, and anaerobic digestion systems require significantly higher upfront investment than traditional windrow composting facilities designed primarily for yard waste. High capital costs for infrastructure, equipment, hauling, and regulatory compliance create substantial barriers to entry for new facilities.
- **Limited end markets:** Regional end markets for compost and compost-derived products remain underdeveloped and inconsistent, limiting revenue stability for processors. Straight compost often struggles to achieve sufficient demand, requiring processors to blend materials into engineered soils or specialty products to move volume. Without stronger policy drivers such as public procurement standards, soil health initiatives, or stormwater regulations that encourage compost use market uncertainty continues to constrain investment in new or expanded processing capacity.

Recommendations

Table 20 provides the recommendations to activate, build, and grow the waste prevention and food recovery pillar of the circular organics economy in Kansas City.

Table 20: Organics Infrastructure and Investment Recommendations

Continued support for recycling and reuse infrastructure through MARC:



Underway

Maintain and strengthen Kansas City's partnership with the Mid-America Regional Council (MARC) to expand recycling and reuse infrastructure across the region. MARC's Solid Waste Management District grant program provides critical funding for equipment, facilities, and programs that reduce waste, increase material recovery, and support local circular-economy initiatives. Continued City investment and collaboration will help leverage regional resources, support community organizations and local governments in implementing new projects, and ensure that recycling, reuse, and waste reduction infrastructure continues to grow in alignment with Kansas City's long-term sustainability and diversion goals.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	All generators	Capital intensive Startup Costs	F-2.4, F-2.6	<\$30K Annual

Capacity Expansion Assessment:



Underway & Foundational

Kansas City should evaluate additional composting capacity needs along with options for complementary organics processing technologies such as anaerobic digestion that can reliably manage packaged food waste at scale. Because many large generators (e.g., grocers and manufacturers) are unable or unwilling to depackage material, a dedicated packaged-food processing solution is needed to maximize diversion while allowing traditional composting operations to continue focusing on clean, source-separated streams.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	All Generators	Contamination in the Stream	W-2.1	\$30K–\$300K One Time

City–Processor Partnership to Reduce Contamination in the Organics Stream:



Foundational

The City should work collaboratively with compost processors to establish consistent contamination-reduction protocols such as aligned education materials and targeted outreach to high-contamination generators to improve feedstock quality. This partnership would enable processors to fully utilize collected organics and help to expand end-market opportunities.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	All Generators	Contamination in the Stream	W-2.1	\$30K–\$300K Annual

Community compost initiative:

Kansas City should expand community-scale composting by supporting neighborhood drop-off sites, block-level bin programs, and resident workshops to make composting accessible, equitable, and integrated into local neighborhoods.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	All Generators	Limited Processing Capacity	W-2.1	\$30K – \$3M Mixed

Build initiative to support backyard composting:

Build an initiative to support backyard composting by providing residents with guidance, cost-share incentives, and outreach materials to set up low-impact compost bins at home. Such an initiative should include a simple toolkit (bin designs, placement guidance, odor-control tips) and an outreach campaign to encourage adoption and demystify composting.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	Residential	Limited Processing Capacity	F-1.2	\$30K – \$300K Annual

Develop food waste specific grant opportunities:

Create targeted grant opportunities to support expansion of local food-waste processing capacity, with a focus on needs identified by operators and food recovery partners.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Building	ICI	Limited Processing Capacity and Capital-Intensive Startup Costs	W-2.1	\$300K – \$3M Annual

Long-term expansion of food-waste processing capacity:

Using findings from organics processing evaluation, Kansas City should proactively explore options to expand local processing through a formal RFP process and new public-private partnerships. This could include soliciting proposals for additional composting or anaerobic digestion infrastructure, innovative technologies, or co-located facilities that complement existing operators. Establishing a structured pathway for future capacity expansion ensures the City is prepared to meet growing diversion goals and support a resilient, long-term circular organics system.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Building	All Generators	Limited Processing Capacity	W-2.1	\$3M – >\$9M Capital

Market Development Incubator:

Create a business model development technical assistance program to guide entrepreneurs in creating new markets for food waste management and food recovery. Develop a presentation forum that matches with potential grant, financing, and funding sources with violable products and programming.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Growing	ICI	Limited Processing Capacity	F-2.4, W-2.1	\$30K – \$3M Annual

Case Studies

PUBLIC-PRIVATE PARTNERSHIP TO EXPAND PROCESSING CAPACITY

Identified Challenge: The City of Providence, RI faced limited local capacity for food-waste diversion and processing, particularly for ICI generators. Existing infrastructure was insufficient to support expanded food-waste collection, and private operators faced significant financial barriers to scaling operations, including high upfront equipment costs and uncertainty around long-term material supply. Without targeted investment, Providence risked stalling progress toward waste reduction and climate goals despite growing interest from businesses and community composting initiatives.

Solution Implementation: To address these constraints, the City of Providence leveraged federal grant funding through the U.S. Environmental Protection Agency’s Solid Waste Infrastructure for Recycling (SWIFR) program to support targeted expansion of food-waste diversion and processing capacity. Rather than building and operating facilities directly, the City structured the program to provide subawards to two regional processors, Remix Organics and Groundwork Rhode Island, each addressing different segments of the organics processing ecosystem (City of Providence, 2024; U.S. EPA, 2025).

Grant funding awarded to Remix Organics, an industrial-scale food-waste processor, covered approximately 25–40% of an expansion project estimated at \$1–2 million. Funds supported the purchase of four key pieces of equipment designed to expand processing and collection capacity, including a forklift, two side-loading collection trucks, and a box truck for slurry transport. These investments directly increased Remix’s ability to service additional generators and move higher volumes of food waste through the regional system.

Funding awarded to Groundwork Rhode Island, a community-based composting organization, supported approximately 26% of a community compost hub expansion. Grant funds were used to build a workshop and storage shed at the composting site, expand feedstock storage, and purchase essential equipment including a bucket loader, truck, dump trailer, and a food-waste pickup e-trike. This investment strengthened neighborhood-scale processing capacity while expanding access to food-waste diversion through community-based models.

The City paired these capital subawards with technical assistance and program coordination to strengthen generator participation and ensure that expanded capacity was fully utilized. This public–private partnership approach reduced financial risk for operators, accelerated deployment of new infrastructure, and allowed Providence to catalyze food-waste processing capacity growth without assuming long-term operational responsibility (City of Providence, 2024).

Key Learnings for Kansas City: Provide was able to address a frequently cited barrier of high upfront investment costs by supporting investments of private sector or non-profit operators. For Kansas City, this case study highlights the value of designing targeted grant opportunities that directly support private investment and expansion of organics processing capacity.

MARKET DEVELOPMENT INCUBATOR: NEXT CYCLE MICHIGAN

Identified Challenge: Thirty-eight percent of Michigan’s municipal solid waste stream is organic material, nearly half of which is food waste. For the state to reach its 45% municipal solid waste diversion goal, organics recovery must increase approximately fourfold from current levels, with most of that increase coming from additional food waste diversion (NextCycle Michigan, 2025). Achieving higher rates of organics diversion requires improvements to recovery systems, expansion of processing capacity, and development of robust end markets. These outcomes depend not only on expanded collection programs, but also on stronger business innovation, technical capacity, and funding mechanisms that support new organics processing and market development pathways.

Solution Implementation: In response to these structural gaps, the Michigan Department of Environment, Great Lakes, and Energy (EGLE) launched the NextCycle Michigan initiative and created the Foods, Liquids, and Organic Waste Systems (FLOWS) Innovation Challenge Track to catalyze growth in the state’s organics recovery ecosystem. The FLOWS accelerator brings together grant funding, public and private sector partners, technical assistance, mentorship, and investment pathway development to support teams proposing projects aimed at transforming organics recovery. Supported projects include innovations in food recover, organics collection, compost processing, end market development for compost products, and other recovery and reuse pathways for organic materials.

Groups selected for the FLOWS track participate in an accelerator experience designed to advance projects toward implementation readiness. This includes business planning support, expert consulting, networking opportunities, and connections to potential funders, positioning projects for future financing, scaling, or commercialization. Selected FLOWS teams represent a diverse set of organizations and project types, ranging from community-based composting initiatives and municipal in-vessel compost processing plans to nonprofit food recovery operations and emerging technologies focused on increasing food waste diversion. Together, these collaborations illustrate how the accelerator has mobilized resources across sectors to strengthen Michigan’s organics infrastructure while encouraging innovation in both processing and market pathways (NextCycle Michigan, 2025).

Key Learnings for Kansas City: The FLOWS track demonstrates that municipal and state entities can play a pivotal role in stimulating private-sector and nonprofit innovation to address organics processing barriers. By deploying structured grant opportunities, technical assistance, and accelerator-style support, public agencies can reduce financial risk for startups and established firms alike, enabling project teams to develop and scale solutions that contribute to expanded organics recovery. For Kansas City, this model highlights the value of designing competitive grant programs and partnership platforms that engage business innovators, local governments, nonprofits, and community organizations in co-creating solutions to divert food waste, expand processing capacity, and develop stronger markets for recovered organic products.

Regional End Markets

Regional end markets for processed organic materials are an essential piece of developing an organics circular economy. Without end markets to purchase finished compost and compost derived soil amendments, collection and processing operations collapse.

This section evaluates Kansas City's existing organics end markets, highlights gaps and constraints affecting market uptake, and outlines strategies to expand demand, improve market alignment, and support a more circular and economically durable organics system.

Regional Highlights

URBAVORE URBAN FARM

Urbavore Urban Farm is a 13.5-acre, biologically diverse farm in Kansas City that has been committed to sustainable, energy-independent systems for food production, waste and water management, and shelter for over ten years. The farm operates through a robust volunteer network and cultivates crops using nutrient-enhanced soils produced from composting operations. Crops include strawberries, blueberries, muskmelons, asparagus, gourmet potatoes, heirloom tomatoes, hard-neck garlic, and specialty roots. Hens and pigs are raised on pastures, naturally fertilizing the fields through their grazing activities. Urbavore produce is available directly from the farm via online pre-order and through a member-based CSA program. The farm also accepts food scraps and some yard waste for composting on their site. Residents can drop off these materials for free, and the farm uses these materials to produce nutrient-dense compost for agricultural use. One million pounds of food waste was diverted in 2024.

KANSAS CITY WATER'S BIRMINGHAM FARM

Birmingham Farm, located adjacent to the Blue River WWTP along the north side of the Missouri River, is owned and operated by Kansas City Water. Currently, approximately 5,500 tons per year of Class B biosolids from the Blue River WWTP are directly applied to 1,400 acres of farmland to serve as a soil additive for crops. A system of pipes moves the waste from the nearby Blue River WWTP to the farm. Irrigation wheels are then used to spray the mixture onto the fields. Crops are currently shipped to Mexico and sold for purposes of ethanol production and cattle feed, generating approximately \$500k in annual revenue.

Stakeholder Feedback

Stakeholder engagement consistently emphasized that the primary constraint on scaling organics diversion in Kansas City is not the availability of organic material, but the limited strength, diversity, and reliability of end markets for organics-derived products. Stakeholders described a system in which processing capacity, collection expansion, and technology deployment are fundamentally dependent on whether recovered materials can be absorbed into stable, predictable markets. In the absence of reliable demand signals, investments in new or expanded processing infrastructure remain financially risky, even where technical solutions and feedstock streams are available.

Across interviews, stakeholders repeatedly noted that projects become financially viable only once long-term offtake agreements or committed buyers are secured. While potential markets exist for compost, biochar, and other organics-derived products such as construction materials, landscaping applications, and agricultural uses, these markets are largely voluntary and fragmented. Without anchor customers or institutional commitments, processors and technology developers must rely on ad hoc buyers. As a result, market uncertainty, rather than technical feasibility, remains a central barrier to system growth.

