

**KANE COUNTY**

**SOLID WASTE MANAGEMENT PLAN**

**FIVE YEAR UPDATE**



**Prepared by the  
Kane County Department of Environmental Management  
Geneva, Illinois**

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**NOVEMBER 2009**

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## **EXECUTIVE SUMMARY**

All Illinois counties are required by state law to plan for the management of solid waste generated within the county for a 20 year planning period. Counties must update their plans every five years.

Kane County's first Solid Waste Management Plan was adopted by the County Board in 1992. Subsequent updates were adopted in 1998 and 2004. The 2004 update continued a strong emphasis on waste reduction and recycling, found that adequate landfill capacity existed in the state of Illinois to meet the County's long-term disposal needs, and recommended that a series of waste transfer stations owned and/or operated by the private sector be encouraged to access this existing landfill capacity.

### **Solid Waste Quantities**

From 2009 to 2030, the County's population is projected to increase from 507,579 to 718,464, approximately 42 percent. Following this growth, the amount of solid waste generated within Kane County is expected to increase from 750,000 tons per year in 2009 to 1,062,000 tons per year in 2030.

### **Current Waste Management System**

All solid waste management in Kane County is provided by private companies. 14 separate companies were issued annual waste hauling licenses in 2009, but an estimated 80 percent of the solid waste in Kane County is collected by three publicly-owned companies: Allied Waste Services, Veolia Environmental Services, and Waste Management.

The amount of solid waste recycled in Kane County has increased from 44,664 tons (9% of the waste stream) in 1989 to 272,409 tons (38% of the waste stream) in 2009.

The non-recycled portion of the county's solid waste is delivered to privately-owned transfer stations in Batavia, Elgin, West Chicago, and west of Geneva. From there, the waste is transported to landfills in Lee, Livingston, Ogle, and Whiteside counties.

In spite of the trend toward transfer of waste to distant landfills, prices have remained competitive in both the residential and commercial sectors. Tipping fees at northern Illinois landfills are highly competitive, and the numerous waste haulers operating in Kane County also ensures that a high level of competition exists.

Since all solid waste in Kane County is collected, recycled, or transferred/landfilled by private companies, sufficient competition among the private sector serves to control price increases, and also maintains high quality of service in both the residential and commercial sectors.

## **Recycling**

Recycling has been an important element in both the 1992 Kane County Solid Waste Management Plan and subsequent updates. In 2009, an estimated 38 percent of the solid waste in Kane County was recycled. This level of recycling has been achieved as a result of high levels of cooperation from municipalities, the private sector, and the general public.

This Plan Update includes eight separate recommendations designed to maximize, to the extent practically and economically feasible, the amount of solid waste generated within the County which is recycled.

## **Landfilling**

Statewide, 18 years of landfill capacity remained at the end of 2007, a significant increase from the 9 years of capacity available in 1992. Competition among existing landfills has kept waste disposal costs in check in our marketplace. This competition is anticipated to continue into the future

Adequate landfill capacity appears to exist in northern Illinois to meet the disposal needs for non-recyclable waste generated within Kane County. This Plan Update recommends that the County continues the policy established by Resolution 95-247 which states, in part, that: “The Kane County Board will not pursue the acquisition of property, the development of, or siting approval for a new landfill facility in Kane County.”

## **Waste Transfer**

Almost all of Kane County’s non-recycled solid waste is managed through four privately-owned transfer stations. As additional population growth occurs in the western portions of the county, additional transfer facilities will be needed.

To insure that sufficient information is presented on any proposed transfer stations, and that siting applications comply with statutory requirements, the County has identified a set of minimum requirements for any future transfer station proposals. In addition, Kane County requires that operators of future transfer stations enter into a host fee agreement with the County.

## **Alternative Technologies**

As part of the planning process for the original plan and the first five-year update, Kane County conducted extensive studies of non-landfill technologies, including incineration and mixed waste composting. Midwestern market economics have concentrated the flow of solid waste to large, regional-scale landfills. In this environment, non-landfill technologies do not present a viable alternative. The County will continue to monitor technological developments and market conditions for non-landfill waste management approaches.

# CHAPTER 1

## INTRODUCTION AND BACKGROUND

The Illinois Solid Waste Planning and Recycling Act (415 ILCS 15/1 et seq) requires all Illinois counties to plan for the management of solid waste generated within the county for a 20 year planning period. Counties must update their plans every five years.

Each county plan must contain several provisions, including: (1) a description of the volume of solid waste generated within the County and projections of waste generated over the next 20 years; (2) a description of current and proposed facilities for the management of solid waste; (3) an evaluation of proposed facilities and programs; and (4) a recycling program designed to recycle 25 percent of the waste generated within the planning area.

