

INTRODUCTION

Comprehensive solid waste management services are provided in the context of a growing university community (University of Kansas and Haskell Indian Nations University), resulting in a highly transient population. These services have been a municipal function since 1946. In the *2011 City of Lawrence DirectionFinder Survey* completed by ETC Institute, ninety-three percent (93%) of the residents surveyed, who had an opinion, were satisfied with residential trash services.

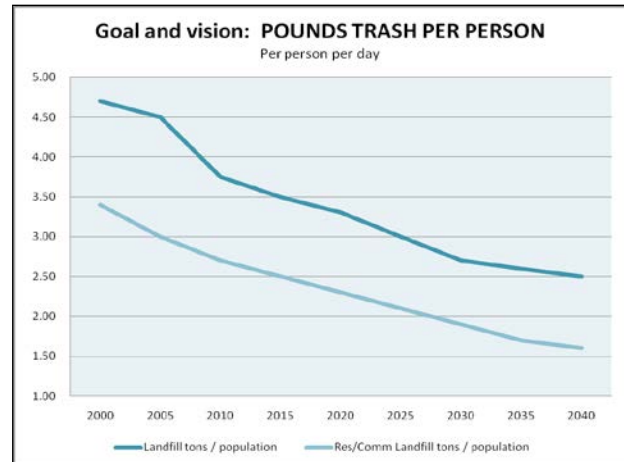
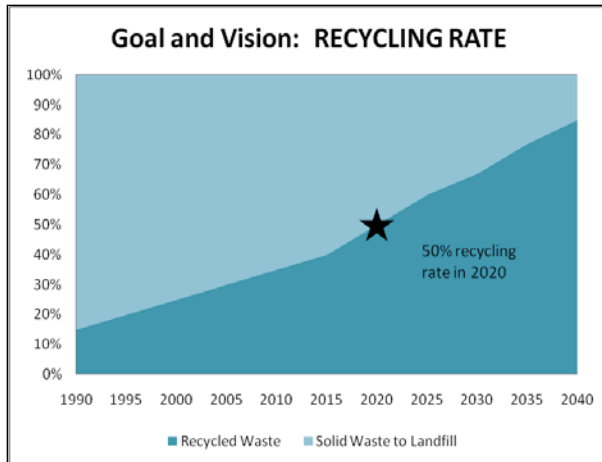
Even with a high satisfaction rate, there are multiple factors driving continuous improvement in solid waste management, including:

- Improving worker safety through increased automation.
- Increasing efficiencies in routing and collection through use of technologies and automation.
- Responding to an increasing demand for residential curbside recycling.
- Balancing community values of health and safety with fairness in the rate structure.
- Promoting long term stability for customers.
- Preserving local jobs.
- Responsibly managing local resources.

The Lawrence City Commission created the Solid Waste Task Force in February 2011 to develop recommendations regarding the long-term solid waste service options for the community.

GOALS AND FINDINGS

The Lawrence community values comprehensive solid waste services and is committed to source reduction, waste diversion, and recycling as components of the overall solid waste management strategy. The Solid Waste Task Force is focused on providing strategic direction to manage the waste stream to place increasing emphasis on waste diversion over time. Goals are graphically represented below, with a focus on the overall long-term trends. The task force recommends the goal of 50 percent recycling rate in 2020. The 2010 recycling rate was 38 percent.



To develop our recommendations, the Solid Waste Task Force read and listened to feedback from community members, reviewed materials and experiences from other cities and companies that provide waste recycling services, reviewed information compiled by City staff, reviewed recommendations of the Sustainability Advisory Board and the City Auditor, and discussed issues as a group. The task force held 20 meetings between April 2011 and January 2012.

The Solid Waste Task Force analyzed current solid waste management practices, and made the following findings:

- Solid waste industry best management practices indicate containerization and increasing automation will decrease worker injuries and increase operational efficiencies;
- Higher diversion and recycling rates are achieved in communities with curbside recycling and separate collection of organics;
- Variable rate pricing structures increase equity, reduce landfill disposal, and increase incentives for recycling;
- Variable rate structures are most effective when paired with community wide curbside recycling programs; and
- There has been long-term interest in a community-wide curbside recycling program, if fiscally feasible. The 2008 Recycling Survey, completed by ETC Institute, found 79 percent of those surveyed thought it was important to have citywide curbside recycling, with 64 percent willing to pay for that service if the cost were \$ 6 per month.

EXECUTIVE SUMMARY

To achieve the goals for waste management, source reduction, and diversion, the Solid Waste Task Force envisions a residential service that includes two roll-out carts for single family

customers as part of the standard monthly fee – one for trash and one for single stream recycling. The task force report articulates the services currently provided through solid waste user fees and the issues identified. Recommendations for overall service are bulleted below.

Residential solid waste services

- The City of Lawrence will continue to provide weekly collection of residential solid waste to ensure protection of public health, safety, and environment.
- Increase automation for residential trash collection by:
 - Providing roll-out trash carts for residential services, which can be utilized immediately with the current fleet of semi-automated trucks. This maximizes the return-on-investment on currently existing semi-automated trucks.
 - Increasing automation of trucks for residential service collection as current fleet units are replaced.
- Implement a variable rate pricing structure for residential solid waste services that encourages waste reduction and increases equity in the rate structure.
 - Initial implementation of cart system for trash will include a standard trash rate that includes a roll-out cart. Other cart sizes should be available for modestly different rates.
 - Additional roll-out carts would be available for a fixed fee per month to cover the cost of the cart and the additional landfill tonnage.
 - Bulk item service (and up to five tires) would continue to be provided for no charge to minimize dumping and visual blight.
 - Collection of excessive trash piles will be charged to the resident or property owner on a per event basis for piles which require one loader to expend more than five minutes to load the trash from a single stop. Customers with recurring charges will be assessed and may be asked to obtain a larger or second cart.
 - Evaluate need to implement additional variable rate pricing measures after a couple years of program implementation, if problems are identified with a large number of households who regularly exceed trash / recycling cart space.
- The City of Lawrence will continue to provide weekly collection of yard trimmings to keep materials out of landfill waste stream.
- Implement city-wide single-stream curbside recycling if fiscally prudent and sustainable. City-wide program would be included in the standard rate for residential service (participation voluntary).

