



Solid Waste Management Plans Five-Year Worksheet



Instructions:

Complete this worksheet and submit it with any attachments, including additional revisions to the county or regional solid waste management plan, documentation of the public hearing, planning review, copy of the adoption resolution(s) and list of the current solid waste management committee members to the Bureau of Waste Management. In the case of regions, the adoption resolution of each county commission must be submitted. Answers may be written directly on this worksheet or incorporated into an updated copy of the plan; additional sheets may be used if necessary.

County or Region Name: (If this is a regional update, please list all counties within the region.)

Douglas/Jefferson Counties Solid Waste Planning Region

Chapter 1. Administration and Solid Waste Management Planning

A. Solid Waste Management Committee identified, including the name, political entity, organization, or business represented: K.A.R. 28-29-76

See attached listing of SWM Committee members and their contact information.

B. Adopted and submitted by County Commission(s): K.A.R. 28-29-78(e)

Jefferson County Commission: 5/4/2009
Douglas County Commission: 5/6/2009

C. Documentation of the public hearing, this may be either proof of publication of the notice in the official newspaper of the county (ies) or proof of hearing from the minutes of the commissioners meeting(s): K.A.R. 28-29-78(d)

See attached minutes from Board of County Commissioners of each county.

D. Planning review from an appropriate official land-use planning agency for consistency between the solid waste management plan and other comprehensive plans covering the county or region. Please note the name of the planning agency reviewing the solid waste plan and when it was provided. Any comments from the selected planning agency should be forwarded to KDHE. Examples of possible planning review agencies include: planning and zoning departments, conservation or watershed districts, RC&Ds, economic development agencies or any organization or agency within the planning area involved in comprehensive land-use planning: K.S.A. 65-3405(k)

See attached letters from Douglas and Jefferson Counties planning officials.

E. An update of the implementation schedule and timeline. The timeline should include significant solid waste system benchmarks for a ten-year period. At a minimum, the schedule

the western part of the county bordering the Delaware River valley and in the southern part of the county bordering the Kansas River valley. The bedrock is overlain with sand and gravel, with varying thicknesses of soil. The deep soils are found in the Kansas and Delaware River valleys.

- Description of population densities (include projected 10 year growth)

Douglas County population comprises 86% of the total population for the 2-county region. Based on July 1, 2007 population figures, Douglas County population was 113,488 while Jefferson County population was 18,467.

In Douglas County, the City of Lawrence accounts for approximately 79% of the county population. The three remaining cities in Douglas County account for the following approximate percentages of total county population: Eudora – 5.4%, Baldwin City – 3.7%, Lecompton - 0.6%. The unincorporated portions of Douglas County contain the remaining 11.3% of the total county population.

In Jefferson County, approximately 66% of the total county population resides in the unincorporated areas. The eight cities in Jefferson County contain the remaining 34% of the population. The percentages of total county population residing in Jefferson County cities ranges from a high of 6.3% (in Valley Falls) to a low of 3.0% (in Winchester).

- Identification of Cities

Jefferson County: McLouth, Meriden, Nortonville, Oskaloosa, Ozawkie, Perry, Valley Falls, Winchester

Douglas County: Lawrence, Eudora, Baldwin City, Lecompton

- Regional growth patterns

From 4/1/2000 to 7/1/2007, the counties and cities experienced the following percent change in growth (negative percent growth shown in parentheses):

Jefferson County		0.2
Unincorporated areas	2.9	
McLouth	(7.0)	
Meriden	1.4	
Nortonville	(7.5)	
Oskaloosa	(5.3)	
Ozawkie	1.3	
Perry	(5.8)	
Valley Falls	(8.3)	
Winchester	(4.3)	
Douglas County		11.9
Unincorporated areas	9.1	
Lawrence	10.9	
Baldwin City	19.1	
Eudora	29.1	
Lecompton	5.9	

- Local transportation networks

Federal and state arterial highways provide rapid transportation within and through the region. These highways connect the region with nearby major population centers. I-70 (Kansas Turnpike) is a major freeway connecting Lawrence to Topeka and Kansas City.

significant growth.

- Industries: No significant change. _____
- Utilities: No significant change. _____
- Transportation patterns: Commuter traffic to population centers in Topeka and K.C. is increasing.
- Air, land or water usage: Ongoing effort by Lawrence & Douglas County to identify and secure areas for industrial development and areas for permanent green space. ECO2 committee comprised of community leaders and citizens is leading this effort.