County solid waste plans must also conform with the waste management hierarchy established as State policy in the Illinois Solid Waste Management Act (415 ILCS 20/1 et seq):

- (1) volume reduction at the source
- (2) recycling and reuse
- (3) combustion
- (4) disposal in landfill facilities

### **1992 Kane County Solid Waste Management Plan**

On November 10, 1992, the Kane County Board adopted the County's first Solid Waste Management Plan. Major recommendations of that plan included: (1) a 47% recycling goal; (2) expansion of permitted capacity at Settler's Hill landfill in Geneva; and (3) initiation of a site selection process for a future landfill facility.

The County Board approved an expansion of Settler's Hill landfill in 1994. This approval was appealed to the Illinois Pollution Control Board. The County Board's decision to approve the expansion was upheld in September 1997. A subsequent agreement (County Board Resolution 97-269) between Kane County, the City of Geneva, and Waste Management of Illinois, Inc. (WMI) states that (1) Settler's Hill will permanently close on or before December 31, 2006; (2) WMI is prohibited from operating any waste incineration, waste transfer or composting facilities at Settler's Hill; and (3) WMI shall not seek permitting for any other landfill or transfer station site within Geneva Township.

A study to identify preferred sites for a new landfill was completed in August 1995. Following review of that study, in September 1995, the County Board adopted Resolution 95-247 which states in part:

“The Kane County Board will not pursue the acquisition of property, the development of, or siting approval for a new landfill facility in Kane County”.

This resolution also stated that in subsequent Solid Waste Management Plan updates, “reduction, reuse, and recycling of solid waste is to be given primary importance. Alternate technologies for the disposal of solid waste are to be given a fair and unbiased review”.

## **1997 Plan Update**

In 1996, the County commissioned Andrews Environmental Engineering, Inc. to conduct a feasibility analysis of alternative technologies for municipal solid waste management. The technologies evaluated were mixed waste composting, separate collection and composting of food waste, waste-to-energy, and advanced recycling.

The study found that none of these approaches would eliminate the need for a landfill; all would require a complex site selection process; all would be susceptible to the impact of waste flow control; and that tipping fees would be substantially higher than landfill tipping fees.

The 1997 Plan Update was adopted by the Kane County Board on March 10, 1998. This Update continued a strong emphasis on waste reduction and recycling, found that adequate landfill capacity existed in the state of Illinois to meet the County’s long-term disposal needs, and recommended that a series of waste transfer stations owned and operated by the private sector be encouraged to access this existing landfill capacity.

## **2004 Plan Update**

The next five-year plan update was initiated in 2002 by the Kane County Department of Environmental Management. However, in June 2002, the County received an application for siting approval for a transfer station at the Woodland Landfill near South Elgin. The planning process was put on hold, pending the outcome of this siting application. The Kane County Board denied the application on December 10, 2002.

The plan update process was then resumed and an update was adopted by the County Board on May 11, 2004. This update included ten recommendations to increase recycling levels and a reaffirmation of the 1995 resolution opposing any future landfills in the County. It further called for reliance on private sector transfer stations to manage the County’s waste needs, recommended the County provide assistance to the waste industry with identification of potential future transfer station locations, and established criteria for future siting applications for transfer stations.

The Kane County Solid Waste Management Plan was subsequently amended by County Board Resolution #05-462 on December 13, 2005. This resolution requires a host agreement be approved between the County and the applicant for pollution control facilities located anywhere in Kane County. The host agreement must be in place prior to the determination of plan consistency being made by the County.

# CHAPTER 2

## SOLID WASTE NEEDS ASSESSMENT

### A. Introduction

This chapter describes the current system for managing solid waste in Kane County, quantifies the amount of solid waste generation, and describes recycling and waste reduction, waste transfer, and disposal practices.

### B. Demographic Trends

A primary variable affecting the amount of solid waste in Kane County is the growth in population, households, and employment. As of July 1, 2008, Kane County's population was estimated at 507, 579, according to the U.S. Census Bureau. In 2030, the County's population is projected by the Chicago Metropolitan Agency for planning (CMAP) to increase to 718,464.

The impact of this population growth is significant on the County's waste management infrastructure because it continues to increase the demand for managing the recyclables and solid waste generated within the County.

### C. Waste Generation

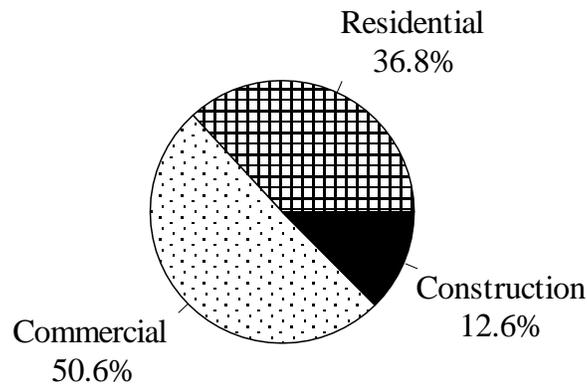
The 2004 Plan Update estimated a per capita waste generation rate of 8.16 pounds per person per day. A new analysis of waste generation in Illinois was developed in 2009 by Camp Dresser & McKee, Inc. for the State of Illinois. This new study estimates Kane County waste generation at 8.10 pounds per person per day. Since the new study is the most recent information available, this new data will be used for the 2009 Kane County plan update.