- Evaluate costs and opportunities by soliciting a Request for Proposals (RFP) for single-stream curbside recycling.
- The RFP should have two (2) alternatives, to separately evaluate collection and processing components. In other words, companies will be asked to submit proposals for
 - turn-key operations (company provided collection and material processing), and
 - material processing only (which would allow municipal collection of materials).
- Promote adequate number of drop-off points for glass, if material is not accepted in single-stream curbside collection system.
- Increase diversion of organic materials from the waste stream by:
 - Focusing education, and outreach on backyard composting of both yard trimmings and food waste.
 - Examining the collection of vegetative food waste for residential customers as part of existing residential collection of yard trimmings.
- Develop long-range plan for sustainable household hazardous waste program, balancing needs for fiscal responsibility and customer convenience. Issues that must be addressed include adequate physical facilities, access, marketing, staffing, and ability to staff for open hours that may not require appointments.
- Develop comprehensive outreach and education program to facilitate the implementation of solid waste program changes. Assist residents in ability to easily find information about recycling specific waste streams by creating a searchable web page.

Commercial / multi-family solid waste services

The Solid Waste Task Force did not have adequate time to analyze significant changes for commercial or multi-family solid waste services. However, the task force expects that staff and policy-makers will consider enhancements to these services toward the goals of source reduction, increased solid waste diversion, and rate equity as new opportunities for more automated collections, recycling, *organic collections*, and *other services arise through the implementation of improvements to residential services*.

Public Input

The Solid Waste Task Force proactively sought public input in the options for solid waste services. A [webpage](#) was created in February 2011 to provide ready access to all citizens interested in the topic. In addition, a Solid Waste Task Force feedback form was implemented to provide a convenient method for residents to provide their comments to the task force. Over 100 comments have been received through this method. Comments are posted on the webpage, under resources.

An initial public forum was held June 8, 2011. Twenty-nine people attended the session, in addition to city staff.

Key themes in the feedback prior to completion of the final draft of this report include:

- Generally high satisfaction with residential trash services
- High levels of interest in recycling, although no consensus on method (curbside by subscription, citywide curbside, drop-off)
- Among those who currently have curbside recycling by subscription, there is a generally high level of satisfaction with their selected providers
- Concerns about containers (size, how to store, how to manage)
- Desire for equity in rate structure for small volume households
- Concerns about and/or suggestions for minimizing illegal dumping
- Recommendations for other community systems that should be reviewed
- Hesitancy to change current system

A second public comment session was held on January 19, 2012 to receive feedback on the final draft report. Fifty people attended the session. The Solid Waste Task Force identified common themes from the comments received, and summarized how the feedback was considered in the report. Attachment 6 provides details on themes and considerations relating to public input.

The final report to the City Commission reflects the input sought throughout the process.

BACKGROUND

SOLID WASTE MANAGEMENT IN LAWRENCE, KS

Comprehensive solid waste management services are provided in the context of a growing university community (University of Kansas and Haskell Indian Nations University), resulting in a highly transient population.

The collection and disposal of garbage became a municipal service in 1946. The City continues to provide exclusive trash service for residential and commercial customers. Since the 1980's the City has maintained a long-term relationship with Hamm Industries for landfill services at the Subtitle D Sanitary Landfill located less than five miles north of the city limits.

Lawrence has been active in developing waste reduction and recycling opportunities through a variety of private and public services since the early 1990's. Management practices for specific material streams are detailed in this report. In general, Lawrence has used a **targeted diversion strategy** to develop programs based on volume / weight in the waste stream and toxicity of materials. Using the targeted diversion strategy, Lawrence targeted yard trimmings on the residential side and cardboard on the commercial side as major first steps to reducing the overall tons of material put in the landfill each year (see [attachment 2](#)). Drop-off recycling centers have been available in the community since 1993. There are currently six private companies registered to provide residential curbside recycling services.

SOLID WASTE TASK FORCE

The Lawrence City Commission created the Solid Waste Task Force in February 2011 to develop recommendations to the governing body regarding the long-term solid waste service options for the citizens of Lawrence. The purpose of the task force is to:

- Articulate / document the services currently provided through solid waste user fees.
- Articulate issues driving recommendations for service changes.
- Consider solid waste services that may be included in the long-range plan for the Lawrence community (such as, variable rate pricing, curbside recycling, yard trimmings collection, bulky item collection, and so on).
- Seek community-wide input in the options for desired solid waste services.
- Develop recommendations for the Lawrence City Commission regarding implementation of services or changes to existing services.
- Propose timelines and educational outreach to achieve recommended service levels.

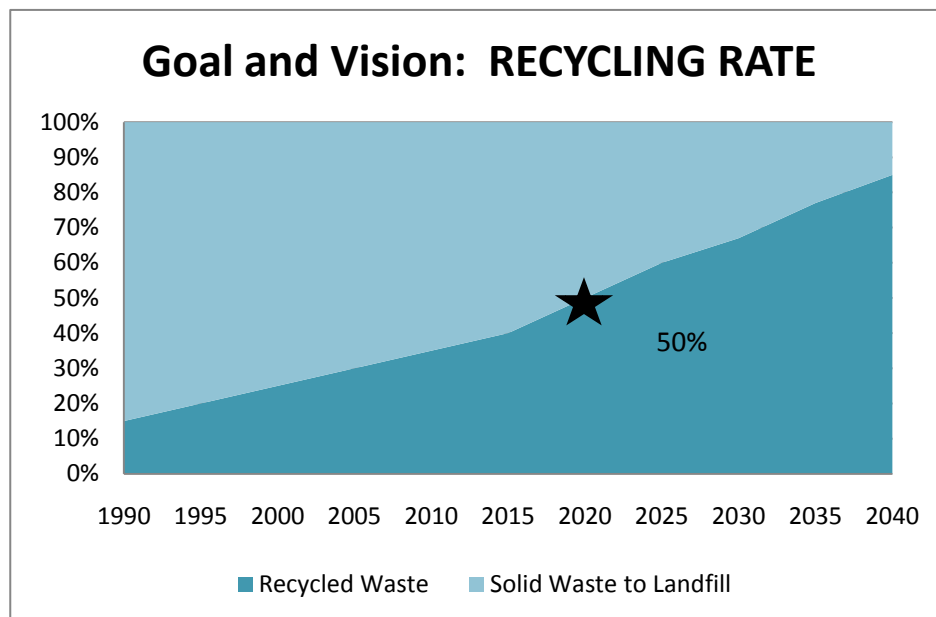
This report provides the recommendations that are due to the City Commission by March 2012.

