

FINAL DRAFT  
JUNE 28, 1994

MUNICIPAL SOLID WASTE  
REGIONAL PLAN  
FOR

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FAYETTE COUNTY  
SOLID WASTE PLANNING REGION

PREPARED BY:

GRACE AND ASSOCIATES, INC.  
2969 ELMORE PARK ROAD  
BARTLETT, TENNESSEE 38134

1994

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PART I

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EXECUTIVE SUMMARY

## EXECUTIVE SUMMARY

### General Information

The Municipal Solid Waste Regional Plan for the Fayette County Solid Waste Planning Region was prepared in accordance with the State of Tennessee, Solid Waste Management Act of 1991. State guidelines for preparation of regional plans were used to insure uniformity and compliance with State requirements.

~~The Region, as it is referred to in this Plan, was formed as a single county region due to a number of considerations such as solitary control over solid waste planning, geographic location, transportation routes, landfill availability, solid waste volumes, and various other aspects of political and economic concern. A Solid Waste Planning Region Board representing both the County and municipal governments with solid waste collection services was formed to coordinate the planning efforts. The engineering consulting firm of Grace and Associates, Inc. of Bartlett, Tennessee was contracted to prepare the Plan under the guidance of the Regional Board.~~

### Regional Needs and Goals

The existing solid waste management services in the Region will be upgraded to meet the requirements of the State. Of equal or greater importance will be the consideration to provide needed and reasonable solid waste services to all residents in the Region. The Regional goals are as follows:

- \* To provide solid waste collection services to all residents, businesses, industries and institutions which presently do not have adequate collection service,

- \* To ensure that the Region has long term access to a Class I landfill for final disposal of solid waste at a reasonable cost,

- \* To ensure that the Region has the ability to transport solid waste to a Class I landfill in an economical manner,

- \* To attempt to reduce the amount of Regional solid waste disposed of in Class I landfills by 25% prior to 1996,

- \* To properly manage problem waste materials such as waste tires, waste oil, waste batteries, and household hazardous waste,

- \* To educate and inform the general public, businesses, industries and institutions about the Plan and about pertinent solid waste issues. Special emphasis will be placed on solid waste reduction and recycling.

## Key Elements of the Regional Plan

Collection - A formal bid for Regional door-to-door collection of household solid waste will be taken prior to the summer of 1995. The collection bid will include all residents which are presently unserved and also any businesses, industries or municipalities which choose to be included in the bid.

Transfer and Transport - The County plans to construct a Regional super-convenience center with transfer capabilities. This ~~station could facilitate the transfer of solid wastes from smaller collection trucks to larger transport trucks for hauling to a Class I landfill for disposal.~~

Class I Disposal - The County will cease to operate a Class I landfill on or before October of 1996. Prior to that date, a formal bid will be taken for a Regional Class I disposal contract. At this time there is a large capacity of Class I landfill disposal space in the West Tennessee area. There is also ample competition in the disposal industry to protect against rapidly escalating costs. The County plans to maintain its Class I landfill permit for unused acreage in the event that a County landfill facility becomes more economical in the future.

Class III/IV Disposal - The County plans to permit and operate a Regional Class III/IV landfill for the disposal of brush, land clearing waste, construction/demolition waste, etc. Materials taken to a Class III/IV landfill will be credited toward the 25% reduction goal.

Problem Waste Management - The County will construct a Regional super-convenience center which will include a problem waste collection area. Problem wastes include waste oil and waste automotive batteries. A waste tire collection facility already exists in the County.

Recycling and Waste reduction - The County will construct a Regional recycling center in conjunction with the super-convenience center. In addition, the Regional door-to-door solid waste collection system will offer residential recycling opportunities. Business and industrial waste reduction and recycling will be strongly encouraged and an organized effort to obtain waste reduction information from businesses and industries will be initiated.

Public Information and Education - The Solid Waste Planning Region Board along with an Educational Advisory Committee will begin to formulate programs for bringing solid waste information and education to various sectors of the Regional community. A strong emphasis will be placed on bringing solid waste information and education to school children, civic organizations and clubs, scouts, churches, etc. in an effort to reach as much of the community as possible.

## Implementation Schedule and Funding

See Chapter XI.

## Responsibilities

The ultimate responsibility for implementation of the Plan lies with the County government. The Regional Board is responsible for Plan development, updates, modifications, and documentation. Each municipality which continues to operate a solid waste ~~collection system will be responsible for documenting all of its~~ solid waste management practices to the Regional Board. In addition, each of these municipalities will be responsible for developing and documenting efforts and achievements toward the 25% reduction goal, public information and education, and problem waste management.

PART II

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REGIONAL MUNICIPAL  
SOLID WASTE MANAGEMENT PLAN

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CHAPTER I  
DESCRIPTION OF THE  
MUNICIPAL SOLID WASTE REGION

A. GENERAL DESCRIPTION

The Fayette County Solid Waste Planning Region, herein referred to as the Region, is a rectangular shaped area of 705 square miles in southwest Tennessee. The Region is bounded on the west by Shelby County, on the north by Tipton and Haywood Counties, on the east by Hardeman County and on the south by the State of Mississippi. See Map I-1.

The Region is characterized by a rolling terrain forming drainage basins for three major West Tennessee drainage systems. The Wolf and Loosahatchie River systems flow from east to west along the southern and north-central areas of the Region respectively. The extreme northern portion of the Region is drained by the Hatchie River system. An adequate transportation system is present and comprised of approximately 16 miles of interstate, 107 miles of primary highway, 80 miles of state highway and over 685 miles of county roads. Railroad service is also available in the southern and extreme northwest areas of the Region. There is one commercial/general aviation airport located outside the City of Somerville.

Agricultural activity remains a very significant part of the Region's economy while the industrial base continues to grow at a slow, steady pace. There are nine incorporated towns in the Region: Braden, Gallaway, LaGrange, Moscow, Oakland, Piperton, Rossville, Somerville and Williston.

B. RATIONALE FOR REGION FORMATION

The Fayette County Solid Waste Planning Region is comprised of one county - Fayette. There were other possible alternatives and/or opportunities for joining multi-county planning regions. Several different regional associations were discussed involving Hardeman, Haywood, Shelby and Tipton Counties respectively. Fayette County officials outlined the following advantages and disadvantages for multi-county regionalization and decided that the disadvantages were great enough to remain as a single county region.

ADVANTAGES

1. Multi-county regions are strongly encouraged by the Tennessee Solid Waste Management Act of 1991.
2. Large, regional landfills will be cheaper to operate, and planning for these regional landfills should be more efficient with a multi-county regional approach.

3. Planning for compliance with the recycling and educational requirements of the Waste Management Act will probably be better with help from other counties (particularly Shelby County).

4. Cash incentives are given to counties in multi-county regions, e.g., each county in a 4-county region receives about \$10,000 extra state money for planning purposes than would be received if the county were a single county region.

5. Multi-county regionalization is a first step towards multi-county landfills, which should result in lower operating costs for everyone, and should result in fewer environmental problems. If environmental standards are too costly for single county landfills, those single county landfills may tend to cheat on regulations, saving money and possibly endangering long term public safety and welfare.

#### DISADVANTAGES

1. Individual counties may lose control over their own destiny.

2. Multi-county regionalization is a first step toward multi-county landfills, which would present many problems for the receiving county.

3. Regions can be changed in the future; however, considering current state sentiment, it would probably be easier for a single county region to join an existing region, than for a member of a multi-county region to split and form a single county region.

4. Single county regions evidently do not limit waste disposal options for themselves, since there can be multi-county landfills without having multi-county regions. Additionally, several private landfills are available, eliminating the necessity for multi-county public landfills.

5. In a multi-county region, a management authority would probably dictate waste management. This authority would consist of a board consisting of one member for each county, and one member for each municipality within each county. Under this system, the municipalities could override the wishes of the counties. However, in a single county region, there may not be a need to establish a management authority; therefore, the county could retain control of waste policies.

6. Fayette County seems to be an "odd-man-out". Shelby County does not want to join with Fayette County due to the rural versus urban issues involved. Haywood, Lauderdale and Tipton Counties will form a region possibly resulting in a maximum number acceptable on the planning board for a region. Hardeman County is forming a single county region. These scenarios leave Fayette County on the outside and encourages the single county approach.

C. INSTITUTIONAL STRUCTURE

As required by State regulations, the Fayette County Solid Waste Planning Region Board, herein referred to as the Board, was established. The Board is ultimately responsible for development of this Municipal Solid Waste Regional Plan, referred to as the Plan, and for coordination of all planning efforts with various local government agencies, businesses, industries and the community. The Board members and their representation are listed below along with their respective term limits.

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<u>County Representatives:</u>	<u>Term</u>
Vip D. Lewis	2 Years
Myles Wilson	4 Years
Jim Goodman	6 Years

<u>Municipal Representatives:</u>	
Lee S. (Sissy) Sterling	4 Years
Maynard Stiles	2 Years
Michael C. French	6 Years

<u>At-Large Appointment:</u>	
Richard Rucker	2 Years

The following board members were nominated and elected as officers.

Board Officers:  
Chairperson - Richard Rucker  
Vice-Chairperson - Lee S. (Sissy) Sterling  
Secretary - Jim Goodman

The Board decided to form Advisory Committees to help establish and direct the Region's solid waste planning in specific areas. The committees and their members are listed below.

Engineering Consultant Selection Committee:  
Sissy Sterling  
Mike French  
Jim Goodman  
Erwin Kee

A Public Information and Education Advisory Committee will be formed immediately after the Plan is submitted to the State.

D. DEMOGRAPHIC CHARACTERISTICS

As a whole the Region has a relatively low population density. As mentioned previously, there are nine small incorporated towns in the Region. Somerville is the largest town and the County seat of Fayette County with a 1990 population of just over 2,000. Over 80 percent of the Region's total population resides in unincorporated areas making it a predominately rural region. The Region's 1993 population projection and population density is shown in Table I-1.

TABLE I-1

POPULATION AND DENSITY  
1993

<u>Area*</u> <u>(Sq. Miles)</u>	<u>1993*</u> <u>Population</u>	<u>Avg. Density</u> <u>Population/Sq.Mi.</u>
705	25,503	36.17

\*District Needs Assessment; Fayette County

Six of the nine incorporated towns in the Region have a solid waste collection system in place for residents. These are the only towns referenced in this plan with specific data from the District Needs Assessment for Fayette County. Table I-2 provides a breakdown of the Regional population by urban, municipal and rural areas. The municipal population total does not include Braden, Piperton and Williston.

TABLE I-2

DISTRIBUTION OF THE TOTAL POPULATION  
BY URBAN, MUNICIPAL AND RURAL AREAS, 1990\*

<u>Urban</u> <u>Population</u>	<u>%</u>	<u>Municipal</u> <u>Population</u>	<u>%</u>	<u>Rural</u> <u>Population</u>	<u>%</u>
0	0	4,081	16.0	21,478	84.0

\*District Needs Assessment; Fayette County

The distribution of the population by sex and age is typical of the pattern in rural counties. Females, by virtue of their longer life span, predominate the over 65 category by approximately 57 to 43 percent. Males hold a slightly higher percentage in the 17 and under ages. Between the ages of 18 to 64 females outnumber males by approximately 52 to 48 percent. This distribution in the working age population may reflect the pattern of young men leaving the rural areas for better job opportunities in urban areas such as Shelby County.

Table I-3 gives the population distribution for the Region.

TABLE I-3

DISTRIBUTION OF THE TOTAL REGIONAL POPULATION  
BY SEX AND AGE, 1990\*

<u>Age</u>	<u>Total</u>	<u>Male</u>	<u>%</u>	<u>Female</u>	<u>%</u>
0-4	1,996	994	49.8	1,002	50.2
5-17	5,645	3,010	53.3	2,635	46.7
18-44	9,743	4,680	48.0	5,063	52.0
45-64	4,855	2,346	48.3	2,509	51.7
65 +	<u>3,320</u>	<u>1,419</u>	42.7	<u>1,901</u>	57.3
Total	25,559	12,449	48.7	13,110	51.3

\*District Needs Assessment; Fayette County

The educational achievement level of adults (over 25 years) in the Region indicates just under half have a high school degree, with approximately 16 percent holding degrees beyond the high school level. Achievement levels also indicate that over one third of the adult population have less than a 9th grade education. Campaigns to educate the public and encourage recycling must be developed to address these widely varying target groups.

TABLE I-4

EDUCATIONAL ACHIEVEMENT  
OF ADULTS OVER 25 YEARS OLD

	<u>Number</u>	<u>%</u>
Less than 12th Grade	3,549	34.83
High School Degree	5,000	49.07
Associate Degree	397	3.89
College Degree	805	7.90
Post Graduate/Professional (>4)	<u>439</u>	4.31
Regional Total	10,190	

The majority of all housing in the Region is classified as single family - detached or mobile home/trailer. These housing types account for over 92 percent of the total occupied housing. This type of housing in a mostly rural region will tend to increase the cost of solid waste collection. The distribution by housing type, occupancy and ownership is shown in Table I-5.

TABLE I-5

~~HOUSING TYPE AND OCCUPANCY CHARACTERISTICS\*~~

	<u>Total Units</u>	<u>Occupied</u>	<u>Owner</u>	<u>Rented</u>
<b>Single Family</b>				
1, Detached	6,599	6,164	4,881	1,283
1, Attached	73	69	39	30
<b>Multi-Family</b>				
2	118	106	14	92
3-4	133	121	7	114
5-9	101	94	10	84
10-19	79	77	2	75
20-49	70	68	0	68
50 or more	0	0	0	0
Mobile Home/ Trailer	1,803	1,623	1,298	325
Other	<u>139</u>	<u>131</u>	<u>76</u>	<u>55</u>
Total	9,115	8,453	6,327	2,126

\*District Needs Assessment; Fayette County.  
The institutional population of the Region is 449

Population projections for the ten year planning period must be used to scale the solid waste plan developed for the Region. The University of Tennessee and Division of Information Services, TDH, have developed the projections used for this Plan. Table I-6 presents the Regional population projection for the planning period.

TABLE I-6  
 REGION POPULATION PROJECTIONS  
 1994-2003\*

<u>Year</u>	<u>Population Projection</u>
1994	25,484
1995	25,466
1996	25,447
1997	25,428
1998	25,410
1999	25,391
2000	25,373
2001	25,312
2002	25,252
2003	25,191

\*UT Department of Sociology and the Division of Information Resources, TDH. February 6, 1992 Revision.

The growth in the eastern portion of Shelby County combined with the improved access provided by the widening of U.S. Highway 64 and the completion of Nonconnah Parkway in southeastern Shelby County will invalidate these declining population projections. In addition, Fayette County was added to the Memphis Metropolitan Statistical Area (MSA) in January, 1993. The additional population provided by Fayette County put the MSA over the one million population total. This milestone should emphasize the area as a regional center and possibly attract more industries and more people to the MSA and to Fayette County.

## E. ECONOMIC ACTIVITY

With an average per capita annual income of under \$10,000 and almost one quarter of the total population below the established poverty line, it is apparent that the Region has very substantial economic problems. General economic data for the Region is provided in Table I-7.

TABLE I-7

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ECONOMIC INFORMATION, 1990\*

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Population	25,559
MSA County (yes/no)	yes
Total Employment	7,923**
Total Earnings	68,557,000
Per Capita Income	9,627
% Population Below Poverty Line	24

\*District Needs Assessment; Fayette County

\*\*Does Not Include Agricultural Employment

Employment in the Region is dominated by manufacturing positions, government jobs, and agricultural activities. The type of employment in the Region helps to indicate the magnitude of per capita solid waste generation. The distribution of employment for the Region's population is provided in Tables I-8 and I-9 respectively.

TABLE I-8

% OF TOTAL EMPLOYMENT  
(NON-AGRICULTURAL)\*

<u>Sector</u>	<u>Employment</u>	<u>%</u>
Manufacturing	2,337	35.7
Construction	431	6.6
Trade	920	14.0
Finance	218	3.3
Service	953	14.6
Government	1,556	23.8
Transportation/ Public Utilities	<u>134</u>	2.0
Total	6,549	

\*District Needs Assessment; Fayette County

TABLE I-9

AGRICULTURAL EMPLOYMENT\*

<u>Total County Employment</u>	<u>Agricultural Employment</u>	<u>%</u>
7,923	1,374	17.3

\*District Needs Assessment; Fayette County

The commercial and industrial solid waste generators normally account for nearly two thirds of the total waste generation in a particular area. The Fayette County Region has a sizeable number of commercial businesses and industries considering its rural nature. Table I-10 gives the total number of commercial and industrial solid waste generators with 10 or more employees.

TABLE I-10

MAJOR COMMERCIAL & INDUSTRIAL  
~~NON-HAZARDOUS SOLID WASTE GENERATORS~~

<u>Screening Criteria</u>	<u>Number of* Generators</u>	<u>Estimated Waste Quantity</u>
All generators with 10 or more employees	28	See Chapter II

Large institutions and health care facilities can also generate a substantial amount of solid waste. The Region does not have any large institutions as indicated in Table I-11, however it does have three sizeable health care facilities as indicated in Table I-12. School waste generation is discussed further in Chapter II.

TABLE I-11

INSTITUTIONS  
 (HOUSING > 100 PERSONS)\*

NONE

\*District Needs Assessment; Fayette County

TABLE I-12

HEALTH CARE FACILITIES  
 (MORE THEN 30 BEDS)\*

<u>No. of Facilities</u>	<u>No. of Beds</u>	<u>Infectious Waste Management</u>	<u>Estimated Waste Quantity</u>
3	252	Incineration**	Not Available

\*District Needs Assessment; Fayette County

\*\*Outside of Region, Exact location not available

The Region currently makes use of the typical sources of local revenue to fund or subsidize solid waste systems. Tables I-13 and I-14 provide a general overview of the sources of local revenue with some specific solid waste system funding sources included.

TABLE I-13

SOURCES OF LOCAL REVENUE\*

<u>Source</u>	<u>Yes/No</u>
Property Tax	Yes
Local Sales Tax	Yes
Waste Collection Fee	Yes <sup>1</sup>
User Fee/Tipping Fee	Yes <sup>2</sup>
Other	No

\*District Needs Assessment; Fayette County

<sup>1</sup>Cities of LaGrange, Moscow, Oakland, Rossville and Somerville only.

<sup>2</sup>County only.

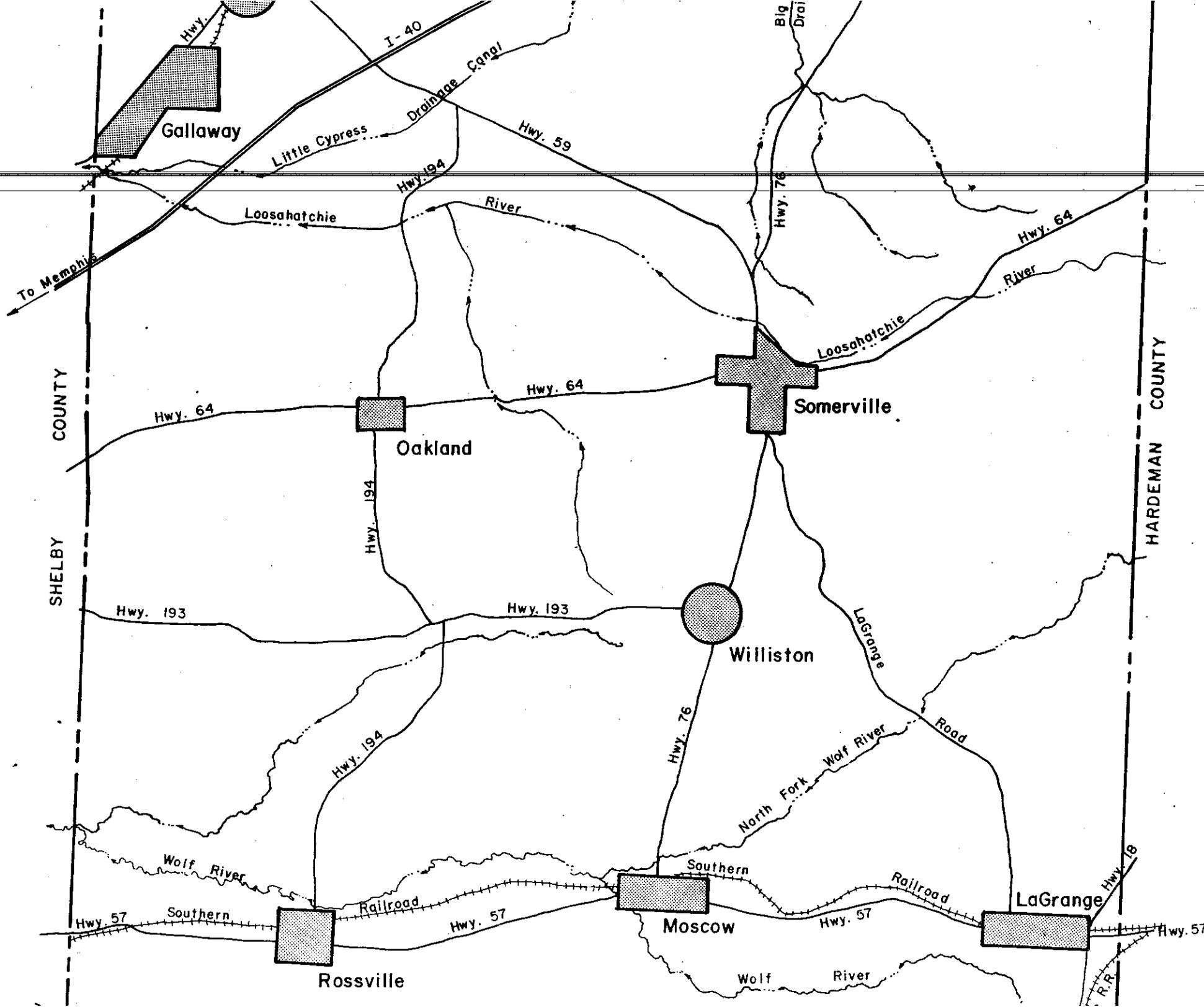
TABLE I-14

COUNTY REVENUE SUMMARY\*

<u>Revenue Source</u>	<u>1991 Total</u>
Appraised Property Value	\$150,214,627
Property Tax Revenue	4,676,861
Sales Subject to Sales Tax	65,178,655
Sales Tax Revenue	134,986
Wheel Tax Revenue	505,175

\*District Needs Assessment; Fayette County

# Fayette County Solid Waste Planning Region



CHAPTER II  
ANALYSIS OF THE CURRENT  
SOLID WASTE MANAGEMENT SYSTEM  
FOR THE REGION

A. WASTE STREAM CHARACTERIZATION

The waste stream for the Region can be described by a number of factors including quantity, source, disposal method, generation rate, waste composition, etc. For this Plan it is ~~important to discuss the waste generation rate per capita for the Region as a whole. This rate can be an indication of the commercial and industrial strength of the Region and will be used in determining the waste reduction goal mandated by the State.~~ From the District Needs Assessments, Table II-1 provides information on the total waste generation and the per capita rate for the Region.

TABLE II-1

ESTIMATED QUANTITY OF SOLID WASTE  
RECEIVED FOR DISPOSAL/INCINERATION, 1991\*

<u>Tons of Waste</u>	<u>1991 Population</u>	<u>Tons Per Capita</u>
14,040	25,540	0.55

\*District Needs Assessment; Fayette County

The Regional solid waste generation rate of 0.55 tons per capita per year is somewhat low despite the rural demographics of Fayette County. This low estimate is probably the result of not having any large scale collection services or green-boxes in the unincorporated areas.

Solid wastes originate from five basic sources - residences, institutions, schools, businesses, and industries. Along with these sources, two smaller categories - special and other - include wastes such as sludges, hospital waste, tires, demolition debris and construction materials. The quantities and percentages of solid wastes from these sources are described in Table II-2.

TABLE II-2

ORIGIN OF SOLID WASTES, 1991\*  
(TONS PER YEAR)

<u>Source</u>	<u>Est. Tons Per Year</u>	<u>%</u>
Residential	5,756	41.0
Institutional, School & Commercial	3,089	22.0
Non-Hazardous Industrial	4,493	32.0
Special	0	0.0
Other**	702	5.0

\*District Needs Assessment; Fayette County

\*\*Demolition Waste

Table II-2 indicates that approximately 32 percent of the total solid waste stream for the Region originates from major industries. Considering this large volume and the relatively small number of industries, it is apparent that the average industry generates a large volume of solid waste. Therefore, a large potential exists for waste reduction and recycling in the industrial sector. With this in mind, an industrial non-hazardous solid waste survey was conducted in the Region to determine the types and volumes of waste being generated by major industry. Although survey results and industrial data are still being received, Table II-2A provides survey data of waste generation received as of March, 1994. A more comprehensive data base of industrial non-hazardous solid waste generation will be developed during the first year of the Planning period.

