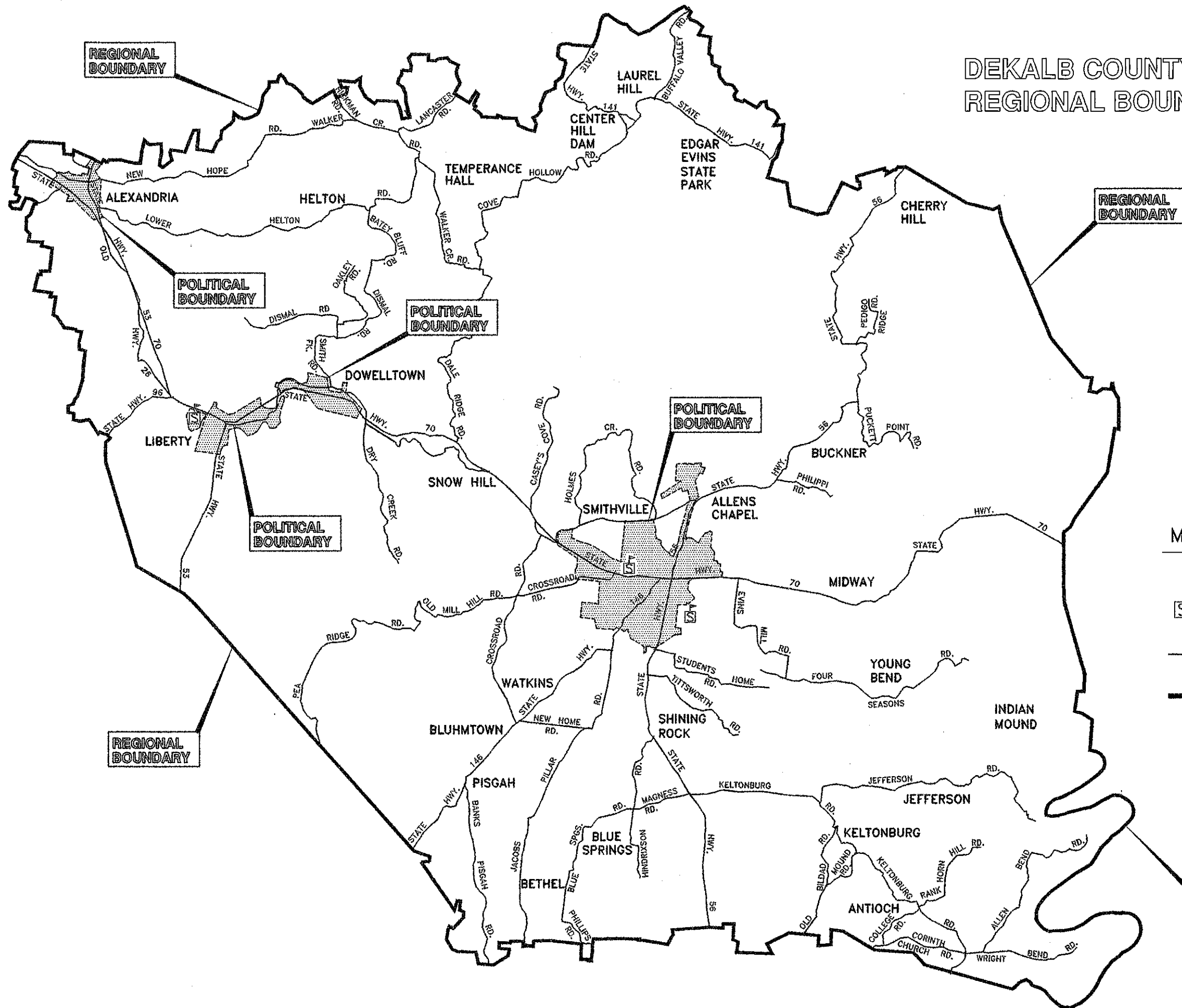





# DEKALB COUNTY, TENNESSEE REGIONAL BOUNDARY MAP



## MAP SYMBOLS

-  SCHOOL
-  ROADS
-  COUNTY LINE

REGIONAL BOUNDARY

### **C. INSTITUTIONAL STRUCTURE**

*Dekalb County established an eleven member Regional Solid Waste Board under T.C.A. 68-211-813(b)(1) to produce and oversee the Municipal Solid Waste Regional Plan for Dekalb County. The Regional Solid Waste Board is structured of officials representing the city and county officials, local businessmen and interested residents of the county. The board is comprised of the following officials:*

*Billy J. Lafevre - Chairman  
James White - Vice Chairman  
Tim Stribling - Secretary  
Larry Webb - County Executive  
Cecil Burger - Mayor of Smithville  
Leonard Dickens - Board Member  
Mack Harney - Board Member  
Tom Keith - Board Member  
Dwight Mathis - Board Member  
Kenneth Sandlin - Board Member  
Ronald Young - Board Member*

### **D. DEMOGRAPHICS**

*Dekalb County has a total population of 14,360 according to the U.S. Census Bureau projections for 1993. Further analysis reveals that the four urban areas, Smithville, Alexandria, Dowelltown, and Liberty comprise a population of 5,220 or 36.4% of the total county population. Therefore 63.6% or 9,140 people reside in rural Dekalb County areas. (Refer to Tables I-1 and I-2, pg. Ch.1-4).*

*The distribution by age and sex is revealed by Table I-3 (pg. Ch.1-5). Dekalb County is typical for the region with the largest portion at 37.8% within the 18-44 age group. There is almost a uniform split between male and female distribution with slightly more females than males.*

*Table I-4 (pg. Ch.1-5) indicates that for the county residents over 25 years of age, approximately 51% have some form of high school education and approximately 15.9% have some college education. However, there are approximately 29.6% that have less than an 8th grade level education.*

*The distribution by the type of housing and occupancy is revealed in Table I-5 (pg. Ch.1-6). The projections for the Dekalb County Region are indicated in Table I-6 (pg. Ch.1-7). The projections are made through the year 2003 by the University of Tennessee Department of Sociology.*

*The District Needs Assessment states that there are not any significant demographic factors that might have an impact on waste management decisions. Therefore the Dekalb County Region as projected, does not expect any changes that would affect future waste disposal quantities or rates.*

**A. REGIONAL SUMMARY: DEMOGRAPHICS**

1. Name of Region: Dekalb County
2. Regional Population: 14,360
3. Regional Area: 304.6 Square Miles

**4. POPULATION AND POPULATION DENSITY  
TABLE I-1**

County	Area (Sq. Miles)	Population*	Avg. Density Pop./Sq. Miles
Dekalb	304.6	14,360	47.1
Regional Total:	304.6	14,360	47.1

\*1990 Census

**5. DISTRIBUTION OF THE TOTAL REGIONAL POPULATION,  
BY URBAN AND RURAL AREAS:**

**TABLE I-2**

County	City	Urban		Rural	
		Population	%	Population	%
Dekalb	Smithville	3,791	26.4	9,140	63.6
	Alexandria	730	5.0		
	Dowelltown	308	2.2		
	Liberty	391	2.8		
Regional Total		5,220	36.4	9,140	63.6

6. DISTRIBUTION OF THE TOTAL REGIONAL POPULATION  
BY SEX AND AGE:

TABLE I-3

Age	Total	Male	%	Female	%
0-4	869	430	49.5	439	50.5
5-17	2,593	1,344	51.8	1,249	48.2
18-44	5,425	2,623	48.4	2,802	51.6
45-64	3,195	1,536	48.1	1,659	51.9
65+	2,278	921	40.4	1,357	59.6
Regional Total	14,360	6,854	47.7	7,506	52.3

7. DISTRIBUTION OF REGIONAL POPULATION  
BY EDUCATION (AGE > 25):

Table I-4

DEKALB	Number	%
Less than 8th Grade	2,828	29.6
Grade 8	0	0
High School (1-4)	4,877	51.0
College (1-4)	1,518	15.9
Post Graduate/ Professional (>4)	334	3.5
Regional Total	9,557	100%

8. TOTAL NUMBER OF HOUSEHOLDS IN REGION: 5,696

9. DISTRIBUTION BY TYPE OF HOUSING AND OCCUPANCY:  
TABLE I-5

	Total Persons	Occupied	Owner	Rented
Single Family				
1, Detached	11,547	11,547	9,543	2,004
1, Attached	147	147	55	92
Multi-Family				
2	426	426	32	394
3-4	131	131	3	128
5-9	182	182	5	177
10-19	151	151	0	151
20-49	0	0	0	0
50 or More	0	0	0	0
Institutional	123	N/A	N/A	N/A
Mobile Home/Trailer	1,471	1,471	1,090	381
Other	182	182	128	154
Regional Total	14,360	14,360	10,856	3,381

10. REGIONAL POPULATION PROJECTIONS 1994-2003:  
 TABLE I-6  
 DEKALB COUNTY'S REGIONAL POPULATION 1993:  
 PROJECTION YEAR

County	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Regional Total	14,618	14,863	14,748	14,814	14,880	14,946	15,012	15,063	15,114	15,165

## **E. ECONOMIC ACTIVITY**

***There has not been any significant change in the economic activity of Dekalb County's Region since the District Needs Assessment was prepared. Therefore, it is not necessary to update this information.***

***However, the county's economic data is presented in tabular form beginning with Table I-7 thru Table I-14 (pgs. Ch.1-9 thru Ch.1-12). The Tables also provide an overview of sales tax and the property tax base of Dekalb County's Region.***

1. BASIC ECONOMIC INFORMATION, FOR EACH COUNTY,  
AND THE REGION IN 1991.

TABLE I-7

County	Population	MSA County (yes/no)	Total Employment	Total Earnings	Per Capita Income	% Population Below the Poverty Line
DeKalb	14,360	NO	7,028	\$99,436	\$13,018	20.3%
Regional Total	14,360		7,028	\$99,436	\$13,018	20.3%

2. NON-AGRICULTURAL EMPLOYMENT, BY SECTOR, IN 1993:

TABLE I-8  
% OF TOTAL EMPLOYMENT

County	Manufac- turing	Construction	Trade	Finance	Service	Government	Transportation Pub. Utilities
DeKalb	2,509	344	1,051	296	1,077	631	199
%	40.5	5.6	17.0	4.8	17.4	10.2	3.2



3. TOTAL AGRICULTURAL EMPLOYMENT IN 1991:

TABLE I-9  
AGRICULTURAL EMPLOYEES

County	Employment
Dekalb	1,198
Regional Total	1,198

4. A regional summary of major generators of commercial and non-hazardous industrial waste for 1991. Data for Dekalb County's Region was obtained from field surveys.

Table I-10

County	Screening* Criteria Applied	Number of Generators	Estimated Total Qty. of Waste
Dekalb	25 or Greater	15	4,500
Regional Total			4,500

5. Prepare a Regional summary of institutions housing more than 100 persons:

Table I-11

County	Total Number of Institutions	Total Number of Students Prisoners/Residents	Est. Qty. of Waste Generated	
Dekalb	0	0		0
Regional Total	0	0		0

6. Summary data on major health care facilities (larger than 50 beds), (hospitals, nursing homes) in the region.

TABLE I-12

Dekalb County	No. of Facilities	No. of Beds	Infectious Waste Mgmt.		Est. Quantity of Solid Waste Generated
			OnSite/Offsite	Type Treatment	
Sunny Point Health Care Ctr.	1	76	Qty. Unknown	Incineration	Collected by BFI Qty. Unknown
Dekalb General Hospital	1	71	12 Tons/Yr.	Waste Mgmt. Incineration	24 Tons/Year
Regional Total					

SOURCES OF LOCAL REVENUE UTILIZED IN THE REGION  
TABLE I-13

County	Property Tax	Local Sales Tax	Wheel Tax	Local Waste Collection Fee	User Fee/ Tipping Fee	Other
Dekalb	1,954,000	811,158	None	0	175,785	-----
Regional Total	1,954,000	811,158		0	175,785	

8. PROVIDE THE FOLLOWING DATA FOR FISCAL 1993  
TABLE I-14

County	Total Assessed Property Value	Total Property Tax Revenue	Total Sales Subject to Sales Tax	Total Local Sales Tax Revenue	# Registered Vehicles	Total Wheel Tax Revenue
Dekalb	\$91,077,731	\$1,954,000	\$67,824,319	\$811,158	12,947	N/A
Regional Total	\$91,077,731	\$1,954,000	\$67,824,319	\$811,158	12,947	N/A

**CHAPTER II**

**ANALYSIS OF THE CURRENT SOLID WASTE MANAGEMENT  
SYSTEM FOR THE REGION**

## CHAPTER II

### ANALYSIS OF THE CURRENT SOLID WASTE MANAGEMENT SYSTEM FOR THE REGION

#### A. WASTE STREAM CHARACTERIZATION

*The Development District's Needs Assessment states that a detailed engineering characterization of the waste stream is not required. Therefore; the national figures for 1988 as set forth in the EPA publication, "Characterization of Municipal Solid Waste in the United States: 1990 Update" will be used. Also, a comprehensive study has not been done in the Upper Cumberland area in recent years, and the national projections are representative of the county's waste composition.*

*Tables II-1 through II-3 (pages Ch. II-2 & Ch. II-3) reflect the actual volumes collected for Dekalb County Region in 1992. Table II-4 (page Ch. II-4) reflects the national percentages and how this applies to Dekalb County's volume for each category.*

*The Dekalb County Region doesn't have any special waste or any unusual conditions that affect the solid waste stream. A minor amount may possibly be generated from tourism around Center Hill Lake. However, no appreciable increase has been recorded for this portion of the county.*

A. REGIONAL SUMMARY: WASTE STREAM CHARACTERIZATION

1. QUANTITY OF SOLID WASTE RECEIVED FOR DISPOSAL/  
INCINERATION IN CALENDAR 1992

TABLE II-1

County	Tons Disposed	Population (1991)	Waste Disposed Per Capita
Dekalb	9,000	14,425	0.62 Tons/Yr.
Regional Total	9,000	14,425	0.62 Tons/Yr.

2. ORIGIN OF REGIONAL SOLID WASTE IN 1992:

TABLE II-2

TONS PER YEAR

County	Residential	Institutional/ Commercial	Non-Hazardous Industrial	Special	Other
Dekalb	4,500	900	3,600		
Regional Total	4,500	900	3,600		

3. ACCEPTANCE OF CERTAIN CATEGORIES OF SOLID WASTE FOR DISPOSAL OR INCINERATION:

TABLE II-3

County/ Facility	Yard Waste (Clippings- leaves-grass)		Sewage Sludge		Construction Demolition		Tires		White Goods*	
	Y/N	Qty.	Y/N	Qty.	Y/N	Qty.	Y/N	Qty.	Y/N	Qty.
Dekalb	N	0	N	0	N	0	N	0	Y	26
Regional Total		0		0		0		0		26

\*White Goods - discarded major appliances, such as refrigerators, ranges, etc.