GOALS AND FINDINGS

GOALS

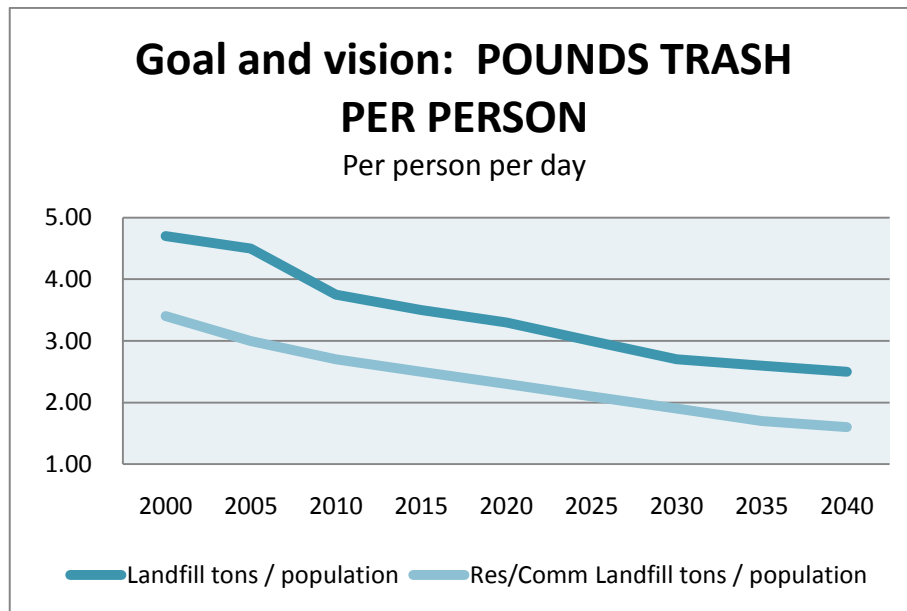
The Lawrence community values comprehensive solid waste services and is committed to source reduction, waste diversion, and recycling as components of the overall solid waste management strategy. The Solid Waste Task Force is focused on providing strategic direction to manage the waste stream to place increasing emphasis on waste diversion over time. Goals are graphically represented below, with a focus on the overall long-term trends.

The recycling rate is a benchmark frequently cited as an indication of successful diversion programs in communities. The US Environmental Protection Agency has developed a standard methodology for measuring the recycling rates. The standard methodology helps communities make fair comparisons across jurisdictions and produces useful information for planning and decision-making. The recycling rate, however, is not a perfect measurement. There are assumptions and projections built into the methodology. More importantly, the recycling rate does not capture source reduction or reuse components, which are the first two orders on the reduce-reuse-recycle hierarchy. Nonetheless, a numerical target is valuable for communicating community priorities for increasing recycling over time. The Solid Waste Task Force recommends a community recycling goal of 50 percent by 2020. The 2010 recycling rate was 38 percent.



An alternative measurement mechanism is pounds of waste per person per day. This methodology will capture source reduction and recycling efforts, by focusing only on the pounds

of waste disposed through the landfill. The pounds per person per day is also an imperfect measurement. For instance, the graphic below shows a significant decline in the total pounds per person per day between 2005 and 2010 (upper dark line). That line is likely capturing social economic changes (recession, housing market decline). The second line excludes roll-off tonnage in the calculation, in an effort to mitigate changes in construction trends. Nonetheless, the graphic is intended to communicate overall philosophical goals, not focus on numeric changes. Although a specific goal has not been set, it is important to use this measure as a benchmark to ensure overall waste reduction goals are being met. In 2009, the City's Climate Protection Task Force recommended 5, 10, and 15 year goals for waste reduction to 3, 2.75 and 2.25 lbs per person respectively.



FINDINGS

The Solid Waste Task Force analyzed current solid waste management practices in Lawrence and many other communities. Attachment 3 outlines references and research efforts. Over the ten months of committee work, the task force arrived at the following findings:

- Solid waste industry best management practices indicate containerization and increasing automation will decrease worker injuries and increase operational efficiencies;^{1 2}

¹ H. Lanier Hickman, Jr., Complete Handbook of Solid Waste Collection and Transfer (American Academy of Environmental Engineers, 2000) 77.

² Marc Rogoff, Donald Ross, Jeffrey Wood, "Automated waste collection: how to make sure it makes sense for your community," APWA Reporter, March 2010, 44.

- Higher diversion and recycling rates are achieved in communities with curbside recycling and separate collection of organics;³
- Variable rate pricing structures increase equity, reduce landfill disposal, and increase incentives for recycling;⁴
- Variable rate structures are most effective when paired with community wide curbside recycling programs;⁵ and
- There has been long-term interest in a community-wide curbside recycling program, if fiscally feasible. The 2008 Recycling Survey, completed by ETC Institute, found 79 percent of those surveyed thought it was important to have citywide curbside recycling, with 64 percent willing to pay for that service if the cost were \$ 6 per month.⁶

PATHWAY FOR RESIDENTIAL SERVICE

The Solid Waste Task Force is focused on providing strategic direction to manage the waste stream to place increasing emphasis on waste diversion over time. The report addresses materials by waste stream, discussion of current practices for collection, management, and/or disposal, and recommendations for future improvements to achieve goals.

Lawrence residents express a high level of satisfaction with trash collection services. In the 2011 City of Lawrence DirectionFinder Survey completed by ETC Institute, ninety-three percent (93%) of the residents surveyed, who had an opinion, were satisfied with residential trash services (p. 4). The 2011 survey showed a two percent increase over 2007 survey data (p. 22). The survey report is available at: http://www.lawrenceks.org/pdf/2011_citizen_survey_combined.pdf.

