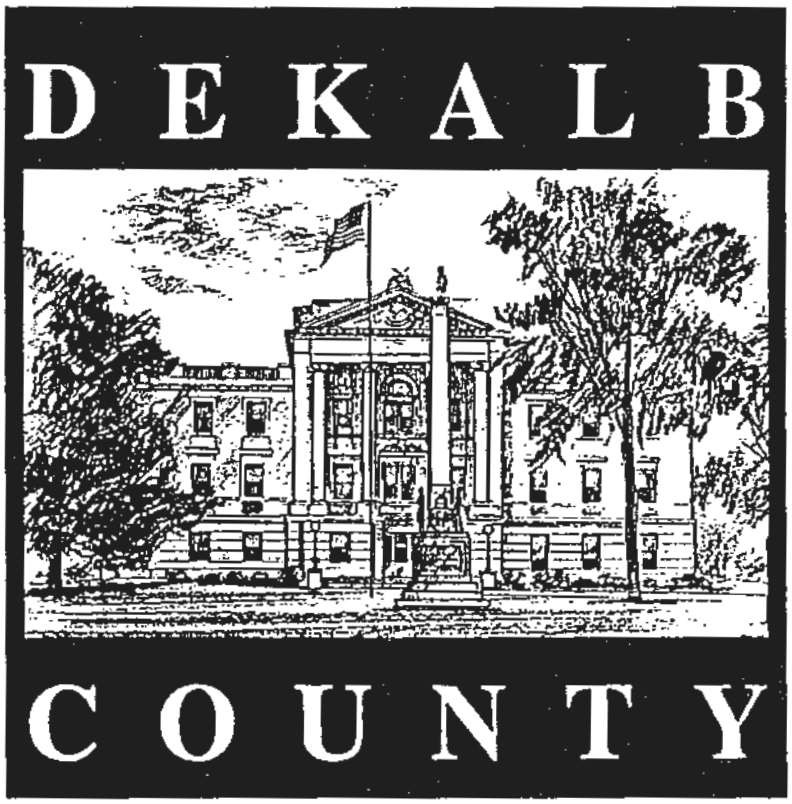
DEKALB COUNTY

VOLUME II - SOLID WASTE MANAGEMENT PLAN



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EXECUTIVE SUMMARY

DeKalb County began its waste management planning process in February, 1993 upon receiving a Phase I/Phase II planning grant from the Illinois Environmental Protection Agency (IEPA). The DeKalb County Phase I Waste Management Needs Assessment was finalized in April, 1994. The County began its Phase II planning process in October, 1993. During Phase II, the County officials, the DeKalb County Citizens Advisory Committee (CAC) and general public focused on building a consensus on how to manage the County's waste for the next 20 years at a minimum. The results of the Phase II planning process are contained in a two volume report: Volume I - Solid Waste Management Alternatives and Volume II - Solid Waste Management Plan.

The DeKalb County CAC played an instrumental role in the analysis of alternatives and recommending a long-term waste management system for the County. The DeKalb County Board was responsible for final review of the draft Phase II reports and gave authorization to place the Phase II reports on file for the 90 day public comment period.

The CAC met monthly from October, 1993 to September, 1994. During its monthly meetings, the CAC reviewed outlines, handouts and technical reports (i.e. chapters) on source reduction and reuse; household and CESQG hazardous waste management; recycling; intermediate facilities; compost processes and wet/dry collection systems; incineration for volume reduction and for energy recovery; landfilling; public involvement and education; and implementation options. Volume I is comprised of the technical reports developed for each of the above topics.

The final CAC meeting in October, 1994 focused on developing consensus on the final waste management system; identifying which entities would be responsible for implementing the Plan; analysis of the economic and environmental advantages and disadvantages of the proposed Plan; estimated life cycle costs; specific implementation tasks; and, a time schedule for implementing the Plan.

DEKALB COUNTY'S CURRENT WASTE MANAGEMENT SYSTEM

Municipal waste generation in DeKalb County in 1993 was estimated to be approximately 105,874 tons. The municipal waste generation was broken down by sector as follows: 41 percent was residential waste; 24 percent was commercial/institutional waste; 32 percent was construction/demolition debris and 3 percent was industrial office and lunchroom waste. This is equivalent to 7.4 pounds per capita per day. By the year 2015, it is estimated that DeKalb County will generate approximately 111,731 tons of municipal waste.

The majority of municipal waste generated in DeKalb County is landfilled. Based on information from the Phase I Waste Management Needs Assessment study, approximately 56 percent of the municipal waste generated in the County was landfilled in 1992. The remainder was recycled (38 percent), composted (6 percent) or incinerated (less than 0.1 percent).

Under the Solid Waste Planning and Recycling Act, plans must contain recycling programs which are designed to achieve a 15 percent recycling goal by the third year of the program and 25 percent by the fifth year. These goals are in relation to municipal waste and are to be met in terms of weight (as opposed to volume). Based on 1992 waste management practices, DeKalb County is achieving a 44 percent (38 percent recycled plus 6 percent composted) municipal waste recycling rate. As a result, DeKalb County is already significantly exceeding the State's municipal waste recycling goals.

Landfill capacity is relatively abundant in the DeKalb County region at this time. There is one permitted landfill in DeKalb County - the DeKalb County Landfill owned and operated by WMX. According to WMX, the DeKalb County Landfill has approximately 20 years of capacity. According to the Phase I Waste Management Needs Assessment, 98 percent of the County's waste is taken to the DeKalb County Landfill.

PROPOSED WASTE MANAGEMENT SYSTEM FOR DEKALB COUNTY

After conducting a comprehensive review of the numerous programs and facilities available for managing its waste stream (see Volume I of the Phase II Plan), DeKalb County is proposing to build upon its integrated approach to managing waste. The integrated approach includes public involvement and education, source reduction, reuse, household and CESQG hazardous waste management, recycling, landscape waste management and landfilling. The following section describes the primary components of the DeKalb County Solid Waste Management Plan.

Public Involvement and Education. Public involvement and education will play an important role in the continued success of the County's waste reduction program. The County's waste reduction program components (i.e. source reduction, reuse, hazardous waste management and recycling) are predicated on the waste generator being informed and actively participating. The public involvement and education program will include:

- Designating a Solid Waste Coordinator to oversee the development and on-going administration of the education program. The primary components of the program will include an informational clearinghouse, publicity campaign, educational curricula, waste audit assistance, a regular newspaper column and/or newsletter, emphasis on homeowner management of landscape waste and public achievement awards.

- Acquiring and distributing educational materials to the County Courthouse and each public library in the County.

- Publishing a periodic newspaper column and/or newsletter publicizing various waste reduction methods available to the public, the County's progress on its recycling goals and other waste management information.

- Working with the Regional Superintendent of Schools to assist the schools with curriculum enhancement on waste management.

- Working with the DeKalb County Natural Resources Education Consortium to develop and implement the overall education program.

Source Reduction and Reuse. Source reduction is a front-end approach to waste management that attempts to prevent waste from being generated in the first place, thus avoiding the expenses involved in collecting, recycling, treating and disposing of waste after it has been generated. The County is committed to source reduction and believes that reducing the amount of refuse before it is generated is the best solution to waste management. The source reduction and reuse program will include:

- Establishing measurable source reduction goals.
- Conducting waste audits at county government facilities and implementing source reduction/reuse measures to set an example to local businesses and units of local government, and establishing a procurement policy that favors source reduction, reuse, durability and recyclability.
- Providing waste audit assistance and identifying and/or developing model source reduction/reuse programs in commercial, institutional and industrial (CII) establishments, developing or providing a self-help manual on waste auditing to businesses and coordinating waste audit services with local recycling service providers and encouraging businesses to work with their haulers to establish waste reduction programs.
- Evaluating and implementing exchange and collection programs, such as community swap boards and curbside collection of donated goods, to facilitate the exchange of reusable materials.
- Educating residents on how to handle landscape waste in their own backyards through composting, mulching or chipping and how to reduce or eliminate problems associated with backyard composting.
- Reviewing existing ordinances related to solid waste management and determining if revisions or new ordinances are necessary.
- Supporting environmentally and economically responsible source reduction legislation and regulations.

Household and CESQG Hazardous Waste Management. The County's hazardous waste management program will address hazardous waste generated by households and conditionally exempt small quantity generators (CESQG's), or businesses that generate less than 220 pounds per month of hazardous material or 2 pounds per month of acutely hazardous material. The primary focus will be on minimizing the amount of household hazardous waste (HHW) generated

and properly managing the waste once it is generated. The household and CESQG hazardous waste management program will include:

- Pursuing an extensive education program focusing on explaining the potential health and environmental impacts of HHW, the substitutes available for hazardous products and the proper and responsible disposal practices for toxic materials.

- Informing CESQG's about the Illinois Industrial Materials Exchange Service and providing waste audit assistance to these businesses in an attempt to reduce the toxicity of their waste stream.

- Assessing the quantity of hazardous waste that is generated by households and CESQG's and the need for collection programs for household and CESQG hazardous waste.

- Evaluating the feasibility of developing a permanent HHW collection program either on a county-wide basis or a regional basis with neighboring counties.

- Encouraging and coordinating efforts with local retailers and service providers to provide local collection of materials including paint, used motor oil, antifreeze and batteries.

Recycling. Recycling is already the foundation of DeKalb County's waste reduction program. The County's recycling program is already achieving a 31% residential waste recycling rate and a 44% municipal waste recycling rate. The County is setting additional goals for both residential waste and municipal waste. The residential recycling goals are 35% and 40% in the fifth and tenth year of Plan implementation. The municipal waste recycling goals are 47% and 51% in the fifth and tenth year of Plan implementation. The 51% recycling goal is significant because, if it is achieved, DeKalb County will no longer be landfilling a majority of its waste. The recycling program will include:

Residential Waste.

- Evaluating whether to establish a drop-off recycling network to serve the residents located in the unincorporated area of the County or whether to extend curbside recycling to rural residents, especially those in rural subdivisions.

- Establishing a recordkeeping system to track the amount of municipal waste recycled and landfilled, and conducting an annual review of the County's progress toward reaching its residential and municipal recycling goals.

Commercial/Institutional (C/I) Waste.

- Encouraging haulers to provide recycling services to C/I establishments upon request and to collect a maximum range of recyclables.

- Assisting interested C/I establishments in conducting C/I waste audits to develop or expand recycling programs, and identifying or helping develop model recycling programs in C/I establishments.

Construction/Demolition (C/D) Debris.

- Examining the generation and management of C/D debris, entering into dialogue with local C/D contractors to exchange information concerning the generation and management of C/D waste (especially asphalt and concrete), identifying local C/D markets and/or potential market opportunities, and setting C/D recycling goals.

- Developing and distributing information guides on the preferred methods for managing C/D debris.

Orphan Wastes.

- Making available information on orphan waste recycling and tracking the developments of recycling opportunities for lead acid batteries, motor oil, tires, and white goods (i.e. major appliances).

- Encouraging local automotive stations and motor oil retailers to accept and recycle used motor oil and making information available to the public on participating establishments or programs.

- Assisting the Farm Bureau publicize its tire collection program and determining the need to augment current tire collection efforts with an additional IEPA funded tire collection day.

- Working with local tire retailers and white goods handlers to comply with new legislation.

Other.

- Developing a job description for a Solid Waste Coordinator position and designating a Solid Waste Coordinator to promote, implement and administer the County's waste management programs, including waste reduction and final disposal components.

- Implementing an in-house recycling program within DeKalb County facilities and strongly encouraging other units of local government to implement similar programs.

- Developing a procurement policy patterned after the State's policy which gives preference to recycled-content materials wherever economically and practically feasible and strongly encourage other units of local government to develop similar policies. Attempts should be made to purchase post-consumer recycled paper (office paper, stationary, forms, tissue paper, etc.), post-consumer recycled plastic products (e.g. lawn edging, garbage cans, park benches), re-refined motor oil and remanufactured/retread tires for government vehicles, and compost for landscaping in parks, wherever such use is practical and economical.

- Exploring the feasibility of developing a procurement policy for recycled C/D material.

Landscape Waste Management. The landscape waste program components will include:

- Encouraging residents to leave grass clippings on the lawn or compost landscape waste in their own backyards.

- Encouraging residents to use the DeKalb County Landscape Waste Facility instead of burning landscape waste.

- Investigating the development of special collection and management programs for landscape waste which is difficult for residents to manage in their own back yards, such as large diameter landscape waste, storm damage and Christmas trees.

- Encouraging the use of composted materials.

Final Disposal. The County reviewed a variety of options for final processing and disposal of the waste which could not be reduced, reused or recycled. After evaluating the advantages and disadvantages of these options, the County has decided not to recommend

transfer stations, mixed waste processing, RDF processing, municipal waste composting, or incineration for energy recovery or for volume reduction (with the exception of the NIU incineration project) at this time. Each of these technologies will be re-evaluated during the five-year updates to the Plan. The County will monitor the status of the NIU incinerator feasibility report. The County's policy on incineration is that if viable markets exist for wastestream components, they should be recycled, not incinerated. The County's recommended final disposal program includes landfilling and more specifically the following components:

- Continuing to rely on existing landfill capacity for disposal of the County's waste.
- Preparing an annual report on the DeKalb County region's disposal capacity and submitting it to the County Board.
- Adopting County-wide landfill siting criteria within two years of Plan adoption. No new landfills or landfill expansions will be sited in DeKalb County during this two year period unless a need is demonstrated and the County Board acknowledges this need in a resolution.
- Reviewing the existing County siting and filing fee ordinances and making amendments, if necessary.
- Enacting a local landfill surcharge to assist in funding implementation of the Plan.
- Continuing to limit the service area of the DeKalb County Landfill, as stipulated in the County's June 5, 1989 siting decision. If for whatever reason the service area is expanded, the owner/operator of the landfill must negotiate a Host County Agreement with the DeKalb County Board prior to accepting waste from the expanded service area.
- Proposals for green waste composting will be encouraged and considered, but issues such as odors, markets for the compost and cost must be addressed by developers. (Note: The City of DeKalb and Waste Management - West have received a grant from the Department of Energy and Natural Resources to conduct a pilot wet/dry collection study in 1995. If successful, there may be a need for a permanent green waste composting site in DeKalb County.)

IMPLEMENTATION OF THE WASTE MANAGEMENT SYSTEM

The DeKalb County Board will be the governmental entity responsible for taking the lead on implementing the Plan. The County Board recognizes the important role of other units of local government in the implementation of the Plan. As a result, the County will strongly encourage the municipalities to enact a resolution to adopt the DeKalb County Solid Waste Management Plan. The County will also contact the municipalities to determine their interest in signing an intergovernmental agreement to more clearly define the roles and responsibilities of the County and municipalities in implementing the Plan.

In addition, the County will continue to work with residents; the business community; waste haulers; landfill owners/operators; recycling providers; and other not-for-profit, civic and professional organizations to elicit feedback and enhance cooperation in implementing the Plan. DeKalb County's Solid Waste Coordinator will be responsible for administering and overseeing the implementation of the County's Solid Waste Management Plan. The County will begin implementation of its Plan immediately after its adoption. It is anticipated that the majority of the programs called for in the Plan will be implemented or implementation initiated within three to five years of the date the Plan is adopted by the County Board.

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CHAPTER 1
INTRODUCTION

The Phase II Waste Management Plan for DeKalb County has been divided into two volumes: Volume I - Solid Waste Management Alternatives, and Volume II - Solid Waste Management Plan. This Volume II report builds upon the research and evaluation conducted for Volume I and provides a detailed explanation of the planned waste management system and how it will be implemented.

The remainder of this chapter contains: 1) a brief history of the County's planning project; 2) an explanation of the requirements of the Solid Waste Planning and Recycling Act (SWPRA); and, 3) an overview of the contents of the remaining chapters in Volume II.

BRIEF HISTORY OF DEKALB COUNTY'S PLANNING PROJECT

The Illinois Environmental Protection Agency (IEPA) awarded a combined Phase I/Phase II planning grant to DeKalb County on February 18, 1993. The final Phase I Waste Management Needs Assessment report was completed and accepted by the IEPA on April 13, 1994.

Beginning in October, 1993, monthly meetings were held by the DeKalb County Citizens' Advisory Committee to discuss the content of the County's Phase II Solid Waste Management Plan. The Citizens' Advisory Committee (CAC) was comprised of 18 members representing county government, municipal government, the waste management industry, local recyclers, local industry in general and citizens' groups. Patrick Engineering Inc. conducted the research for Phase I and provided technical advice to the CAC and the DeKalb County Board throughout the Phase II process.

REQUIREMENTS OF THE SWPRA

The Solid Waste Planning and Recycling Act (SWPRA), as amended, requires all counties in Illinois to develop comprehensive waste plans. The primary purpose of the SWPRA is to decrease waste generation, increase recycling, reuse, and composting, and insure the timely development of needed facilities and programs. Section 4(c) and Section 6 of the SWPRA contain minimum standards concerning the content of waste management plans and of recycling programs. The following subsections contain the current text of these two sections of the SWPRA.

Minimum Requirements of a Solid Waste Management Plan. The minimum requirements for a waste management plan according to Section 4(c) of the SWPRA are as follows:

> (c) Each waste management plan shall contain, at a minimum, the following provisions:
>
> > (1) A description of the origin, content and weight or volume of municipal waste currently generated within the county's boundaries, and the origin, content, and weight or volume of municipal waste that will be generated within the county's boundaries during the next 20 years, including an assessment of the primary variables affecting this estimate and the extent to which they can reasonably be expected to occur.
> >
> > (2) A description of the facilities where municipal waste is currently being processed or disposed of and the remaining available permitted capacity of such facilities.
> >
> > (3) A description of the facilities and programs that are proposed for the management of municipal waste generated within the county's boundaries during the next 20 years, including, but not limited to their size, expected cost and financing method.
> >
> > (4) An evaluation of the environmental, energy, life cycle cost and economic advantages and disadvantages of the proposed waste management facilities and programs.
> >
> > (5) A description of the time schedule for the development and operation of each proposed facility or program.

(6) The identity of potential sites within the county where each proposed waste processing, disposal and recycling program will be located or an explanation of how the sites will be chosen. For any facility outside the county that the county proposes to utilize, the plan shall explain the reasons for selecting such facility.

(7) The identity of the governmental entity that will be responsible for implementing the plan on behalf of the county and explanation of the legal basis for the entity's authority to do so.

(8) Any other information that the Agency may require.

Minimum Requirements of a Recycling Program. In addition to the general requirements for a waste management plan, the SWPRA contains more specific requirements for the contents of a recycling program. The requirements of Section 6 of the SWPRA are as follows:

Section 6. Each county waste management plan adopted under Section 4 shall include a recycling program. Such recycling program:

(1) Shall be implemented throughout the county and include a time schedule for implementation of the program.

(2) Shall provide for the designation of a recycling coordinator to administer the program.

(3) Shall be designed to recycle, by the end of the third and fifth years of the program, respectively 15% and 25% of the municipal waste generated in the county, subject to the existence of a viable market for the recycled material, based on measurements of recycling and waste generated in terms of weight. The determination of recycling rate shall not include: discarded motor vehicles, wastes used for clean fill or erosion control, or commercial, institutional or industrial machinery or equipment.

(4) May provide for the construction and operation of one or more recycling centers by a unit of local government, or for contracting with other public or private entities for the operation of recycling centers.

(5) May require residents of the county to separate recyclable materials at the time of disposal or trash pick-up.

(6) May make special provision for commercial and institutional establishments that implement their own specialized recycling programs, provided that such establishments annually provide written documentation to the county of the total number of tons of material recycled.

(7) Shall provide for separate collection and composting of leaves.

(8) Shall include public education and notification programs to foster understanding of and encourage compliance with the recycling program.

(9) Shall include provisions for compliance, including incentives and penalties.

(10) Shall include provisions for (i) recycling the collected materials, (ii) identifying potential markets for at least 3 recyclable materials, and (iii) promoting the use of products made from recovered or recycled materials among businesses, newspapers and local governments in the county.

(11) May provide for the payment of recycling diversion credits to public and private parties engaged in recycling activities.

ORGANIZATION OF THE REPORT

Chapter 2 updates and summarizes the findings of the Phase I Waste Management Needs Assessment Report. Current and expected waste generation rates are provided; current waste management practices are described; and the capacity of current waste management facilities are discussed.

Chapter 3 discusses the important role of the Citizens Advisory Committee (CAC) in the writing of the Plan and provides a listing of the preliminary recommendations agreed to by the CAC during the development of the Volume I Report.

Chapter 4 provides a description of the final recommendations approved by the DeKalb County Board for programs and facilities to manage the County's waste for at least the next 20 years; analyzes the life cycle cost and economic advantages and disadvantages of the planned

system; and evaluates the environmental and energy advantages and disadvantages of the planned system.

Chapter 5 focuses on how the waste system proposed in Chapter 4 will be implemented. Included is the selection of the implementation mechanism (e.g., County lead, solid waste disposal district, municipal joint action agency) to be utilized to implement the Plan; a discussion of the entities involved in Plan implementation; a detailed description of the waste reduction and final disposal tasks; an overview of the legal controls or powers necessary to implement the Plan; and a proposed implementation schedule.

Appendix A contains a list of the CAC members.

Appendix B contains the responsiveness summary developed after the public hearing and correspondence with the IEPA.

Appendix C contains definitions for frequently used terms and a list of acronyms.

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CHAPTER 2
SUMMARY OF THE WASTE MANAGEMENT NEEDS ASSESSMENT

This chapter summarizes the findings of the DeKalb County Phase I Waste Management Needs Assessment report. The Needs Assessment was conducted in order to gather information on current trends in the generation, transport, and management of non-hazardous waste in DeKalb County. Analytical techniques were applied to develop waste generation projections and to predict needs for a 20-year planning period. The base year for the report was 1992, although some information has been updated in this review.

The following information is presented in this chapter:

- Current and expected quantities of waste generated in DeKalb County.
- Methods and facilities currently used to manage waste generated in DeKalb County.
- Capacity and life-expectancy of existing regional waste management facilities.

CURRENT AND EXPECTED WASTE GENERATION

The residential, commercial/institutional (C/I), industrial office and lunchroom, and construction/demolition wastestreams together are typically classified as municipal waste (MW). The Illinois Solid Waste Planning and Recycling Act requires that counties design a MW recycling program to achieve a 25 percent recycling rate within five years of Plan implementation. This legislation defines municipal waste as, "garbage, general household, institutional and commercial waste, industrial lunchroom or office waste, landscape waste, and construction or demolition debris." The quantity of municipal waste generated in DeKalb County in 1993 is estimated to be 105,874 tons, based on research conducted for the Needs Assessment and on information received from residential and commercial/institutional surveys, waste management facility operators, a residential waste weigh field study, Northern Illinois

University, the Illinois Environmental Protection Agency, Elmer Larson, Inc. and various published sources. This quantity is equivalent to 7.4 pounds of municipal waste generated per capita per day (pcd).