#### 4. DESCRIPTION OF THE WASTE STREAM BY MATERIALS

TABLE II-4

<u>Waste Category</u>	<u>National %</u>	<u>Calculated Regional Tons</u>
Paper & paperboard	40.0	3,600
Glass	7.0	639
Ferrous Metals	6.5	585
Aluminum	1.4	126
Other Non-Ferrous Metals	0.6	54
Plastics	8.0	720
Rubber & Leather	2.5	225
Textiles	2.1	189
Wood	3.6	324
Food Waste	7.4	666
Yard Waste	17.6	1,584
Misc. Inorganic Waste	1.5	135
Other	1.7	153
<b>TOTAL MUNICIPAL SOLID WASTE</b>	<b>100.0</b>	<b>9,000</b>



## **B. WASTE COLLECTION AND TRANSPORTATION SYSTEMS**

**Dekalb County operates an excellent Collection System with two (2) manned Convenience Centers and sixteen (16) unmanned roll off Box Pick-Up Centers at the following locations:**

<b>Snow Hill</b>	<b>Short Mountain</b>
<b>Sligo Bridge</b>	<b>Dowelltown</b>
<b>Wolf Creek</b>	<b>Alexandria</b>
<b>Cheery Hill</b>	<b>Village Market</b>
<b>Blue Springs</b>	<b>Pea Ridge</b>
<b>Keltonburg</b>	<b>Shiney Rock</b>
<b>Belk</b>	<b>West Elem. School</b>
<b>Johnson Chapel</b>	<b>Smithville Elem. School</b>
<b>Temperance Hall</b>	<b>Dekalb Co. High School</b>

**The county provides routine pickup and disposal at the landfill for these collection stations. The County utilizes two (2) trucks to pick up the solid waste at these Centers.**

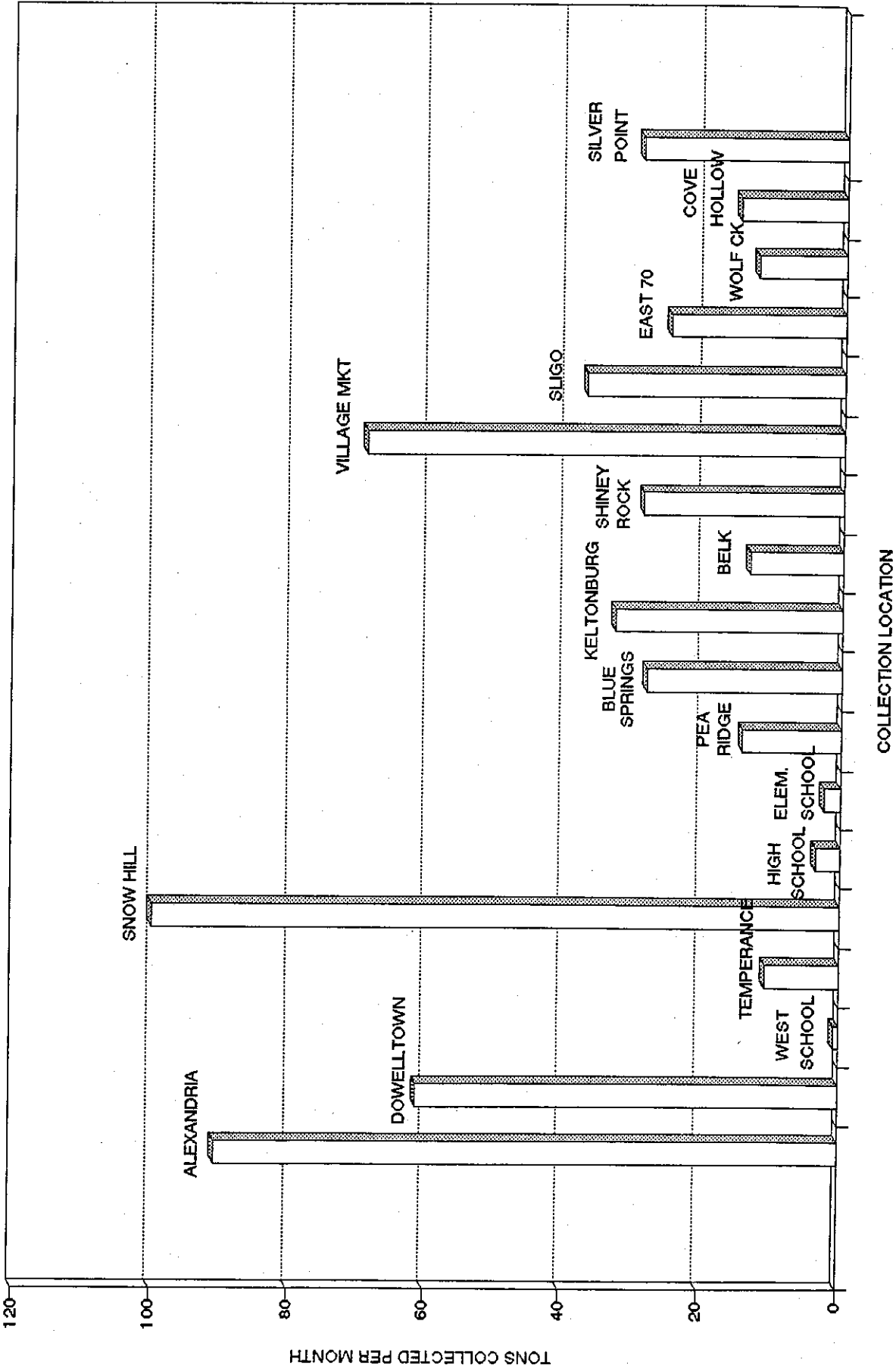
**Therefore, the county has excellent coverage with these collection points (Refer to the current system map on page Ch. II-18).**

**The major portion of current solid waste generated is in order of volume generated with Snow Hill, Alexandria, Dowelltown and Village Market being the top four locations. The bar graph on Solid Waste generated - illustrates the volume in tons per month collected for July 1993. (Refer to Graph on page Ch. II-6).**

**The county operates two manned collection centers with one at Village Market in Northern Smithville near the Industrial Park and the other one is Shiney Rock which is approximately two (2) miles South of Smithville along Highway 56. The county has plans for additional manned convenience centers over the next few years.**

**Smithville, Dowelltown, Liberty and Alexandria have door-to-door collection services within the city limits for residential collection of solid waste. Waste Management and BFI are two (2) private collection service agencies that also collect commercial and industrial solid waste. A tire collection facility located at the Dekalb County's local Landfill held waste tires until they could be shredded by the Tennessee Division of Solid Waste. The County's Landfill receives all of the trash in the County, with the exception of the waste disposed of by Private Haulers, BFI, Inc. and Solid Waste Management, Inc.**

# PRESENT DEKALB COUNTY SOLID WASTE GENERATION BY COLLECTION LOCATION



REGIONAL SUMMARY: FACILITIES

TABLE II-6

6. OPERATING AND PLANNED COMPOSTING FACILITIES IN THE REGION:

County	Facility Location	Tons of Waste Processed/Yr	Composted Materials		
			Yard Waste	Sewage Sludge	Solid Waste
Existing:					
NONE					
Planned:					
DEKALB	Dekalb Co. Landfill	2,000/1995	1584	100	324
Regional Total	Dekalb Co. Landfill	2,000/1995	1584	100	324

5. UNMANAGED WASTE\*:

TABLE II-5

County	Potential Waste Generation 1991 tpy	Actual Waste Disposed 1991 tpy	Unmanaged Waste 1991 (potential/actual) tpy	Percent of Potential Total
Dekalb	15,724	9,000	6,724	43%
Regional Total	15,724	9,000	6,724	43%

\*Wastes that are "outside" the collection system such as materials in roadside dumps, litter, etc.



7. MUNICIPAL SOLID WASTE INCINERATORS OR WASTE-TO-ENERGY FACILITIES IN THE REGION:

TABLE II-7

Operating Facilities:

County	Facility Location	Design Capacity tons/year	Current Use tons/year	Anticipated Operating Life of Facility
Dekalb	None	---	---	---

Planned Facilities:

County	Facility Location	Design Capacity tons/year	Current Use tons/year	Anticipated Operating Life of Facility
Dekalb	None	---	NA	---

## **C. SOURCE REDUCTION AND RECYCLING SYSTEMS**

Source reduction and recycling has already begun to be implemented in the Region. The schools in Dekalb County are now recycling the schools' computer paper and other paper as well. Also, several manufacturing firms are involved either in source reduction or recycling. Some of these include a pallet exchange, the recycling centers at Village Market, and some manufacturers are using recycled cardboard.

### **RECYCLING CENTERS:**

Recycling centers will have a significant impact on the longevity of the existing Landfill in Dekalb County. There should be a Recycling Center at every Convenience Center site. There should also be Centers at West Elementary, Smithville Elementary, Dekalb County Middle School and Dekalb County High School, as well as at all of the fast food restaurant locations, and at West Gates Shopping Center on Highway 56 South and at T. G. & Y. on Highway 70 West. The containers at these sites should be clearly labeled and easily accessible during operating hours, if the facility is manned. There should be compartments for paper, cardboard, tin, aluminum, plastic and glass. Nothing should be put inside these compartments other than what the outer label indicates. Paper and cardboard are major factors at the Landfill, these items alone account for a major portion of the Landfill's area. If these items could be recycled, the impact would be phenomenal, but in reality, the recycling facilities will not account for this large of a percentage of the paper and cardboard. If the Centers are used correctly, the results will extend the life of the existing Landfill.

### **REDUCTION BY DIVERSION:**

A Class III-IV Landfill can have wood, yard waste and organic wastes deposited within its confines. Since yard wastes make up approximately 17.6% of the existing Landfill's intake, a sizable amount of space would be available for other kinds of waste material. By constructing a Class III-IV Landfill, the amount of waste diverted from the existing Class I-II Landfill would be around twenty-three (23%) percent. This reduction almost meets the reduction requirements on its own. Another thing to consider is that the wastes going into the Class III-IV Landfill are of a rather bulky nature and take a considerable amount of volume. By removing these items from the present Landfill, it is possible that the volume may be increased by as much as fifty (50%) percent, thus giving the existing facility a longer period of existence. A Class III-IV Landfill is the most economical facet of this plan. The Class III-IV Landfill will not cost as much to build as the Class I-II Landfill. This is the most important factor in meeting the twenty-five (25%) percent reduction cost.

## **D. WASTE PROCESSING, COMPOSTING, AND WASTE-TO-ENERGY INCINERATION SYSTEMS**

Reduction in the volume of yard type wastes can be handled in a number of different ways. One prospective choice is to use a chipper. By using a chipper, the bulky limbs and brush are reduced to a mulch-like state, which does not take up as much volume.

Composting is not currently provided in Dekalb County's Region, however, by the year 1995 it is projected that the County will install a grinder/shredder primarily for the yard waste and wood materials which is approximately twenty (20%) percent of the total waste generated based upon the national figures. This will enable the Region to reduce the volume being disposed of in their Landfill accordingly.

#### **WASTE PROCESSING FACILITIES:**

Dekalb County currently does not have any waste processing and waste-to-energy incineration facilities in the Region. Therefore, this section of the Solid Waste Management Plan is not applicable to this report.

#### **E. DISPOSAL FACILITIES - LANDFILLS AND BALEFILLS**

Dekalb County operates an approved Landfill in the Eastern portion of the County which is projected to last to the year 2000. The capacity of the Class I Landfill is rated at 79,920 tons as of January 1, 1993. Tables II-8 through Table II-11 (pages Ch. II-11-13) illustrates the projected capacity of the Region's Landfill. The location of the Landfill is on the map of the Current System in Part J (page Ch. II-18) of this Chapter.

8. EXISTING MUNICIPAL SOLID WASTE LANDFILLS IN THE REGION:

Table II-8

County	Name of Landfill	Location	Permitted Capacity (Acres)	Current Rate of Waste Accepted (tons/day)	Remaining Capacity (tons)
Dekalb	Dekalb Co. Landfill		12	55	180,679
Regional Total			12	55	180,679

9. EXISTING LANDFILLS EXPECTED TO CLOSE BEFORE 2003:

TABLE II-9

County	Location	Current Use (Tons/Day)	Current Annual Use (Tons/Year)	Anticipated Date of Closure
Dekalb		55	20,075	2,000
Regional Total		55	20,075	2,000



10. Planned Expansions and Planned New Facilities Which Will Operate for Ten Years or More:

Table II-10

County	Proposed Facility		Location	When Will Capacity be Available	Permitted Capacity Sought (acre)	Design Rate of Waste (tpd) Disposed	Potential Expansion Yes/No
	Expan.	New					
Planned New Regional Capacity							

11. TOTAL EXISTING AND PLANNED CAPACITY  
IN THE REGION AT THE CLOSE OF THE  
NEXT TEN YEARS:

TABLE II-11

Year	TONS		
	Existing	Planned	Total
FY 1993	75,167		75,167
FY 1994	65,661		65,661
FY 1995	55,990		55,990
FY 1996	46,382		46,382
FY 1997	36,722		36,722
FY 1998	27,011		27,011
FY 1999	17,247		17,247
FY 2000	7,430		7,430
FY 2001			
FY 2002			
FY 2003			

\*As of January 1, 1993, present landfill equals  
79,920 tons of disposal capacity.

## **F. COSTS OF THE CURRENT SYSTEM**

*A detail cost of Dekalb County's Financial Statement for the Collection and Disposal of Solid Waste indicates that for 1993 the total expenses were \$342,080. A breakdown of individual cost is revealed in Table II-12 (page Ch. II-15). Tipping fees in the amount of \$175,000 account for a part of the \$342,080, the remainder comes from County General Funds.*

## **G. REVENUES**

*The present revenues for operations of the Landfill is derived from Tipping Fees and County General Funds (Table II-13 page Ch. 11-16). The system's cost and revenues are balanced for the system.*

TABLE II-12

Dekalb County

Solid Waste/Sanitation Fund

Statement of Operations

For the Fiscal Year Ending June 30, 1993

	<u>1993</u>
55000	<b>PUBLIC HEALTH AND WELFARE</b>
55700	Sanitation Services
55710	Sanitation and Waste Removal
149	Laborers \$25,500
338	Maintenance & Repair Services-Vehicles \$8,000
499	Other Supplies and Materials \$5,000
55720	Landfills
149	Laborers \$61,500
321	Engineering Services \$6,000
330	Operating Lease Payments \$9,200
338	Maintenance & Repair Service-Vehicles \$22,000
399	Other Contracted Services \$29,000
409	Crushed Stone \$2,000
412	Diesel Fuel \$17,500
452	Utilities \$2,700
499	Other Supplies and Materials \$15,000
715	Land \$12,580
791	Other Construction \$81,500
55740	Convenience Centers
149	Laborers \$23,000
499	Other Supplies and Materials \$5,000
55790	Other Sanitation Services
201	Social Security \$8,500
204	State Retirement \$1,400
210	Unemployment Compensation \$500
499	Other Supplies and Materials \$2,700
510	Trustee's Commission \$3,500
	<b>TOTAL PUBLIC HEALTH AND WELFARE \$342,080</b>
	<b>TOTAL EXPENDITURES \$342,080</b>

TABLE II-13

DEKALB COUNTY REVENUES FOR SOLID WASTE/SANITATION FUND

DESCRIPTION	1993
Local Taxes	
County Property Taxes.....	\$ 90,930
Interest & Penalty.....	150
Refuse Disposal Charges.....	133,500
Other Sources of Operating Transfers.....	117,500
<b>TOTAL SOURCES OF REVENUE.....</b>	<b>\$342,080</b>

## **H. PUBLIC INFORMATION AND EDUCATION PROGRAMS**

### **Review of Existing Education Programs:**

The present education and information programs of Dekalb County consist of flyers and other miscellaneous handouts at convenience centers, local radio announcements, road signs, the Adopt a Highway Program.

## **I. PROBLEM WASTES**

Problem wastes are mostly made up of waste tires, waste batteries, waste oil, demolition waste, and yard waste. These wastes are going to either be diverted from the existing landfill, or disposed of through a different method. The waste oil, tires and batteries are problem wastes and should be disposed of accordingly. The yard and demolition wastes are different, they pose no threat to the environment, but they are bulky in nature and therefore, take up considerable amounts of space in the landfill. If these wastes are diverted, the life expectancy of the existing landfill will be extended.

## **J. SYSTEM MAP FOR BASE YEAR (1993)**

The System Map is attached as the next page (page Ch. II-18) for reference that has the following items noted with their corresponding locations in the Dekalb County Region:

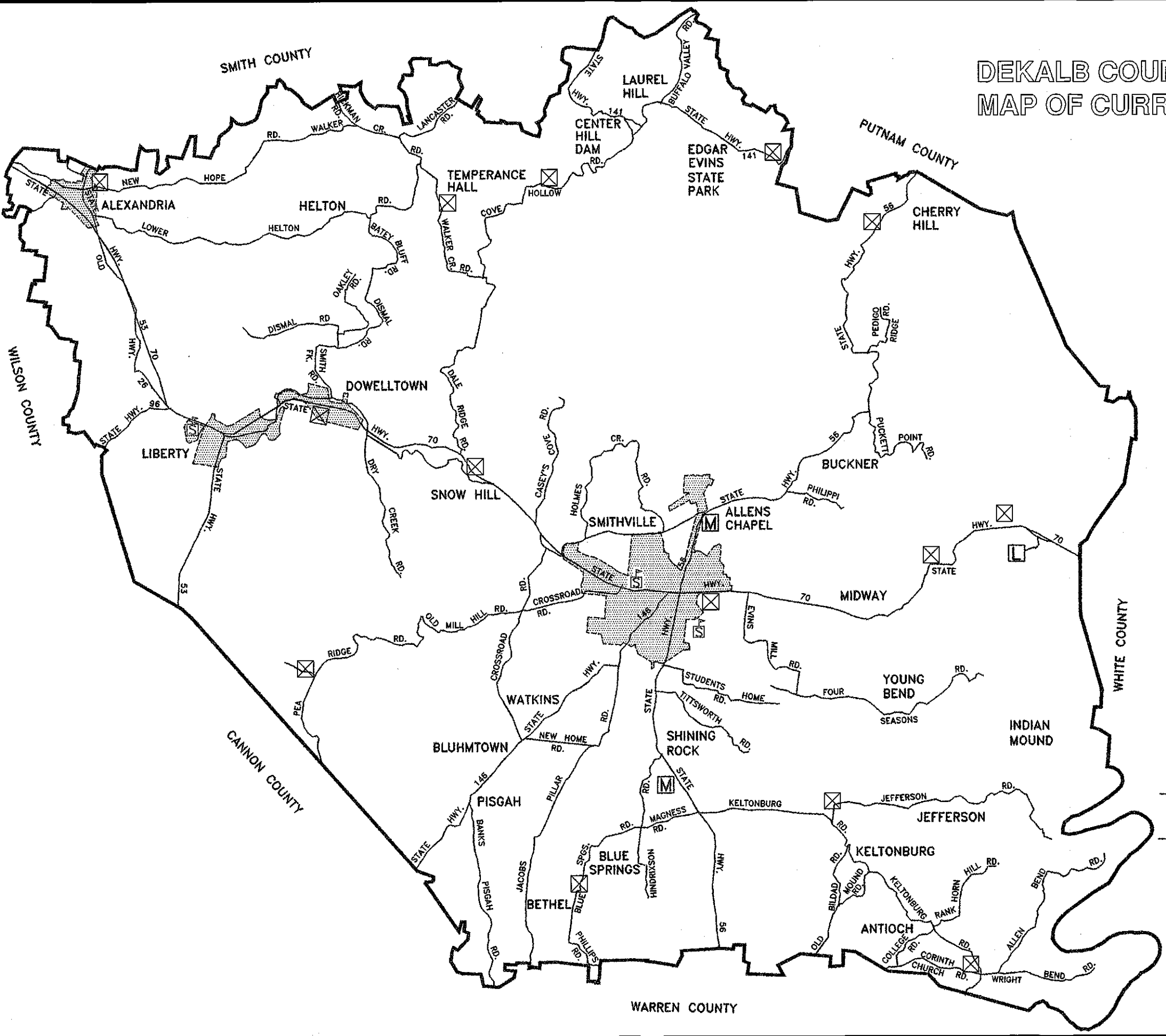
1. Convenience Center Sites
2. Collection Service Areas
3. Transfer Stations (private)
4. Recycling Collection Sites
5. Transportation Routes
6. Processing Facilities Sites
7. Composting Facilities Sites (N/A)
8. Incineration Facilities Sites (N/A)
9. Landfill Site
10. Educational Program Sites (e.g., schools)

## **K. STRENGTHS AND WEAKNESSES OF EXISTING SYSTEM**







### **STRENGTHS:**

1. Dekalb County presently has a new Landfill that meets Sub-Title D regulations, with a projected life to year 2001.
2. Two modern, manned Convenience Centers in operation - others are planned.
3. Eliminated "green-box" system and converted to roll on/roll off containers.