"We're confident in the feedstock because everybody's searching for a solution for these solid waste feeds [organics]. The important connections for us are going to [be] offtake agreements. Once we have those in place, our projects become bankable for a lender or for an investment group". –John Michael, Cirque Renewables

"People don't understand the value of these products enough to support them at scale."
– Kevin Anderson, Missouri Organic Recycling

Stakeholders also emphasized that demand for compost as a standalone product is limited within the Kansas City region. To move material through the system, compost is typically blended into manufactured soils, mulches, or specialty products rather than sold independently. While these blended products are successful and widely used, they add cost and complexity and ultimately cap the volume of food waste-derived compost that can be absorbed annually. Stakeholders described the need to carefully balance incoming organic material with outgoing product sales to avoid stockpiling, degradation, or disposal costs, underscoring how weak end-market demand directly constrains food waste diversion efforts.

Stakeholders identified public-sector demand as a significant but underutilized opportunity to strengthen organics end markets. Municipal and institutional applications such as public works projects, roadways, sidewalks, landscaping, stormwater infrastructure, and capital improvements were frequently cited as high-volume, locally controlled outlets capable of absorbing compost, biochar, and other recovered products. Despite this potential, stakeholders noted that current specifications, standards, and procurement practices rarely require or incentivize the use of organics-derived materials, leaving much of this demand unrealized.

"There should be some thought of incentivizing the backside of compost utilization. You know, 5% organic matter when they do a new construction, having that as being part of the requirements, making sure they're using compost in those tree plantings. [Incentives] make a big difference for me when it comes to utilizing and selling and keeping markets moving." – Kevin Anderson, Missouri Organic Recycling

We create a high carbon biochar... That should be applied to flood areas and runoff areas, because it's going to increase absorption in the land, it's going to decrease runoff, it's going to adsorb PFAS that's in the land." —John Michael, Cirque Renewables

Finally, stakeholders highlighted the promise of emerging end markets, including biochar for construction materials, recovered carbon black for manufacturing, and specialized soil-health applications. While these markets demonstrate strong technical potential and environmental benefits, stakeholders emphasized that early-stage adoption remains limited. Without pilot projects, testing support, and early adopters willing to validate new products, these markets struggle to move beyond demonstration scale. Stakeholders suggested that targeted support for pilots and market validation could help bridge the gap between innovation and commercialization, strengthening the overall resilience of the organics end-market ecosystem in Kansas City.

Takeaways and Gaps: Regional End Markets

Effective organics management in the Kansas City region depends on building and sustaining viable end markets for processed organics materials such as compost, mulch, biochar, and soil amendments. As collection and diversion programs expand, the volume of finished materials will grow, making it essential to ensure stable demand, market infrastructure, and policy support to absorb these materials locally.

Gaps in developing and sustaining end markets include:

- **Market demand and quality standards:** While demand exists for high-quality compost and soil products, inconsistent product quality and limited buyer awareness can restrict market growth.
- **Public perception and community support:** Expanding compost use often depends on strong community buy-in. Concerns about odor, truck traffic, or contamination can lead to opposition to siting or use.
- **Supply-demand balance and logistics:** As organics diversion increases, the region may face challenges in balancing processing capacity with end-market demand, particularly under seasonal fluctuations in both feedstock availability and compost demand.
- **Regional coordination and market visibility:** There is no centralized marketplace or coordination mechanism connecting producers, haulers, and end users of compost and digestate products.

Recommendations

Table 21 provides the recommendations to activate, build, and grow the waste prevention and food recovery pillar of the

Table 21: Regional End Market Recommendations

Conduct broader market assessment plan:

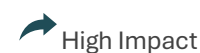


Foundational

Conduct a comprehensive market assessment to evaluate and quantify potential private-sector demand for finished compost across Kansas City, including new construction sites, landscaping operations, urban agriculture, stormwater management projects, and commercial land developments. The assessment should identify current barriers to adoption, estimate potential volumes of compost uptake, and recommend strategies to grow demand in sectors with the greatest capacity for expansion.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	All Generators	Market demand, quality standards, and Supply-demand balance and logistics	F-1.2	\$30K – \$300K One Time

Establish finished compost procurement policy:



High Impact

Develop citywide procurement standards that require the use of finished compost across municipal departments, including Parks and Recreation and Public Works. By incorporating compost into landscaping, soil restoration, stormwater management, and public construction projects, Kansas City can create a stable end market for locally produced compost, support regional organics recycling infrastructure, and demonstrate municipal leadership in circular material use. Clear departmental guidelines and annual purchasing targets would help ensure consistent demand and integrate compost use into routine City operations.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	All Generators	Market demand and quality standards	W-1.1, F-1.2	<\$30K One Time

Incentivize use of finished compost:



High Impact

The City could consider offering discounts or partial reimbursements to residents, developers, landscaping firms, and community organizations that purchase or apply locally produced compost. Additionally, the City could allow compost-amended soils to qualify for stormwater fee reductions or green infrastructure credits, recognizing compost's ability to increase infiltration, reduce runoff, and improve soil function. The City could also encourage Brownfield redevelopment using locally produced compost or soil enriched with organics.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Building	All Generators	Market demand, quality standards, Supply-demand balance and logistics, regional coordination and market visibility	F-1.2	\$30K – \$300K Annual

Require Compost Use in City-Funded Grants:

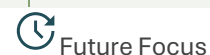
For any City-funded grant involving landscaping, beautification, stormwater management, green infrastructure, community gardens, or urban agriculture, require the incorporation of finished compost as a standard project element. Embedding compost use into grant criteria ensures that City-supported projects model best practices in soil health, water management, and climate resilience.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Building	All Generators	Market demand, quality standards, Supply-demand balance and logistics, regional coordination and market visibility	F-1.2, W-1.1	<\$30K Annual

Create "Green Building" Certification program or "Heat Island Mitigation" program:

The "Green Building" certification program can require a business to utilize compost on landscaping, stormwater management, to qualify. Compost improves soil structure and water retention, supporting healthier vegetation and increased canopy cover, two of the most effective local strategies for reducing surface temperatures. By pairing compost procurement with targeted greening in heat-vulnerable areas, the City can advance both climate adaptation and equity goals while strengthening local demand for finished compost.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Building	All Generators	Market demand, quality standards, Supply-demand balance and logistics, regional coordination and market visibility	W-1.5	\$30K – \$30K Annual

Contractor compost use education program:

Develop a contractor-focused compost education program that provides model specifications, purchasing guidelines, and practical training to support wider adoption of finished compost in construction, landscaping, and property management. This program should equip landscape architects, contractors, developers, and maintenance staff with clear standards for compost use, examples of approved applications, and guidance on sourcing high-quality local compost.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Growing	All Generators	Market demand, quality standards, Supply-demand balance and logistics, regional coordination and market visibility	F-1.2	\$30K – \$300K One Time



Launch community soil health initiative:

The City should launch a coordinated education and outreach campaign aimed at residents, businesses, community growers, and professional landscapers to demonstrate the value of using finished compost in gardens, landscapes, and construction projects. The initiative should highlight the proven benefits of compost such as improved soil health and urban heat mitigation along with its role in supporting a sustainable local organics economy.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Growing	All Generators	Public Perception and Community Support	F-1.2	\$30K – \$300K Annual



Beyond Finished Compost:

Explore opportunities to utilize food and yard waste in higher-value or complementary end uses beyond traditional compost, such as biochar, soil amendments with enhanced carbon sequestration properties, or other emerging organic waste valorization technologies. Missouri Organic Recycling and other local processors are already beginning to investigate these pathways. Supporting research, pilot projects, and market development in this space can help Kansas City diversify outlets for organic materials, strengthen local processing capacity, and capture additional environmental benefits, particularly around carbon storage, soil health, and climate resilience.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Growing	All Generators	Market demand and quality standards and supply-demand balance and logistics	W-1.5	\$30K – \$300K One Time

Case Studies

SEATTLE COMPOST PROCUREMENT AND SOILD AMENDMENT POLICY

Identified Challenge: As Seattle expanded food and yard waste diversion, the City recognized a growing mismatch between the volume of organic material collected and the reliability of end markets for finished compost. Compost produced from municipal organics competed with conventional soil amendments and landscaping materials without a consistent demand signal from the public sector. As a result, compost use in public works, parks, and capital projects was uneven and often treated as an optional or discretionary material rather than a standard input. This lack of predictable demand limited the ability of local compost producers to scale operations and constrained the City's ability to fully realize the environmental and economic benefits of its organics diversion programs (City of Seattle, 2021).

Solution Implementation: To address this gap, the City of Seattle adopted a formal Compost Procurement Ordinance and complementary soil amendment requirements embedded in municipal code and departmental standards. The policy requires City departments to evaluate and prioritize the use of compost and compost-amended soils in applicable government-funded projects, including landscaping, parks, rights-of-way, erosion control, and green stormwater infrastructure, unless specific exemptions apply. The ordinance links procurement expectations to the City's organics diversion efforts by encouraging compost purchases that correspond to the volume of organic materials collected and processed. Seattle further reinforced the policy through detailed technical specifications and best management practices that require soil restoration with compost following construction activities, ensuring consistent implementation across departments and contractors (City of Seattle Public Utilities, n.d.).

Key Learnings for Kansas City: Seattle's experience demonstrates that compost end markets can be strengthened most effectively when procurement requirements are institutionalized through municipal code and project specifications rather than left to voluntary adoption. By embedding compost use into routine public works and capital project workflows, the City created stable, recurring demand that supported local processors and reduced market uncertainty. For Kansas City, this case illustrates the value of aligning organics diversion goals with public-sector purchasing power, particularly in areas already under municipal control such as streetscapes, parks, stormwater infrastructure, and redevelopment projects. It also highlights the importance of pairing procurement policies with clear technical standards so that compost use becomes a default practice rather than an exception.

COMPOST-DRIVEN HEAT ISLAND MITIGATION IN BALTIMORE

Identified Challenge: Baltimore's historically marginalized neighborhoods have long faced disproportionate environmental burdens, including higher urban heat island effects driven by limited tree canopy, extensive impervious surfaces, and legacy disinvestment. In areas with limited green space, residents experience elevated surface and air temperatures during heat waves that contribute to health risks. Traditional tree planting efforts have been hindered by poor soil conditions. For instance, compacted and nutrient-deficient soils have severely restricted tree survival and growth, thereby limiting the city's capacity to expand canopy cover in the neighborhoods that need it most.

Solution Implementation: To confront both heat and equitable green infrastructure outcomes, community organizations, urban foresters, and city officials partnered to integrate compost application into tree planting and soil restoration practices in heat-vulnerable neighborhoods. Compost was used to amend urban soils prior to tree planting and landscaping to improve soil structure, increase water holding capacity, and provide a nutrient-rich medium that supports plant establishment and long-term health. These compost-amended soil interventions were implemented in schools, parks, vacant lots, and streetscape projects in communities disproportionately affected by heat island impacts. As local practitioners involved in the effort explained, compost not only enhances tree survival but also supports soil moisture retention and reduces surface

temperatures via evapotranspiration to help planted trees thrive in areas that historically struggled to sustain vegetation growth (Sierra & Hosain, 2022).