Even with a very high satisfaction rate, comprehensive solid waste management services in Lawrence can improve. Indications of this need included:

- Performance audit on Solid Waste Performance completed in January 2010. Both positive practices and concerns were outlined in the audit. The City Auditor noted,

³ Mecklenberg County Land Use & Environmental Services Agency, “Best Practices for Local Government Solid Waste Recycling, Diversion from Landfill, and Waste Reduction,” December 2011, 31.

⁴ “Frequently Asked Questions on PAYT / VR,” Lisa Skumatz PhD (SERA), Pay-as-you-throw, 2009, <<http://www.paytwest.org/faqPAYTSERAv301.pdf>>

⁵ Lisa Skumatz, PhD (SERA), “Pay-As-You-Throw – Now: Increase recycling and decrease greenhouse gases quickly, fairly, and cost-effectively,” APWA Reporter, March 2010, 38.

⁶ 2008 Lawrence Recycling Survey: Final Report, ETC Institute, April 2008, i-ii, >http://www.lawrenceks.org/recycling/pdf/recycling_survey_results.pdf>

“Based on the comparison with good practices, areas where the city might improve include:

- Increasing the use of automated collection;
- Increasing the use of technology for routing and vehicle / driver performance;
- Providing residents with volume-based pricing options; and
- Increasing participation in benchmarking and performance measurement and reporting.”

The audit report is available at: http://www.lawrenceks.org/auditor/2010/solid_waste_performance.

- Sustainability Advisory Board advocated for changes in the overall solid waste management and planning processes, as communicated to the City Commission in October 2009. The top three elements addressed in the memo were:
 - Establishment of a quantitative waste reduction and recycling goal;
 - Implementation of a variable rate pricing structure for residential customers; and
 - Creation of city-wide residential recycling program which would provide uniform access to curbside recycling for all residents.

The memo is available at: http://www.lawrenceks.org/web_based_agendas/2009/12-01-09/12-01-09h/SAB_memo_re_wrr_recommendations.pdf

The overall fiscal health of the Solid Waste enterprise fund is not currently a driving factor for service changes. In 2010, the Solid Waste enterprise fund ended in a favorable financial position. Fiscal year 2011 will be similarly favorable, and the 2012 budget balances revenues and expenditures. However, analysis of changes to solid waste services must be informed by the primary cost drivers in the fund. Major expenditure categories budgeted for 2011 include personnel costs (57% excluding workers' compensation, 60% including workers' compensation), equipment costs (16%), and landfill / disposal (17%).

VISION FOR RESIDENTIAL SERVICES

To achieve the goals for waste management, source reduction, and diversion, the Solid Waste Task Force envisions a residential service that includes two roll-out carts for single family customers as part of the standard monthly fee – one for trash and one for single stream recycling. The task force report articulates the services currently provided through solid waste user fees and the issues identified. Specific elements of residential services are discussed below.

SOLID WASTE / TRASH

Current policy and process:

Lawrence has approximately 28,500 customers who pay single-family residential rates. Trash is collected from residential customers once per week, using semi-automated rear-load trash trucks (most frequently 25 cubic yard), with an operator and two loaders. The truck travels down the street in one direction, collecting materials from both sides of the street simultaneously. Residential customers can rent roll-out carts in two sizes (65 or 90 gallon), but carts are not mandatory. All rear-load trash trucks are equipped with dual cart dumpers. City carts are rolled to the back of the truck and the cart dumpers tip and empty the containers. Approximately 7,000 city carts are currently in use by single family customers.

Lawrence collects most large items at the curb for no additional charge for residential customers. The current fleet of rear-load trucks can handle some larger items on a regular route, such as mattresses, and small furniture. Larger “bulk” items and Freon-containing appliances are collected each week by appointment with a larger truck that does not compact the waste materials. In the early 1990’s, the City eliminated additional fees for bulky items and residential tires, to address issues with illegal dumping in alleys and isolated areas.

Collecting solid waste is a dangerous job. The task force learned that, nationally, refuse collectors are three times more likely to be killed on the job as police officers and fire fighters. Review of the city’s workers’ compensation expenditures found that solid waste expenditures over the last two years were almost \$4,000 per position, which is more than three times the expenditures for the next highest department, the Police Department.

Increased automation helps reduce the risk to employees. Automated collection is associated with fewer injuries than manual collection, a lower portion of severe injuries, and less physical burnout. The City of Olathe noted a decrease in workers’ compensation costs over 50 percent after transitioning to automated collection.

Increased automation helps reduce and manage collection costs. Lawrence’s current approach with a three person crew and a rear loader, while flexible, costs almost twice as much as fully automated collection and about 50 percent more than semi-automated collection.

Proposed process improvements and policy changes:

- The City of Lawrence will continue to provide weekly collection of residential solid waste to ensure protection of public health, safety, and environment.

- Increase automation for residential trash collection by:
 - Providing roll-out trash carts for residential services, which can be utilized immediately with the current fleet of semi-automated trucks. This maximizes the return-on-investment on currently existing semi-automated trucks.
 - Increasing automation of trucks for residential service collection as current fleet units are replaced.
- Implement a variable rate pricing structure for residential solid waste services that encourages waste reduction and increases equity in the rate structure.
 - Initial implementation of cart system for trash will include a standard trash rate that includes a roll-out cart. Other cart sizes should be available for modestly different rates.
 - Additional roll-out carts would be available for a fixed fee per month to cover the cost of the cart and the additional landfill tonnage.
 - Bulk item service (and up to five tires) would continue to be provided for no charge to minimize dumping and visual blight.
 - Collection of excessive trash piles will be charged to the resident or property owner on a per event basis for piles which require one loader to expend more than five minutes to load the trash from a single stop. Customers with recurring charges will be assessed and may be asked to obtain a larger or second cart.
 - Evaluate need to implement additional variable rate pricing measures after a couple years of program implementation, if problems are identified with a large number of households who regularly exceed trash / recycling cart space.

RECYCLABLES (fibers, metals, plastics, glass)

Current policy and process: Residential recycling for standard household recyclables (newspaper, cardboard, mixed papers, aluminum, steel, plastics) is achieved through a variety of private and public options.