Total waste generation can be calculated by using population and per capita generation data. Historical and projected waste generation is shown in Table 2.1.

<b>Table 2.1 - TOTAL WASTE GENERATION</b>			
<b>Year</b>	<b>Population</b>	<b>Total Waste</b>	<b>Source</b>
1989	320,000	490,820	1992 Plan
1997	363,428	572,390	1997 Update
2001	413,727	616,122	2004 Update
2009	507,579	750,329	2009 Update
2030	718,464	1,062,069	2009 Update

The original 1992 plan estimated waste volumes for the residential, commercial, and construction sectors, based on hauler reports and landfill gate surveys. No subsequent data has been developed to show any change from the original sector data. This plan update recommends that the sector data, as shown in Figure 2.1, remain unchanged.

**Figure 2.1 Waste Generation, by Sector**



## **D. Current Solid Waste Management System**

### **1. Solid Waste Collection**

All solid waste collection in Kane County is provided by private companies. Kane County licenses all waste haulers using two or more trucks to collect waste within the County (Kane County Code, Section 11.108, et.seq.).

In early 2009, 14 separate companies were issued annual waste hauling licenses. Some of the companies provide a full range of service, including residential, commercial, and construction service. Some only provide roll-off dumpster service.

The local waste collection industry is highly competitive. Bid requests issued for municipal contracts typically elicit 4-6 qualified proposals.

17 municipalities have franchise agreements for the collection of garbage, recyclables, and landscape waste. Three townships (Campton, Plato, and Virgil) and the Mill Creek Special Service Area also contract for waste services. Residents in the unincorporated areas of all other townships and all commercial establishments contract individually for waste collection services.

**Table 2.2 Municipally Contracted Haulers**

<b>Unit of Government</b>	<b>Contracted Hauler</b>
Aurora, City of	Allied Waste - Aurora
Batavia, City of	Veolia Environmental Services
Burlington, Village of	Allied Waste - Elgin
Carpentersville, Village of	ARC Disposal & Recycling
East Dundee, Village of	Allied Waste - Elgin
Elburn, Village of	Waste Management
Elgin, City of	Waste Management
Geneva, City of	Allied Waste - Aurora
Gilberts, Village of	ARC Disposal & Recycling
Hampshire, Village of	Waste Management
Maple Park, Village of	Waste Management
Montgomery, Village of	Allied Waste - Aurora
North Aurora, Village of	Waste Management
Sleepy Hollow, Village of	ARC Disposal & Recycling
St. Charles, City of	Veolia Environmental Services
Sugar Grove, Village of	Waste Management
West Dundee, Village of	Allied Waste - Elgin
Campton Township	Waste Management
Plato Township	Waste Management
Virgil Township	Northern Illinois Disposal
Mill Creek Special Service Area	Veolia Environmental Services
<i>Note: all information as of January 2009</i>	

An estimated 90% of all solid waste in Kane County is collected by four publicly-owned companies: Allied Waste Services, ARC Recycling & Disposal (Republic), Veolia Environmental Services, and Waste Management.

## **2. Recycling**

Recycling activity in Kane County underwent tremendous growth, beginning in the late 1980s. Prior to that time, recycling consisted of scrap metal, large stores recycling their cardboard boxes, a few drop-off locations for the public, and paper drives by scouting and church groups.

Residential curbside collection of recyclables began in 1989 in the municipalities of East Dundee, Sleepy Hollow, and St. Charles. By 1993, all municipalities were providing curbside service to their single-family residents.