Key Learnings for Kansas City: Baltimore's experience demonstrates that compost amendment is more than a soil enhancement practice. It's a climate adaptation and environmental equity strategy. By improving the conditions for tree survival and growth in underserved neighborhoods, compost has contributed to broader efforts to expand canopy cover, reduce localized heat, and address historical disparities in green infrastructure access. For Kansas City, this case illustrates how combining compost use with greening initiatives like addressing poor soil health and high heat vulnerability in neighborhoods can have multiplying benefits: strengthening tree establishment, improving soil health, enhancing cooling through increased evapotranspiration, and advancing equitable outcomes. Standardizing compost application in public tree planting, streetscape, and green infrastructure projects could help Kansas City expand canopy cover more effectively in heat-impacted neighborhoods, while also creating stable demand for finished compost that aligns with broader sustainability goals.

Local Leadership and Engagement

Local leadership and community engagement are essential to the success of a circular organics economy. Local organizations, neighborhood leaders, educators, and workforce partners who translate these frameworks into action on the ground. Their leadership builds trust, fosters participation, and ensures that circular organics strategies reflect community priorities and lived experience.

In Kansas City, a diverse set of community-based organizations and regional partners are already advancing food recovery, composting, soil stewardship, and green workforce development through education, hands-on practice, and neighborhood-centered approaches. These efforts demonstrate how leadership rooted in place can normalize new behaviors, strengthen local capacity, and connect environmental goals with economic opportunity.

The following section highlights examples of local leadership and engagement that are helping to shape Kansas City's circular organics economy, with a focus on neighborhood-scale innovation, workforce development, and community-driven solutions that support long-term resilience and equity.

Regional highlights

CITY OF KANSAS CITY OFFICE OF ECONOMIC DEVELOPMENT

The City of Kansas City's Office of Economic Development (OED; <https://www.kcmo.gov/city-hall/departments/city-manager-s-office/office-of-economic-development>), housed within the City Manager's Office, serves as the central coordinator for the City's economic development strategy, working across departments and with community partners to advance job creation and inclusive growth. The OED focuses primarily on strategic planning, incentives programs, economic development data analysis, housing policy, and inclusive development and serves as a conduit between the City, the Economic Development Corporation of Kansas City (EDCKC), and other economic development community partners.

The OED supports initiatives that align training and employment opportunities with the City's broader economic goals, partnering with organizations like the Full Employment Council, Great Jobs KC, and community-based programs such as KC

Can Compost's Green Core Training to connect residents, particularly those facing employment barriers, to careers in high-demand fields.

FULL EMPLOYMENT COUNCIL (FEC)

The Full Employment Council (FEC; <https://www.feckc.org/about>) is a business-led private, non-profit corporation with a mission to connect job seekers, particularly individuals from underserved and underrepresented communities, with the training, support services, and employment opportunities they need to achieve economic self-sufficiency. The FEC provides services to the Kansas City region including Kansas City and Cass, Clay, Jackson, Platte, and Ray counties. In 2024, FEC served 15,000 people and helped over 600 individuals find employment, with an average hourly wage of \$24.44. FEC offers a broad range of services including career counseling, on-the-job training, resume development, job placement, and sector-specific training in fields such as healthcare and transportation.

CULTIVATE KC AND URBAN FARMER WORKFORCE DEVELOPMENT

Cultivate KC (<https://www.cultivatekc.org/>) supports urban farmers and gardeners across Kansas City through training, land access support, and technical assistance. While primarily focused on food production, Cultivate KC plays an important leadership role in workforce development by equipping growers with skills related to soil health, compost use, and sustainable production practices.

By supporting emerging farmers, many from historically underserved communities, Cultivate KC helps create pathways into green jobs and local enterprise development that rely on healthy soils and access to organic amendments. This work strengthens the connection between composting, urban agriculture, and economic opportunity.

GREAT JOBS KC

Great Jobs KC (<https://greatjobskc.org/>) is a nonprofit organization that provides tuition-free skills training and college scholarships to adults in the Kansas City region. The Skills Training Program is open to adults 17 and older who meet income eligibility requirements and reside in one of six qualifying counties: Wyandotte or Johnson in Kansas, or Cass, Clay, Jackson, or Platte in Missouri. The program offers training in high-demand fields including Information Technology, Healthcare, Manufacturing, Construction, and Logistics and Warehousing. Every participant begins with a Digital Literacy Assessment to identify technical strengths and customize a learning plan.

GREEN WORKS KC

Green Works KC is a Kansas City-based nonprofit focused on advancing economic mobility through green workforce development, environmental stewardship, and community revitalization. The organization provides job training, transitional employment, and career pathways in environmental fields, including urban forestry, green infrastructure maintenance, and neighborhood beautification, with a focus on serving individuals facing barriers to employment.

Through its programming, Green Works KC connects environmental improvement with workforce development by engaging participants in hands-on projects that improve neighborhood conditions while building practical skills. These activities support broader circular economy goals by strengthening local capacity for land stewardship, soil improvement, and climate resilience, particularly in historically underserved communities. Green Works KC's model demonstrates how investments in environmental work can simultaneously advance social equity, workforce development, and long-term sustainability outcomes.

IVANHOE NEIGHBORHOOD COUNCIL AND URBAN AGRICULTURE LEADERSHIP

[The Ivanhoe Neighborhood Council](#) has played a longstanding leadership role in advancing community-driven food access, urban agriculture, and environmental stewardship in Kansas City's historic Ivanhoe neighborhood. Through partnerships with local growers, schools, and nonprofits, the neighborhood has integrated gardens, food distribution, and community education into its broader revitalization strategy.

Local leadership in Ivanhoe demonstrates how neighborhood-based organizations can serve as anchors for circular organics practices by linking compost use, food production, and resident engagement. These efforts help ensure that organic materials are reinvested locally while building skills, ownership, and social cohesion.

KC CAN COMPOST GREEN CORE TRAINING PROGRAM

KC Can Compost is first introduced in the report in the Organics Collection Programs section. KC Can Compost also runs a program called Green Core Training (<https://kccancompost.com/green-core-training>) which is a free program that provides environmental literacy and workforce readiness training to individuals facing employment barriers. The program connects climate action with community workforce development, equipping participants with both technical knowledge of the green economy and practical workplace soft skills such as teamwork, critical thinking, resume writing, and interview preparation. Upon completing the program, participants receive an Environmental Specialist designation from the U.S. Department of Labor. KC Can also assists graduates in connecting with green job internships and employment opportunities.

KC FOOD HUB

[KC Food Hub](#) is a Kansas City-based nonprofit that strengthens the regional food system by connecting local farmers with wholesale and institutional buyers through aggregation, distribution, and technical support. The organization focuses on building reliable market access for small and mid-sized producers while increasing the availability of locally grown food for schools, businesses, and community institutions.

KC Food Hub provides leadership by addressing structural barriers that often limit farmer participation in larger markets, including distribution logistics, pricing, and procurement requirements. By coordinating supply, managing relationships with buyers, and supporting producers with business and operational guidance, the organization helps keep food dollars circulating locally and strengthens the economic viability of regional agriculture.

From a circular organics perspective, KC Food Hub's work reinforces the upstream value of food as a resource by supporting efficient, localized supply chains that reduce waste, shorten transport distances, and strengthen producer resilience. Its leadership demonstrates how investment in food system coordination and infrastructure can complement food recovery, composting, and soil health efforts by ensuring that more food reaches its intended use in the first place. KC Food Hub's model highlights the importance of locally rooted intermediaries in building resilient, equitable food systems that support both producers and communities.

LITERACY KC WORKFORCE DEVELOPMENT DIVISION

Literacy KC's Workforce Development Division (<https://literacykc.org/workforce-development/>) provides workforce and college preparation, integrated education training, and workforce education to Kansas City-area residents. The Division focuses on reducing barriers to employment and empowering learners to achieve their workforce goals. Based on Mid-America Regional Council research identifying the top in-demand career pathways for the region, Literacy KC is working to offer credentials in Life Science, Information Technology, Manufacturing, and Supply Chain over the next five years.

NORTHLAND WORKFORCE DEVELOPMENT CENTER (NWDC)

The Northland Workforce Development Center (NWDC; <https://missouripartnership.com/kansas-city-invests-25-million-in-workforce-development/>) is a planned 145,000-square-foot training facility being developed by the Northland Workforce Development Center Corporation, a 501(c)(3) nonprofit founded in 2023. The \$74 million project will replace the existing Northland Career Center campus and is designed to serve both high school students and adults seeking career-focused education or retraining opportunities in high-demand fields. The City of Kansas City committed \$25 million toward the project in April 2025, complementing a \$37 million investment from the State of Missouri. The center will feature modern labs, updated classrooms, and industry-aligned training programs.

ROOTED & REACHING

Rooted & Reaching is a Kansas City-based environmental organization that operates an Eco Art Garden in the Dunbar neighborhood and provides hands-on, community-centered environmental education. Through workshops, demonstrations, and creative programming, Rooted & Reaching engages residents in learning about composting, soil health, and waste reduction in ways that are accessible and locally relevant. The organization is launching a vermicomposting program using red wiggler worm bins to demonstrate how food scraps can be transformed into valuable soil amendments, reinforcing the role of neighborhood-scale solutions in a circular organics economy.

Rooted & Reaching's work exemplifies how place-based leadership can normalize composting practices, build environmental literacy, and connect waste reduction to broader goals around art, culture, and neighborhood revitalization.

KANSAS CITY FOOD WISE AND EQUITY-FOCUSED FOOD SYSTEM VISIBILITY

Kansas City Food Wise is a locally grounded leadership and engagement tool that makes the region's food system visible through a community-informed, interactive map of food access points, food recovery organizations, community gardens, urban farms, composting operations, and related resources. Managed by MARC, the map serves the nine-county Kansas City metropolitan area and is built from organizationally sourced data, allowing local leaders, practitioners, and residents to both contribute to and use the information.

When paired with environmental justice and food access analysis, the KC Food Wise map becomes more than an inventory. It functions as a leadership and engagement tool that helps communities and decision-makers understand where food system assets and gaps intersect. Figure 11 illustrates this relationship by overlaying Kansas City's food system resources with Low Income Disadvantaged Communities (LIDAC), highlighting persistent inequities in grocery access and food infrastructure across the City. An interactive web-based version of this map can be accessed here: [Interactive Map of Low Income Disadvantaged Communities and Kansas City Food Systems](#)⁸