E. What changes are expected to occur over the next ten-year planning period? Explain.

Attracting industrial growth and generating jobs is a major focus for Lawrence and Douglas County. Lawrence and Douglas County are attempting to acquire the former Farmland chemical plant east of Lawrence along K-10 highway in this effort.

F. Establish time and revenue schedules to develop, construct, or operate the SWM system.

Not applicable.

G. How is the SWM system funded?

User fees.

H. Identify projected demands and obstacles to the SWM system.

Volatile markets have hampered the growth in recycling.

I. What processes are being completed for orderly and systematic elimination of nuisances and pollution sources associated with

- Storage: In Lawrence, increased use of carts _____
- Collection: In Lawrence, the Environmental Dept. (Neighborhood Services) issues citations for trash cleanup on private property.
- Transportation: Private haulers are increasing the use of automated collection trucks
- Processing: same _____
- Disposal: same _____

Chapter 3. Waste Source and Disposal

A. What is your current method of disposal of municipal solid waste? (circle each that applies)

Landfill, ~~Transfer station~~, Direct haul, Other:

What is the landfill status if method of disposal? Open, ongoing, and compliant

Chapter 4. Waste Characterization

A. Has there been a change in the sources, quantity or composition of solid waste generated within the planning area? (Waste characterization models are available from the Bureau of Waste Management)

- Residential/Commercial: No change in composition. Quantities are stable or declining.
- Industrial: No change in composition. Quantities are stable or declining.
- Special: No change in composition. Quantities are stable or declining.

B. Have any new management programs or disposal options been initiated or have previously existing programs or disposal options been eliminated for any of the special wastes in the list below? Please check those special wastes where management practices have changed since the last update along with a brief description. Please attach additional sheets if necessary.

N/C__ Lead acid batteries: Collection at HHW and several business locations already available.

N/C__ Household hazardous waste: Already established. Last year, both counties participated in the KDHE sponsored mercury sweep.

N/C__ Small quantities of hazardous wastes (less than 55 lbs./month, see K.A.R. 28-31-2(e))

Already established in Douglas County.

X__ White goods (cfc evacuation required): Jefferson County accepts and evacuates cfc, then white are picked up by Lonnie's Recycling. Lawrence had collection and cfc evacuation program already established.

X__ Pesticides and their containers: Lawrence/DGCO HHW participated in another KDHE sponsored clean sweep for pesticides.

N/C__ Used oil Already established

X__ Consumer electronics (E-waste): Lawrence conducted e-waste collection events in spring & fall 2008. Similar collection events are planned for 2009. 2008 collection

- Composting: Ongoing program in Lawrence. _____

B. What is the schedule for implementing waste reduction strategies?

Lawrence – All planned strategies have been implemented. Current efforts are for maintaining existing programs. A growth rate since 2007 of more than 10% requires increased tonnages within existing recycling programs to maintain or increase the recycling rate, which has occurred. Lawrence will examine additional reduction strategies as resources allow.

C. Describe any methods of education that have been conducted to express the importance of solid waste minimization. How did you measure the success of your educational activities/materials?

Lawrence – The importance of solid waste minimization has been addressed to the public via presentations to neighborhood associations, school classrooms (K-12), universities and community organizations; informational displays at events including Earth Day and America Recycles Day; and printed material such as the City's newsletter, utility bill inserts, brochures and paid advertising. Tips for residents on how to minimize solid waste can also be found on the City's website. The success of these educational efforts can be measured by the increasing participation rates of the city programs and services which focus on reduce, reuse and recycle.

Chapter 6. This section of the worksheet is recommended, but not required

How is the county/region working to improve their recycling and/or waste diversion programs?

Lawrence – Additional drop-off locations have been sited. Mixed paper collection has been added to the drop-off program. Electronic waste collection events have been started. OCC and office paper collections have been expanded to additional businesses and offered to schools.

How have recycling volumes and diversion rates changed since the programs began?

Lawrence – Recycling volumes have increased greatly; over 30,300 tons were recycled in 2007 (lasted data available) compared to 2,000 tons in 1991. During the same period the recycling rate grew from 4% to 35%.

What is the current recycling and/or diversion rate? How was this determined?

Lawrence - The current (2007) diversion rate is 35%. First the tonnage generated was determined (diverted + landfilled). Then the tonnage diverted was divided by the tonnage generated which determines the recycling rate (in %).

What waste materials comprise a majority of the waste volume that is recycled or diverted? What kind of record-keeping is taking place?