The District Needs Assessment provided preliminary information on the types of solid wastes which could be easily diverted from final disposal in Class I landfills. See Table II-3. These wastes were mostly categorized as Special and Other in Table II-2. In addition, the Needs Assessment calculated the composition of various components of the Regional waste stream based on national averages. This waste stream characterization for the Region is provided in Table II-4.

TABLE II-2A  
INDUSTRIAL SOLID WASTE SURVEY  
DATA ACCUMULATED AS OF MARCH, 1994  
(TONS/YEAR)

Total Number of Industries With 10 or More Employees - 28  
Approximate Total Number of Employees - 2,794

Number of Industries Responding - 9  
Number of Employees - 895

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
<u>Total</u>	895	10	37	100	12	385	33	38	200
<u>Waste Generation</u>									
Paper(19.3)	703	9	1	60	1	427	3	58	7
Cardboard(10.2)	370	32	3	90	11	107	11		30
Glass(3.0)	109	1	1			107			
Aluminum(0.0)	1	1							
Other Metals(6.3)	229		13		2	214			
Plastics(27.1)	987		21	450		427	3		
Resins(5.7)	207		104						
Rubber & Leather(0.0)									
Textiles(2.8)	101							10	91
Pallets(10.5)	382					321	1	3	23
Other Wood(0.0)									
Yard Waste(0.0)								1	
Food Waste(8.9)	322					321			
Dirt(0.0)									
Other(6.2)	<u>225</u>					<u>214</u>			
<u>Total(100.0)</u>	3,636	43	143	600	14	2,138	18	72	151

\*Industry Names are Not Identified

TABLE II-3

WASTE TYPES ACCEPTED FOR CLASS I DISPOSAL  
WHICH COULD BE DIVERTED, 1991\*  
(TONS/YEAR)

<u>Yard Waste</u>	<u>Construction/ Demolition</u>	<u>Tires</u>	<u>White Goods</u>
1,123	702	30	0

TABLE II-4

## REGIONAL WASTE CHARACTERIZATION\*

<u>Waste Category</u>	<u>Percentage (National Average)</u>	<u>Calculated Tons</u>
Paper & Paperboard	40.0	5,616.00
Glass	7.0	982.80
Ferrous Metals	6.5	912.60
Aluminum	1.4	196.56
Other Non-Ferrous Metals	0.6	84.24
Plastics	8.0	1,123.20
Rubber & Leather	2.5	351.00
Textiles	2.1	294.84
Wood	3.6	505.44
Food Waste	7.4	1,038.96
Yard Waste	17.6	2,471.04
Misc. Inorganic Waste	1.5	210.60
Other	<u>1.8</u>	<u>252.72</u>
Total	100.0	14,040.00

\*District Needs Assessment; Fayette County

Although the estimated tonnages of different waste types presented in Table II-4 were compiled from national averages, they are considered accurate enough for the purposes of this Plan. A two day waste characterization program was conducted in the County to determine how closely the County's waste stream reflected national averages. The results of this separation and weighing program included in Appendix F indicate that the waste stream composition percentages approximated published national ranges.

Another important factor in the waste stream analysis is determining the portion of solid waste which is considered unmanaged. This component includes wastes which are disposed of illegally in open dumps, illegally incinerated, placed in green-boxes outside the Region, or otherwise not accounted for in the established collection and disposal systems of the Region. In an effort to quantify these wastes, the District Needs Assessments computed the potential waste generation for the County based on a per capita generation rate of 1.095 tons per capita per year. These figures are presented in Table II-5. For the purposes of this Plan, no unmanaged solid wastes will be considered. When the Region develops a comprehensive county-wide collection service, it is assumed that the unmanaged solid waste stream will be insignificant.

TABLE II-5  
UNMANAGED WASTES, 1991\*  
(TONS/YEAR)

<u>Potential Waste Generation</u>	<u>Estimated Waste Disposal</u>	<u>Unmanaged Waste</u>	<u>Percent of Potential</u>
27,966**	14,040	13,926	49.8

\*District Needs Assessment; Fayette County

\*\*Estimated based on 1.095 Tons/Capita/Year generation rate.

## B. WASTE COLLECTION AND TRANSPORTATION SYSTEMS

The District Needs Assessment for the County provided an overview of the solid waste collection and transportation systems presently in operation. Municipal waste management planning begins with developing a comprehensive and efficient collection system. The existing collection systems are strong in some areas and require some improvement in other areas in order to meet the minimum level of service required by the State. Table II-6 describes the level of household waste collection service now available in the Region. Map II-1 outlines the various service areas and level of service in each area.

TABLE II-6

## HOUSEHOLD SOLID WASTE COLLECTION SERVICE\*

<u>No. of Households</u>	<u>Municipal Pickups</u>	<u>Green-Box Service</u>	<u>Contract Pickups</u>	<u>No Service</u>
8,453	1,363	0	2,920	4,170

\*District Needs Assessment; Fayette County

Existing collection systems across the Region vary in their collection frequency and equipment. Solid waste collection vehicles ranging from less than 5 cubic yards of capacity to 31-40 cubic yard of capacity are used by different municipalities and private contractors. Collection frequencies vary from once per week to three times per week for residences and from once per week to daily for businesses. There are no solid waste transfer stations in the Region at this time, therefore all waste collected by these vehicles is taken directly to a landfill. The average haul distance from a collection area ranges from 0.5 miles in Somerville to approximately 22 miles from Rossville. These average haul distances are considered short by national standards for transporting solid waste, however they do reflect a significant cost of the overall waste management system. The collection services available in the various municipalities and by private collection contractors are summarized in Table II-7. Waste collection and transportation system options for the planning period are evaluated in Chapter V.

TABLE II-7

## MUNICIPAL/PRIVATE COLLECTION SERVICES

<u>City</u>	<u>Household Pickups</u>	<u>Collection Frequency</u>	<u>Businesses</u>	<u>Collection Frequency</u>
LaGrange	70	1/wk	4	1/wk
Moscow	166	1/wk	31	1/wk
Oakland	121	1/wk	29	3/wk
Rossville	112	1/wk	18	2/wk
Somerville	894	2/wk Yd Wst 1/wk	230	5/wk
Private Services	2,920	1/wk	137	2-3/wk

## C. SOURCE REDUCTION AND RECYCLING SYSTEMS

In order for the State municipal solid waste reduction goal of 25 percent to be achieved, the Region will need to quantify its existing waste reduction efforts and also establish additional programs. At this time there are very few waste reduction efforts in the Region. The county does have a highway litter control program which uses prison labor to clean up waste along road rights-of-way. Some of this material is recycled. The District Needs Assessment did not mention any other public waste reduction or recycling efforts.

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The majority of all waste reduction programs in the Region are being sponsored by businesses, industries or collection service providers. Several of the larger industrial solid waste generators have ongoing programs in-house to reduce their waste stream and thus reduce their waste management costs. Materials which are commonly diverted from the waste stream include wood pallets, cardboard, paper, aluminum, plastics, and scrap metals. As a result of the industrial solid waste survey mentioned previously, the University of Tennessee's Center for Industrial Services has been contacted about establishing an Industrial Solid Waste Focus Group in the Region. The goal of the focus group will be to look for additional ways to reduce the overall waste stream going to the landfill and also to realize an economic benefit for the industries.

The Region also has a limited number of small businesses which will reclaim specific waste materials such as used oil, automobile batteries, various automobile parts, aluminum and various other scrap metals. Some of these businesses are strictly operating as recycling centers, and others provide outlets for recyclable materials as an extra service for their customers. The Regional approach to all source reduction and recycling systems is evaluated in Chapters IV and VI respectively.

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

According to the District Needs Assessment, there are no existing municipal solid waste processing or composting facilities in the Region. The City of Somerville does have an alternative use for its leaves, and this program is discussed in Chapter VII. Incineration of infectious waste from the three major health care facilities is provided at unspecified locations outside the Region. Chapter VII discusses composting, processing, waste-to-energy and incineration alternatives.

The Plan guidance document requested tabulation of composting and incineration facilities as Tables II-6 and II-7, however since these facilities were not identified in the Needs Assessment, these tables were omitted and the table numbers were used previously.

E. DISPOSAL FACILITIES - LANDFILLS AND BALEFILLS

The county owns and operates a Class I landfill at this time. Although additional land is available and permitted for use, the County will most likely cease operating its Class I facility on or before October of 1996 when all of the latest State and Federal regulations will be required for operation, closure and post-closure. Information on the existing landfill and its remaining capacity is presented in Table II-8. The facility is located on the Regional Base Map, Map II-2. The ~~anticipated closure date for the facility is provided in Table II-9.~~

TABLE II-8

EXISTING CLASS I SOLID WASTE LANDFILLS\*

<u>Landfill Name</u>	<u>Permitted Area Being Filled</u>	<u>1991 Disposal Rate, (T/D)</u>	<u>Remaining Capacity</u>
Fayette County Landfill	5	45	2 yrs

\*District Needs Assessment; Fayette County

TABLE II-9

ANTICIPATED CLOSURE DATE OF EXISTING CLASS I LANDFILLS\*

<u>Landfill Name</u>	<u>Anticipated Closure Date</u>
Fayette County Landfill	October, 1996

In addition to the County's recently permitted Class I expansion area, the only other proposed landfill development in the Region at this time is known as the Profill site in Galloway (See Table II-10). The project is still in the early development stages and will not be a part of the Plan discussion.

TABLE II-10

PLANNED EXPANSIONS/NEW FACILITIES (CLASS I)  
WITH GREATER THAN 10 YEARS OPERATING LIFE

<u>Facility Name</u>	<u>New or Expansion</u>	<u>Capacity (Acres)</u>	<u>Operating Date</u>	<u>Disposal Rate (T/D)</u>
Fayette County Landfill	Exp.	72	*	45
Profill	New	200**	NA	NA

\*Permitted as a Class I Landfill but No Operating Date Set

\*\*Information from TDEC, Memphis Field Office

Based on the capacity of the county owned Class I landfill expansion area and the existing Class I area, the capacity for Class I solid waste disposal in the Region is presented in Table II-11.

TABLE II-11  
EXISTING AND PERMITTED CLASS I  
REGIONAL SOLID WASTE CAPACITY, TONS

<u>Year</u>	<u>Existing Capacity</u>	<u>Permitted Capacity</u>	<u>Total</u>
1993	54,000	1,328,000	1,382,000
1994	39,600	1,328,000	1,367,600
1995	25,200	1,328,000	1,353,200
1996	10,800	1,328,000	1,338,800
1997	0	1,328,000	1,328,000
1998	0	1,328,000	1,328,000
1999	0	1,328,000	1,328,000
2000	0	1,328,000	1,328,000
2001	0	1,328,000	1,328,000
2002	0	1,328,000	1,328,000
2003	0	1,328,000	1,328,000

#### F. COSTS OF THE CURRENT SYSTEM

Anticipated costs for the 1993 fiscal year for solid waste management services in the County are \$380,594.00. This figure is not broken down into various components of the solid waste management system. The County has received a variance from operating under the State's uniform accounting system for an enterprise fund because of plans to cease operating the County Class I landfill on or before October, 1996.

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#### ~~G. REVENUES FOR THE CURRENT SYSTEM~~

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The anticipated revenues for the 1993 fiscal year are as follows:

<u>SOURCE</u>	<u>AMOUNT</u>
Taxes	\$353,950.00
Tipping Fees	235,000.00
State Grants, Revenue Sharing, Etc.	25,000.00
Sale of Recyclables	100.00
TOTAL	<u>\$614,050.00</u>

Based on anticipated revenues and anticipated costs for the 1993 fiscal year, a fund balance of \$233,456.00 exists. This balance is due to planned construction costs and contracted services being temporarily postponed to a later date.

#### H. PUBLIC INFORMATION AND EDUCATION PROGRAMS

According to the District Needs Assessment, there are no public information and education programs in the Region at this time other than a recycling education program in the three private schools. No details were available for these programs. It is obvious that development of information and education programs will be critical to the success of future solid waste management activities in the Region. Plans for public information and education programs are described in Chapter IX. A large component of these programs will involve public and private schools in the Region.

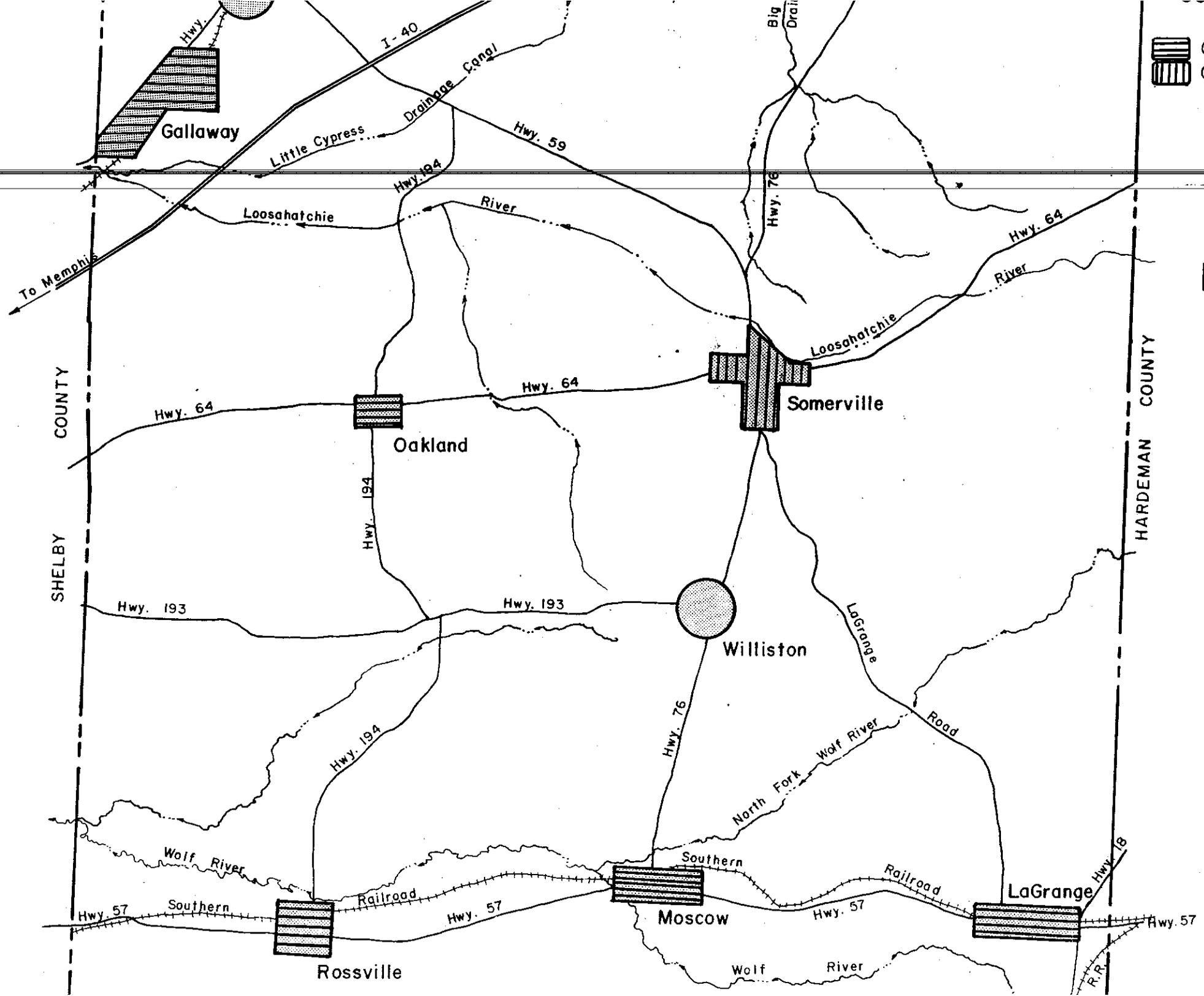
#### I. SYSTEM MAP - 1993

Map II-3 indicates all of the existing solid waste management systems in the Region.

SOLID WASTE COLLECTION  
**SERVICE AREAS**  
 COLLECTION FREQUENCY, 1\WEEK  
 COLLECTION FREQUENCY, 2\WEEK

# Fayette County

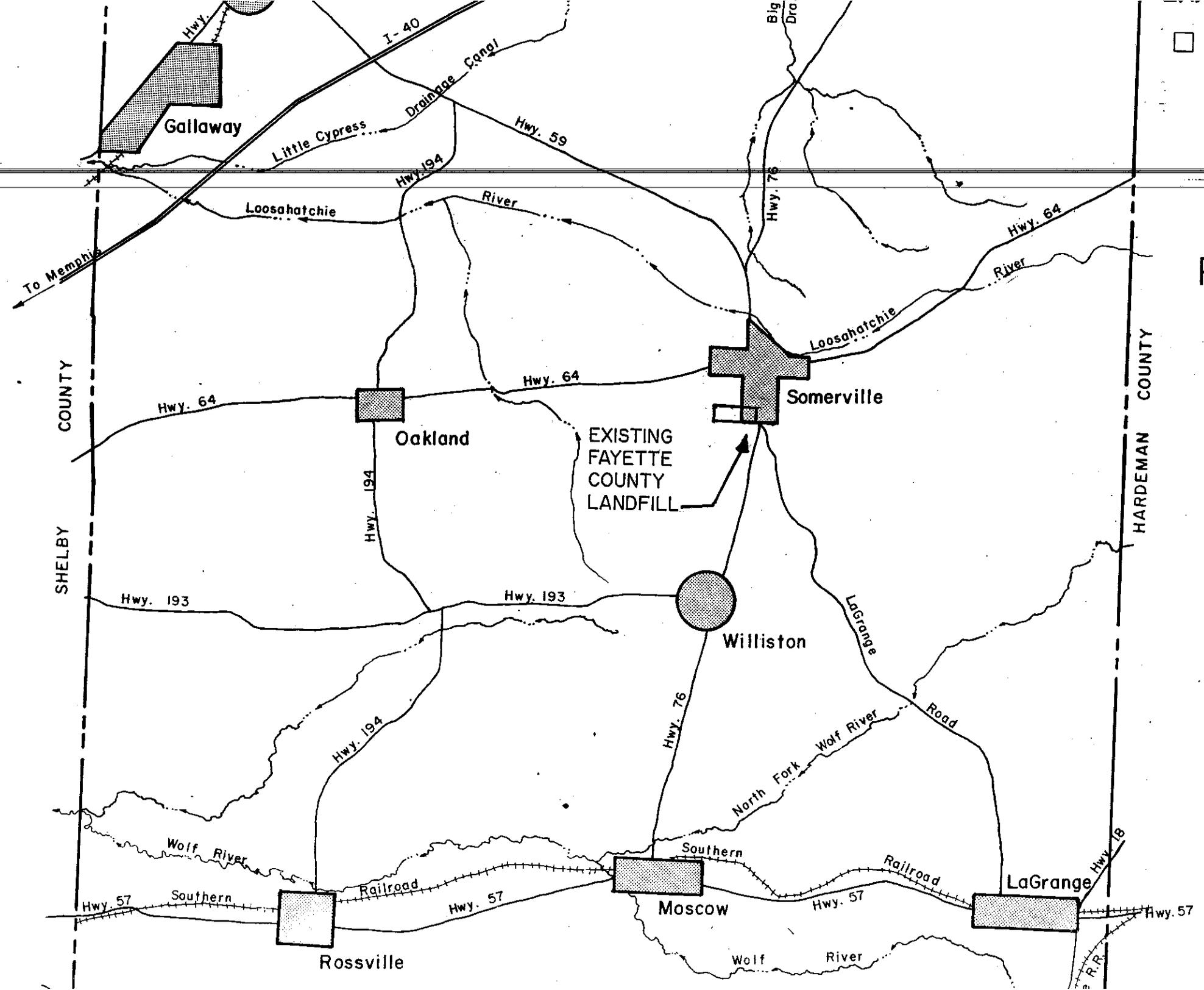
## Solid Waste Planning Region



□ APPROXIMATE LOCATION

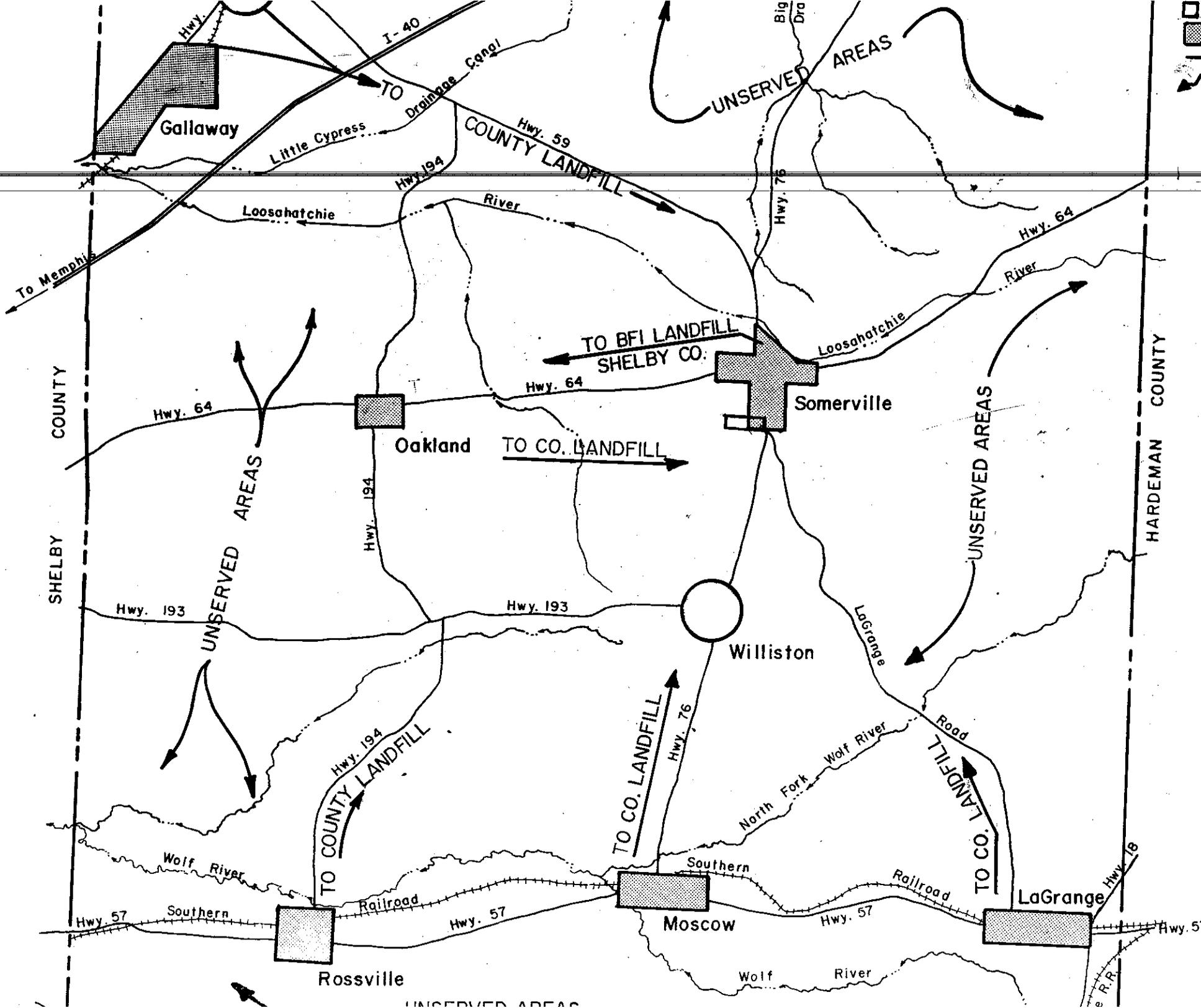
# Fayette County

## Solid Waste Planning Region



-  LANDFILL
-  DOOR-TO-DOOR COLLECTION
-  WASTE FLOW
-  UNSERVED AREA

# Fayette County Solid Waste Planning Region



CHAPTER III  
GROWTH TRENDS,  
WASTE PROJECTIONS AND  
PRELIMINARY SYSTEM STRUCTURE

A. GROWTH TRENDS AND WASTE PROJECTIONS

The District Needs Assessment completed for Fayette County includes a chapter on solid waste generation projections. These projections are made up to the year 1991. Base projections are calculated using population projections and an annual per capita solid waste generation rate in tons per person per year. These rates vary from region to region depending primarily on the commercial, industrial and institutional solid waste contribution. The base solid waste projections are then modified by an economic growth factor per year, an estimated waste reduction percentage, conditions related to regulatory changes or other specific county influences, and any solid waste imports to or exports from the Region. Ultimately a projection of the total quantity of solid waste requiring collection, transportation, processing or treatment and disposal is calculated for each year in the planning period. The tables that follow (Table III-1 through III-8) summarize these projections for the Region from the District Needs Assessment and extend the projections to the year 1993.

It should be emphasized that the data presented in Tables III-1 through III-8 will be modified during the planning period as more specific data is accumulated. These tables were developed based on State guidelines and information from the District Needs Assessment. Factors such as an anticipated, but as yet unknown, population growth in the Region will be reflected in Plan updates as needed.