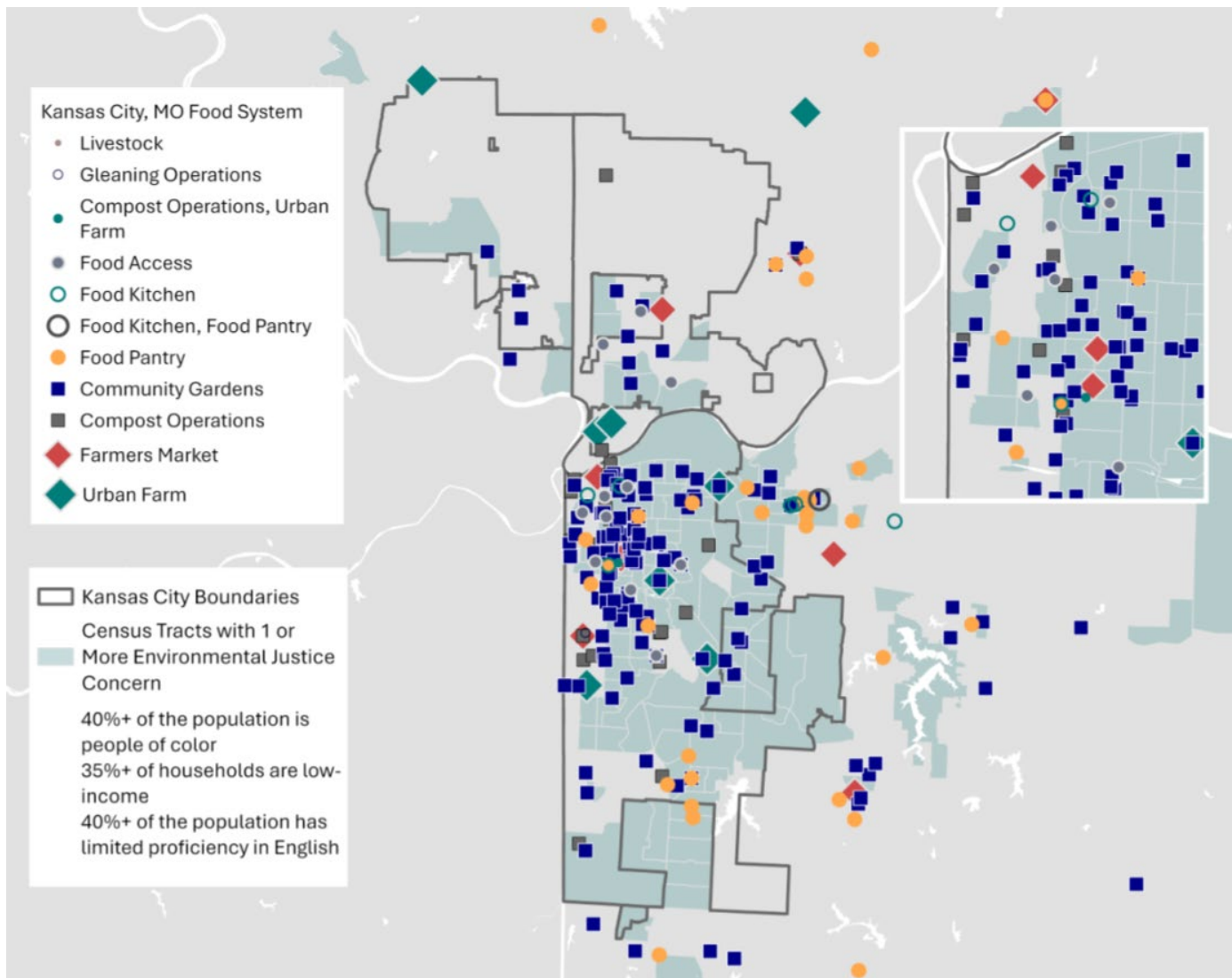
As shown in Figure 11, historically underserved neighborhoods on Kansas City's east side including Ivanhoe, Linwood, and the Key Coalition/Washington–Wheatley corridor experience both elevated indicators of environmental justice concern and limited access to full-service grocery stores. In many of these areas, residents travel more than a mile to reach a full-service supermarket, reinforcing long-standing food desert conditions. The recent closure of the Sun Fresh Market at 31st & Prospect (Linwood Shopping Center) in August 2025 removed one of the few remaining full-scale grocers in the area, leaving thousands of locals with even fewer nearby options (White, 2025, October 3). Despite nearly \$18–29 million in public investments over a

⁸Link to the Interactive version of the Low Income Disadvantaged Communities and the Kansas City Food Systems map: <https://rrsinc.maps.arcgis.com/apps/mapviewer/index.html?webmap=a1727c20dc4f453e9e5ab31284d9cc42>

decade, the store struggled with declining customer traffic before shutting its doors (Zeff, 2025). Additionally, the Merc Co-op location at 501 Minnesota Avenue is slated to close December 30, 2025 (Marsh, 2025). The co-op was initially launched in a historically underserved downtown Kansas City area to address the grocery shortage in the region. However, its financial performance and the subsequent failure of adjacent redevelopment projects weakened its viability. (White, 2025, July 1). The closure of these stores highlights the significant gaps in healthy food access in neighborhoods long considered food insecure.

Despite these challenges, Figure 7 also highlights the presence of community-based food assets within and near these same neighborhoods, including food pantries, community gardens, food kitchens, and urban farms. These locally led resources often serve as stabilizing food access points where traditional retail has struggled to persist. Their concentration in areas with high environmental justice concern underscores the critical role of neighborhood leadership, community engagement, and grassroots solutions in addressing food insecurity.

Figure 11: Low Income Disadvantaged Communities and Kansas City Food Systems⁸



Stakeholder Feedback

Stakeholders emphasized that Kansas City benefits from strong local leadership, community-based organizations, and grassroots innovation across the food and organics system, but that progress remains uneven and constrained by gaps in access, coordination, education, and workforce development. Participants consistently pointed to persistent disparities in fresh food access, particularly in historically disinvested east-side neighborhoods, where residents face limited grocery options despite the presence of food pantries, community gardens, and urban agriculture initiatives. Recent grocery store closures reinforced stakeholder concerns that one-time investments or isolated projects are insufficient to ensure long-term food access. Instead, stakeholders stressed the need for a more resilient, community-centered ecosystem of retail and non-retail food options that reflect neighborhood needs, purchasing patterns, and cultural preferences.

"[Pantries are] filled with [high] sodium items...that contribute to the health disparities that we have. A lot of pantries don't have access [or resources] to get produce." –Michael Watson, Urban Produce Push (UPP)

Stakeholders also highlighted the critical role of trusted local leaders in advancing food recovery, composting, and local food initiatives. Participation was consistently described as strongest when programs are communicated and championed by neighborhood-based messengers who understand local context, can address concerns directly, and help normalize new practices. These local champions bring cultural competence, trust, and lived experience that formal outreach efforts often lack.

"It feels like you have it in spots and starts or you have it in a little bit of somewhere, but you don't have it institutionalized. Does there have to be a local champion everywhere we get this going? It just feels so spotty; one little victory is one little victory." –Emily Randal, Climate Action KC

At the same time, stakeholders cautioned that many local champions currently operate in isolation, leading to small, localized successes but uneven access and fragmented outcomes citywide. While neighborhood-led efforts are essential, the absence of coordination across the City limits their collective impact and can result in duplicative work, service gaps, and disjointed systems. Stakeholders emphasized that pairing neighborhood leadership with stronger citywide coordination is critical to ensuring that access to fresh food, community composting, and locally produced compost is consistent,

equitable, and scalable across Kansas City, rather than dependent on where individual champions happen to be active.

Education and awareness gaps were further identified as a barrier, with stakeholders observing that many residents and businesses lack a clear understanding of how food moves through the system, the resources required to produce it, or the environmental and social value of preventing waste. Participants emphasized the need to shift messaging away from purely technical guidance or diversion metrics toward narratives that frame food as a shared community resource and food recovery as an act of dignity, care, and environmental stewardship.

"When you talk to groupshow we're trying to rescue food, and they're literally like, 'why? Why are you rescuing food?' And it's almost takes you aback because you would think that people will kind of know, but they don't." –Michael Watson, Urban Produce Push (UPP)

"Most of the things we're doing [require] skilled labor [such as] loader operators, truck drivers, professionals like CFOs and leaders [with higher] pay scales. "That's another really good aspect; [In investing in composting] you definitely are developing that skilled labor segment." –Kevin Anderson, Missouri Organic Recycling

Stakeholders emphasized that workforce development is a critical leadership opportunity within Kansas City's circular organics economy, particularly because food recover, composting, and organics processing jobs can provide pathways to stable, living-wage employment. Participants noted that many positions in the organics sector such as drivers, equipment operators, site workers, and maintenance roles offer competitive wages and transferable skills. However, stakeholders also identified a disconnect between these opportunities and existing workforce training programs. Current job training pipelines often do not highlight or actively connect trainees to careers in organics

diversion, resulting in missed opportunities to align workforce development investments with a growing sector that can deliver both economic and environmental benefits.

At the same time, stakeholders stressed that the circular organics economy must intentionally create employment opportunities that are accessible to a wide range of workers, particularly residents from historically underserved neighborhoods. Participants raised concerns that, without clear coordination and intentional frameworks, new infrastructure and programs could primarily benefit well-capitalized operators rather than community members. The absence of a clearly defined coordinating role was cited as a barrier to aligning hiring practices, training pathways, and operational needs across generators, processors, and service providers. As

one stakeholder noted, strengthening coordination, education, and workforce development is essential to ensuring the circular organics economy delivers equitable access to jobs, supports small and community-based participation, and distributes economic benefits broadly as the system scales.

"What type of framework [might enable more people to be able to] afford big machinery, overhead and infrastructure to set up and be a part of a circular economy? How do you figure out ways to make the entry more accessible to participate?"

– Damon Lee Patterson, Dunbar Neighborhood Conservation Steward with Rooted & Reaching

Takeaways and Gaps: Environmental Justice

Effective development of a circular organics economy in Kansas City depends not only on infrastructure and policy, but on strong local leadership, community engagement, and coordinated action across neighborhoods, institutions, and sectors. Trusted local leaders, workforce partners, and community-based organizations play a critical role in translating citywide goals into on-the-ground participation, ensuring programs are culturally relevant, equitably accessible, and responsive to lived experience.

Gaps in local leadership and engagement include:

- **Uneven Access:** Access to fresh food and community composting opportunities remain highly uneven across Kansas City, with historically disinvested neighborhoods experiencing persistent gaps despite strong localized efforts and past public investment.

- **Need for Local Food Champions:** Trusted neighborhood-based leaders play a critical role in driving participation in food recover, composting, and local food initiatives, but these efforts are often isolated and lack the coordination needed to achieve consistent, citywide impact.
- **Education and Awareness:** Many residents and businesses remain unaware of food recover, composting, and diversion opportunities or do not understand how to participate effectively, limiting engagement and reinforcing contamination and underutilization of available programs.
- **Lack of Coordination Between Generators:** Food generators, haulers, and recovery organizations often operate in silos, resulting in fragmented logistics, missed recovery opportunities, and inefficiencies that constrain the scale and reliability of the overall system.
- **Need for Workforce Development:** While Kansas City has a well-developed network of workforce development organizations, there is no system-wide approach to coordinating these resources around green job training and career pathways in the organics and food recovery sector.

Recommendations

Table 22 provides the recommendations to activate, build, and grow the waste prevention and food recovery pillar of the circular organics economy in Kansas City.