Table 2-1 and Figure 2-1 show that residential waste comprises a large portion of the total, an estimated 43,626 tons (41 percent of all MW generated). This quantity is equivalent to 3.1 pounds of residential waste generated per capita per day.

TABLE 2-1. WASTE GENERATION IN DEKALB COUNTY, 1993

Wastestream	Tons Per Year	Percent of Municipal Waste	Per Capita Per Day Rate	Percent of Total Waste
Residential Waste	43,626	41	3.1	32
Commercial/Institutional Waste	25,236	24	1.8	19
Construction/Demolition Debris	33,972	32	2.4	25
Industrial Office/Lunchroom	3,040	3	0.2	2
MUNICIPAL WASTE GENERATION	105,874	100	7.4	78
Industrial Waste	29,635		2.1	22
TOTAL WASTE GENERATION	135,509		9.5	100

Total waste generation for 1993, which includes municipal waste (105,874 tons) and industrial waste (29,635 tons) is estimated to be 135,509 tons or 9.5 pcd.

Commercial/institutional (C/I) waste also comprises a large portion of the municipal waste generated in the region, approximately 25,236 tons in 1993 (or 24 percent of MW generated). This quantity is equivalent to an average of 1.8 pounds of C/I waste generated per capita per day. C/I waste generation was estimated in the Needs Assessment study based on employment estimates, surveys to local businesses, and a commercial field sampling study.

An estimated 33,972 tons of construction/demolition debris was generated in the County in 1993. This quantity is equivalent to 32 percent of the municipal wastestream, or 2.4 pounds of construction/demolition debris generated per capita per day.

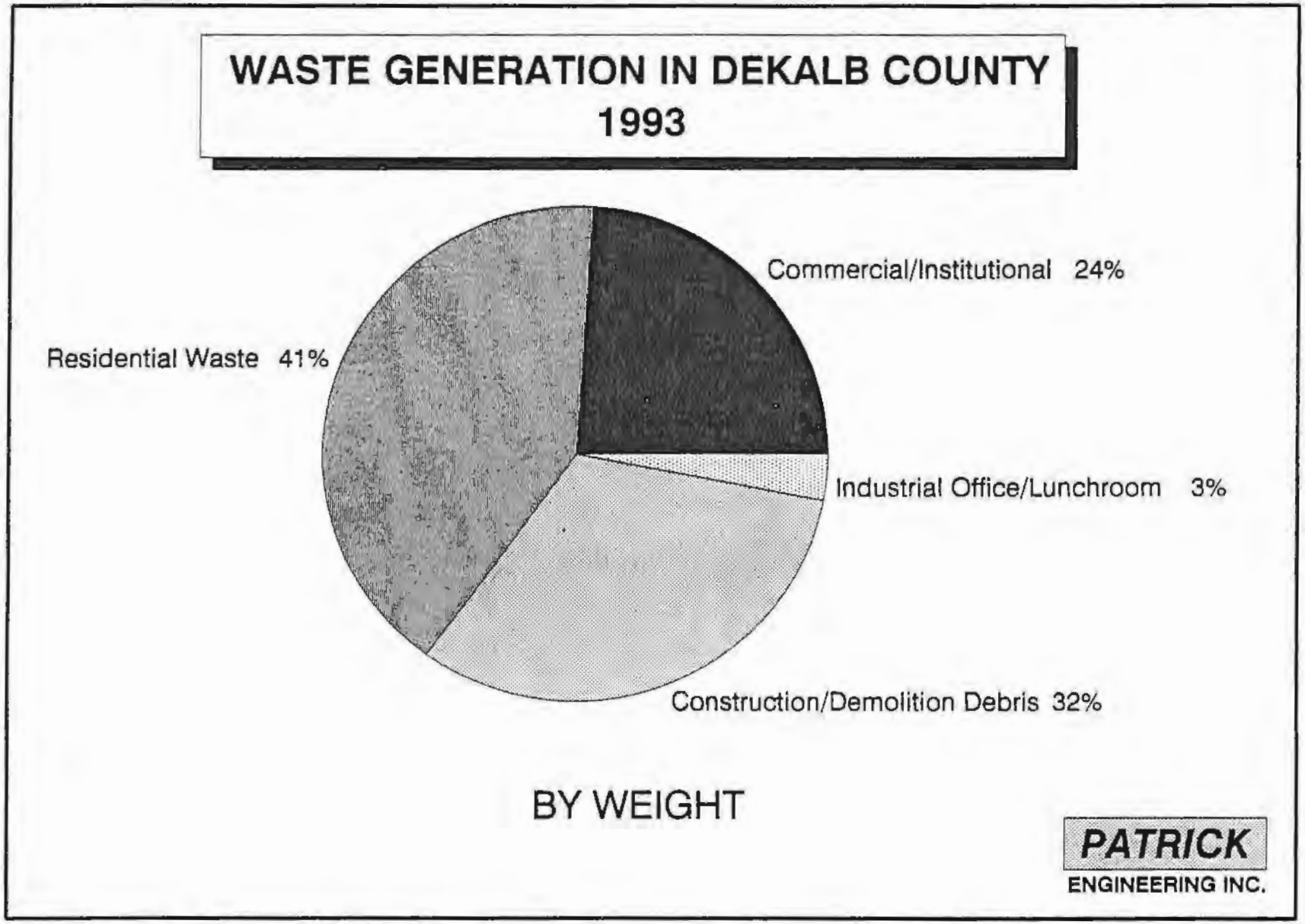

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FIGURE 2-1

Table 2-2 presents a forecast of municipal waste to be generated in DeKalb County through the year 2015. To calculate these wastestreams, the quantity of residential, commercial/institutional, industrial office and lunchroom, industrial, and construction/demolition debris waste was forecasted. Residential waste generation was forecasted as a function of population growth. Population growth projections were obtained from the Illinois Bureau of the Budget (the region's population is expected to increase 3.9 percent over the next 20 years). Commercial/institutional and industrial waste generation were forecasted as a function of employment change. Construction/demolition (C/D) waste generation is assumed to vary proportionally with the change in population levels. Employment projections were obtained from the Illinois Department of Employment Security (the region's total employment is expected to increase 10.0 percent over the next 20 years). Total waste was calculated as the sum of residential, commercial/institutional, industrial office and lunchroom, construction/demolition debris, and industrial waste. Table 2-2 shows the amount of total waste generated is expected to increase approximately 6.5 percent during the next 20 years.

TABLE 2-2. FORECAST OF TOTAL WASTE GENERATION IN DEKALB COUNTY 1993-2015 (TONS PER YEAR)

Wastestream	1993	1995	2005	2015	% Change
Residential Waste	43,626	43,430	44,288	45,333	3.9
C/I Waste[1]	25,236	25,630	26,660	27,757	10.0
C/D Debris[2]	33,972	34,092	34,695	35,297	3.9
Industrial Office/Lunchroom	3,040	3,088	3,212	3,344	10.0
MUNICIPAL WASTE GENERATION	105,874	106,240	108,855	111,731	5.5
Industrial	29,635	30,098	31,307	32,596	10.0
TOTAL WASTE GENERATION	135,509	136,338	140,162	144,327	6.5

Notes: 1. C/I Waste refers to commercial/institutional waste.
2. C/D Debris refers to construction/demolition debris.

METHODS AND FACILITIES CURRENTLY USED TO MANAGE WASTES

Tables 2-3 and 2-4 show the estimated tonnage and percentages of waste managed in DeKalb County in 1993 by landfilling, recycling, composting and incineration. Table 2-4 shows that the majority of municipal waste is landfilled (55.7 percent). Table 2-4 shows that 36.1 percent of municipal waste is recycled, 8.1 percent is composted, and 0.1 percent is incinerated. Since composted material is consider "recycling" under the State definition, DeKalb County is achieving an overall recycling rate of 44.2 percent. Approximately 55.6 percent of the total waste is landfilled, 37.9 percent of the total waste is recycled, 6.3 percent of the total waste is composted, and less than 0.1 percent of the total waste is incinerated.

Seven private haulers provide collection services in DeKalb County, including BFI - Rockford, Community Disposal, Illinois Valley Recycling, Marengo Disposal, Monarch Disposal, Tri-County Disposal (WMX) and Waste Management-West (WMX). Waste Management - West, which recently acquired DeKalb County Disposal (DCD), hauls the majority of the county's waste.

Nine municipalities contract for waste collection services. Collection services are privately arranged for in four municipalities, as well in the unincorporated areas of townships. Collection arrangements for commercial, institutional and industrial establishments are privately arranged as well. The average hauling distance required to dispose of general household waste throughout the county is estimated to be 14 miles.

TABLE 2-3. WASTE MANAGEMENT BREAKDOWN BY TONS PER YEAR (TPY), 1993

Management Method	Residential (TPY)	C/I[1] (TPY)	C/D[2] (TPY)	Industrial Office (TPY)	MW[3] (TPY)	Industrial (TPY)	Total Waste[4] (TPY)
Landfilled	28,760	13,433	13,972	2,812	58,977	16,418	75,395
Recycled	6,694	11,316	20,000	228	38,238	13,180	51,418
Composted	8,172	404	0	0	8,576	0	8,576
Incinerated	0	83	0	0	83	38	121
TOTAL	43,626	25,236	33,972	3,040	105,874	29,635	135,509

Notes:
1. C/I refers to commercial/institutional waste.
2. "C/D" refers to construction and demolition debris.
3. "MW" refers to municipal waste. MW is equal to the sum of residential, C/I and C/D wastes.
4. Total waste is equal to the sum of MW plus industrial waste.

TABLE 2-4. WASTE MANAGEMENT BREAKDOWN BY PERCENT, 1993

Management Method	Residential (%)	C/I[1] (%)	C/D[2] (%)	Industrial Office (%)	MW[3] (%)	Industrial (%)	Total Waste (%)
Landfilled	65.9	53.2	41.0	92.5	55.7	55.4	55.6
Recycled	15.3	44.8	58.9	7.5	36.1	44.5	37.9
Composted	18.7	1.6	0.0	0.0	8.1	0.0	6.3
Incinerated	0.0	0.3	0.0	0.0	0.1	0.1	0.1
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes:
1. See notes in Table 2-3.
2. Values may not add to 100 percent due to rounding.

Landfilling is the primary means of disposal for waste generated within DeKalb County. An estimated 58,977 tons of municipal waste is expected to be landfilled in DeKalb County during 1993. An estimated 75,395 tons of total waste is expected to be landfilled in DeKalb County during 1993.

The DeKalb County Landfill, located in Cortland, primarily serves DeKalb County. The landfill, which is operated by Waste Management, is expected to accept approximately 79,208 tons of waste during 1993 based on 1992 levels. This estimate is a sum of 77,379 tons of non-hazardous waste and 1,829 tons of special waste. Approximately 6,223 tons, or 8 percent, of the non-hazardous waste disposed in the DeKalb County landfill was imported into the landfill during 1992 from counties bordering DeKalb County, including Kane, Kendall, LaSalle, Lee, McHenry and Ogle Counties. The importation of non-hazardous waste, however, has been declining. Only six percent was imported into the DeKalb County Landfill during 1993. Landfill records indicate that quantities of waste landfilled (in both tonnage and cubic yardage) are highest in the spring and summer months and lowest in the fall and winter months.

Landfills used to dispose of DeKalb County's non-hazardous waste include the DeKalb County Landfill (98%), Rochelle Municipal Landfill (1%), States Land Improvement (<1%), Winnebago Reclamation Landfill (<1%), Woodland Landfill (<1%), Peru Municipal Landfill (<1%), Davis Junction Landfill (<1%), and Morris Community Landfill (<1%). Overall, it is estimated that 1,426 tons, or 2 percent, of DeKalb County's non-hazardous waste will be exported from DeKalb County to out-of-county landfills during 1993. Table 2-5 provides information on the regional landfill disposal facilities.

TABLE 2-5. DEKALB COUNTY AREA DISPOSAL CAPACITY

Landfill & County Location	Own/Oper.[1]	Dist.[2]	Tipping Fee[3]	Cap.[4] (TPD)	Remaining Capacity[5]	Years Left[6]	Out-of-County Restrictions
CDT LF (Will)	PR/PR	47	$30.00 ton	501-1000	460,000	1992	NA
Community LF (Grundy)	PR/PR	40	$7.00 cy $8.00 ccy	101-500	686,400	1993	None
Davis Junction (Ogle)	PR/PR	21	$41.22 ton	501-1000	857,070	1994*	None
DeKalb County LF (DeKalb)	PR/PR	0	$8.55 cy	101-500	4,024,908	2013	No OOC waste accepted
Envirotech LF (Grundy)	PR/PR	40	$8.45 cy	26-100	1,978,282	1997	None
ESL LF (Will)	PR/PR	40		NA	390,153	1994	NA
Greene Valley LF (DuPage)	PB/PR	33	$9.15 cy	>1000	31,385,626	1997	NA
Mallard Lake LF (DuPage)	PB/PR	45	$8.10/cy	>1000	26,588,000	2001	NA
Oglesby Municipal LF (LaSalle)	PB/PB	50	$8.00 cy	NA	51,900	1999	NA
Peru Municipal LF (LaSalle)	PB/PB	50	$8.00 cy	26-100	277,702	1996	NA
Rochelle Municipal LF (Ogle)	PB/PB	15	$23.57/ton	101-500	2,117,138	2007*	NA
Settlers Hill LF (Kane)	PB/PR	24	$9.15 cy	>1000	22,233,417	2004*	None
States Land Impr. LF (LaSalle)	PR/PR	45	$7.50 cy	101-500	1,151,600	1999	None
Wheatland LF (Will)	PR/PR	36	$22.50/ton	NA	9,299,675	2011	Temporarily Closed
Winnebago Reclamation LF (Winnebago)	PR/PR	27	$53.00/ton	101-500	3,338,598	1999*	NA
Woodland LF (Kane)	PR/PR	24	$11.35 cy	>1000	14,547,526	1997	NA

Notes:
1. PR means private and PB means public.
2. The distance is estimated in road miles between the City of DeKalb and the disposal site.
3. The tipping fees are either in tons, loose cubic yards (CY), or compacted cubic yards (CCY).
4. Range of daily tons accepted.
5. Remaining gate capacity reported in cubic yards in 1991.
6. (Reported) last year of remaining capacity as of 1992.
7. OOC = Out-Of-County.
8. * indicates expansion is planned.

Sources: IEPA Available Disposal Capacity for Waste in Illinois, January 1993. Landfill Price Digest, March 1993.

A total of 83 tons of municipal waste, or 121 tons of total waste, is expected to be incinerated in DeKalb County during 1993. Of this amount, an estimated 83 tons will occur from commercial/institutional establishments with on-site incinerators and 38 tons will occur from industrial establishments with on-site incinerators.

DeKalb County is expected to recycle 46,814 tons of municipal waste, or 51,190 tons of total waste in 1993. Of the general household materials recycled, an estimated 4,734 tons originate from curbside recycling collections, 1,960 tons originates from drop-off recycling centers, and an estimated 8,172 tons of landscape waste generated by DeKalb County residents will be composted during 1993. Of the commercial, institutional and industrial (CII) materials recycled, an estimated 404 tons of landscape waste will be composted, 7,863 tons originate from CII recycling conducted by haulers, 466 tons originate from commercial/institutional establishments arranging their own markets, 228 tons originate from industrial establishments arranging their own markets (municipal waste recycling), 12,952 tons originate from industrial establishments (non-municipal waste recycling), 1,248 originate from the City of DeKalb's multi-family drop-boxes, 1,739 tons originate from Northern Illinois University's (NIU's) internal recycling program, and approximately 20,000 tons originate from construction/demolition debris recycling.

Households in the thirteen municipalities in the County and various unincorporated areas within the County have curbside collection services (see Table 2-6). In other words, 65 percent of single family households in Dekalb County have curbside recycling programs available to them. Participation rates in these programs range from 75 - 95 percent. Drop-off recycling sites serving the DeKalb County area include the City of DeKalb's multi-family drop-boxes, the DeKalb County Landfill Drop-Box, DeKalb Iron & Metal, the NIU Student Association Recycling Center, R & T Recycling, and the WMX/DCD Processing Center (see Table 2-7).

TABLE 2-6. DEKALB COUNTY CURBSIDE RECYCLING PROGRAM OVERVIEW

Community	SF HHLDs[1]	HHLDs w/ Curbside[2]	% HHLDs Part.	Materials Collected
Cortland	338	415	75%	ONP, CR, CP, HG, MP, MG, GL, AL, S/B, #1PL, #2PL, #6PL, #4RG, MJC
DeKalb	6,493	5,900	95%	ONP, CR, CP, HG, MP, MG, GL, AL, S/B, #1PL, #2PL, #6PL, #4RG, MJC
Genoa	1,018	1,080	90%	ONP, CR, CP, MG, GL, AL, S/B, #1PL, #2PL
Hinckley	599	650	90%	ONP, GL, AL, S/B, #1PL, #2PL
Kirkland	331	250	90%	ONP, GL, AL, S/B, #1PL, #2PL
Kingston	181	168	90%	ONP, GL, AL, S/B, #1PL, #2PL
Lee	46	100	%	
Malta	300	325	75%	ONP, CR, CP, HG, MP, MG, GL, AL, S/B, #1PL, #2PL, #6PL, #4RG, MJC
Sandwich	1,863	35	NA	NA
Shabbona	308	400	90%	ONP, GL, AL, S/B, #1PL, #2PL
Somonauk	378	to come		N\A
Sycamore	3,176	3,400	95%	ONP, CR, CP, HG, MP, MG, GL, AL, S/B, #1PL, #2PL, #6PL, #4RG, MJC
Waterman	358	450	90%	ONP, GL, AL, S/B, #1PL, #2PL
Incorp. Subtotal	15,391	13,173		Varies
Unincorp. Subtotal	4,954	50		Varies
Total	20,343	13,223		

Notes: 1. Haulers estimate of homes with curbside service available (homes with a recycling bin). The figure in parenthesis is the number of single family homes (1 - 4 units attached) in each municipality.

2. Haulers estimate of households which set out recyclables at least once a month

Key: *Materials:* **ONP**: Newspaper; **CR**: Corrugated cardboard; **MG**: Magazines; **HG**: High Grade Paper; **MP**: Mixed paper; **CP**: Chipboard; **SB**:Steel/Bi-Metal; **AL**: Aluminum; **GL**: Glass; **#1PL**: PETE Plastic; **#2PL**: HDPE Plastic; **#4RG**: plastic rings; **#6PL**: Polystyrene Plastic; **MJC**: Milk and juice cartons.

Source: Hauler Surveys, 1993. Municipal Surveys, 1993.

TABLE 2-7. RECYCLING CENTERS IN THE DEKALB COUNTY AREA			
Recycling Center	Hours	Type	Materials Collected
DeKalb County Landfill Somonauk Road Cortland, IL 758-6906	AT: M-F 7-3:30 2nd Sa/Mo 7-11 UN: Su-Sa 24hrs	DB	ONP, GL, AL, S/B, #1PL, #2PL
DeKalb Iron & Metal Co. 900 Oak Street DeKalb, IL 758-2458	AT: M-F 8-11:30 12:30-4 Sa 8-11:30	BB, PR	GL, AL, S/B, SM
NIU Student Association Recycling Center Northern Illinois University DeKalb, IL 753-9920	UN: Su - Sa 24hrs	FSRC	GL (clear), AL, S/B, NFM, FM, AB, WG
R & T Recycling P. O. Box 603 S. Goge Street Somonauk, IL 498-3749	AT: M-F 10-5 Sa 9-3	BB	AB, SM
WMX/DCD Processing Center 115 Simmonds Avenue DeKalb, IL 758-5209	AT: 8-5 UN: Su - Sa 24hrs	DB PR	ONP, CR, CP, HG, MP, MG, GL, AL, S/B, #1PL, #2PL, #6PL, #4RG, MJC

Key: *Type of Collection*: **DB**: drop-box; **FSRC**: full service recycling center; **BB**: buy-back center; **PR**: processor.

Materials: **ONP**: Newspaper; **CR**: Corrugated cardboard; **MG**: Magazines; **HG**: High Grade Paper; **MP**: Mixed paper; **CP**: Chipboard; **SB**:Steel/Bi-Metal; **AL**: Aluminum; **GL**: Glass; **#1PL**: PETE Plastic; **#2PL**: HDPE Plastic; **#4RG**: plastic rings; **#6PL**: Polystyrene Plastic; **MJC**: Milk and juice cartons; **SM**: Scrap Metal; **AB**: Automobile Batteries & Radiators; **WG**: White Goods; **NFM**: Non-ferrous metals.

Source: Recycling Center Surveys, 1993.

Many commercial, institutional and industrial (CII) establishments in DeKalb County have incorporated recycling programs within their operations. In most cases, the establishments either arrange their own markets or contract recycling collection services. NIU and Kishwaukee College have implemented internal recycling programs. The University Recycling Act will require both universities to develop comprehensive waste management plans and to reduce their waste stream by 40 percent by January, 2000.

Up until 1993, DeKalb County Disposal (DCD), recently acquired by Waste Management - West, operated a landscape waste facility where a majority of DeKalb County's landscape waste was composted. Since 1993, the DeKalb County Landscape Waste Facility, located at the landfill in Cortland, provides DeKalb County, as well as many other communities in Northern Illinois, with an outlet for composting landscape waste. The facility, operated by Waste Management, is projected to accept over 61,000 cubic yards, or approximately 26,180 tons at the facility in 1993, although a majority of this material is generated from areas located outside of DeKalb County.

Of DeKalb County's municipal waste discarded in 1993, it is estimated that 56 percent will be landfilled, less than 1 percent will be incinerated, 44 percent will be recycled (36% recycled + 8% composted or land applied). Of DeKalb County's total waste discarded in 1993, it is estimated that 56 percent will be landfilled, less than 1 percent will be incinerated, 38 percent will be recycled and 6 percent will be composted. The municipal waste recycling rate (including quantities of municipal waste recycled and composted) of DeKalb County in 1993, estimated to be 44 percent, surpasses the State's municipal waste recycling goals. The Solid Waste Planning and Recycling Act requires the County to develop and implement a recycling plan designed to achieve a recycling rate of 15 percent within three years and 25 percent within five years of implementation.

LIFE-EXPECTANCY OF EXISTING REGIONAL WASTE MANAGEMENT FACILITIES

The DeKalb County Landfill reports that disposal capacity will be depleted in approximately 20 years or by 2014. Landfill facilities located within proximity to DeKalb County have reported remaining capacity of 1 to 51 years based on current intake volumes.

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CHAPTER 3
REVIEW OF SOLID WASTE MANAGEMENT ALTERNATIVES

DeKalb County's Phase II planning process began with the review and discussion of a wide range of potential programs and facilities. As the information was presented and discussed, a consensus was reached on what programs and facilities met the needs of DeKalb County. This information and the preliminary recommendations of the Citizens Advisory Committee are documented in Volume I of this two volume Phase II report and in this Chapter. Figure 3-1 shows six outputs; outputs 1-5 represent the chapters in Volume I and output 6 is the Volume II - Solid Waste Management Plan.