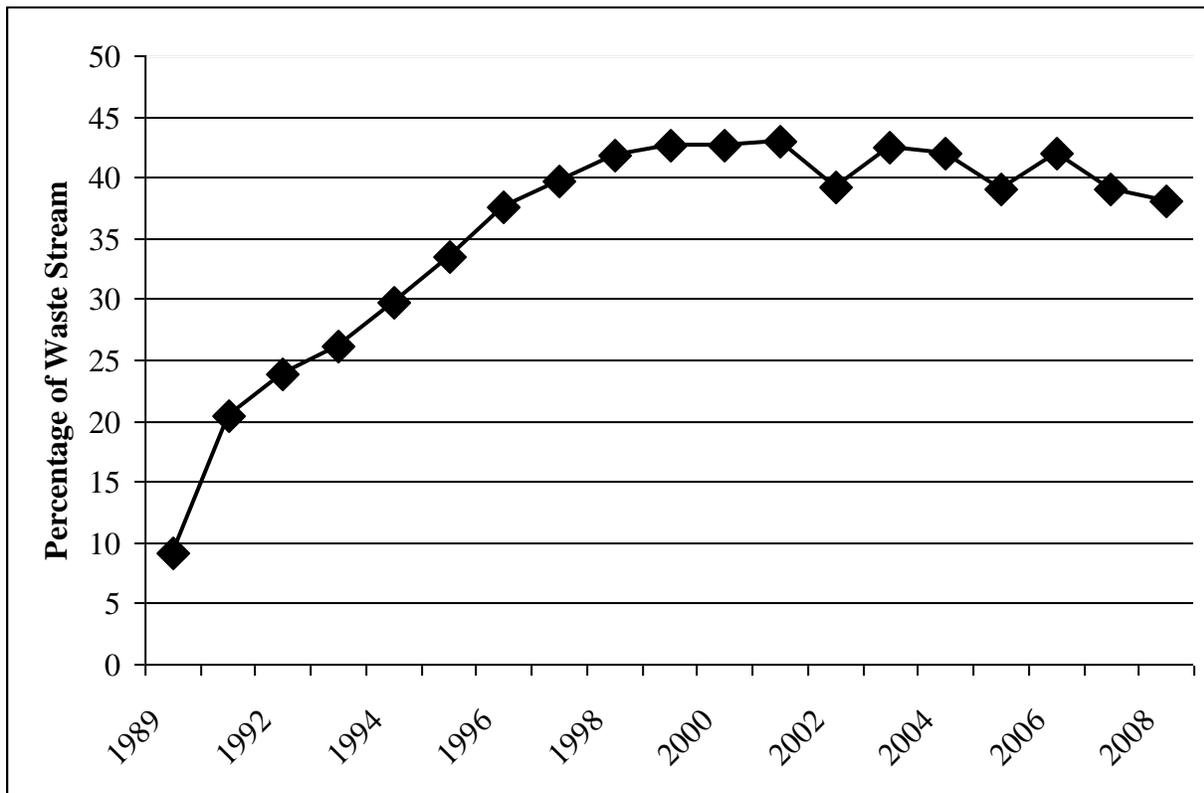
The 1992 Plan adopted a countywide recycling goal of 47.3% by 2000. The 1997 Plan Update set the recycling goal at 52% by 2003. The 2004 Update recommended the County develop programs “to maximize recycling, to the extent practically and economically feasible”.

To address recycling opportunities for residents of unincorporated areas and multi-family dwellings, the Kane County Board adopted a mandatory recycling ordinance in 1994 (Kane County Code, Section 11-108, et.seq.). This ordinance requires that licensed haulers must provide collection of recyclables from all dwelling units they service.

In 1995, the Kane County Board amended its mandatory recycling ordinance to include recycling from commercial establishments. Beginning in 1996, commercial establishments have been required to recycle the two largest recyclable items in their waste stream.

As shown in Figure 2.2, the amount of solid waste recycled in Kane County has increased from 9% of the waste stream (44,664 tons) in 1989 to 38 % of the waste stream (272,409 tons) in 2008. The County conducts an annual survey of licensed waste/recycling haulers and other recycling businesses to determine recycling volumes.

**Figure 2.2 – Annual Recycling Rates**



Recyclable materials in Kane County are collected and processed entirely by the private sector. Private companies operate all residential curbside recycling programs and provide recycling service for multi-family dwellings. The recyclables collected in this system are usually

transferred to a regional processing facility, where the materials are sorted and shipped to end-use markets.

Many commercial establishments use their waste hauler to also provide recycling service. Some larger establishments deal directly with regional recycling companies to collect and recycle their recyclables, which may include metals, paper, plastics, pallets, or wood

There are presently three recycling drop-off centers located in the county. These locations accept a residential menu of recyclable material and are typically used by residents in unincorporated areas, multi-family residents, and small businesses. There are six private recycling centers that focus on metals recycling.

Landscape waste was banned from disposal in Illinois landfills in 1990. In each municipality, this material is collected by contracted haulers. In some locations, city and township crews conduct separate collection programs for leaves or brush. Private landscaping services are employed by a significant portion of residents and commercial establishments.

There is one permitted landscape waste composting facility in Kane County, near Hampshire. A significant amount of the collected landscape waste is land-applied on farms in Kane County and neighboring counties. Landscape waste is also direct-hauled or transferred to permitted composting facilities in neighboring counties.

### **3. Waste Transfer**

With the closure of many landfills in the Chicago metropolitan area, there has been a significant increase in the use of transfer stations to facilitate the transportation of solid waste to more distant landfills. An estimated 98% of Kane County waste is taken to local transfer stations for shipment to out-of-county landfills.

There are currently two permitted transfer stations in Kane County, at a location west of Geneva, owned and operated by Waste Management Inc., and a Batavia facility owned and operated by Veolia Environmental Services. In addition, a significant portion of County's waste is shipped through the DuKane transfer station located in West Chicago and the Waste Management facility in Elgin/Cook County.

Tipping fees at Illinois landfills are highly competitive. Where possible, haulers will transport their waste to a landfill owned by their company, to internalize all revenue.