Table 22: Local Leadership and Engagement Recommendations

Food as a community resource campaign:



Underway

Continue funding and promotion of the 2026 “Give a Scrap” campaign designed to highlight Kansas City’s progress in food waste management. Lead a citywide education and engagement campaign that shifts the focus from pounds of food recovered to the human, cultural, and environmental value of food. This campaign should reframe food recovery around impact, dignity, and value. This initiative should emphasize the resources invested in growing and transporting food, the significance of donating edible food, who receives the food and how it meets community needs, and the environmental benefits of eating food rather than landfilling it.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	All Generators	Education and Awareness	W-1.5, F-1.4	<\$30K Annual

City staff champion for food recovery and diversion coordination:



Foundational

Designate the City’s Food Systems Coordinator (or a similar City staff role) as the central convener and point-of-contact for local food purchase opportunities, food recovery and organics diversion across Kansas City’s ICI sectors. This role would focus on aligning generators, haulers, and recovery organizations to reduce fragmentation and create a coordinated citywide system.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	ICI	Lack of coordination between generators	F-1.5, F-2.3	\$30K – \$300K Annual



Future Focus

ICI-focused diversion education and outreach:

Develop a targeted education and outreach program for ICI sectors to support food waste diversion and improve composting performance, coordinating closely with the MARC Solid Waste Management District's Food Waste Bites program launching in 2026. City outreach should complement rather than duplicate Food Waste Bites and the waste audit and toolkit services already provided by local operators such as KC Can Compost, which currently offer commercial customers waste assessments, tailored composting plans, and on-site training. City efforts should extend support to sectors and generators not yet reached by these programs, and offer deeper technical assistance such as sorting training and ongoing contamination monitoring for generators ready to advance further.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	ICI	Education and Awareness and Lack of coordination between generators	W-1.5, F-1.4	\$30K – \$300K Annual

Conduct a fresh food access needs assessment and develop incentives that support long-term success in underserved areas:



Future Focus

Conduct a data-driven needs assessment to understand why recent grocery investments in Kansas City have struggled or failed and to identify the full range of food access models that serve residents most effectively. The closures of Sun Fresh at 31st & Prospect and the Merc Co-op at 501 Minnesota Avenue demonstrate that significant public investment alone does not guarantee long-term viability in underserved neighborhoods. The City should investigate the market, operational, and community factors that contributed to these closures and use those findings to evaluate the full spectrum of food access strategies, including large-format retail, micro-grocers, cooperatives, and distributed models such as healthy corner store networks, that link existing neighborhood retail to fresh, affordable produce. In areas where full-format grocery has proven difficult to sustain, non-traditional, distributed infrastructure that works within the existing neighborhood fabric may offer a more resilient and scalable path to long-term food access. The City should design incentives, procurement support, and infrastructure investment to reflect these findings and direct resources toward approaches with the strongest evidence of community impact and long-term viability.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Activation	ICI	Uneven Access	F-2.3, F-1.4	\$30K – \$300K One Time



Foundational

Workforce development:

Kansas City has a strong and growing workforce development ecosystem, including the Full Employment Council, Great Jobs KC, Literacy KC, and KC Can Compost's Green Core Training program. These organizations can be leveraged to ensure a systematic connection to opportunities in the organics and food recovery sector. The City should play a convening role, working through the Office of Economic Development and its community partners to align existing workforce programs with the training, certification, and job placement needs of the circular organics economy. Skilled positions such as loader operators, compost site workers, truck drivers, and mechanics command strong wages in the \$25–\$40 per hour range, while neighborhood-level composting sites can create additional roles in collection, transportation, sorting, bin installation, and equipment maintenance. By coordinating with programs like Green Core Training, which already provides U.S. Department of Labor certifications and direct employment support to individuals facing barriers to employment, and connecting residents to apprenticeships and job placement through partners like the Full Employment Council and Great Jobs KC, the City can build intentional pipelines into these roles without duplicating existing efforts. The City can also pilot "daily work, daily pay" roles in community composting and environmental restoration as low-barrier entry points into the green jobs sector, strengthening Kansas City's distributed composting network while expanding economic opportunity for residents who need it most.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Building	All Generators	Need for workforce development	F-1.2, F-2.1	\$30K – \$300K Annual

Support and expand local sourcing through institutional procurement partnerships:

Future Focus

Encourage and support partnerships between the City, school districts, and other public or private institutions to source locally grown food, by leveraging organizations like KC Food Hub. The City should facilitate connections between KC Food Hub and municipal departments, schools, and businesses, and provide policy or procurement support that prioritizes locally sourced foods in public meals and catering contracts.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Building	ICI	Uneven Access	F-2.2, F-1.4	\$30K – \$300K Mixed

Establish local champions:

Develop a neighborhood champion program to cultivate trusted community leaders who can promote food waste reduction, local food, and diversion opportunities, while also communicating the impacts of contamination within their neighborhoods and across the City. These champions can serve as culturally competent messengers who help residents understand how to participate in food recovery, composting, and local food initiatives; address concerns; and build community ownership of organics programs. Rather than building this framework from scratch, the City should draw on community engagement models already operational in Kansas City. Kanbe's Markets' Store Ambassador program which is designed to drive fresh food adoption in corner stores serving low-income neighborhoods demonstrates the trusted-messenger approach at scale and offers a ready-made pilot model for the broader neighborhood champions framework.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Building	All Generators	Need for local food champions	F-1.2, F-1.4, F-2.1, W-1.5	\$30K – \$300K Annual

Support long-term access and stability of fresh food in underserved neighborhoods:

Use findings from the fresh food access needs assessment and early implementation of fresh food in grocery store initiative to develop a long-term, community-centered fresh food access strategy that supports a resilient ecosystem of retail and non-retail options in neighborhoods that have historically lacked grocery stores. This may include micro-grocers, cooperatives, culturally relevant markets, mobile or pop-up produce vendors, community-owned retail models, and strengthened links to local growers and food hubs. The strategy should incorporate shared infrastructure, incentive programs, and procurement commitments that help stabilize operations over time.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Building	All Generators	Access to fresh food, lack of traditional grocery stores	F-2.3	\$300K – \$3M Mixed

Cultivate food wisdom in K-12 education:

Develop a K–12 education initiative that builds understanding of the cultural, environmental, and community value of food. Drawing on insights from the piloted food recovery program, the City should partner with schools to teach students how food moves through the system, the resources required to produce it, and why cultural appropriateness matters in food access. Classroom activities, curriculum modules, and engagement with local food recovery partners can help students appreciate how cultural, spiritual, and dietary preferences shape what foods are welcomed, how unfamiliar foods often go unused, and why thoughtful distribution reduces waste.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Growing	Residential	Education and Awareness	F-1.4	\$30K – \$300K Annual

Champion the value of circular organics with local and state-level decision makers:



Foundational

Position Kansas City's circular organics sector as a growing industry cluster by proactively communicating its economic, environmental, and community benefits to local and state leaders. A circular organics economy reduces food waste to landfill, saves residents and businesses money, creates local jobs, and helps feed people through expanded food recovery. It also improves soil quality, lowers greenhouse gas emissions, supports urban farming, and contributes to neighborhood revitalization and community cohesion. By elevating this narrative and demonstrating the sector's broad value, the City can build stronger policy support, attract investment, and accelerate the development of a robust circular organics system.

System Stage	Target Sector	Addressed Gap	Resiliency Impact	Cost Range & Type
Growing	All Generators	Need for local food champions	W-1.5, F-1.4	<\$30K Annual

Case Studies

DETROIT, MICHIGAN COMMUNITY-OWNED GROCERY AND LOCAL FOOD ACCESS

Identified Challenge: For decades, Detroit has faced widespread food access challenges following population loss, disinvestment, and the departure of major grocery chains. By the early 2000s, large portions of the city were characterized as food deserts, particularly in predominantly Black neighborhoods where residents lacked access to full-service grocery stores within a reasonable distance.

Solution Implementation: While Detroit experienced a mass exodus of major retail grocers in the early 2000s, independent, community-rooted grocery stores stepped in with support from targeted public investment, enabling policy, and grassroots leadership. As documented by Dorsey (2016), Detroit retained approximately 77 full-service grocery stores, 65 of which were independently owned, many of them family-run businesses that had operated for decades. These stores supplied neighborhoods with fresh, culturally relevant food by sourcing locally, maintaining frequent inventory turnover, and responding directly to community preferences, often succeeding where large-format chains struggled. City initiatives such as the Detroit Green Grocer Project, administered by the Detroit Economic Growth Corporation, reinforced these efforts by providing \$5,000–\$50,000 in infrastructure improvement grants, with a total program investment of \$5.3 million, helping stabilize food access by strengthening the local food infrastructure that already existed rather than relying solely on new large-scale retail development (Dorsey, 2016).

Detroit's food landscape continues to evolve, but unevenly. Ogden (2025) reports that nearly 30% of Detroit residents still lack convenient access to a full-service grocery store, even as some national and regional grocers including Meijer, Whole Foods, Aldi, and Fresh Thyme have reentered or expanded in select neighborhoods since 2013. While these investments have improved access in parts of the city, affordability and geographic coverage remain persistent challenges, particularly in lower-income neighborhoods.

In response, Detroit residents and community organizations have expanded non-retail food access strategies at significant scale. Detroit now supports more than 1,500 urban gardens and farms, making it one of the largest urban agriculture networks in the United States (Rajaram, 2024). These sites range from small neighborhood gardens to larger operations such as D-Town Farm and The Greening of Detroit and produce fresh fruits and vegetables that are distributed directly to residents, sold through farm stands, or integrated into local food programs. Urban agriculture has become a critical complement to grocery retail by converting vacant land into productive space, strengthening neighborhood food sovereignty, and reducing dependence on distant supply chains (Rajaram, 2024).

A flagship example of community-led food access is the Detroit People's Food Co-op, a cooperatively owned grocery store in the North End neighborhood. Developed over more than a decade, the co-op was supported through city-owned land disposition, public and philanthropic financing, and technical assistance aligned with Detroit's broader food system and economic development goals. The store emphasizes locally sourced produce, affordable pricing, and democratic ownership, ensuring that residents have both access to fresh food and a stake in long-term success (Detroit People's Food Co-op, n.d.).

Taken together, Detroit's experience illustrates that food access has not been restored through a single solution, but through a layered ecosystem of independent grocers, public investment, urban agriculture, food banks, and cooperative ownership.

Key Learnings for Kansas City: Detroit's experience demonstrates that addressing food deserts requires intentional public leadership, community ownership, and long-term support structures. By leveraging city land, aligning food access goals with economic development, and supporting alternative retail models such as cooperatives, Detroit created a resilient food access

solution rooted in community control. For Kansas City, this case highlights the value of pairing food access investments with local sourcing, cooperative or community-owned models, and sustained, technical and financial support. These approaches can stabilize food access in underserved neighborhoods while reinforcing local food economies and building trust where traditional retail models have struggled.

RUSTBELT RIDERS

Identified Challenge: Like many cities, Cleveland faced a significant share of food waste entering the municipal waste stream without accessible diversion options for residents and small businesses. Large-scale organics processing and collection services were limited, while many residents lacked convenient means to divert food scraps from the landfill. Compounding the challenge, communities experiencing economic hardship often lacked equal access to environmental services and suffered from inequities related to food access, green space amenities, and community health. The City sought a solution that would both reduce waste and improve community wellbeing.

Solution Implementation: To expand access to food scrap diversion and strengthen the link between waste reduction, soil health, and community wellbeing, the City of Cleveland partnered with Rust Belt Riders, a mission-driven composting cooperative founded in 2014 with a focus on building a circular local economy. Through a pilot program launched in partnership with the City, Rust Belt Riders established a network of neighborhood-based food scrap drop-off sites designed to make composting accessible to residents without requiring curbside service (City of Cleveland, 2024).

Rust Belt Riders operates a hybrid service model that includes residential drop-off memberships, optional home pickup, and commercial collection services for restaurants, grocery stores, and institutions. A central feature of the program is its equity-centered design: SNAP-eligible households can participate at reduced or no cost, removing financial barriers that often limit participation in environmental programs. This approach has helped broaden engagement in food scrap diversion across neighborhoods that have historically been underserved.

Collected food scraps are transported to centralized composting facilities operated by Rust Belt Riders and processed into finished soil products sold under the Tilth Soil brand. These compost products are then reinvested into the local economy for use in home gardens, landscaping, urban farms, and community green space projects, reinforcing a visible connection between diverted food waste and neighborhood improvement (Rust Belt Riders, n.d.). Rust Belt Riders now diverts approximately 3,500 tons of organic material annually, sustaining its operations through a diversified revenue mix that includes service subscriptions, compost sales, and public-private partnerships that help subsidize equitable access.

Key Learnings for Kansas City: Rust Belt Riders demonstrates how community-oriented organics diversion models can expand participation, advance equity, and connect waste reduction to broader community outcomes. By offering multiple entry points such as drop-off sites, residential pickup, and commercial service and subsidizing access for SNAP-eligible households, the program reduces barriers to participation and reaches underserved neighborhoods. The visible reinvestment of finished compost into local gardens, farms, and green spaces strengthens public understanding of the circular economy and builds trust and buy-in at the neighborhood level. For Kansas City, this case illustrates the value of supporting mission-driven partners through grants, operational coordination, and equity-centered policies to scale diversion while simultaneously strengthening soil health, community resilience, and local economic activity.