# DEKALB COUNTY, TENNESSEE MAP OF CURRENT SYSTEM



## MAP SYMBOLS

-  SCHOOL WITH RECYCLABLE COLLECTION
-  ROLL-ON SITES
-  MANNED SITES
-  LANDFILL
-  ROADS
-  COUNTY LINE

NOT TO SCALE

4. *Land is available for a Class III-IV Landfill.*
5. *Land is available for some expansion of present Landfill pending the hydro-geological test proving the area to be acceptable.*

**WEAKNESSES:**

1. *Dekalb County lacks an existing Class III-IV Landfill. By instituting a Class III-IV Landfill, the present Landfill's life expectancy will be increased.*
2. *Additional manned Convenience Centers or increased door-to-door pick-up. By increasing door-to-door pick-up, the county could actually receive ample benefits. Let private haulers collect the trash from the entire county, therefore all trash in the county will be exposed to a tipping fee, thus generating an additional source of revenue for the county.*
3. *Snow's Hill and Dowelltown/Alexandria are presently underserved.*



**CHAPTER III**

**GROWTH TRENDS, WASTE PROJECTIONS AND  
PRELIMINARY SYSTEM STRUCTURE**

## **CHAPTER III**

### **GROWTH TRENDS, WASTE PROJECTIONS AND PRELIMINARY SYSTEM STRUCTURE**

#### **A.,B. GROWTH TRENDS AND WASTE PROJECTIONS:**

*The growth trends and solid waste generation are illustrated in Tables III-1 (pg. Ch.111-2) and Tables III-2 (pg. Ch.111-3). These tables illustrate growth for the ten-year planning period (1994-2003) and the projected volume of solid waste generated. The Dekalb County Region is not a multi-county region, therefore, a multi-county plan is not necessary.*

#### **C. PRELIMINARY SYSTEM DESIGN:**

*The Dekalb County Region proposes to develop a Class III Landfill area to reduce the volume entering the Class I Landfill area. This will reduce the volume by approximately five percent (5%) based upon volume of materials. Also a shredding facility will be installed to reduce the volume going to the Class III-IV Landfill. Composting may also be utilized at the existing Class I Landfill. There will be additional recycling facilities offered to reduce the volume of solid waste entering the landfill. These methods of reducing the county's total waste disposed into the current landfill are projected to be approximately ten percent (10%) of the total volume generated.*

*Tables III-1 (pg. Ch.111-2) through III-3 (pg. Ch.111-3) illustrate the volume generated in the Dekalb County Region requiring disposal based upon preliminary estimates.*

#### **D. EVALUATION CRITERIA FOR THE REGION:**

*The final selection is covered in the Executive Summary and was deferred until the later evaluation was completed in the following chapters.*

1. THE FOLLOWING TABLE SUMMARIZES CALCULATIONS OF ANNUAL PER CAPITA SOLID WASTE GENERATION RATES, FOR EACH COUNTY IN THE REGION.

TABLE III-1\*

County	Total Waste Disposed in FY 1993	Projected Population 1993	Annual Per Capita Generation Tons/Person/Year
Dekalb	9,168	14,553	.63
Regional Total	9,168	14,553	.63

\*Aggregate from Items 2, 3 and 4 in Chapter IV.A of the District Needs Assessment County Profiles

2. SUMMARY OF THE PROJECTED QUANTITY OF SOLID WASTE REQUIRING DISPOSAL (GENERATION) IN THE REGION IN EACH PROJECTED YEAR, ADJUSTED FOR POPULATION CHANGES.

TABLE III-2\*  
QUANTITY OF SOLID WASTE REQUIRING DISPOSAL (TONS)

County	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Dekalb	9,209	9,364	9,291	9,333	9,374	9,416	9,458	9,490	9,522	9,554

\*Aggregate from Tables IV-1 in District Needs Assessment County Profiles, as extended.

3. SUMMARY OF THE PROJECTED QUANTITY OF SOLID WASTE REQUIRING DISPOSAL IN THE REGION FOR EACH PROJECTION YEAR, ADJUSTED FOR POPULATION GROWTH AND ECONOMIC GROWTH.

TABLE III-3\*  
QUANTITY OF SOLID WASTE REQUIRING DISPOSAL (IN TONS)  
ADJUSTED FOR POPULATION AND ECONOMIC GROWTH

County	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Dekalb	9,416	9,456	9,506	9,671	9,608	9,660	9,711	9,764	9,817	9,861
Regional Total	9,416	9,456	9,506	9,671	9,608	9,660	9,711	9,764	9,817	9,861

\*Aggregate from Table IV-3 in District Needs Assessment County Profiles, as extended.

4. SUMMARY OF THE PROJECTED QUANTITIES OF SOLID WASTE REQUIRING DISPOSAL (= GENERATION) FOR EACH PROJECTION YEAR, ADJUSTED FOR POPULATION GROWTH, ECONOMIC GROWTH, AND SOURCE REDUCTION, RECYCLING, AND INDUSTRIAL PROCESS CHANGE.

TABLE III-4\*

QUANTITY OF WASTE REQUIRING DISPOSAL (IN TONS) ADJUSTED POPULATION CHANGES, ECONOMIC GROWTH, AND WASTE REDUCTION AND RECYCLING

County	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Dekalb	9,031	8,220	7,206	7,245	7,283	7,323	7,363	7,396	7,470	7,544
Regional Total	9,031	8,220	7,206	7,245	7,283	7,323	7,363	7,396	7,470	7,544

\*Aggregate from Tables IV-4 in District Needs Assessment County Profiles, as extended.

{NOTE: Tables III-5 thru III-7 were Optional - because Dekalb Co. is not a multi-county region we omitted them.}

8. SUMMARY INDICATING PROJECTED QUANTITIES OF SOLID WASTE WHICH WILL REQUIRE COLLECTION AND AND DISPOSAL IN EACH PROJECTION YEAR, AFTER ADJUSTMENT FOR ALL APPLICABLE FACTORS.

Table III-8

ANNUAL PROJECTIONS OF SOLID WASTE REQUIRING DISPOSAL ADJUSTED FOR ALL APPLICABLE FACTORS (IN TONS/YEAR)

County	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Dekalb	9,506	9,671	9,608	9,660	9,711	9,764	9,817	9,861	9,910	9,959
Regional Total	9,506	9,671	9,608	9,660	9,711	9,764	9,817	9,861	9,910	9,959

**CHAPTER IV**  
**WASTE REDUCTION**

## CHAPTER IV

### WASTE REDUCTION

#### A. ESTABLISHING A BASE YEAR QUANTITY:

The base year of 1989 is established for the Dekalb County Region which includes a population of 14,450 people generating 18,018 tons of solid waste that was disposed of in their landfill. This data was obtained from the University of Tennessee report entitled "Managing Our Waste: Solid Waste Planning in Tennessee," which was published in February 1990. Also refer to Table IV-1 (pg. Ch. IV-5). The per capita regional disposal rate based on these numbers is 1.25 tons per year per person.

#### B. CALCULATE A TARGET 1995 WASTE REDUCTION PER CAPITA DISPOSAL ROLE:

The goal of the state is to reduce the amount of solid waste disposed of at the landfill by twenty-five percent (25%) measured on a per capita basis by December 31, 1995. The reduction in 1989 base year figures are:

$$\text{Average 1989 per capita rate} \times 0.25 = \text{target 1995 per capita reduction} \\ (\text{tons / person / year}) = (\text{tons / person / year})$$

$$1.25 (0.25) = 0.31 \text{ tons / person / year}$$

Therefore, the 1995 target reduction is:

$$1995 \text{ target per capita reduction (tons / person / year)} \times 1995 \text{ population}$$

$$= 1995 \text{ target reduction tons / year}$$

$$(0.31) (14,863) = 4,608 \text{ tons / year}$$

#### C. DESCRIBE HOW THE REGION WILL MEET THE STATEWIDE WASTE REDUCTION GOAL:

##### GOALS OF DISPOSAL FOR 1995 AND 2003:

Dekalb County proposes to recycle 570 tons of paper, glass, metal, aluminum and plastic by 1995, then by 2003, the County projects to have diverted 3,608 tons to a Class III-IV Landfill and recycled 5,540 tons of paper, glass, metal, aluminum and plastic, a total of 12,005 tons, since 1995.

##### ALLOCATION OF 1995 TARGET REDUCTION:

All allocation is the responsibility of Dekalb County since it is a one (1) County Region.

**MATERIAL:**

<u>YEAR</u>	<u>TYPE</u>	<u>%</u>	<u>TONS</u>	<u>RECOVERED</u>	<u>DIVERTED</u>
1995	Paper	40.0	3868	387	0
	Glass	7.0	677	68	0
	Ferrous Metal	6.5	629	63	94
	Aluminum	1.4	135	14	0
	Non-Ferrous Metal	0.6	58	0	0
	Plastics	8.0	774	77	0
	Rubber/Leather	2.5	242	0	0
	Textiles	2.1	203	0	0
	Wood	3.6	348	0	52
	Food Waste	7.4	715	0	0
	Yard Waste	17.6	1702	0	255
	Inorganic	1.5	145	0	0
	Other	1.7	164	0	0

**ECONOMIC SECTOR:**

*Industrial, commercial and institutional facilities need to recycle all of the paper, metal and batteries that they discard. Also, residential and commercial wastes and demolition wastes should be taken to the proposed Class III-IV Landfill. All batteries will be taken to a battery collection site.*

**YEAR:**

<u>YEAR</u>	<u>TONS RECOVERED</u>	<u>TONS DIVERTED</u>
1995	609	401
1996	605	394
1997	608	396
1998	612	398
1999	615	400
2000	619	402
2001	621	403
2002	624	406
2003	627	408
TOTAL:	5540	3608

**STRATEGY EMPLOYED TO MEET TARGETED AMOUNT:**

*A Class III-IV Landfill and Battery Collection Facility are the proposed solutions to meet the targeted amount of waste to be reduced. The planned Class III-IV facility should be opened by late 1994 or early 1995. This will also prolong life expectancy for the present Class I facility.*



**PRIOR WASTE REDUCTION CREDIT:**

No credit for prior waste reduction due to source reduction and recycling in 1985-1989 under the regulations set by the Tennessee Code Annotated Section 68-31-851(C) can be claimed in the Dekalb County area.

**ESTIMATE OF MATERIAL RECOVERED EACH YEAR:**

A ten (10%) percent reduction is the goal for Dekalb County each year.

**RECOVERED MATERIALS (TONS):**

<u>YEAR</u>	<u>PAPER</u>	<u>METALS</u>	<u>ALUMINUM</u>	<u>PLASTIC</u>
1993	378	66	13	77
1994	380	67	13	77
1995	385	68	13	77
1996	385	67	13	77
1997	387	68	14	78
1998	388	68	14	78
1999	391	68	14	78
2000	392	69	14	79
2001	395	70	14	79
2002	396	70	14	80
2003	398	70	14	80

**ESTIMATE OF MATERIALS DIVERTED EACH YEAR:**

A fifteen (15%) percent diversion is the goal for Dekalb County each year.

**DIVERTED MATERIALS (TONS):**

<u>YEAR</u>	<u>METALS</u>	<u>WOOD WASTE</u>	<u>YARD WASTE</u>
1996	95	52	255
1997	95	53	256
1998	95	53	257
1999	96	54	257
2000	96	54	258
2001	96	54	258
2002	96	55	259
2003	97	55	260

**ECONOMIC INCENTIVE/DISCENTIVES AND REDUCTION CAUSED EACH YEAR:**

*Incentives - A reduced Tipping Fee will be initiated at the Class III-IV Landfill to encourage people to use the facility, thus diverting the bulky materials from the Class I-II Landfill. Also, a no charge policy on the collection of waste batteries when they are brought into the collection sites.*

**OTHER STRATEGIES:**

**D. ESTIMATE OF TEN YEAR STAFFING, BUDGET AND FUNDING BY YEAR:**

*(See Chapter V)*

**E. COMPOSITE TEN YEAR IMPLEMENTATION SCHEDULE FOR STRATEGIES:**

*By 1995 - Implement an Educational Program to educate the Citizens of the need to recycle.*

*By 1995 - Have Recycling Facilities in place at all Convenience Centers and Schools throughout Dekalb County.*

*By 1996 - Have a Class III-IV Facility available.*

**F. RESPONSIBILITY FOR IMPLEMENTATION OF PLAN:**

*The responsibility for implementation of the Regional Solid Waste Plan shall be dependent upon the legislative body(s) of Dekalb County.*

**G. HOW DATA WILL BE COLLECTED FOR ANNUAL REPORTS:**

*By using the scales at the Landfill, data should be acquired by the Director of Solid Waste by compiling the waste volume by months with Quarterly Summaries and the Calculation of Expenditures and Revenues.*

TABLE IV-1

POPULATION AND QUANTITIES OF WASTE DISPOSED  
OF AT MUNICIPAL SOLID WASTE DISPOSAL  
FACILITIES AND INCINERATION, 1989

County	1989 Population	1989 Total Waste Disposed (tons)
Dekalb	14,450	18,018
Regional Total	14,450	18,018

TABLE IV-2

ESTIMATED QUANTITIES OF WASTE REMOVED OR DIVERTED  
FROM THE WASTE STREAM (TONS)

Year	Previous Reductions	Recovered & Recycled	Diverted to Alternative Disposal	Economic Incentives	Other	Total
1985 to 1989	0	0	0	0	0	0
1990	0	0	0	NO	0	9,000
1991		0	9,000	NO	0	
1992		0		NO	0	
1993		0		NO	0	
1994		0		NO	0	
1995		580	380	NO	0	960
Subtotal		580	9,380	NO	0	9,960
1996		576	386	NO	0	962
1997		579	384	NO	0	963
1998		583	387	NO	0	970
1999		585	388	NO	0	973
2000		589	390	NO	0	979
2001		592	392	NO	0	984
2002		594	394	NO	0	988
2003		598	396	NO	0	994
TOTAL		5,276	12,478		0	17,754

**CHAPTER V**  
**WASTE COLLECTION AND TRANSPORTATION**

## CHAPTER V

### WASTE COLLECTION AND TRANSPORTATION

#### A. COMPARISON OF EXISTING SYSTEM TO ESTABLISHED STANDARDS:

According to the Tennessee Code Annotated standards as set forth in section 63-211-851, a system should contain the following: a landfill or incinerator, a convenience center, a recycling center, a cooperative market for recyclables, a market advisory council, a hazardous household waste mobile collection unit, a tipping fee or surcharge for landfill and incinerator, a program for education, a tire, battery, and waste oil disposal, annual reports, measurement of waste intake (scales), transport registration, and certified operators.