There are six private companies registered to collect recycling materials at the curb for households. Curbside services are by subscription, for a fee, and residential customers contract with their preferred provider. Based on current data, staff estimates approximately 5,000 residential customers contract for curbside recycling services.

The community is served by a combination of private and public recycling drop off options. There is one private multi-stream community drop-off center that takes fibers, metals, plastics, and glass. Two additional private community drop-off centers specialize in salvage and metal recovery. There are twelve (12) city-operated fiber drop off locations (newspaper, cardboard, mixed paper) in the community. The drop-off locations are provided at no-charge to the customers. In 2010, approximately 5306 tons of material was recycled through the drop-off programs and curbside programs.

Glass is handled at one drop-off location offered by a private company. The City of Lawrence will implement four additional drop-off locations for customer convenience in 2012. Future programming for glass will depend on the policy direction of the City Commission with regards to curbside recycling, and whether glass is accepted in a curbside single-stream collection program.

Proposed process improvements and policy changes:

- Implement city-wide single-stream curbside recycling if fiscally prudent and sustainable. City-wide program would be included in the standard rate for residential service (participation voluntary).
 - Evaluate costs and opportunities by soliciting a Request for Proposals (RFP) for single-stream curbside recycling.
 - The RFP should have two (2) alternatives, to separately evaluate collection and processing components. In other words, companies will be asked to submit proposals for
 - turn-key operations (company provided collection and material processing), and
 - material processing only (which would allow municipal collection of materials).
- Promote adequate number of drop-off points for glass, if material is not accepted in single-stream curbside collection system.

ORGANICS (YARD TRIMMINGS and FOOD WASTE)

Current policy and process: City-wide collection of grass, leaves, and small woody debris occurs on Mondays, March to mid-December, except holidays. Yard trimmings set out in cans, city carts, or compostable paper bags are transported to the City's woody recovery and compost facility for processing. Material is collected using the same fleet of rear-load solid waste trucks that are assigned to collect residential trash the rest of the week. Finished compost is used for city projects and distributed back to residents through community sale events in the spring and fall.

Waste Reduction and Recycling staff provides technical assistance upon request to assist residents with managing food waste at home. No collection or processing services are currently offered. The City encourages source reduction through backyard composting by providing education to residents, demonstration projects, and the sale of compost bins and kitchen scrap pails.

Food waste is an area where residential services may be enhanced with minimal changes to current programming. With appropriate approvals from the Kansas Department of Health and

Environment through the compost site permitting process, residential vegetative waste could be managed on the existing site, mixed with yard trimmings. Further, collection could be accomplished with existing crews, trucks, and routes, by expanding the yard trimmings program to include vegetative food waste for residential customers.

Proposed process improvements and policy changes:

- Increase diversion of organic materials from the waste stream by:
 - Focusing education, and outreach on backyard composting of both yard trimmings and food waste.
 - Examining the collection of vegetative food waste for residential customers) as part of existing residential collection of yard trimmings.

HOUSEHOLD HAZARDOUS WASTE

Current policy and process: The Household Hazardous Waste (HHW) facility accepts hazardous materials including paint, cleaners, automotive fluids, pesticides, pool chemicals, and batteries from Douglas County households throughout the year by drop-off appointment. Products dropped off at the HHW facility that are in good, usable condition are distributed free through the Product Reuse program to Douglas County households and not-for-profit organizations. For customer convenience, appointments are available one evening per week year rounds and one Saturday per month, April through October. The facility has grown incrementally over a period of years, now occupying four separate buildings on the Douglas County Public Works site.

Proposed process improvements and policy changes:

- Develop long-range plan for sustainable household hazardous waste program, balancing needs for fiscal responsibility and customer convenience. Issues that must be addressed include adequate physical facilities, access, marketing, staffing, and ability to staff open hours that may not require appointments.

OUTREACH, EDUCATION, and OTHER SERVICES

Current policy and process: The Solid Waste Division, through Waste Reduction and Recycling (WRR) staff, completes a wide variety of outreach activities, technical assistance, and special events. Each year, multiple presentations and/or facility tours are given to students K-12 and universities, community groups, and other governmental agencies. The Division serves as a central point for community recycling information. Citizens receive information through phone consultations, online resources (e.g., website, Facebook), brochures and flyers, and advertising. Special events include the Lawrence Earth Day Parade and Celebration (spring), the Lawrence Energy Conservation Fair and Sustainable Homes Tour (fall), and two electronic recycling events per year.

The Solid Waste Division supplements residential services with special projects such as weekly downtown litter cleanup, highway litter cleanups, neighborhood alley cleanups, and dead animal collection.

Proposed process improvements and policy changes:

- Develop comprehensive outreach and education program to facilitate the implementation of solid waste program changes. Assist residents in ability to easily find information about recycling specific waste streams by creating a searchable web page.

● PATHWAY FOR COMMERCIAL / MULTI-FAMILY SERVICE

SOLID WASTE / TRASH

Current policy and process: Lawrence has approximately 1,800 non-residential accounts, including roll-off services. Commercial services are provided through a variety of service types, depending on the character and volume of the trash. Rear-load dumpster service is provided for smaller volume generators and in areas where access is restricted. The entire central business district is served by rear-load trash containers. Rear-load routes are integrated between commercial and residential services, meaning the same truck collects both dumpsters and residential trash on a common route. Rear-load dumpster service is quasi-automated – two people are required to roll the dumpster to the truck, but the truck lifts and empties the container mechanically.

Higher volume generators are served by either front-load or roll-off services. Front-load trucks are a single person, fully-automated operation. Container sizes range from four to ten cubic yards. Front load service is provided up to six times per week. Roll-off services are suitable for large quantity generators, compacted wastes, and construction materials. Roll-off boxes are picked up from the customer and hauled directly to the landfill site, then returned to the customer, in most instances.

RECYCLABLES

Current policy and process: Collection of recyclable materials for businesses is achieved through a variety of private and public options.

Lawrence provides cardboard and sorted office paper recycling for commercial customers at no additional charge. The program is funded by solid waste fees collected and revenues from the materials sold. Cardboard collection containers are located throughout the central business district and provided to commercial customers upon request. There are currently over 470 containers in the community. Cardboard is collected in rear-load dumpsters. A rear-load trash truck is dedicated to collecting cardboard routes five days per week. Sorted office paper is generally white paper, and is collected on one day per week using roll-out carts. This is a single commodity recycling program. Over 140 customers are currently served by the office paper program.