### **4. Disposal**

All of the non-recyclable solid waste collected within Kane County is disposed in landfills. No operating landfills remain in Kane County. The last, Settler's Hill landfill in Geneva, which is owned by the County and operated under contract by Waste Management Inc., was closed in December 2006.

Solid Waste collected in Kane County is delivered to transfer stations and then taken to numerous landfills, including facilities in Lee, Livingston, Ogle, and Whiteside Counties.

## **E. Conclusion**

While recycling efforts have significantly reduced the volume of solid waste requiring disposal, continued population growth will create an increased need for disposal of the non-recyclable portion of the waste stream.

Since all solid waste in Kane County is collected, recycled, or transferred/landfilled by private companies, the greatest need is to ensure sufficient competition for both waste transfer and landfilling in the private sector. Competition serves to control price increases, and also maintains high quality of service in both the residential and commercial sectors.

## CHAPTER 3

# RECYCLING AND WASTE REDUCTION

### 1. Introduction

Recycling has been an important element in the original 1992 Kane County Solid Waste Management Plan and the 1997 and 2004 plan updates. The Illinois Solid Waste Planning and Recycling Act requires that county solid waste plans include a 25 percent recycling goal, and designate a recycling coordinator for the County.

Recycling has developed into a significant solid waste management strategy. In Kane County, the percent of the waste stream that is recycled has grown from 9% in 1989 to 40% in 2008. It has been estimated that recycling has eliminated the need for 13 new landfills in Illinois since 1990.

This level of recycling has been achieved as a result of high levels of cooperation from municipalities, the private sector, and the general public.

### 2. Waste Reduction

Waste reduction is identified as the most preferred method of solid waste management in the Illinois Solid Waste Management Act. Waste reduction requires significant behavioral change by consumers. Through its educational programs, Kane County has attempted to encourage consumer behavior to change purchasing habits to reduce waste. However, public response to waste reduction messages has been difficult to measure.

Landscape waste management is one area in which waste reduction efforts have occurred. After landscape waste was banned from Illinois landfills in 1990, many homeowners began leaving their grass clippings on their lawns. Mulching features have since become standard on most lawn mowing equipment. Many residents also turned to backyard composting as a method to reduce the volume of landscape waste requiring collection.

Another approach to waste reduction that has proven successful is the implementation of volume-based billing programs by municipalities. This approach provides generators with a direct financial incentive to reduce and recycle as much of their waste stream as possible. Five municipalities (Aurora, Batavia, Geneva, North Aurora, and St. Charles) have full volume-based billing for residential solid waste collection. Two other municipalities (Elgin and Montgomery) have modified volume-based programs.

#### ***Recommendation 3.1***

*Continue to support and encourage the implementation of volume-based collection programs and other appropriate waste reduction measures throughout the County.*

### **3. Residential Sector**

#### **Municipal Curbside Recycling**

All municipalities in the County that contract for garbage service also provide curbside recycling service for their single-family residents. Weekly set-out rates, as reported by haulers, ranges from 75 to 94 percent. The amount of recyclables collected in these programs averages 80 pounds per household per month.

All municipal curbside programs have similar menus of accepted materials, including newspapers, magazines, mixed paper, chipboard, cardboard, aluminum and steel cans, glass containers, and plastic containers marked with #1, #2, #3, #4, #5, and #7 codes.

When these programs were initiated, residents were provided with a single recycling bin, usually about 14 gallons in size. Some towns have since upgraded to an 18 gallon bin. However, even that size is typically insufficient for the weekly recyclables from many households. A common curbside scene is an odd assortment of the original bin along with 2-3 other containers to hold all the items for recycling.

The City of Elgin and several other locations have provided residents with 64 gallon wheeled carts for their recyclables. These larger containers have resulted in an increase of 10-40% in recycling volumes.

#### **Unincorporated Areas**

In unincorporated areas, the County's recycling ordinance requires that all haulers provide recycling service to all of their residential customers. In practice, some 90 percent of unincorporated homes have recycling service.

#### **Multi-Family Dwellings**

Municipal refuse contracts typically cover residential dwellings containing 1-4 units. Larger multifamily buildings contract privately for refuse service. Only an estimated 30 percent of multi-family buildings currently have functioning recycling service.

Recycling in multi-family buildings is consistently more problematic than for single-family residences. Recycling containers are often filled with garbage if the garbage dumpster is full. High turnover rates among tenants make education an on-going concern.

The County's 1997 recycling ordinance required haulers to provide recycling service for these building, and building owners to provide recycling service for their residents. Efforts to develop a practical mechanism to enforce these provisions have not been successful.

#### **Drop-Off Programs**

Three recycling drop off facilities are located around the County, operated by private companies. These facilities are typically used by multi-family residents, small businesses, and rural residents without garbage service. The volume of recyclable material collected at these locations is negligible when compared with the volume from curbside programs.