TABLE III-1

ANNUAL PER CAPITA GENERATION RATES\*

Total Waste Disposed in FY 1993, Tons	Projected Population 1993	Annual Per Capita Generation Tons/Person/Year
14,020	25,503	0.550

\*District Needs Assessment: Fayette County

TABLE III-2

TOTAL WASTE GENERATION (TONS)  
 BASED ON POPULATION GROWTH  
 AND 1993 PER CAPITA RATES\*

<u>Year</u>	<u>Total</u>
1994	14,009
<del>1995</del>	<del>13,999</del>
1996	13,989
1997	13,978
1998	13,969
1999	13,958
2000	13,948
2001	13,915
2002	13,882
2003	<u>13,848</u>
Total	139,495

\*District Needs Assessment: Fayette County  
 (Data Projected to Year 2003)

NOTE: The above figures do not include unmanaged waste.

Table III-3 provides an estimated quantity of solid wastes that will be generated in the Region during the planning period without any waste reduction efforts. Both population changes and economic growth are factored into the analysis. Except for the wastes that are removed from the waste stream at the point of waste generation, these quantities reflect the total waste tonnage requiring collection and/or transportation systems.

TABLE III-3

TOTAL WASTE GENERATION (TONS)  
 ADJUSTED FOR POPULATION CHANGE  
 AND 3.2 % ANNUAL ECONOMIC GROWTH\*

<u>Year</u>	<u>Total</u>
1994	14,488
1995	14,493
1996	14,498
1997	14,504
1998	14,511
1999	14,518
2000	14,526
2001	14,511
2002	14,498
2003	<u>14,483</u>
Total	145,030

\*District Needs Assessment: Fayette County  
 (Data Projected to Year 2003)

NOTE: The above figures do not include unmanaged waste.

The Solid Waste Management Act of 1991 established a minimum solid waste reduction goal of 25% to be in place by December 31, 1995. The goal is to reduce the amount of solid waste currently being disposed of in Class I landfills across the state. Calculations of the waste reduction tonnage are to be based on the 1989 per capita solid waste generation rate as published in the 1990 University of Tennessee report entitled "Managing Our Waste: Solid Waste Planning in Tennessee". The tonnage of waste calculated by multiplying twenty-five percent (25%) of the 1989 per capita generation rate by the projected populations in 1995 through 2003 is to be diverted from the Class I landfill waste stream each year. These calculations are provided for the Region in Table III-4 along with an adjusted total waste quantity requiring disposal.

TABLE III-4

TOTAL WASTE GENERATION REQUIRING DISPOSAL (TONS)  
ADJUSTED FOR POPULATION CHANGE, ECONOMIC GROWTH  
AND WASTE REDUCTION\*

Year	Population	Reduction %	Reduction Tonnage	Table III-3	
				Generation Estimate	Disposal Tonnage
1994	25,484	5.0	693	14,488	13,795
1995	25,466	15.0	2,078	14,493	12,415
1996	25,447	25.0	3,461	14,498	11,037
1997	25,428	25.0	3,458	14,504	11,046
1998	25,410	25.0	3,456	14,511	11,055
1999	25,391	25.0	3,453	14,518	11,065
2000	25,373	25.0	3,451	14,526	11,075
2001	25,312	25.0	3,442	14,511	11,069
2002	25,252	25.0	3,434	14,498	11,064
2003	25,191	25.0	3,426	14,483	11,057
Total			30,352	145,030	114,678

\*Reduction tonnage is based on percentages of the 1989 base rate for per capita generation. This per capita rate for waste reduction is multiplied by the projected population for each year in the planning period. The 1989 base rate is 0.544 for Fayette County.

In some instances local, state or federal regulatory changes or other influences such as major industrial relocations can have a significant impact on the solid waste quantities requiring disposal. The Region does not anticipate any noticeable impact from these type changes on its waste disposal capacity needs.

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TABLE III-5

TOTAL WASTE GENERATION REQUIRING DISPOSAL (TONS)  
ADJUSTED FOR REGULATORY CHANGES

This Table is not needed for the Fayette County Region

TABLE III-6

TOTAL WASTE GENERATION REQUIRING DISPOSAL (TONS)  
ADJUSTED FOR SPECIAL FACTORS

This Table is not needed for the Fayette County Region

TABLE III-7

TOTAL WASTE GENERATION REQUIRING DISPOSAL (TONS)  
ADJUSTED FOR IMPORTS/EXPORTS

<u>Year</u>	<u>Imports(+)/ Exports(-)*</u>	<u>Adjusted Total</u>
1994	-3,000	10,795
1995	-3,000	9,415
1996	-3,000	8,037
1997	-3,000	8,046
1998	-3,000	8,055
1999	-3,000	8,065
2000	-3,000	8,075
2001	-3,000	8,069
2002	-3,000	8,064
2003	<u>-3,000</u>	<u>8,057</u>
Total	-30,000	84,678

\* Exports were estimated based on private collection and disposal contracts existing throughout the Region as of March, 1994.

After making all foreseeable adjustments to the waste generation projections for the planning period, the total waste quantity requiring disposal capacity was determined for the Region.

TABLE III-8

TOTAL WASTE GENERATION REQUIRING DISPOSAL (TONS)  
IN THE FAYETTE COUNTY REGION  
INCLUDING ALL ADJUSTMENT FACTORS

<u>Year</u>	<u>Adjusted Total</u>
1994	10,795
1995	9,415
1996	8,037
1997	8,046
1998	8,055
1999	8,065
2000	8,075
2001	8,069
2002	8,064
2003	<u>8,057</u>
Total	84,678

## B. PRELIMINARY SYSTEM DESIGN

The current solid waste management systems in the Region will require upgrading. Even those municipal systems which may have adequate collection, transportation and disposal arrangements will need to introduce new waste reduction programs. Listed below are the major system components that may be a part of the regional solid waste plan.

Waste collection and transportation

Waste reduction

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Recycling

Waste Processing, composting, waste-to-energy and/or incineration

Disposal

Public information and Education

Problem wastes management

Each of these system components will be evaluated in Chapters IV through X that follow. It is anticipated that each of these component categories in some form or another will become an integral part of the Regional Plan. Managing wastes by waste-to-energy or incineration methods will receive the least attention due to a number of disadvantages which will be discussed in Chapter VII.

In addition to these waste management systems, the regional staffing, scheduling, funding, and statutory controls necessary to make them effective will also be discussed.

## C. EVALUATION CRITERIA FOR THE REGION

Evaluation criteria for each of the waste management system components will include: institutional compatibility, number and size of facilities needed, regional markets for recovered materials or energy, capital and annual operating costs, unit costs, siting and regulatory requirements, environmental impacts, public acceptance and any other criteria selected by the Fayette County Solid Waste Planning Region Board.

CHAPTER IV

WASTE REDUCTION

A. ESTABLISHING A BASE YEAR QUANTITY

The State established the following goal for waste reduction as part of the Solid Waste Management Act of 1991: "The goal of the State is to reduce by twenty-five percent (25%) the amount of ~~solid waste disposed of at municipal solid waste disposal facilities and incinerators, measured on a per capita basis~~ within Tennessee by weight, by December 31, 1995." The base year for calculating progress toward that goal is 1989. The annual solid waste quantity and population figure used to calculate the per capita waste generation in 1989 are documented in the UT report entitled "Managing Our Waste: Solid Waste Planning in Tennessee" (February 1990). Based on this report, the Regional statistics are provided in Table IV-1.

Table IV-1

<u>County</u>	<u>1989 Population</u>	<u>1989 Waste Generation</u>
Fayette	26,600	14,482

The base year per capita solid waste generation is 0.544 tons/capita/year. As stated previously, the entire Region is not served by solid waste collection at this time. During the first year of the planning period as additional commercial, industrial and residential waste generation data are accumulated, the region may submit documentation to the state to revise the year and the base rate. If this is done, the waste reduction goals calculated below will be modified accordingly.

B. TARGET 1995 WASTE REDUCTION PER CAPITA DISPOSAL RATE

The solid waste reduction tonnage per capita, is calculated as follows:

$$1989 \text{ per capita rate} \times 0.25 = \text{Target 1995 per capita reduction}$$

$$0.544 \text{ tons/capita/yr} \times 0.25 = 0.136 \text{ tons/capita/yr}$$

The reduction goal of waste to be reduced at the source, or otherwise diverted from Class I landfills by December 31, 1995 is calculated as follows:

$$\text{Target 1995 per capita reduction} \times 1995 \text{ projected population}$$

$$0.136 \text{ tons/capita/yr} \times 25,466 = 3,463 \text{ tons/year reduction tonnage}$$

This target reduction tonnage is a planning goal and it will be modified if the base year and base rate are adjusted.

C. MEETING THE SOLID WASTE REDUCTION GOAL

1. Statement of Regional Goals - The goal of the Region is to develop and implement at least one (1) waste reduction strategy in each of the following sectors by December 31, 1995: residential, industrial, commercial, institutional and governmental. By the same date, the Region will have a more comprehensive data base of the its total waste generation and full documentation of all waste reduction contributing toward the 25% goal. By the end of the initial 10 year planning period a ~~comprehensive waste reduction program for the entire Region will be in place with ongoing efforts to further increase waste reduction.~~

2. Allocations for the 25% Reduction Goal - The 25% reduction in solid waste taken to Class I facilities will be achieved by allocating the reduction percentages between different materials (yard wastes, paper, metals, etc.) and economic sectors (residential, industrial, etc.). As indicated in Table III-4, the Region will attempt to achieve at least 5% reduction in 1994 (693 tons) and 15% reduction in 1995 (2,078). The goal for 1996 will be the full 25% reduction of the 1989 base per capita rate.

Based on the Regional waste characterization provided in the District Needs Assessment for Fayette County and the reduction goal for specific materials, the 1996 reduction tonnage in each waste category is estimated in the following table.

<u>Waste Category</u>	<u>Est. %</u>	<u>1996 Tons</u>	<u>Reduction %</u>	<u>Reduction Tonnage</u>
Paper & Paperboard	40.0	5,799	10.0	580
Glass	7.0	1,015	0.0	0
Ferrous Metals	6.5	942	5.0	47
Aluminum	1.4	203	5.0	10
Other Non-Ferrous	0.6	87	0.0	0
Plastics	8.0	1,160	5.0	58
Rubber & Leather	2.5	362	0.0	0
Textiles	2.1	304	0.0	0
Wood	3.6	522	75.0	391
Food Waste	7.4	1,074	0.0	0
Yard Waste	17.6	2,552	95.0	2,424
Misc. Organic	1.5	217	0.0	0
Other	1.8	261	0.0	0
Total		14,498		
Solid Waste Reduction Achieved				3,510
Solid Waste Reduction Goal				3,463

Waste reduction from all sources (i.e. residential, industrial, etc.) will be necessary to achieve the 25% goal. The following waste reduction percentages from each economic sector will be targeted initially, however modification of these estimates will likely be included in the annual Plan updates.

<u>Economic Sector</u>	<u>% of Total Waste Stream*</u>	<u>x Goal</u>	<u>=</u>	<u>% Reduction of Waste Stream</u>	<u>Reduction Tonnage</u>
Residential	40	x 25%	=	10.0%	1,450
Commercial	15	x 25%	=	3.75%	544
Industrial	30	x 25%	=	7.5%	1,087
Institutional	5	x 25%	=	1.25%	181
Governmental	<u>10</u>	x 25%	=	<u>2.5%</u>	<u>362</u>
Total	100			25.00%	3,624

\* Estimated

### 3. Strategies for Solid Waste Reduction

a. Credits for Previous Waste Reduction (1985-1993) - Although it is likely that several waste reduction and recycling activities were taking place between 1985 and 1993, the Plan does not attempt to credit these activities toward the 25% reduction goal at this time. Solid waste reduction information from the initial survey of industries in the Region is provided in Chapter VI. After additional data is obtained during the first year of the Plan, the Region will request credit for reduction activities conducted between 1985 and 1993.

b. Materials Recycling and Source Reduction - As stated previously, the Region's goal for solid waste reduction is 5% in 1994, 15% in 1995 and 25% in 1996. Reductions based on residential recycling are considered very crucial to achieving the overall reduction goals. The effectiveness of public education efforts will largely determine how productive residential recycling becomes. Reductions based on commercial and industrial waste recycling and source reduction should be significant if adequate data on past waste reduction efforts can be obtained and if businesses and industry are receptive to new reduction efforts. Recycling and source reduction strategies are discussed in Chapter VI.

c. Solid Waste Diversion from Class I Facilities - A substantial amount of waste reduction during the first few years of the Plan will be the result of waste diversion from Class I facilities to Class III/IV facilities. The costs associated with constructing, operating and maintaining a Class III/IV landfill are discussed in Chapter VIII.

The goals for solid waste recycling and source reduction vs. waste diversion for the first three years of the Plan are provided below.

<u>Year</u>	<u>Overall Waste Reduction</u>	<u>% Diverted</u>	<u>% Recycled</u>
1994	5%	4%	1%
1995	15%	12%	3%
1996	25%	20%	5%

d. Economic Strategies for Waste Reduction - The Region does not plan to pursue any economic incentives or disincentives for increasing overall solid waste reduction at this time.

e. Other Waste Reduction Strategies - There are no other waste reduction strategies planned at this time.

f. A summary of the estimated waste reduction quantities is provided in Table IV-2 below.

Table IV-2  
Estimated Quantities of Waste Reduction

<u>Year</u>	<u>Previous Reductions</u>	<u>Recovered/ Recycled</u>	<u>Diverted</u>	<u>Economic Strategy</u>	<u>Other</u>	<u>Total*</u>
1985-1989	NA	NA	0	0	0	NA
1990	NA	NA	0	0	0	NA
1991	NA	NA	0	0	0	NA
1992	NA	NA	0	0	0	NA
1993	NA	NA	0	0	0	NA
1994	0	139	555	0	0	694
1995	0	416	1,662	0	0	2,078
1996	0	693	2,770	0	0	3,463
1997	0	692	2,766	0	0	3,458
1998	0	691	2,765	0	0	3,456
1999	0	691	2,762	0	0	3,453
2000	0	690	2,761	0	0	3,451
2001	0	688	2,754	0	0	3,442
2002	0	687	2,747	0	0	3,434
2003	0	685	2,741	0	0	3,426
Total	NA	6,072	24,283	0	0	30,355

\*Reduction totals are based on Table III-4. These estimates will be updated annually as data is accumulated.

#### D. STAFFING, BUDGET AND FUNDING

Staffing, budget and funding for various waste reduction strategies are discussed in other chapters as follows.

Recycling and Source Reduction	- Chapter VI
Waste Diversion	- Chapter VIII
Public Information and Education	- Chapter IX
Problem Waste Reduction	- Chapter X

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#### E. IMPLEMENTATION SCHEDULE

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Implementation schedules for each waste reduction strategy are discussed in the respective chapters listed above.

#### F. SPECIFIC RESPONSIBILITIES FOR ACHIEVING GOALS

It will be the responsibility of each entity within the Region operating or providing solid waste collection services to account for its waste reduction activities and achievements. Municipalities will be encouraged and welcomed into participating in the overall Regional solid waste Plan. Participation in the overall Plan would place specific responsibility for achieving the 25% reduction goal on the Region. However, if a municipality wishes to continue its own solid waste collection services, the responsibility for the 25% reduction goal will belong to the individual municipality. Other specific responsibilities for waste reduction goals are discussed in the respective chapters listed above.

#### G. COLLECTION AND PREPARATION OF ANNUAL REPORTS

The Region will request that all municipalities submit pertinent solid waste data to the Regional Solid Waste Board by January 15 of each year. A general survey form for obtaining this information will be mailed to each municipality by December 1 of each year. Information from other major generators of solid waste in the Region will be obtained in a similar manner each year. This data along with information from the approved Regional solid waste system will be aggregated and used to update and/or modify the Plan annually as required by the State.

## CHAPTER V

### WASTE COLLECTION AND TRANSPORTATION

#### A. MINIMUM REQUIREMENTS OF REGIONAL COLLECTION SYSTEM

The Solid Waste Management Act designates that counties or regions will bear the primary responsibility for providing solid waste collection and transportation services to all residents. The three primary options for providing these services are: 1) to provide services through county or regional operations, 2) to provide services through agreement with another unit of government, or 3) to provide services through contract with private companies.

The level of service is also established by the Solid Waste Management Act. That minimum level of service is to provide a network of staffed convenience centers. The minimum number for the Region based on one(1) per 180 square mile service area is four(4) and based on one(1) per 12,000 population in the service area is two(2). A higher level of service would be to provide door-to-door collection throughout the Region.

#### B. REGIONAL NEEDS

At this time a number of solid waste collection and transportation systems are operating within the Fayette County Solid Waste Planning Region. In addition to the collection of solid wastes by municipal crews, a number of private collection companies operate in the Region. There are, however, a sizeable number of unserved residences and small businesses in unincorporated areas as described in Chapter II, and the County does not operate a green-box collection system.

Several alternatives for solid waste collection and transportation were considered for the Region. These options were determined after discussions with state and local solid waste administrators, private waste management companies and members of the regional solid waste board. An effort was made to integrate these options with existing solid waste management systems while also exploring other systems of collection and transportation conducive to predominately rural areas. A description and cost estimate for each of these options is provided in Appendix F.

#### C. PROPOSED COLLECTION AND TRANSPORTATION SYSTEM

1. System Goals and Service Area - Based on the analysis of collection and transportation options, the Region plans to incorporate a door-to-door collection system with the capacity to transfer solid wastes into larger transport vehicles for hauling to a Class I landfill facility outside the Region. Collection and hauling services will be provided by private contract. The goal is to provide collection services to all unserved residents

and small businesses while maintaining the existing municipal collection systems that continue to operate. Another major goal of the system is to promote and enhance recycling efforts throughout the Region and to facilitate any intermediate collection and processing of recyclables, problem wastes, etc.

2. Proposed Facilities - The Region plans to construct and operate a super-convenience center which will include a transfer area, a staffed convenience center, and a collection area for recyclables and problem wastes. The convenience center area will ~~be designed and operated in accordance with the State guidelines.~~ A tentative layout for the facility is shown as Exhibit 5-1. The problem waste storage area is described in more detail in Chapter X - Problem Wastes.

3. Implementation Schedule - A formal bid for collection and transportation services will be let by the County prior to December 31, 1995. All unserved, unincorporated areas, any municipality and any business or industry which wishes to do so will be included in the bid. Bid documents will include several alternative bid proposals in order to select the best system for the Region. Possible alternative bid proposals are described below.

#### BID PACKAGE I

- 1 - Collection from residences to transfer station.
- 2 - Haul "blue-bags" from transfer station to recyclery.
- 3 - Recycling cost at recyclery (already delivered).
- 4 - Haul to landfill from transfer station.
- 5 - Disposal at Class I landfill (already delivered and weighed).

#### BID PACKAGE II

Collection, Disposal, and "Blue-Bag" Recycling with no public transfer station.

All bids should be expressed in terms of price per household per month, except when specifically requested to be in price per ton. All bidders should bid for any individual services desired, in addition to any combination of services.

#### E. 10 YEAR STAFFING AND TRAINING

It is anticipated that a minimum of one (1) and a maximum of four (4) additional staff will be needed for the proposed collection and transportation system. The staffing positions required for the system are described on the next page. All staff positions will require training for specific responsibilities as well as cross training to handle other positions. Training will include basic operations, safety, policy, regulations, and emergency response. Any required State training will be achieved after the State announces requirements and availability of training courses.

<u>Position Description</u>	<u>Staff Required</u>
Convenience Center Operator	1 full time
Recyclables Collection Area Operator	No additional staff
Problem Waste Area Operator	No additional staff
Blue Bag Separators	2 part time
Transfer Station Operator	1 full time

F. COST ESTIMATES AND 10-YEAR BUDGET

Based on numerous bids and proposals by private collection companies for door-to-door collection of residential solid waste in the West Tennessee area, the anticipated system cost for the Region is from \$5.00 to \$7.00 per household per month. Estimating 8,000 households in the collection area, the total cost per year would be approximately \$576,000. This includes those municipal and private collections referenced in Table II-7.

The cost estimate for a super-convenience center with transfer station capable of handling all of the Region's waste stream is provided below.

SUPER-CONVENIENCE CENTER COST ESTIMATE

Capital Cost

Road, Site Grading, Drainage	\$ 98,000
Building	146,000
Transfer Equipment	100,000
Convenience Center Site Work	5,000
Convenience Center Equipment	3,000
TOTAL	<u>\$352,000*</u>

\* Funding is already appropriated by Fayette County government. Capital cost is not ammortized into annual costs.

Labor/Supplies

Staffing	\$ 82,500/Yr*
Benefits(20%)	16,500/Yr
Administration(10%)	8,250/Yr
Supplies and Maintenance	5,000/Yr
Utilities	4,800/Yr
TOTAL	<u>\$117,050/Year</u>

\* This figure reflects some employee overlap from landfilling operations.

Haul Cost	TOTAL	<u>\$78,000/Year</u>
Total Cost Per Year		\$195,050/Year

## 10-YEAR BUDGET

<u>Year</u>	<u>Capital Cost</u>	<u>Operating Cost</u>
1994-2003	\$352,000	\$771,050/Year

This operating cost includes county-wide Regional collection and super-convenience center costs. Increases in salary, fuel, utility costs, etc. were not considered in the 10-year budget estimate.

## G. 10-YEAR IMPLEMENTATION PLAN

The implementation plan for the collection and transportation system is described below. See Chapter XI for a complete implementation schedule for the Regional Plan.

September 1, 1994 - Complete design of super-convenience center

December 1, 1994 - Mail survey forms to municipalities with collection systems to obtain annual information

February 1, 1995 - Open bids for Regional services.

February 1, 1995 - Complete construction of super-convenience center

March 1, 1995 - Hire additional staff

May 1, 1995 - Funding sources finalized; monthly household fee for residential services; tipping fee at the facility for other private haulers, industries, etc. (No tipping fee for special wastes - i.e. tires, automotive batteries, oil).

May 15, 1995 - Award contract for Regional services; service to begin July 1, 1995

June 1, 1995 - Initiate billing system for monthly residential service fee; initiate tipping fee at super-convenience center

July 1, 1995 - Begin contract period for Regional services

March 1, 1995-2003 - Annual progress report due to State

## H. COLLECTION AND TRANSPORTATION SYSTEM MAP

Existing and new elements of the regional collection and transportation system are depicted on Map No. XI-1.

entrance/exit

ASPHALT

CONVENIENCE CENTER;  
RECYCLING AREA;  
& PROBLEM WASTE  
COLLECTION

TRANSFER AREAS

ASPHALT

ASPHALT

BREAKROOM

BATTERY AREA

CONCRETE

OFFICE

CONCRETE

ROLL OFF

CONCRETE

CONCRETE

OIL COLLECTION TANK

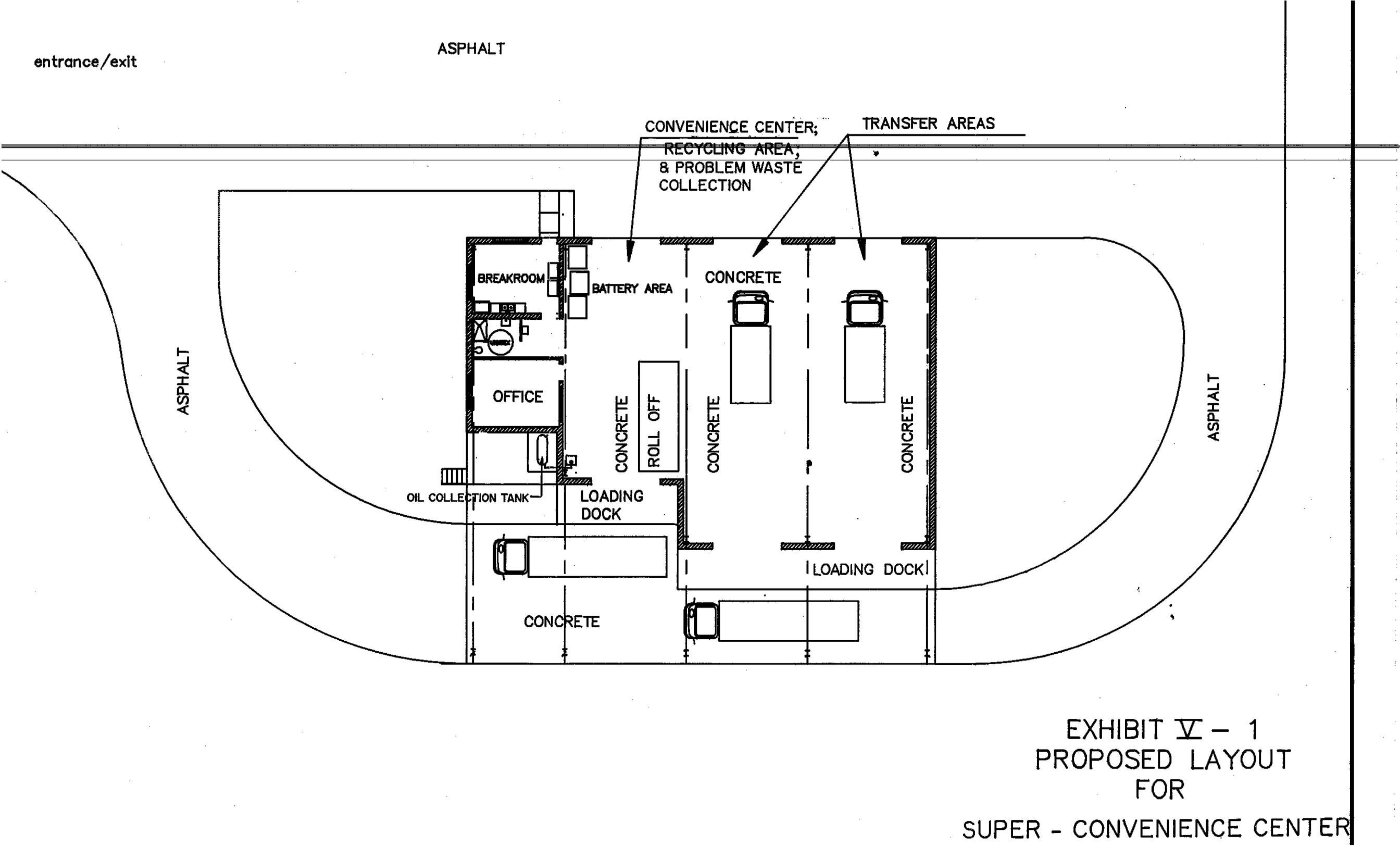
LOADING DOCK

LOADING DOCK

CONCRETE

EXHIBIT V - 1  
PROPOSED LAYOUT  
FOR

SUPER - CONVENIENCE CENTER



## CHAPTER VI

### RECYCLING AND SOURCE REDUCTION

#### A. GENERAL

As stated in Chapter IV, the Region will attempt to reach the 25% waste reduction goal by using a combination of activities including diversion of wastes to Class III/IV landfills, recycling and source reduction. Recycling refers to separating specific materials out of the solid waste stream in order to reuse them in some manner. This can be done at any time between the point of waste generation and final disposal at the landfill. Source reduction refers to modifying an activity which produces solid waste in order to generate less waste. Examples include changing an industrial process resulting in less waste or buying reusable containers for home use. Source reduction is most effective when it eliminates a waste material which is difficult to recycle.