REQUIRED	EXISTING	PROPOSED
Landfill	X	
Convenience Ctr.	X	
Recycling Ctr.	X	
Market for Recyclables		X
Market Advisory Council		X
Tipping Fee	X	
Education Program		X
Tire Disposal	X	
Battery Disposal		X
Oil Waste Disposal		X
Household Hazardous Waste		X
Annual Report		X
Scales	X	
Certified Operators		X

## **B. COUNTY'S NEEDS TO PROVIDE ADEQUATE SERVICE TO ALL RESIDENTS AND TO MEET STANDARDS:**

*According to the T.C.A. standards as set forth in section 63-211-851, Dekalb County's solid waste system is lacking the following elements: a Market Advisory Council, Hazardous Household Waste Collection Unit, Battery and Waste Oil Disposal Facilities, a County Educational Program, Certified Operators, Annual Report, and Recyclable Markets.*

## **C. DESCRIPTION OF HOW NEEDS WILL BE MET IN TEN YEARS:**

### **1. COLLECTION GOALS AND OBJECTIVES:**

- a. *Dekalb County should establish a Market Advisory Council by July of 1994 with one member being the Director of Solid Waste. This Council will actively pursue markets for recyclable materials such as: cardboard, paper, glass, plastic, metals (tin, aluminum, etc.), and the Council will monitor the volume of recyclables generated within Dekalb County and record the information in the annual reports. The Market Advisory Council should also work with surrounding Solid Waste Regions in order to obtain a more profitable volume of marketable recyclables to make the transportation of the materials more feasible. If the council pursues the other regional recycling markets, transportation efficiency will be greatly increased with this cooperation.*
- b. *A Hazardous Household Waste Collection should be scheduled at one convenience center annually. This date should be advertised to the public.*
- c. *A waste-oil and waste-battery collection site should be provided at the present Landfill by July 1, 1994. The facility should be advertised to the public.*
- d. *Dekalb County should form a committee consisting of five persons, one of which is the Director of Solid Waste and one which is a member of the County Board of Education. The committee will work with the State Planning Office to educate the citizens of Dekalb County on the requirements by law to meet the State's solid waste regulations, encourage waste reduction, and promote the recycling of recyclable materials. The State Planning Office will aid the county in obtaining a solid waste curriculum for the students enrolled in grades K-12. The Planning Office will provide information and programs to municipal, county, and state officials and employees; kindergarten through graduate students and teachers; businesses that use or could use recycled materials or that produce or could produce projects from recycled materials, and persons who provide support services to those businesses; and the general public. For the school curriculum, the State Planning office will review, evaluate, and publish a list of approved curriculum materials relative to solid waste management, source reduction and recycling; sponsor workshops on curriculum materials for educators; provide training for teachers on solid waste management; and establish peer assistance programs for teachers.*

- e. **Each year by June 31, Annual Reports should be prepared on Landfill Operations, Collection Systems, Recycling, Hazardous Household Collection, and Educational Programs. The report should give totals for waste collected, location, cost to process, describe programs initiated and results. These reports should be prepared by the Director of Solid Waste for Dekalb County and be presented to the Dekalb County Solid Waste Committee.**
  
- f. **The County should assure that all Landfill employees are Certified Operators and are Certified by the State of Tennessee. The Certification should be accomplished by sending each operator to the state's training and certification programs.**



## **2. COLLECTION SYSTEM STRATEGY FOR IMPROVED SERVICE:**

- a. *Presently, DeKalb County has adequate Collection Service throughout its Region. Future needs will require that services continue but with improved methods to provide for Cost Reduction. Two (2) Manned Convenience Centers exist in the present system and additional Manned Centers with Compactors should be placed in areas with high waste volume to reduce Transportation Costs. As shown in Chapter II Transportation-Collection Costs are greatly reduced by increasing waste density per load. Snow's Hill, Alexandria-Dowelltown, are the high volume areas and should be provided with Compactor Units as soon as possible. The next priority would be the Keltonburg-Belk area and the last priority would be the location of a Manned Convenience Center East of Center Hill Lake to serve Sligo, East 70 and Johnson Chapel areas. This plan proposes to have Snow's Hill in operation by October 1994, Alexandria-Dowelltown by October 1996, and the remaining two (2) by October 1999. If funds can be made available the Alexandria-Dowelltown should be completed sooner.*

## **3. COLLECTION VEHICLES:**

- a. *DeKalb County already has an adequately supplied modern collection vehicle system. Future reduction of rural pick-up of roll-on boxes would prevent the need for additional trucks.*
- b. *If properly maintained the present equipment should provide several years of serviceable use.*

## **4. TRANSFER STATION NEEDS:**

- a. *DeKalb County's present Landfill life is projected to last until 2000 A.D. or 2001 A.D. and therefore no need for a Transfer Station exists at present. A Transfer Station could be an alternative to a replacement Landfill at the Closure of the present facility. This should be evaluated in the future as operational costs become more available. The estimated cost for a Transfer Station to serve DeKalb County would be approximately \$600,000.*

## **5. INTEGRATION OF COLLECTION SYSTEM WITH RECYCLING AND PROBLEM WASTE:**

- a. *DeKalb's present Collection System has begun integrating its recycling effort in the Collection System by having Recycling Facilities at the Convenience Stations and other locations throughout the County. This effort must be educating the public of its needs to recycle.*
- b. *Problem Waste Collection and Storage has been addressed with the construction of a Tire Collection Facility at the present Landfill. It is necessary that a Battery and Waste Oil Facility be provided in the near future. This would best be accomplished by providing a Collection of these items at the Manned Convenience Centers where the waste can be monitored and controlled.*

## PRESENT COLLECTION/TRANSPORTATION COSTS

LOCATION	TONNAGE	LOADS	AVG. TONS PER LOAD	HAUL COST	COST/TO
Alexandria	90.77	35	2.59	\$83.20	\$32.08
Dowelltown	61.36	28	2.19	\$59.20	\$27.01
*West School	0.50	1	0.50	\$64.00	\$128.00
Temperance Hall	10.69	5	2.14	\$67.20	\$31.43
Snowhill	100.02	53	1.89	\$51.20	\$27.13
*High School	3.38	4	0.85	\$32.00	\$37.87
Village Mkt. (Manned)	68.90	17	4.05	\$33.60	\$8.29
Sligo	37.05	24	1.54	\$8.00	\$5.18
East 70	24.91	19	1.31	\$6.40	\$4.88
Wolf Creek	12.38	5	2.48	\$83.20	\$33.60
Cove Hollow	14.97	5	2.99	\$70.40	\$23.51
Silver Point	29.11	18	1.62	\$64.00	\$39.57
*Elem. School	2.40	4	0.60	\$32.00	\$53.33
Pea Ridge	14.20	8	1.78	\$60.80	\$34.25
Blue Springs	27.93	17	1.64	\$51.20	\$31.16
Keltonburg	35.59	17	2.09	\$54.40	\$25.98
Belk	13.31	9	1.48	\$70.40	\$47.60
Shiney Rock (Manned)	28.64	10	2.86	\$41.60	\$14.53

\*Schools not in session entire month.

Haul Cost Calculated @ \$1.60/mi. from

"Solid Waste Transportation & Other Cost" by the C.T.A.S.-U.T.

### COLLECTION DATA SUMMARY - JUNE 1993

ALEXANDRIA	DOWELLTOWN	WEST SCH	TEMPERANCE	SNOWHILL	HIGH SCH
6,040	3,920	980	3,080	5,080	1,360
4,420	4,340		4,180	3,840	1,260
7,020	5,060		4,720	4,500	1,600
4,960	6,640		4,860	4,500	2,540
3,400	1,840		4,540	5,000	
6,200	1,840			3,920	
4,400	5,100			4,400	
5,640	2,400			2,960	
6,160	5,540			1,860	
7,960	6,300			2,000	
2,240	4,060			2,980	
4,720	4,440			2,920	
2,840	4,620			3,020	
4,690	5,020			3,900	
5,360	6,340			4,200	
5,380	4,160			4,040	
5,520	4,120			4,200	
4,480	3,400			4,780	
5,640	3,980			4,200	
5,080	4,620			3,900	
2,646	5,660			2,440	
5,160	5,820			3,160	
3,840	3,120			2,600	
6,120	2,980			2,980	
6,240	2,780			3,020	
5,000	5,020			4,700	
5,140	6,780			4,820	
5,100	2,820			1,120	
5,760				5,060	
1,720				5,160	
7,100				4,800	
6,460				3,580	
5,840				2,820	
7,520				2,880	
5,740				2,660	
				2,780	
				2,840	
				2,460	
				5,780	
				4,460	
				4,400	
				5,380	
				4,840	
				4,760	
				4,340	
				4,700	
				2,340	
				3,100	
				1,300	
				5,260	
				4,580	
				4,560	
				4,160	
181,536	122,720	980	21,380	200,040	6,760
LBS.	LBS.	LBS.	LBS.	LBS.	LBS.
90.77	61.36	0.49	10.69	100.02	3.38
TONS	TONS	TONS	TONS	TONS	TONS

**COLLECTION DATA SUMMARY - JUNE 1993**

VILLAGE MKT	SLIGO	EAST 70	WOLF CREEK	COVE HOLLOW	SILVER P
1,440			4,560		
21,620	2040	2,900	3,840	4,940	2,840
2,800	4,720	2,360	4,900	5,840	3,060
2,400	3,280	2,420	5,460	7,660	3,180
3,900	2,400	1,440	6,000	3,160	3,280
20,220	1,540	1,940		8,340	3,460
6,340	2,340	3,520			2,140
21,240	2,680	2,520			1,860
3,280	4,340	1,180			3,400
1,940	3,960	1,140			4,540
6,720	2,400	2,580			1,620
1,460	3,020	2,160			1,340
16,480	2,820	3,060			2,040
2,620	5,840	3,680			5,320
2,300	2,500	2,620			5,260
19,680	3,420	1,960			1,880
3,360	2,000	5,080			5,140
	1,560	3,220			3,060
	1,420	2,220			4,800
	2,680	3,820			
	3,160				
	2,880				
	3,800				
	3,840				
	5,460				
137,800	74,100	49,820	24,760	29,940	58,220
LBS.	LBS.	LBS.	LBS.	LBS.	LBS.
68.90	37.05	24.91	12.38	14.97	29.11
TONS	TONS	TONS	TONS	TONS	TONS

ELEM. SCHOOL	PEA RIDGE	BLUE SPRING	KELTONBURG	BELK	SHINEY ROCK
980	5,640	3,640	4,980	3,560	2,360
700	4,680	3,280	2,720	1,860	9,040
1,160	3,020	3,440	3,500	2,960	4,900
1,960	3,480	3,080	5,740	2,100	8,100
	3,300	1,680	3,620	3,480	8,040
	1,820	3,340	3,640	1,500	3,900
	2,720	4,500	5,640	3,380	2,840
	3,740	4,580	3,720	2,900	8,260
		2,700	4,740	4,880	2,460
		2,360	2,220		7,380
		2,720	3,240		
		2,380	2,080		
		4,140	4,700		
		2,200	2,120		
		2,740	3,020		
		3,260	3,580		
		5,820	5,920		
4,800	28,400	55,860	65,180	26,620	57,280
LBS.	LBS.	LBS.	LBS.	LBS.	LBS.
2.40	14.20	27.93	32.59	13.31	28.64
TONS	TONS	TONS	TONS	TONS	TONS

#### **D. SUMMARY OF TEN-YEAR STAFFING AND TRAINING NEEDS:**

*Solid Waste Collection and Disposal is a very critical and complicated process today, and will continue to become even more so in the future, as environmental controls are enacted by the State and Federal Governments. This is an area that places major liability on local County Governments with environmental monitoring of Groundwater quality.*

*Because of the complexity of the operation it is necessary that Dekalb County appoint a Director of Solid Waste. This position would assume full responsibility for the Collection and Disposal of the County Solid Waste Program. This individual must have management and construction experience to assure the proper operation of both Collection and Disposal functions. The Solid Waste Director should serve as a member of the Market Advisory Council and the Education Committee. The Director of Solid Waste would be appointed by and serve under the County Executive as provided by law under T.C.A. 5-6-106.*

*The County also should have a Landfill supervisor employed to supervise the day to day operation of the County's Landfill. Duties include maintaining proper cover, line and grade, maintain the Storm Water Run Off Collection System, the Leachate Collection System, and Closure/Post Closure operations in the County. The Landfill supervisor should also be proficient in the operation of all heavy equipment used in the Landfill operation.*

#### **STAFFING NEEDS:**

- 1 - Director of Solid Waste
- 1 - Landfill Supervisor - Operator
- 4 - Equipment Operators (pan, dozier, and compactor)
- 2 - Truck Drivers
- 6 - Convenience Center Operators
- 2 - Laborers

#### **TRAINING NEEDS:**

1. Identify which workers require certification.
2. Establish terms and requirements for certification.
3. Establish different levels of certification for different facilities.
4. Impose fees to fund training and certification.
5. Require that one or more certified attendants be on site at all times during operating hours.

*The present staff of Dekalb County is very competent and should continue to perform their duties with the new positions being filled by July 1, 1995.*

## **E. TEN-YEAR BUDGET:**

**A Ten-Year Budget for Dekalb County Solid Waste Program has been prepared . The following budget is comprised of two parts - 1) Being a 207 Solid Waste Disposal Fund (Landfill Budget) and 2) Being a 116 Solid Waste/Sanitation Fund (Collection System Budget). The budgets have been estimated through the year 2002-2003. Due to the ever changing rules and regulations placed upon Local Governments by both State and Federal Governments, these estimates can change over time and should be reevaluated annually. Dekalb County will have an average annual operating cost of approximately \$500,000 per year for Collection and Disposal.**

Dekalb County, Tennessee  
 116 Solid Waste/Sanitation Fund (Collection)  
 Statement of Proposed Operations  
 For the Fiscal Year Ending June 30, 1994

No. Account	Description	1993-94 Estimated	1994-95 Estimated	1995-96 Estimated	1996-97 Estimated	1997-98 Estimated	1998-99 Estimated	1999-2000 Estimated	2000-2001 Estimated	2001-2002 Estimated	2002-2003 Estimated
55000	PUBLIC HEALTH AND WELFARE										
55730	Waste Collection										
55731	Waste Pickup										
149	Laborers	\$27,040	\$28,153	\$29,527	\$30,400	\$31,325	\$32,900	\$34,500	\$35,600	\$37,350	\$39,300
338	Maintenance & Repair Services-Vehicles	\$4,500	\$4,725	\$4,960	\$5,209	\$5,470	\$5,743	\$6,030	\$6,331	\$6,648	\$6,980
499	Other Supplies and Materials	\$3,000	\$3,000	\$3,150	\$3,150	\$3,150	\$3,200	\$3,200	\$3,300	\$3,300	\$3,300
55732	Convenience Centers										
149	Laborers	\$29,500	\$45,000	\$45,000	\$65,000	\$65,000	\$65,000	\$100,000	\$100,000	\$100,000	\$100,000
499	Other Supplies and Materials	\$2,500	\$3,000	\$3,000	\$3,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
791	Other Construction	\$0	\$30,000	\$0	\$30,000	\$0	\$0	\$60,000	\$0	\$0	\$0
55750	Waste Disposal										
55759	Other Waste Disposal										
191	Board and Committee Members Fees	\$1,400	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
201	Social Security	\$4,500	\$4,652	\$4,762	\$7,632	\$7,706	\$7,832	\$10,760	\$10,848	\$10,988	\$11,144
204	State Retirement	\$500	\$500	\$500	\$763	\$771	\$783	\$1,076	\$1,085	\$1,099	\$1,114
210	Unemployment Compensation	\$1,000	\$1,163	\$1,190	\$1,908	\$1,926	\$1,958	\$2,690	\$2,712	\$2,747	\$2,786
321	Engineering Services	\$13,500	\$0	\$0	\$0	\$0	\$8,000	\$0	\$0	\$0	\$0
499	Other Supplies and Materials	\$1,100	\$1,155	\$1,213	\$1,274	\$1,338	\$1,405	\$1,475	\$1,549	\$1,626	\$1,707
510	Trustee's Commission	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
TOTAL PUBLIC HEALTH AND WELFARE		\$90,540	\$124,348	\$96,302	\$151,336	\$124,686	\$134,821	\$227,731	\$169,425	\$171,758	\$174,331

Dekalb County

Ch. V-10

Solid Waste Plan

Dekalb County, Tennessee  
 207 Solid Waste Disposal Fund (Landfill)  
 Statement of Proposed Operations  
 For the Fiscal Year Ending June 30, 1994

Account No.	Description	Estimated 1993-94	Estimated 1994-95	Estimated 1995-96	Estimated 1996-97	Estimated 1997-98	Estimated 1998-99	Estimated 1999-2000	Estimated 2000-2001	Estimated 2001-2002	Estimated 2002-2003
	Estimated Expenditures										
55000	PUBLIC HEALTH AND WELFARE										
55750	Waste Disposal										
55754	Landfill Operation and Maintenance										
149	Laborers	\$72,600	\$89,000	\$98,000	\$100,100	\$103,400	\$107,087	\$110,300	\$113,600	\$117,000	\$120,500
321	Engineering Services	\$15,000	\$22,000	\$5,000	\$5,000	\$5,000	\$29,000	\$21,000	\$8,000	\$8,000	\$2,000
330	Operating Lease Payments	\$9,900	\$12,900	\$12,900	\$12,900	\$12,900	\$12,900	\$30,000	\$30,000	\$30,000	\$30,000
338	Maintenance & Repair Services-Vehicle	\$22,000	\$23,000	\$24,000	\$25,000	\$26,000	\$28,000	\$30,000	\$30,000	\$30,000	\$32,000
399	Other Contracted Services	\$17,000	\$20,000	\$20,000	\$22,000	\$22,000	\$45,000	\$25,000	\$25,000	\$25,000	\$25,000
409	Crushed Stone	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,500	\$2,500	\$2,600	\$2,600
412	Diesel Fuel	\$22,000	\$23,800	\$24,500	\$24,500	\$24,500	\$25,000	\$25,000	\$25,000	\$25,500	\$25,500
452	Utilities	\$3,000	\$3,000	\$3,000	\$3,000	\$3,100	\$3,100	\$3,200	\$3,200	\$3,300	\$3,300
499	Other Supplies and Materials	\$15,000	\$18,000	\$15,000	\$15,000	\$15,000	\$18,000	\$20,000	\$20,000	\$20,000	\$25,000
791	Other Construction	\$24,000	\$77,000	\$64,000	\$55,000	\$65,000	\$65,000	\$80,000	\$70,000	\$70,000	\$80,000
55759	Other Waste Disposal										
201	Social Security	\$6,000	\$7,387	\$8,134	\$8,308	\$8,308	\$8,582	\$8,888	\$9,155	\$9,429	\$9,711
204	State Retirement	\$871	\$1,068	\$1,176	\$1,201	\$1,201	\$1,241	\$1,285	\$1,324	\$1,363	\$1,404
210	Unemployment Compensation	\$1,525	\$1,869	\$2,058	\$2,102	\$2,102	\$2,171	\$2,249	\$2,316	\$2,386	\$2,457
499	Other Supplies and Materials	\$1,000	\$1,200	\$1,300	\$1,400	\$1,500	\$1,600	\$1,700	\$1,800	\$1,900	\$2,000
510	Trustee's Commission	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
55770	Postclosure Care Costs										
399	Other Contracted Services	\$116,935	\$13,400	\$14,070	\$14,775	\$15,500	\$16,715	\$35,000	\$36,000	\$36,500	\$37,000
	TOTAL PUBLIC HEALTH AND WELFARE	\$213,896	\$317,624	\$297,138	\$294,287	\$309,512	\$367,396	\$398,122	\$379,895	\$384,978	\$400,472