ROLE OF THE CITIZENS ADVISORY COMMITTEE

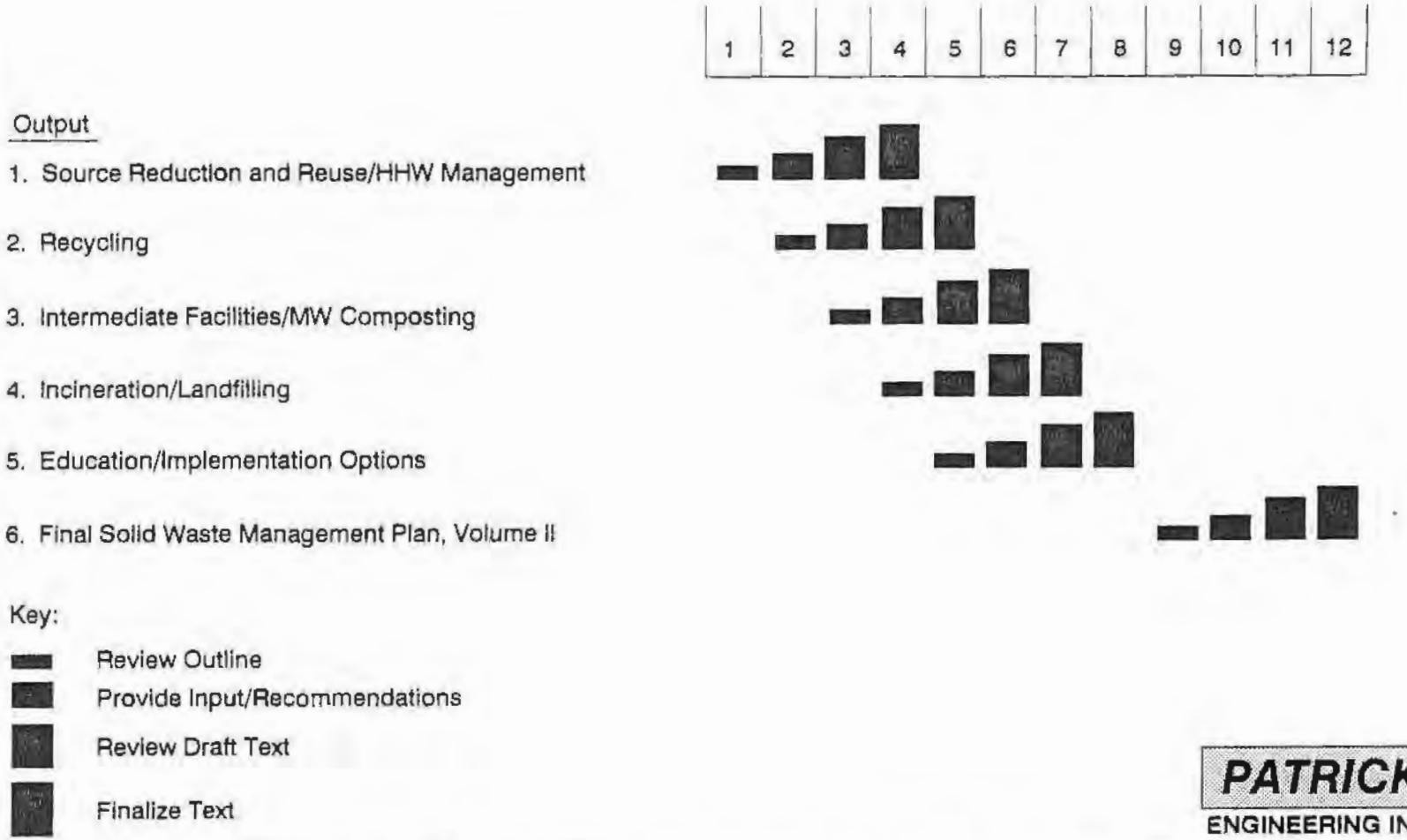
The Citizens Advisory Committee (CAC) met on a monthly basis for approximately one year to discuss and review waste management options and to ultimately recommend a waste management system to the DeKalb County Board. The CAC members were chosen to represent the broad interests of the County and to meet the requirements of the Solid Waste Planning and Recycling Act (SWPRA). A list of the CAC members is presented in Appendix A.

Figure 3-1 provides a depiction of the process utilized by the CAC to review a wide variety of waste management programs and facilities and to arrive at a consensus on the recommended long-term waste management plan. For each output or chapter (e.g. source reduction) listed on Figure 3-1, the CAC went through the following four-step review process.

- Step 1 - the CAC was given an information packet (which included reading materials related to the relevant output), and a proposed outline for the chapter. At the next meeting, the CAC reviewed the outline.

- Step 2 - the CAC further reviewed the information packet and outline. At this step, the CAC provided specific comments to the consultant. After Step 2 was completed, the consultant prepared the first draft text and submitted it to the CAC.

DEKALB COUNTY WASTE MANAGEMENT PLAN
DEVELOPMENT PHASES



PATRICK
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FIGURE 3-1

- Step 3 - the CAC reviewed and commented on the draft text. Those comments were then factored into a second draft.

- Step 4 - the CAC reviewed the second draft and eventually finalized the chapter.

The goal of the four step process was to educate the CAC members (Step 1), elicit their preliminary recommendations (Step 2), factor these recommendations into a draft chapter (Step 3) and arrive at a final consensus for each of the six outputs (Step 4). This process allowed the CAC to develop recommendations based on their input on what policies were most suited for DeKalb County.

The CAC met on a monthly basis beginning in October, 1993. During the timeframe from October, 1993 - September, 1994, the CAC reviewed outlines, information packets and draft text for each of the Volume I chapters listed below:

- Chapter 3 - Source Reduction and Reuse

- Chapter 4 - Toxicity Reduction and the Management of Household and CESQG Hazardous Waste

- Chapter 5 - Recycling

- Chapter 6 - Intermediate Facilities

- Chapter 7 - Compost Processes and Collection Systems

- Chapter 8 - Incineration for Energy Recovery and Volume Reduction

- Chapter 9 - Landfilling

- Chapter 10 - Public Involvement and Education

- Chapter 11 - Implementation Options

  (Note: Chapter 1 - Introduction and Chapter 2 - Planning Background were not reviewed by the CAC).

The final meeting of the CAC in October, 1994 was devoted to reviewing and finalizing the draft Volume II - Solid Waste Management Plan.

The following sections of this chapter list the preliminary recommendations agreed to and formally accepted by the CAC for each of the Volume I chapters listed above. These recommendations were reviewed by the DeKalb County Board and were relied on extensively to formulate DeKalb County's Plan as discussed in Chapter 4.

SOURCE REDUCTION AND REUSE RECOMMENDATIONS

Described below are the recommended initiatives DeKalb County should take to encourage source reduction and reuse. The recommendations include measuring source reduction, educational efforts, collection/exchange programs, volume-based disposal rates, waste audit assistance, on-site landscape waste management, model source reduction programs, local policies, State and Federal legislative and regulatory initiatives and a County government in-house source reduction and reuse program.

Measuring Source Reduction. The County should not adopt a specific percentage source reduction goal to reduce the waste stream, since a precise goal would be essentially arbitrary and difficult, if not impossible, to measure. The County should, however, establish measurable goals for the recommended source reduction and reuse program components to monitor progress.

- To gain the support and active involvement of five or more community organizations in educating the public and conducting survey research.
- To distribute waste audit information to 90 percent of the businesses in the County that have more than 20 employees or that have a high ratio of pounds of waste per capita per day or that generate potentially toxic (e.g., dry cleaning shops, auto repair shops).
- To convince 10 percent of these businesses to conduct a waste audit and to implement some or all of the audit recommendations.
- To sign up 10 or more businesses of various types to participate in waste reduction seminars to educate other members of the business community on effective waste reduction techniques.

Educational Efforts. Educational efforts will be the cornerstone of the source reduction program. Specific educational components are outlined in Volume I, Chapter 10.

Collection/Exchange Programs. The County should investigate the feasibility of implementing collection/exchange points for reusable materials, such as community swap boards, waste exchanges and curbside collection of donated materials.

- Grocery stores, hardware stores and other businesses often provide community bulletin boards as a service to their customers. Identifying and promoting these "exchange" opportunities, particularly for businesses that have successful waste reduction programs in place, may be all that is necessary to increase their use.

- The Salvation Army has a pick-up collection service for donated goods based out of Rockford. This reuse opportunity could also be promoted to increase its use. The County could encourage municipalities to consider setting up a curbside collection of donated goods through the Salvation Army, either on a regular monthly basis or on a less frequent basis.

Volume-Based Disposal Rates. If the County's overall recycling rate falls below State mandated goals, the County may consider volume-based collection programs, among other alternatives, as a means of increasing the recycling rate.

Waste Audit Assistance. The County should offer waste audit assistance to interested business, both large waste generators and small businesses, to develop or expand source reduction and reuse. In addition, the County should develop or provide a self-help manual for businesses with an emphasis on local success stories, local markets for materials collected and local waste reduction opportunities. The County should coordinate this effort with local recycling service providers and encourage businesses to discuss these issues with their haulers.

On-site Landscape Waste Management. The County should encourage residents and businesses to manage landscape waste on their own property through composting, mulching or chipping.

- An education program should be provided to increase participation and reduce or eliminate potential problems associated with on-site landscape waste management.

Model Source Reduction Programs. The County, in conjunction with the Chamber of Commerce, should identify and highlight commercial/institutional and industrial establishments serving as models for the County.

Local Policies. The County should review and modify its existing ordinances and codes related to solid waste management to reflect new and proposed programs and Plan recommendations.

State & Federal Legislative and Regulatory Initiatives. The County should support legislation and regulations at the State and national levels to reduce the volume of products and packaging if such measures are supported by environmental and economic impact studies.

County Government Source Reduction & Reuse Program. The County should conduct waste audits of its facilities. These waste audits should attempt to pinpoint source reduction and reuse opportunities.

- The County should implement a source reduction and reuse program as an example to local businesses and units of local government.
- The County should establish procurement standards that favor source reduction, reuse, durability and recyclability where practical and economically feasible as an example to local businesses and units of local government.
- The County should encourage other units of local government to conduct waste audits, implement source reduction and reuse programs, and establish procurement standards that favor source reduction, reuse, durability and recyclability for their public facilities.

TOXICITY REDUCTION AND THE MANAGEMENT OF HOUSEHOLD AND CESQG HAZARDOUS WASTE RECOMMENDATIONS

Described below are the recommended initiatives DeKalb County should pursue to encourage toxicity reduction and the responsible disposal of household hazardous waste. The recommendations include education programs; collection programs; and additional research.

Education Programs. In conjunction with source reduction educational activities described in Volume I, Chapter 3, the County should utilize existing information, develop local information and aggressively disseminate the information as it relates to hazardous waste generated by households and conditionally exempt small quantity generators (CESQG's). The education program should focus on explaining the potential health and environmental impacts of household hazardous wastes; the substitutes available for hazardous products and the proper and responsible disposal practices for toxic materials. More specific recommendations include:

- The County should gather the existing reference materials and information handouts concerning toxicity reduction developed by state agencies and other responsible sources. The materials should be made available to the public through a County information clearinghouse or reference center.

- The County should develop a publicity campaign concerning household hazardous waste and toxicity reduction through the use of local information hand-outs, newsletters and news releases.

- The County should provide and arrange speaking engagements to community groups, present displays at public events and hold special workshops concerning household hazardous waste and toxicity reduction.

- The County should develop a listing of local reuse/recycling opportunities for household hazardous products available to the residents of DeKalb County

- The County should encourage local school boards to incorporate toxicity reduction educational materials into school curriculum.

- The County should coordinate an in-store shopper awareness program to emphasize toxicity reduction.

- The County should inform local businesses of waste exchange opportunities, such as the Industrial Materials Exchange Service.

- The County should consider developing an aggressive waste auditing program for CESQG's, in attempt to reduce the toxicity of this waste stream.

Collection Programs. The County should attempt to provide or coordinate recycling/reuse/disposal opportunities for household hazardous products to residents. More specific recommendations include:

- The County should communicate with neighboring counties concerning the establishment of a regional collection program.

- The County should encourage and/or coordinate efforts of local paint retailers in the County to collect and recycle/reuse/dispose of used paint from customers.

- The County should establish a paint exchange, bulking or collection site where paint could be swapped, remixed for use in County projects, or picked up by a hauler for reprocessing.

- The County should encourage and/or coordinate efforts of local automotive businesses in the County to collect and recycle/reuse/dispose of used motor oil, antifreeze or other solvents from customers.

- The County should encourage and/or coordinate efforts of local jewelers and watch shops to collect and recycle/reuse/dispose of watch batteries from customers.

- The County should investigate the feasibility of developing a permanent collection program. If a permanent collection program is deemed feasible, the County should apply to the State for monetary assistance.

- The County should investigate the feasibility of offering incentives to CESQG's to send their waste to a approved RCRA facility.

- The County should investigate the feasibility of coordinating the collection of hazardous waste from households, CESQG's and the agricultural community.

Additional Research. The County should more thoroughly assess the level of hazardous waste that is generated by households and CESQG's. More specific recommendations include:

- The County should assess the quantity of household hazardous waste in the residential waste stream and evaluate the need for a permanent household hazardous waste collection program.

- The County should survey likely CESQG's in the County to determine the quantity of the CESQG waste stream in the County and evaluate the need for a CESQG hazardous waste collection program.

RECYCLING RECOMMENDATIONS

Described below are the preliminary recommendations to be considered by DeKalb County to encourage recycling. The discussion points include options for residential recycling, commercial, institutional and industrial recycling, management of construction/demolition debris, management of orphan wastes, processing alternatives, education programs, recycling policies, administrative activities, monitoring/reporting system and local government in-house recycling and procurement programs.

Residential Recycling

- The County should set a residential recycling goal of 35% in the fifth year and 40% in the tenth year of plan implementation. Even though the current recycling rate is 31%, over one-third of this diversion is attributed to landscape waste. This is important, because if the County is successful at source reducing landscape waste through on-site management practices, then the total recycling percentage will shrink.

- The County should consider whether it is necessary to develop a drop-box recycling network to serve residents located in the unincorporated areas of the County. If deemed necessary, the County should consider entering into discussions with township officials and haulers to implement this drop-box network.

- The County should consider whether it is necessary to extend curbside recycling services to residents in unincorporated areas, especially in rural subdivisions and adjacent to incorporated towns.

Commercial/Institutional and Industrial Recycling

- The County should consider encouraging commercial, industrial and institutional (CII) haulers to collect a maximum range of recyclables. Priorities for determining which materials to collect should include availability of markets, cost effectiveness of collection and the potential volume, weight of toxicity reduction incurred due to recycling the material.

- The County should consider offering assistance to interested CII establishments in conducting waste audits to develop or expand recycling programs and the County should consider developing and providing a self-audit manual for businesses.

- The County should consider identifying or helping to develop model recycling programs in CII establishments and promote their success in the media.

Municipal Waste Recycling Goal

- The County should set a municipal waste recycling goal of 47% in the fifth year and 51% in the tenth year of Plan implementation. The current municipal waste recycling rate is 44%. By setting a ten year goal of 51%, the County hopes to eventually recycle a majority of the waste it generates.

Management of Construction/Demolition (C/D) Debris

- The County should quantify the rate of C/D recycling and include the recycled material in the County's municipal recycling rate per IEPA guidelines (June 1, 1994).

- The County should consider beginning a dialogue with local C/D contractors to consider undertaking a study to more closely examine the generation and management of C/D debris, with a special emphasis on the management of asphalt and concrete generated within the County. An effort should be made to identify local C/D markets and/or potential market opportunities.

- After obtaining adequate information, the County should consider setting quantitative C/D recycling goals comparable to the goals established by the Solid Waste Planning and Recycling Act of 15% and 25% in the third and fifth years, respectively, of plan implementation.

- The County should consider developing and providing information guides concerning the preferred management of C/D debris.

- The County should consider adopting a policy mandating that new construction, demolition or renovation projects submit waste management plans outlining methods to be used to minimize waste. The County should consider encouraging municipalities to adopt similar policies.

Management of Orphan Wastes

- The County should consider preparing or making available information on local lead-acid battery recycling and should track the development of recycling opportunities for all types of batteries.

- The County should consider making available information on motor oil recycling, should encourage local automotive service stations and motor oil retailers to collect motor oil from the public and sbould aggressively publicize motor oil collections. The County should also consider methods of discouraging do-it-yourself oil changing through public education programs.

- The County should consider aggressively publicizing tire collection days, such as the one sponsored by Farm Bureau through the IEPA, and should start a dialogue with local tire retailers and haulers to alleviate any difficulties with the disposal of tires once the tire legislation becomes effective in 1994.

- The County should consider working closely with haulers, appliance services, the County landfill operator and white good recyclers to alleviate any difficulties with the recycling and disposal of white goods once the legislation becomes effective in 1994. The County should monitor the progress of the White Goods Task Force recommendations as, if implemented, it will become more difficult to dispose of or recycle major appliances.

- The County should evaluate grant opportunities for managing orphan wastes.

Processing Alternatives

- Given the regional processing capabilities available and the economics of developing a MRF, the County should not consider the development of a County-owned and/or operated centralized processing facility at this time.

Education Programs

- Educational efforts should be a strong emphasis of the recycling program. Specific educational components will be outlined in Chapter 10 of Volume I.

Recycling Policies

- The County should review and amend as necessary its existing solid waste ordinances and anti-dumping provisions.

Administrative Activities

- The County should consider developing a job description for the Recycling/Solid Waste Coordinator position.

- The County should consider designating a Recycling/Solid Waste Coordinator.

Monitoring/Reporting System

- The County should consider developing a reporting form and data collection system to track the quantities of municipal waste landfilled, incinerated, recycled and composted in DeKalb County in order to measure progress toward the County's and State's municipal waste recycling goals.

- The County should consider developing an annual report documenting, to the best of its abilities, the level of municipal waste recycling occurring within the County.

Local Government Recycling and Procurement Programs

- The County should consider whether it is necessary to expand or upgrade its in-house recycling program, focusing on office paper and aluminum cans at a minimum and strongly encourage other units of local government to implement similar programs.

- The County should consider developing a procurement policy patterned after the State's policy which gives preference to recycled-content materials wherever economically and practically feasible and strongly encourage other units of local government to develop similar policies. Attempts should be made to purchase post-consumer recycled paper (office paper, stationary, forms, tissue paper, etc.), post-consumer recycled plastic products (e.g. lawn edging, garbage cans, park benches), re-refined motor oil and remanufactured/retread tires for government vehicles, and compost for landscaping in parks, wherever such use is practical and economical.

- The County should explore the feasibility of developing a procurement policy for recycled C/D material.

- The County should gather and/or develop model procurement ordinances to be used in public and private sector organizations within DeKalb County.

INTERMEDIATE FACILITY RECOMMENDATIONS

Listed below are the preliminary recommendations for intermediate facilities to be considered by DeKalb County.

Mixed Waste Processing.

- Mixed waste processing is not a recommended component of the DeKalb County plan at this time, based on the effective existing recycling programs in DeKalb County, and based on the relatively high capital and operating costs and the lack of extensive information and experience on the reliability of mixed waste processing systems. However, if a transfer station is established in the region, then mixed waste processing becomes more economically attractive and should be given further consideration.

Refuse Derived Fuel.

- A refuse derived fuel (RDF) facility is not a recommended component of the DeKalb County plan at this time, based on the relatively high capital and operating costs, the lack of established markets for the RDF in the region, and the lack of extensive information and experience on the reliability of RDF systems.

Transfer Station.

- Based on preliminary analyses, it appears that a transfer station sized to handle the County's waste is not economically feasible at this time. If the DeKalb County Landfill closes, then the County should give serious consideration to developing a transfer station in the County near DeKalb.

Plan Update.

- Each of these options should be reevaluated as a component of the five year plan update.

COMPOST PROCESSES AND COLLECTION SYSTEMS RECOMMENDATIONS

Listed below are the preliminary recommendations for composting of landscape waste, green waste and municipal waste and wet/dry collection systems.

Landscape Waste Collection and Management. The following activities should be pursued by the County to encourage the preferred management of landscape waste:

- Since the landscape waste composted in DeKalb County makes up 10 percent of the municipal wastestream, the County should encourage its continued success.
- The County should encourage residents to leave grass clippings on the lawn or compost landscape waste in their own backyards.
- The County should encourage residents to utilize the DeKalb County Landscape Waste Facility instead of burning landscape waste in their yards.
- The processing and marketing of landscape waste should remain the responsibility of the private sector.
- The County should encourage the use of composted materials.
- The County should investigate the implementation of special collection and management programs for landscape waste which is difficult for residents to manage in their own back yards, such as large diameter landscape waste, storm damage and Christmas trees.

Green Waste Composting. Should landfill availability decrease and tipping fees in the region increase, the relative economics of green waste composting may become more attractive. Green waste accounts for approximately 25 percent of the municipal waste. It is recommended, therefore, that:

- The County should review the green waste composting option in the five year update to the Plan.

- Any proposals by the private sector regarding green waste composting should still be encouraged and considered, but issues such as odors, markets for compost and cost impacts to residents, should be convincingly addressed by would-be developers.

- The County should not pursue a County-owned green waste processing due to the already successful recycling programs in the County.

Wet/Dry Collection Systems. Wet/dry collection systems are not recommended components of the County's plan at this time. A wet/dry system relies on the existence of a green waste composting facility. Until such a compost facility is implemented in or near the County, a wet/dry collection system is not feasible.

Municipal Waste Composting. Municipal waste composting is not a recommended component of the County's plan at this time, based on the relatively high capital and operating costs associated with municipal waste composting, the lack of established markets for the compost in the region, the lack of support for mixed waste composting from the State, and the lack of extensive information and experience on the reliability of mixed municipal waste compost systems.

If landfill availability decreases and tipping fees in the region increase, the relative economics of municipal waste composting and wet/dry collection may become more attractive. It is recommended, therefore, that these options be reviewed as new information becomes available or in the five year updates to the plan. Any proposals by the private sector regarding mixed municipal waste composting should still be considered, but solutions to problems such as markets for compost should be convincingly demonstrated by would-be developers.

INCINERATION FOR ENERGY RECOVERY AND VOLUME REDUCTION RECOMMENDATIONS

Listed below are the preliminary recommendations for incineration to be considered by DeKalb County.

Incineration Facility.

- Based on the high capital and operating costs associated with incineration and the unclear regulatory atmosphere that currently exists, development of an incineration project for energy recovery and volume reduction is not a recommended alternative for DeKalb County at this time.

- The County should monitor the status of the NIU incineration report entitled, *Main Campus Incinerator and Health Center Incineration Study*. If the NIU incineration project is implemented, it is recommended that the County monitor the operation and viability of the project.