#### B. REGIONAL NEEDS

The Regional needs for recycling and source reduction are as follows:

- 1) Determine the amount of industrial waste which was reduced via recycling and source reduction between 1985 and 1993.
- 2) Establish residential recycling programs and activities.
- 3) Establish industrial and commercial recycling programs and activities.
- 4) Establish recycling programs for government offices and institutions.
- 5) Encourage source reduction through public information and education programs.

#### C. SPECIFIC ACTIONS PLANNED

##### 1. Regional Goals

Regional goals for overall waste reduction are presented in Chapter IV. This Chapter specifically addresses waste recycling and source reduction activities. These activities are considered vital to the Region in achieving the State 25% reduction goal. They also provide the best long term benefits and potentials for greater waste reduction.

The regional goals are to establish recycling opportunities in each of the economic sectors mentioned above and to promote source reduction of wastes which are difficult to recycle.

## 2. Regional Strategies

a. Residential Recycling - As part of the Regional collection system being implemented, a residential "blue-bag" recycling program will be initiated. This system urges the homeowner to separate specific recyclables and place them into a collection bag of a different color than regular household garbage. The bag is typically blue. The private contractor providing collection will collect both regular garbage bags and these "blue-bags". Both the Class I materials and the "blue-bag" materials will be weighed prior to processing. ~~Documentation of all recycled materials will be required.~~ Due to the present nature of recycling markets, the Region will not attempt to directly market recyclable materials to end users.

Approximately 8,000 households and some small businesses will have access to the "blue-bag" recycling program. The service area will include the entire Region which is not served with waste collection at this time. As stated in Table IV-2, the Regional goal for waste recycling is just under 700 tons/year by 1996. It is anticipated that the effectiveness of this "blue-bag" system will start small and gradually improve as public information and education efforts become effective. These efforts are described in Chapter IX.

In addition to the "blue-bag" system, the Region also plans to provide a collection area for residential recyclables at the super-convenience center. This collection area will be staffed for assisting and educating the public. Drop-off bins will be provided for aluminum and specific plastics, metal, cardboard, and paper. A proposed layout for the super-convenience center is shown as Exhibit V-1.

b. Commercial and Industrial Recycling - Efforts to encourage and assist businesses and industries in waste recycling and source reduction are addressed in Chapter IX. As stated in previous chapters, some solid waste reduction information from industries in the Region has been accumulated as of March, 1994. This information is presented in Table VI-1. It is obvious from the data that many industries have the potential to recycle and reduce waste generation, although few are realizing that potential. It also obvious that some industries have reduced large tonnages of solid waste since 1985, and these should be accounted for by the Region. Annual Plan updates will include additional information as it becomes available.

TABLE VI-1  
INDUSTRIAL SOLID WASTE SURVEY  
RECYCLING AND SOURCE REDUCTION BETWEEN 1985 AND 1993  
DATA ACCUMULATED AS OF MARCH, 1994  
(TONS/YEAR)

Total Number of Industries With 10 or More Employees - 28  
Approximate Total Number of Employees - 2,794

Number of Industries Responding - 9  
Number of Employees - 895

	<u>Industry Number*</u>								
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Number of Employees	80	10	37	100	12	385	33	38	200

Waste Recycling and Source Reduction

Paper	NA								
Cardboard	504+	NA				504			
Glass									
Aluminum	35					35			
Other Metals	1+	NA				1			
Plastics									
Resins									
Rubber & Leather									
Textiles									
Pallets	25	25							
Other Wood									
Yard Waste									
Food Waste									
Dirt									
Other									
Total	565	25	0	0	0	540	0	0	0

\*Industry Names are Not Identified

### 3. Staffing

Residential "blue-bag" recycling will be staffed by the private collection contractor or the additional staff discussed in Chapter V. Other residential, industrial, commercial, governmental and institutional programs will be initiated by existing County Public Works staff or by volunteers, civic organizations, County Agricultural Extension Office personnel, etc.

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### 4. 10 - Year Budget

The majority of the budget for the programs discussed in this chapter is included in Chapter V. Additional funds needed for public information and education are included in Chapter IX.

### 5. Funding

See Chapters V and IX.

### 6. Collection and Submitting Data

As stated previously, the Region will keep records at the super-convenience center of all incoming wastes and outgoing wastes and recyclable materials. In addition, documentation will be required from the recycling facility of all wastes which were actually recycled. This data will be submitted annually to the State as required for Plan updates and progress reports. The Region will continue to obtain data from local businesses and industries via mail and direct phone contact. Governmental agencies and institutions will also be contacted directly on an annual basis (minimum) to obtain recycling data.

### 7. Implementation Schedule

See Chapters V and IX.

### 8. Allocation of Responsibilities

The Fayette County Solid Waste Planning Region is responsible for all recycling and source reduction programs described herein. Individual municipalities providing separate collection and transportation services are responsible for developing, implementing, documenting and reporting recycling activities to the Regional Board on an annual basis for State reporting purposes. The Region is responsible for collecting and reporting recycling and source reduction information documented by private waste generators (i.e. businesses, industries, etc.).

CHAPTER VII  
COMPOSTING, SOLID WASTE PROCESSING,  
WASTE-TO-ENERGY AND  
INCINERATION CAPACITY

A. REGIONAL NEEDS FOR COMPOSTING, WASTE-TO-ENERGY AND  
INCINERATION

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Due to the relatively small amount of waste generated in the Region, most waste processing operations are not feasible. In addition, many processes are very difficult to permit and operate in an environmentally acceptable manner.

The most feasible options for waste processing include composting of leaves and chipping of tree limbs to produce mulch. These are potentially easy operations which could count toward the 25% reduction goal, however, the overall reduction in tonnage from diverting these materials from Class I landfills is normally small.

The City of Somerville has a leaf processing operation which diverts all leaves collected by the City's leaf suction truck from going into a Class I landfill. Approximately 80 truck loads per year averaging 2.8 tons per load (+/-) or approximately 224 tons per year are collected. The City has an arrangement with a local farmer who plows the leaves into a piece of farmland as a soil conditioner. The operation is expected to continue during the Planning period and will be credited toward the 25% reduction goal.

At this time the Region does not plan to incorporate any waste processing options. Any municipal or private waste processing operations such as that discussed above which affect the Regional Plan will be reported annually in Plan updates.

## CHAPTER VIII

### DISPOSAL

#### A. GENERAL DISCUSSION

##### 1. Class I Landfills

The State - Solid Waste Management Act along with the Federal - Subtitle D Landfill Regulations have significantly altered the way local communities view solid waste disposal. The siting, design, development, operation, closure and post-closure of solid waste landfills are all very technical and expensive. Therefore the solid waste disposal alternatives for the Fayette County Region were evaluated very carefully for effective long range waste management planning.

It is certain that the Region will need access to a Class I landfill for disposal of the vast majority of its solid waste regardless of the how effective its reduction/recycling programs may become. In addition, there is a great need for access to a Class III/IV Landfill facility for disposal of landscaping and land clearing waste, construction/demolition waste and other similar types of waste. Diversion of these types of waste from Class I facilities will be credited toward the 25% waste reduction goal.

At this time, the Region has two primary alternatives for long term Class I disposal - 1) continuation of the existing Class I landfill owned and operated by the County, or 2) contract with a privately owned landfill for disposal. The most accessible private landfill facilities are either of the two BFI sites located in Shelby County, Tennessee, the Waste Management facility near Houston, Mississippi, the Waste Management facility in Benton County, Tennessee or the Barker Brothers facility in Obion County, Tennessee. In addition, there are at least four(4) other proposed Class I landfill sites in West Tennessee in various stages of the State permitting process. Due to the economics of landfill development, operation and closure, the Region will experience very high costs per ton for disposal if it operates its own Class I landfill. The maximum anticipated Regional waste stream of approximately 25,000 tons/year will not make a Regional Class I landfill feasible over the 10-year Planning period if current economic trends for landfills continue. The size, location and existing tipping fees at the BFI landfills make them the most attractive privately operated sites for the Region as of this date, however, the competitive edge that BFI now possesses may change in the future due to competition from other nearby facilities. The best private landfill alternative for the Region may change accordingly. The presence of other existing and planned Class I facilities in the area should provide adequate competition and price controls for the foreseeable future. Detailed cost estimates for Regional waste disposal based on the public vs. private Class I landfill alternatives are provided in Appendix F.

There are several other significant factors involved in the Regional landfill vs. private landfill decision. These include the costs of unknown future liabilities, public opposition to landfills, the legal issues of flow control and uncertainties about future environmental regulations. Problems in any of these areas will be a tremendous burden for a Regional facility to resolve. The major question about contracting with private facilities is long term cost control. As mentioned above, the presence of other private landfills in the area competing for the solid waste stream should keep future rates reasonable.

Although it is recommended that the Region contract with a private Class I disposal facility at this time, the County's existing Class I permit should be kept current with the Tennessee Department of Environment and Conservation. In the event that future considerations make the Regional Class I landfill feasible, this existing site would become extremely valuable. The potential for the Region to build and operate a public landfill on this existing site at any time in the future should be a factor in all price negotiations with privately owned landfills.

## 2. CLASS III/IV LANDFILLS

Although a Regional Class I landfill will not be operating, a Regional Class III/IV facility is proposed. The cost for development, operation, closure and post-closure of Class III/IV landfills is significantly lower than Class I landfills. The waste disposed of in these facilities will also be credited toward the 25% solid waste reduction goal. Of the 72 acres presently permitted for a Class I landfill, a portion could be reclassified as a Class III/IV landfill. Minor adjustments in the approved layout of the Class I facility will be required, but many other costs of developing a new landfill on a new site will be avoided. The detailed costs associated with a Regional Class III/IV landfill are provided below.

### CLASS III/IV LANDFILL COST ESTIMATES

#### Design Assumptions:

Annual Tonnage\* = 5,000  
\* Roughly Estimated to be 20% of Total Waste Stream (+/-)  
Minimum Site Life = 20 years  
In-place waste compaction = 1,000 lbs/CY  
Volume of daily/intermediate cover = 1 % of total airspace  
Average landfill waste depth = 40 feet  
Average landfill excavation depth = 20 feet

Landfill Acreage	5
Total Acreage	10

**PRE-CONSTRUCTION AND CONSTRUCTION COSTS - CLASS III/IV FACILITY \***

<u>Item Description</u>	<u>Unit Cost</u>	<u>Total Cost</u>
Site Characterization	\$ 0 LS	\$ 0
Engineering/Design	5,000 LS	5,000
Legal	3,000 LS	3,000
Land Purchase @ \$2,500/AC	0 LS	0
Clearing, Grubbing & Access Rds	2,000/AC	20,000
Excavation	2,000/AC-FT	200,000
<del>Clay Liner (2 FT = 17,000 CY +/-)</del>	<del>0</del>	<del>0</del>
Scales/Fencing	0 LS	0
Buildings	0 LS	0
Drainage/Sedimentation Ponds	400/AC	4,000
Utilities	0	0
Gas Management Systems	1,000/AC	5,000
Groundwater Monitoring Wells(3)	4,000 EA	12,000
CQA	2,000/AC	10,000
<b>TOTAL (1993 DOLLARS)</b>		<b>\$ 259,000</b>
<b>ANNUAL COST @ 6% FOR 20 YEARS</b>		<b>\$ 22,580</b>

\*Some items have no cost or lower than normal cost due the planned development of the Class III/IV landfill on the permitted Class I site.

**OPERATION COSTS - REGIONAL FACILITY**

Labor (3 @ \$25,000 EA x 1.2)	\$ 90,000/YR
Equipment (\$2/Ton of Waste)	10,000/YR
Daily Cover (\$.25/Ton of Waste)	1,250/YR
Environmental Monitoring (\$1000/AC)	<u>5,000/YR</u>
<b>ANNUAL COST (1993 DOLLARS)</b>	<b>\$106,250/YR</b>

**CLOSURE COSTS - REGIONAL FACILITY**

Clay Cap (2 FT = 17,000 CY/AC +/-)	5/CY	85,000
Topsoil (1 FT = 8,500 CY/AC +/-)	2/CY	17,000
Seeding	1,000/AC	5,000
Sedimentation Control	200/AC	1,000
CQA	1,000/AC	<u>5,000</u>
<b>TOTAL (1993 DOLLARS)</b>		<b>\$ 113,000</b>
<b>ANNUAL COST @ 6% FOR 20 YEARS)</b>		<b>\$ 9,851</b>

**POST CLOSURE - REGIONAL FACILITY**

Routine Maintenance	\$200/AC-YR	\$ 1,000/YR
Annual Inspections/Reports	1,000/YR	1,000/YR
Gas Control	2,500/YR	2,500/YR
Environmental Monitoring(\$1000/AC-YR)		<u>5,000/YR</u>
<b>ANNUAL COST (1993 DOLLARS)</b>		<b>\$ 9,500/YR</b>

SUMMARY (COST PER YEAR IN 1993 DOLLARS) - REGIONAL FACILITY

Pre-Construction/Construction	\$ 22,580/YR
Operation	106,250/YR
Closure	9,851/YR
Post Closure	<u>9,500/YR</u>
<b>TOTAL ANNUAL COST</b>	<b>\$ 148,181/YR</b>

**COST PER TON = \$148,181/YR x 1 YR/5,000 TONS = \$29.64/TON**

**COST PER CY = \$29.64/TON x 0.25 TONS/CY = \$7.41/CY**

**CURRENT BFI COST PER CY = \$6.00/CY\***

\*Does not include hauling costs from the Region to BFI.

B. DEMAND VS. SUPPLY OF DISPOSAL CAPACITY

Due to the Regional plan to contract with a private Class I landfill for disposal services, there is a great excess of disposal capacity for the 10-year planning period and beyond. In addition to the permitted Class I capacity of the existing County landfill (See Table II-11), the BFI facility in Millington, Tennessee has a capacity which exceeds 40 years. When the respective capacities of the other Class I landfills in West Tennessee are included, it is obvious that there is ample Class I access for many, many years. The two tables requested in the State planning guidelines (Table Nos. VIII-1 and VIII-2) are not included in the Regional Plan due to information which is not available or not pertinent on existing capacity at private Class I facilities in the area.

C. PROTECTING EXCESS CAPACITY

The vast amount of excess capacity in the West Tennessee area appears to be very stable at this time. In order to protect the Region's interest in future capacity, the private landfill owner under contract with the Region will be questioned annually about remaining landfill capacity. In addition, the State regulatory agencies (both in Tennessee and Mississippi) will be contacted annually and questioned about similar information on all Class I facilities in the area. Should the capacity for the next 5-year period appear suspect, the Region will begin evaluation of reopening its Class I facility or another disposal option. The Plan will be modified as needed.

D. FUNDING

Funding for the private Class I landfill costs and for the public Class III/IV landfill costs will be derived through disposal fees. Based on the estimated Class I disposal costs at a private landfill and the estimated number of residential users, Class I landfill disposal is estimated to cost approximately \$2.00 per household per month. Regional Class III/IV landfill

disposal is projected to cost approximately \$1.00 per household per month. This cost is based on an estimated 65% proportion of Class III/IV material originating from residential users. Tipping fees from other private haulers of Class III/IV materials will account for the remainder of the Class III/IV landfill funding. The user fee system is discussed in more detail in Chapter XI.

#### E. IMPLEMENTATION SCHEDULE

~~The implementation plan for the Class I and Class III/IV disposal system is outlined below. A complete implementation schedule for the Regional Plan is provided in Chapter XI.~~

August, 1994 - Submit request to the State for reclassification of 5 acres at the existing Class I site for use as Class III/IV landfill

February 1, 1995 - Open bids for Regional services

May 1, 1995 - Funding sources finalized; monthly household fee for residential services; tipping fee at the Regional Class III/IV landfill for other private haulers, industries, etc.

May 15, 1995 - Award contract for Regional services; service to begin July 1, 1995

June 1, 1995 - Initiate billing system for monthly residential service fee; initiate tipping fee at Regional Class III/IV landfill pending reclassification of Class I acreage by the State

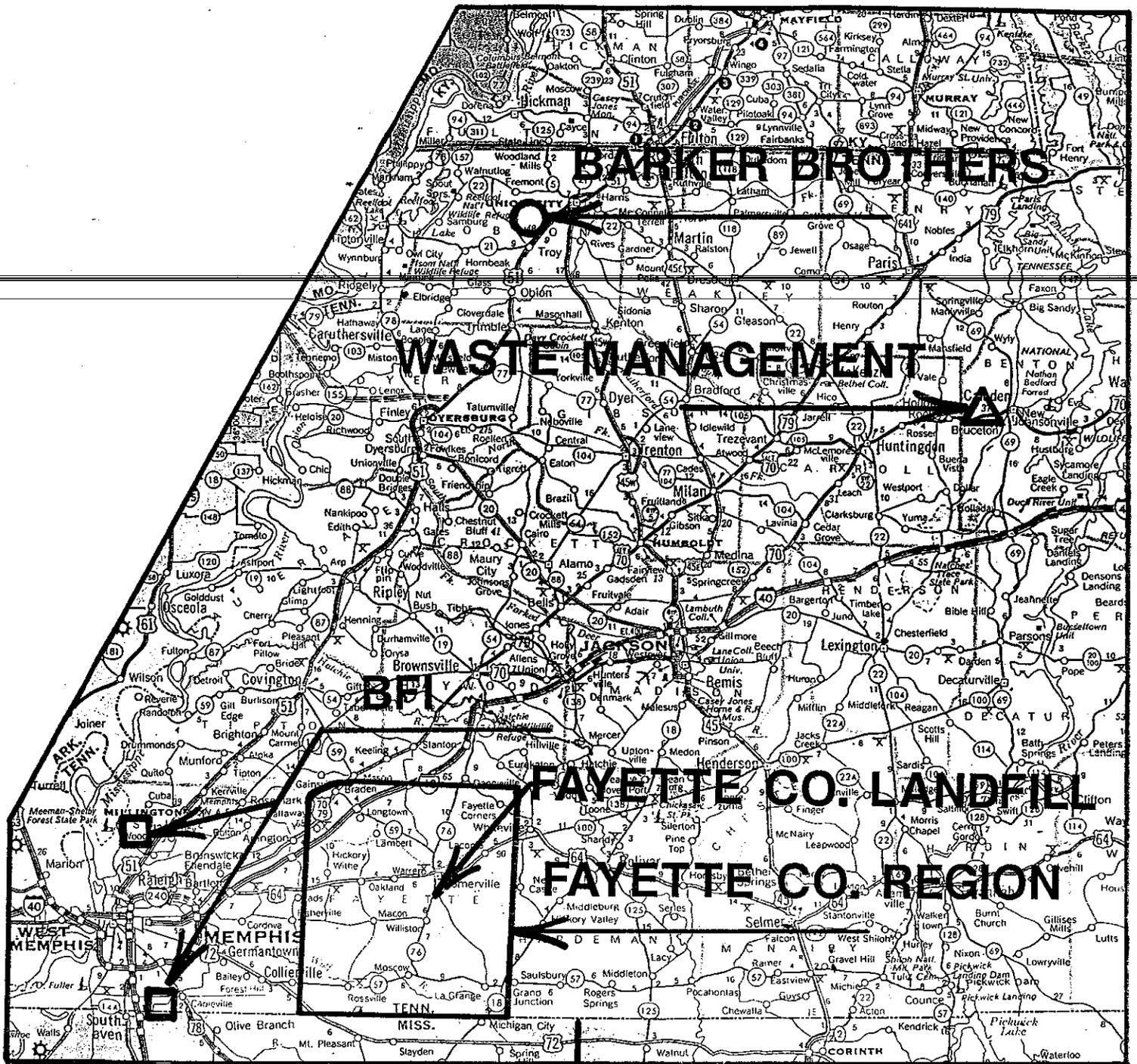
July 1, 1995 - Begin contract period for Regional services

February 1, 1995-2003 - Request information from private Class I landfill contractor and Tennessee and Mississippi solid waste agencies about remaining Class I landfill capacities

March 1, 1995-2003 - Annual progress report due to State

#### F. LOCATION OF DISPOSAL FACILITIES

See Map VIII-1 for the location of Class I landfill facilities in the area.



# WASTE MANAGEMENT

# MAP VIII-1

HOUSTON, MS 100 MI. (+/-)



BARKER BROTHERS



B.F.I.



WASTE MANAGEMENT

## CHAPTER IX

### PUBLIC INFORMATION AND EDUCATION

#### A. REGIONAL NEEDS FOR INFORMATION AND EDUCATION

The Fayette County Solid Waste Planning Region, like all other planning regions in the State, will need to develop additional public information and education programs regarding ~~solid waste issues, options, costs and goals. The Regional information and education programs will need to address general~~ solid waste issues and also focus on the specific Plan adopted by the Region. Separate programs may be needed for the general public, businesses, industries, schools, government offices and other entities which are critical to the solid waste Plan.

#### B. SPECIFIC PLANS FOR INFORMING AND EDUCATING

##### 1. Regional Goals and Objectives

The primary goals of the information and education programs are as follows:

- 1) educate the general public about what solid waste is and why it is important to the Region and to them personally,
- 2) inform the general public, businesses, industries, etc. about the specific components of this Plan and how the Plan affects them personally, and
- 3) strongly encourage the support and participation of all individuals and entities in the Region to make the Plan a success.

##### 2. Target Groups and Audiences

As stated above the Region plans to provide solid waste information and education to the general public, businesses, industries, schools, and government entities. To accomplish this goal the Region will utilize existing government organizations and staff, public service groups, educators and volunteers to help reach as many target groups and audiences as possible. These include the University of Tennessee Center for Industrial Services, County Technical Assistance Service, Municipal Technical Assistance Service, the County Extension Office, Fayette County Solid Waste Planning Region Board members, Fayette County Public Works Department staff and board members, and selected school officials and teachers. Some of the target groups and audiences for solid waste information and education are as follows:

General Public - civic clubs, garden clubs, Boy Scouts and Girl Scouts, customers at retail centers, Regional super-convenience center users, local newspaper readers, etc.

Businesses and Industries - Chamber of Commerce and associated groups, specific businesses and industries which generate large amounts of solid waste, local business districts, industrial parks, etc.

Schools - local public and private schools

Government Entities - County and local municipal government offices and facilities

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### ~~3. Information to be Provided~~

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As much as possible the Region will utilize existing solid waste information and education material developed by or accessible through the State of Tennessee Division of Solid Waste Assistance or other agencies. Materials include printed literature, videos, etc. which could be used for local solid waste spokesman training or provided directly to the target audience for their use.

### 4. Methods to be Utilized

The specific methods to be utilized to reach target audiences are being formulated at this time. Some of the methods to be employed are as follows:

#### General Public -

\* Formation of a Speaker's Bureau - This bureau will actively seek an audience with local civic organizations, Chamber of Commerce, schools, etc. The goal will be to speak at least one time per year to any organization which may have direct or indirect influence on solid waste practices throughout the Region.