## **F. TEN-YEAR TIMETABLE FOR IMPLEMENTATION:**

### **1. DESIGN, FINANCING, CONSTRUCTION AND OPENING OF REQUIRED FACILITIES, AND PURCHASE OF EQUIPMENT:**

- a. *Design - The present designed landfill will have a life until 2001 although Cell-B must be redesigned to include composite liner and required changes by October 1996.*

*By 1996, Dekalb County needs to locate a site for a new facility to be in place by January 2001. In the event that Dekalb County chooses not to continue to operate a landfill after 2001, a transfer station site should be selected and the design of a transfer station be implemented.*

- b. *Financing - By 1994 Dekalb County Court should approve and adopt the Regional 10 yr. Plan, including the proposed budget and commit to the proposed funding.*
- c. *Construction and Opening of Required Facility - Year 2001 will require that a new facility be on line to receive waste upon closure of the existing facility.*
- d. *Equipment - The county has very good equipment with the exception of an older D-5 dozer, which may need to be replaced if it can not be maintained at a reasonable cost.*

### **2. EXPANSION AND CERTIFICATION OF STAFF:**

- a. *July 1, 1994, placement of Landfill Supervisor*
- b. *July 1, 1995, placement of Director of Solid Waste*
- c. *Certification of staff as soon as State Certification is available or required.*

### **3. INITIATION OF A FUNDING FOR ANNUAL OPERATING COSTS:**

- a. *Dekalb County established a tipping fee in 1991 of \$40.00 per ton. This fee should be monitored and adjusted as necessary to help share funding cost and yet maintain a reasonable tipping cost.*

### **4. COLLECTION OF REQUIRED DATA AND PREPARATION OF ANNUAL REPORTS:**

- a. *The Dekalb County Director of Solid Waste should be responsible for the collection and preparation of the annual reports and data collection for solid waste.*

**5. PLANNED UPDATES:**

- 1994 - *Snow Hill Convenience Center*
- 1994 - *Class III-IV Landfill*
- 1996 - *Alexandria - Dowelltown Convenience Center*
- 1996 - *Opening of Cell-B at present Class I Facility*
- 1998 - *Begin permitting of a new landfill site*
- 1999 - *Keltonburg Convenience Center*
- 1999 - *Possible Johnson Chapel Convenience Center*

**G. DESCRIPTION OF RESPONSIBILITY OF PROVIDING COLLECTION SERVICES AND FACILITIES IN MULTI-COUNTY REGION:**

*This section of the Solid Waste Management Plan has been omitted from this report, due to the fact that Dekalb County is not part of a multi-county region.*

**H. LOCATION OF EXISTING AND NEW ELEMENTS OF COLLECTION AND TRANSPORTATION SYSTEM:**

*See Map in Chapter XI.*

**CHAPTER VI**  
**RECYCLING**

## **CHAPTER VI**

### **RECYCLING**

#### **A. DEFINITION OF RECYCLING NEEDS:**

*Dekalb County's recycling needs are based upon acquiring additional space from the current landfill, or the ability to increase the longevity of the current landfill. By recycling, the waste intake could theoretically be cut by up to forty percent, but realistically, only a fraction of this percentage will actually be obtained. Cardboard and paper are the largest problems at the landfill. If these items were recycled, a significant difference would be noticed in present capacity. Dekalb County must also locate a market for accumulated recyclables; this will hopefully become a source of revenue.*

#### **B. ACTIONS TO EXPAND RECOVERY, REUSE AND RECYCLING:**

##### **1. GOALS AND OBJECTIVES:**

- a. See Table IV-2

##### **2. STRATEGY:**

- a. Place recycling containers at each collection site, school, shopping center, and fast food restaurant.

##### **3. DESCRIPTION OF ANY RECYCLING PROGRAMS AND WHY:**

###### **a. Type of System:**

*Drop off at Convenient Centers*

###### **b. Size of Program (Number of Households and Businesses Served):**

*County wide*

###### **c. Quantity of Recovered Materials to be Collected and Diverted From Landfills:**

*See Chapter IV*

###### **d. Approximate Service Area:**

*304.6 sq. mi.*

4. **DESCRIPTION AND LOCATION OF COLLECTION SITES FOR RECYCLABLE MATERIAL:**
  - a. *See Map Section J, Chapter II*
  
5. **LOCATION AND DESCRIPTION OF ANY REGIONAL CENTER FOR PROCESSING RECOVERED MATERIALS:**
  - a. *None at present, but Marketing Advisory Board should pursue new markets.*
  
6. **DESCRIPTION OF RECYCLING COLLECTION PROGRAM WILL HELP COLLECTION CENTERS THAT ARE TOO SMALL/REMOTE TO BE ACTIVE IN THE MARKET:**
  - a. *This is a county wide program and all centers will participate.*
  
7. **DESCRIPTION OF INTERACTION WITH OFFICE OF COOPERATIVE MARKETING:**
  - a. *This will be accomplished by the Marketing Advisory Board and the Director of Solid Waste.*
  
8. **DESCRIPTION OF ACTIONS TO CREATE/EXPAND MARKETS FOR RECOVERED MATERIAL WITH A RECYCLED CONTENT:**
  - a. *This is the responsibility of the Marketing Advisory Board.*
  
9. **DESCRIPTION OF EDUCATION PROGRAMS ON RECYCLING:**
  - a. *A recycling educational program is to be established by the five (5) person committee as described in Chapter V of this plan.*
  
10. **TEN-YEAR STAFFING PLAN:**
  - a. *Existing staff is adequate*
  
11. **TEN-YEAR BUDGET:**
  - a. *See Chapter V*
  
12. **FUNDING PLAN:**
  - a. *Funding to be by sale of recovered material, state grants, and funds derived from Tipping Fees and other such revenue.*

**13. PLAN FOR COLLECTING DATA FOR ANNUAL REPORTS TO STATE:**

- a. *This is to be done by the Director of Solid Waste.*

**C. EXPLANATION OF HOW RECYCLING PROGRAMS IN PUBLIC SECTOR WILL COORDINATE WITH PRIVATE AND NON-PROFIT SECTOR:**

*Both private and non-profit sector will be permitted to use the existing public collection system.*

**D. TEN-YEAR IMPLEMENTATION SCHEDULE:**

- 1993 - *Begin Recycling at Centers*  
1994 - *Establish Marketing Advisory Board*

**E. RESPONSIBILITY FOR IMPLEMENTATION:**

*The implementation and funding of this plan is the responsibility of the Dekalb County's Legislative Body. It is recommended that the Dekalb County Legislative Body adopt this plan.*

**F. LOCATION OF EXISTING AND PLANNED RECYCLING PROGRAMS, SERVICES, AND FACILITIES:**

*Refer to Chapter XI.*

**CHAPTER VII**

**COMPOSTING, SOLID WASTE PROCESSING,  
WASTE-TO-ENERGY AND INCINERATION CAPACITY**

## CHAPTER VII

### **COMPOSTING, SOLID WASTE PROCESSING, WASTE-TO-ENERGY AND INCINERATION CAPACITY**

#### **A. NEEDS FOR COMPOSTING, WASTE PROCESSING, INCINERATION FOR THE NEXT TEN YEARS:**

*Due to the Dekalb County Region being a rural area with low volume, Waste-to-Energy and Incineration are not economically feasible and are not considered in this Plan.*

*Composting is a process that potentially could reduce the total waste volume by approximately 90 tons annually or approximately 1%. This can be accomplished utilizing the existing staffing and budget that is proposed in this Plan.*

*Dekalb County should purchase a mobile grinder/shredder or chipper to reduce the wood products and yard waste to a more suitable Class III-IV Landfill. If a sufficient volume of material is generated, then composting should be reevaluated as a possible alternative. It is projected that this will probably occur toward the end of the 10 year planning period or by the year 2003.*



**CHAPTER VIII**  
**DISPOSAL CAPACITY**

## CHAPTER VIII

### DISPOSAL CAPACITY

#### A. ANALYSES OF TOTAL REGIONAL DEMAND FOR DISPOSAL CAPACITY VS CURRENT AND PLANNED DISPOSAL CAPACITY

Today at the present volume intake Dekalb County's Landfill has a projected life until the year 2001 A.D. As shown in Table VIII-1 Dekalb County had an estimated capacity of 79,920 Tons or 213,386 C.Y. Dekalb County generates approximately 9,500 Tons per year and with the wastes requiring disposal as shown in Chapter III Table III-8 the life is approximately 7.5 years. If a Class III-IV Landfill is opened by 1995 this will extend the present Class I-II Landfill by a minimum of one year based on the assumption that approximately 15% of the waste volume is diverted to the Class III-IV Landfill, this is a reasonable assumption.

If a Class III-IV Landfill could be opened at the present site the operation of the facility could be performed using the existing personnel and equipment.

#### B. EXCESS CAPACITY

No Excessive Capacity is available or will be available beyond 2001, therefore a Shortfall will occur.

#### C. SHORTFALL OF CAPACITY

For the Ten-Year Planning Period a Shortfall will occur at the Present Site. This will require that the Dekalb County Solid Waste Committee take the following actions:

1. Take ever action possible to increase reduction in volume, recycle to maximum extent, and divert as much waste from the Class I-II Landfill to a Class III-IV Landfill.
2. Locate and have permitted a future Landfill Site or
3. Make arrangements to transport Dekalb County waste to another site by exporting. This will require that a Transfer Station be planned and constructed by 2001. As was stated earlier in this report a Transfer Station could be constructed at approximately \$600,000.
4. If the Dekalb Solid Waste Committee elects to provide for the Shortfall which will occur in 2001 by a New Class I Facility; they should use the following procedures to locate and identify a site.
  - a. Locate general area for Landfill location which will minimize Transportation Costs. (In other words a Centralized Location).
  - b. Determine cost for all locations.

- c. *Have Preliminary Engineering performed to determine site potentials.*
- e. *Select best alternative based on total cost to develop and O & M cost converted to cost per ton to dispose.*

*Cost for a Class I Landfill is a much discussed and debated issue today. The cost to construct a Class I Landfill to meet Sub-Title D Regulations, it is very expensive in relationship to previous operation requirements. Dekalb has as much information as any County on operation due to the fact that we today are operating under the State requirements with the exception of a Composite Liner. The cost of present disposal for 1993 is calculated to be \$22.50/Ton with cost for both Transportation and Disposal at \$32.03. It is estimated that in 1996 under the full requirements of Sub-Title D the Disposal Cost will be \$30.63/Ton and a Total Disposal and Transportation Cost of \$46.38/Ton.*

*A New Facility to be constructed by 2000 would have an estimated cost of \$150,000/acre if enough area is developed and the construction is performed in part by the present staff. This would include Land Acquisition, Site Testing, Design and Engineering, Permitting and Construction Cost. Although the Cost of Equipment and Labor are presently included in the Ten-Year Budget in Chapter V other cost would have to be funded.*

#### **5. Funding**

- a. *A New Class I Facility if constructed would require that the County finance the Capital Cost. This can be accomplished by either, Capital Outlay Notes, Bond Issue, or if available State Loans or Grants. At this time it is impossible to predict what interest rate will be and if any State or Federal Funds will be available in 1999. Dekalb County should plan to use Capital Outlay Notes and finance through Local Institutions.*

#### **6. Staffing, Training & Certification**

- a. *As was addressed earlier Dekalb County is presently operating a new modern Class I Facility with an outstanding performance record. The staffing, training and certification requirements as described in Chapter V will be adequate to continue operation of another facility.*

- 7. *The Ten-Year Operation Budget in Chapter V includes the cost to operate a New Class I Facility through 2003. Because the County is and will be operating the present site until 2001 the years 2002 and 2003 are on the Ten-Year Budget in Chapter V.*

#### **8. Funding Plan**

*The Dekalb County Regional Solid Waste Board recommends that the Dekalb County Legislative Body adopt one of the following funding options to establish a source of revenue to offset the cost associated with the collection and disposal of solid waste generated within the Dekalb County Planning Area.*

- a. *Increase the local sales tax by one cent.*
- b. *Passing of a county wide wheel tax of approximately \$30.00 per vehicle.*

- c. **Create a billing system for waste collection and disposal. This system would collect a solid waste fee from all residents of Dekalb County for waste generated.**

**The options are listed in order of priority with the sales tax increase being the most logical being that the present local sales tax is below that of surrounding counties. This would create the necessary funds required to operate the solid waste system and still provide a sales tax below that of most counties in the middle Tennessee area.**

#### **D. IMPLEMENTATION PLAN**

**October 1996 - Open Cell B at Present Facility.**

**January 1997 - Begin procedures for location of New Class I Facility.**

**July 1997 - Select site for New Facility.**

**July 1997 - Prepare Cost Estimate for New Facility and compare to alternatives of using Transfer Station to Export Waste.**

**January 1998 - Make decision as to County's selected option.**

**January 1998 - Begin design of New Class I Facility or Transfer Station.**

**October 1998 - Have plans completed and submitted for Permitting.**

**January 1999 - Secure Funding.**

**April 1999 - Begin construction of Facility.**

1. PROJECTED DEMAND AND SUPPLY, AND IDENTIFICATION OF POTENTIAL SHORTFALLS OR SURPLUS IN DISPOSAL CAPACITY. (WITHOUT CLASS III-IV)

TABLE VIII-1 A  
 COUNTY: DEKALB  
 TONS PER YEAR

Year	DEMAND: Tons of Waste Requiring Disposal	SUPPLY: Existing & Planned Capacity	Surplus (+)	Shortfall (-)
*1993	9,476	70,440	+	
1994	9,506	60,938	+	
1995	9,671	51,267	+	
1996	9,608	41,659	+	
1997	9,660	31,999	+	
1998	9,711	22,288	+	
1999	9,764	12,524	+	
2000	9,817	2,707	+	
2001	9,861	(7,154)		-
2002	9,910	(17,064)		-
2003	9,955	(27,019)		-

\*Calculated capacity of present Landfill as of January 1,1993 was 79,920 Tons. Calculation based on 750 lb./C.Y.

1. PROJECTED DEMAND AND SUPPLY, AND IDENTIFICATION OF POTENTIAL SHORTFALLS OR SURPLUS IN DISPOSAL CAPACITY. (\*WITH CLASS III-IV IN OPERATION BY 1995)

TABLE VIII-1 B  
 COUNTY: Dekalb  
 TONS PER YEAR

Year	DEMAND: Tons of Waste Requiring Disposal	SUPPLY: Existing & Planned Capacity	Surplus (+)	Shortfall (-)
*1993	9,476	70,440	+	
1994	9,506	60,938	+	
1995	8,220	52,718	+	
1996	8,167	44,551	+	
1997	8,211	36,360	+	
1998	8,254	28,086	+	
1999	8,299	19,787	+	
2000	8,344	11,443	+	
2001	8,382	3,061	+	
2002	8,424	(5,367)		-
2003	8,462	(13,829)		-

\*This is assuming a 15% reduction per year in volume to a Class III-V from the Waste Stream.