Lawrence – Yard trimmings (primarily grass and leaves) are the largest category of diversion followed by fibers (primarily OCC and ONP). The tonnages from city programs are recorded; yard trimmings are converted to tonnage using weekly counts of bags, cans and carts collected

(average weights for each have been determined). The city collects tonnage reports from other recyclers within the community (Wal-Mart, Kansas University, etc.). In-house business recycling (grocery stores, etc.) is determine utilizing updated data from the Regional Solid Waste Management Plan and periodic updates from the businesses themselves.

Have there many been any specific waste streams that are considered significant and have been targeted for diversion since the initial planning?

Lawrence – Yes. Mixed paper was targeted beginning in 2007 and electronic wastes in 2008.

Is business and/or industry participating in recycling, composting, or other waste diversion programs? Does the county/region offer services to this sector?

Lawrence – Yes. The city offers OCC and office paper collection to businesses and other entities.

Also a Small Quantity Generator auditing and collection program is offered. In addition, virtually all large private generators of OCC (grocery stores, manufacturing plants, big box stores) are collecting OCC on-site in compactors or as bales made in-house for recycling.

Has consideration or research been given to any of the following programs:

■ Pay-as-you-throw? **Lawrence** – Yes. Volume based rates are used for commercial accounts (including apartment complexes who have dumpster service). Residential service is not deemed suitable for volume-based rates due to the large number of multi-family units in student neighborhoods, large number of alleys used for collection, large number of renters (52% of housing) that move frequently, the increased cost of billing services that would entail, and the cost of education, monitoring and enforcement.

■ Full-cost accounting? **Lawrence** – Yes. Lawrence solid waste services operate as an enterprise fund which is full-cost accounting.

Is the county participating in any waste management regions or partnerships? If so, is the arrangement successful and efficient? If not, should one be pursued?

Yes. It is deemed successful and efficient.

Does the county have a contingency plan for animal carcass disposal resulting from foreign animal disease? (Assistance on carcass disposal planning is available from KDHE, (785) 296-1600)

Yes. Both Douglas and Jefferson counties have developed an FAD plan, and have incorporated into the Emergency Operations Plan for each county.

events diverted 56 tons of e-waste, and citizens in more than 1,000 vehicles participated. Jefferson County also conducted e-waste collection in 2008. They plan to have one collection event each year.

N/C_ Medical wastes: Lawrence/DGCO HHW started collecting pharmaceuticals and plans to work with the Pollution Prevention Institute to educate residents about the proper disposal of pharmaceuticals.

X___ Construction and demolition wastes: Lawrence conducted trial metal collection from construction activities at Wescoe Hall on KU campus.

N/C_ Seasonal cleanup wastes

X___ Natural disaster wastes: Working draft of Debris Management Plan was developed for Douglas County.

X___ Yard wastes: Lawrence eliminated the use of plastic bags for yard waste set out and started allowing only carts, cans or compostable paper bags for set out.

N/C___ Industrial wastes

N/C___ Agricultural wastes

N/C___ Abandoned/Junked automobiles

N/C___ Waste/scrap tires

N/C___ Bulky or other wastes requiring special handling: describe _____

Chapter 5. Solid Waste Reduction Strategies / Education

A. Describe how the following waste reduction strategies will be established: KAR 28-29-77©(5)

- Source reduction: Ongoing program in Lawrence. Jefferson County to establish multiple site recycling, increased public education, and e-waste collection events.
- Land disposal and reuse: Ongoing program in Lawrence. _____
- Recycling: Ongoing program in Lawrence. Jefferson County to establish multiple site recycling.

Location of disposal sites: 5 miles northwest of Lawrence on US-24/59

B. Is this disposal method expected to be in place for the next ten years? If not, what changes are planned.

Yes

C. Since the last SWMP was written or updated, have there been any changes in;

- Collection: None _____
- Transportation: None _____
- Storage and/or processing of municipal solid waste:
None _____

D. Please check and provide a brief description of those areas that have experienced significant change since the current plan was written. Review the Five-Year Update Guide for assistance in determining possible changes. Please attach additional sheets if necessary.

N/C ___ City and county responsibilities for solid waste systems

N/C ___ Local provision for regulation of solid waste management

X ___ Public education efforts related to waste management

Increased public education efforts include education on waste reduction, composting, recycling and household hazardous waste disposal. Education efforts also targeted proper disposal of mercury containing items, recycling of compact fluorescent bulbs, recycling of e-waste, and use of canvas bags in lieu of plastic bags.