***Recommendation 3.2***

*The County should encourage municipalities to increase the size of recycling bins when renewing or bidding refuse/recycling contracts.*

**4. Commercial Sector**

Commercial and institutional establishments generate 50 percent of all solid waste generated in Kane County. The composition of commercial waste is quite different from residential waste and can vary significantly among different establishments. The commercial waste stream does contain large amounts of recyclable material, including paper, cardboard, pallets, etc.

Businesses and non-profits contract directly with a private hauler to collect their solid waste. More than 2,000 establishments also rely on their waste hauler to provide recycling services. Other businesses use the services of a third-party company to recycle large quantities of corrugated paper, scrap metal, pallets or other materials.

The 1996 Kane County recycling ordinance required all commercial establishments to recycle the two largest recyclable materials in their waste stream. In the first two years after this requirement was adopted in 1996, countywide compliance was estimated at 70 to 80 percent. Since then, however, it is believed that compliance rates have dropped to about 40 percent of all establishments. Efforts to develop a practical mechanism to enforce these provisions have not been successful.

**5. Construction Sector**

This sector generates an estimated 12.6 percent of the total Kane County waste stream. Construction waste includes large quantities of cardboard and wood, and smaller quantities of other recyclable materials, such as metals and plastics.

Recycling on construction sites is often problematic, with contamination being a typical problem. Centralized sorting facilities have been developed in several parts of the State. However, current regulatory requirements impede further development in Kane County.

Recycling activity in this sector has been market-driven. Increased distances to disposal sites and increased disposal tipping fees will lead to increased recycling from construction sites, particularly as regulatory barriers are removed.

***Recommendation 3.3***

*Continue to monitor and encourage the development of private sector programs and markets for construction waste.*

## 6. Household Hazardous Waste

The County's Solid Waste Plans have contained a consistent goal to reduce the volume *and toxicity* of waste destined for disposal. Since 1992, the County has used several different approaches for the management of this material.

### One-Day Collection Events

Kane County has worked with the Illinois Environmental Protection Agency (IEPA) to offer one-day collection events for residents. From 1992 through 2008, 25 of these events have been conducted at various locations. The 25 one-day events have been attended by 30,528 residents and diverted an estimated 3,000,000 pounds of material from landfills.

### Permanent Facility

In 1996, the City of Naperville and the IEPA opened Illinois' first permanent drop-off facility for HHW. The location of this facility is convenient to many residents in the southern portion of Kane County.

Beginning in 1998, Kane County has entered into an agreement with the City of Naperville to provide financial support for the operation of this facility. From 1998 – 2008, 19,859 Kane County residents per year have used this facility.

### Pick-up Service

In an effort to provide more convenient HHW service to residents of northern Kane County, the County and the City of Elgin contracted with Curbside, Inc. in 1999 to provide an HHW pickup service for Elgin residents. In 2000, this service was expanded to other northern portions of the County, including South Elgin, Elgin Township, Dundee Township, Gilberts, and Hampshire. From 1999 – 2008, 5,600 households have used this service.

<b>SUMMARY OF HHW COLLECTION PROGRAMS</b>		
<b>Program</b>	<b>Households Served</b>	<b>Amount Collected</b>
One-Day Events	30,528	3,050,000 lbs.
Permanent Drop-off	19,859	1,200,000 lbs.
Pick-up Service	5,600	560,000 lbs.
Motor Oil Drop-offs	13,348	183,000 gallons
<b>Totals:</b>	<b>69,335 households</b>	<b>4,810,000 lbs. +</b>

### Used Motor Oil

The County began conducting separate drop-off days for used motor oil in 1994, in an effort to divert this material from the more-expensive HHW collections. At that time, there were no private businesses in the County that would accept used oil from the public at no charge. From 1994 – 2008, the County conducted 65 one-day collection events, which were attended by 13,348 people and collected some 183,700 gallons of used oil.

Numerous private businesses now accept used motor oil from the public at no charge. In addition, the cities of Batavia and St. Charles, used motor oil is collected curbside by their contracted haulers. With the development of municipal and private sector options, the County has reduced the frequency of its used oil collection events.

### **Household Batteries**

The County has also conducted a program to collect and recycle used household batteries to divert heavy metals including cadmium, lead, and mercury from the waste stream. Battery recycling began in 1995 with a drop-off location in Plato Township. Additional drop off points have been established in Elgin Township, who assumed responsibility for the program in 2006. From 1995 – 2008, an estimated 120,000 pounds of batteries have been recycled by these efforts. Small, household batteries are also accepted in the curbside recycling programs in 12 municipalities.

### **Program Funding**

These programs have been funded by various combinations of state, county, and municipal funding. However, their continued operation is being threatened by budgetary limitations, particularly from State and County sources.

### ***Recommendation 3.4***

*Develop additional funding sources in order to continue programs for proper handling of household hazardous waste.*

## **7. Electronic Equipment**

Obsolete consumer electronic equipment, such as computers and televisions, has been identified as items which should be diverted from disposal because of the quantity and the toxicity of some components. The County began conducting collection events for this material in 2000.