- In accordance with the State's preferred waste management hierarchy, components of the wastestream, for which viable markets exist, should be recycled instead of incinerated.

Plan Update.

- As landfill tipping fees in Illinois continue to increase, incineration may become more economically viable. It is recommended therefore that incineration for energy recovery and volume reduction be reviewed in the five year updates to assess its viability as a long-term waste management option for DeKalb County.

- It is also recommended that the rules and regulations regarding municipal waste combustion be monitored along with the status of other incineration projects in areas with the same characteristics as DeKalb County. This monitoring should be conducted as part of the five year updates to the County's Solid Waste Management Plan.

LANDFILLING RECOMMENDATIONS

Listed below are the preliminary recommendations on landfilling to be considered by DeKalb County.

Disposal Capacity.

- Given the disposal capacity available in DeKalb County (approximately 20 years at the DeKalb County Landfill) and the region (see Table 9-13, Volume I), DeKalb County should continue to rely on existing landfill disposal capacity for final disposal of the County's waste.

- The County's Solid Waste Coordinator should prepare an annual report on the region's disposal capacity and should submit it to the County Board.

Landfill Siting.

- The County should adopt landfill siting criteria within two years of Plan adoption. No new landfill or landfill expansion should be sited in DeKalb County within this two-year period, unless a need is demonstrated for a new landfill or landfill expansion.

- The landfill siting criteria should be compatible with the County's Comprehensive Plan. As the County developes a Geographic Information System, the appropriate layers of landfill siting criteria should be of high priority.

Landfill Ordinances.

- DeKalb County should review its existing siting ordinance and filing fee requirement and make amendments, if necessary.

- DeKalb County should enact a local surcharge ordinance (pursuant to Section 22.15(j) of the Illinois Environmental Protection Act) to assist in funding implementation of the Plan.

Host County Agreement.

- The DeKalb County Landfill should continue to be limited to its current service area, as stipulated in the June 5, 1989 siting decision. However, if the service area is expanded, the owner/operator of the DeKalb County Landfill should negotiate a Host County Agreement with the DeKalb County Board prior to accepting waste from the expanded service area. Provisions of the Host County Agreement should include:

  - No regulated hazardous waste shall be accepted for final disposal in the landfill.

  - A host fee must be paid to the County. The host fee can either be calculated as a percentage of revenues or on a per ton basis. If the fee is calculated on a per ton basis, the per ton host fee will be adjusted annually based on an appropriate Consumer Price Index for DeKalb County.

  - The landfill must guarantee long-term disposal capacity for DeKalb County's non-hazardous solid waste and non-hazardous special waste (contingent upon the landfill having proper permits from the IEPA to accept special waste). The length of the capacity guarantee will be agreed-upon by the landfill and the County.

  - A property value protection program for existing homes within a site specific distance (to be negotiated by the landfill and the County).

  - A domestic water well protection plan must be provided for existing water wells within a site specific distance (to be negotiated with the appropriate siting body).

  - An indemnification agreement must be negotiated to indemnify and hold harmless the County and its officers, agents, and employees from liability associated with any and all operations at the landfill.

  - An assignment of rights clause must be negotiated allowing the County the authority to approve or disapprove any transfer of ownership or other interest in the landfill. Such approval should not be unreasonably withheld.

  - The landfill must allow the County (if appropriate) unrestricted access to all non-financial records associated with the landfill, as required by State and federal statutes and regulations.

  - If the landfill is owned by a private individual or corporation, an environmental contingency fund or an alternative environmental protection plan must be established. The environmental contingency fund or

environmental protection plan is in addition to the financial assurance requirements of the state and federal regulations.

- A procedure, agreed upon by the County, to annually determine the remaining disposal capacity remaining at the landfill.

PUBLIC INVOLVEMENT AND EDUCATION RECOMMENDATIONS

Listed below are the preliminary recommendations on public involvement and education to be considered by DeKalb County.

Education Program.

- An extensive education program should be the cornerstone of DeKalb County's solid waste management plan. Education will be the most effective long-term solution in changing the attitudes and behavior of consumers and producers. Components of the education program should include:

  - An informational clearinghouse.
  - A publicity campaign.
  - Educational curricula.
  - Waste audit assistance.
  - A regular newspaper column and/or newsletter.
  - An emphasis on homeowner management of landscape waste.
  - Public achievement awards to businesses and individuals.

  A variety of educational materials have already been developed for use in other regions of Illinois and the nation, and these materials should be acquired and held for distribution in the Solid Waste Coordinator's office and each public library throughout the region. The educational materials should explain the need for and benefits of source reduction, recycling and other waste management issues in plain, direct language. These materials may already exist throughout the region, so the Coordinator should inventory them to avoid duplication and identify areas of need.

The Solid Waste Coordinator should contact the DeKalb County Natural Resource Education Consortium to determine its interest in assisting in the solid waste management educational program.

- In order to implement an effective educational curricula, a survey should be conducted of current school curriculum on waste reduction, and revisions or additions to the curriculum should be developed and implemented. The County's Regional Superintendent of Schools would be a logical coordinator for this effort. Once the Solid Waste Coordinator is appointed, he or she should work closely with the Regional Superintendent to assist schools with curriculum enhancement.

- The Solid Waste Coordinator should publish a periodic newsletter to publicize the various waste reduction methods available to the public as well as information regarding waste management in general. In addition, the Coordinator should utilize every opportunity available to pass on information regarding the need to reduce the generation of waste. These opportunities include: public outreach at various community events, posters and exhibits, media relations, in-store shopper awareness programs with the cooperation of store management, and the creation of local waste reduction directories.

- A hazardous waste management education program is also central to hazardous waste reduction. The education program should focus on explaining the potential health and environmental impacts of household hazardous wastes and the substitutes available for hazardous products. This information should be incorporated into all components of the broader source reduction education program, including informational handouts, newsletters, question and answer sessions, information displays in stores, and school curriculum. There are several well designed information handouts available from the ENR clearinghouse concerning household hazardous waste.

  The education program should also be targeted toward likely conditionally exempt small quantity generators of hazardous waste. Waste audit information should be offered to these businesses as well as assistance in determining the feasibility and structure of possible cooperative agreements among these businesses.

Waste Audits.

- One of the most important tasks provided by the Solid Waste Coordinator should be to provide extensive technical assistance to interested local businesses regarding waste audit performance. It is also recommended that the County conduct waste audits of its facilities and implement source reduction programs to provide an example to local businesses and municipalities. The waste audits should examine the procurement practices of County facilities and the available alternatives for procurement. Depending on the findings of the waste audit, the County should consider establishing a procurement policy that favors source

reducing products (as well as recycled products). The results of the County and local business waste audits should be compiled in a report and published through whatever means are appropriate.

Training Courses.

- It is recommended that the County's Cooperative Extension Service conduct Master Recycler and Master Gardener training courses in order to increase awareness, education and practical training of residents throughout the region regarding waste reduction and composting. This is one of the least expensive methods of waste reduction education programs available to the County.

Networking.

- In order to remain abreast of waste management issues on the state and federal levels, the Coordinator should be involved with trade associations. These organizations provide membership with newsletters, informational materials, workshops, meetings, conferences and networking opportunities.

IMPLEMENTATION RECOMMENDATIONS

Listed below are the preliminary recommendations on which entity(ies) should be responsible for implementing the Plan.

- DeKalb County should be the lead unit of local government responsible for overseeing implementation of the Plan.
- DeKalb County should strongly encourage each municipality to enact a resolution to recognize and accept the DeKalb County Solid Waste Management Plan.
- DeKalb County should contact the municipalities to determine their interest in signing an intergovernmental agreement to more clearly define the roles and responsibilities of the County and municipalities in implementing the Plan.

SUMMARY

The recommendations in this chapter were developed and approved by the DeKalb County Citizens Advisory Committee. These recommendations were reviewed and accepted by the DeKalb County Board and became the basis for the County's Plan as described in Chapter 4. Implementation of the Plan is discussed in Chapter 5.

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CHAPTER 4
DEKALB COUNTY'S PROPOSED WASTE MANAGEMENT SYSTEM

This chapter outlines the specific components and cost of the DeKalb County Solid Waste Management Plan. The proposed Plan should be viewed as a document that will inevitably require further compromise and adjustment during implementation. However, the Plan, as described in this Chapter, does provide a blueprint for action and for a new direction in managing the County's waste. The plan was prepared in accordance with the waste management hierarchy as stated in the Illinois Solid Waste Management Act.

The remainder of this Chapter: 1) describes the programs and facilities recommended to manage the County's waste for at least the next 20 years; 2) analyzes the life cycle cost and economic advantages and disadvantages of the proposed system; and, 3) evaluates the environmental and energy advantages and disadvantages of the proposed system. The proposed strategy and timetable for implementing the components of the Plan are addressed in Chapter 5.

The DeKalb County CAC approved the draft Plan on October 17, 1994 and sent it to the DeKalb County Board for its review and approval. The DeKalb County Board placed the draft Plan on file for the 90 day comment period on November 7, 1994. A public hearing was held in DeKalb on December 1, 1994. The County Board authorized that several revisions be made to the draft Plan in response to comments received from the public and the IEPA (see Appendix B, Responsiveness Summary and Correspondence With IEPA). The DeKalb County Board adopted the final Plan on March 15, 1995.

DESCRIPTION OF THE SYSTEM

DeKalb County's proposed waste management system is comprised of two main components - waste reduction and final disposal. Waste reduction includes source reduction, hazardous waste management, recycling, reuse, and landscape waste management. A primary emphasis of the planning process was building upon DeKalb County's existing waste reduction

The planning process also focused on final disposal of that material which cannot be reduced at the source, recycled, reused, or composted. The County studied various waste management options including transfer stations, municipal waste (MW) composting, green waste composting, refuse derived fuel (RDF) processing, waste-to-energy, and landfilling.

DeKalb County's waste reduction programs will target the municipal wastestream (as opposed to the total wastestream) as quantified in the Phase I Needs Assessment report. This is consistent with the recycling goals of the Solid Waste Planning and Recycling Act (SWPRA) which reference municipal waste (MW). DeKalb County will monitor its MW recycling rate to track its progress toward meeting State recycling goals.

The final disposal component of the waste management system addresses the total non-hazardous wastestream (excluding non-hazardous special waste). The County recognizes that a majority of its non-hazardous total waste is currently being landfilled and that continued access to disposal capacity for the total wastestream is important to the economic well-being of the County.

Waste Reduction. DeKalb County's waste reduction program consists of five primary components:

- Public Involvement and Education.
- Source Reduction and Reuse.
- Hazardous Waste Management.
- Recycling.
- Landscape Waste Management.

The County's waste reduction goals are to reduce its reliance on landfilling and to reduce the toxicity of the wastestream through implementation of each of the above waste reduction program components. In order to achieve the waste reduction goals, it will be necessary to

implement programs for each of the above waste reduction components. The following text describes the County's proposed waste reduction programs.

Public Involvement and Education. Public involvement and education will play an important role in expanding the County's existing waste reduction programs. The County's waste reduction program components (e.g. source reduction and reuse, hazardous waste management, recycling) are predicated on the generator being informed and actively participating. Education will be the most effective long-term solution in changing the attitudes and behavior of citizens and businesses.

The development and on-going administration of the education program will be the responsibility of the Solid Waste Coordinator. Prior to developing the education program, the Solid Waste Coordinator will contact the DeKalb County Natural Resource Education Consortium to determine its interest in assisting with the education program. The primary components of the education program include: an informational clearinghouse; a publicity campaign; educational curricula; waste audit assistance; a regular newspaper column and/or newsletter; an emphasis on homeowner management of landscape waste and management of hazardous wastes; and, public achievement awards.

A variety of educational materials have already been developed for use in other regions of Illinois and the nation, and these materials will be acquired and held for distribution in the Solid Waste Coordinator's office and each public library throughout the County. The educational materials will include information on the need for and benefits of source reduction, recycling and other waste management issues in plain, direct language. These materials may already exist throughout the region, so the Coordinator will inventory them to avoid duplication and identify areas of need.

The Solid Waste Coordinator will publish a periodic newspaper column and/or newsletter to publicize the various waste reduction methods available to the public as well as information regarding waste management in general. In addition, the Coordinator will utilize opportunities available to pass on information regarding the need to reduce the generation of waste. These

opportunities include: public outreach at various community events, posters and exhibits, media relations, in-store shopper awareness programs with the cooperation of store management, and the creation of local waste reduction directories.

In order to implement an effective educational curricula, a survey will be conducted of current school curriculum on waste reduction, and revisions or additions to the curriculum will be developed and implemented. The Regional Superintendent of Schools would be a logical coordinator for this effort. Once the Solid Waste Coordinator is appointed, he or she will work closely with the Regional Superintendent to assist schools with curriculum enhancement. It should be noted that the Regional Superintendent has been active in recycling efforts and helped obtain a grant from the Illinois Department of Energy and Natural Resources. In addition, the Coordinator will work with the County's Cooperative Extension Service to provide Master Recycler and Master Gardener training courses.

In order to remain abreast of waste management issues on the State and federal levels, the Coordinator will be active with trade associations. These organizations provide membership with newsletters, informational materials, workshops, meetings, conferences and networking opportunities.

Source Reduction and Reuse. Source reduction is a front-end approach to waste management that attempts to prevent waste from being generated in the first place, thus avoiding the expenses involved in collecting, recycling, treating and disposing of waste after it has been generated. Throughout the evaluation of source reduction options and development of recommendations, the primary consideration was to propose programs that the County had the legal, political, and financial ability to implement.

DeKalb County already has one of the most effective waste reduction programs in the State. The County has already achieved the State recycling goal of 25 percent. If the County's overall recycling rate falls below the State goal of 25 percent, the County will consider implementing volume-based collection programs, among other alternatives, as a means of increasing the recycling rate. The County will provide assistance to municipalities interested in

evaluating and possibly implementing volume-based rates, but the ultimate decision will remain with the municipalities.

The County will not establish a specific source reduction goal for reducing municipal waste because such a goal is essentially arbitrary and difficult to measure. However, the County will attempt to establish a baseline for waste generation and attempt to track waste generation data to help determine if the programs are successful and it will establish source reduction goals which are measurable. For example, a goal could be to distribute waste audit information to 90 percent of all businesses in the County with 20 or more employees.

To establish source reduction and reuse in the commercial/institutional sector, the County will offer waste audit assistance through its Solid Waste Coordinator to interested businesses. The County will coordinate its waste audit assistance program with local recycling service providers and encourage businesses to discuss these issues with their haulers. In addition, the County will develop or make available a self-help manual(s) on waste audits to interested businesses. The County will identify those businesses that have implemented successful source reduction and reuse programs and utilize them as models for other businesses to emulate.

The County will pursue several activities to stimulate reuse, exchange and collection programs. First, the County will dedicate space for a community bulletin board and/or encourage local businesses to provide community bulletin boards to advertise reuse and exchange opportunities throughout the County. Municipalities will be encouraged to develop community bulletin boards as well. Second, in conjunction with municipalities, the County will determine the feasibility of having a charitable organization (e.g. Salvation Army) hold monthly or periodic curbside collections of durable items.

In order to set a proper example, DeKalb County will study and implement source reduction and reuse programs at its own facilities. Specifically, the County will conduct waste audits at its facilities (e.g. County Courthouse, County garages) to pinpoint source reduction and reuse opportunities. Once implemented, the County will track and publicize the results of its source reduction and reuse efforts. Finally, as part of the waste audits, the County will examine

its current procurement practices and implement new procurement practices that favor source reduction, reuse, durability and recyclability where practical and economically feasible. The County will encourage other units of local government in the County to also conduct waste audits and establish procurement standards that favor source reduction, reuse, durability and recyclability.

To supplement the above source reduction and reuse programs, the County and municipalities will need to consider several policies. First, the County and the municipalities will need to review their existing ordinances and codes to determine if revisions or new ordinances are necessary due to the new programs proposed in the Plan. Second, the County will track and support legislation at the State and national level to reduce the toxicity and volume of waste if such legislation is supported by environmental and economic impact studies.

Hazardous Waste Management. DeKalb County's hazardous waste management program will address hazardous waste generated by households and conditionally exempt small quantity generators (i.e. businesses that generate less than 220 pounds per month of hazardous material or 2 pounds per month of acutely hazardous material). The primary focus will be on minimizing the amount of household hazardous waste (HHW) and conditionally exempt waste generated and properly managing the waste once it is generated.

Education will be a key component of the program. The educational effort will focus on explaining the potential health and environmental impacts of HHW, and the substitutes available for hazardous products. This information will be incorporated into the County's overall educational efforts, as previously described in this chapter.

DeKalb County will also acquire educational materials for the conditionally exempt small quantity generators (CESQG's), inform them of the waste exchange opportunities provided by the Industrial Materials Exchange Service and provide assistance to these businesses through the waste audit process. The County will also survey likely CESQG's in the County to determine the type and quantity of waste generated by CESQG's in the County and evaluate the need for an on-going CESQG hazardous waste collection program.

Used motor oil and paint represent the two largest volume components of HHW. As a result, the County will encourage the local automotive businesses and motor oil retailers to accept used motor oil (and other materials such as antifreeze) from customers who change their own oil. In addition, the County will encourage and attempt to coordinate the efforts of local paint retailers in the County to collect used paint from customers; and local jewelers and watch shops to collect watch batteries from customers.

Properly managing and disposing of HHW can be relatively expensive. The County will contact its neighboring counties to determine their interest in establishing a regional collection program either through a series of IEPA single day collection events or a permanent collection site.

Recycling. Recycling is already a primary component of DeKalb County's waste reduction program. Additional programs will be targeted to the residential, commercial, institutional and construction/demolition wastestreams. The County is not proposing that County government be responsible for collecting, processing or marketing recyclables. This will remain the responsibility of the private sector and community organizations. The County's role will be to set goals and provide the leadership and necessary educational assistance to insure that recycling opportunities continue to expand throughout the County.

The County's overall recycling program consists of the following components:

- Residential recycling program;
- Commercial/institutional recycling program;
- Construction/demolition recycling program;
- Orphan waste management;
- Recycling policies;
- Administrative activities;

- Monitoring/reporting systems; and
- Local units of government recycling program.

Each of these components is described more fully in the following text.

The County's residential recycling program will strive to reach a 35 percent and 40 percent residential recycling goal in five to ten years, respectively, of Plan adoption. The County will enter into discussions with township officials and haulers to determine the need to implement a drop-off recycling network to serve residents located in unincorporated areas of the County. In addition, the County will consider whether it is necessary to extend curbside recycling services to residents in unincorporated areas, especially rural subdivisions adjacent to incorporated towns. The municipalities will continue to be responsible for evaluating and overseeing recycling options - either drop-off centers and/or curbside recycling - for municipal residents. The County will provide assistance to the municipalities through its Solid Waste Coordinator. The County will not become involved in the collection, processing or marketing of residential recyclables, which will remain the responsibility of the private sector, other units of local government, and/or not-for-profit organizations. The County, through its Solid Waste Coordinator, will conduct an annual review of the entire County's progress toward reaching the County's residential recycling goals.

The County and municipalities will encourage haulers to provide recycling services to their commercial/institutional and industrial customers. To stimulate interest in recycling, the County will offer waste audit assistance and/or a self-audit manual to interested businesses. The County will identify and help develop model recycling programs in commercial, institutional and industrial establishments to act as examples of successful recycling. The County will encourage haulers to collect a maximum range of recyclables depending upon the availability of markets, cost effectiveness of collection, and the potential for volume, weight or toxicity reduction. The collection, processing and marketing of commercial/institutional recyclables will remain the responsibility of the private sector, other units of local government and/or not-for-profit organizations.

After assessing the regional processing capabilities for recyclables and the economics of developing a material recovery facility, the County will not pursue the development of a County owned or sponsored facility at this time.

The County's initial recycling focus has been on the residential, commercial and institutional components of municipal waste (MW). However, the County will also undertake a study to more closely examine the generation and management of construction/demolition (C/D) debris. This study will involve meeting with local C/D contractors to obtain information on the type and amount of C/D generated and current handling methods, with a special emphasis on the management of asphalt and concrete generated and recycled in the County. The County will utilize this information to attempt to identify existing and/or potential markets for C/D debris and to recommend programs for separating and collecting the material. After the study is completed, the County will set C/D recycling goals and develop information on the preferred management of C/D debris. The County will actively support local and regional programs for collecting, processing and marketing C/D debris. Finally, the County will consider whether to adopt an ordinance mandating that new construction, demolition or renovation projects submit C/D waste management plans outlining methods to be utilized to minimize and/or recycle C/D waste. The County will encourage municipalities to consider adopting similar ordinances.

Combined, the County's residential, commercial/institutional and C/D programs will strive to reach a 47 percent and a 51 percent municipal waste recycling goal in five and ten years, respectively, of Plan adoption. The County will conduct an annual review of its progress toward meeting the municipal waste recycling goals.

The remaining targeted components of MW are those items commonly referred to as orphan wastes, such as lead-acid batteries, used motor oil, tires and white goods. The County will work with local retailers and haulers to make information available on where these materials can be dropped off and to encourage additional retailers to manage these materials. Specifically, the County will:

- Make information available on lead-acid battery recycling, track the quantity of lead-acid battery recovery and track the development of recycling opportunities for other types of batteries;

- Encourage local automotive stations and motor oil retailers to accept and recycle used motor oil and make available information on the location of participating establishments or programs;

- Assist the Farm Bureau publicize its tire collection programs and determine the need to augment these current efforts with a County-sponsored and IEPA funded tire collection day;

- Contact local tire retailers and haulers to determine if any difficulties have arisen due to the July, 1994 ban on landfilling whole tires;

- Work with the haulers and white good recyclers to address any difficulties associated with compliance with the State law effective July 1, 1994; and

- Evaluate grant opportunities for managing orphan wastes.

To augment the overall MW recycling program, the County and municipalities will review and amend as necessary their existing solid waste related ordinances.

The County will develop a job description for the Solid Waste Coordinator and designate a person to the position.

To provide necessary information to evaluate the effectiveness of its recycling program, the County will develop a reporting form and data collection system to quantify the quantity of municipal waste recycled, composted and disposed. The County will utilize this data to prepare an annual report documenting, to the best of its abilities, the recycling rate in DeKalb County.

Finally, with all the requirements for residents and haulers to recycle, the County and municipalities will also have certain obligations including:

- Conducting waste audits at their facilities and expanding/implementing in-house recycling programs targeting office paper and aluminum cans, at a minimum;

- Developing a procurement policy which gives preference to recycled-content materials, including recycled paper (e.g. stationary, forms, tissue paper, etc.),

recycled plastic products (e.g. lawn edging, garbage cans, park benches, etc.), re-refined motor oil, remanufactured/retread tires for government vehicles and compost for landscaping in parks, wherever economically and practically feasible; and

- Exploring the feasibility of developing a procurement policy for recycled C/D material.