CINCINNATI, OHIO ADDRESSING FOOD INSECURITY AS A ROOT CAUSE TO NEIGHBORHOOD GUN VIOLENCE

Identified Challenge: Cincinnati has faced persistent food insecurity in neighborhoods that also experience elevated rates of gun violence, community disinvestment, and limited access to economic opportunity. City leaders and community partners recognized that food insecurity was not an isolated issue, but a structural condition contributing to broader instability, particularly among youth, gun violence survivors, and families in high-risk neighborhoods. Reliance on short-term grants and charitable food assistance limited the City's ability to pursue coordinated, prevention-oriented solutions (City of Cincinnati, 2025).

Solution Implementation: In 2024, the City of Cincinnati established the Impact Award, a grant initiative funded through the City's general fund and administered by the City's Office of Human Services. In 2025, the City awarded \$850,000 through the program to Cincinnati Children's Hospital Medical Center and more than a dozen community partners to implement a coordinated response linking food access, urban agriculture, and violence prevention. The funded initiative supports a network of neighborhood-based food resource hubs and urban farms in communities including Avondale, East Price Hill, and the West End. Partner organizations such as La Soupe, Findlay Market, and Green Umbrella collaborate to grow produce, recovery and prepare meals, and coordinate local distribution, while prioritizing populations most impacted by violence and economic exclusion (Erwin, 2025).

Key Learnings for Kansas City: Cincinnati's Impact Award demonstrates how cities can use recurring general fund resources to treat food insecurity as a systemic, preventative issue rather than an emergency condition. By explicitly linking food access, community safety, and neighborhood revitalization, the City created a policy and funding framework that supports long-term capacity building rather than episodic service delivery. For Kansas City, this case illustrates how dedicated municipal funding can align with public health and equity goals to strengthen food recover, urban agriculture, and community food infrastructure while advancing broader resilience objectives.

Circular Economy Implementation Impacts

Surplus Food Diversion, Jobs, and Greenhouse Gas Emissions

While each pillar of the circular organics economy is described in its own section of this report, their impact is realized most powerfully when implemented together. Prevention and recovery efforts reduce surplus food at the source and prioritize feeding people first, followed by feeding animals, while expanded organics processing captures remaining materials for soil regeneration. When aligned, these pillars shift the system away from the traditional linear “make–take–waste” model and toward a circular economy that maximizes environmental, economic, and community benefits.

The Implementation Impacts section highlights the combined effect of advancing these pillars across three development phases: Activation, Building, and Growing. At each stage, measurable outcomes increase across three key performance indicators:

- Tons of food waste diverted from landfill
- Greenhouse gas (GHG) emissions avoided (MTCO₂E)
- Direct jobs created

Figure 12 and Table 23 summarize these outcomes and demonstrate the compounding nature of investment and system development over time. As the system progresses from Activation to Growing, outcomes increase substantially, demonstrating that early foundational investments create the infrastructure and partnerships necessary to unlock much larger downstream benefits.

The impacts in the Activation phase are intentionally modest, reflecting the foundational nature of the recommendations. This stage focuses on establishing the policy framework, institutional alignment, funding mechanisms, and system data necessary to support building and long-term growth. Actions such as reviewing zoning laws to enable composting and urban agriculture, forming a cross-departmental task force, building a stable funding mechanism, and setting clear food recovery and diversion goals create the governance backbone for implementation.

At the same time, outreach and education initiatives, including residential food waste reduction campaigns and development of a Best Practices Playbook for ICI generators, begin building community awareness and stakeholder engagement. Programmatic, processing infrastructure, and market assessments conducted during this phase identify collection and capacity gaps, contamination challenges, and end-market barriers. Together, these efforts generate the technical and institutional readiness required to successfully scale programs in the Building phase.

During the Building phase, impacts grow substantially as policies and pilot programs transition into operational systems. Regulatory measures such as large generator recovery and diversion requirements and mandatory diversion from City-hosted events create predictable feedstock flows and normalize participation among commercial generators. Programmatic expansion includes piloting universal residential organics collection in select neighborhoods, launching zero-waste

commercial zones, implementing municipal building organics diversion programs, and facilitating a food recovery pilot informed by the earlier distribution equity assessment.

These efforts move beyond planning into measurable implementation, increasing both tons diverted and greenhouse gas emissions avoided. Infrastructure investment expands processing capacity and introduces food-waste-specific grant opportunities to reduce financial barriers for partners. Market development actions, including compost use incentives and compost requirements in City-funded projects, begin strengthening end-market demand, ensuring that recovered materials are productively utilized and reintegrated into the local economy.

The Building phase also advances workforce development, institutional procurement partnerships, and local leadership networks. As programs expand and become embedded in policy and procurement systems, diversion rates increase substantially and job creation accelerates across logistics, processing operations, outreach, and program management functions.

In the Growing phase, impacts expand dramatically as the system transitions from targeted pilots to citywide implementation. The rollout of universal residential organics collection across Kansas City represents a step change in diversion potential. Simultaneously, the City-facilitated hub-and-spoke food recovery model scales redistribution capacity across neighborhoods, increasing equity and ensuring recovered food reaches underserved communities efficiently.

Enhanced policy incentives, such as donation and diversion credit programs, further institutionalize circular practices and reduce long-term structural barriers. City funding tied to standardized data tracking strengthens measurement, transparency, and accountability, supporting continuous improvement.

Infrastructure and market development deepen through the creation of a market development incubator, contractor compost use education programs, soil health initiatives, and expanded compost utilization beyond traditional finished compost markets. Educational initiatives embed circular organics principles within K–12 systems, cultivating long-term cultural change and reinforcing community participation.

Impacts in the Growing phase increase not only because of expanded citywide programs, but also because initiatives launched during the Building phase have matured. Continued education, stakeholder engagement, infrastructure optimization, and market development allow earlier investments to reach full operational capacity. As a result, diversion, greenhouse gas reductions, and job creation accelerate in a compounding manner, reflecting a circular organics system that has moved from foundation to scale to long-term institutionalization.

Taken together, the phased recommendations demonstrate a clear and achievable pathway for Kansas City to transition from incremental improvements to a fully realized circular organics system. By first establishing policy alignment, funding stability, and data transparency, then scaling programs and infrastructure, and institutionalizing citywide diversion and market development, the impact to Kansas City goes beyond just waste diversion, creating climate, economic, and community resiliency benefits.

Figure 12: Circular Organics Economy Implementation Impacts

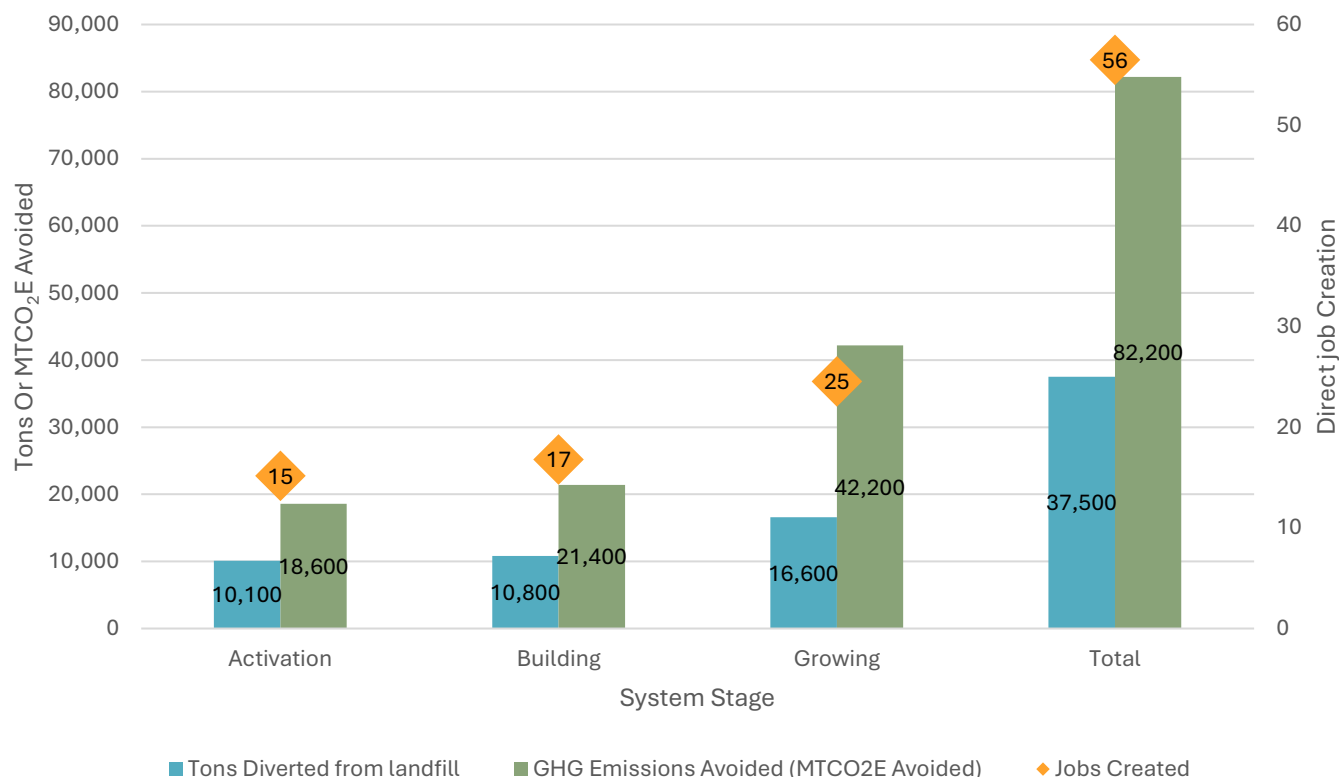


Table 23: Circular Organics Economy Implementation Impacts

System Stage	Prevention & Recovery			Organics Processing		
	Additional Tons Diverted from Disposal	GHG Emissions Avoided (MTCO2E)	Direct Jobs Created	Additional Tons Diverted from Disposal	GHG Emissions Avoided (MTCO2E)	Direct Jobs Created
Activation	3,700	15,400	6	6,400	3,200	9
Building	4,400	18,300	8	6,400	3,100	9
Growing	8,100	33,700	13	8,500	8,500	12
Total	16,200	67,400	27	21,300	14,800	30

Social Return on Investment (SROI)

The total value of transitioning to a circular organics economy can be estimated through a Social Return on Investment (SROI) analysis, which measures the value generated per dollar invested across the Activation, Building, and Growing scenarios. The generated value includes avoided disposal costs, reduction in GHG emissions, direct job creation, retail value of rescued food, and the value of compost generated. The combined dollar value of these components is compared to the total estimated cost of implementation to produce an SROI ratio, expressed as the value generated per dollar invested. However, the full value of a circular organics economy extends beyond what can be responsibly quantified in this framework. Other factors not fully captured here include the food security benefits of feeding hungry residents and associated improvements in public safety and community wellbeing, indirect and induced job creation, reduced synthetic fertilizer demand, improved agricultural soil water

retention, and the avoided upstream costs of food production, including the water, energy, and land embedded in food that would otherwise go to waste, meaning the true social return is likely considerably higher than these estimates suggest.

The recommendations in this plan encompass a mix of cost types including annual operating expenses, one-time operating expenditures, and capital investments which complicates a straightforward comparison of total program cost to total social value. Annual operating costs, such as education and outreach campaigns, staff coordination, and grant programs, recur each year and generate ongoing value. One-time operating costs, such as feasibility studies and policy development, are incurred once during program development. Capital investments, such as composting infrastructure and residential collection equipment, require significant upfront expenditure but generate value over a useful life of ten to twenty or more years. Treating these cost types as equivalent in a single-year comparison would misrepresent the true cost efficiency of the program.