{NOTE: Table VIII-2 is not applicable because Dekalb Co. is not a Multi-County Region.}

**CHAPTER IX**  
**PUBLIC INFORMATION AND EDUCATION**

## **CHAPTER IX**

### **PUBLIC INFORMATION AND EDUCATION**

#### **A. DEFINITION OF NEEDS FOR PUBLIC INFORMATION:**

*The citizens of Dekalb County need to be educated about the laws on solid waste. They need to know how they can help the County reach the twenty-five (25%) percent reduction through recycling and cooperation with the laws.*

#### **B. STEPS TAKEN TO MEET NEEDS:**

*The state planning office will help meet the needs for a school curriculum, and by creating the five-person committee, Dekalb County can direct the education program more efficiently.*

##### **1. GOALS AND OBJECTIVES:**

*The goal and objective is to educate the citizens of Dekalb County on the need for efficient Solid Waste Disposal, and how they can help by recycling and using the facilities supplied for them.*

##### **2. TARGET GROUPS AND AUDIENCES:**

*Schools, newspaper and city/county elected officials.*

##### **3. AMOUNT AND KIND OF INFORMATION PROVIDED:**

*Run ads weekly on cost per ton of disposal at Landfill (use graphs, charts, etc.), radio spots, flyers and pamphlets.*

##### **4. METHODS UTILIZED:**

###### **a. School Based Instruction:**

###### **b. Workshops, Conferences, and Training Courses:**

*The Solid Waste Director should attend TDEC's Solid Waste Conference and relay information to Dekalb County residents.*

###### **c. Audio-Visual Materials, Slides, and Videos:**

###### **d. Publications:**

###### **e. Contests and Awards:**

*Dekalb County should have recycling contests in the schools, with the class that acquires the most recyclables receiving some type of reward for their participation.*



**f. Exhibits or Demonstrations:**

*A field trip to the Landfill should be planned to allow the students to see first hand where the trash goes, how it is disposed of, how the facility is managed in order to increase it's longevity, and what individuals can do to help.*

**g. Speaker's Bureau:**

**h. Other:**

**5. STAFF AND BUDGET NEEDS:**

*The educational system needs a Solid Waste Instructor to coordinate programs, publications and adult education of Solid Waste in addition to present educational services through the Litter Grant Program.*

**6. FUNDING PLAN:**

**7. EVALUATION AND REPORTING:**

*The Director of Solid Waste should evaluate the progress made with the community and report to the County Executive.*

**C. TEN-YEAR IMPLEMENTATION SCHEDULE:**

*Annual training seminars and classes will be offered for the public, along with Public Hearings and training for local school students, as well.*

**CHAPTER X**  
**PROBLEM WASTES**

# CHAPTER X

## PROBLEM WASTES

### A. HOUSEHOLD HAZARDOUS WASTE

*The Dekalb County Region has the characteristics that will include the need for a Household Hazardous Waste Program. The Region proposes to coordinate with the State in the Household Hazardous Waste Mobile Collection Events. The County's Region will provide the location, appropriate advertising and a site representative to assist in collection of the Household hazardous Waste Material. These requirements are in accordance with the State's Policy Guide issued August 1993.*

#### SITE CRITERIA:

*Dekalb County will arrange a temporary site for the Collection Event. Seven to fifteen (7-15) days prior to the Collection Event, the County will allow the Household Hazardous Waste Collection Contractor to inspect the site in order to finalize plans for the Event. The site will meet the requirements set forth in the Policy Guide and to arrange for assistance the Dekalb County Region will contact the Special Waste Section at (615) 532-0091 for assistance. The location selected will meet the State's approval.*

#### ADVERTISEMENT:

*The County will advertise in the Smithville Review Newspaper of which has a general circulation in Dekalb County with a paid subscription. The advertisement will begin at least two (2) weeks prior to Event and run the week during which the event occurs. The ad will conform with the requirements set forth in the "Policy Guide" issued by the Department of Environment and Conservation, Division of Solid Waste Assistance. The County will coordinate the educational and promotional activities with the State.*

#### COUNTY REPRESENTATIVE:

*The Director of Solid Waste for Dekalb county will be responsible for the Collection Event. This individual will either be on-site or have a Representative on-site that will safeguard the County property used by the Collection Contractor and manage the County-provided utilities and the nonhazardous waste containers, as well. The County will notify the Special Waste Section Manager in writing the name of its designated Site Representative.*

#### PROCEDURE FOR SCHEDULING THE COLLECTION EVENT:

*The County will coordinate with the Special Waste Section on the date and other details required for the Event. The Collection Event will be scheduled in accordance with the Policy Guide on a first-come first-served basis. All requests will be made in writing and be at least thirty (30) days prior to the desired collection date.*

## **B. WASTE TIRES**

*Dekalb County currently stores Waste Tires at the current Landfill location. The tires are held until a volume is generated to justify arranging for a Tire Shredder to come and shred the tires and then dispose of in the Landfill area. Coordination is done with the State on a periodic an needed basis.*

## **C. WASTE OIL**

*Waste oil is currently being managed through local private oil companies and the related pick-up service for disposed or recycling. There are no real good estimates as to the volume of Waste Oil recovered in 1993. The private sector has an efficient handling system and the County will continue to provide educational material for residents on handling of Waste Oil.*

## **D. LEAD ACID BATTERIES**

*The Lead Acid Batteries are currently being picked-up by the Private Sector and recycled in an approved matter. Dekalb County will collect Lead Acid Batteries at the manned Convenience Centers and at the Landfill. The batteries will be turned over to a Private Company for recycling. The storage of the Acid Batteries can be at the Landfill in accordance with the State Special Waste Handling Procedures.*

## **E. LITTER**

*The Dekalb County Region will coordinate with the Litter Control Program provided through the Department of Transportation. Disposal capabilities will be available at the Landfill and the Convenience Centers for collecting the Litter Waste. The material that can be recycled will be diverted into recyclable containers such as aluminum cans, etc.*

## **F. INFECTIOUS WASTE**

*The hospitals handle most of the Infectious Waste by incineration in a very effective manner. The County does not have a significant need to define or address this issue due to the extremely low volume generated.*

## **G. OTHER PROBLEM WASTES (OPTIONAL)**

*Therefore Not Applicable.*

**CHAPTER XI**

**IMPLEMENTATION: SCHEDULE, STAFFING AND FUNDING**

## **CHAPTER XI**

### **IMPLEMENTATION: SCHEDULE, STAFFING AND FUNDING**

#### **A. SYSTEM DEFINITION**

*It is proposed that the region continue operating a Class I Landfill in accordance with state rules and regulation. The projected life of the landfill is through the year 2000. Also, the county will provide manned convenience centers for residential solid waste. The county has already met the twenty-five percent (25%) reduction requirement required by 1994. This is based upon the base year calculations of 18,018 tons for 1989 and currently the figures indicate that approximately 9000 tons per year is entering the landfill.*

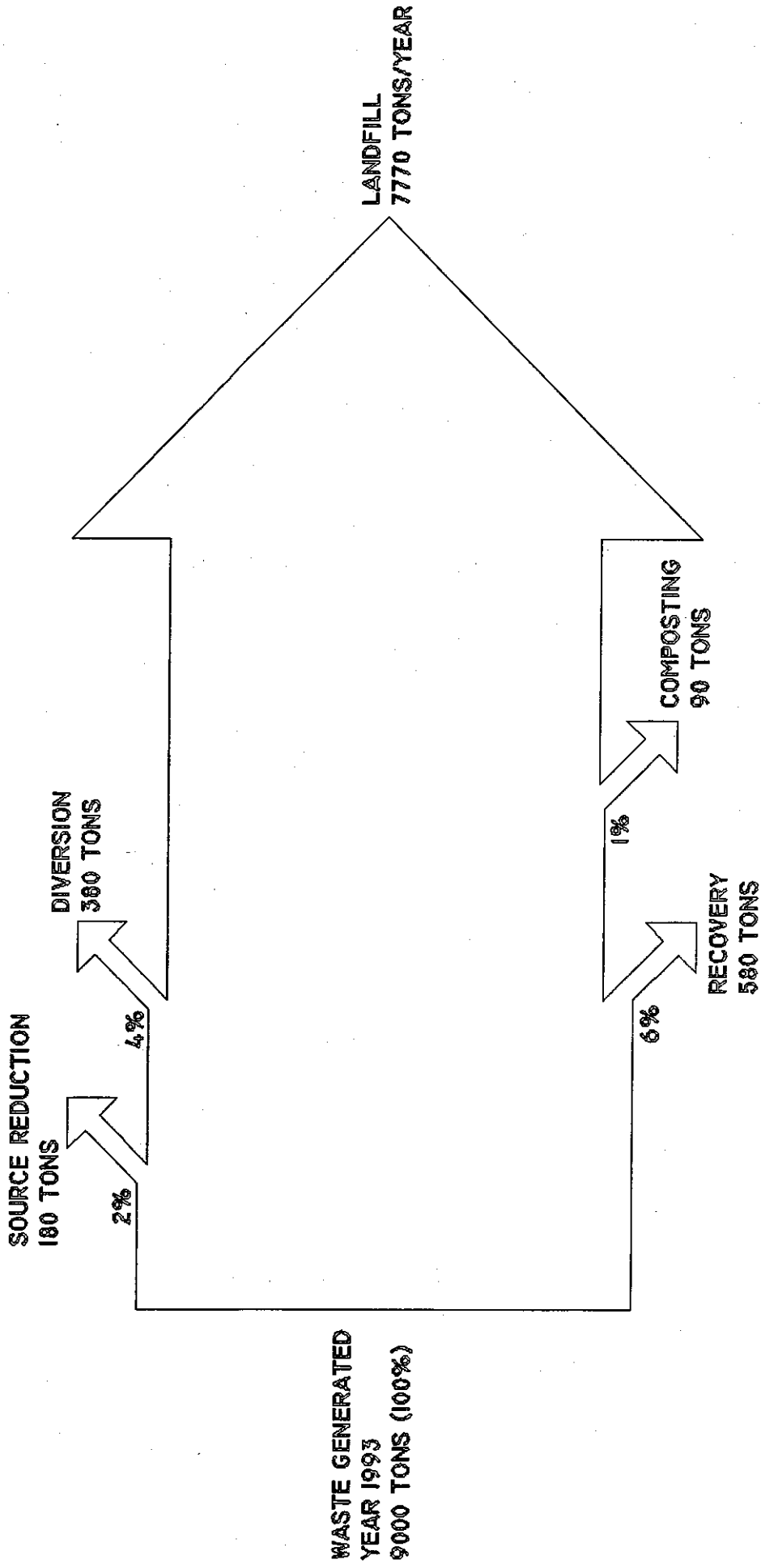
*The landfill has established a footprint of operation through October 1996. At that time Dekalb County will open Cell-B at the present landfill site which will provide disposal capacity until 2001. A Class III-Class IV Landfill is projected to be opened by 1995 which will reduce the volume of total solid waste entering the Class I operation.*

*In the year 2001 another Class I Landfill will be opened to provide disposal through the year 2003 or the remainder of the planning period.*

*Also involved within this time frame is the additional amount of solid waste that can be averted from landfill. The projected calculations for the first planning period are:*

- Source reduction - 2%*
- Diversion (demolition waste) - 4%*
- Composting (yard waste) - 1%*
- Recycling (newsprint, cardboard, glass & cans) - 6%*
- Landfilling - 87%*

*Refer to the Proportional Flow Diagram for Dekalb County.*



WASTE GENERATED  
YEAR 1993  
9000 TONS (100%)

PROPORTIONAL FLOW DIAGRAM  
DEKALB COUNTY LANDFILL  
DEKALB COUNTY, TN

*The Proposed System Map of Dekalb County's Region is prepared which shows the proposed system as outlined in Chapters V, VI, VII, VIII, IX, & X. This map is inserted as a part of this chapter.*

*The Regional Solid Waste Board for the Planning Region of Dekalb County has been established to develop and revise this plan. It is proposed that the Dekalb County Legislative Body review and adopt the Regional Solid Waste Plan as approved by the Regional Solid Waste Board and provide the necessary funding to implement the approved Solid Waste Plan.*

## **B. IMPLEMENTATION SCHEDULE:**

*As previously discussed, a twenty-five percent (25%) reduction of solid waste has already been met, therefore, by 1994 the county has met the 1994 deadline for solid waste reduction. It is proposed that the additional personnel necessary to operate and supervise the system should be filled by July 1, 1995. This essentially involves a Solid Waste Director that will be in charge of the proposed system in this plan. The county proposes to have added a Market Advisory Council, Educational Program, hard to Handle Waste Disposal, and Annual Reporting System with Certified Operators by July 1, 1995. With these additions the county should meet the requirements of operating a system. (Refer to Chapter V) This implementation is for the first five (5) years (1994 - 1998) period.*

*The schedule for the second five (5) years includes opening another Class I Landfill approximately in year 2000 to 2001.*

## **C. STAFFING AND TRAINING REQUIREMENTS**

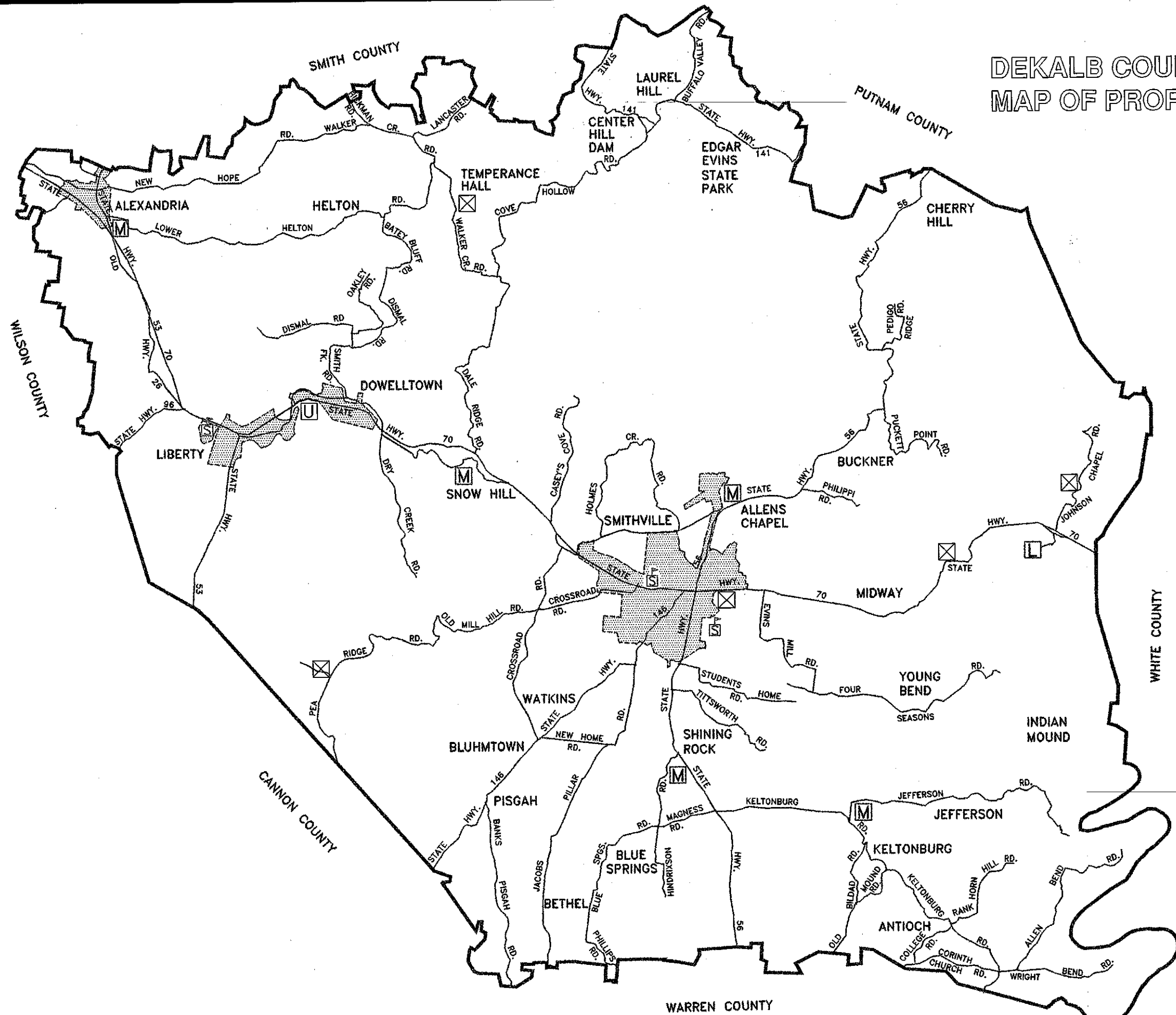
*Solid Waste Collection and Disposal is a very critical and complicated process today, and will continue to become even more so in the future, as environmental controls are enacted by the State and Federal Governments. This is an area that places major liability on local County Governments with environmental monitoring of Groundwater quality.*

*Because of the complexity of the operation it is necessary that Dekalb County appoint a Director of Solid Waste. This position would assume full responsibility for the Collection and Disposal of the County Solid Waste Program. This individual must have management and construction experience to assure the proper operation of both Collection and Disposal functions. The Solid Waste Director should serve as a member of the Market Advisory Council and the Education Committee. The Director of Solid Waste would be appointed by and serve under the County Executive as provided by law under T.C.A. 5-6-106.*








*The County also should have a Landfill supervisor employed to supervise the day to day operation of the County's Landfill. Duties include maintaining proper cover, line and grade, maintain the Storm Water Run Off Collection System, the Leachate Collection System, and Closure/Post Closure operations in the County. The Landfill supervisor should also be proficient in the operation of all heavy equipment used in the Landfill operation.*



# DEKALB COUNTY, TENNESSEE MAP OF PROPOSED SYSTEM



## MAP SYMBOLS

-  SCHOOL WITH RECYCLABLE COLLECTION
-  ROLL-ON SITES
-  MANNED SITES
-  UNMANNED CONVENIENCE CENTER SITES
-  LANDFILL
-  ROADS
-  COUNTY LINE

REVISED 2-21-94  
NOT TO SCALE

### **STAFFING NEEDS:**

- 1 - Director of Solid Waste (1995-1996)
- 1 - Landfill Supervisor - Operator
- 4 - Equipment Operators (pan, dozier, and compactor)
- 2 - Truck Drivers
- 6 - Convenience Center Operators
- 2 - Laborers

### **TRAINING NEEDS:**

- 1. Identify which workers require certification.
- 2. Establish terms and requirements for certification.
- 3. Establish different levels of certification for different facilities.
- 4. Impose fees to fund training and certification.
- 5. Require that one or more certified attendants be on site at all times during operating hours.