Landscape Waste Management. Currently, approximately 10 percent of DeKalb County's MW is composted at the DeKalb County Landscape Waste Facility and the remainder is being managed by the individual homeowner or business. The County will continue to rely on the private sector to offer landscape waste management services on an as-needed basis. The County will encourage residents to leave their grass clippings on the lawn or to compost their landscape waste in their backyards. The County will provide educational programs to increase backyard composting and to minimize potential problems associated with backyard composting. The County will assist the municipalities in investigating whether special collection programs are necessary for large diameter landscape waste, storm damage and Christmas trees. Finally, the County will encourage the use of composted materials.

Compliance With State Recycling Goals. The Solid Waste Planning and Recycling Act (SWPRA) establishes the State goals for recycling programs. Under the SWPRA, plans must contain recycling programs which are designed to achieve a 15 percent recycling goal by the third year of the program and 25 percent by the fifth year. These goals are in relation to municipal waste (MW) and are to be met in terms of weight (as opposed to volume). The goals are also contingent upon the existence of viable markets for recyclables.

According to the estimates in Chapter 2, the County is currently achieving a 44 percent recycling rate, almost double the State recycling goal of 25 percent. The County's existing and proposed recycling programs are comprehensive and target the traditional MW wastestreams (residential, commercial, institutional) and also focus on enhancing data collection and recycling programs targeting construction/demolition debris. Once fully implemented with favorable markets and more comprehensive recordkeeping and tracking, the existing and proposed recycling programs should meet the County's municipal waste recycling goals of 47% and 51%

within five and ten years, respectively, of Plan adoption. The Solid Waste Coordinator will be responsible for tracking the County's progress toward achieving the County's recycling goals.

Final Disposal. DeKalb County reviewed several long-term waste processing and disposal options including transfer stations, mixed waste processing, RDF processing, green waste composting, MW composting, incineration for energy recovery and volume reduction and landfilling. After evaluating the advantages and disadvantages of these options, transfer stations, mixed waste processing, RDF processing, MW composting, or incineration for energy recovery/volume reduction are not recommended components of the Plan at this time. The County will consider proposals for green waste composting, but only if issues considering odors, markets and cost are convincingly addressed by would-be developers. In reference to incineration, the County Plan does not preclude Northern Illinois University from developing an incinerator. However, it is the County's policy that those components of the wastestream, for which viable markets exist, should be recycled instead of incinerated. These technologies will be evaluated during the five year updates to the Plan.

Landfilling. DeKalb County evaluated the existing disposal capacity in the County and throughout the region. Based on this analysis, DeKalb County will continue to rely on existing capacity to provide long-term disposal capacity for the County's waste. In order to actively track the status of available disposal capacity within the County and the region, the Solid Waste Coordinator will prepare an annual report on disposal capacity and submit it to the DeKalb County Board.

Within two years of Plan adoption, the DeKalb County Board will evaluate and adopt landfill siting criteria applicable to new landfills and/or landfill expansions proposed in DeKalb County. Once the County adopts the landfill siting criteria, proposals for new landfills and/or landfill expansions will be accepted. However, in order to receive local siting approval, the County's landfill siting criteria must be complied with.

No new landfills or landfill expansions will be sited in DeKalb County within this two year period, unless the entity proposing the new landfill or landfill expansion demonstrates a

need for the proposed landfill and the DeKalb County Board passes a resolution acknowledging the need for the facility. The landfill siting criteria adopted by the DeKalb County Board will be compatible with the County's Comprehensive Plan. As the County continues to develop its Geographic Information System (GIS), the GIS mapping of the landfill siting criteria will be a high priority.

Even though the County's Plan precludes the development of landfills within two years of Plan adoption and other waste management facilities (with the exception of green waste composting facilities) until the first five year update is adopted, the County's Plan may still be challenged by would-be developers of facilities currently not recommended in the Plan. In order to prepare for this type of situation, the County will review its existing siting ordinance and filing fee requirements and make amendments, if necessary. In particular, the County may want to address siting provisions applicable to green waste composting facilities in its ordinance. Municipalities will be encouraged to adopt or amend local siting ordinances and filing fee requirements as well.

DeKalb County will enact a local surcharge ordinance (pursuant to Section 22.15(j) of the Illinois Environmental Protection Act) to assist in meeting funding obligations for Plan implementation.

The DeKalb County Landfill will continue to be limited to its current service area, as stipulated in the County's June 5, 1989 siting decision. However, if the service area is expanded, the owner/operator of the DeKalb County Landfill will be required to negotiate a Host County Agreement with the DeKalb County Board prior to accepting waste from an expanded service area. Provisions of the Host County Agreement will include, at a minimum:

- No regulated hazardous waste shall be accepted for final disposal in the landfill.
- A host fee must be paid to the County. The host fee can either be calculated as a percentage of revenues or on a per ton basis. If the fee is calculated on a per ton basis, the per ton host fee will be adjusted annually based on an appropriate Consumer Price Index for DeKalb County.

- The landfill must guarantee long-term disposal capacity for DeKalb County's non-hazardous solid waste and non-hazardous special waste (contingent upon the landfill having proper permits from the IEPA to accept special waste). The length of the capacity guarantee will be agreed-upon by the landfill and the County.

- A property value protection program for existing homes within a site specific distance (to be negotiated by the landfill and the County).

- A domestic water well protection plan must be provided for existing water wells within a site specific distance (to be negotiated with the appropriate siting body).

- An indemnification agreement must be negotiated to indemnify and hold harmless the County and its officers, agents, and employees from liability associated with any and all operations at the landfill.

- An assignment of rights clause must be negotiated allowing the County the authority to approve or disapprove any transfer of ownership or other interest in the landfill. Such approval must not be unreasonably withheld.

- The landfill must allow the County (if appropriate) unrestricted access to all non-financial records associated with the landfill, as required by State and federal statutes and regulations.

- If the landfill is owned by a private individual or corporation, an environmental contingency fund or an alternative environmental protection plan must be established. The environmental contingency fund or environmental protection plan is in addition to the financial assurance requirements of the State and federal regulations.

- A procedure, agreed upon by the County, to annually determine the remaining disposal capacity at the landfill.

LIFE CYCLE COSTS AND ECONOMIC ADVANTAGES AND DISADVANTAGES

Economic Basis for the DeKalb County Solid Waste Management Plan. The DeKalb County Solid Waste Management Plan is based on the active involvement of the private sector in both waste reduction programs (source reduction, recycling, composting) and final disposal programs (collection, transportation and landfilling). The emphasis on the private sector stems from the following reasons:

- The private sector has historically performed most waste management activities in the County. Waste collection in the County is primarily performed by private haulers under franchise agreements or private contract arrangements. Recycling programs in the region are also operated by private enterprises. The expertise of the private sector in managing waste provides a sound foundation for implementation of the Solid Waste Management Plan.

- As a result of new regulations and public resistance to siting waste facilities, the cost in time and money for the County to have ownership or operating interest in a new disposal facility would be substantial. The IEPA considers three years to be the minimum required time to site and permit a facility although recent experience in Illinois suggests a much longer period is required.

- The private sector has demonstrated an interest and ability to operate recycling programs in the County. With support from the County and the municipalities, the private sector will be able to expand the current level of recycling in the County.

- There is an increasing tendency to rely more on the private sector to perform "governmental" services.

This is not to say that the public sector does not have a role in the County's Solid Waste Management Plan. The role of the County and municipalities will be: 1) to educate residents and businesses about recycling; and 2) to provide a market environment conducive to the achievement of the recycling and other waste-related goals (through procurement practices, ordinances, contracts, and other means). Public-interest groups may also have a role in providing recycling solutions until the private sector can provide comprehensive recycling services.

Four Year Implementation Budget. The programs shown in Table 4-1 are expected to incur start-up costs during the first four years of Plan implementation. (Based on County fiscal years and only one-half year for 1995.) The costs shown are considered estimates. Program costs include costs for supplies, printing, acquisition of educational materials, outside legal and consulting services, etc. The program costs are divided into four categories: personnel, waste reduction, final disposal and miscellaneous.

DeKalb County will attempt to fund these start-up implementation costs through a Phase III Implementation Grant from the IEPA (IEPA's current Phase III grant funding situation is

uncertain), other grant opportunities and other funding options (the grant opportunities and other funding options are discussed in subsequent sections of this chapter).

Life Cycle Economic Analysis for Waste Management System. The Solid Waste Planning and Recycling Act requires that the County perform a life-cycle economic analysis of the recommended waste management system. Table 4-2 presents a system-wide analysis of waste management costs for the County for a 20-year planning period. The analysis is for municipal waste only. The table is divided into two portions: 1) a waste management portion, which lists the tons per year expected to be handled under each management method; and, 2) an annual cost portion, which lists the approximate total annual costs to residents, businesses, and government for the use of each waste management system in the County. This section describes the assumptions used to calculate the estimates in Table 4-2.

For the waste management portion, the municipal waste forecast is based on the waste generation rates (per resident) determined in the Phase I Needs Assessment report and on population projections from the Illinois Bureau of the Budget and employment projections from the Illinois Department of Employment Security. The estimates for the individual management methods are based on the findings of the Needs Assessments and the updated findings in Chapter 2 of this report. The forecasts for the individual management methods assume that the region will maintain a 44 percent recycling rate for the entire municipal waste stream through 2015.

The annual costs portion of Table 4-2 presents the approximate total annual costs to residents, businesses, and government for waste management in the region. The cost estimates in Table 4-2 are presented in 1994 dollars. Disposal costs include the cost of both collection and landfill disposal. The allowance for education and administration was calculated to encompass implementation of each program in the recommended waste management system. Therefore, costs for education and administration are presented as a separate category in the table, rather than under any particular waste management method. Note that the costs in the table are in constant 1994 dollars and are not escalated for inflation. The table therefore reflects the future estimated costs of managing the region's waste in terms of current purchasing power.

TABLE 4-1. DEKALB COUNTY FOUR YEAR WASTE PLAN IMPLEMENTATION COSTS

	1995[1]	1996[2]	1997[2]	1998[2]
Personnel				
Solid Waste Coordinator's Salary (5% Increase Per Year)	$10,500	$22,050	$23,153	$24,311
Coordinator's Fringe Benefits (35% of Salary)	$ 3,675	$ 7,718	$ 8,104	$ 8,509
Clerical Support (5% Increase Per Year)	$ 2,500	$ 5,250	$ 5,513	$ 5,789
Subtotal	$16,675	$35,018	$36,770	$38,609
Waste Reduction Programs				
Establish Information Library	$ 1,000	$ 1,000	$ 500	$ 500
Develop and Conduct Waste Reduction Education Program	$ 4,000	$ 4,000	$ 4,000	$ 2,000
Waste Audit of DeKalb County's Facilities and Waste Audit Assistance	$ 4,000	$ 4,000	$ 4,000	$ 1,000
Hazardous Waste Management Program (Assess HHW quantities, CESQG survey and assistance, and HHW information collection)	$ 1,000	$ 1,000	$ 1,000	$ 500
Establish Tracking System for Recycling and Final Disposal	$ 2,000	$ 2,000	$ 500	$ 500
Develop Construction/Demolition Debris Management Strategy	$ 1,000	$ 2,000	$ 2,000	$ 500
Subtotal	$13,000	$14,000	$12,000	$ 5,000
Final Disposal Programs				
Annual Review of Existing Disposal Capacity	$ 2,000	$ 2,000	$ 1,000	$ 1,000
Develop Landfill Siting Criteria	$ 7,500	$ 5,000	$ 0	$ 0
Subtotal	$ 9,500	$ 7,000	$ 1,000	$ 1,000
Miscellaneous Expenses				
Mileage and Expenses (8,000 miles @ $0.25/mile and $500 discretionary spending for seminars, association memberships, etc.)	$ 1,250	$ 2,500	$ 2,500	$ 2,500
Subtotal	$ 1,250	$ 2,500	$ 2,500	$ 2,500
Total	$40,425	$58,518	$52,270	$47,109
FOUR YEAR BUDGET				$198,322
Per Ton Landfill Surcharge Amount Required to Meet Estimated Plan Implementation Costs[3]	$1.13[4]/ton	$0.82/ton	$0.73/ton	$0.66/ton

Notes:
1. Six month budget, June 1 - November 30, 1995.
2. County fiscal year, December 1 - November 30.
3. Assumes the landfill receives an average of 205,000 (216,000 gate yards times 95%) gate cubic yards per year of surcharge eligible waste with an average density of 700 pounds per cubic yard (205,000 cubic yards/year x 700 lbs./cubic yard x 1 ton/2,000 lb. = 71,750 tons per year) and pays the surcharge on a per ton basis.
4. Assumes the surcharge becomes effective on June 1, 1995.

TABLE 4-2. LIFE-CYCLE ECONOMIC ANALYSIS FOR DEKALB COUNTY'S SOLID WASTE MANAGEMENT SYSTEM					
	1995	2000	2005	2010	2015
Municipal Waste Management (TPY)					
Curbside Recycling	4,896	4,944	4,992	5,051	5,110
Drop-off Recycling	1,960	1,980	2,000	2,020	2,040
Commercial Recycling	11,725	11,961	12,195	12,446	12,698
Compost/Land Application	8,545	8,629	8,723	8,829	8,935
Incineration (Commercial)	84	86	88	90	91
C/D Recycling	20,000	20,200	20,395	20,636	20,876
Landfilling	59,039	59,763	60,462	61,255	61,981
Total MW Generation	106,249	107,563	108,855	110,327	111,731
Recycling Percent (%)	44.4	44.4	44.4	44.4	44.4
Annual Costs (1994 $)					
Education/Administration	40,425	50,000	50,000	50,000	50,000
Curbside Recycling	334,500	337,700	341,000	344,800	348,800
Drop-off Recycling	32,700	33,000	33,300	33,700	34,000
Commercial Recycling	527,625	538,245	548,775	560,070	571,410
Composting	854,500	862,900	872,300	882,900	893,500
Landfilling	4,231,055	4,279,605	4,326,625	4,381,285	4,432,875
Total Annual Costs	6,037,105	6,101,450	6,172,000	6,252,755	6,330,585
Cost Per Ton	56.82	56.72	56.70	56.67	56.66
Note: See assumptions in text.					

Education and administration costs are estimated to be approximately $50,000 annually (in 1994 dollars) once the one-time program costs for implementation have been funded. Education and administration costs, therefore, amount to approximately $0.46 per ton of municipal waste generated in DeKalb County.

Curbside recycling costs are estimated to be approximately $334,500 in 1995 (there are approximately 13,223 households with curbside service). These estimates are based on a rate of $2.00 per household per month for recycling service plus the cost of replacing recycling containers. This analysis assumes that curbside service will be continued in the municipalities with curbside programs. A diversion rate of 60 pounds per household per month is assumed

based on existing program success (14,734 tons/13,223 HH). Thus, approximately 13,870 households will have curbside service in 2000. Curbside recycling bins are estimated to cost $6 each and replaced at a rate of approximately 10 percent per year.

Drop-off recycling costs are projected based on an average cost to maintain drop-off sites and haul recyclables to a processing center. The 1993 capture rate of 1,960 tons is used to estimate the quantity of recyclables that will be captured at drop-off sites in the future. The estimated future capture rates shown are conservative because curbside programs will expand slightly, providing an alternative outlet. Drop-off tonnages are based on 30 cubic yard containers serviced on an as-needed basis. The average cost is estimated to be $300 per pull, based on past bids for a similar rural drop-off program. It is assumed that the private sector will provide the roll-off containers and service the containers on an as-needed basis. Assuming the quantity of material collected from the drop box system is one-sixth of the total drop-off material, the estimated number of pulls in 1995 will be equal to 109, so the resulting cost is $32,700 in 1994 dollars. The need for drop-off services should be discussed in order to provide recycling opportunities to all County residents. In addition, it is estimated that the Student Association requires $13,000 per year to operate. It is assumed the other drop-off facilities break even due to location. The total cost of these activities is estimated to be $49,000.

Commercial/institutional recycling costs (the cost of having a container of recyclables such as cardboard delivered and processed) are estimated to be approximately $527,625 for 1995 and $538,245 by 2000. These estimates are uncertain due to the wide range of costs that may occur for different types and quantities of materials, as well as the uncertain revenues that will be gained, since markets for recyclables are relatively unpredictable. Haulers from rural counties across Illinois were interviewed regarding the costs of recycling service. Their predictions concerning the costs of commercial recycling ranged from 80% of the cost of refuse disposal (in large cities) to 110% (in rural areas). Thus, the cost estimate for Table 4-2 is calculated as equal to the cost per ton for collection and disposal in a landfill (approximately $45). This calculation is considered reasonable because the County is largely rural, with few large cities. Commercial tonnages in Table 4-2 are based on the assumption that amounts

recycled will be proportional to employment increases. These quantities include materials collected from multi-family units, typically serviced on commercial recycling routes.

The cost for composting landscape waste materials is estimated to be approximately $854,500 for the year 1995. This estimate is based on the cost per bag or sticker paid by residents. The average cost of $2 per sticker or bag is used and a maximum weight of 40 pounds of yardwaste per bag or sticker. It is assumed that the quantity of landscape waste will increase slightly in future years as the population increases.

Costs are not presented for incineration. Approximately 84 tons of waste is incinerated annually by businesses and institutions, and the cost to these companies is unknown. Since the cost of incineration for these businesses is not an incremental cost to the current system and the amount of waste incinerated is minimal, it has limited relevance to the purpose of this economic analysis.

The cost of collection and disposal of waste in landfills is estimated to be approximately $4,231,055 in 1995. The cost is estimated to be $4,279,605 in 2000. These estimates are based on an average disposal and collection cost of approximately $100 per ton of residential waste, and an average collection and disposal cost of approximately $45 per ton of commercial/institutional, construction/demolition and industrial office/lunchroom waste in 1995. Estimation of an average collection cost for commercial waste is difficult due to the range of prices that may occur for different sizes of containers and different frequencies of pick-up. The residential waste disposal cost is based on the County weighted average cost of $9.06 per household per month and the residential generation rate of 1.089 ton per household per year.

Funding. The County's Plan requires funding for: 1) start-up and on-going implementation costs for the waste reduction programs and 2) annual administration costs for the Solid Waste Coordinator.

As Table 4-1 shows, the combined budget for the next three years is $198,322 with a large portion of that being incurred in the first year of implementation. Assuming that these

expenses are eligible for Phase III funding from the IEPA and that the local share is 30 percent, the total cost to the County over a three year period will be approximately $59,497.

The funding for the curbside collection and management of recyclables and refuse will continue to be paid primarily through user fees. One area of uncertainty is the funding for the drop-off center(s) in the unincorporated areas if they are deemed necessary. If recommended, the County, municipalities and townships will enter into a dialogue with the haulers to determine the best method for funding the drop-offs. All available federal and state grant opportunities will be pursued to offset up-front capital (e.g. recycling bins, drop-off containers) and education costs.

Table 4-3 shows the three primary funding areas and lists a variety of funding options. Several of the funding options are uncertain, particularly the IEPA Phase III grants, and other IEPA/DENR grant programs. (A description of the IEPA and DENR grant programs listed in Table 4-3 is provided in the next section). As a result, the County may be forced to rely primarily on user fees and money from the general revenue fund to pay for Plan implementation.

Table 4-3 identifies three funding options that don't involve grants, general funds or user fees. These options are briefly described below.

- Hauler License - The County has the legal authority to license the haulers in the County and charge the haulers a reasonable licensing fee. The amount of money collected through a licensing arrangement is limited and will likely be passed on to the consumer. One distinct advantage of hauler licensing is the ability to require that certain conditions (e.g. recordkeeping, offering of recycling services) be met in return for being issued a license.

- Tax Levy By Disposal District - Both Counties and townships have the legal authority to create a solid waste disposal district under the Solid Waste Disposal District Act. The Act allows a County or township waste disposal district to levy an annual tax upon all taxable property in the district.

- Tax Levy by Township - The Township Refuse Collection and Disposal Act authorizes townships to contract for the collection and management of recyclables and refuse and to levy a tax to pay for these services.

TABLE 4-3. FUNDING OPTIONS AVAILABLE TO DEKALB COUNTY			
	Funding Category		
Funding Option	Program Implementation Costs	Administrative Costs	Collection and Management of Recyclables and Refuse
1. IEPA Phase III Grant	✓	✓[1]	
2. IEPA White Goods Grant Program	✓		✓
3. IEPA HHW Grant Program (Single Event and Permanent Collection Center)			✓
4. IEPA Tire Collection Program			✓
5. DENR Recycling Grants			✓
6. DENR Technologies Demonstration Grant			✓
7. DENR Market Development Grant			✓
8. DENR School Education Grant Program	✓		
9. DENR Used Tire Grant Program	✓		✓
10. County General Fund	✓	✓	✓
11. Municipal General Fund	✓	✓	✓
12. Hauler License	✓	✓	✓
13. Tax Levy by Disposal District	✓	✓	✓
14. Tax Levy by Township			✓
15. User Fee			✓
16. Landfill Surcharge/Host Fees	✓	✓	✓
Note: 1. Phase III funding will probably not cover these costs indefinitely.			

Recommendation for Funding. As Table 4-3 shows, there are numerous funding options available but many of them are uncertain (IEPA and DENR grants) or may never become available (Phase III grants). As a result, DeKalb County will need to pursue a diversified funding strategy and attempt to involve all levels of government (i.e. state, county, municipal) and waste generators in the funding effort. The County's funding strategy includes the following components:

1. User fees will be relied upon whenever possible to fund recycling and final disposal. Most waste generators in the County are already paying a direct user fee to their hauler/recycler for waste management services.

2. The County will pursue all available State and federal grants to help offset the implementation and administrative costs.

3. The County will utilize money from a local landfill surcharge ordinance it will enact and its General Fund to help fund the implementation and administrative costs.

Implementing this three part strategy should allow for an equitable spreading of costs between government and waste generators. Successful implementation will not only require participation by numerous entities, but also funding from numerous sources. The State sources of funding are discussed in the following section.

IEPA Grants. The Illinois Environmental Protection Agency is responsible for the administration of several solid waste grant programs described below.

- Phase III Implementation Grant Program. IEPA plans to continue its financial assistance to counties by developing Phase III implementation grants as a follow-up to the Phase I and Phase II planning grants, however, the funding of the Phase III grant program is uncertain at this time. Final rules have not been promulgated yet. Grants of up to $500,000 are available (inclusive of DeKalb County's Phase I/Phase II grant award), with a maximum State share of 70 percent. The preliminary rules circulated by the IEPA were fairly broad as to the types of programs that may be funded, but waste reduction projects will be favored. The applicant must have an adopted solid waste management plan that meets the requirements of the Solid Waste Planning and Recycling Act and other applicable State legislation, as determined by IEPA.

- White Goods Grant Program. Public Act 87-0727 was passed in 1991 (and amended by Public Act 87-858 in 1992) and authorizes the IEPA to provide financial assistance to units of local government to plan for and implement programs to collect, transport and manage white goods. Units of local government are expressly allowed to jointly apply for funding. The IEPA has promulgated rules, but expects them to be revised based on the findings of the White Goods Task Force.