To address this, the SROI is calculated using the low-cost estimate for each scenario as the primary basis for comparison. The low-cost estimate reflects predominantly annual operating expenditures and one-time program development costs, and therefore provides the most meaningful and conservative basis for evaluating social value generated relative to investment. The high-cost estimate, which incorporates significant capital infrastructure investment, is presented as the upper bound of the cost range but is not used as the primary SROI benchmark, as doing so would understate the program's long-term value by treating multi-decade infrastructure investments as a single-year cost.

This approach intentionally errs on the side of caution. Because these cost estimates are high-level and subject to significant uncertainty, further precision in cost modeling is not warranted at this stage of planning and would convey a false sense of accuracy. Individual cost estimates should be refined through formal feasibility studies as recommendations advance toward implementation.

Finally, two standard SROI adjustments, additionality and attribution, were evaluated and determined not to require modification in this context. All value streams are counted as additional because the analysis accounts only for incremental diversion above current capture rates, meaning that much of the value generated would not occur without the interventions described in this report. Full attribution to the modeled interventions is appropriate because program costs represent the complete and direct investment required to generate the estimated outcomes.

Table 24 presents the low and high values for each of the six valuation assumptions including tons diverted, greenhouse gas emissions avoided, jobs created, compost produced, and food rescued. The disposal tip fee reflects the range of landfill tipping fees reported for the Kansas City metropolitan area. The social cost of carbon is drawn from the most recent EPA estimate and applied as a single value given the agency's current guidance. Average annual wages and job duration are presented as a range to capture uncertainty in the types of positions created and the sustained duration of employment. The value of finished compost reflects the bulk market price range for compost sold to agricultural and landscaping end markets. The retail value of rescued food reflects the estimated retail value per ton of food redirected from disposal to human consumption. Together these assumptions form the basis for estimating the full social value generated across the Activation, Building, and Growing scenarios.

Table 24: Assumption Values for SROI Evaluation

Assumptions	Low Value	High Value	Unit	Source
Disposal Tip Fee	\$34	\$57	\$/ton	Foundation for Regeneration, 2024
Social Cost of Carbon (SCC)	\$190	\$190	\$/MTCO2E	U.S. EPA, 2023
Average Annual Wage per Job	\$40,000	\$50,000	\$Job/Years	U.S. Bureau of Labor Statistics, 2024
Job Duration (years)	5	10	Years	
Value of Finished Compost	\$20	\$40	\$/ton	Web Based Research
Retail Value of Food	\$5,000	\$5,000	\$/ton	ReFED, 2016

The estimated annual value generated across each stage by SROI metric is shown Table 25. The retail value of rescued food represents the largest share of total value across all three scenarios, reflecting the high per-ton retail value of food redirected from disposal to human consumption. Job value is the second largest contributor, driven by the combination of wages and sustained employment duration. The social cost of carbon represents the third largest value stream, capturing the economic benefit of avoided greenhouse gas emissions. Avoided disposal costs and compost value, while meaningful, represent smaller shares of the total given the relatively modest tipping fee range and bulk compost market prices in the Kansas City metropolitan area. Across all three scenarios combined, the circular organics economy is estimated to generate between \$109.6M and \$127.9M in total annual social value.

Table 25: Estimated Annual Value by SROI Metric from Implementing Recommendations of the Circular Organics Economy (\$M)

System Stage	Avoided Disposal (Low)	Avoided Disposal (High)	SCC Value (One Value)	Job Value (Low)	Job Value (High)	Value of Rescued Food (One Value)	Value of Compost (Low)	Value of Compost (High)	Total Value (Low)	Total Value (High)
Activation	\$0.3	\$0.6	\$3.5	\$3.0	\$7.6	\$18.5	\$0.1	\$0.3	\$25.5	\$30.4
Building	\$0.4	\$0.6	\$4.1	\$3.4	\$8.4	\$22.0	\$0.1	\$0.3	\$29.9	\$35.3
Growing	\$0.6	\$0.9	\$8.0	\$4.9	\$12.3	\$40.5	\$0.2	\$0.3	\$54.2	\$62.1
Total	\$1.3	\$2.1	\$15.6	\$11.3	\$28.2	\$81.0	\$0.4	\$0.9	\$109.6	\$127.9

Table 26 compares the estimated annual social value generated across each scenario to the estimated annual program cost, and the calculated SROI ratio which is expressed as the dollar value of social benefit generated for every dollar invested. The results demonstrate a compelling social return across all three scenarios. The Activation scenario yields the highest SROI, ranging from \$33 to \$40 for every dollar invested, reflecting the relatively low annual cost of early-stage program activity combined with the emphasis on prevented and rescued food which generate some of the highest value. The Building scenario produces an SROI of \$6 to \$7, reflecting higher annual costs as the program scales and additional infrastructure and coordination come online. The Growing scenario yields an SROI of \$12 to \$14, as the full value of a mature circular organics system is realized against a stabilizing cost base. Across all three scenarios combined, the circular organics economy generates between \$11 and \$13 in social value for every dollar invested, demonstrating that the recommendations in this plan represent a strong and defensible public investment.

Table 26: Total Estimated Value, Low and High, Compared to the Estimated Annual Cost and the SROI, Low and High

Stage	Annual Value (\$M, Low)	Annual Value (\$M, High)	Annual Cost (\$M)	SROI Low	SROI High
Activation	\$25.5	\$30.4	\$0.8	\$33	\$40
Building	\$29.9	\$35.3	\$4.7	\$6	\$7
Growing	\$54.2	\$62.1	\$4.4	\$12	\$14
Total	\$109.6	\$127.9	\$9.9	\$11	\$13

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Appendix

Organics Generation Methodology

TOTAL ORGANICS GENERATION METHODOLOGY

DISPOSED ORGANICS

The total estimated organics disposed for Kansas City, Missouri is based on two main data sources:

- Missouri Department of Natural Resources Statewide Waste Composition Study 2018
- Springfield, Missouri Landfill Waste Characterization Study 2025⁹.

Total estimated MSW disposal in Kansas City, Missouri was based on a statewide per capita estimate of MSW disposal taken from the Missouri statewide waste characterization study in 2018 and the U.S. Census estimated 2025 population of Kansas City, Missouri. The Missouri statewide waste characterization study provides an estimate of total statewide MSW disposal for the residential and commercial sectors. The breakdown of surplus food by unpackaged inedible, unpackaged edible, and packaged food was based on the Springfield, Missouri study. Table 27 shows the estimated of total MSW disposal in Kansas City, Missouri.

Table 27: Total Estimated MSW Disposal in Kansas City, Missouri

Total MSW disposal (Tons)	
Population Kansas City 2025	518,016
Estimated Per Capita MSW Disposal (lbs./person/year) ¹⁰	1,267
Total MSW disposal (Tons)	328,126
Residential (Tons)	186,964
Commercial (Tons)	141,162

RECOVERED AND DIVERTED ORGANICS

Estimated organics recovery by rescue organizations and diversion to compost is based on numerous data points collected from stakeholders during this report including Missouri Organic Recycling, Pete's Garden, Kanbe's Markets, and Urban Produce Push. In some cases, the data provided represented the Kansas City metro region and not Kansas City, Missouri specifically. In those instances, a proportional estimate representing Kansas City, Missouri was estimated based on population.

⁹ Detailed study data can be found here: <https://www.springfieldmo.gov/6056/Landfill-Waste-Characterization-Study#docaccess-cb26fde421e765e9dd05b7ef31067692df1158b60f113f22b01e7d52820cb18c>

¹⁰ Missouri 2016-2017 estimated MSW per capita disposal rate

DETAILED ICI SECTOR GENERATION METHODOLOGY

The food waste generation estimates are based on data received directly from organics collectors and processors in Kansas City along with review of previous reports such as the Material Flow Analysis of Discarded Materials in the Kansas City Metropolitan Area.

The ICI sector generation estimate by business type is based on business and employment data from the U.S. Economic Census Bureau and Data Axle verified business lists for Kansas City organized by NAICS code. The relevant NAICS codes for large quantity of food waste generating businesses are presented in Table 27.

Table 28: NAICS Codes of Large Quantify Food Waste Generating Businesses and Institutions

NAICS	NAICS Description
311	Food Manufacturing
3121	Beverage Manufacturing
445	Food and Beverage Retailers
6111	Elementary and Secondary Schools
6112	Junior Colleges
6113	Colleges, Universities, and Professional Schools
6114	Business Schools and Computer Management Training
622	Hospitals
623	Nursing and Residential Care Facilities
6214	Outpatient Care Centers
6242	Community Food and Housing, Emergency and Other Relief Services
6244	Child Care Services
7112	Spectator Sports
7121	Museums, Historical Sites, and Similar Institutions
7131	Amusement Parks and Arcades
7139	Other Amusement and Recreation Industries (e.g. golf courses, country clubs, bowling facilities, etc.)
71131	Promoters of Performing Arts, Sports, and Similar Events with Facilities
72	Accommodation and Food Services
92	Public Administration (courts, police, fire stations, etc.)

The volume of food waste generated per business was determined using per employee food waste generation data from the 2014 CalRecycle Generator-Based Characterization of Commercial Sector Disposal and Division in California. This study provided a snapshot of total waste generated by business type (Table 28).

Table 29: Estimated Total Waste Generation Rates and Proportion of Food Waste by Generator Type

Sector Description	Waste Generation Rate (Tons / Employee / Year)	Proportion of Food Waste
Arts, Entertainment, & Recreation	3.08	30.5%
Durable Wholesale & Trucking	2.99	2%
Education	0.5	30%
Hotels & Lodging	2.14	28%
Manufacturing - Electronic Equipment	0.75	6%
Manufacturing - Food & Nondurable Wholesale	1.85	46%
Manufacturing - All Other	1.5	2%
Medical & Health	0.74	20%
Public Administration	0.39	15%
Restaurants	2.92	47%
Retail Trade - Food & Beverage Stores	6.64	30%
Retail Trade - All Other	2.41	16%
Services - Management, Administrative, Support, & Social	1.44	13%
Services - Professional, Technical, & Financial	2.31	7%
Services - Repair & Personal	1.5	20%
Not Elsewhere Classified	1.2	24%
Multifamily*	0.87	22%

Methodology for Estimated Diversion, Cost, Greenhouse Gas Emissions Reduction, and Jobs Created

This report contains a number of estimates that were generated using the methodology described below.

Diversion Estimates

Table 29 presents the estimated capture rates of food from the disposal stream into three categories: prevention of food waste, recovery of surplus food to feed people, and diversion of food scraps and surplus food for composting. These capture rate estimates were applied to disposed food as relevant to each capture method. For example, recovery of surplus food estimates were only applied to commercially generated edible food.

Table 30: Estimated Capture Rate of Food from the Disposal Stream Across the System Stages

System Stage	Prevention	Recovery	Diversion
Activation	5%	10%	15%
Building	10%	25%	30%
Growing	20%	50%	50%
	Applied to all disposed food waste	Applied to edible food waste disposed by commercial sector	Applied to food remaining in disposal after prevention and rescue

Cost Estimates

Cost estimates are based on a combined industry knowledge of RRS and FFR. Cost estimates for this report are intended as high-level directional ranges to provide context around each recommendation. A more detailed cost analysis should be performed for greater certainty.

Greenhouse Gas Emissions Reduction

The avoided greenhouse gas emission estimates were produced using the U.S. EPA WARM model version 16.