*The present staff of Dekalb County is very competent and should continue to perform their duties with the new positions being filled by July 1, 1995.*

### **E. TEN-YEAR BUDGET:**

*A Ten-Year Budget for Dekalb County Solid Waste Program has been prepared . The following budget is comprised of two parts - 1) being a 207 Solid Waste Disposal Fund (Landfill Budget) and 2) being a 116 Solid Waste/Sanitation Fund (Collection System Budget). The budgets have been estimated through the year 2002-2003. Due to the ever changing rules and regulations placed upon Local Governments by both State and Federal Governments, these estimates can change over time and should be reevaluated annually. Dekalb County will have an average annual operating cost of approximately \$500,000 per year for Collection and Disposal.*

Dekalb County, Tennessee  
116 Solid Waste/Sanitation Fund (Collection)  
Statement of Proposed Operations  
For the Fiscal Year Ending June 30, 1994

No. Account	Description	1993-94 Estimated	1994-95 Estimated	1995-96 Estimated	1996-97 Estimated	1997-98 Estimated	1998-99 Estimated	1999-2000 Estimated	2000-2001 Estimated	2001-2002 Estimated	2002-2003 Estimated
55000	PUBLIC HEALTH AND WELFARE										
55730	Waste Collection										
55731	Waste Pickup										
149	Laborers	\$27,040	\$28,153	\$29,527	\$30,400	\$31,325	\$32,900	\$34,500	\$35,600	\$37,350	\$39,300
338	Maintenance & Repair Services-Vehicles	\$4,500	\$4,725	\$4,960	\$5,209	\$5,470	\$5,743	\$6,030	\$6,331	\$6,648	\$6,980
499	Other Supplies and Materials	\$3,000	\$3,000	\$3,150	\$3,150	\$3,150	\$3,200	\$3,200	\$3,300	\$3,300	\$3,300
55732	Convenience Centers										
149	Laborers	\$29,500	\$45,000	\$45,000	\$65,000	\$65,000	\$65,000	\$100,000	\$100,000	\$100,000	\$100,000
499	Other Supplies and Materials	\$2,500	\$3,000	\$3,000	\$3,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
791	Other Construction	\$0	\$30,000	\$0	\$30,000	\$0	\$0	\$60,000	\$0	\$0	\$0
55750	Waste Disposal										
55759	Other Waste Disposal										
191	Board and Committee Members Fees	\$1,400	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
201	Social Security	\$4,500	\$4,652	\$4,762	\$7,632	\$7,706	\$7,832	\$10,760	\$10,848	\$10,988	\$11,144
204	State Retirement	\$500	\$500	\$500	\$763	\$771	\$783	\$1,076	\$1,085	\$1,099	\$1,114
210	Unemployment Compensation	\$1,000	\$1,163	\$1,190	\$1,908	\$1,926	\$1,958	\$2,690	\$2,712	\$2,747	\$2,786
321	Engineering Services	\$13,500	\$0	\$0	\$0	\$0	\$8,000	\$0	\$0	\$0	\$0
499	Other Supplies and Materials	\$1,100	\$1,155	\$1,213	\$1,274	\$1,338	\$1,405	\$1,475	\$1,549	\$1,626	\$1,707
510	Trustee's Commission	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
TOTAL PUBLIC HEALTH AND WELFARE		\$90,540	\$124,348	\$96,302	\$151,336	\$124,686	\$134,821	\$227,731	\$169,425	\$171,758	\$174,331

Dekalb County

Ch. XI-6

Solid Waste Plan

Dekalb County, Tennessee  
 207 Solid Waste Disposal Fund (Landfill)  
 Statement of Proposed Operations  
 For the Fiscal Year Ending June 30, 1994

Account No.	Description	Estimated 1993-94	Estimated 1994-95	Estimated 1995-96	Estimated 1996-97	Estimated 1997-98	Estimated 1998-99	Estimated 1999-2000	Estimated 2000-2001	Estimated 2001-2002	Estimated 2002-2003
	Estimated Expenditures										
55000	PUBLIC HEALTH AND WELFARE										
55750	Waste Disposal										
55754	Landfill Operation and Maintenance										
149	Laborers	\$72,600	\$89,000	\$98,000	\$100,100	\$103,400	\$107,087	\$110,300	\$113,600	\$117,000	\$120,500
321	Engineering Services	\$15,000	\$22,000	\$5,000	\$5,000	\$5,000	\$29,000	\$21,000	\$8,000	\$8,000	\$2,000
330	Operating Lease Payments	\$9,900	\$12,900	\$12,900	\$12,900	\$12,900	\$12,900	\$30,000	\$30,000	\$30,000	\$30,000
338	Maintenance & Repair Services-Vehicle	\$22,000	\$23,000	\$24,000	\$25,000	\$26,000	\$28,000	\$30,000	\$30,000	\$30,000	\$32,000
399	Other Contracted Services	\$17,000	\$20,000	\$20,000	\$22,000	\$22,000	\$45,000	\$25,000	\$25,000	\$25,000	\$25,000
409	Crushed Stone	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,500	\$2,500	\$2,600	\$2,600
412	Diesel Fuel	\$22,000	\$23,800	\$24,500	\$24,500	\$24,500	\$25,000	\$25,000	\$25,000	\$25,500	\$25,500
452	Utilities	\$3,000	\$3,000	\$3,000	\$3,000	\$3,100	\$3,100	\$3,200	\$3,200	\$3,300	\$3,300
499	Other Supplies and Materials	\$15,000	\$18,000	\$15,000	\$15,000	\$15,000	\$18,000	\$20,000	\$20,000	\$20,000	\$25,000
791	Other Construction	\$24,000	\$77,000	\$64,000	\$55,000	\$65,000	\$65,000	\$80,000	\$70,000	\$70,000	\$80,000
55759	Other Waste Disposal										
201	Social Security	\$6,000	\$7,387	\$8,134	\$8,308	\$8,308	\$8,582	\$8,888	\$9,155	\$9,429	\$9,711
204	State Retirement	\$871	\$1,068	\$1,176	\$1,201	\$1,201	\$1,241	\$1,285	\$1,324	\$1,363	\$1,404
210	Unemployment Compensation	\$1,525	\$1,869	\$2,058	\$2,102	\$2,102	\$2,171	\$2,249	\$2,316	\$2,386	\$2,457
499	Other Supplies and Materials	\$1,000	\$1,200	\$1,300	\$1,400	\$1,500	\$1,600	\$1,700	\$1,800	\$1,900	\$2,000
510	Trustee's Commission	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
55770	Postclosure Care Costs										
399	Other Contracted Services	\$116,935	\$13,400	\$14,070	\$14,775	\$15,500	\$16,715	\$35,000	\$36,000	\$36,500	\$37,000
	TOTAL PUBLIC HEALTH AND WELFARE	\$213,896	\$317,624	\$297,138	\$294,287	\$309,512	\$367,396	\$398,122	\$379,895	\$384,978	\$400,472

**CHAPTER XII**  
**ALLOCATION OF IMPLEMENTATION RESPONSIBILITIES**

## **CHAPTER XII**

### **ALLOCATION OF IMPLEMENTATION RESPONSIBILITIES**

#### **A. ONE-COUNTY REGIONS**

*The Region is a one County Region which has established a Solid Waste Committee that has adopted the Plan. The Resolution by the Board is attached in the Appendix and contains the signature of the Chairman. The County Commission has adopted the Plan with projected funding of the Plan.*

#### **B. MULTI-COUNTY REGIONS**

*This section does not apply to the Dekalb County Region.*

#### **C. SOLID WASTE AUTHORITIES**

*This section does not apply to the Dekalb County Region.*

#### **D. LOCAL PLANNING COMMISSION REVIEW**

*A draft of the Region's Solid Waste Plan was submitted to the Dekalb County Legislative Body for review and comment. Formal adoption of the Plan is pending and a copy of the Resolution will be provided after this has occurred.*

**CHAPTER XIII**  
**FLOW CONTROL AND PERMIT APPLICATION REVIEW**

## **CHAPTER XIII**

### **FLOW CONTROL AND PERMIT APPLICATION REVIEW**

*Dekalb County's legislative body should prepare and adopt resolutions controlling both import and export of all solid waste within the Planning Region. The policy of Dekalb County solid waste flow should be such that all solid waste generated within the planning region be disposed of in the Dekalb County Landfill as long as the county owns or operates a landfill facility. This is to ensure that all revenue for collection and disposal be kept within Dekalb County. This would constitute a zero export of solid waste that can be placed within a Class I facility. All hazardous and medical wastes generated within the region will be exported to facilities outside of the region equipped to handle such wastes.*

*The Dekalb County Legislative Body should reserve the right to permit import and export of solid waste under emergency conditions only.*

*Upon review and adoption all restrictions will be forwarded to the Tennessee State Planning office.*





**LARRY WEBB**

County Executive  
DeKalb County Courthouse  
SMITHVILLE, TENNESSEE 37166

There was a public hearing to discuss the DeKalb County 10 year regional Solid Waste Board on June 7, 1994 at 9:30 a.m. in the office of the County Executive. T.C.A. 68-211-813

Present:

Larry Webb  
Angela J. Puckett  
Ken Shepherd  
Dean Judkins  
Lois Ann Puckett

County Executive  
Smithville, In.  
Cookeville, In.  
Smithville, In.  
Smithville, In.

**PUBLIC NOTICE**

THERE WILL BE A PUBLIC HEARING ON  
TUESDAY, JUNE 7, 1994 AT 9:30 A.M. CON-  
CERNING DEKALB COUNTY SOLID WASTE 10  
YEAR PLAN IN THE OFFICE OF COUNTY  
EXECUTIVE IN THE COURTHOUSE.

LARRY WEBB  
COUNTY EXECUTIVE  
DEKALB COUNTY

BE IT REMEMBERED THAT DEKALB COUNTY COURT MET IN REGULAR SESSION ON THE 23rd day of May, 1994 in the DeKalb County Courthouse at 6:00 P. M. where the following proceedings were held and recorded:

Present and presiding Larry Webb, Chairman  
John H. Thweatt, County Clerk  
The meeting was called to order by Chairman Webb  
Court opened by Steve Johnson, Deputy Sheriff  
Invocation by Tom Keith  
Roll call by the clerk; There were 12 present and 2 absent

Present	Absent
Danny Parkerson	Mark Willoughby
Frank Thomas	Vesper Pistole
Tom Keith	
Tim Adcock	
Robert Rowe	
Joe Collins	
Eugene Moore	
Larry Evans	
Leonard Dickens	
Freda Frazier	
Mack Harney	
Mark Loring	

A motion was made by Tom Keith and seconded by Danny Parkerson to approve the minutes from last meeting as submitted. Adopted

A motion was made by Mack Harney and seconded by Mark Loring to approve the Regional Solid Waste 10 year plan. The clerk called the roll, all 12 voted yes. The motion carried.

A motion was made by Larry Evans and seconded by Danny Parkerson to approve the Resolution to authorize the provisions of code section 414(h) of the Internal Revenue Code for employees of a political subdivision participating in the Tennessee Consolidated Retirement System in accordance with Title 8 Section 34 through 37 of the Tennessee Code Annotated. This having been read to the court by Clerk John H. Thweatt. A roll call vote was cast with all 12 voting yes the motion carried.

Chairman Webb brought to the commissioners attention the fact a convenience site for the Snow Hill area is being considered. The site is located just beyond Toad Road on the left going West and is owned by Jack Evins. Mr. Evins does not want to sell but has agreed to lease the land for a 10 year period at \$100 per month for the first 5 years with a 3% cost of living for years 6-7-8-9 and 10. This property is level, with water and electricity and is very accessible. After some discussion and the fact Mr. Webb explained that he's expecting to receive reimbursement money that was applied for, a motion was made by Mack Harney and seconded by Robert Rowe that we authorize Chairman Webb to draw up the necessary lease documents for a 10 year lease with Mr. Evins at \$100 per month with a 3% cost of living clause for years 6-7-8-9 and 10. The clerk called the roll, all 12 voted yes. The motion carried. (Note) there was some question about the fence becoming part of the real estate if we have to leave out. Mr. Webb thought maybe the fence could be taken down, but leave the post and slab.

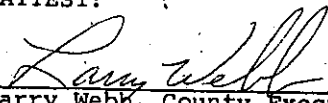
Mr. Webb told the court there has been discussion of possibly moving the Extension Office to a different location which Mr. Steve Officer is in charge of. The office is now located on East Broad st. and due to widening of the highway the parking facilities will be effected. The county has been offered comparable rent at a different location, which Mr. Officer explained. It seems Mr. James Ed Rice has available 1200 sq. ft. of space located on W. Broad st. in the building that houses the F&H and ASCS offices. It is a nicer building and Mr. Rice has agreed to rent this for \$600 per month including utilities. A motion was made by Danny Parkerson and seconded by Mack Harney that we authorize County Executive Larry Webb to draw up documents to rent this space from Mr. Rice on an annual basis of \$600 per month, with a time frame of approximately 3½ years. A roll call vote was cast with all 12 voting yes. The motion carried.

A motion was made by Mark Loring and seconded by Larry Evans to approve the following as Notary's: Lynn Kent, Patricia Nora Rodas, Ginger Hawkins, Annette Rhody, Nancy S. Lewis and W. K. Gilliam. Adopted

Danny Parkerson, on behalf of Mr. Don Elmore presented a petition to the court from the people of the 1st and 2nd districts requesting an ambulance substation in the Alexandria area of DeKalb County. This will be filed with the clerk and referred to the budget committee. It was requested that the ambulance and budget committee's meet jointly and discuss this. A motion was made by Mack Harney to accept this.

A motion was made by Danny Parkerson and seconded by Tom Keith to adjourn.

ATTEST:

  
Larry Webb, County Executive &  
Chairman

  
John H. Thweatt, County Clerk

MINUTES

DeKalb County Regional Solid Waste Board

February 16, 1994

The DeKalb County Regional Solid Waste Board met on February 16, 1994, at 7:00 p.m. at the DeKalb County Courthouse.

Billy J. Lafevre called the meeting to order.

A roll call was taken. Members present were: Billy J. Lafevre, Larry Webb, Cecil Burger, Tim Stribling, Leonard Dickens, Mack Harney, Ronald Young, James White, and Dwight Mathis.

Larry Webb made a motion to suspend the reading of the minutes of the previous meeting. Dwight Mathis made the second. The motion was approved.

Ken Shepard of the Upper Cumberland Development District was in attendance.

Ronnie Reece was present from the engineering firm of Professional Engineering Services. He presented the board with the completed DeKalb County Regional Solid Waste ten year plans manual. It is the same as the rough draft with the exception of two major changes that the board wanted inserted into the final plan, the first being the method of funding or budgeting to be recommended to the DeKalb County legislative body. The final report recommends that the DeKalb County legislative body adopt one of the following funding options to establish a source of revenue to offset the cost associated with the collection of solid waste. The funding options are: sales tax increase, wheel tax, or a billing system to collect services rendered. The second change concerned flow control in that the DeKalb County legislative body would prepare and adopt a resolution controlling the import and export of all solid waste within the planning region.

Mac Harney made a motion to adopt the ten year plan. Dwight Mathis made the second. The motion was passed.

No further business was brought before the board. The meeting was adjourned.

Respectfully submitted,



Tim Stribling



**LARRY WEBB**  
County Executive  
DeKalb County Courthouse  
SMITHVILLE, TENNESSEE 37166

May 27, 1994

Mr. Frank Colwell  
Route 6, Box 115  
Smithville, TN 37166

Dear Frank,

I have placed a copy of the 10 Year Solid Waste Plan in the Smithville Library, which you can review at your convenience.

Sincerely,

A handwritten signature in cursive script that reads "Larry".

Larry Webb  
County Executive



**LARRY WEBB**  
County Executive  
DeKalb County Courthouse  
SMITHVILLE, TENNESSEE 37166

May 27, 1994

Mr. Lewis Knowles  
Route 1, Box 311  
Smithville, TN 37166

Dear Lewis,

I have placed a copy of the 10 Year Solid Waste Plan in the Smithville Library, which you can review at your convenience.

Sincerely,

A handwritten signature in cursive script that reads "Larry".

Larry Webb  
County Executive



**LARRY WEBB**  
County Executive  
DeKalb County Courthouse  
SMITHVILLE, TENNESSEE 37166

May 27, 1994

Mr. Larry Evans  
Route 6, Box 298  
Smithville, TN 37166

Dear Larry,

I have placed a copy of the 10 Year Solid Waste Plan in the Smithville Library, which you can review at your convenience.

Sincerely,

A handwritten signature in cursive script that reads "Larry Webb".

Larry Webb  
County Executive





**LARRY WEBB**  
County Executive  
DeKalb County Courthouse  
SMITHVILLE, TENNESSEE 37166


May 27, 1994

Mr. Leon Stribling  
C/O Stribling Chevrolet  
Highway 70  
Smithville, TN 37166

Dear Leon,

I have placed a copy of the 10 Year Solid Waste Plan in the Smithville Library, which you can review at your convenience.

Sincerely,

  
Larry Webb  
County Executive



**LARRY WEBB**  
County Executive  
DeKalb County Courthouse  
SMITHVILLE, TENNESSEE 37166

May 27, 1994

Mr. Norval Webb  
C/O Webb's Pharmacy  
400 Public Square  
Smithville, TN 37166

Dear Norval,

I have placed a copy of the 10 Year Solid Waste Plan in the Smithville Library, which you can review at your convenience.

Sincerely,

A handwritten signature in cursive script that reads "Larry".

Larry Webb  
County Executive



**LARRY WEBB**  
County Executive  
DeKalb County Courthouse  
SMITHVILLE, TENNESSEE 37166

May 27, 1994

Mr. Vesper Pistole  
300 W. Main Street  
Smithville, TN 37166

Dear Mr. Pistole.