\* Local Advertising and Promotion - Informational material will be provided to the local newspaper(s) and any other local public media on a regular basis. This information may be presented in a series of presentations and cover all aspects of the Regional Plan. Annual updates to the material will be necessary in order to address any proposed and/or approved modifications to the Plan. In addition, any dates for specific events such as Household Hazardous Waste collection days, waste tire shredding, etc. will be announced through the local media.

\* Public Exhibits and Demonstrations - Public exhibits and/or demonstrations may be developed for presentation at locations where large numbers of local residents are likely to gather. These include retail centers, the County Courthouse, city halls, schools, the planned super-convenience center, or any local event such as fairs, rodeos, festivals, etc. The exhibit may be semi-permanent and remain in one location for longer periods of time or be portable and move from location to location as the need arises. Exhibits and demonstrations may be staffed by a local volunteer knowledgeable of the Regional Plan and pertinent solid waste issues.

## Businesses and Industries -

\* Solid Waste Reduction Workshop - An industrial solid waste reduction workshop developed by the University of Tennessee Center for Industrial Services (UTCIS) is being scheduled for the spring of 1994. This workshop will include any interested local industry and is intended to assist in source reduction and recycling efforts and data gathering from industry.

\* Local Business and Industrial Meetings - The Chamber of Commerce will be used as a venue for contacting and addressing ~~local businesses and industries~~. ~~The speaker's bureau described above will actively seek to address business and industrial groups through the Chamber at least one time per year.~~

\* Surveys and Direct Contact - Local industry will be contacted at least one time per year and asked to complete a survey questionnaire about solid waste management, recycling, source reduction, etc. Direct phone contact may be required if response to the surveys is not sufficient. Any significant changes in solid waste generation and/or management from existing industry will become a part of the annual Plan updates. All information from specific businesses and industries in the Region will be strictly confidential unless permission to release the information is obtained from that industry.

\* Small Business Solid Waste Reduction - Localized solid waste reduction "districts" for small businesses will be established. These districts will be established in geographic areas where several businesses are in close proximity to each other. A "lead" business in each district may be designated to help with solid waste management efforts. Information and education about the Plan and other solid waste issues can be presented to these districts through that lead business rather than to individual businesses. Small business programs may include Regional district competitions for solid waste reduction, solid waste exhibits, etc.

## Schools -

\* Direct Contact - The speaker's bureau mentioned above will seek audiences with all local public and private school children at least one time per year.

\* ~~Teacher Training and Materials~~ - In-service training for classroom teachers regarding solid waste issues will be encouraged. Local educators will also be provided with a list of information and materials available from the State or other agencies which may be helpful in developing solid waste curriculum. An advisory committee of local educators will be established to choose the best available literature, videos, etc. to adequately inform children of all ages.

\* Field Trips - Schools will be invited to schedule field trips to the Regional super-convenience center, the Class III/IV landfill, the private Class I landfill, recyclery, etc.

\* Waste Reduction at School Facilities - Schools will be encouraged to reduce their individual waste streams and to report reduction quantities to the Region. All schools in the Region will be provided with information about potential solid waste reduction activities.

#### Local Government -

\* Solid Waste Reduction Programs - Efforts will be made to form government office paper recycling programs. Other materials which local government facilities generate in large quantities will also be addressed.

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#### 5. Staff and Budget Needs

The Region does not plan to add additional staff for the public information and education component of the Plan. Existing County and municipal staff, Board members, volunteers and education subcommittee members will be called upon to support and contribute to the needs in these areas. The Regional budget for information and education will be relatively small compared to the overall management system. The primary costs will be associated with advertising, promotion, specific programs (i.e. exhibits, Chamber meetings, etc.) and purchasing materials. It is anticipated that these costs will be approximately \$1,000 per year.

#### 6. Funding Plan

Funding for public information and education will come from a disposal fee of approximately \$0.01/household/month.

#### 7. Evaluation and Reporting

As part of the annual updates required for the Plan, the Regional Board will compile a list of all public information and education activities during the previous year. Where possible, an evaluation will be made of the effectiveness of a particular program (i.e. industrial waste reduction workshops, school waste reduction activities, etc.)

#### C. IMPLEMENTATION SCHEDULE

August 1, 1994 - Identify key Regional Board members, County and municipal staff and community volunteers to assist in implementation of the public information and education activities. Also, establish an Educational Advisory Committee to specifically address the school and community related components of the Plan.

September 1, 1994 - Begin a series of newspaper articles describing various aspects of the Regional Plan and how the Region will be affected.

October 1, 1994 - Meeting of key individuals and Educational Advisory Committee members described above to begin developing a formal plan of various public information and education efforts.

March 1, 1995-2003 - Annual progress report due to State

January and July, 1996-2003 - Semi annual meeting of key individuals and Educational Advisory Committee members to discuss and evaluate existing programs and continue development of new programs.

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## CHAPTER X

### PROBLEM WASTES

#### A. GENERAL

The Solid Waste Management Act of 1991 requires specific information for four problem wastes: 1) household hazardous waste, 2) waste tires, 3) waste oils, and 4) lead acid batteries. A minor amount of information is required for litter control and ~~other wastes which may be of particular concern to the Region~~ (i.e. infectious wastes, white goods, abandoned cars, pallets, etc.)

#### B. HOUSEHOLD HAZARDOUS WASTE (HHW)

##### 1. Regional Needs

It is expected that households in the Fayette County Solid Waste Planning Region generate a fairly typical amount of HHW. In the past these wastes were allowed into Class I landfill facilities for final disposal, however the goal of the Solid Waste Act of 1991 is to dispose of these materials in a more suitable manner. There is growing concern that Class I landfills do not adequately protect the environment from releases of HHW materials.

Household wastes can generally be classified as hazardous if they are flammable, corrosive, reactive or toxic. A partial list of common household materials typically classified as hazardous is provided below.

##### I. Household Cleaners

Drain Openers, Oven Cleaners, Wood and Metal Cleaners  
Polishers, Toilet Bowl Cleaners, and Disinfectants

##### II. Automotive Products

Oil and Fuel Additives, Grease and Rust Solvents,  
Carburetor and Fuel Injector Cleaners, Air Conditioning  
Refrigerants, Starter Fluids, Body Putty, Anti-Freeze/Coolant,  
Waste Oil

##### III. Home Maintenance and Improvement Products

Paint Thinner, Paint Strippers and Removers, Adhesives,  
Paint

##### IV. Lawn and Garden Products

Herbicides, Pesticides/Rodenticides, Fungicides/Wood  
Preservatives

##### V. Miscellaneous

Batteries, Fingernail Polish Remover, Pool Chemicals,  
Photo Processing Chemicals, Medicines/Drugs, Reactives (aerosols/  
compressed gas)

## 2. Regional Plan

a. **Regional Goals** - The Regional goals for HHW management are as follows:

1. To divert HHW from Class I facilities,
2. To receive credit toward the 25% reduction goal,
3. To provide a facility for temporarily collecting, sorting and packaging HHW materials (~~The facility will be used in conjunction with the State-approved HHW collection contractor during State-sponsored collection events.~~), and
4. To educate the public about HHW materials, collection facilities, "safe" substitutes, etc.

b. **HHW Collection Site** - The Region will provide a facility for collecting, sorting and packaging HHW materials. An existing paved area of suitable size will be roped off for collecting, sorting and packaging operations. Other site criteria as described in the TDEC publication "County Responsibilities, Household Hazardous Waste Collection Events in Tennessee; Policy Guide; August 1993" are already in place.

c. **Information and Education** - The Region plans to incorporate information and brochures already available through the TDEC Division of Solid Waste Assistance into its public information and educational efforts. Local newspapers, schools, civic groups and service organizations will be the primary sources for distributing information about HHW and specific collection events. A minimum of two(2) months of notice will be given to the general public prior to an HHW collection event. During these two months, public information will be provided on a regular basis, at least weekly, in order to adequately promote the event. See Chapter IX for additional information on public information and education.

d. **Coordination With State Collection Efforts** - As mandated by the 1991 Act, the State will provide periodic services for collection of HHW materials from each planning region. The Fayette County Solid Waste Planning Region will coordinate its facilities, planning and personnel to make maximum usage of the State collection program. Once a collection day is established, the County will assume a support role for the State's collection contractor. Any responsibilities not a part of the contractor's duties such as notification of local emergency agencies, providing additional site security, providing additional site safety precautions, etc. will be handled by the County Public Works Department. The County will coordinate its record keeping with the State contractor's records in order to properly document the collection activities. These records will be filed with the State by the appropriate authority as required by the Act.

e. Staff and Training - No additional staffing is anticipated for the HHW program. The Region will utilize County staff presently available to coordinate the collection events, assist during the collection activities and complete any record keeping and State documentation. One(1) County staff person will manage the program and one(1) other will assist in its implementation. Additional volunteers may be requested to assist during the collection event.

f. Estimated Costs - Costs associated with the HHW collection program as it is planned will be funded through a disposal fee of approximately \$0.02/household/month. The majority of the facility and staffing costs are already in place at this time. Estimated costs for the HHW program provided below are based on staging one(1) collection event per year.

<u>Description</u>	<u>Estimated Cost/Yr</u>
Collection Event Staffing	\$700.00
Public Information/Education	500.00
Facility Preparation Costs	200.00
Recording Keeping/Documentation	100.00
	<u>\$1,500.00</u>

3. Implementation Schedule - Pending the establishment of a scheduled date with the State's collection contractor, the Region plans to hold one HHW collection event during October of 1994.

### C. WASTE TIRES

#### 1. Current Waste Tire Program

a. Permitted Tire Storage Site - The County currently has a permitted tire storage site capable of containing 2,500 to 5,000 tires. A State grant of \$5,000 was received to help construct the facility which is located near the entrance to the County landfill. The rectangular storage area is approximately 125 feet long and 50 feet wide with an earthen berm approximately 2 feet tall and 10 feet wide completely surrounding the area. A 4-inch layer of gravel covers the site. Stormwater falling in the tire storage area drains generally from the southeast corner to the northeast corner where it flows through a valved pipe into the existing surface runoff system.

b. Tire Shredding Operations - Tire shredding is scheduled two(2) times per year, and the State contracted tire shredder provides the service at the storage area. Based on previous shredding operations and the rate of incoming tires, the Region expects to handle from 2,000 to 3,000 tires per year. Typically two(2) County employees assist the contractor during the operation.

d. Ultimate Use/Disposal of Shredded Tires - At this time the County is using shredded tires to aid in erosion control at the Class I landfill. In the future, shredded tires can be used in a

similar fashion at the planned Class III/IV landfill and credited toward the 25% waste reduction goal.

e. **Operating Costs** - The operating costs for the tire storage area, shredding, final use/disposal, and record keeping will be funded through a disposal fee of approximately \$0.02/household/month. Costs would be similar to those provided above for HHW collection events or roughly \$1,500 dollars per year.

## 2. Current Tire Generation and Processing Rates

Based on the amount of pre-disposal fees paid to the State of Tennessee Department of Revenue for the period from July 1, 1992 through June 30, 1993, approximately 4,402 tires were sold in Fayette County. Studies indicate that the typical tire discard rate is approximately 0.7 tires/person/year. For Fayette County this generation rate would equate to approximately 16,800 tires per year. It is obvious that a large number of tires used in the County are purchased outside the County. It is also believed that the County generates less than the "typical" amount of waste tires per year. Based on this and the fact that tire retailers are accepting used tires when new tires are sold, the existing tire storage and processing operation is believed to be adequate for the Region at this time. Shredding operations conducted twice per year can easily handle all accumulated tires.

## 3. Illegal Waste Tire Inventory

As a part of normal operations, the County will continue to deal with illegal waste tire piles as their locations become known. The normal procedure when a tire pile is identified is to notify the land owner and request that all tires be removed by a specified date. If the request is denied, a second notice is sent insisting that all tires be removed immediately or face possible legal action. Legal action could include civil penalties or property seizure as allowed by local, state and federal law.

## D. WASTE OIL

### 1. Current Waste Oil Management

At this time there are no publically operated waste oil management programs in the Region. A limited number of automotive service centers or related private businesses may accept used oil from the public, but none are identified in this Plan.

### 2. Planned Regional Collection Site

As part of the planned super-convenience center described in previous chapters, the Region will provide a used oil collection area. The facility will be located under a covered area with appropriate safeguards for preventing collisions, containing spills, and maintaining any necessary health and safety

requirements. The area will be accessible to the general public of the Region and will be staffed at all times during operating hours.

#### E. LEAD ACID BATTERIES

##### 1. Current Battery Management

At this time the County accepts used lead acid batteries at the Class I landfill office building just inside the entrance. ~~Batteries can be dropped off on the covered porch of the office building. They are then moved as needed to a small trailer for hauling to a local recycler.~~

##### 2. Supporting Existing Efforts

More battery retailers are accepting used batteries when new batteries are sold. As this practice grows, the Region expects to handle fewer used batteries in the future.

##### 3. Planned Regional Collection Site

A collection area for used batteries will be established in the planned super-convenience center. As with the used oil area, the used battery area will be equipped with all necessary safeguards and will be staffed during all operating hours.

#### F. LITTER CONTROL EFFORTS

The existing litter control program described in Chapter II will continue to operate under the County's direction. The County will provide any information that relates to solid waste reduction and recycling or problem wastes to the Regional Board on an annual basis. The Region will report any pertinent information to the State in annual Plan updates.

#### G. INFECTIOUS WASTE AND OTHER PROBLEM WASTES

The Region does not recognize any problems with infectious wastes or other wastes such as white goods, abandoned cars, etc. at this time. If any such specific waste should become a particular problem or concern in the future, the Region will adopt a management plan to address the situation. This section of the Plan will then be revised to include that management plan.

## CHAPTER XI

### IMPLEMENTATION: SCHEDULE, STAFFING AND FUNDING

#### A. SYSTEM DEFINITION

##### 1. Components of the System

~~The Regional Plan for solid waste management includes~~ collection and transportation, waste diversion, recycling, source reduction, Class I disposal, Class III/IV disposal, public information and education and problem waste management. All of the system components will be integrated together, but the overall success of the Plan will depend largely on public information and education. Key elements of the Plan along with Regional goals or objectives are described below.

Collection and transportation - The Regional goal is to provide door-to-door solid waste collection for every resident in the Region. This goal will be accomplished by establishing a Regional contract with a private collection company to collect solid waste from every resident in the Region. Businesses and municipalities will be included in the system if they so desire, however municipalities with existing solid waste collection systems will not be required to participate. The private contractor may be required to transport all solid waste from the Region to the planned super-convenience center where wastes could be transferred into larger vehicles for transport to a Class I landfill outside the Region or collect solid waste and haul directly to the Class I site outside the Region.

Waste reduction - The Regional goal is to reduce the per capita amount of solid waste presently being generated as much as possible. The State's target reduction of 25% based on 1989 rates will be used for Planning purposes, however every effort will be made to meet and exceed this target. Specific components of the reduction plan include solid waste diversion from Class I landfills to Class III/IV landfills and residential, commercial, industrial, governmental and institutional recycling and source reduction. The super-convenience center will also be an integral part of this system as it will house the residential recycling center and "blue-bag" separation area, if a transfer facility is operated.

Waste Disposal - Both Class I and Class III/IV landfills are included in the Plan. Class I disposal will be provided under contract by the best and most economical private facility in the area. The County also intends to maintain its Class I landfill permit in the event that this facility becomes economical to operate in future years. A portion of the existing permitted Class I area will be reclassified as a Class III/IV landfill and operated by the County. As much Class III/IV material as possible will be diverted to this facility to help achieve the waste reduction target.

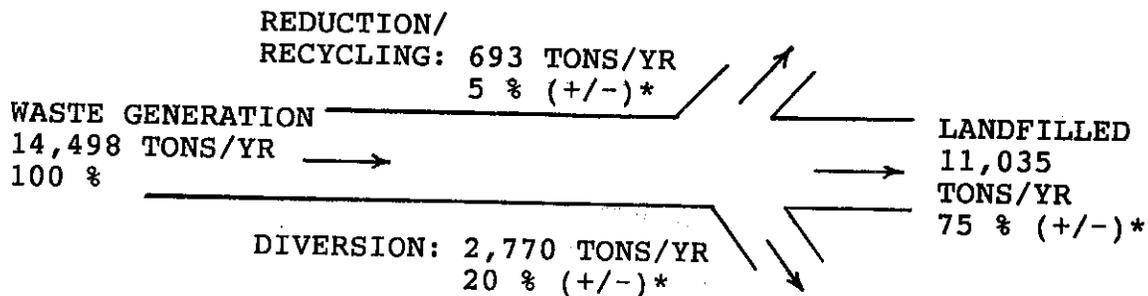
Public Information and Education - The Region considers this component of the Plan to be very critical to the overall success of the Plan. The Regional goal is to adequately inform and educate as many audiences as possible about the Regional Plan and how it affects them personally. Programs which encourage participation will be emphasized. Success will be based largely on the participation in residential and commercial recycling, household hazardous waste collection events, problem waste collection and Class III/IV material collection.

~~Problem Waste Collection - The super-convenience center will be the key component of the Regional Plan to properly manage waste tires, used oil, and used batteries. The Regional goal is to provide a facility for collecting these materials so that proper disposal can be assured.~~

## 2. Proportional Solid Waste Flow Diagram

An illustration of the most probable proportional solid waste flow resulting from the Regional Plan is shown below along with a table of estimated quantities for the Planning period.

PROPORTIONAL SOLID WASTE FLOW DIAGRAM, 1996



\*Percentages are rounded to equal 25% total reduction; generation estimates and reduction goals are calculated based on different base data; base year may be modified in Plan updates

PROJECTED QUANTITIES OF SOLID WASTE TO BE MANAGED, TONS

<u>Year</u>	<u>Projected Generation*</u>	<u>Source Reduction/ Recycling</u>	<u>Diverted</u>	<u>Landfilled</u>
1994	14,488	139	555	13,794
1995	14,493	416	1,662	12,415
1996	14,498	693	2,770	11,035
1997	14,504	692	2,776	11,036
1998	14,511	691	2,765	11,055
1999	14,518	691	2,762	11,065
2000	14,526	690	2,761	11,075
2001	14,511	688	2,754	11,069
2002	14,498	687	2,747	11,064
2003	14,483	685	2,741	11,057

\*Per Table III-3

## B. IMPLEMENTATION SCHEDULE

The implementation schedule for the Regional Plan is described below.

August 1, 1994 - Identify key Regional Board members, County and municipal staff and community volunteers to assist in implementation of the public information and education activities. Also, establish an Educational Advisory Committee to specifically address the school and community related components of the Plan.

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August, 1994 - Submit request to the State for reclassification of 5 acres at the existing Class I site for use as Class III/IV landfill

September 1, 1994 - Complete design of super-convenience center

September 1, 1994 - Begin a series of newspaper articles describing various aspects of the Regional Plan and how the Region may be affected.

December 1, 1994 - Mail survey forms to municipalities with collection systems to obtain annual information; mail survey forms to major industries and other major solid waste generators to obtain annual information

January, 1995 - Meeting of key Regional Board members, County and municipal staff, Educational Advisory Committee members and interested volunteers to begin developing a formal plan of various public information and education efforts.

February 1, 1995 - Open bids for Regional services

February 1, 1995 - Complete construction of super-convenience center

March 1, 1995 - Hire additional staff

May 1, 1995 - Funding sources finalized; monthly household fee for residential services; tipping fee at the Regional Class III/IV landfill and super-convenience center for other private haulers, industries, etc. (No tipping fee for problem wastes - oil, automotive batteries, tires)

May 15, 1995 - Award contract for Regional services; service to begin July 1, 1995

June 1, 1995 - Initiate billing system for monthly residential service fee; initiate tipping fee at super-convenience center; initiate tipping fee at Regional Class III/IV landfill pending reclassification of Class I acreage by the State

July 1, 1995 - Begin contract period for Regional services

February 1, 1995-2003 - Request information from private Class I landfill contractor and Tennessee and Mississippi solid waste agencies about remaining Class I landfill capacities.

January and July, 1996-2003 - Semi annual meeting of individuals listed above to discuss and evaluate existing public information and education programs and to continue development of new programs.

March 1, 1995-2003 - Annual progress report due to State

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### C. STAFFING AND TRAINING REQUIREMENTS

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**Collection: Regional** - The private collection contractor will be responsible for all staffing and training. Documentation of all training will be provided to the Region by the contractor

**Super-Convenience Center:** The Super-Convenience Center will be staffed by one(1) full time County employee. It is anticipated that this position will be filled December 1, 1994.

The Transfer Station component, if used, will be staffed by one(1) full time staff County employee. This position will be filled prior to beginning transfer operations at the facility.

If a transfer station is utilized, the separation of residential "blue-bags" for recycling will be staffed by two(2) part time County employees. These positions will also be filled December 1, 1994.

**Disposal: Class I Disposal** - The private Class I facility contracted with the Region will be responsible for all staffing and training.

**Class III/IV** - The County will use existing staff from its Class I facility to staff the Class III/IV facility. Training will be provided and documented as per State requirements.

D. BUDGET

The 10-year budget of estimated expenses and revenues for the Plan is provided below. Collection, super-convenience center, Class III/IV, public information, and tire and household hazardous waste costs do not reflect annual inflation. The Class I landfill costs are based on the possible disposal contract rates presented in Appendix F and anticipated waste quantities.

EXPENSES

<u>Year</u>	<u>Collect.</u>	<u>Super- Conven.*</u>	<u>Class I Landfill</u>	<u>Class III/IV</u>	<u>Info. Educ.</u>	<u>Tires/ HHW</u>
1994	\$295,000	\$ 0	\$317,262	\$ 0	\$1,000	\$3,000
1995	576,000	195,050	192,000	148,181	1,000	3,000
1996	576,000	195,050	192,000	148,181	1,000	3,000
1997	576,000	195,050	192,000	148,181	1,000	3,000
1998	576,000	195,050	192,000	148,181	1,000	3,000
1999	576,000	195,050	192,000	148,181	1,000	3,000
2000	576,000	195,050	192,000	148,181	1,000	3,000
2001	576,000	195,050	192,000	148,181	1,000	3,000
2002	576,000	195,050	192,000	148,181	1,000	3,000
2003	576,000	195,050	192,000	148,181	1,000	3,000

\*Includes the waste oil, waste battery, waste transfer, recycling and super-convenience center operations.

REVENUES

Revenues to fund the proposed solid waste management system have not been finalized at this time, however the Regional goal is for the system to be fully supported by disposal fees and tipping fees. Disposal fees for residents will be billed on a monthly basis, and it is anticipated that these fees will be added to the monthly electric bill. Agreements with the local electric utility companies serving the County will be negotiated prior to June, 1995. Funding sources for the various system components are described below.

**Collection** - The collection system in the unincorporated and unserved areas of the Region will be funded entirely through disposal fees. The anticipated residential cost is from \$5.00 to \$7.00 per household per month.

Municipalities which continue to operate a door-to-door collection system will be responsible for funding their system. In most cases this funding will continue to be through user fees.

**Super-Convenience Center** - The costs associated with the super-convenience center will be allocated to everyone having access and use of the facility. These users include all residents in the County served by the Regional collection system, all municipalities which operate a collection system and all

private waste haulers operating in the County which use the facility. The tipping fees for private haulers would include disposal costs and are expected to be from \$30.00 to \$35.00 per ton. The residential cost is anticipated to be from \$0.75 to \$2.50 per household per month.

The Town of Somerville has stated that they are in the process of contracting for all of the services provided by the the super-convenience center such as waste tire, oil and battery collection. However, it is the intent of the Region at this time ~~to recommend that all residents which have access to and utilize the proposed facility pay a proportional share of the operating cost.~~

**Class I Landfill Disposal** - The contract price for Class I waste disposal will dictate the user cost per month. It is anticipated that the residential cost will be from \$2.00 to \$3.00 per household per month. If municipalities operating a collection system choose to transport their waste to the County transfer station, (if utilized), the transfer cost and final disposal cost at the private Class I facility will be assessed to the municipality. The cost to businesses and industries will be based on the total tonnage of solid waste handled by the County and taken to the Class I facility.

**Class III/IV Landfill Disposal** - The estimated cost for disposal of Class III/IV material at the County facility is approximately \$1.00 to \$1.50 per household per month.

**Public Information/Education/Waste Tire Management/Household Hazardous Waste** - The total cost associated with these programs will also be funded through user fees anticipated to be approximately \$0.04 to \$0.05 per household per month.

**Total Residential Cost** - The cost per household per month for the entire solid waste management system is anticipate to be from approximately \$9.00 to just over \$14.00. Costs are expected to be much closer to \$9.00 per household per month due to the conservative methods of cost estimating used to develop the Regional Plan.