Since then, 65 collection events have served a total of 30,716 participants and collected about 3,600,000 pounds of material. Participation has increased significantly each year.

In 2009, the Illinois General Assembly passed Public Act 95-0959, the “Electronic Products Recycling and Reuse Act.” This law bans electronic equipment from Illinois landfills, beginning in 2010, and requires product manufacturers to establish programs to recycle this material.

### ***Recommendation 3.5***

*Develop new collection opportunities for used electronic equipment, in response to Public Act 95-0959.*

## **8. Other Materials**

### **Landscape Waste**

Landscape waste was banned from Illinois landfills in 1990. Separate collection of this material is provided by municipalities, townships, and private businesses. The collected material is either chipped, land-applied on farmland, or composted at permitted facilities.

## **Appliances**

Used appliances, also known as “white goods”, have been banned from Illinois landfills since 1994. All local waste haulers have made arrangements with subcontractors for the separate collection of white goods from residential customers.

## **Tires**

Used tires have been banned from Illinois landfills since 1995. Retailers are required to take back used tires when new tires are purchased. In addition, many tire retailers will accept extra used tires for a small fee. The County has conducted occasional free tire drop-off days as a convenience to residents.

## **Books**

Hard and soft-bound books cannot be recycled in existing residential recycling programs, because of the bindings. However, recycling markets do exist for books, as long as they are collected and shipped separately. The County conducted a pilot book recycling event in early 2003, where some 220 residents brought in over 11,000 books. Subsequently, books are collected during the monthly electronics recycling program. From 2003 through 2008, some 400,000 pounds of books have been recycled.

### ***Recommendation 3.6***

*Continue to monitor the operation of programs for the collection and processing of landscape waste, appliances, tires and books to ensure that effective programs are in place for the proper handling of these materials.*

## **Food Waste**

Food scraps comprise 12% of landfilled solid waste in Illinois, according to the 2009 report, “Illinois Commodity/Waste generation and Characterization Study”. The only larger material found in landfills is recyclable paper (15% of total).

Food waste originates from residential, commercial, and institutional sources. This organic matter is readily compostable. Prior to 2009, limited attempts had been made to compost food waste, due to regulatory barriers. However, Senate Bill 99, currently waiting the Governor’s signature, would eliminate those barriers. A new generation of collection and composting programs for this material should follow.

## **Textiles**

Used clothing and other textiles represent 3 percent of landfilled solid waste. These items are readily recycled. Collection programs exist, primarily by charitable organizations, and for-profit “drop boxes”. However, current efforts result in the recycling of only about 15 percent of the available material.

### ***Recommendation 3.7***

*Develop or encourage new programs to increase food waste composting and textile recycling.*

## **9. Education Programs**

### **Public Education**

Public education is critical to the continued success of recycling programs, especially in areas such as Kane County which are experiencing high rates of population growth and turnover in existing homes. Important educational messages include reminders of what materials can (and cannot) be recycled, the benefits of recycling, and results of current recycling programs.

The County publishes an annual guide to local recycling programs, which is distributed County-wide. Program information is posted on the Kane County website, and press releases are issued for individual collection events. In addition, program information is distributed to all local governments and waste haulers, which has resulted in an established referral network, through which the County receives more than 2,000 telephone and e-mail inquiries each year. County staff also conducts presentations to numerous local organizations.

### **School Programs**

Schools are an important setting for establishing recycling habits at an early age. From 1994 – 2005, the County conducted a comprehensive program designed to increase the level of recycling in schools, and to inform students and staff about the importance of recycling at school, at home, and in the workplace. This program was discontinued due to budgetary limitations.

### ***Recommendation 3.8***

*Continue public education efforts to support local recycling programs and continue to offer programs to support in-school recycling efforts and increase recycling awareness in local schools.*

## CHAPTER 4

### SOLID WASTE DISPOSAL

While recycling efforts have significantly reduced the volume of solid waste requiring disposal, continued population growth will create an increased need for disposal of the non-recyclable portion of the waste stream.

#### **Incineration and Alternative Technologies**

During the planning process for both the 1992 plan and the 1997 Plan Update, non-landfill technologies were extensively studied. Both studies found that no alternative approaches would eliminate the need for a landfill; all would require a complex site selection process; all would be susceptible to the impact of waste flow control (or lack of control); and that tipping fees would be substantially higher than landfill tipping fees.

The County has continued to monitor developments in the solid waste management field in Illinois and throughout the Midwest. There are currently no operating waste-to-energy incinerators in Illinois and no new incinerators or mixed-waste composting facilities have been built in the Midwest for the past several years. No other technologies appear to be market-ready or cost-competitive at this time.

Midwestern market economics have concentrated the flow of solid waste to large, regional-scale landfills. In this environment, non-landfill technologies do not present a viable alternative.