Private options are also available to meet the recycling preferences of businesses. Many of the curbside residential recycling companies will collect recyclable materials from businesses on a contracted fee-basis. One company is currently providing larger single-stream recycling options to churches, schools, multi-family and commercial areas using a front-load automated operation.

ORGANICS

Current policy and process: Organic materials in the commercial stream may include yard trimmings due to property management and a wide spectrum of food waste (retail outlets and restaurants). Opportunities for recycling for organic yard trimmings in Lawrence are better developed than food waste recycling. Approximately 90 companies paid for access to drop-off materials at the compost site in 2011. The registrants are landscaping companies, property management companies, tree services, and garden stores. Access is provided via a fob-key for an annual fee. Users are required to report materials monthly, or access to the site will be deactivated. Companies may also access the site for a fee on Saturdays during the woody debris drop-off events offered by Parks and Recreation.

A few retailers are currently contracting for food waste management services with private companies. The food waste collected is vegetative only, all packaging removed, and in a “pre-consumer” state.

The Kansas Department of Health and Environment is currently emphasizing food waste management programs that will divert commercial and residential food waste. There is no grant funding available at this time, but the state will provide technical assistance where possible to modify compost site permits and assist with program development.

Proposed process improvements and policy changes:

The Solid Waste Task Force did not have adequate time to analyze significant changes for commercial or multi-family solid waste services. However, the task force expects that staff and policy-makers will consider enhancements to these services toward the goals of source reduction, increased solid waste diversion, and rate equity as new opportunities for more automated collections, recycling, organic collections, and other services arise through the implementation of improvements to residential services.

COMMUNITY INPUT AND PUBLIC PARTICIPATION

The Solid Waste Task Force proactively sought public input in the options for solid waste services. A webpage was created in February 2011 to provide ready access to all citizens interested in the topic. In addition, a Solid Waste Task Force feedback form was implemented to provide a convenient method for residents to provide their comments to the task force. Over 100 comments have been received through this method. Comments are posted on the webpage, under resources.

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- Among those who currently have curbside recycling by subscription, there is a generally high level of satisfaction with their selected providers
- Concerns about containers (size, how to store, how to manage)
- Desire for equity in rate structure for small volume households
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- Recommendations for other community systems that should be reviewed
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The final report to the City Commission reflects the input sought throughout the process.

Attachment 1: Solid Waste Task Force Members

<i>Members</i>	<i>Phone</i>	
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<i>Christine Tomlin</i> <i>E-mail: cblistomlin@earthlink.net</i>	<i>785-843-1624</i>	
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Staff Liaison: David Corliss, City Manager

Attachment 2: Historical Targeted Diversion Strategy

Guiding principle in program development:

Maximum diversion (weight / toxicity) for minimum dollars.

Historical expansion of programs

Year	Program element	Comment
1993	Yard trimmings collection program	Replaced one trash pick up per week; diverted major component of residential waste stream by weight
1993	Household hazardous waste facility opened	Initial grant funding from state, operated one Saturday per month with volunteers (residential waste stream based on toxicity)
1993	Wal-Mart community drop-off center opened	Regional residential recycling drop-off
1995	Newspaper drop-off locations	Residential fiber recovery
1996	Cardboard collection program for small commercial operations	Non-residential fiber recovery
1997	Cardboard drop off locations	Residential and non-residential fiber recovery
2000	Small Quantity Generator program offered through Hazardous Waste facility	Commercial waste stream based on toxicity for non-regulated producers
2002	Office waste paper program	Non-residential fiber recovery
2003	Household hazardous waste, expands hours for customer convenience	Transitioned from one Saturday per month to weekly drop-offs by appointment, including one evening per week, and one Saturday per month
2005	12 th & Haskell expands to multi-stream drop-off	Expanded community drop-off from metal recovery to multi-stream recycling
2007	Mixed paper drop off	Expansion of residential fiber recovery to include mixed fibers, including junk mail, chip board containers
2008	Electronic recycling collection events	Residential and small commercial service addresses both volume and toxicity components of waste stream
2012	Glass drop off program	City glass collection program, in partnership with Ripple Glass. 4 new locations

Attachment 3: Links to Solid Waste Task Force information and activities

Quick reference to SWTF efforts

Information	Full web address
<u>Solid Waste Task Force webpage</u>	<u>http://www.lawrenceks.org/swtf/</u>
<u>Meeting minutes</u>	<u>http://www.lawrenceks.org/swtf/minutes</u>
<u>Presentations to task force</u>	<u>http://www.lawrenceks.org/swtf/presentations</u>
<u>Feedback and correspondence</u>	<u>http://www.lawrenceks.org/swtf/feedback_recvd</u>

For those without internet access, City staff will print this report and information from the above links upon request. Please call the Public Works Department at (785) 832-3123.

Meeting summary

Date	Agenda topics / activities
April 7, 2011	Introductory meeting Kansas Open Meetings Act requirements Planning for task force work
April 20, 2011	Current solid waste operations (Tammy Bennett) Solid Waste performance audit (Michael Eglinski)
May 4, 2011	Comparison of other communities (Kathy Richardson)
May 17, 2011	Field Trip: Solid Waste Collections
June 8, 2011	Public input session 1
June 15, 2011	Johnson County Solid Waste Management Plan (Julie Coon) Solid Waste Operations in Olathe (Kent Seyfried)

June 30, 2011	Citizen Survey (David Corliss) Process, goals, structure (SWTF)
July 14, 2011	Open discussion with task force regarding big bucket items
July 28, 2011	Field Trip: Hamm's Landfill
August 11, 2011	Containerization discussion Framework on curbside recycling
August 25, 2011	Community curbside recycling programs and material recovery facilities Waste Connections (Don Rogers) Deffenbaugh Industries (Tom Coffman) Ripple Glass (Mike Utz)
September 12, 2011	Area activities regarding material recovery facilities Honey Creek Disposal (Kevin and Randy Weldon) Hamm Waste Services (Charlie Sedlock) Waste Management (Carrie Spencer)
September 24, 2011	Field Trip: Deffenbaugh Material Recovery Facility
September 28, 2011	Task force discussion / recommendations
October 26, 2011	Draft 1 of Solid Waste Task Force report, review / edit
November 16, 2011	Variable rate pricing (Kathy Richardson)
December 12, 2011	VRP continued Household Hazardous Waste (Kathy Richardson)
January 5, 2012	Draft report review
January 19, 2012	Public Comment Session
January 26, 2012	Draft report review / revisions
January 31, 2012	Draft report final edits

Attachment 4: Employee safety, workers' compensation, and automation

Employee safety is one driving force for increasing automation through the use of roll-out carts for residential trash. Roll-out carts collected with semi-automated or fully-automated equipment will significantly reduce both the frequency and severity of employee injury.