- Household Hazardous Waste Collection Grant Program. Public Act 87-0735 (which was amended by Public Act 87-1159) requires the IEPA to develop a statewide household hazardous waste management plan by March 1, 1995. This plan must include a network of local collection centers. In order to stimulate the development of the collection centers, the Act authorizes the IEPA to establish a grant program for units of local government that decide to provide local or regional collection centers. The grants will cover up to 66 percent of the capital

2. The County will pursue all available State and federal grants to help offset the implementation and administrative costs.

3. The County will utilize money from a local landfill surcharge ordinance it will enact and its General Fund to help fund the implementation and administrative costs.

Implementing this three part strategy should allow for an equitable spreading of costs between government and waste generators. Successful implementation will not only require participation by numerous entities, but also funding from numerous sources. The State sources of funding are discussed in the following section.

IEPA Grants. The Illinois Environmental Protection Agency is responsible for the administration of several solid waste grant programs described below.

- Phase III Implementation Grant Program. IEPA plans to continue its financial assistance to counties by developing Phase III implementation grants as a follow-up to the Phase I and Phase II planning grants, however, the Phase III grants were not available as of the adoption date of this plan. Final rules have not been promulgated yet. Grants of up to $500,000 are available, with a maximum State share of 70 percent. The preliminary rules circulated by the IEPA were fairly broad as to the types of programs that may be funded, but waste reduction projects will be favored. The applicant must have an adopted solid waste management plan that meets the requirements of the Solid Waste Planning and Recycling Act and other applicable State legislation, as determined by IEPA.

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promotional expenses, or to procure recycled products. This grant might be used to purchase recycled paper in quantity, to be sold later to schools, libraries, and other public agencies.

- School Education Program. Funding under this program is available at a regional level to fund development of waste reduction programs in schools. Assistance is in the form of grants, with no matching requirement. Funds may be used to purchase large storage bins for recyclable materials and other direct costs of developing waste reduction programs in schools. This grant might be used to assist the County's schools in implementing recycling programs.

- Used Tire Grant Program. Public Act 87-0727 authorizes ENR to provide grants or loans to assist units of local government and private industry to establish programs to collect, process and utilize waste tires and tire derived materials. The Act sets a funding target, pursuant to appropriation, of at least $2 million per fiscal year from the Used Tire Management Fund for the management of used tires. Forty-five percent of this amount ($900,000) is to be made available to ENR for this program. This program is currently operational.

Economic Advantages and Disadvantages. The following points summarize the economic advantages of DeKalb County's Solid Waste Management Plan:

- By utilizing the private sector to provide recycling services and provide landfill disposal capacity, the County does not have to incur the substantial up-front costs of buying collection vehicles, building a processing facility and siting and permitting a landfill. Furthermore, the County will not have to issue debt to finance the development of solid management facilities. Scarce public funds can be devoted to solving those problems which the private sector does not address.

- The programs in the Plan will be paid for primarily through user fees. This eliminates the need to increase taxes and regularly reminds residents that all waste management services have a cost.

The following points summarize the economic disadvantages of the County's Solid Waste Management Plan:

- By utilizing the private sector for recycling and solid waste disposal services, the County is subject to market driven costs.

- Recycling and landscape waste composting are relatively expensive methods of managing waste compared to landfilling at the present. If landfill tipping fees continue to increase at historic rates, however, recycling and landscape waste composting will become relatively more attractive.

ENVIRONMENTAL AND ENERGY EVALUATION OF FACILITIES AND PROGRAMS

The Solid Waste Planning and Recycling Act requires that an evaluation of the environmental and energy impacts of the proposed waste management facilities and programs be prepared as part of the Plan. Factors to be considered include: air quality, water quality, public health and safety, aesthetics, displacement of flora and fauna, and energy and natural resource use. These factors are evaluated in Table 4-4 for the recommended system.

As can be seen in Table 4-4, source reduction and toxicity reduction have minimal impacts on any of the environmental and energy determinants. The recycling and composting components of the recommended Plan, on the other hand, do have the potential for some negative impacts, including odors, run-off, vectors and aesthetic impacts. In addition, energy will be required to process recyclable and compostable materials, as well as to transport those materials from the generator to the processor and then to the end-user. These energy requirements may be made up by the energy and resource savings during the manufacture or end-use of products, however.

The landfill disposal component of the recommended Plan has greater potential for negative impacts, including odors, run-off, groundwater contamination, vectors and aesthetic impacts. These impacts can be minimized with proper design and operation of the landfill. Energy is also required for the compaction and covering of waste at the landfill, but some of this energy can be regained in the form of methane gas.

TABLE 4-4. EVALUATION OF ENVIRONMENTAL AND ENERGY IMPACTS OF PROPOSED SYSTEM			
	Source/Toxicity Reduction	Recycling/Composting	Landfill Disposal
Air Quality	Minimal impact	Potential for odors, air emissions	Potential for odors, air emissions
Water Quality	Minimal impact	Requires run-off control	Requires run-off control, leachate control, proper design
Public Health and Safety	Minimal impact	Requires vector control, sanitation	Requires vector control, sanitation
Aesthetics	Minimal impact	Impact is minimized with proper siting, sanitation, and berms	Impact is minimized with proper siting, sanitation and berms
Displacement of Flora and Fauna	Minimal impact	Occupation of relatively small land area	Occupation and disruption of large land area
Energy and Natural Resource Use	Minimal impact	Energy required for processing, additional transportation; energy and resources/savings during manufacturing	Energy required for landfill equipment; energy recovered in the form of methane gas

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CHAPTER 5
IMPLEMENTATION OF THE RECOMMENDED WASTE MANAGEMENT SYSTEM

This chapter includes the selection of the most suitable implementation option for DeKalb County; the entities (e.g. county government, municipalities, haulers, landfill operators, etc.) responsible for implementation of the Plan; a thorough description of the waste reduction and final disposal implementation tasks; the legal controls or powers necessary to implement the Plan; and, a proposed schedule for implementing the Plan.

SELECTION OF PREFERRED IMPLEMENTATION MECHANISM

Based on a review of the various options available for implementing the Plan (see Chapter 11 of Volume I), DeKalb County has chosen the County-lead option. Under this option, DeKalb County will be the unit of government responsible for implementing the Plan. The municipalities will be asked and encouraged to pass resolutions adopting the County Plan.

Signing of an Intergovernmental Agreement. The County will contact the municipalities and townships to determine their interest in signing an intergovernmental agreement with the County. The County recognizes the need to work with the other units of local government in the County to effectively meet the needs of all residents and businesses throughout the County. By negotiating an intergovernmental agreement, the County and other units of local government can formalize a partnership to oversee plan implementation. If a significant number of municipalities and townships are interested in negotiating an intergovernmental agreement, the County will initiate the formation of an Intergovernmental Committee. Each municipality and township (and their legal counsel) will be asked to join the committee. The purpose of the committee will be to agree on and sign an intergovernmental agreement which describes the implementation duties and responsibilities of the members.

The County will contact the municipalities and townships to determine their interest in signing an agreement within 90 days of Plan adoption. If there is an interest, the County will attempt to negotiate an agreement within the first year of plan implementation.

The following is a listing of duties and responsibilities of the primary governmental parties responsible for the implementation - County government, municipal government and township government. If an Intergovernmental Committee is formed, it will be up to the Committee to negotiate the final text of the intergovernmental agreement, but the beginning point for the negotiations would be the duties and responsibilities which have already been recommended in Chapter 4.

DeKalb County's Duties and Responsibilities:

- The County will be the lead implementation agency responsible for overseeing and coordinating the implementation of the Solid Waste Management Plan throughout the County.
- The County will designate a Solid Waste Coordinator and provide clerical and secretarial support to the Solid Waste Coordinator on an as-needed basis.
- The County will develop and implement source reduction/hazardous waste management/recycling/landscape waste education and promotional programs as outlined in Waste Reduction Task 1 of the Plan.
- The County will conduct waste audits at each of the County's facilities and implement appropriate source reduction, recycling and procurement programs as outlined in Waste Reduction Task 2 of the Plan. The County will provide waste audit assistance and a self-audit manual to interested businesses and units of local government.
- The County will provide assistance to municipalities in evaluating and implementing volume-based rates.
- The County will make an effort to facilitate the exchange/reuse of materials as outlined in Waste Reduction Task 3.
- The County will evaluate and enact appropriate policies to augment the source reduction/reuse/recycling programs as recommended in the Plan.

- The County will work with local businesses and organizations to encourage them to accept or continue to accept used motor oil, paint and watch batteries and it will evaluate the future need for an on-going collection program for HHW and/or CESQG waste as outlined in Waste Reduction Task 4.

- The County will evaluate whether to implement a network of drop-off centers and/or to extend curbside recycling to the unincorporated areas of the County as outlined in Waste Reduction Task 5.

- The County will provide technical assistance to municipalities in implementing drop-off and/or curbside recycling programs as outlined in Waste Reduction Task 6.

- The County will work with the haulers to increase the level of recycling in the commercial/institutional sectors as outlined in Waste Reduction Task 7.

- The County will evaluate the generation and management of construction/demolition debris and development of a construction/demolition recycling program as outlined in Waste Reduction Task 8.

- The County will evaluate options for managing orphan wastes (white goods, used tires, and lead-acid batteries) as outlined in Waste Reduction Task 9 of the Plan.

- The County will develop, implement and administer an on-going recyclables and final disposal recordkeeping system and annually review its progress in meeting its recycling goals as outlined in Waste Reduction Task 10.

- The County will take the lead in evaluating funding options available to the County and municipalities from the IEPA and DENR as outlined in Waste Reduction Task 11 of the Plan.

- The County will monitor and evaluate the source reduction, hazardous waste management, and recycling programs as outlined in Waste Reduction Task 12 of the Plan.

- The County will track legislative and regulatory changes that affect the Plan and lobby when appropriate as outlined in Waste Reduction Task 13 of the Plan.

- The County will assist the municipalities, as needed, in the research and drafting of waste reduction related ordinances.

- The County will annually monitor the viability and economic feasibility of continued reliance on existing disposal capacity as outlined in Final Disposal Task 1 of the Plan.

- The County will review its existing siting ordinance and filing fee requirements, provide technical assistance to municipalities in drafting similar ordinances and develop landfill siting criteria within two years of Plan adoption, as outlined in Final Disposal Task 2 of the Plan.

- The County will be responsible for the five year planning updates.

- The County will coordinate the funding strategy discussed in Chapter 4 and develop and approve an annual budget.

Municipal Duties and Responsibilities:

- Enact a resolution adopting the DeKalb County Solid Waste Management Plan.

- Provide appropriate space at the City or Village Hall for educational information on waste management.

- Assist the County in developing exchange/reuse programs, in particular in conjunction with municipal spring or fall clean-up days.

- Conduct a waste audit of municipal facilities and implementing appropriate source reduction, recycling and procurement programs.

- Work with the County and haulers and oversee implementation of a residential curbside and/or drop-off collection program within the municipality.

- Work with the County and the haulers to expand the level of recycling in the commercial/institutional sector.

- Assist the County in the management of orphan wastes by working with local retailers, organizations and haulers to publicize existing outlets and encourage the development of new ones.

- Assist the County, as required, achieve its objectives concerning collecting data on the amount of residential, commercial, institutional and C/D waste recycled and disposed of by the municipality.

- Adopt (or amend) a facility siting/filing fee ordinance for regional pollution control facilities.

Township Duties and Responsibilities:

- Enact a resolution adopting the DeKalb County Solid Waste Management Plan.
- Provide appropriate space at township offices for educational information on waste management.
- Conduct a waste audit of township facilities and implementing appropriate source reduction, recycling and procurement programs.
- Work with the County and haulers to evaluate the need for residential drop-off centers and/or curbside recycling in the unincorporated part of the County.
- Assist the County, as required, achieve its objectives concerning collecting data on the amount of residential, commercial and institutional waste recycled and disposed of by the township.

Formation of an Implementation Oversight Committee. The County may appoint an Implementation Oversight Committee to assist in and oversee implementation of the Plan. The Committee should be free to select its own officers, develop its own by-laws and set its own meeting times. The County will provide the Committee with a meeting place. The Solid Waste Coordinator and/or a designated liaison person should attend all the meetings of the Committee that he or she is invited to attend.

GOVERNMENTAL ENTITY RESPONSIBLE FOR IMPLEMENTATION

Under Section 4(c)(7) of the Solid Waste Planning and Recycling Act, the County's Plan is required to identify the governmental entity responsible for implementing the Plan. DeKalb County has chosen the County-lead option. Under this option, DeKalb County will be the governmental entity responsible for implementing the Plan. To effectively implement the Plan, the County, municipalities, townships and their staff will need the cooperation and assistance of the waste industry, businesses and residents.

Staff Requirements. DeKalb County will designate a Solid Waste Coordinator. The duties and responsibilities of the Coordinator have been fully discussed and outlined in the Plan. The County will also provide clerical and secretarial support to the Coordinator on an as-needed basis.

The State's Attorney and municipal legal counsel, in conjunction with private legal counsel (if necessary), will assist in implementing the Plan. The State's Attorney, municipal counsel, and the private legal counsel will provide legal assistance in negotiating the intergovernmental agreement and necessary ordinances.

The County may also consider hiring a consultant to assist the Solid Waste Coordinator implement the numerous waste reduction and final disposal programs. The consultant would have a short-term role (6-18 months) in Plan implementation.

The County recognizes the need to have a strong staff, a committed County Board, municipal councils and township boards to insure that the political, legal and technical components of a successful Plan implementation structure are in place. The time of the State's Attorney, municipal legal counsel, private legal counsel, Solid Waste Coordinator and consultant dedicated to Plan implementation should be eligible for funding under the IEPA's proposed Phase III grant program.

The following is a listing of the other major parties who will be responsible for assisting the County implement the Plan and a brief description of their roles.

- Municipalities - The municipalities represent the majority of the County's population and businesses and therefore its solid waste. The proposed role and duties of the municipalities are discussed in this Volume II report.

- Townships - The townships have unique status under Illinois' solid waste legislation to levy taxes and implement recycling and disposal programs. The townships may prove essential to the implementation (if necessary) of a rural network of drop-off recycling centers.

- Residents - The continued and expanded success of the source reduction, hazardous waste management and recycling efforts will, to a significant degree,

depend on the participation of the residents. With proper education and the implementation of convenient programs, it is anticipated that a majority of the residents in the County will participate.

- Business - This category includes commercial, institutional and industrial businesses. Much like the residents, the continued and expanded success of the source reduction, hazardous waste management and recycling programs will be dependent upon participation by the businesses.

- Waste Haulers - The role of the waste haulers has been and will continue to be central to the successful implementation of the Plan. The haulers possess the expertise and resources to assist in the implementation of the waste reduction and final disposal programs. The haulers will be relied upon to collect, process and market recyclables and transport the remaining waste to an appropriate final disposal site(s).

- Landfill Owners/Operators - The landfilling industry will be relied upon to provide disposal capacity.

- Not-For-Profit, Civic and Professional Organizations - The various interest groups in the County will be invited to assist in the education of the residents and businesses and to assist in the implementation of the Plan.

IMPLEMENTATION TASKS

This section of the report provides a more complete explanation of the tasks to be undertaken by the Solid Waste Coordinator and by other County, municipal and township officials. Tasks related to waste reduction are discussed first, followed by tasks related to final disposal. Each major activity is broken down to show subtasks, major decisions, potential obstacles, roles and responsibilities, duration of the task, and source of funding.

Waste Reduction Tasks. The major tasks discussed include: 1) education and promotion of source reduction/hazardous waste management/recycling/landscape waste management; 2) waste audits of County facilities for source reduction, procurement, and recycling; and waste audit assistance to businesses and other institutions; 3) facilitating the exchange/reuse of materials; 4) evaluating options for managing used oil, paint and watch batteries and evaluation of the future need for an on-going HHW collection program and/or collection center or a

CESQG collection program; 5) evaluation of the need for implementation of a network of rural drop-off centers and/or curbside recycling in the unincorporated part of the County; 6) assistance in the design and implementation of curbside/drop-off recycling programs in each municipality; 7) increasing the level of commercial/institutional recycling; 8) evaluation of construction/demolition debris; 9) evaluating options for managing orphan wastes (white goods, used tires and lead-acid batteries); 10) recordkeeping and reporting for recycling and final disposal; 11) evaluating IEPA and DENR funding options; 12) program monitoring and evaluation; and, 13) legislative/regulatory tracking and lobbying.

WASTE REDUCTION TASK 1:	SOURCE REDUCTION/HAZARDOUS WASTE MANAGEMENT/RECYCLING/EDUCATION/ LANDSCAPE WASTE MANAGEMENT AND PROMOTION

Subtasks: Contact the DeKalb County Natural Resources Education Consortium to determine its interest and role in developing and implementing the solid waste education program. Obtain informational documents and assemble an "informational clearinghouse" on source reduction, recycling, on-site composting, household hazardous waste and CESQG's at the County Courthouse and, on a more limited basis, at each public library throughout the County, municipal offices and township offices. Design and implement a publicity campaign, and obtain assistance from local civic organizations. In conjunction with the Regional Superintendent, conduct a survey of current school curriculum and develop and implement revisions and additions to the curriculum, including emphasizing source reduction and recycling themes at science fairs. Public outreach at public events and local festivals. Work with local churches to develop a listing of local reuse opportunities. Develop an in-store shopper awareness program. Inform businesses of waste exchange opportunities including the Industrial Materials Exchange Service. Work with the local Cooperative Extension Service to conduct Master Recycler and Master Gardener training courses. Develop a regular newspaper column and/or newsletter. Develop an education program to encourage residents to leave grass clippings on the lawn or to backyard compost landscape waste. Include information on how to minimize potential problems with backyard composting.

Comments: The aims of this task are to encourage source reduction, recycling, composting and proper management of hazardous waste; to increase awareness of the issues; to educate the residents and businesses on how to reduce and recycle; and, to inform them about the local recycling/reuse programs when they are implemented. Education is very important to the achievement of source reduction and reuse, hazardous waste management, composting and recycling goals and will be an ongoing task. Special attention will be focused on existing school curriculum on source reduction/hazardous waste management/recycling/composting and enhancing the curriculum, if necessary. The informational clearinghouse will distribute information on request, while the publicity campaign will use mass-distribution media.

Major Decisions: Types of media used for publicity campaign, e.g., posters, newspaper inserts, public service announcements, etc. Specific informational documents to be distributed. The nature and extent of school curriculum changes.

Potential Obstacles: Lack of support from public officials and civic organizations. On-going education efforts may be overlooked if the Solid Waste Coordinator is busy with other tasks. Lack of funding.

Roles and Responsibilities: The Solid Waste Coordinator will take the lead role. The Regional Superintendent will also play a key role in the area of school curriculum enhancement. Other responsibilities will fall to other public officials and to civic organizations, and other entities such as the Natural Resources Education Consortium.

Duration: Education will be ongoing, but the workload will be especially heavy the first two years.

Source of Funding: IEPA's Phase III Implementation Grant Program, ENR's School Education Grant Program and/or county government funds will pay for personnel costs, material costs, mailing costs, etc.

WASTE REDUCTION TASK 2:	WASTE AUDITS OF COUNTY FACILITIES AND WASTE AUDIT ASSISTANCE TO BUSINESSES AND INSTITUTIONS

Subtasks: Obtain material procurement records for each County facility. Collect information on waste disposal from employees at the facilities and from records if available. Identify options for changing work processes so that less waste is produced, based on advice from employees with first-hand knowledge. Identify options for recycling and for procurement of materials that reduce waste, increase the markets for recyclable goods, are more durable or that are easily recyclable. Evaluate options and make recommendations for the procurement, use and management of materials. Publicize the results of the audits. Offer waste audit assistance to businesses, institutions and other units of local government. Develop a public relations effort to inform businesses and institutions of the waste audit assistance program. Develop a self-help audit manual or obtain copies of self-audit manuals and distribute to local businesses. Coordinate waste audit assistance with local recycling service providers.

Comments: The aim of this task will be to demonstrate to local businesses, schools and municipalities the procedures and benefits of a waste audit and to provide technical assistance to them on how to conduct a waste audit.

Major Decisions: The extent of the audit of County facilities. The nature of the assistance to businesses/institutions and the priority in which assistance will be given.

Potential Obstacles: Disagreement on recommendations. Concern about the reliability and cost of procuring recycled content products. Lack of commitment during implementation. Insufficient monitoring and adjustment during implementation.

Roles and Responsibilities: The Solid Waste Coordinator will work with County employees to develop options and recommendations. The recommendations will be implemented and monitored by designated employees who worked with the coordinator in developing options. The results of the County audits will be publicized by the Coordinator. The Coordinator, in conjunction with local recycling service providers, will provide technical assistance to businesses/institutions. A technical consultant may be helpful in assisting the Coordinator conduct the County audits and audits of businesses/institutions.

Duration: The audit of all County facilities will be conducted over the course of several months and will be one of the first tasks of the Coordinator. The success of the program should be monitored six months and twelve months after implementation. The assistance to businesses/institutions will be available after the County audits have been completed.

Source of Funding: IEPA's Phase III Implementation Grant Program and/or county government funds will pay for personnel and implementation costs.

WASTE REDUCTION TASK 3: EVALUATE OPTIONS FOR FACILITATING THE EXCHANGE/REUSE OF REUSABLE MATERIALS
Subtasks: Dedicate space for community swap boards in the County Courthouse and City Halls and/or local business establishments. Evaluate incorporating material exchanges in conjunction with municipal spring and fall clean-up days. Determine the feasibility of working with a charitable service to hold monthly or periodic curbside collection programs for reusable materials.
Comments: The aim of this task is to make it easier for people to exchange reusable materials and/or donate them to charitable services.
Major Decisions: Where to locate the community bulletin boards and whether to pursue monthly or periodic curbside collection programs for reusable materials.
Potential Obstacles: Lack of interest in exchanging "used" items.
Roles and Responsibilities: The Solid Waste Coordinator will take the lead in evaluating the various reuse/exchange options. Municipal officials will need to work with the Coordinator to determine if material exchanges can be combined with municipal sponsored clean-up days.
Duration: The Coordinator should evaluate these options during the second year of Plan implementation. Once implemented, the exchange/reuse programs should continue on a regular basis.
Source of Funding: IEPA's Phase III Implementation Grant Program and/or county government funds.

WASTE REDUCTION TASK 4:	EVALUATION OF OPTIONS FOR MANAGING USED OIL, PAINT AND WATCH BATTERIES AND THE FUTURE NEED FOR HAZARDOUS WASTE MANAGEMENT PROGRAMS

Subtasks: Meet with local automotive businesses and encourage and assist them in developing a network of used oil drop-off sites in the County. Investigate paint exchange programs conducted in other counties in Illinois; meet with local paint dealers and civic organizations to determine the feasibility of conducting paint exchanges in the County. Meet with local jewelers and watch shop owners and encourage them to recycle watch batteries. Conduct research on the quantity of HHW in the residential wastestream and evaluate the need for an on-going HHW collection program. Contact neighboring counties to determine their interest in establishing a regional HHW collection program. Survey likely CESQG's in the County to determine the amount of CESQG waste generated in the County and evaluate the need for an on-going CESQG collection program.