N/C ___ Assessed valuation, cost and ability to fund the solid waste system

E. Are solid waste disposal services available to all residents and businesses in the planning area?

In the northwest corner of Jefferson County, there are no private haulers. Otherwise, yes.

F. Have there been any solid waste facility changes due to state permit requirements under K.S.A. 65-3407?

No facility changes.

- Location None _____
- Number None _____
- Ownership or distribution None _____

K-10 is a major highway connecting Lawrence to the greater Kansas City area. US-59 highway runs north & south through the region, just east of the center of both counties, connecting with Ottawa to the south and Atchison to the north. US-40 and US-24 highways provide alternate east-west transportation to I-70. K-4 highway runs northeast through Jefferson County from Topeka to Nortonville.

The bridge carrying Douglas County Route 1029 over the Kansas River at Lecompton/Perry is the only bridge directly connecting the two counties. The Massachusetts Street and Vermont Street bridges in Lawrence carry US-40 and US-59 highways over the Kansas River.

Douglas County has a county/township road maintenance system. The County maintains the rural major and minor collector roads within the county. Local rural roads are maintained by the nine political townships. Douglas County also has maintenance responsibility for all bridges and larger culverts on the township maintained roads as well as the county routes. Douglas County maintains 208 centerline miles and 163 bridges. The nine townships within Douglas County maintain 578 roadway miles.

Jefferson County has a county unit road maintenance system, i.e. the county maintains all roads in the unincorporated areas. Jefferson County maintains 861 miles of road and 142 bridges.

B. Solid Waste generated (tons) Recycled / Disposed / Total Generated K.A.R.28-29-77©(1)

	Total tons	Recycled	Disposed
Douglas	106,477.00	30,314.00	76,163.00
Jefferson	30,893.00	10.00	30,883.00
TOTALS	137,370.00	30,324.00	107,046.00

Note: All recycling figures are approximate based upon reports provided by Jefferson County and City of Lawrence recycling

C. Solid Waste Characterization (tons) K.A.R. 28-29-77©(1)
Residential / Commercial / Industrial / Special

Residential	60% =	82,422 tons
Commercial	35% =	48,080 tons
Industrial	0% =	0 tons
Special	4% =	5,495 tons

- D. Describe changes that have occurred in the county/region and how they have affected the SWMP;
- Population: Jefferson County total population has remained stable with modest growth in the unincorporated areas. Population in 6 of 8 cities in Jefferson County has declined. The cities of Eudora and Baldwin City in Douglas County have experienced very strong growth. Lawrence and the unincorporated portions of Douglas County have experienced

should include annual reviews and five-year updates of the plan (note review due dates will be reset with the approval of this update). It is useful to include disposal capacity issues, contract renewals and projected program enhancements or closures in the schedule. Assign any necessary action steps and indicate the party responsible for completion.

**Lawrence/Jefferson County Solid Waste Region
Ten-year Planning Horizon**

<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
1	1	1	1	1	1	1	1	1	1	1
2					2					2
3		3		3		3		3		3
4		4		4		4		4		4

Legend:

- 1 Annual Solid Waste Management Plan Review
- 2 Five-year Solid Waste Management Plan Review
- 3 Biennial Evaluation of Increased Recycling for Lawrence
Reaffirmation of Support for Statewide Beverage Container Deposit - Lawrence and Douglas
County Commissions
- 4

Chapter 2. County Description and Solid Waste Management System

A. General County Description

- **Geographical and Geological Characteristics**
(Note: the following language is excerpted from the Douglas/Jefferson Counties Regional Solid Waste Management Plan, Final Report, December 1996, by Franklin Associates, Ltd.)

Douglas County and Jefferson County are separated by the Kansas River. The region shares its borders with seven Kansas counties. Osage, Shawnee and Jackson Counties are immediately west of the region. Atchison County is to the north of the region. Leavenworth and Johnson Counties are to the east of the region.

Douglas County has a total area of approximately 474 square miles, including four cities and nine townships. Jefferson County contains approximately 552 square miles, including eight cities and twelve townships.

Douglas County lies partly on sedimentary rock of the Pennsylvanian age. The Kansas River valley and its tributaries are basically alluvial material. The southern part of the county contains massive formations of limestone. The county is underlain with a rock shelf, with the exception of the erosion due to the Kansas River and its tributaries. This rock shelf has a thin layer of soil cover. The only parts of the county that contain deep soil are the Kansas and Wakarusa River valleys.

In Jefferson County, rocks of late Pennsylvanian age constitute the bedrock. This bedrock crops out in sharp ridges and along bluffs and steep valley walls, especially in