The City Auditor and Risk Manager have provided information regarding workers' compensation costs. The calculations are different, but both are meaningful measures of financial costs of worker injury. The Risk Management calculations attribute all costs back to the date of injury. For instance, if an employee is injured in 2008, but there are costs paid out in 2009 and 2010, all those expenditures are shown in the injury year (2008). The City Auditor reports costs in the year paid, regardless of injury. In that method, a payment made in 2010 for settlement of a 2008 injury claim will be shown in payment year (2010).

Year	Year of injury method (risk management method)	Year of expense method (city auditor method)
2005	\$ 116,184	
2006	\$ 418,489	
2007	\$ 132,703	
2008	\$ 419,253	
2009	\$ 48,120	
2010	\$ 356,736	\$ 384,440
2011 ytd	\$ 234,170	\$ 401,501

As reported to the Solid Waste Task Force by the City Auditor, semi and fully automated collection are associated with:

- Fewer injuries than manual collection;
- Reduced chance of injuring from lifting and getting on and off vehicles;
- Lower percent of severe injuries; and
- Less physical burnout.

Information provided to the City Auditor regarding worker injury costs in the City of Olathe showed a reduction of greater than 50 percent following implementation of automated systems.

MSW Management, a journal for municipal solid waste professionals, reported extensively on transition to automated systems in "Automated Collection Goes to Work," October 2010.

Attachment 5: Area communities using standardized containers

RESIDENTIAL TRASH COLLECTION - Mandatory Carts		
YES	Only For Some Haulers	NO
De Soto, KS (One Private Hauler)	Blue Springs, MO (Several Private Haulers)	Baldwin City, KS (One Private Hauler)
Emporia, KS (City is Only Hauler)	Independence, MO (Several Private Haulers)	Bonner Springs, KS (One Private Hauler)
Eudora, KS (One Private Hauler)	Manhattan, KS (Several Private Haulers)	Columbia, MO (City is Only Hauler)
Gardner, KS (Several Private Haulers)	Overland Park, KS (Several Private Haulers)	Grandview, MO (Several Private Haulers)
Leawood, KS (Several Private Haulers)	Raytown, MO (Several Private Haulers)	Edwardsville, KS (One Private Hauler)
Lenexa, KS (Several Private Haulers)	Shawnee County/Topeka, KS (Several Private Haulers & County is a Hauler)	Kansas City, KS (One Private Hauler)
Linwood, KS (One Private Hauler)	Wichita, KS (Several Private Haulers)	Kansas City, MO (Several Private Haulers & City is a Hauler)
Mission, KS (One Private Hauler)		Lawrence, KS (City is Only Hauler)
Newton, KS (City is Only Hauler)		Leavenworth, KS (Several Private Haulers & City is a Hauler)
Norman, OK (City is Only Hauler)		Lecompton, KS (One Private Hauler)
Olathe, KS (City is Only Hauler)		Lee's Summit, MO (Several Private Haulers)
Salina, KS (Several Private Haulers & City is a Hauler)		Oskaloosa, KS (One Private Hauler)
Shawnee, KS (Several Private Haulers)		Ottawa, KS (Several Private Haulers)
Tonganoxie, KS (One Private Hauler)		

RESIDENTIAL CURBSIDE RECYCLING COLLECTION - Mandatory Containers		
YES	Only For Some Haulers	NO
De Soto, KS (One Private Hauler)	Blue Springs, MO (Several Private Haulers)	Bonner Springs, KS (One Private Hauler)
Eudora, KS (One Private Hauler)	Emporia, KS (Several Private Haulers)	Columbia, MO (City is Only Hauler)
Gardner, KS (Several Private Haulers)	Lawrence, KS (Several Private Haulers)	
Independence, MO (Several Private Haulers)	Manhattan, KS (Several Private Haulers)	
Kansas City, KS (One Private Hauler)	Shawnee County/Topeka, KS (Several Private Haulers)	
Kansas City, MO (Several Private Haulers & City is a Hauler)	Wichita, KS (Several Private Haulers)	
Leawood, KS (Several Private Haulers)		Baldwin City, KS (No Curbside Recycling)
Lee's Summit, MO (Several Private Haulers)		Edwardsville, KS (No Curbside Recycling)
Lenexa, KS (Several Private Haulers)		Grandview, MO (No Curbside Recycling)
Mission, KS (One Private Hauler)		Leavenworth, KS (No Curbside Recycling)
Newton, KS (City is Only Hauler)		Lecompton, KS (No Curbside Recycling)
Norman, OK (One Private Hauler)		Linwood, KS (No Curbside Recycling)
Olathe, KS (City is Only Hauler)		Oskaloosa, KS (No Curbside Recycling)
Overland Park, KS (Several Private Haulers)		Ottawa, KS (No Curbside Recycling)
Salina, KS (City is Only Hauler)		Raytown, MO (No Curbside Recycling)
Shawnee, KS (Several Private Haulers)		Tonganoxie, KS (No Curbside Recycling)