Jobs Created

Job creation estimates are based on employment factors applied to food recovery to feed people and organics diversion to composting.

- **Food Recovery:** Approximately 4 jobs are created per 1,000 tons of surplus food rescued and redirected for human consumption (ReFED, 2025b).
- **Organics Diversion to Composting:** Approximately 0.4 jobs are created per 1,000 tons of food diverted to composting (Institute for Local Self-Reliance, 2013).

No job displacement from disposal or landfill operations was assumed, as existing trash collection and landfill positions would be unlikely to be materially affected by organics diversion at the scale modeled here. It is also worth noting that organics collection programs would likely generate additional collection jobs beyond those quantified above however these positions are not included in the estimates presented here given the difficulty of projecting collection employment at this stage of planning.

Programming Analysis and the Kansas City Climate Protection and Resiliency Plan

Kansas City Metro Area has begun building programming for food access and diversion in compliance with the Kansas City Climate Protection and Resiliency Plan. Below is an accounting of each of Plan's stated initiatives and the programs now in place in the region to address the initiative.

STRATEGY: INCREASE PRODUCTION OF LOCAL FOOD

F-1.1: Reduce zoning and policy barriers to local food production.

- **Action Description:** Review codes, permitting, and policy requirements to encourage and remove barriers to urban agriculture, regenerative agriculture, community gardens, food forests, and soil regeneration.
- **Actions Implemented:**
 - » Publication of "From the Ground Up: Planning and Zoning for Urban Agriculture in Greater Kansas City" in July 2021. Ordinance 88-312-02 Urban Agriculture
 - » Home Garden (88-312-02-A)
 - » Community Garden (88-312-02-B)
 - » Community Supported Agriculture (88-312-02-C)

F-1.2: Incentivize local food production and soil regeneration.

- **Action Description:** Continue and expand incentives to encourage urban agriculture, community gardens, food forests, and soil regeneration.

- **Actions Implemented:**

- » PLANT (Promoting Local Agriculture and Neighborhood Transformation) Micro Grant Program- Grants \$5k–\$10k for urban ag projects
- » Urban Agriculture Cost-Share Grant Program - The Missouri Department of Agriculture cost-share grants for urban ag projects
- » The Natural Resources Conservation Service (NRCS) urban farmer program for free technical assistance installing regenerative practices such as composting facilities, cover crops, water-saving irrigation, and pollinator habitats
- » People's Garden initiative - sustainable, community-based, education-focused gardens

F-1.3: Transform underutilized urban spaces into food production areas.

- **Action Description:** Transform lawns, vacant lots, rooftops, flood prone areas, and other underutilized urban spaces into gardens, natural landscapes, tree areas, and community spaces to support food production and soil regeneration.
- **Actions Implemented:**
 - » Land Bank Pathways: residents and nonprofits can acquire or lease vacant property for uses like gardens and urban agriculture
 - » The Giving Grove: community-managed micro-orchards
 - » Kansas City Community Gardens (KCCG) Partnership with KC Parks & Recreation community garden sites
 - » Cultivate KC – Urban farms

F-1.4: Provide education about ways to garden, grow food, and advance regenerative soil practices.

- **Action Description:** Coordinate across organizations to provide comprehensive education to community members about gardening, food production, soil microbes, composting, and pesticide/herbicide/fertilizer reduction.
- **Actions Implemented:**
 - » Kansas City Community Gardens (KCCG) Educational Workshops and KCCG Schoolyard Green Initiative
 - » Kansas City Public Library Seed Libraries & Low-Cost Gardening Resources – free vegetable, fruit, flower, herb, and tree seeds
 - » KCCG Beanstalk Children's Garden STEM-based environmental and nutrition education
 - » Master Gardeners of Greater Kansas City Garden 'N Grow Summer
 - » Master Gardeners Eating from the Garden curriculum for 4th–5th graders
 - » Urban Green Dreams K–6 hands-on learning in growing food

F-1.5: Establish a coordinator position for food systems planning and community collaboration at the municipal level.

- **Actions Description:** Create a City staff position, ambassador, and/or advisory board/committee to coordinate food systems planning and help collaborate across City departments and organizations on food and soil matters.
- **Actions Implemented:**
 - » 2024 Food Systems Coordinator position (October 30, 2024, to October 30, 2028) with goals:
 - Improving access to healthy, sustainable food
 - Reducing food waste and redirecting it to nature-based solutions
 - Supporting elements of the Kansas City Climate Protection and Resiliency Plan (CPRP)

F-2.1: Expand and support programs that increase local food access and promote plant-based food consumption.

- **Action Description:** Continue to support and provide education about and seek opportunities to expand programs that improve local food access for people with lower or moderate incomes (e.g., food pantries, double-up food bucks, reducing barriers to being able to accept EBT).
- **Actions Implemented:**
 - » KC Health Initiative, The Prospect KC, NourishKC, and Kansas City Community Gardens emphasize healthy, vegetable-forward meals and nutrition education.
 - » Kanbe's Markets' healthy corner stores
 - » Pete's Garden
 - » Harvesters
 - » YWCA Food Programs and Urban Farm
 - » KC Food Hub and Farm School
 - » EatingWell Initiative
 - » Missouri Dept. of Agriculture Food Insecure Cost-Share Grant - up to \$50,000 per project to enhance food access and community economic impact

F-2.2: Expand farm-to-table/school/City programs and local food product purchasing.

- **Action Description:** Continue to support and expand efforts to create markets for local food products, including City government and other private and public sector purchasing (e.g., schools, businesses).
- **Actions Implemented:**
 - » PLANT Microgrant Program
 - » Farmer's Market Passport + Hub
 - » Food from the Farm (School)
 - » Ivanhoe Food & Education Community
 - » Kansas City Food Hub
 - » USDA Urban Ag Support

F-2.3: Explore and provide incentives for more grocery stores and store purchases of local foods.

- **Action Description:** Incentivize grocery stores and food retailers to locate in areas without adequate, healthy, and affordable food access. Consider linking incentives to supply of local food products.
- **Actions Implemented:**
 - » Double Up Food Bucks – Heartland
 - » Sun Fresh SNAP Matching
 - » Ivanhoe Local Food Access Project
 - » Food Insecure Cost-Share Grants
 - » Kanbe's Market

F-2.4: Support and expand food waste reduction, food recovery, and emergency food transport and storage.

- **Action Description:** Support and build on existing food recovery efforts and explore new incentives and programs such as incentives to increase food sharing from private gardening and donations of lower-grade food from farmers.
- **Actions Implemented:**
 - » KCMO Food Waste Recycling community drop-offs; smart compost kiosks; pilot bins

- » Food Recovery & Redistribution Programs: Kanbe's Markets, KC Food Hub, Urban Produce Push, KC Can Compost
- » Health-Focused Programs - "Food as Medicine" vouchers
- » Strategic Planning MARC Regional Action Plan and community coordination through KC Food Wise

F-2.5: Establish green restaurant recognition and incentives.

- **Action Description:** Publicly recognize restaurants and food retailers that offer plant-based meals, locally sourced products, etc. Explore the creation of a "Grown in KCMO" logo for restaurants, possible self-certification process, and a publicly accessible registry of businesses and their local goods and products.
- **Actions Implemented:**
 - » Promotion of the Green Restaurant Association (GRA) certification program

F-2.6: Support the development of food hubs.

- **Action Description:** Support locally owned, multicultural/ethnic business to build out food hubs in communities with lower incomes (e.g., Independence Ave, Northeast KC, East KC) and form strategic partnerships with local grocery stores, farmers, and non-profit organizations (e.g., After the Harvest).
- **Actions Implemented:**
 - » Kansas City Food Hub: a wholesaler and online retailer of locally grown produce
 - » Kanbe's Markets: fresh, affordable produce to underserved Kansas City communities
 - » Historic Northeast Public Market Development: Independence and Hardesty avenues public market, coworking, and community gathering spaces. This initiative aims to revitalize the Historic Northeast area and provide a platform for local entrepreneurs.

W-1.1: Expand City government recycling and green purchasing

- **Action Description:** Leverage the City recycling ambassadors, green procurement grant, and other initiatives to expand City government recycling and green purchasing.
- **Actions Implemented:**
 - » Transitioning all residents to 65-gallon recycling carts
 - » Green and Sustainable Procurement Ordinance
 - » Mill Food Recyclers Program 50 high-tech food recycling bins across municipal buildings, including community centers and fire stations.

W-1.5: Promote waste reduction and diversion programs and advocacy

- **Action Description:** Build on regional efforts (led by MARC Solid Waste District), and the efforts of local organizations (e.g., KC Can, Bridging the Gap) to promote Kansas City-specific waste reduction and diversion programs and opportunities (e.g., how to compost, recycling center information). Create and socialize a hub of information to help people to find the waste-related resources they may need, including resources for the business community, and help them navigate solid waste contracts.
- **Actions Implemented:**
 - » Centralized webpage for residents about recycling, leaf and brush collection, and food waste drop-offs: <https://www.kcmo.gov/city-hall/departments/trash>

W-1.6: Provide more neighborhood and community solid waste disposal, composting, and recycling sites, programs, and events.

- **Action Description:** Coordinate across service providers and organizations to expand existing waste-related efforts (e.g., hard to recycle events, household hazardous waste events, neighborhood clean-up events) to provide more localized waste reduction and diversion opportunities for neighborhoods and residents.
- **Actions Implemented:**
 - » KC Green initiative compost drop-off sites, recycling centers, leaf and brush drop-offs, and neighborhood cleanup assistance programs.
 - » Free Compost Drop-Off Locations for food scraps and yard waste.
 - » Mill Food Recyclers Program 50 high-tech food recycling bins across municipal buildings, including community centers and fire stations.
 - » KC Can Compost curbside composting services, drop-off locations, and educational resources.
 - » Jerusalem Farm neighborhood food scrap collection and composting program.
 - » KC Green Neighborhood Recognition Program.

W-1.9: Establish requirements for waste diversion at all City-permitted events.

- **Action Description:** Establish a requirement for waste collection and diversion for all City-permitted events (e.g., marathons, parades). Events should provide separate collection for waste and recycling and have volunteers/staff positioned at each collection point to answer questions and control contamination.
- **Actions Implemented:**
 - » Kansas City Parks recycling requirement.

W-2.1: Expand and promote small- and large-scale composting throughout Kansas City.

- **Action Description:** Coordinate across composting and solid waste service providers, and community organizations, to introduce and expand composting services throughout Kansas City. Work to remove barriers to composting (e.g., compost pile size limitations) and create new localized opportunities to drop off and distribute organic material (e.g., compost kiosks, food waste drop-off).
- **Actions Implemented:**
 - » KC Can Compost: Educates and trains individuals facing barriers to employment for work in the green economy, including organic waste management. They offer commercial curbside and event collection and centralized drop-off programs for municipalities and residents
 - » Compost Collective KC: Provides curbside composting services and operates community compost hubs, such as the Compost Hub at Urbavore Urban Farm. They also accept drop-offs of food scraps, grass clippings, and leaves at no charge.
 - » Food Cycle KC: Offers education and consulting on the compost process.
 - » Drop-Off Opportunities: multiple compost drop-off locations, including at public buildings and fire stations, to make composting more accessible.
 - » KC Can Compost drop-off locations around the city, such as the KC Can Warehouse and other partner sites, where residents can drop off their compostable materials.
 - » Compost Collective KC offers a community bin program where residents can bring up to five gallons of food scraps in their own containers for a small fee, promoting localized composting efforts.
 - » KC Mill Partnership offers 50 public locations that feature high-tech cans that grind and dehydrate food scraps.
 - » KC Water WWTP Technology Expansion that will produce Class A biosolids for unlimited agricultural applications.