#### **Recommendation 4.1**

*Continue to monitor technological developments and market conditions for non-landfill waste management approaches such as waste-to-energy incineration and mixed-waste composting.*

#### **Landfilling**

Following the closure of Settlers Hill landfill in 2006, all of Kane County's solid waste has been disposed in landfills located in other Illinois counties. As was noted in Chapter 1, County Board Resolution #95-247 stated that "The Kane County Board will not pursue the acquisition of property, the development of, or siting approval for a new landfill facility in Kane County". This plan reaffirms that resolution.

The Illinois EPA produces an annual report on landfill capacity in Illinois. As of January 1, 2008, there were 988 million cubic yards of available capacity in 48 Illinois landfills. This remaining capacity is 33 percent greater than the 743 million cubic yards of landfill capacity that was available in 2002. This increased capacity is the result of expansions of existing landfills and the development of new landfills.

At the end of 2007, the IEPA also reported that 18 years of landfill capacity remained in Illinois, a significant increase from the 14 years of capacity reported in 2001 and 9 years of landfill capacity available in 1992.

The three major waste haulers in Kane County all have access to northern Illinois landfills that are controlled by their respective companies. The linkage between haulers and landfills will ensure that the solid waste industry in Kane County will remain competitive for both the residential and commercial sectors.

Table 5.1 lists five landfills that receive waste from Kane County. The Prairie View landfill in Will County is limited to receiving waste from Will County and border communities, including the City of Aurora.

Table 5.1 Selected Landfills for Kane County Solid Waste		
Landfill	Location	Operator
Lee County Landfill	Dixon	Allied Waste Industries
Livingston Landfill	Pontiac	Allied Waste Industries
Orchard Hills	Ogle County	Veolia Environmental Services
Prairie Hill RDF	Whiteside County	Waste Management
Prairie View Landfill	Will County	Waste Management

In summary, adequate landfill capacity appears to exist in northern Illinois to meet the disposal needs for non-recyclable waste generated within Kane County.

The Kane County Solid Waste Management Plan opposes the siting and/or construction of any new landfill capacity within Kane County.

## Transfer Stations

Almost all of Kane County's non-recycled solid waste is managed through four privately-operated transfer stations. Two of these facilities are located in Kane County and two are just over the county boundary in Cook and DuPage counties. As additional population growth occurs in the western portions of Kane County, additional transfer facilities will be needed.

## Siting Approval

Waste transfer stations are defined as pollution control facilities under the Illinois Environmental Protection Act and must secure local siting approval as well as Illinois EPA permit approval. If a transfer station is proposed to be located in unincorporated Kane County, the County is vested

with siting authority. If a transfer station is proposed to be located in an incorporated area, the municipality is the appropriate siting authority.

Section 39.2 of the Illinois Environmental Protection Act governs the local siting process. In order to receive local siting approval, transfer stations must demonstrate compliance with nine separate criteria.

Kane County has adopted a local siting ordinance (Kane County Code, Chapter 11, Article V) to implement the requirements of Section 39.2. Kane County wishes to insure that sufficient information is presented on proposed transfer stations, and that siting applications comply with statutory requirements to include “sufficient details” demonstrating compliance with the nine criteria of Section 39.2.

The 2004 Kane County Solid Waste Management Plan Update contains specific required content of applications for local siting approval of transfer stations to be located within Kane County. Unless a siting application contains all the information as defined and required in the 2004 Plan Update, the application is incomplete and does not contain the necessary information for the siting authority to adequately review and objectively rule on the proposed facility. Any siting application filed within Kane County which does not contain all of the information specified in the 2004 Plan Update is inconsistent with the County’s Solid Waste Management Plan.

Transfer stations which are used exclusively for landscape waste, and at which landscape waste is not stored for more than 24 hours, are exempt from the Section 39.2 process. Such facilities must obtain zoning approval, however, as well as IEPA permit approval. Transfer stations which are used exclusively for recycling purposes are also exempt from the siting process.

Upon receiving local siting approval, a facility is required to obtain development and operating permits from the Illinois EPA. Transfer stations may also require additional approvals such as stormwater permits, building permits, and occupancy permits. After they are constructed and commence operations, transfer stations are inspected by the Illinois EPA.

The Kane County Solid Waste Management Plan recognizes the need for additional transfer station capacity to be constructed which accepts waste generated by the residents and businesses of Kane County.

### **Host Fees**

By their nature, pollution control facilities have external consequences that extend beyond the limits of the property and beyond municipal boundaries. A host agreement between the County and operator of a pollution control facility would provide compensation and regulation of external consequences.

County Board Resolution #05-462, adopted on December 13, 2005, requires an applicant for a pollution control facility located anywhere in Kane County to enter into a host agreement with the County. This agreement is required to establish consistency with the County’s solid waste management plan, and must be entered into before a finding of plan consistency can be determined for any proposed facility. County Board Resolution #05-462 is incorporated by citation into this plan.