Comments: The County's goal is to minimize the generation of hazardous materials and encourage proper management of HHW, used oil, paint and watch batteries. Used oil and paint typically comprise 60-70 percent of the amount of material collected at IEPA's single event HHW collection projects. The cost of the IEPA single event collections is extremely high (even though the IEPA pays for the program) and the waiting period for being selected by the IEPA can be quite long. A permanent HHW collection site may be feasible if a regional approach is taken.

Major Decisions: How to develop a network of used oil drop-off sites and whether to hold paint exchanges. Whether there is a need for a permanent local or regional HHW collection site. Whether to establish a CESQG collection program.

Potential Obstacles: Automotive businesses may be reluctant to collect used oil because of liability concerns and cost. Lack of support from paint dealers and civic organizations for paint exchanges. Inadequate funding and/or public resistance to siting a permanent collection facility.

Roles and Responsibilities: The Solid Waste Coordinator will take the lead role. The cooperation of automotive businesses, paint dealers, jewelers, watch shop owners and civic organizations will be important. A technical consultant may play a useful role.

Duration: The evaluation of HHW collection programs, used oil drop-off and a paint exchange and battery recycling will occur during the second year of implementation.

Source of Funding: IEPA's Phase III grant program, IEPA's HHW grant program, DENR's grant programs and/or county government funds.

WASTE REDUCTION TASK 5:	EVALUATION OF A NETWORK OF RURAL DROP-OFF CENTERS AND/OR CURBSIDE COLLECTION

Subtasks: Conduct meetings with the municipalities, townships, haulers and citizens to discuss the need for and type of drop-off centers necessary to service the unincorporated area of the County and locate the most suitable areas for drop-off centers. Determine whether the centers will be manned or unmanned, operating hours, materials accepted, who will service the centers, cost of the program and payment method. Monitor the need for additional facilities. Evaluate whether to extend curbside recycling to unincorporated areas, especially to subdivisions adjacent to incorporated towns.

Comments: The goal of this task is to provide residents in the unincorporated area of the County a convenient recycling opportunity. The County may need to consider issuing a request for bids to select a contractor to operate the drop-off centers.

Major Decisions: Whether the drop-off centers are necessary; whether they should be manned or unmanned, materials accepted, operating hours, number and location of drop-off centers. Who will service the drop-off centers and how the cost for this service will be funded. Whether to extend curbside services to unincorporated areas of the County.

Potential Obstacles: Funding the drop-off program. Reaching agreement on the location and service area for drop-off centers. Coordination between the County, municipalities, townships and the haulers. Additional cost for rural curbside service.

Roles and Responsibilities: This task will require negotiation and cooperation among the County, Solid Waste Coordinator, municipalities, townships, haulers and the public.

Duration: The evaluation of the need for a rural drop-off network program and/or rural curbside recycling should be completed within two years of Plan adoption.

Source of Funding: IEPA's Phase III grant program should pay for personnel costs and educational efforts for evaluating and implementing the drop-off program and/or curbside recycling. ENR's grant funds may help pay for capital costs. Township tax levy pursuant to the Township Refuse Collection and Disposal Act. County, township and/or municipal general funds.

WASTE REDUCTION TASK 6:	ESTABLISHMENT OF CURBSIDE AND/OR DROP-OFF RECYCLING IN EACH MUNICIPALITY

Subtasks: Study existing curbside and drop-off recycling programs in the County. Provide technical assistance to the municipalities in establishing and/or expanding curbside and/or drop-off recycling programs. Determine the location of drop-offs. Determine the materials to be included in the program.

Comments: The intent is to provide municipalities currently without recycling programs flexibility in deciding whether to implement drop-off recycling or curbside recycling and to assist municipalities with curbside programs to expand their programs. The County Solid Waste Coordinator will assist the municipalities in evaluating options, negotiating with haulers, educating residents and overseeing implementation.

Major Decisions: Details of funding the curbside and/or drop-off recycling service. How to gather public input concerning recycling options.

Potential Obstacles: Disagreements with local government officials and the hauling companies over the design of the curbside and/or drop-off program. If a user fee is established to fund the curbside service, public discontent with the price of the user fee. Lack of participation.

Roles and Responsibilities: The Solid Waste Coordinator, municipalities and hauling companies will work together to implement curbside and/or drop-off recycling. Input should also be sought from the public. The Solid Waste Coordinator will work with the municipalities to encourage and help foster the implementation of curbside and/or drop-off recycling programs.

Duration: Each municipality currently without a recycling program should have curbside and/or drop-off recycling available within two years of Plan adoption.

Source of Funding: Curbside recycling service should be funded by a user fee. IEPA's Phase III Implementation Grant Program and/or county government funds can cover personnel costs for technical assistance and meetings. ENR's Recycling Grants Program is available to assist in the funding of capital costs and public awareness.

WASTE REDUCTION TASK 7: STIMULATING COMMERCIAL AND INSTITUTIONAL RECYCLING SERVICES
Subtasks: Examine the commercial and institutional recycling services already being offered by local haulers. Study recycling ordinances or licensing agreements from other local government units. Conduct public meetings with hauling companies, the local business/industrial associations and public officials on the development of a more comprehensive commercial/institutional recycling program. Develop minimum guidelines for a commercial recycling program. Provide waste audit assistance and develop or provide a self-help audit manual to interested businesses.
Comments: The continued successful implementation of commercial/institutional recycling will require the cooperation of the municipalities, businesses and haulers. The design and implementation of the recycling programs will be decided by the hauler and the individual commercial/institutional establishment. The County will provide waste audit assistance.
Major Decisions: Details of how to implement a more comprehensive recycling program.
Potential Obstacles: Disagreements between County officials, municipal officials, the hauling companies and commercial/institutional establishments over the appropriate means to expand services. Cost of recycling services may discourage participation.
Roles and Responsibilities: The Solid Waste Coordinator, County officials, municipal officials, and hauling companies will work together to design a more comprehensive program. Input will also be sought from the local business/industrial associations. The assistance of a technical consultant may be helpful.
Duration: The process should begin during the second year of implementation.
Source of Funding: The recycling service should be funded by a user fee. IEPA's Phase III Implementation Grant Program and/or county government funds. Commercial/institutional establishments may apply for funding under the ENR's Recycling Grants Program.

WASTE REDUCTION TASK 8: EVALUATION OF CONSTRUCTION/DEMOLITION DEBRIS.
Subtasks: Meet with local builders and contractors to discuss current construction/demolition (C/D) management practices and what options are available for recycling and/or reusing the materials. Develop a recordkeeping system to track the generation and management of construction/demolition debris. Attempt to identify existing local markets and/or potential markets. Set quantitative recycling goals. Develop and/or provide information on preferred management of C/D debris. Support local and regional pilot studies on reducing and/or recycling C/D debris. Evaluate whether to adopt an ordinance requiring C/D related projects to submit C/D waste reduction plans. Explore the feasibility of developing a procurement policy for recycled C/D material.
Comments: Construction/demolition debris is part of MW and as a result the County should make an effort to recycle this wastestream to help meet the County's recycling goals. The IEPA's interpretation of which C/D materials count toward MW recycling should be continually monitored.
Major Decisions: How to effectively track construction/demolition debris and how to encourage recycling of construction/demolition debris. Whether viable markets exist. Whether to require C/D waste reduction plans.
Potential Obstacles: Illegal dumping of construction/demolition debris. Lack of cooperation by contractors. Inadequate markets.
Roles and Responsibilities: The Solid Waste Coordinator will take the lead role. A technical consultant may play a useful role.
Duration: The evaluation of construction/demolition debris management should he completed by the end of the second year.
Source of Funding: IEPA's and DENR's grant programs and/or County funds.

WASTE REDUCTION TASK 9: EVALUATION OF ORPHAN WASTES
Subtasks: Consult with local scrap dealers to determine their future role concerning managing white goods and assess the need to develop an alternative white goods collection and management system. Evaluate the current infrastructure for removing hazardous components from white goods. Meet with the Farm Bureau and evaluate the current system for managing used tires and determine the need for additional planning. Determine whether to apply for an IEPA funded tire collection day. Monitor the IEPA's and DENR's grant programs for white goods and used tires.
Comments: The most pressing issue may be the management of white goods. Beginning July 1, 1994, white goods cannot be offered for collection unless the "hazardous" components have been removed.
Major Decisions: How to manage white goods if the local scrap industry chooses not to continue managing them. Whether there is a need to develop a used tire program in addition to the Farm Bureau's collection program.
Potential Obstacles: Inadequate funding to develop and implement programs. Illegal dumping of white goods and tires.
Roles and Responsibilities: The Solid Waste Coordinator will take the lead role. A technical consultant may play a useful role.
Duration: The evaluation of white goods should be completed within one year of Plan adoption. The evaluation of used tires should be completed by the end of the second year.
Source of Funding: IEPA's and DENR's grant programs and/or County funds.

WASTE REDUCTION TASK 10: RECORDKEEPING AND REPORTING OF RECYCLING OPERATIONS AND FINAL DISPOSAL
Subtasks: Track Statewide efforts to standardize recycling recordkeeping and reporting. Develop a draft reporting format. Elicit comments on the draft format and revise as necessary. Enter data in a spreadsheet or database for monitoring and analysis. Develop a system to track the disposal of waste not recycled with input from waste haulers and landfills.
Comments: A formal means of tracking the quantities of waste from the County that are recycled and disposed will be necessary to monitor the County's progress toward its recycling goals and to evaluate the effectiveness of its programs. The data must be broken down by sector (residential, commercial, C/D) to determine if recycling goals are being met.
Major Decisions: Extent of information to be asked for. Incentives or policies to ensure that recycling operators, haulers and/or landfill operators fill out the forms. How to ensure confidentiality.
Potential Obstacles: Recycling operators, haulers and landfill operators may be hesitant to fill out the forms because the quantities are difficult to estimate accurately or because they may fear that confidentiality will be breached. Determining a workable definition of "recycling".
Roles and Responsibilities: The Solid Waste Coordinator will take the lead role. The cooperation of recycling operators, haulers and landfills will be essential. The assistance of a technical consultant may be helpful.
Duration: Immediate and ongoing.
Source of Funding: IEPA's Phase III Implementation Grant Program and/or County funds will pay for personnel costs.

WASTE REDUCTION TASK 11: OVERALL PROGRAM ADMINISTRATION AND FUNDING
Subtasks: Develop job description and designate Solid Waste Coordinator. Select technical and legal consultants, if necessary. Develop funding mechanisms to pay for staff salaries and other Plan components. Apply for the appropriate IEPA and ENR grant funding. Continually evaluate IEPA's and ENR's grant programs. Research and evaluate other funding options (e.g. USEPA, FHA).
Comments: This task cannot be fully described until the Plan is finalized and decisions are made conecrning intergovernmental agreements, etc. The County will be responsible for setting the budget for the overall program. The Solid Waste Coordinator could be hired on a contract basis.
Major Decisions: Selection of personnel, and consultant(s). Structure of intergovernmental agreement, if local government units agree to form one. Funding level.
Potential Obstacles: Inadequate funding. Poor communication lines between staff, County officials and municipalities.
Roles and Responsibilities: The final Plan and County Board, which will oversee the work of the Solid Waste Coordinator, will determine the major organizational and funding features of implementation.
Duration: Immediate and ongoing.
Source of Funds: IEPA's Phase III Implementation Grant Program, ENR's grant programs and/or County funds will pay for personnel costs, capital costs, etc.

WASTE REDUCTION TASK 12: PROGRAM MONITORING AND EVALUATION
Subtasks: Gather baseline data on consumer attitudes and behavior using a telephone opinion survey. Gather baseline data on waste generation in County facilities, based on records, if available, employee interviews, and/or several consecutive weeks of actual measurement with a scale. Monitor consumer attitudes and behavior with additional administrations of the opinion survey during later months to see if the education campaign has had a significant effect. Monitor waste generation at County facilities several months after implementation to determine the success of the waste audit. Analyze reported data from recycling operations to detect trends and to measure the effects of education and of the ordinances establishing recycling service. Seek comments from haulers and businesses to determine if the recycling program is on track and is meeting everyone's needs. Evaluate education program, waste audit program, and the recycling provisions of the Plan. Revise priorities and goals and plan future actions.
Comments: Program monitoring and evaluation is essential to the success of Plan implementation. Few policies or programs are constructed so well from the beginning that they cannot be improved with some adjustments. By making baseline measurements and by making other provisions for monitoring and evaluation, the program's success can be tracked and the factors affecting its success can be more accurately identified and addressed.
Major Decisions: Construction of the opinion survey.
Potential Obstacles: Inadequate survey and/or research design. Evaluation tasks may be overlooked if the Solid Waste Coordinator is busy with other tasks.
Roles and Responsibilities: The Solid Waste Coordinator will take the lead role. A technical consultant may play a useful role.
Duration: Monitoring and evaluation will be ongoing.
Source of Funding: IEPA's Phase III Implementation Grant Program and/or County funds will pay for personnel costs, mailing costs, etc.

WASTE REDUCTION TASK 13: LEGISLATIVE AND REGULATORY TRACKING AND LOBBYING
Subtasks: Track the status of bills introduced in the General Assembly that may influence the County's Solid Waste Plan. Send letters and/or meet with legislators on any key bills. Track the status of the IEPA's and ENR's rule-making for grants for the management of household hazardous waste, white goods, and other wastes.
Comments: State legislation and regulations are the principal driving forces behind changes in solid waste management today. It is necessary to keep abreast of decisions and trends that could have an effect on the County's solid waste management system.
Major Decisions: Whether to lobby for or against specific bills and/or amendments.
Roles and Responsibilities: The Solid Waste Coordinator will take a lead role in tracking legislation and regulations and report his/her findings to the County Board for further action.
Duration: Ongoing.
Source of Funding: IEPA's Phase III Implementation Grant Program and/or County funds will pay for personnel costs, etc.

Final Disposal Task.

1. Annual monitoring of existing landfill capacity.

2. Review and amend (if necessary) existing siting and filing fee ordinances and develop and adopt landfill siting criteria.

FINAL DISPOSAL TASK 1: MONITORING OF EXISTING DISPOSAL CAPACITY
Subtasks: Conduct an annual evaluation of the location and number of landfills accepting solid waste from the County. Obtain and analyze copies of annual capacity reports and calculations submitted by the landfills to the IEPA (due April 15). Annually review the capacity status of each landfill accepting waste from the County to determine the viability and economic feasibility of continued reliance on existing landfill disposal capacity. Prepare an annual capacity determination report and submit it to the County Board.
Comments: Evaluating the landfills utilized by the County will require the cooperation of the haulers. The terms, "viability" and "economic feasibility" must be defined prior to preparation of the capacity determination report. Examples might include five years or less of average remaining capacity in landfills utilized by the County and posted gate fees greater than the average posted gate fee state-wide.
Major Decisions: When to decide that landfill capacity is too "unreliable" and/or "costly". Whether to lift the Plan's ban on new landfills and/or landfill expansions during the first five year update to the Plan.
Potential Obstacles: Sudden shifts in capacity or landfilling costs due to regulatory issues or market conditions.
Roles and Responsibilities: The Solid Waste Coordinator will take the lead role in collecting and analyzing the data and preparing the annual report. The landfill operators and haulers will be relied upon to submit accurate data. The County will be responsible for determining if capacity is becoming too "unreliable" or "costly" and what further actions need to be taken.
Duration: Tbe capacity determination report should be prepared on an annual basis beginning in 1995.
Source of Funds: IEPA Phase III grant funds and/or County funds.

FINAL DISPOSAL TASK 2: RESEARCH AND AMEND FACILITY SITING/ FILING FEE ORDINANCE AND DEVELOP AND ADOPT LANDFILL SITING CRITERIA
Subtasks: Obtain and review the most recent language in Section 39.2 of the Illinois Environmental Protection Act (i.e. siting law). Amend existing County ordinances or enact a new ordinance to address filing fee requirements and to require more specific information in the siting application than required by the State siting law. Especially in regards to green waste composting facilities and landfills. Strongly encourage the municipalities to enact a similar facility siting/filing fee ordinance. Develop and adopt landfill siting criteria within two years of Plan adoption. Consider mapping the landfill siting criteria on the County's GIS.
Comments: The trend in facility siting ordinances is to require specific types of information in the facility siting applications to insure that sufficient analysis has been done by the applicant. The facility siting and filing fee requirements can be combined into one ordinance. Ideally, the County (and each municipality) will enact similar facility siting/filing fee ordinances. The County should develop a mechanism to receive public comments during the evaluation of landfill siting criteria.
Major Decisions: The level of detail required in facility siting applications as required by the ordinance. Whether to develop GIS maps of the landfill siting criteria.
Potential Obstacles: Disagreements over the level of detail to be required by the facility siting/filing fee ordinance. Disagreements over the filing fee amounts. Lack of municipal interest in enacting an ordinance. Disagreements over the landfill siting criteria.
Roles and Responsibilities: The Solid Waste Coordinator, the State's Attorney, County Board and municipalities will take the lead roles in the facility siting/filing fee ordinance. The Solid Waste Coordinator, State's Attorney, County Board, waste industry and general public will take lead roles in developing landfill siting criteria. The assistance of a technical and/or legal consultant may be helpful.
Duration: The siting/filing fee ordinance and the landfill siting fee ordinance should be finalized during the first year of Plan implementation.
Source of Funds: IEPA Phase III grant funds and/or local government funds.

NECESSARY LEGAL CONTROLS

The County-lead implementation option provides the legal controls necessary to implement the Plan. The remainder of this section discusses the legal authority that is or may in the future be required to implement the Plan, including a brief discussion of flow control.

Legal Authority of the County-Lead Option. The Local Solid Waste Disposal Act (LSWDA) and the Solid Waste Planning and Recycling Act (SWPRA) grant the authority to enter into intergovernmental agreements to prepare and implement waste management plans. This authority is clear and explicit.

The SWPRA also appears to grant the County the legal authority to mandate recycling programs in both the unincorporated and incorporated areas of the Counties, according to a recent Attorney General opinion. At this time, the County has chosen to ask the municipalities and townships to sign an intergovernmental agreement and will not attempt to mandate waste reduction programs. Instead, the County, municipalities and townships will work together to continue to provide convenient recycling opportunities throughout the County.

Flow Control. Flow control is the legal authority granted to a unit of local government to direct the flow of waste to a specific facility. Several Illinois statutes contain flow control authority but the wording and intent of the legislation differs. Currently, the Plan does not require that this flow control authority be invoked in the unincorporated region of the County, nor is it asking the municipalities to invoke their flow control authority. Recent court decisions, including a recent U.S. Supreme Court Decision (Carbone Inc. v. Clarkstown) have struck down local flow control ordinances as being a violation of the Commerce Clause of the U.S. Constitution.

IMPLEMENTATION SCHEDULE

Legally, the County must begin implementing the Plan within one year of adoption. The County will begin implementation of the Plan within one year after its adoption. Figures 5-1 and 5-2 show the proposed schedule for implementing the waste reduction (Figure 5-1) and Final Disposal/Implementation (Figure 5-2) components of the Plan. As implementation of the Plan begins, it may be necessary to revise the scbedules. It is anticipated that the majority of the programs called for in the Plan will be implemented or implementation initiated within the first several years. Formal implementation of the Plan will begin once the Solid Waste Coordinator is designated. The timelines in Figures 5-1 and 5-2 are intended to become effective once this designation is made.

ref: \p\539\539b\phase2\vol2\chapter.5

FIGURE 5-1. IMPLEMENTATION SCHEDULE FOR DEKALB COUNTY'S WASTE REDUCTION PROGRAM

	Month																	
Activity / Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
WASTE REDUCTION																		
Designate Solid Waste Coordinator	---																	
Survey Schools and Update Curriculum		---	---	---														
Establish Information Clearinghouse		---	---	---														
Implement Recordkeeping System		---	---	---														
Implement Education/Promotion Campaign					---	---	---											
Maintain Educational Efforts/Regular Newspaper Column								---	---	---	---	---	---	---	---	---	---	---
Conduct Waste Audits of County Facilities					---	---	---											
Implement Waste Audit Recommendations								---	---	---								
Implement Waste Audit Education/Assistance Program											---	---	---	---	---	---	---	---
Implement Exchange/Reuse Programs												---	---	---	---	---	---	---
Evaluation of Rural Drop-off/Curbside Program													---	---	---	---	---	---
Evaluate C/D Debris													---	---	---	---	---	---
Evaluate Used Oil and Paint Management															---	---	---	
Evaluate Household Hazardous Waste Management															---	---	---	
Evaluate White Goods, Used Tires		---	---	---													---	---
Legislative Tracking/Lobbying		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Program Monitoring and Evaluation		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

FIGURE 5-2. IMPLEMENTATION SCHEDULE FOR DEKALB COUNTY'S FINAL DISPOSAL PROGRAM AND IMPLEMENTATION AUTHORITY

	Month																	
Activity Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
FINAL DISPOSAL																		
Monitor Existing Landfill Capacity	----------																	
Review and Enact Facility Siting/Filing Fee Ordinance							----------											
Evaluate and Adopt Landfill Siting Criteria				----------														
IMPLEMENTATION																		
Determine Interest in Forming Intergovernmental Committee	----------																	
Agree on Intergovernmental Agreement				----------														

APPENDIX A

DEKALB COUNTY CITIZENS ADVISORY COMMITTEE (CAC) MEMBERSHIP LIST

Mr. Ken Bowden
205 Laurel Lane
DeKalb, Illinois 60115

Mr. Bob Jordal
R.R. #2, Gurler Road
DeKalb, Illinois 60115

Ms. Marlene Allen
207 East Third Street
Sandwich, Illinois 60548

Mr. Butch Binder
401 Charles Street
Sycamore, Illinois 60178

Mr. Robert Hutcheson
Highway 64, R.R. #1
Malta, Illinois 60150

Mr. Jeff Gorman
616 Parkmoor
Sycamore, Illinois 60178

Mr. Ronald Matekaitis
200 South 4th Street
DeKalb, Illinois 60115

Mr. Cameron Davis
City of DeKalb
200 South Fourth Street
DeKalb, Illinois 60115

Mr. Derek DeGroot
Waste Management - West
P.O. Box 745
DeKalb, Illinois 60115

Mr. Robert Larson
Larson Accounting Service
209 W. Main Street
Genoa, Illinois 60135

Mr. Dale Hoekstra
Waste Management
1031 East Fabyan Pkwy.
Batavia, Illinois 60510

Mr. Joe Bybee
DeKalb County Soil & Water Conservation Dist.
315 North Sixth Street
DeKalb, Illinois 60115

Mr. Bob Drake
DeKalb County Health Department
2337 Sycamore Rd.
DeKalb, Illinois 60115

Mr. Roger Hopkins
DeKalb County Economic Development Commission
421 North California, Ste. 200
P.O. Box 5
Sycamore, Illinois 60178

Mr. Mike Walt
DeKalb Precision Industries
2031 Sycamore Road
DeKalb, Illinois 60115

Ms. Nancy Beasley
705 DeKalb Ave.
Sycamore, Illinois 60178

Mr. Ronald Naylor
Public Works
City of DeKalb
200 South Fourth St.
DeKalb, Illinois 60115

Mr. Steve Kapitan
League of Women Voters
323 N. Seventh St.
DeKalb, Illinois 60115

APPENDIX B

RESPONSIVENESS SUMMARY AND CORRESPONDENCE WITH THE IEPA

RESPONSIVENESS SUMMARY

The DeKalb County two-volume draft Solid Waste Management Plan was formally placed on file November 7, 1994 for the 90 day public review and comment period. The 90 day comment period ended on February 6, 1995. In accordance with the Solid Waste Planning and Recycling Act, this responsiveness summary was incorporated into the Plan submitted to the County Board for adoption on March 15, 1995.