#### E. REGIONAL BASE MAP

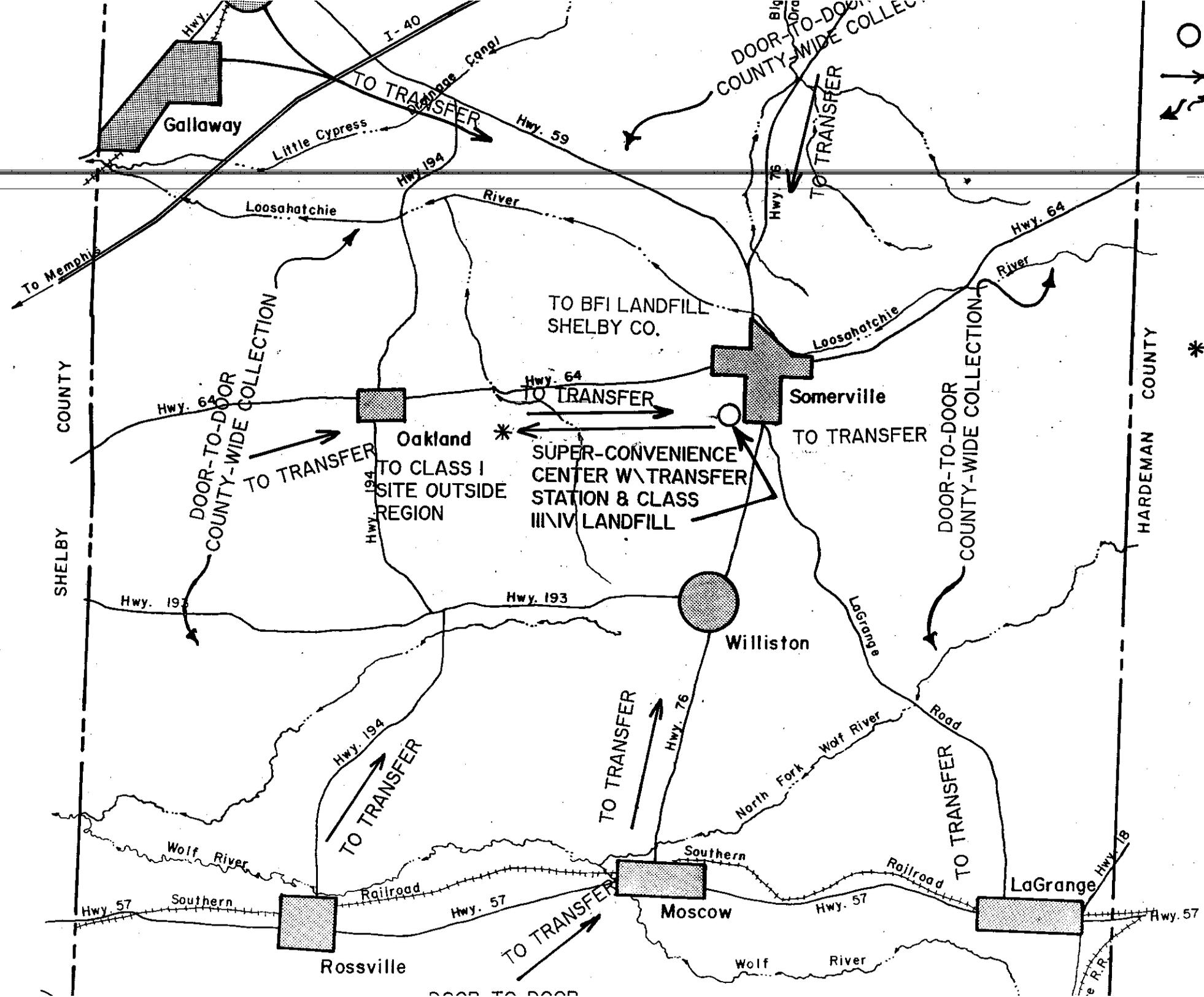
Map XI-1 and Map XI-2 are composite base maps of the planned Regional solid waste management system with and without the solid waste transfer operation. These maps show waste flow patterns, major facilities, etc.

- MANAGEMENT SYSTEM**
- SUPER-CONVENIENCE CENTER & CLASS III/IV LANDFILL
  - WASTE FLOW
  - ↪ COUNTY-WIDE COLLECTION

## Fayette County

## Solid Waste Planning Region

\* CLASS I DISPOSAL SITE OUTSIDE REGION TO BE DETERMINED BY BID

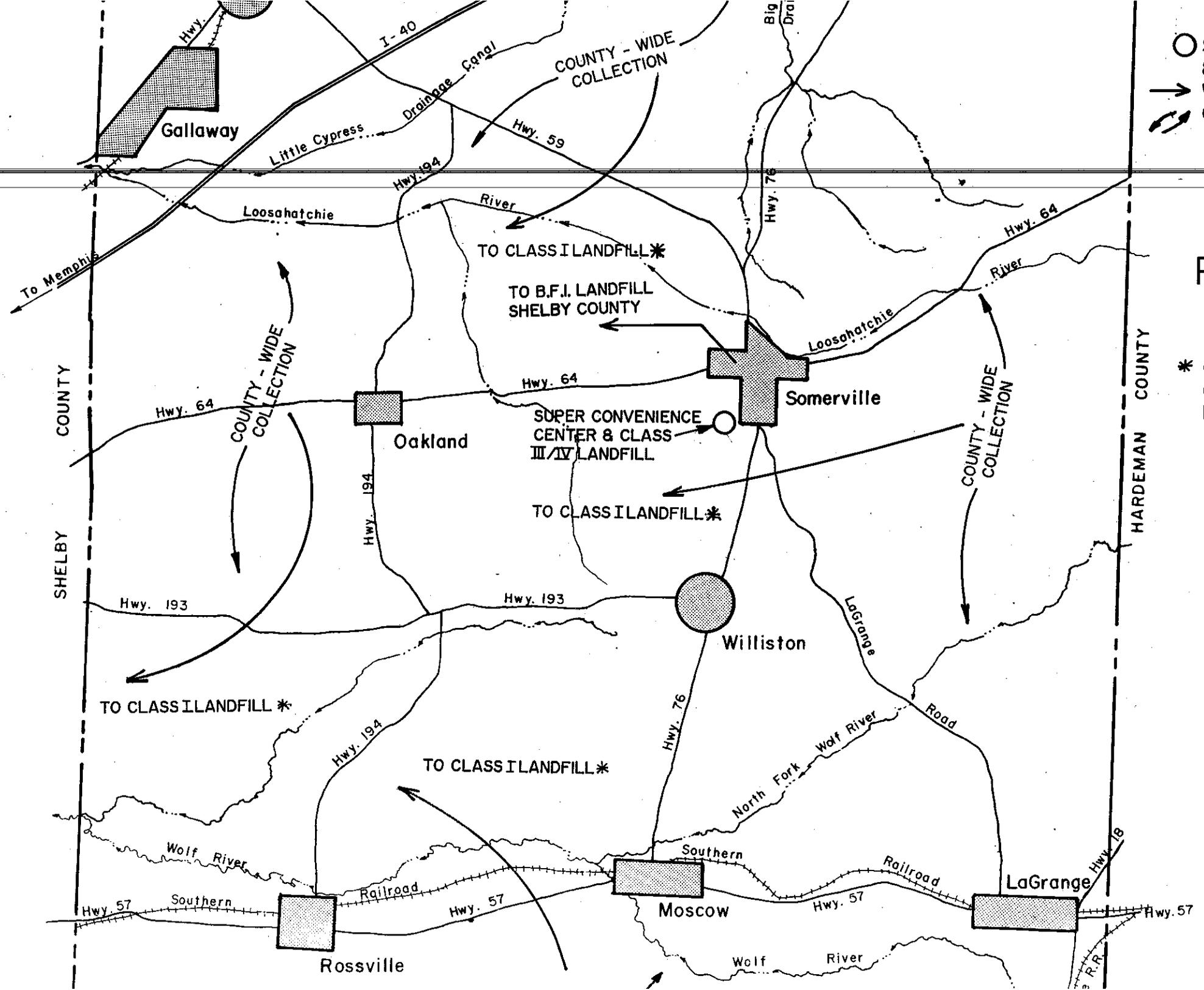


- MANAGEMENT SYSTEM (NO TRANSFER), SUPER CONVENIENCE CENTER & CLASS III/IV LANDFILL
- WASTE FLOW
- ↻ COUNTY-WIDE COLLECTION

# Fayette County

## Solid Waste Planning Region

\* CLASS I DISPOSAL SITE OUTSIDE OF REGION TO BE DETERMINED BY BID.



## CHAPTER XII

### ALLOCATION OF IMPLEMENTATION RESPONSIBILITIES:

#### PLAN ADOPTION AND SUBMISSION

In accordance with the Solid Waste Management Act of 1991, ultimately the full responsibility for implementation of the Plan resides with Fayette County. Therefore the Plan was submitted to and reviewed by the Fayette County Board of Commissioners on June 28, 1994 and adopted by resolution. A copy of the adoption resolution is included with the Plan submittal letter to the Tennessee Department of Environment and Conservation, Division of Solid Waste Assistance.

The Plan was also approved by the Fayette County Solid Waste Region Board, Fayette County Development Commission, Fayette County Public Works Board and Fayette County Planning Commission. A copy of the adoption resolution from the County Commission is included in Appendix E.

CHAPTER XIII  
FLOW CONTROL AND PERMIT APPLICATION REVIEW

A. FLOW CONTROL

The Solid Waste Management Act of 1991 authorizes two types of regional flow control - 1) out-of-region bans and 2) intra-region flow control. At this time, the Fayette County Solid Waste Planning Region chooses not to include any flow control policies in the Plan. This decision will be reviewed annually to determine if future flow control policies need to be inacted.

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B. REGIONAL REVIEW OF PROPOSED SOLID WASTE FACILITIES

The Regional Board will review proposed solid waste disposal facilities and incinerators to determine if they are consistent with the approved Regional Plan.

PART III

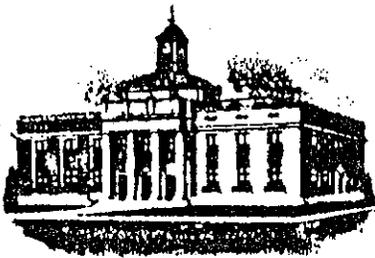
APPENDICES

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## APPENDIX A

### Legal Documentation and Organization of the Region

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Organized 1824

## Office of County Executive

### Fayette County

Room 204, Courthouse  
Somerville, Tennessee 38068  
(901) 465-5202

*David Smith*  
County Executive

January 20, 1993

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Honorable Bryant Millsaps  
Tennessee Secretary of State  
403 7th Avenue, North  
Nashville, Tennessee, 37243-0305

Dear Secretary Millsaps:

Pursuant to the Solid Waste Management Act of 1991, I hereby attach an attested copy of a resolution adopted unanimously by the Fayette County Commission in regular session on Tuesday, January 19th, 1993.

This resolution establishes Fayette County as a single - county planning region under the terms of the Act, and provides for the appointment of a seven - member Municipal Solid Waste Planning Region Board.

Sincerely,

Wm. David Smith  
County Executive

cc: Steve Andrews, MAAG  
Commissioner Vip D. Lewis  
Richard Rucker

Attach:

WDS:cs

RESOLUTION NO. 92-\_\_\_\_\_  
A RESOLUTION  
CREATING FAYETTE COUNTY'S  
MUNICIPAL SOLID WASTE  
PLANNING REGION

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WHEREAS, the adoption of the Subtitle D landfill regulations by the United States Environmental Protection Agency and companion regulations adopted by the Tennessee Solid Waste Control Board will impact on both the cost and method of disposal of municipal solid waste; and

WHEREAS, at the urging and support of a coalition of local government, environmental, commercial and industrial leaders, the 97th Tennessee General Assembly enacted T.C.A. § 68-211-801 et seq. titled "Solid Waste Management Act of 1991", and

WHEREAS, with the view that better planning for solid waste will help control the additional cost that will be imposed by the new landfill regulations, help protect the environment, provide and improve solid waste management system, better utilize our natural resources, and promote the education of the citizens of Tennessee in the areas of solid waste management including the need for and desirability of reduction and minimization of solid waste, local governments in Tennessee supported and worked for the passage of this Act; and

WHEREAS, one of the stated public policies of this Act is to institute and maintain a comprehensive, integrated, statewide program for solid waste management; and

WHEREAS, as per T.C.A. § 68-211-881, the nine development districts in the State of Tennessee have completed a district needs assessment which are inventories of the solid waste systems in Tennessee; and

WHEREAS, Fayette County's Board of County Commissioners has given consideration to the needs assessment prepared by the Memphis Area Association of Governments; and

WHEREAS, T.C.A. § 68-211-813, requires that counties in the State of Tennessee form municipal solid waste regions no later than December 12, 1992; and

WHEREAS, the Act's stated preference in the formation of multi-county regions with counties having the option of forming single or multi-county municipal solid waste regions; and

WHEREAS, the State of Tennessee, will provide grant monies of varying amounts to single county, two County, and three or more County municipal solid waste regions to assist these regions in developing their municipal solid waste regions plans; and

WHEREAS, the primary and prevailing purpose of the municipal solid waste regions ~~are the preparation of municipal solid waste regions plans~~ which among other requirements must identify how each region will reduce its solid waste disposal per capita by twenty-five percent (25%) by December 31th, 1995, and a planned capacity assurance of its disposal needs for a ten (10) year period; and

WHEREAS, the development of a municipal solid waste regional plan that results in the most cost effective and efficient management of municipal solid waste is in the best interest of the citizens of Fayette County.

NOW, THEREFORE, BE IT RESOLVED, by the Board of County Commissioners of Fayette County, Tennessee, acting pursuant to T.C.A. [ 68-211-801 et seq., that there is hereby established a Municipal Solid Waste Region for and by Fayette County, Tennessee; and

BE IT FURTHER RESOLVED, that pursuant to T.C.A. [ 68-211-801 et seq., that the Board of County Commissioners of Fayette County, Tennessee, finds and determines that Fayette County shall be and shall constitute a single County municipal solid waste region due to the following: It is the will of the Citizens of Fayette County to remain a single entity in collection and disposal of Solid Waste. It is also the wish of the citizens to ue the existing permitted landfill to the maximum good of the people of Fayette County; and

BE IT FURTHER RESOLVED, that pursuant to T.C.A. [ 68-211-813(b)(1), a Municipal Solid Waste Region Board is hereby established to administer the activities of this Region; and

BE IT FURTHER RESOLVED, that this Municipal Solid Waste Region Board shall be composed of seven (7) members; and

BE IT FURTHER RESOLVED, that pursuant to T.C.A. [ 68-211-813(b)(1), three (3) Board members shall be appointed by the County Executive and approved by the Board of County Commissioners; and

BE IT FURTHER RESOLVED, that the six (6) Cities, Gallaway, LaGrange, Moscow, Oakland, Rossville and Somerville, shall appoint three (3) members At-Large, approved by their respective City Boards; and

BE IT FURTHER RESOLVED, that one (1) member of the Municipal Solid Waste Board shall be appointed as a At-Large member representing and approved by both County and Cities; and

BE IT FURTHER RESOLVED, that members of the Board of the Municipal Solid Waste Region shall serve a six (6) year term except that one (1) member appointed by the County Executive shall have a two (2) year term, that one (1) member appointed by the County Executive shall have a four (4) year term, that one (1) member appointed by the County Executive shall have a six (6) year term; and

~~BE IT FURTHER RESOLVED, that the members of the Board of the Municipal~~  
Solid Waste Region as appointed above by the respective Cities, shall serve a six (6) year term, except that one (1) member so appointed shall serve for one (1) year, one (1) member for three (3) years and one (1) member for five (5) years; and

BE IT FURTHER RESOLVED, that the one (1) member appointed At-Large by the County Executive and Mayors of the Cities, shall serve a two (2) year term; and

BE IT FURTHER RESOLVED, that this Municipal Solid Waste Region Board shall have all powers and duties as granted it by T.C.A. [ 68-211-813 et seq. and in addition, in the performance of its duty to produce a municipal solid waste region plan, it shall be empowered to utilize existing Fayette County governmental personnel, to employ or contract with persons, private consulting firms, and/or governmental, quasi-governmental, and public entities and agencies and to utilize Fayette County's services, facilities and records in completing this task; and

BE IT FURTHER RESOLVED, that at the Municipal Solid Waste Region Board's initial organization meeting it shall select from its members a chair, vice-chair, and secretary and shall cause the establishment of a municipal solid waste advisory committee whose membership shall be chosen by the Board and whose duties are to assist and advise the Board; and

BE IT FURTHER RESOLVED, that the Municipal Solid Waste Region Board, in furtherance of its duty to produce a municipal solid waste region plan, is authorized to apply for and receive funds from the State of Tennessee, the federal government, Fayette County, the City of Gallaway, the City of LaGrange, the City of Moscow, the City of Oakland, the City of Rossville and the City of Somerville, and donations and grants from private corporations and foundations; and

BE IT FURTHER RESOLVED, that the Municipal Solid Waste Region Board, will strive to coalesce with other municipal solid waste regions, to maximize education, collection, recycling and disposal of solid waste; and

BE IT FURTHER RESOLVED, that the Municipal Solid Waste Region Board, will plan in conjunction with other regions and Counties contiguous to the boundaries of this Municipal Solid Waste Region and the Memphis Area Association of Governments Development District so as to encourage multi-County planning and make possible later mergers of smaller regions into larger regions if so desired; and

BE IT FURTHER RESOLVED, that Fayette County shall receive, disburse and act as the fiscal agent for the administration of the funds of the Municipal Solid Waste Region and the Region's Board; and

BE IT FURTHER RESOLVED, that upon the passage of this Resolution and at no later date than December 31, 1992, the County Clerk of Fayette County shall transmit a copy of this Resolution to the Tennessee State Planning Office; and

RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF FAYETTE COUNTY, TENNESSEE, this 19th day of JANUARY, 1993, the welfare of the citizens of Fayette County requiring it.

Sponsor:

Vip D. Lewis  
County Commissioner

Attest:

*Bill J. Graham*  
Fayette County Clerk

Approved:

*Wm. David Smith*  
Wm. David Smith  
Fayette County Executive

Approved as to form:

*Jaymond*  
Fayette County Attorney

# 9. 1. 1. 1

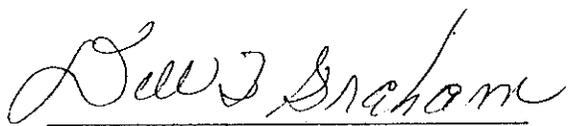
RESOLUTION OF  
AMENDMENT TO THE  
FAYETTE COUNTY REGIONAL  
MUNICIPAL SOLID WASTE BOARD

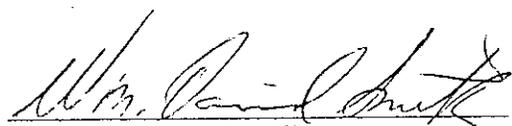
WHEREAS, the Tennessee State Planning has reviewed the resolution of the Fayette County Commission dated January 19th, 1993, establishing Fayette County's Municipal Solid Waste Planning Region, and finds that amendments are required thereto,

NOW THEREFORE BE IT RESOLVED by the Board of County Commissioners of Fayette County, Tennessee, meeting in regular session at 7:00 P.M., Tuesday, June 22nd, 1993, at the Courthouse in Somerville, that the resolution creating a Solid Waste Planning Region for Fayette County as found in Minute Book #3, page #573 is amended by deleting the eighth "resolved" section entirely and substituting the following language:

"BE IT FURTHER RESOLVED, that the members of the Board of the Municipal Solid Waste Region as appointed above by the respective Cities, shall serve a six (6) year term, except that one (1) member so appointed shall serve for two (2) years, one (1) member for four (4) years and one (1) member for six (6) years; and, "

Adopted this 22nd day of June, 1993.

  
DELL T. GRAHAM  
COUNTY CLERK

  
WM. DAVID SMITH  
COUNTY EXECUTIVE



State of Tennessee

NED McWHERTER  
GOVERNOR

September 24, 1993



Mr. David Smith  
Fayette County Executive  
P.O. Box 218  
Somerville, TN 38068

Dear Mr. Smith:

Thank you for submitting an amendment to the Fayette County resolution establishing a municipal solid waste region. The amendment corrects the defect described in paragraph 3 of my letter to you, dated March 10, 1993.

The amendment does not address the defect identified in paragraph 2 of the March 10 letter. However, inasmuch as the members of your board have apparently been appointed and confirmed by the appropriate county or municipalities, and the board is actively developing a plan, I have decided to remove the conditions in the Fayette County resolution.

However, please note that when you submit your regional plan to the state in June 1994, the appointment and confirmation of each member of the Fayette County Regional Planning Board must be documented, as described in Appendix A, page 56 of the "Guidelines" ("yellow book"). A copy of this appendix is attached.

Consequently, the resolution now appears to substantially comply with the Solid Waste Management Act of 1991, and is approved.

By copy of this letter, I will notify the Department of Environment and Conservation that the Fayette County resolution has been approved, and that the region is eligible to apply for a \$15,000 planning grant.

If you have any additional legal questions, you may contact Elizabeth Blackstone at 615/532-0077, or Ron Fults at 615/242-0358; Mr. Hale is no longer on our staff.

Sincerely,

*Carol White*

Carol White  
Director  
State Planning Office

CCW/RHN/jmp

Attachments

cc: Paul Evan Davis  
Elizabeth Blackstone  
Ron Fults  
John Sicola

RESOLUTION AMENDING  
TERMS OF MEMBERS  
TO THE REGIONAL SOLID WASTE  
PLANNING BOARD

WHEREAS, certain corrections are now necessary to comply with provisions  
~~of the Solid Waste Management Act of 1991;~~

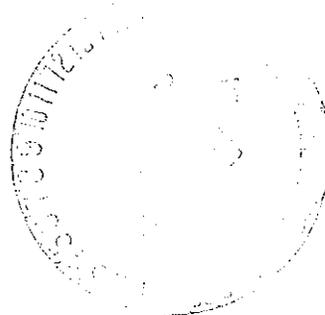
NOW, THEREFORE, BE IT RESOLVED by the Mayor and Board of Alderpersons  
(or Commissioners) of LaGrange, Tennessee; meeting in regular session  
on Dec. 13, 1993, that the previous resolution appointing members to  
the Regional Solid Waste Planning Board is amended as follows:

John Pitner	Two (2) year term
Lee S. "Sissy" Sterling	Four (4) year term
Michael C. French	Six (6) year term

Approved this 13<sup>th</sup> day of Dec., 1993.

ATTEST: Michelle Gaither  
CITY CLERK

Edward [Signature]  
MAYOR



RESOLUTION FILLING  
A "CITY" REPRESENTATIVE VACANCY  
ON THE REGIONAL SOLID WASTE PLANNING BOARD

WHEREAS, a vacancy now exists on the Regional Solid Waste Planning Board due to the resignation of "City" representative, John Pitner, who was serving a two (2) year term;

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Board of Alderpersons (or Commissioners) of Lebrance, Tennessee; meeting in regular session on Dec. 13, 1993, that the recommendation of the Nominating Committee is hereby accepted and the following person is ratified to fill the unexpired two (2) year term, replacing John Pitner:

Maynard C. Stiles  
20375 Highway #57  
Moscow, Tennessee, 38057  
Phone: 901/877-6352

Approved this 13<sup>th</sup> day of Dec., 1993.

ATTEST: Michelle Gaitner  
CITY CLERK

Edmund Stiles  
MAYOR

RESOLUTION AMENDING  
TERMS OF MEMBERS  
TO THE REGIONAL SOLID WASTE  
PLANNING BOARD

WHEREAS, certain corrections are now necessary to comply with provisions of the Solid Waste Management Act of 1991;

---

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Board of Alderpersons (or Commissioners) of ROSSVILLE, Tennessee; meeting in regular session on NOVEMBER 8, 1993, that the previous resolution appointing members to the Regional Solid Waste Planning Board is amended as follows:

John Pitner	Two (2) year term
Lee S. "Sissy" Sterling	Four (4) year term
Michael C. French	Six (6) year term

Approved this 8th day of NOVEMBER, 1993.

ATTEST:

*Alma Rankin*  
CITY CLERK

*James C. French*  
MAYOR

RESOLUTION FILLING  
A "CITY" REPRESENTATIVE VACANCY  
ON THE REGIONAL SOLID WASTE PLANNING BOARD

WHEREAS, a vacancy now exists on the Regional Solid Waste Planning Board due the resignation of "City" representative, John Pitner, who was serving a two (2) year term;

---

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Board of Alderpersons (or Commissioners) of ROSSVILLE, Tennessee; meeting in regular session on NOVEMBER 8, 1993, that the recommendation of the Nominating Committee is hereby accepted and the following person is ratified to fill the unexpired two (2) year term, replacing John Pitner:

Maynard C. Stiles  
20375 Highway #57  
Moscow, Tennessee, 38057  
Phone: 901/877-6352

Approved this 8th day of NOVEMBER, 1993.