I have placed a copy of the 10 Year Solid Waste Plan in the Smithville Library, which you can review at your convenience.

Sincerely,

A handwritten signature in cursive script that reads "Larry Webb".

Larry Webb  
County Executive



**LARRY WEBB**

County Executive

DeKalb County Courthouse

SMITHVILLE, TENNESSEE 37166

May 27, 1994

Mr. Leo Ashburn  
North 3rd Street  
Smithville, TN 37166

Dear Mr. Leo,

I have placed a copy of the 10 Year Solid Waste Plan in the Smithville Library, which you can review at your convenience.

Sincerely,

A handwritten signature in cursive script that reads "Larry Webb".

Larry Webb  
County Executive



**LARRY WEBB**  
County Executive  
DeKalb County Courthouse  
SMITHVILLE, TENNESSEE 37166

May 27, 1994

Mr. John Whitehead  
621 East 15th Street  
Cookeville, TN 38501-1820

Dear John,

I have placed a copy of the 10 Year Solid Waste Plan in the Smithville Library, which you can review at your convenience.

Sincerely,

A handwritten signature in cursive script that reads "Larry Webb".

Larry Webb  
County Executive

RECEIVED JUL 05 1994

*DEKALB COUNTY*  
*10 YEAR SOLID WASTE*  
*REGIONAL PLAN*

*1994-2004*

*FOR*  
*DEKALB COUNTY, TENNESSEE*  
*REGIONAL SOLID WASTE COMMITTEE*

*DATE:*  
*FEBRUARY, 1994*

RONNIE G. REECE, P.E.  
7A COOK ST., PO BOX 812  
SPARTA, TN 38583  
(615) 836-3764



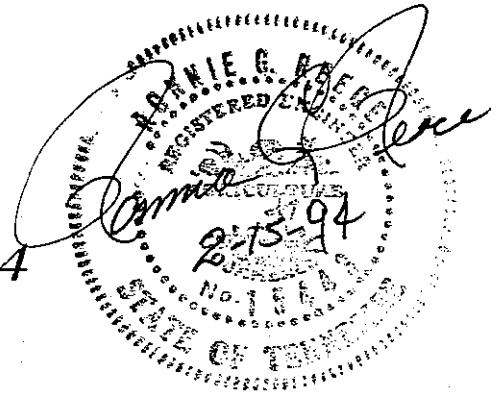
RICKY E. WHITE, P.E.  
204 W. LOCUST STREET  
LAFAYETTE, TN 37083  
(615) 666-2385

DEKALB COUNTY  
10 YEAR SOLID WASTE  
REGIONAL PLAN

1994-2004

FOR  
DEKALB COUNTY, TENNESSEE  
REGIONAL SOLID WASTE COMMITTEE

DATE:  
FEBRUARY, 1994



RONNIE G. REECE, P.E.  
7A COOK ST. PO BOX 812  
SPARTA, TN 38583  
(615) 836-3764



RICKY E. WHITE, P.E.  
204 W. LOCUST STREET  
LAFAYETTE, TN 37083  
(615) 666-2385

**DEKALB COUNTY SOLID WASTE COMMITTEE:**

**CHAIRMAN: Mr. Billy J. Lafevre**

**VICE CHAIRMAN: Mr. James White**

**SECRETARY: Mr. Tim Stribling**

**COUNTY EXECUTIVE: Mr. Larry Webb**

**MAYOR: Mr. Cecil Burger**

**COMMITTEE MEMBERS:**

**Mr. Leonard Dickens**

**Mr. Mack Harney**

**Mr. Tom Keith**

**Mr. Dwight Mathis**

**Mr. Kenneth Sandlin**

**Mr. Ronald Young**



## **TABLE OF CONTENTS**

<b>Topic</b>	<b>Pages:</b>
<b><i>Executive Summary</i></b>	<b><i>ES-1-4</i></b>
<b><i>Description of the Municipal Solid Waste Region</i></b>	<b><i>Ch.I-1-12</i></b>
<b><i>Analysis of the Current Solid Waste Management System For the Region</i></b>	<b><i>Ch.II-1-19</i></b>
<b><i>Growth Trends, Waste Projections and Preliminary System Structure</i></b>	<b><i>Ch.III-1-4</i></b>
<b><i>Waste Reduction</i></b>	<b><i>Ch.IV-1-6</i></b>
<b><i>Waste Collection and Transportation</i></b>	<b><i>Ch.V-1-13</i></b>
<b><i>Recycling</i></b>	<b><i>Ch.VI-1-3</i></b>
<b><i>Composting, Solid Waste Processing, Waste-to-Energy and Incineration Capacity</i></b>	<b><i>Ch.VII-1</i></b>
<b><i>Disposal Capacity</i></b>	<b><i>Ch.VIII-1-5</i></b>
<b><i>Public Information and Education</i></b>	<b><i>Ch.IX-1-2</i></b>
<b><i>Problem Wastes</i></b>	<b><i>Ch.X-1-2</i></b>
<b><i>Implementation: Schedule, Staffing and Funding</i></b>	<b><i>Ch.XI-1-7</i></b>
<b><i>Allocation of Implementation Responsibilities</i></b>	<b><i>Ch.XII-1</i></b>
<b><i>Flow Control and Permit Application Review</i></b>	<b><i>Ch.XIII-1</i></b>

## **EXECUTIVE SUMMARY**

# EXECUTIVE SUMMARY

## REGIONAL DESCRIPTION AND FORMATION

*Dekalb County elected to remain a Single-County Region due to the efforts and expense recently undertaken to establish a new Class I Landfill. This Landfill meets the new regulations as per Chapter 1200-1-7, Solid Waste Processing and Disposal. The new facility has a projected life until Spring of 2001. Although some advantages may be provided through Multi-County Regions, Dekalb County presently has the majority of the necessary staffing and equipment in place to continue operating as a Single-County Region. Transportation to other Facilities will dramatically increase Solid Waste Management System Cost.*

*The county has formed a Solid Waste Region with a Board consisting of eleven members. This is in pursuant to T.C.A. Section 68-211-813 (b)(1).*

## CURRENT SOLID WASTE MANAGEMENT SYSTEM

*The current Management System provides excellent collection and disposal for Dekalb County. A total of 9,416 tons was processed in 1992 for an average of 0.62 tons/year/person. This volume of Solid Waste was collected from eighteen (18) separate locations within the Region. The Solid Waste generated at the individual collection centers is depicted by the attached Bar Graph (Page ES-4). The Solid Waste generated was disposed of in the existing Class I Facility.*

## GROWTH TRENDS AND WASTE PROJECTIONS

*The Region Growth Trends in Waste Production is slight over the next ten years. Total annual projections range from 9,506 ton in 1994 to 9,959 ton in 2003. This equates to an increase of 4.7% in ten years or less than 1/2% per year.*

## WASTE REDUCTION

*The State of Tennessee has established a reduction goal of twenty-five (25%) percent by December 31, 1995, as per T.C.A. Section 68-31-861(a). This reduction must be attained by the Dekalb Solid Waste Region. A base year of 1989 established Dekalb County's Solid Waste per capita rate at 1.25 ton therefore, a 0.31 ton per capita reduction must be attained. At present this Region has reached its goal but with further efforts they can continue to reduce waste volume.*

## WASTE COLLECTION AND TRANSPORTATION

*The current Waste Management System provides eighteen (18) Collection Sites throughout the Region of which two (2) trucks are equipped with 42 C.Y. containers and all collection sites are supplied with Roll-Off Containers. This major upgrade to the Collection System has eliminated all Green-Boxes in the Region in the past two (2) years. Transportation Costs established by the .pa*

*University of Tennessee Roll-Off Collection Costs are calculated to be \$1.60/mile at the hourly rates received by this systems employees. The Transportation Costs for this system range from \$4.88/ton to \$47.60/ton dependent upon haul distance and density. The average cost for Manned Centers with Compactors is \$11.41/ton. Cost savings are possible by converting some larger unmanned site to fully Manned Convenience Centers.*

## **RECYCLING**

*This System has initiated a Recycling Program. This action must be expanded by establishing a Market Advisory Board to develop markets for Recovered Waste and produce a revenue source. The recycling efforts will only be accomplished by having proper Educational Programs. The Region should strive to recycle a minimum of 580 tons annually.*

## **DISPOSAL CAPACITY AND COST**

*The present Class I Landfill will provide capacity until 2001 at which time either a New Facility must be available or the Region must export Waste to another Facility. Dekalb County's present disposal costs are approximately \$22.50 per/ton with an anticipated increase to \$30.63/ton upon meeting Sub-Title D Composite Liner requirements by October 1996. This emphasizes the need for a Class III-IV Facility to relieve the present Class I from volume that can be diverted. Present staffing will require minor changes to meet future needs. The project operating budget for disposal is in Chapter V of this Plan.*

## **PROBLEM WASTE**

*The County is required to establish a program to handle the Problem Waste. It is proposed that a system to meet the State's "Policy Guide" on Household Hazardous Waste be implemented (Refer to Chapter X). Waste Tires are currently being shredded then disposed of in the Landfill which is proposed for the planning period through 2003. Automotive Waste Oil and Lead Acid Batteries will also be collected and handled according to the State's regulations. There are litter programs in each county which should continue.*

## **EDUCATION**

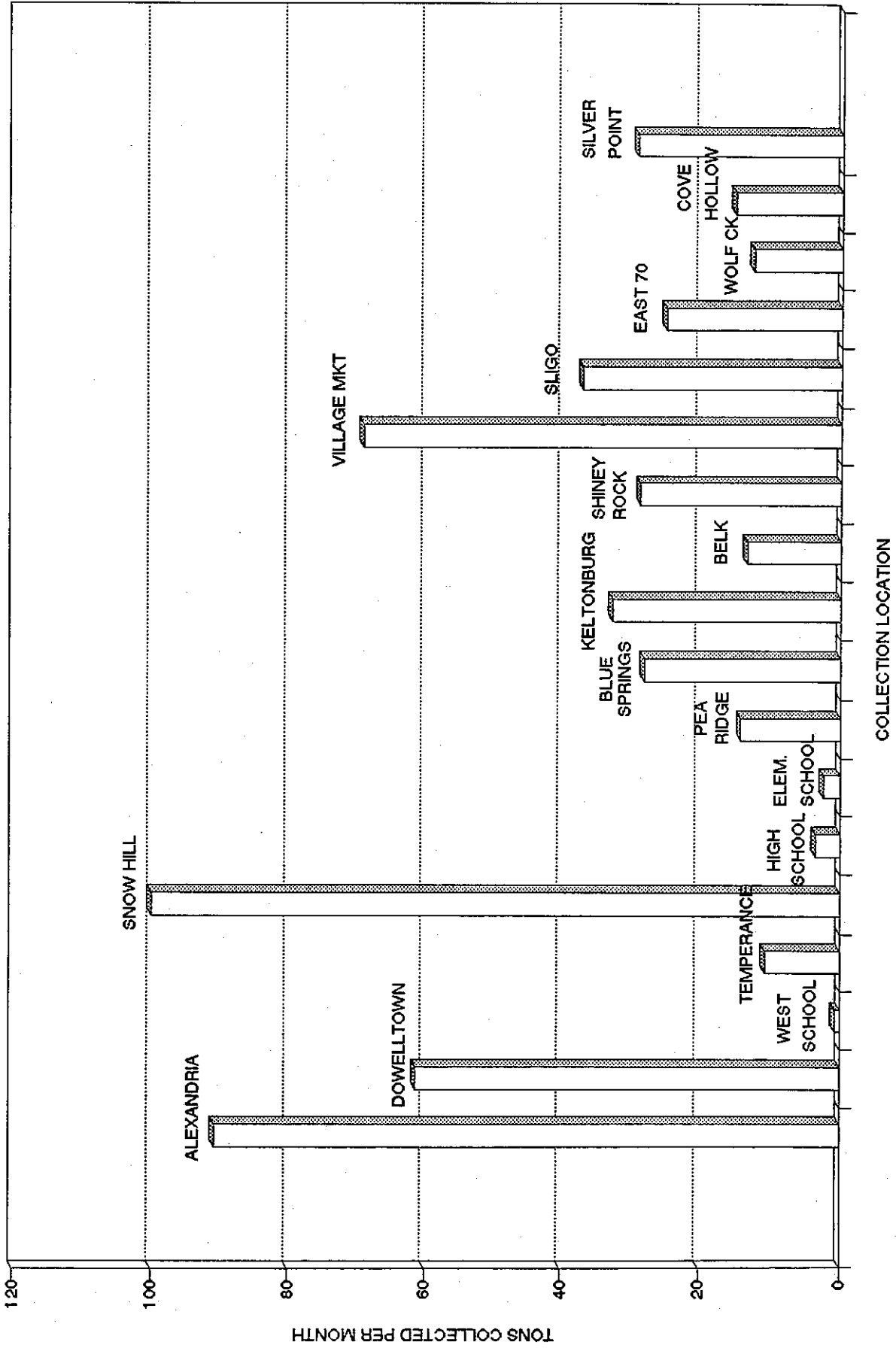
*A five person committee to serve as the Region's Education Committee is to be established and charged with implementing an Educational Program to inform the General Public of the Solid Waste Goal and Objections for Dekalb County. This Educational Program is to educate the citizens of Solid Waste Cost, the necessity to reduce volume of Waste Generated, the Value of Recycling, and the Environmental Benefits of a good Solid Waste Program. A Member of the Dekalb County Board of Education should serve on this committee.*

## **SUMMARY OF REGIONAL NEEDS**

**The needs for the Dekalb County Region are defined as follows:**

- 1. Adopt the Ten-Year Solid Waste Plan to serve as a management tool for Dekalb County. The Plan should be reevaluated and revised on a regular basis.**
- 2. The Solid Waste Collection System should be consolidated and improved. This can be accomplished by providing additional manned Convenience Centers at strategic locations throughout the Region.**
- 3. The volume of Solid Waste generated must be reduced. This can be accomplished by either Recovery, Recycling and/or possibly Composting.**
- 4. Construct a Class III-IV area to dispose of Yard Waste and Demolition Waste. This diversion of waste will extend the life of the Class I Landfill area.**
- 5. Begin looking for another Class I Landfill Site to be opened by the year 2000. This is the projected life expectancy of the existing Class I Landfill even with the above needs being implemented.**
- 6. In order to function according to this Plan the Region will need to implement a training program and add staffing to oversee the program.**
- 7. There is also proposed a Solid Waste Education Committee that will assist in the Education Program in Dekalb County.**
- 8. Establish a program to further address and handle Problem Waste, such as Waste Oil, Lead-Acid Batteries and especially Household Hazardous Waste. This program should be reevaluated on an annual basis.**

# PRESENT DEKALB COUNTY SOLID WASTE GENERATION BY COLLECTION LOCATION



**CHAPTER I**  
**DESCRIPTION OF THE MUNICIPAL SOLID WASTE REGION**

# CHAPTER I

## DESCRIPTION OF THE MUNICIPAL SOLID WASTE REGION

### A. GENERAL DESCRIPTION

*Located in the East Central portion of the state, Dekalb County was established in 1837. The county was named in honor of Baron Johann DeKalb. The county seat lies in Smithville. Dekalb County is bordered by Wilson County, Smith County, Putnam County, Cannon County, Warren County, and White County. Dekalb County is located 70 miles East of Nashville, and 25 miles Southwest of Cookeville.*

*The region is comprised of Dekalb County including the four incorporated communities of Smithville, Dowelltown, Liberty and Alexandria. The county has an area of approximately 304.6 square miles and lies within the Central Highlands Province within two (2) physiographic regions. Approximately 50% of the Western portion of the county lies within the Central Basin. The remaining Eastern portion of the county extends into the Highland Rim Region.*

*A major physical feature of the county is Center Hill Lake on the Caney Fork River. The Center Hill Dam was constructed in 1948 to control flooding of communities along the Caney Fork River, Dekalb County and several down stream communities. Today the lake provides excellent opportunities in tourism and recreational development.*

*The Highland Rim portion of the county is more suitable for modern farming practices unlike the central portion which has more severe slopes. Consequently, most of the forested areas are located in the central portions that have steeper slopes and are not suitable for mechanical farming.*

*The major transportation routes include U.S. Highway 70 that extends through the county in generally an East to West direction and State Highway 56 that extends in a North-South direction through Dekalb County. These roadways essentially are the major transportation routes in Dekalb County and provide excellent transportation for all of the incorporated communities. (Refer to Regional Base Map, pg Ch.1-2)*

### B. RATIONALE FOR REGIONAL SETTING

*Dekalb County has been operating an excellent Solid Waste Collection and Disposal System since the early 1970's, being one of the first counties in the Upper Cumberland to establish a "Green Box" collection system and an approved landfill for disposal.*

*Today Dekalb County operates its third landfill which meets all current rules and regulations. The current landfill has a projected life through 2000 and can meet subtitle D regulations to be in effect in October 1996.*

*Dekalb County does not have an economical alternative for solid waste disposal. Because of the transportation and political restrictions, the neighboring counties are limited by either a lack of landfill capacity or an excessive distance for Dekalb County to haul their waste. The governing bodies for neighboring landfills are in the process of having to redesign and upgrade their operations to meet current rules and regulations for disposal. Neighboring landfills are not of the current standard of Dekalb County's new facility.*