The public hearing was held on December 1, 1994 at 7 p.m. at the DeKalb Municipal Building in DeKalb, Illinois. There were no public comments received at the hearing. However, written comments were received from the DeKalb County Economic Development Corporation and the DeKalb County Farm Bureau. These written comments are listed below in italics.

1. Comments received in a November 22, 1994 letter from the DeKalb County Economic Development Corporation.

   a. *Walter Willis has given us some general guidelines for how the implementation effort should be staffed and budgeted. In my opinion, this is a general framework for the tasks which need to be undertaken and one version of how they could be staffed. I would like the County Board to also consider undertaking plan implementation by subcontracting some portions of the implementation plan, perhaps with some of the tasks to be carried out by the DeKalb County Health Department, some educational efforts to be performed by the DeKalb County Extension Office, and perhaps some of the periodic waste audit and technical monitoring to even be contracted with a consulting firm, such as Patrick Engineering or the City of DeKalb's Public Works staff.*

      The Plan recognizes the importance of working with existing entities (e.g. Regional Superintendent, DeKalb County Natural Resources Education

Consortium) to implement the Plan. The Plan does recommend the designation of a Solid Waste Coordinator in accordance with the Solid Waste Planning and Recycling Act. Who or what organization will be designated was not addressed specifically in the Plan and therefore is a matter to be decided by the County Board.

Table 4-1, Volume II, contains a budget estimate for staffing and implementing the Plan. This table was meant to act as a budget guideline for the County Board. Your suggestions for "subcontracting" some tasks out is consistent with the Plan's recommendations to utilize existing staff, organizations and consultants to assist in implementing the Plan. The County Board will consider "subcontracting" these efforts out as Plan implementation proceeds.

b. *In addition, to fund the Solid Waste Plan implementation, I would encourage the Committee and the County to adopt a flat fee based on the general spending needs to implement the Plan. I do not believe the fee should be variable, starting with $1.13/ton, and then declining over years. Rather, I would prefer the County establish a set fee somewhere in the middle of this range, perhaps at $.75/ton, and then undertake tasks to the extent that the County could fund and recover its costs through the user fee system. Another reason I favor $.75/ton is that it represents a very modest 3% increase in landfilling charges which ultimately will be borne by local tax payers. Perhaps this fee could even be reduced if revenues were forthcoming under matching grants from IEPA, ENR or through the University of Illinois' Extension Service.*

Table 4-1, Volume II, does show four different local surcharge amounts for 1995-1998. This was not meant to imply that the surcharge should be variable. Instead, the purpose was to show the surcharge amount required

to meet the estimated budget for 1995, 1996, 1997 and 1998. Because the annual budgets vary for each year, the surcharge also varies.

The County Board intends to review the recommendation to enact a local surcharge ordinance very carefully and if a surcharge is enacted, it will be for a set fee.

2. Comments received in a January 30, 1995 letter from the DeKalb County Farm Bureau.

   a. *As written, the Plan call for the designation of a Solid Waste Coordinator. We realize there are educational and reporting needs associated with the implementation of the Plan but feel many of these duties could be accomplished through alternative means. The Farm Bureau strongly suggests that if a Coordinator position is considered, it should be a part-time position administered through the County Health Department. Currently, much of the solid waste reporting associated with the landfill is administered through this department and should continue to follow this format. In reference to the education needs, we suggest working through local education service centers, such as the Cooperative Extension Service, to develop a format to carry out this task. By using other services, funding resources could be more efficiently utilized and an additional level of County government would not be created.*

   See response to comment 1(a). The County Board is sensitive to your concern for creating an additional level of County government and does not intend to create a separate department. The State law does require us to <u>designate</u> a Solid Waste Coordinator. This doesn't mean the County will hire additional full-time staff to implement the Plan. DeKalb County has implemented the most successful recycling programs in the State

utilizing existing staff and by working with the private sector. We intend to continue to work with existing staff and local entities to implement the Plan's recommendation.

b. *Next, the Committee discussed the recommendation to set criteria for siting future landfills. As an organization, we concur with this recommendation and strongly encourage the development of this criteria. This procedure should not necessarily site such a facility, but should suggest the condition for future sitings. As a County, we must assume responsibility for the waste we produce. Part of this responsibility is allowing for the final disposal of the waste.*

This was a topic of considerable discussion at several Citizens Advisory Committee meetings. The County Board intends to develop location standards specific to DeKalb County that will insure proper land use and respect the concerns of the waste management industry. During the development of the siting criteria, the public and all affected parties will have an opportunity to provide comments and feedback to the County Board.

c. *As a Committee, we also strongly support the need to limit the service area of our existing landfill and/or future landfills when deemed necessary. Again, this concept enforces the need to be responsible for ones own waste.*

The County Board agrees and specifically reiterated the policy established in its 1989 siting decision which limits the service area of the DeKalb County Landfill.

d. *Although the goals for recycling seem to be at the high end, we commend the Committee for seeking a standard of excellence. With technological changes in packaging and disposal, this goal could be hard to reach, but is attainable and should be strongly emphasized. The County's current recycling rate is something to be extremely proud of and setting a higher standard should be viewed as a motivator to do better in our recycling efforts.*

The County Board is proud of the recycling effort of the County's citizens and businesses. The ultimate recycling goal in the Plan of 51% is significant for two reasons: 1) it provides the County with a new challenge and a reason to continue to build upon our already successful programs and 2) if the 51% recycling rate is achieved, it will represent a significant achievement and further extend the life of the DeKalb County Landfill.

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State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director

2200 Churchill Road, Springfield, IL 62794-9276

217/785-8604
FAX 217/782-9290

January 19, 1995

Mr. Ron Matekaitis
200 South 4th Street
DeKalb, IL 60115

Re: SWM Grant/DeKalb County/Planning/Correspondence

Dear Mr. Matekaitis:

I have completed my review of DeKalb County's Solid Waste Management Plan. I have the following comments to correct or improve the Plan:

General Comments

1. Section 4 of the Solid Waste Planning and Recycling Act (SWPRA) requires waste management plans conform with the waste managment heirarchy in Subsection 2(b) of the Illinois Solid Waste Management Act. This hierarchy is included in Volume 1, page 2-5 of the DeKalb County Solid Waste Management Plan. Revise the Plan to state that it is designed to meet this requirement.

2. Provisions of Section 5(c&d) of the SWPRA which must be met. Page 2-8, bullet 5 should be revised to specifically state that the required entities will be notified. A bullet stating that "tThe Plan submitted to the governing body of the county for adoption shall be accompanied by a document containing written responses to substantative comments made during the comment period" should be added. Section 5(d) states "The governing body of the country shall adopt a plan within 60 days from the end of the public comment period." Add another bullet and include this provision.

Specific Comments

Volume 1

3. P. 2-5. Use the correct legislative citation (ILCS) here and where appropriate throughout the report.

   Correct the #4 hierarchy.

4. P. 3-20, Last Paragraph, Sentence 2. It appears that a phrase has been left out. Possibly the sentence should read, "If the price per bag is too much . . .."

5. P. 4-7, First full paragraph. Correct the typo on "assess".

6. P. 10-1, Definitions. The legislature defines terms. The Agency offers interpretation of the law. Revise this statement.

7. P. 4-23, Bullet 1. Revise this paragraph to state clearly that Phase III grants are not offered at this time. The proposed rules allow for funding of up to $500,000 exclusive of previous solid waste planning grants.

Volume 2

8. P. 1-1, Para. 3, Sentence 2. The Agency "accepts" Needs Assessments but does not "approve" them. Revise this sentence to "accepts".

Feel free to contact me with any questions.

Sincerely,

Robert McGrew

Robert McGrew, Project Manager
Planning and Grants Unit
Solid Waste Management Section
Division of Land Pollution Control
Bureau of Land

bcc: Division File

PATRICK
ENGINEERING INC.

Transportation
Infrastructure
Environmental
Planning
Architecture
Engineering
Surveying

March 7, 1995

Mr. Robert McGrew, Project Manager
Illinois Environmental Protection Agency
Bureau of Land
2200 Churchill Road
P.O. Box 19276
Springfield, Illinois 62794-9276

Subject: DeKalb County Plan

Reference: PEI Project No. 539B

Dear Bob:

We have reviewed your comments and provided revisions as requested. The responses to your comments are provided in the order of your January 19, 1995 letter. Attached are copies of the revised pages of the Plan (both Volume I and Volume II) and the Responsiveness Summary.

General Comments.

1. The Plan has been revised (see page 4-1, Volume II) to state that it was prepared in accordance with the waste management hierarchy stipulated in the Illinois Solid Waste Management Act.

2. Bullet 5 has been revised (see page 2-8, Volume I) to state that the required entities will be notified and new text has been added to bullet 6 to address the additional provisions of Section 5 of the SWPRA, per your request.

Specific Comments.

3. The #4 hierarchy now reads "combustion for volume reduction" and the legislative citations have been corrected throughout the report.

4. The sentence has been corrected in accordance with your suggestion.

5. The typo has been corrected.

6. The reference to the IEPA has been deleted.

300 West Edwards St., Suite 200 • Springfield, Il. 62704-1907 Tel: (217) 525-7050 • Fax: (217) 525-7053

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7. Bullet 1 has been revised to indicate that Phase III grants are not being offered at this time.

8. The revision has been made, per your request.

Please review the revisions to the Plan and let us know if they respond to your comments.

Very truly yours,

PATRICK ENGINEERING INC.

Walter S. Willis

Walter S. Willis
Senior Planner

WSW:alg

Enclosures: Revised Pages of the Plan
Responsiveness Summary

cc: Ron Matekaitis

ref: \sp\p\539\539b\doc\mcgrew.sam

State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director

2200 Churchill Road, Springfield, IL 62794-9276

217/785-8604
FAX 217/524-1991

March 15, 1995

Mr. Ron Matekaitis
200 South 4th Street
DeKalb, IL 60115

Re: SWM Grant/DeKalb County/Planning/Correspondence

Dear Mr. Matekaitis:

I have completed my review of DeKalb County's Final Municipal Solid Waste Plan received March 7, 1995. My comments contained in the January 19, 1995 review letter were adequately addressed in the final report. DeKalb County's Municipal Solid Waste Plan satisfactorily meets the requirements of the Agency's 870 solid waste planning grant rules, the work objectives specified in the March 3, 1993 grant agreement, and the Solid Waste Planning and Recycling Act.

Our records show that the State share remaining is $68,412.86. This includes $0.00 of retainage and $68,412.86 remaining for additional expenditures. In order to close out the grant you will need to:

1. Submit the following items:

   - A copy of the DeKalb County resolution adopting the Municipal Solid Waste Plan.

   - The final billing for work completed from March 3, 1993 to the present.

   - Five copies of the Municipal Solid Waste Plan for our files.

   - A copy of the notice for the public hearing held to receive comments on the Municipal Solid Waste Plan.

2. Complete the enclosed Assignment and Certification for Final Solid Waste Management Grant Payment Form. The form must be signed by the Chairman of DeKalb County Board in order to receive the retainage. We suggest that you prepare a similar form for Patrick Engineering, Inc.

If all of the aforementioned items are submitted together, we can release all the remaining funds at once. It has been a pleasure working with you.

Sincerely,

Robert McGrew

Robert McGrew, Project Manager
Planning and Grants Unit
Solid Waste Management Section
Division of Land Pollution Control
Bureau of Land

Enclosure

APPENDIX C

DEFINITIONS AND ACRONYMS

DEFINITIONS

Clean Construction and Demolition Debris. As defined by the Illinois Environmental Protection Act (415 ILCS 5/3.78), clean construction and demolition debris means broken concrete without protruding metal bars, bricks, rock, stone, or uncontaminated dirt or sand generated from construction or demolition activities.

Compost. As defined by the Illinois Environmental Protection Act (415 ILCS 5/3.69), compost is a the humus-like product of composting waste, which may be used as a soil conditioner.

Composting. As defined by the Illinois Environmental Protection Act (415 ILCS 5/3.70), composting is the biological process by which microorganisms decompose the organic fraction of waste, producing a compost.

Conditionally Exempt Small Quantity Generator (CESQG). A conditionally exempt small quantity generator is a commercial, institutional or industrial establishment which generates no more than 220 pounds of hazardous waste per month or 2 pounds of acutely hazardous waste per month (35 IL Adm. Code 700.304). CESQG's may include printing shops, commercial pesticide users, construction contractors, furniture and wood finishers, laundries and dry cleaners, vehicle maintenance shops, metal working shops, chemical laboratories and chemical formulators.

Domicile Waste. As defined in 35 Ill. Administrative Code 237.101, domicile waste means any refuse generated on single-family domiciliary property as a result of domiciliary activities. The term excludes landscape waste, garbage (i.e., food waste) and trade waste.

Hazardous Waste. As defined by the Illinois Environmental Protection Act (415 ILCS 5/3.15), hazardous waste means a waste, or combination of wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause or significantly contribute to an increase in mortality or an increase in serious, irreversible, or

incapacitating reversible illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed, and which has been identified, by characteristics or listing, as hazardous pursuant to Section 3001 of RCRA of 1976, PL 94-580, or pursuant to Board regulations.

Household Hazardous Waste. As defined by the Household Hazardous Waste Collection Act, household hazardous waste is a consumer-disposed waste product intended for household use generally containing constituents that make its disposal in municipal waste landfills or incinerators undesirable. Household hazardous waste includes, but is not limited to the following; waste oil; solvents; liquid paint; paint removers and paint thinners; and herbicides and pesticides.

Integrated Waste Management. According to the USEPA's Decision Makers Guide to Solid Waste Management, this term refers to the practice of using several alternative waste management techniques to manage and dispose of specific components of the municipal waste stream. Waste management alternatives include source reduction and reuse, recycling, composting, incineration and landfilling.

Landscape Waste (LSW). As defined by the Illinois Environmental Protection Act (415 ILCS 5/3.20), landscape waste is all accumulations of grass or shrubbery cuttings, leaves, tree limbs and other materials accumulated as the result of the care of lawns, shrubbery, vines and trees.

Material Recovery Facility (MRF's). As defined by Patrick Engineering Inc. (there is no legal definition), material recovery facilities are centralized facilities that receive, separate, process and market recyclable materials.

Mixed Waste Processing Facility. As defined by Patrick Engineering Inc. (there is no legal definition), a mixed waste processing facility is a transfer station where recyclables are separated from mixed waste. By recovering recyclables from waste entering the transfer station, the quantity of waste shipped from the transfer station is reduced, thus reducing the costs of

hauling and final disposal. In addition, the sale of recyclables generates a revenue stream which helps offset operating costs.

Municipal Waste. As defined in the Illinois Environmental Protection Act (415 ILCS 5/3.21), municipal waste means garbage, general household and commercial waste, industrial lunchroom or office waste, landscape waste, and construction or demolition debris.

Municipal Waste Recycling Rate. As interpreted by the IEPA, the municipal waste recycling rate is the percentage derived by dividing the weight of all generated municipal waste that is recycled (or planned for recycling) by the weight of all municipal waste generated (or expected to be generated), within the area of concern, during the same year. The weight of municipal waste being recycled is determined by weighing the amount of municipal waste received (or planned for receipt) for recycling and subtracting the weight of remaining material after processing that is not recyclable.

Orphan Wastes. As defined by Patrick Engineering Inc. (there is no legal definition), orphan wastes are miscellaneous wastes which require special handling, such as batteries, motor oil, tires and white goods.

Post-Consumer Materials. As defined by Patrick Engineering Inc. (there is no legal definition), post-consumer materials are those products or materials generated by a business or consumer that have served their intended end uses and have been recovered or otherwise diverted from the waste stream for the purpose of recycling.

Recyclables. As defined by Patrick Engineering Inc. (there is no legal definition), recyclables are materials that still have useful physical or chemical properties after serving their original purpose which can be remanufactured into new products.

Recyclability. As defined by Patrick Engineering Inc. (there is no legal definition), recyclability refers to the ability of products to be recycled and returned to the economic

mainstream as raw materials in the manufacture of new products, depending on the availability of markets in a particular area.

Recycled Content. As defined by Patrick Engineering Inc. (there is no legal definition), recycled content refers to the fact that a product is made with recycled materials.

Recycling, Reclamation or Reuse. As defined by the Illinois Environmental Protection Act (415 ILCS 5/3.30), recycling, reclamation or reuse is a method,technique or process designed to remove any contaminant from waste so as to render the waste reusable, or any process by which materials that would otherwise be disposed of or discarded are collected, separated or processed and returned to the economic mainstream in the form of raw materials or products.

Recycling Center. As defined by the Illinois Environmental Protection Act (415 ILCS 5/3.81), a recycling center is a facility that accepts only segregated, nonhazardous, non-special, homogeneous, non-putrescible materials, such as dry paper, glass, cans or plastics, for subsequent use in the secondary materials market.

Refuse Derived Fuel (RDF) Facilities. As defined by Patrick Engineering Inc. (there is no legal definition), RDF facilities are a hybrid of the mixed waste processing facilities. RDF facilities produce a burnable material from waste. RDF facilities attempt to separate non-burnable materials, such as ferrous metals, glass, and grit in order to produce a fuel that has better combustion characteristics than mixed waste.

Regional Pollution Control Facility. According to the Illinois Environmental Protection Act (415 ILCS 5/3.32), a regional pollution control facility is any waste storage site, sanitary landfill, waste disposal site, waste transfer station, waste treatment facility or waste incinerator that accepts waste from or that serves an area that exceeds or extends over the boundaries of any local purpose unit of government.

Re-Refined Oil. As defined in the Illinois Environmental Protection Act (415 ILCS 5/3.36), re-refined oil means any oil which has been refined from used oil meeting substantially the same standards as new oil.

Reuse. As defined by Patrick Engineering Inc. (there is no legal definition), reuse is the process of using a product in its same form as much as possible before the product reaches the end of its useful live and is discarded. Reuse attempts to recapture the value and usefulness of materials which have outgrown their original use.

Sanitary Landfill. As defined in the Illinois Environmental Protection Act (415 ILCS 5/3.41), sanitary landfill means a facility permitted by the Illinois Environmental Protection Agency for the disposal of waste on land meeting the requirements of the Resource Conservation and Recovery Act, and regulations thereunder, and without creating nuisances or hazards to public health or safety, by confining the refuse to the smallest practical volume and covering it with a layer of earth at the conclusion of each day's operation, or by such other methods and intervals as the Illinois Pollution Control Board may provide by regulation.

Source Reduction. As defined by Patrick Engineering Inc. (there is no legal definition), source reduction is the process of reducing the quantity of waste before the products are purchased, used and discarded. In essence, source reduction is the prevention of waste or the reuse of materials before they become "waste".

Source Separation. As defined by Patrick Engineering Inc. (there is no legal definition), source separation refers to the segregation of recyclable materials from waste products prior to disposal. For example, residences source-separate recyclables from their refuse as part of a curbside recycling program.

Toxicity Reduction. As defined by Patrick Engineering Inc. (there is no legal definition), toxicity reduction is the process of reducing or eliminating the amount of toxic constituents in materials or products entering the wastestream.

Transfer Station. The Illinois Environmental Protection Act (415 ILCS 5/3.83) defines a transfer station as a site or facility that accepts waste for temporary storage or consolidation and further transfer to a waste disposal, treatment or storage facility.

Volume-Based Collection. As defined by Patrick Engineering Inc. (there is no legal definition), volume-based collection refers to a system in which fees for solid waste services are based on the volume of refuse discarded.

Waste Reduction. As defined by Patrick Engineering Inc. (there is no legal definition), waste reduction refers to decreasing the quantity or type of materials that must be disposed through methods including source reduction, reuse, toxicity reduction, volume reduction and recycling.

White Goods. As defined by the Illinois Environmental Protection Act (415 ILCS 5/22.28 (c)(1)), white goods include all discarded refrigerators, ranges, water heaters, freezers, air conditioners, humidifiers and other large domestic and commercial appliances.

ACRONYMS

A/E	=	Architect/Engineer
BACT	=	Best Available Control Technology
CAC	=	Citizens Advisory Committee
C/D	=	Construction and Demolition Waste
CESQG	=	Conditionally Exempt Small Quantity Generator
CPO	=	Computer Printout Paper
DENR	=	Department of Energy and Natural Resources
ESP	=	Electrostatic Precipitators
FERC	=	Federal Energy Regulatory Commission
HB	=	House Bill
HDPE	=	High Density Polyethylene
HHW	=	Household Hazardous Waste
IMES	=	Industrial Materials Exchange Service
IEPA	=	Illinois Environmental Protection Agency
LDPE	=	Low-Density Polyethylene
LSW	=	Landscape Waste
LSWDA	=	Local Solid Waste Disposal Act
lbs/cy	=	Pounds Per Cubic Yard
MRF	=	Material Recovery Facility
MW	=	Municipal Waste
NSPS	=	New Source Performance Standards
O&M	=	Operating and Maintenance
OCC	=	Old Corrugated Cardboard
OMG	=	Old Magazines
ONP	=	Old Newspaper
P.A.	=	Public Act
PCD	=	Pounds Per Capita Per Day
PED	=	Pounds Per Employee Per Day
PEI	=	Patrick Engineering Inc.
PETE	=	Polyethylene Terephthalate
PURPA	=	Public Utilities Regulatory Policies Act
RCRA	=	Resource Conservation and Recovery Act
RDF	=	Refuse Derived Fuel
SB	=	Senate Bill
SIC	=	Standard Industrial Classification
SWPRA	=	Solid Waste Planning and Recycling Act
TCLP	=	Toxic Characteristic Leaching Procedure
TPD	=	Tons Per Day
TPY	=	Tons Per Year
TW	=	Total Waste
UBC	=	Used Beverage Can
USEPA	=	United States Environmental Protection Agency
WTE	=	Waste-To-Energy