ATTEST:

Alicia Rankin  
CITY CLERK

James C. Galtner  
MAYOR



**MAYOR**

Thomas J. Blackwell

**VICE-MAYOR**

John David Douglas

**ALDERMEN**

Don Dowdle  
Nan Green  
Larry J. Harvey  
Priscilla Langdon  
Land Middlecoff

December 1, 1993

David Smith  
County Executive  
Court House  
Somerville, Tn 38068

Dear Mr. Smith:

Please be advised that the two resolutions concerning Solid Waste Board appointees you sent to the Town of Somerville Board of Mayor and Aldermen for consideration were approved.

These resolution were approved by the Board of Mayor and Aldermen at the regular meeting on Monday, November 8, 1993.

If the Town of Somerville or myself can be of any further assistance please let us know.

Sincerely,

Michael C. French  
City Administrator

et



**MAYOR**

Thomas J. Blackwell

**VICE-MAYOR**

John David Douglas

**ALDERMEN**

Don Dowdle  
Nan Green  
Larry J. Harvey  
Priscilla Langdon  
Land Middlecoff

March 24, 1993

David Smith  
County Executive  
Courthouse  
Somerville, TN 38068

Dear Mr. Smith:

On March 8, 1993, at the regular board meeting of the Board of Mayor and Aldermen of the Town of Somerville, the attached Solid Waste Resolution was approved.

If you have any questions, please do not hesitate to call.

Sincerely,

Michael C. French  
City Administrator

et



RESOLUTION APPROVING THE SUGGESTED APPOINTMENTS TO THE FAYETTE  
COUNTY SINGLE - COUNTY SOLID WASTE PLANNING REGION.

BE IT RESOLVED that the Board of Mayor and Aldermen of the Town of  
Somerville ratify the following suggested three (3) appointees to represent the  
municipalities in Fayette County.

---

BE IT RESOLVED that these suggested appointees are:

John Pitner one (1) year term  
Lee S. (Sissy) Sterling three (3) year term  
Michael C. French five (5) year term

BE IT RESOLVED that the suggested City/County joint appointment is:

Richard Rucker two (2) year term

THEREFORE, BE IT RESOLVED that the Town of Somerville Board of Mayor  
and Alderperson ratifies the four (4) above listed persons as representatives of the Town of  
Somerville and the other five (5) municipalities that have solid waste collections systems  
in Fayette County to the seven (7) member Solid Waste Regional Planning Board.

RESOLUTION AMENDING  
TERMS OF MEMBERS  
TO THE REGIONAL SOLID WASTE  
PLANNING BOARD

WHEREAS, certain corrections are now necessary to comply with provisions  
~~of the Solid Waste Management Act of 1991;~~

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Board of Alderpersons  
(or Commissioners) of Moscow, Tennessee; meeting in regular session  
on Nov 8, 1993, that the previous resolution appointing members to  
the Regional Solid Waste Planning Board is amended as follows:

John Pitner	Two (2) year term
Lee S. "Sissy" Sterling	Four (4) year term
Michael C. French	Six (6) year term

Approved this 8 day of Nov, 1993.

ATTEST:

Lee S. Sterling  
CITY CLERK

Calvin E. Oliver  
MAYOR

RESOLUTION FILLING  
A "CITY" REPRESENTATIVE VACANCY  
ON THE REGIONAL SOLID WASTE PLANNING BOARD

WHEREAS, a vacancy now exists on the Regional Solid Waste Planning Board due to the resignation of "City" representative, John Pitner, who was serving a two (2) year term;

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Board of Alderpersons (or Commissioners) of Moscow, Tennessee; meeting in regular session on Nov 8, 1993, that the recommendation of the Nominating Committee is hereby accepted and the following person is ratified to fill the unexpired two (2) year term, replacing John Pitner:

Maynard C. Stiles  
20375 Highway #57  
Moscow, Tennessee, 38057  
Phone: 901/877-6352

Approved this 9 day of Nov, 1993.

ATTEST: \_\_\_\_\_  
CITY CLERK

Calvin E. Davis  
MAYOR

RESOLUTION AMENDING  
TERMS OF MEMBERS  
TO THE REGIONAL SOLID WASTE  
PLANNING BOARD

WHEREAS, certain corrections are now necessary to comply with provisions of the Solid Waste Management Act of 1991;

---

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Board of Alderpersons (or Commissioners) of Oakland, Tennessee; meeting in regular session on November 18 1993, that the previous resolution appointing members to the Regional Solid Waste Planning Board is amended as follows:

John Pitner	Two (2) year term
Lee S. "Sissy" Sterling	Four (4) year term
Michael C. French	Six (6) year term

Approved this 18th day of Nov., 1993.

ATTEST:

Mary H. Maxwell  
CITY CLERK

William O. Muller  
MAYOR

RESOLUTION FILLING  
A "CITY" REPRESENTATIVE VACANCY  
ON THE REGIONAL SOLID WASTE PLANNING BOARD

WHEREAS, a vacancy now exists on the Regional Solid Waste Planning Board due to the resignation of "City" representative, John Pitner, who was serving a two (2) year term;

~~NOW, THEREFORE, BE IT RESOLVED by the Mayor and Board of Alderpersons (or Commissioners) of Oakland, Tennessee; meeting in regular session on November 18, 1993, that the recommendation of the Nominating Committee is hereby accepted and the following person is ratified to fill the unexpired two (2) year term, replacing John Pitner:~~

Maynard C. Stiles  
20375 Highway #57  
Moscow, Tennessee, 38057  
Phone: 901/877-6352

Approved this 18th day of November, 1993.

ATTEST:

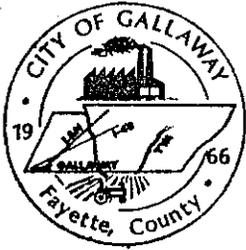
Mary N. Murray  
CITY CLERK

William C. Mullis  
MAYOR

# CITY OF GALLAWAY

P. O. Box 168  
GALLAWAY, TENNESSEE 38036

Phone 901-867-3333



LAYTON WATSON  
Mayor

March 19, 1993

Honorable David Smith  
Fayette County Executive  
Room 204, Courthouse  
Somerville, Tennessee 38068

Dear Executive Smith:

You will please find enclosed, a copy of the Resolution No. 207-93 which was adopted on March 4, 1993 by the Board of Commissioners of the City of Gallaway, regarding the naming of representatives to the Fayette County Solid Waste Planning Board.

With best regards,

Yours truly,

CITY OF GALLAWAY

By   
Layton Watson, Mayor

LW:gb

enclosure



RESOLUTION NO. 207-93

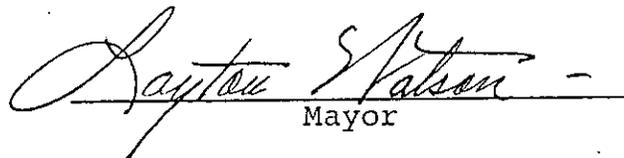
A RESOLUTION APPROVING APPOINTMENTS TO THE FAYETTE COUNTY  
SOLID WASTE PLANNING BOARD.

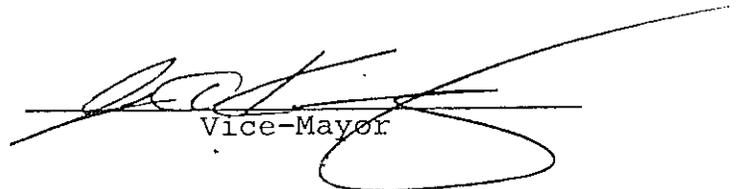
WHEREAS, Tennessee Code Annotated, Section 68-211-813  
~~requires that municipalities providing solid waste collection or~~  
disposal services (directly or indirectly by contract) designate a  
representative to the regional board to be established by Fayette  
County, Tennessee; and

WHEREAS, the City of Gallaway does provide this service and  
therefore are required to be represented on the regional board for  
the purpose of solid waste regional planning.

NOW, THEREFORE BE IT RESOLVED, that the City of Gallaway  
approves the names of Mike French for a five year term, Sissy  
Sterling for a three year term, and John Pitner for a one year  
term, and City/County Joint appointment, Richard Rucker for a  
two year term.

DONE this the 4th day of March 1993, with the Board of  
Commissioners voting unanimously.

  
Mayor

  
Vice-Mayor

  
City Recorder

RESOLUTION APPROVING THE SUGGESTED APPOINTMENTS TO THE FAYETTE COUNTY SINGLE-COUNTY SOLID WASTE PLANNING REGION.

BE IT RESOLVED that the Board of Mayor and Alderpersons of the City of Moscow ratify the following suggested three (3) appointees to represent the municipalities in Fayette County.

BE IT RESOLVED that these suggested appointees are:

John Pitner (1) one year term.

Lee S. (Sissy) Sterling (3) three year term

Micheal C. French (5) five year term

BE IT RESOLVED that the suggested City/County joint appointment is:

Richard Rucker (2) two year term

THEREFORE BE IT RESOLVED that the City of Moscow Board of Mayor and Alderpersons ratifies the (4) four above listed persons as representatives of the City of Moscow and the other (5) five municipalities that have solid waste collections systems in Fayette County to the seven (7) member Solid Waste Regional Planning Board,

*Ratified 3-8-93*

*city recorder  
Lee S. Sterling*

*Approved  
Mayor  
and Board  
alderperson -*



RESOLUTION OF RATIFICATION OF MEMBERS  
OF THE FAYETTE COUNTY SOLID WASTE PLANNING REGION

BE IT RESOLVED that the Board of Mayor and Alderman of the Town of Oakland, Tennessee, ratify appointment of the following three (3) persons to represent the towns of Fayette County on the Fayette County Solid Waste Planning Board:

John R. Pitner - One (1) year;  
Lee S. (Sissy) Sterling - Three (3) years;  
Michael C. French - Five (5) years.

AND BE IT FURTHER RESOLVED that Richard Rucker is ratified for a two (2) year term as the joint city/county representative on the Fayette County Solid Waste Planning Board.

William C. Miller  
Mayor, Town of Oakland

3-18-93  
Date



RESOLUTION NO. 93 - 1

BE IT RESOLVED THAT IN COMPLIANCE WITH PROVISIONS OF THE SOLID WASTE MANAGEMENT ACT OF 1991, FAYETTE COUNTY HAS ESTABLISHED A PLANNING BOARD OF SEVEN (7) PERSONS.

THE FOLLOWING NAMES ARE SUGGESTED FOR COMPLETING THE BOARD:

---

CITY APPOINTMENTS:	MIKE FRENCH	5 YEAR TERM
	SISSY STERLING	3 YEAR TERM
	JOHN PITNER	1 YEAR TERM
CITY/COUNTY JOINT APPOINTMENTS:	RICHARD RUCKER	2 YEAR TERM

PASSED: 3-08-93

  
(MAYOR)

THE TOWN OF LAGRANGE

DEAR DAVID SMITH:

IN OUR MARCH 8, 1993 TOWN MEETING THE MAYOR AND BOARD MADE A  
~~RESOLUTION TO ACCEPT THE APPOINTMENTS FOR THE SOLID WASTE~~  
BOARD.  
RESOLUTION NO 14-93.

SINCERELY,

*Michelle Gaither*

MICHELLE GAITHER  
CITY RECORDER



10-93

RESOLUTION NO ~~92~~  
A RESOLUTION  
APPOINTING A REPRESENTATIVE TO THE  
SOLIDWASTE REGIONAL PLANNING BOARD

WHEREAS, Tennessee Code Annotated, Section 68-211-813 requires that municipalities providing solid waste collection or disposal services (directly or indirectly by contract) designate a representative to the regional board to be established by Fayette County, Tennessee; and

WHEREAS, We do provide this service and therefore are required to be represented on the regional board for the purpose of solid waste regional planning.

NOW, THEREFORE BE IT RESOLVED, On JAN. 12, 1993, the LABARGE Board of Mayor and Aldermen/Councilmen met and approved the appointment of (1) (2) (3) as the representatives of the City of LABARGE, Tennessee.

Sponser:

ED WHITE  
Alderman/Councilman

Attest:

[Signature]  
City Recorder of LABARGE

Approved:

[Signature]  
Mayor of LABARGE

Approved as to form:

\_\_\_\_\_  
City Attorney



RESOLUTIN NO 92- 12  
 A RESOLUTION  
 APPOINTING A REPRESENTIVE TO THE  
 SOLIDWASTE REGIONAL PLANNING BOARD

WHEREAS, Tennessee Code Annotated, Section 68-211-813 requires that municipalities providing solid waste collection or disposal services (directly or indirectly by contract) designate a representative to the regional board to be established by Fayette County, Tennessee; and

WHEREAS, We do provide this service and therefore are required to be represented on the regional board for the purpose of solid waste regional planning.

NOW, THEREFORE BE IT RESOLVED, On 12-17-92, 1992, the Oakland Board of Mayor and Aldermen/Councilmen met and approved the appointment of (1) (2) (3) as the representatives of the city of Oakland, Tennessee.

Sponser:

Charles E. Colman  
 Alderman/Councilman

Attest:

Mary N. Murrell  
 City Recorder of Oakland

Approved:

Carl Dagle  
 Mayor of 12-17-92

Approved as to form:

\_\_\_\_\_  
 City Attorney

RESOLUTION NO 92- \_\_\_\_\_  
A RESOLUTION  
APPOINTING A REPRESENTATIVE TO THE  
SOLIDWASTE REGIONAL PLANNING BOARD

WHEREAS, Tennessee Code Annotated, Section 68-211-813 requires that municipalities providing solid waste collection or disposal services (directly or indirectly by contract) designate a representative to the regional board to be established by Fayette County, Tennessee; and

WHEREAS, We do provide this service and therefore are required to be represented on the regional board for the purpose of solid waste regional planning.

NOW, THEREFORE BE IT RESOLVED, On Jan. 11, 1993, the Board of Mayor and Aldermen/Councilmen met and approved the appointment of (1) (2) (3) as the representatives of the City of Moscow, Tennessee.

Sponser:

Mayor Oliver  
Alderman/Councilman

Attest:

Lee S. [Signature]  
City Recorder of Moscow

Approved:

Calvin E. Oliver  
Mayor of Moscow

Approved as to form:

\_\_\_\_\_  
City Attorney

RESOLUTION NO. 93-1-1

BE IT RESOLVED THAT IN COMPLIANCE WITH PROVISIONS OF THE SOLID WASTE MANAGEMENT ACT OF 1991, FAYETTE COUNTY HAS ESTABLISHED A PLANNING BOARD OF SEVEN (7) PERSONS.

THE FOLLOWING NAMES ARE SUGGESTED FOR COMPLETING THE BOARD:

CITY APPOINTMENTS:	MIKE FRENCH	6 YEAR TERM
	SISSY STERLING	4 YEAR TERM
	JOHN PITNER	2 YEAR TERM

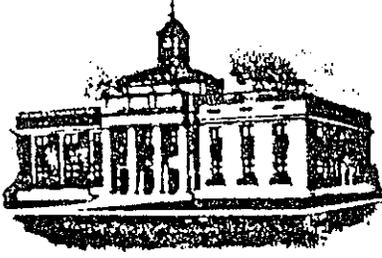
PASSED:

*James C. Gaither*  
(MAYOR)



\*AMENDED RESOLUTION OF 93-1





## *Office of County Executive*

### **Fayette County**

Room 204, Courthouse  
Somerville, Tennessee 38068  
(901) 465-5202

*David Smith*  
*County Executive*

Organized 1824

March 4th, 1993

Mr. Richard Rucker  
790 Country Club Road  
Somerville, Tennessee, 38068

Dear Mr. Rucker:

This letter is to confirm your appointment to the Regional Solid Waste Planning Board of Fayette County. You have been properly ratified by the Fayette County Commission at a regular meeting on February 23rd, 1993. You will serve a 2 year term.

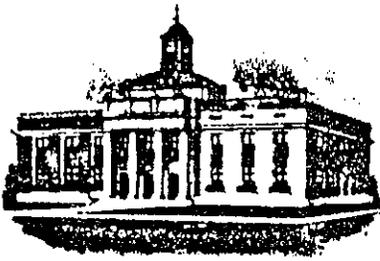
We are awaiting approval of three (3) representatives from the Towns of Somerville, LaGrange, Moscow, Rossville, Oakland, and Gallaway. Upon this being completed, an initial meeting will be scheduled.

Thank you for serving in this important role.

Sincerely,

Wm. David Smith  
County Executive

WDS:np



## *Office of County Executive*

### **Fayette County**

Room 204, Courthouse  
Somerville, Tennessee 38068  
(901) 465-5202

Organized 1824  
March 4th, 1993

*David Smith*  
County Executive

Mr. James Goodman  
275 Great Oaks Road  
Eads, Tennessee, 38028

Dear Mr. Goodman:

This letter is to confirm your appointment to the Regional Solid Waste Planning Board of Fayette County. You have been properly ratified by the Fayette County Commission at a regular meeting on February 23rd, 1993. You will serve a 6 year term.

We are awaiting approval of three (3) representatives from the Towns of Somerville, LaGrange, Moscow, Rossville, Oakland, and Gallaway. Upon this being completed, an initial meeting will be scheduled.

Thank you for serving in this important role.

Sincerely,

A handwritten signature in cursive script that reads "Wm. David Smith".

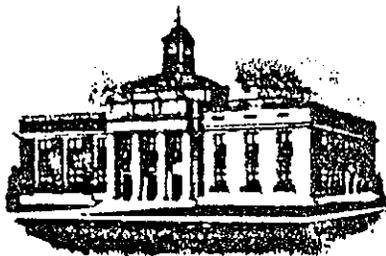
Wm. David Smith  
County Executive

WDS:np

# *Office of County Executive*

## **Fayette County**

Room 204, Courthouse  
Somerville, Tennessee 38068  
(901) 465-5202



Organized 1824  
March 4th, 1993

*David Smith*  
County Executive

Mr. Myles Wilson  
130 Neal Road  
Somerville, Tennessee, 38068

Dear Mr. Wilson:

This letter is to confirm your appointment to the Regional Solid Waste Planning Board of Fayette County. You have been properly ratified by the Fayette County Commission at a regular meeting on February 23rd, 1993. You will serve a 4 year term.

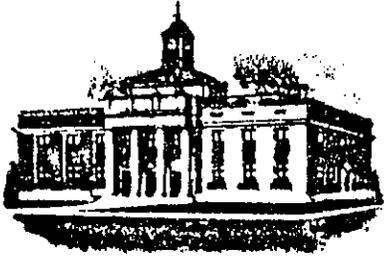
We are awaiting approval of three (3) representatives from the Towns of Somerville, LaGrange, Moscow, Rossville, Oakland, and Gallaway. Upon this being completed, an initial meeting will be scheduled.

Thank you for serving in this important role.

Sincerely,

Wm. David Smith  
County Executive

WDS:np



## *Office of County Executive*

### **Fayette County**

**Room 204, Courthouse  
Somerville, Tennessee 38068  
(901) 465-5202**

Organized 1824  
March 4th, 1993

*David Smith*  
*County Executive*

Mr. Vip D. Lewis  
700 Yager Drive  
Moscow, Tennessee, 38057

Dear Mr. Lewis:

This letter is to confirm your appointment to the Regional Solid Waste Planning Board of Fayette County. You have been properly ratified by the Fayette County Commission at a regular meeting on February 23rd, 1993. You will serve a 2 year term.

We are awaiting approval of three (3) representatives from the Towns of Somerville, LaGrange, Moscow, Rossville, Oakland, and Gallaway. Upon this being completed, an initial meeting will be scheduled.

Thank you for serving in this important role.

Sincerely,

A handwritten signature in cursive script that reads "Wm. David Smith". The signature is fluid and somewhat stylized, with a large initial 'W'.

Wm. David Smith  
County Executive

WDS:np

## APPENDIX B

### Documentation for Adjustments to the Base Year Generation

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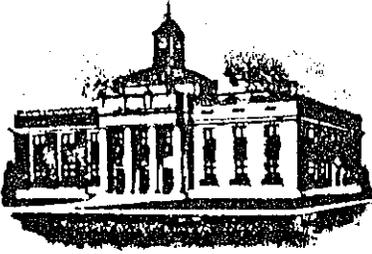
NOT APPLICABLE

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## APPENDIX C

### Public Participation Activities

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## *Office of County Executive*

### **Fayette County**

**Room 204, Courthouse  
Somerville, Tennessee 38068  
(901) 465-5202**

Organized 1824

July 21, 1993

*David Smith*  
*County Executive*

MEMORANDUM TO: Regional Solid Waste Planning Board & other concerned parties  
FROM: Wm. David Smith, County Executive   
SUBJECT: Meeting Notice

The Fayette County Regional Solid Waste Planning Board will meet at 6:30 P.M., Monday, July 26th, in the Circuit Courtroom at the Courthouse in Somerville.

Personnel from the Tennessee Department of Environment and Conservation, Division of Solid Waste Assistance, will be presenting two seminars at this meeting, designed to aid the planning board in completing our solid waste plan. The titles of the seminars are "Waste Reduction, Recycling, Composting and Processing Systems" and Public Outreach, Involvement and Participation."

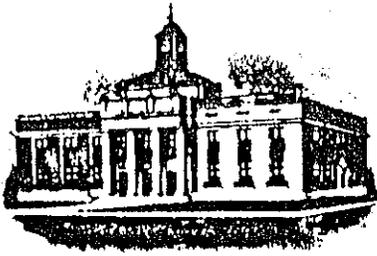
Following these presentations, the Board will conduct its business meeting.

All meetings are open to the public.

# Office of County Executive

## Fayette County

Room 204, Courthouse  
Somerville, Tennessee 38068  
(901) 465-5202



Organized 1824

August 6, 1993

*David Smith*  
County Executive

MEMORANDUM TO: Regional Solid Waste Planning Board & other concerned parties

FROM: Wm. David Smith, County Executive

SUBJECT: Meeting Notice

The Fayette County Regional Municipal Solid Waste planning Board will meet at 6:30 P.M., Monday, August 16th, in the Circuit Courtroom at the Courthouse in Somerville.

Personnel from the Tennessee Department of Environment and Conservation, Division of Solid Waste Assistance, will be presenting two seminars at this meeting, designed to aid the planning board in completing our solid waste plan. The titles of the seminars are "Solid Waste Collection and Transportation Systems" and "Land Disposal - The 21st Century Landfill."

Following these presentations, the Board will conduct its business meeting.

All meetings are open to the public.

4-2-94

Presentations given by Richard Rucker concerning Solid Waste Planning

2-17-94 - Dinner provided by FCRMSWPB for industries, municipalities, Fayette County Public Works Board, and Fayette County Development Committee

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2-21-94 - Somerville Ladies Club

4-6-94 - UT Center for Industrial Services presented Solid Waste info to industries, sponsored by Industrial Committee of the Fayette County Chamber of Commerce

4-13-94 - Moscow Aldermen

4-13-94 - Somerville Aldermen

4-4-94? - Somerville Rotary Club

1993? - Somerville Garden and Arts Club

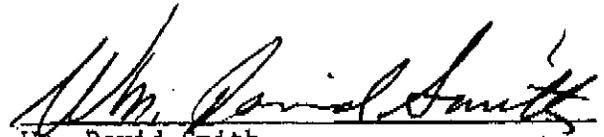
4-17-94? - Somerville First Presbyterian Church

Several Fayette County Commission Meetings during the last 3 years

PUBLIC HEARING

Notice is hereby given to all citizens of Fayette County and other interested parties, that a public hearing will be held at 7:30 P.M., Tuesday, June 7th, 1994, in the upstairs Courtroom of the Courthouse at Somerville, Tennessee, for the purpose of presenting and gathering input on the Municipal Solid Waste Regional Plan for Fayette County Solid Waste Planning Region.

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Wm. David Smith  
County Executive

FAYETTE COUNTY SOLID WASTE PLANNING REGION BOARD

MINUTES OF PUBLIC MEETING

June 6, 1994

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LIST OF PEOPLE ATTENDING

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Thomas J. Blackwell	Mayor	Town of Somerville
Nan Green	Aldersperson	Town of Somerville
Calvin E. Oliver	Mayor	Town of Moscow
John A. Winfrey		2995 Old Brownsville Road
Mark Gregory		10455 Monroe Rd. Arlington, Tn.
Sean Aldridge		10455 Monroe Rd. Arlington, Tn.
Spencer Register		275 Wildflower Way Williston, Tn.
Lucy Cogbill	Aldersperson	Town of LaGrange
Allen Cogbill		LaGrange, Tn.
Don Farmer		140 Farmer Way Somerville
June Kramer		2505 Clay Pond Oakland
Tom Kramer		2505 Clay Pond Oakland
Herman Cox		301 Brittian Rd. Somerville
Alonzo Mormon, Sr.		65 Morman Dr. Rossville, Tn.

FAYETTE COUNTY SOLID WASTE PLANNING REGION BOARD

MINUTES OF PUBLIC MEETING

JUNE 7, 1994

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The Fayette County Solid Waste Planning Region Board held a public meeting on June 7, 1994 at the court house in Somerville to hear comments from the public concerning the solid waste plan.