Attachment 6: Themes and considerations relating to public feedback

Themes	Considerations
Satisfaction with status quo (trash service, recycling options)	<p>The Solid Waste Task Force (SWTF) understands that many residents are satisfied with current services, including the variety of options for managing recyclables. However, the current system does not address core issues such as worker safety, increased efficiency, or increasing community recycling. The system may not be broken, but it can be better. Priorities for improvements are worker safety, cost effectiveness, and increased recycling rates. These will be accomplished through:</p> <ul style="list-style-type: none"> • standardizing containers • increasing automation • increasing recycling opportunities. <p>Many services will continue without changes, such as collection of yard trimmings, household hazardous waste, and city-operated recycling drop-offs.</p>
Concern about containers size (containers too big for needs, inability to move them)	<p>The SWTF reviewed many communities who have moved to standard containers and Lawrence will benefit from their collective experiences. Multiple sizes of standard containers will be available to meet the needs of residents. The SWTF learned the importance of assisting customers with “right-sizing” the container to fit their typical trash needs, as many communities found a tendency to underestimate weekly set-out quantities. Most communities who have “containerized” report there was a great deal of similar concerns prior to implementation, but residents quickly began to value the new system. Many people find the containers much easier to manage than their previous systems, especially when they are heavy. The City will continue to assist residents who are not able to move their trash to the curb. Arrangements can be made by calling the Solid Waste office.</p>
Concern about container storage (no room in garage, bad look for neighborhood)	<p>Container storage is a valid concern – and one that people face already. The City will offer assistance where they can. Many advantages are noted with carts that may assist with storage and appearance concerns – uniform appearance, generally able to keep out rodents and neighborhood animals, lids keep out rain water, and the City will fix or replace normal cart damage.</p>
Concern about managing yard trimmings (especially leaf volumes in fall)	<p>The SWTF recommended no changes to the yard trimmings collection. People will still be able to use cans, city carts, and compostable paper bags to set out materials. Some people may wish to use the city cart for grass and leaves on Mondays then household trash later in the week. People can still use their old trash containers for yard trimmings if they wish, as long as the</p>

<p>Concern about handling special collection situations (KU move-out, holidays, clean-outs)</p>	<p>filled container doesn't exceed 65 pounds (current requirement). The SWTF recommended no changes for special collection situations. The task force recognizes the importance of a clean, safe community. No changes are recommended to bulk item pick-up. Collection of excessive trash piles will be charged to the resident or property owner on a per event basis for piles which require one loader to expend more than five minutes to load the trash from a single stop. Customers with recurring charges will be assessed and may be asked to obtain a larger or second cart.</p>
<p>Concern about 1-person trucks (safety, versatility)</p>	<p>Safety is a top priority. Equipment will be evaluated with respect to employee safety and operational safety. One-person trucks may not be as versatile as the current residential fleet of rear-load trash trucks with a three-person crew. The SWTF recognizes there are some areas where fully automated trucks will work and some where they won't. The fleet will ultimately have a mix of trucks that increase automation and meet operational needs. Routes will be designed to minimize dangers. Trucks will be changed-out as they come up for replacement over several years, so the City will be able to make adjustments as fleet changes happen.</p>
<p>Concern about current employees</p>	<p>Staff anticipates that any reductions to the workforce will be managed through attrition. As truck changes happen through the normal replacement cycle, the City will be able to make adjustments to staffing. Job vacancies occur regularly in this division due to retirements or employees finding other job opportunities. Trash trucks take a long time to replace. Once a truck is ordered, it can take up to 9 months before delivery, so the division will be able to adjust staffing needs with normal vacancies.</p>
<p>Desire to be able to opt out of recycling programs</p>	<p>One of the key goals of the SWTF is to increase recycling. The pathway of city-wide curbside recycling is an effective method to achieve that goal. Overall savings and efficiencies will be achieved by providing the program as part of the base rate. An "opt-out" option is not sufficiently different than the current "opt-in" system to achieve the goals stated. The SWTF heard from some people who currently recycle everything they can at no charge. Even at no charge, recycling drop-off's are not free. Some of the considerations noted were the value of people's time and the dependence on privately operated programs over which the City/community has no control.</p>
<p>Ability to afford increased costs of services</p>	<p>The first phase of SWTF recommendations will be standard containers and moving toward increasing automation of the fleet through truck replacements. Containers will not increase the cost to customers, as savings will be realized over time through reductions in worker injuries. The next phase of recommendations includes completing a Request for Proposals for city-wide residential recycling to get solid cost information for that service. The City Commission</p>

	<p>would consider cost factors and community benefits when the information is received.</p> <p>The SWTF hopes everyone understands that without change, the current status quo of services will result in increased trash fees in the coming years. We need to find strategies for long term savings for some critical cost drivers (employees, injuries, landfill). The recommendations are geared to the cost drivers, to provide a long-term program that is affordable and responsible. For residents who are both elderly and low income (over 60 with income from all sources less than \$11,979), there is opportunity for a reduced solid waste fee.</p>
Concern about lack of inclusion of multi-family properties	<p>Based on feedback at the second public comment session, some language changes were made in the SWTF report to clarify the commercial sections would include multi-family properties. The SWTF recommendation to complete an RFP for recycling services may also address some recycling opportunities on multi-family properties and some commercial areas, such as downtown.</p>
Desire for phased in approach (containers first, then automation, then recycling contract)	<p>The SWTF understands that it is extremely likely that implementation of recommendations will be phased in. Priorities for improvements are worker safety, cost effectiveness, and increased recycling rates. These will be accomplished through:</p> <ul style="list-style-type: none"> • standardizing containers • increasing automation • increasing recycling opportunities. <p>Public outreach will be critical at each step in the process.</p>
Concern about small business	<p>If the City proceeds with a single stream city-wide residential recycling program with one contractor, it will likely cause disruptions to some or all of the curbside providers currently serving customers in Lawrence. No regulations would prohibit residents from continuing services with the registered curbside providers. The task force envisions opportunities for changes in the business model which may allow some companies to be viable, such as providing curbside residential or commercial glass collection, if glass is not included in the single stream program.</p>
Concern that privatization option was sufficiently considered	<p>The SWTF had high praise for the existing service. A change to privatization would be strongly resisted by the community in general because of the quality of service currently provided. The consensus was to keep the current program intact. Several benefits of retaining the current system were also discussed by the SWTF, including the ability to assign personnel and equipment to special clean-up activities downtown, especially in alleys, flexibility to deal with difficult events like move days at the end of semesters, the ability to provide household hazardous waste services, the ability to provide yard waste services, and the ability to conduct public education activities.</p>