The Town of Somerville presented a letter of disagreement to the plan which is attached as part of these minutes.

The following is a list of questions and statements taken from this meeting aired by those who attended.

Mr. Oliver:       What is the final cost of this plan ?

The Town of Moscow feels the same as the Town of Somerville concerning this plan. We will submit a letter to this board the same as Somerville.

Will Electric Companies charge a fee for collecting this fee ?

If Fayette County Public Works will pave my roads and clean my ditches, then we'll pay !

Surely, something can be worked out, I hate to see any law suits.

A. Cogbill:       Is this a realistic cost for all countians to pay?

This fee should be put on the property tax rolls.

Twice a week collection is outrageous.

The State has ways of collecting this fee and it should be looked into.

D. Farmer:       If you generate waste, you should pay.

I should be able to accept or reject this service without cost.

T. Kramer:       How many households are in the county ?

J. Winfrey:       This law has been in effect since when ?  
This is the first I've heard of it ?

T. Blackwell: The Town of Somerville has contracted with BFI for 14 years to pick up and dispose of waste.

~~On April 11, 1994, we voted to oppose anything in this plan.~~

If you don't use it, you shouldn't be charged.

We vigorously oppose this.

Does the board supersede the aldermen of Somerville ?

What will the transfer station cost ?

Has the board thought about taking bids from BFI or Waste Management to just haul all this off ?

It's going to be a big legal question !

A man down the street will buy every battery we take to him and will take old oil.

It's his problem as to what to do with the oil whenever he takes it.

The State has no problem with us !

We are not concerned about the county !

When we tax our citizens for garbage pick-up and this board says we're going to tax you again, then the problems are going to start.

Do we have to pay if we own the landfill ?

If this board can set fees, then it's just a bureaucracy !

We must challenge the law !

H. Cox: How long will the \$11.50 last ?  
We are presently paying \$15.00.

Will the tipping fee be charged if people take garbage to the landfill ?

What does the landfill cost to operate today ?

The county spent alot of money putting in a liner system and ect., what will happen to this ?

Why did the county continue on ?

~~Are Fayette countians going to be charged if their utilities come from Hardeman county ?~~

How far down a private road will the collection people come ?

Are the recepticles going to be furnished ? Don't forget Fayette county is poor.

Can I get a book without paying \$20.00 ?

N. Green: What is the closure plan for the present landfill?

Does the Solid Waste Act mandate funds for this ?

Is this a part of the fee we have talked about tonight ?

Does closure fall under mandate ?

Does closure cost fall under present estimate ?

A. Moorman: Do senior citizens have to be charged no more than they generate ?

Do businesses and residences have the same rate ?

Mr. French informed the board that Mayor Doyle would be sending a letter of opposition similiar to the letter presented by the Town of Somerville.

This meeting began at 7:30 pm and adjourned at 9:03 pm.

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Jim Goodman, Secretary



**MAYOR**

Thomas J. Blackwell

**VICE-MAYOR**

John David Douglas

**ALDERMEN**

Don Dowdle

Nan Green

Larry J. Harvey

Priscilla Langdon

Land Middlecoff

**REQUEST TO PLACE IN MINUTES**

April 14, 1994

Mr. David Smith  
Fayette County Executive  
Courthouse  
Somerville, TN 38068

Dear Mr. Smith:

On Monday, April 11, 1994, Mr. Richard Rucker Chairman of the Fayette County Regional Solid Waste Planning Board addressed the Board of Mayor and Aldermen.

In Mr. Rucker's presentation he stated that Fayette County Public Works is planning to construct a solid waste multi-purpose facility with a possible transfer station included. Mr. Rucker also stated that plans were to assess each house hold and business a monthly fee to pay for the construction and operation of this facility.

Mr. Rucker stated that the residences and businesses of the Town of Somerville would have to pay the fee whether or not they used the proposed facility.

The Board of Mayor and Aldermen voted and approved to oppose any form of assessment or fee for this or any other facility that the Town of Somerville residences and business do not use. (The Town of Somerville contract with B. F. I. for solid waste collection and disposal.)

The Town of Somerville feels that our citizens and business should not pay for a facility that we will not use, or have any gainful benefit thereof.

Sincerely,

Thomas J. Blackwell  
Mayor

et

## APPENDIX D

### Exports and Imports

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## APPENDIX E

**Review by Appropriate Municipal or Regional Planning Commission**

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Organized 1824

**Somerville - Oakland - Fayette County**  
**Consolidated Office of Planning And Development**  
**P.O. Box 504**  
**Somerville, TN 38068**  
**Phone 465-5250**

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July 1, 1994

TO: David Smith, County Executive  
FROM: John R. Pitner, Planning Director   
SUBJECT: Solid Waste Proposal

At the regularly scheduled meeting on June 14, 1994, the Fayette County Planning Commission reviewed and approved the proposal of the county-wide solid waste plan.

June 30, 1994

MEMORANDUM TO: ALL MUNICIPAL PLANNING COMMISSIONS  
FAYETTE COUNTY, TENNESSEE  
(BRADEN, GALLAWAY, GRAND JUNCTION, LAGRANGE,  
MOSCOW, OAKLAND, PIPERTON, ROSSVILLE, SOMERVILLE  
AND WILLISTON)

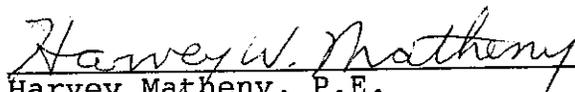
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FROM: GRACE & ASSOCIATES, INC.  
ON BEHALF OF FAYETTE COUNTY

SUBJECT: MUNICIPAL SOLID WASTE REGIONAL PLAN  
FOR FAYETTE COUNTY SOLID WASTE PLANNING REGION

Based on Tennessee's Regional (TCA 13-3-101 et seq.) and Municipal (TCA 13-4-101 et seq.) planning statutes, this letter is to inform local planning commissions of the Fayette County Solid Waste Plan referenced above. You are invited to review the Plan at the County Executive's office and submit any comments if you so choose. Although the Plan will be submitted to the State on July 1, 1994, any comments will be appreciated and evaluated as implementation of the Plan proceeds.

A Public Hearing on the Plan was held at 7:30 pm, Tuesday, June 7, 1994 at the County Courthouse, and the Plan was officially approved by the County Commission on June 28, 1994.

  
Harvey Matheny, P.E.  
Grace and Associates, Inc.

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APPENDIX F

SAMPLE WEIGHING PROGRAM, VARIOUS COST ESTIMATES, MISC.

# FAYETTE COUNTY WASTE STREAM ANALYSIS

ROSSVILLE ==> 7/08/93

CATAGORY	WEIGHT (LBS)	% OF TOTAL
CONSTRUCTION DEMO	540	30.68%
PAPER	380	21.59%
MISCELLANEOUS	340	19.32%
METAL	180	10.23%
TEXTILES	80	4.55%
PLASTIC	80	4.55%
BAGGED & LOSE CLOTH	60	3.41%
BOXES	40	2.27%
GLASS	40	2.27%
ALUMINUM CANS	20	1.14%
TOTAL	1760	100.00%

## FAYETTE COUNTY WASTE STREAM ANALYSIS

MOSCOW ==> 7/08/93

CATAGORY	WEIGHT (LBS)	% OF TOTAL
MISCELLANEOUS	380	31.54%
BOXES	220	18.26%
GLASS	160	13.28%
TEXTILES	160	13.28%
PAPER	80	6.64%
TIN	60	4.98%
PACKAGE PLASTIC	60	4.98%
WOOD	60	4.98%
ALUMINUM CANS	10	0.83%
PLASTIC BOTTLES	10	0.83%
STYROFOAM	5	0.41%
TOTAL	1205	100.00%

## ALTERNATIVES FOR SOLID WASTE COLLECTION AND TRANSPORTATION

The following alternatives for solid waste collection and transportation are considered to be the most feasible options for the Fayette County Region. A description and cost estimate for each of the options is provided on the following pages.

OPTION 1 - provide green-box convenience centers for rural residents with transport to disposal by front-end loader.

~~OPTION 2 - provide roll-off convenience centers for rural residents with transport to disposal in roll-off container.~~

OPTION 3 - provide door-to-door collection for rural residents with transport to disposal by collection vehicle.

OPTION 4 - provide door-to-door collection for rural residents, transport to one regional transfer facility and transport to disposal by transfer vehicle.

### DISCUSSION OF OPTIONS

#### Option 1 and Option 2

Both Option 1 and Option 2 involve the construction and operation of convenience centers for county residents to bring solid waste for disposal. Like the existing green-box system in many counties, these systems require the resident to bring their solid waste to the county facility. Unlike present green-box systems, convenience centers will have full time staffing, controlled access, security fencing, paving, lighting, and will also be conducive to waste segregation (i.e. yard waste, recyclables, tires, problem wastes, white goods, etc.) For many county residents who are already accustomed to taking their solid waste to the landfill or other collection sites, convenience centers offer the same type of service with many improvements. Disadvantages include longer travel distances for some residents and limited drop-off times (typically 10-14 hours daily). Also, residents who already have a waste collection service will not be likely to use the convenience center.

The Solid Waste Management Act requires a minimum number of convenience centers based on one(1) per 180 square mile service area or one(1) per 12,000 population service area. Based on these criteria the minimum number of centers for Fayette County is four(4) based on area and 2 based on population in unincorporated areas. Realistically these numbers are probably too small to adequately serve county residents due to longer driving distances. Studies have shown that driving distances over 3-5 miles will result in decreased participation. Using this information, the minimum number of convenience centers for the county is eight(8). A cost analysis for Option 1 and Option 2 (with and without compaction) follows.

**CONVENIENCE CENTER COST ANALYSIS**

OPTION 1 - GREEN-BOX CENTER  
 OPTION 2 - ROLL-OFF CENTER  
 OPTION 2A - ROLL-OFF CENTER WITH COMPACTION

<u>Item</u>	<u>Green-Box</u>	<u>Roll-Off</u>	<u>w/Comptn</u>
<b>Capital Cost</b>			
Land	\$4,000	\$4,000	\$4,000
Grading/Earthwork*	10,000	13,000	13,000
Paving	30,000	35,000	35,000
Drainage Structures	3,000	3,000	6,000
Fencing and Gates	5,000	5,000	5,000
Building	8,000	8,000	8,000
Utilities	4,000	4,000	4,000
Signs and Landscaping	1,500	1,500	1,500
Engineering,Legal	7,000	8,000	8,500
<b>Total</b>	<b>\$72,500</b>	<b>\$81,500</b>	<b>\$85,000</b>
<b>Annualized Capital Cost @ 6% for 20 Years</b>	<b>\$6,320</b>	<b>\$7,105</b>	<b>\$7,410</b>
Green-Boxes(28)	14,000	-	-
Roll-Offs	-	16,000	8,000
Compactor(1)	-	-	14,000
<b>Total</b>	<b>\$14,000</b>	<b>\$16,000</b>	<b>\$22,000</b>
<b>Annualized Capital Cost @ 6% for 5 Years</b>	<b>\$3,323</b>	<b>\$3,798</b>	<b>\$5,222</b>
<b>Annual Labor and Supply Cost</b>			
Center Staffing	\$25,000	\$25,000	\$25,000
Benefits,Etc.	5,000	5,000	5,000
Administration	4,000	4,000	4,000
Supplies,Mntnce,Etc	2,000	2,000	6,000
Utilities	1,000	1,000	4,000
<b>Annual O &amp; M</b>	<b>\$37,000</b>	<b>\$37,000</b>	<b>\$44,000</b>
<b>Average Annual Cost/Center</b>	<b>\$46,643</b>	<b>\$47,903</b>	<b>\$56,632</b>
<b>Average Tons/Yr/Center</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>
<b>Average Regional Cost/Ton</b>	<b>\$46.64</b>	<b>\$47.90</b>	<b>\$56.63</b>

## CONVENIENCE CENTER HAUL COST ANALYSIS

OPTION 1 - GREEN-BOX CENTER  
 OPTION 2 - ROLL-OFF CENTER  
 OPTION 2A - ROLL-OFF CENTER WITH COMPACTION

<u>Item</u>	<u>Green-Box</u>	<u>Roll-Off</u>	<u>w/Comptn</u>
<b>Transportation Costs</b>			
<del>Avg. Tons/Yr/Center</del>	<del>1,000</del>	<del>1,000</del>	<del>1,000</del>
<del>Avg. Haul Distance</del>	<del>40 Mi</del>	<del>40 Mi</del>	<del>40 Mi</del>
Cost/Ton/Mile*	\$0.258	NA	\$0.207
Average Cost\Year\Center	\$10,320	\$33,120**	\$8,280
Average Cost\Ton	\$10.32	\$33.12	\$8.28

\*From Solid Waste: Transportation and Other Costs, UT County Technical Assistance Service. Based on Driver Pay @ \$7/Hour

\*\*Assumed to be 4 times higher than the annual cost for compacted roll-off haul due to the lack of compaction. The average compaction ratio for compacted roll-offs is assumed to be 4:1.

### Summary of Total Capital, Operating and Transportation Costs\*

	<u>Green-Box</u>	<u>Roll-Off</u>	<u>w/Comptn</u>
Total Regional Cost/Year	\$455,704	\$648,184	\$519,296
Regional Cost/Ton	\$56.96	\$81.02	\$64.91
Cost/Household/Month	\$4.75	\$6.75	\$5.40

\*Figures are based on 8 Convenience Centers in the Region and 8,000 households served by the Centers.

### Option 3 and Option 4

Both options involving door-to-door collection of residential solid waste will require determination of which service provider(s) can do it for the best price. The best price not only being the cheapest but also the most effective level of service, most dependable, cleanest, etc. This Plan cannot determine which collection service provider is the best for the county or for any portion of the planning Region, but typical costs for providing these services are discussed and analyzed.

Numerous proposals, both formal and informal, for countywide door-to-door collection of residential solid waste have been made in and around west Tennessee in recent months. Some collection services were bid, some were negotiated with one hauler and other quotes were provided by private haulers for rough estimating only. The primary factors that affect door-to-door collection costs are collection frequency, collection efficiency or worker productivity, equipment, haul time and distance, population density and administrative cost. A typical proposal for collection will include the cost for disposal, thus making it somewhat difficult to determine the exact cost proposed for collection only. Other proposals include the option of collecting recyclables for solid waste reduction. The table on the following page of collection costs per household per month reflects recent bids, negotiated prices, quotes and municipal collection expenses for various entities in the west Tennessee area.

**Note:** Some of these costs may be slightly outdated or they may be the mid-point of an approximate price range given verbally or in an actual proposal. In addition, the specific factors used to establish these prices vary (i.e. collections frequencies vary, disposal sites vary, etc.). None of the prices from private waste management companies should be considered as current firm-cost proposals for any solid waste management services.

**TYPICAL COLLECTION COSTS - WEST TENNESSEE AREA  
COST/HOUSEHOLD/MONTH**

<u>Collection Area</u>	<u>Proposal Type</u>	<u>Collection</u>	<u>Recycling Option*</u>	<u>Disposal</u>	<u>Total</u>
Lauderdale Co.	WMI <sup>1</sup> -Bid	\$3.43	\$1.98	\$1.76	\$7.17
Lauderdale Co.	BFI <sup>2</sup> -Bid	4.81	1.98	0.90	7.69
Lauderdale Co.	BB <sup>3</sup> -Bid	6.71	1.64	2.70	11.05
Tipton Co.	BFI-Quote	Yes	No	Yes	7.50
Haywood Co.	BFI-Quote	7.50	No	No	7.50
Haywood Co.	WMI-Prop.	5.00	2.50	No	7.50
Tipton Co.	WMI-Prop.	Yes	No	Yes	6.50
DeSoto Co. (MS)	Co.-Rate	7.50	No	No	7.50
DeSoto Co. (MS)	BFI-Negotiated	Yes	Yes	No	5.00
Somerville	BFI-Bid	4.46	No	2.52	6.98
Somerville	City-Bid	7.35	No	2.99	10.34
Covington	City-Rate	8.00	No	No	8.00
Covington	WMI-Prop.	Yes	No	Yes	7.00
Ripley	WMI-Prop.	Yes	No	Yes	6.89
H.L.T.	BFI-Quote	6.00	1.75	No	7.75
H.L.T.	WMI-Quote	6.50	No	No	6.50
<b>Average</b>		<b>\$6.11</b>	<b>\$1.97</b>	<b>\$2.17 =</b>	<b>\$10.25</b>

\*Involves a separate collection vehicle and route for the collection of recyclables.

<sup>1</sup> Waste Management Inc.

<sup>2</sup> Browning Ferris Industries

<sup>3</sup> Barker Brothers

## Regional Transfer Station

Option 4 involves the construction and operation of a transfer station or a facility where solid wastes can be transferred from collection vehicles to larger capacity transport equipment. Option 4 includes a centrally located regional transfer station capable of handling the maximum daily solid waste generation from the Region. The cost estimate for the regional transfer station is provided in Chapter V.

### SUMMARY OF OPTION COSTS INCLUDES RESIDENTIAL WASTE ONLY

<u>Option</u>	<u>Description</u>	<u>Cost/ Household/Month</u>	<u>Total Annual System Cost</u>
Option 1	- Green-Box Conv. Centers	\$4.75	\$456,000
Option 2	- Roll-Off Conv. Centers	\$6.75	\$648,000
Option 2A	- Option 2 w/Compaction	\$5.40	\$519,000
Option 3	- Collection w/Direct Haul		
	Private w/Private	\$6.00	\$576,000
	Public w/Public	\$8.00	\$768,000
Option 4	- Collection w/Transfer&Haul	SEE CHAPTER V	

## REGIONAL CLASS I LANDFILL COST ESTIMATE

### Design Assumptions:

Annual Tonnage = 25,000 tons/year  
 Minimum Site Life = 20 years  
 In-place waste compaction = 1,000 lbs/CY  
 Volume of daily/intermediate cover = 20 % of total airspace  
~~Average landfill waste depth = 40 feet~~  
~~Average landfill excavation depth = 20 feet~~

### Calculation of Landfill Acreage

Landfill Airspace  
 $25,000 \text{ T/YR} \times 2,000 \text{ LB/T} \times \text{CY}/1,000 \text{ LB} = 50,000 \text{ CY/YR}$   
 $50,000 \text{ CY/YR} \times 1.2 \times 20 \text{ YR} \times 27 \text{ CF/CY} = 32,400,000 \text{ CF}$   
 $32,400,000 \text{ CF} \times 1/40 \text{ FT DEPTH} = 810,000 \text{ SF}$   
 $810,000 \text{ SF} \times 1 \text{ ACRE}/43,560 \text{ SF} = 19 \text{ ACRES}$

USE 25 ACRES FOR LANDFILL AREA  
 USE 50 ACRES FOR TOTAL LAND AREA NEEDED

### PRE-CONSTRUCTION AND CONSTRUCTION COSTS

(FAYETTE COUNTY'S EXISTING SITE ELIMINATES OR REDUCES SOME COSTS)

<u>Item Description</u>	<u>Unit Cost</u>	<u>Total Cost</u>
Site Characterization	\$ 0 LS	\$ 0
Engineering/Design	10,000 LS	10,000
Legal	10,000 LS	10,000
Land Purchase @ \$2,500/AC	0 LS	0
Clearing, Grubbing & Access Rds	2,000/AC	100,000
Excavation	2,000/AC-FT	1,000,000
Flexible Membrane Liner	28,000/AC	700,000
Clay Liner (2 FT = 81,000 CY +/-)	5/CY	405,000
Leachate Collection System		
Pipe(600 FT/AC @ \$15/FT)	9,000/AC	
Pipe Filter Fabric(6,000 SF/AC @ \$.2/SF)	1,200/AC	
Drainage Layer(1,613 CY/AC @ \$10/CY)	16,130/AC	
Filter Fabric	8,712/AC	
Cushion(1,613 CY/AC @ \$4/CY)	6,452/AC	
Manholes(2/AC @ 1,500 EA)	3,000/AC	
Pumping Station (\$60,000)	2,400/AC	
Sub-Total	46,894/AC	1,172,350
Leachate Treatment System	500,000 LS	500,000
Scales/Fencing	0 LS	0
Buildings	0 LS	0
Drainage/Sedimentation Ponds	700/AC	35,000
Utilities	0	0
Gas Management Systems	3,000/AC	75,000
Groundwater Monitoring Wells(5)	4,000 EA	20,000
CQA	5,000/AC	125,000

TOTAL (1993 DOLLARS)	\$ 4,027,350
ANNUAL COST @ 6% FOR 20 YEARS	\$ 351,104

REGIONAL CLASS I LANDFILL COST ESTIMATE (cont.)

OPERATION COSTS

Labor (5 @ \$25,000 EA x 1.2)	\$150,000/YR
Equipment (\$1/Ton of Waste)	25,000/YR
Leachate Treatment (100 Gal/AC-Day @ \$.05/Gal)	45,625/YR
Daily Cover (\$.75/Ton of Waste)	18,750/YR
Environmental Monitoring (\$2,500/AC)	62,500/YR

ANNUAL COST (1993 DOLLARS)	\$301,875/YR
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CLOSURE COSTS

Flexible Membrane Liner	\$28,000/AC	\$ 700,000
Clay Cap (2 FT = 81,000 CY/AC +/-)	5/CY	405,000
Topsoil (1 FT = 40,500 CY/AC +/-)	2/CY	81,000
Seeding	1,000/AC	25,000
Sedimentation Control	500/AC	12,500
CQA	2,000/AC	50,000

TOTAL (1993 DOLLARS)	\$1,273,500
ANNUAL COST @ 6% FOR 20 YEARS)	\$111,024

POST CLOSURE

Routine Maintenance	\$500/AC-YR	\$12,500/YR
Annual Inspections/Reports	5,000/YR	5,000/YR
Leachate Treatment(50 Gal/AC-DAY @ \$.05/Gal)		22,812/YR
Gas Control	15,000/YR	15,000/YR
Environmental Monitoring(\$2,500/AC-YR)		62,500/YR

ANNUAL COST (1993 DOLLARS)	\$117,812/YR
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SUMMARY (COST PER YEAR IN 1993 DOLLARS)

Pre-Construction/Construction	\$ 351,104/YR
Operation	301,875/YR
Closure	111,024/YR
Post Closure	117,812/YR

TOTAL ANNUAL COST	\$ 881,815/YR
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COST PER TON = \$ 881,815/YR x 1 YR/25,000 TONS = \$35.27/TON

COST/HOUSEHOLD/MONTH = \$35.27/TON X 0.09 TONS/HSE/MONTH  
= \$3.17/HOUSEHOLD/MONTH

### BFI LANDFILL ESTIMATED DISPOSAL COSTS

The current gate rate at the BFI landfill in Millington, Tennessee for municipal solid waste is \$25.00/ton (not including an additional State assessed solid waste fee of \$0.85/ton). Based on various contract rates now in effect with various municipalities in the area, the Fayette County Region could expect a contract rate beginning at approximately \$23.00/ton. Also, typical BFI-municipal contracts include an annual escalating factor of approximately 8% to 10% per year for 3 to 5 years followed by increases based on the Consumer Price Index(CPI) for the remainder of the contract. (Note: This rate and annual escalating percentage were estimated without any contact with BFI representatives and are intended for cost estimating purposes only).

If the Region began a disposal contract with BFI or any other private disposal facility for a 10-year period beginning at \$23.00 per ton and increasing at 8% each year for 5 years followed by CPI increases of 6% for 5 more years, the disposal fees will be as follows.

<u>Year</u>	<u>Rate/Ton</u>
1994	\$23.00
1995	24.84
1996	26.83
1997	28.97
1998	31.29
1999	33.17
2000	35.16
2001	37.27
2002	39.50
2003	41.87

## DISCUSSION OF PUBLIC VS. PRIVATE ALTERNATIVES

From the cost estimates provided above it appears that the Fayette County Region has the potential to develop a regional Class I landfill facility which could be competitive with private landfills in the area within a few years. By the year 2003 the estimated BFI rate becomes higher than the estimated County landfill rate. It should be noted that the landfill tipping fee for the County landfill alternative of ~~\$35.27/ton will increase~~ annually as do the private fees. Operation costs will increase annually, and the cost for developing new disposal cells will be higher each time additional landfill capacity is needed. The estimate in this report assumes that the entire 25 acre fill area is developed at one time, when in fact it would be developed in phases. Each new disposal cell constructed will have a life expectancy of approximately 3 to 5 years. These increases in construction and operation costs will affect both private and public facilities, but the impact on tipping fees at each facility is difficult to determine.

There are several other significant factors involved in the public vs. private decision. These include the unknown costs of unknown future liabilities, the difficulty of siting new landfills due to public opposition, the legal issues of flow control, and uncertainties about future environmental regulations. Problems in any of these areas will be a tremendous burden for public facilities to resolve. The major question about contracting with private facilities is long term cost control. The presence of other private landfills in the area competing for the solid waste stream should keep future rates reasonable. In addition, the potential for the Region to build and operate a public landfill on its existing site should be a factor in all price negotiations with privately owned landfills.