CUMBERLAND COUNTY
SOLID WASTE MANAGEMENT PLAN

SOLID WASTE BOARD MEMBERS

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EVERETT BOLIN, VICE CHAIRPERSON
MIKE STUBBS, SECRETARY
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PART I
EXECUTIVE SUMMARY

As a result of the Tennessee Solid Waste Management Act of 1991, which requires that each county/region develop a ten-year solid waste management plan, the Cumberland County Region was formed. The Region which consists of Cumberland County and its municipalities was established in an effort to protect the interests of its citizens.

A regional solid waste plan requires planners to acquire a broad-based understanding of regional resources, needs, and statutory mandates. During the eleven months required to develop Cumberland County’s Solid Waste Management Plan more than 35 public meetings were conducted producing over 20 formal presentations and a wide range of public comment. Board members participated in more than 15 onsite visits designated to develop a general understanding of solid waste problems and solutions across Tennessee, including visits to two composting facilities in Minnesota (at no expense to the taxpayer). The plan resulting from these efforts addresses state requirements and local concerns. The resulting plan stresses the need for public and private sector involvement. Most importantly, the plan is not only flexible, practical, and realistic, it is fiscally responsible.

SYSTEM ELEMENTS

The Region - System Analysis and Growth Trends - Reduction, Recycling and Composting - Collection, Transportation and Disposal - Problem Wastes - Scheduling, Staffing and Funding - Responsibilities - Public Information and Education

REGIONAL GOALS AND OBJECTIVES

Development of a ten year requires prudent examination of plan elements, with a consistent criteria. The goal and primary plan objective, is to see that each system element is examined with statutory compliance, design flexibility and fiscal responsibility in mind.

REGIONAL NEEDS

Primary Regional needs include efforts in the area of collection, recycling/reduction, and education.
EXISTING SYSTEM AND PROPOSED MODIFICATIONS

It is estimated that in 1993, Cumberland County generated 30,828 tons of waste. All of the waste was disposed in a Class I landfill located within the County. It is estimated that this disposal facility will close in December 1994. The County is in the process of permitting an additional 373,700 cubic yards (186,850 tons) of Class I disposal area and 389,580 cubic yards (194,790 tons) of Class III/IV disposal area. These facilities are scheduled to open in January 1995.

The waste collection system within the region consists of door-to-door pick up and convenience center collection. Currently, Crossville, Fairfield Glade, Pleasant Hill, and Tansi provide door-to-door collection, while the remainder of the County is served by convenience centers.

PROGRAM IMPLEMENTATION AND COORDINATION

Although affected residents are provided with an adequate number of convenience centers, all facilities are not in compliance with the Solid Waste Management Act of 1991. The changing face of the solid waste problem is arguably its most confounding feature. In the opinion of the Planning Board, decisions regarding site specific technology options designed to address unstable problems ranging over a ten-year period is neither prudent nor realistic. Furthermore, dictating a static solution(s) to a expanding, evolving problem displays a lack of vision and demonstrates a basic misunderstanding of the issue. This Plan requires administrators to continually evaluate collection techniques, staffing requirements, and the number and location of convenience centers. The primary consideration of administrators will be statutory compliance and fiscal responsibility to those served.

A minimum of three enhanced convenience centers meeting state requirements will be brought on-line. Convenience center locations will be consistent with traffic patterns in order to promote usage. The enhance center, as brought on-line will be designed to collect commingled household waste and some problem waste as well as recyclables.
RECYCLING/REDUCTION

Included in the solid waste program will be a recycling component. Recycling along with reduction and reuse will aid in the Region’s 25 percent reduction goal. A centralized recycling center capable of performing convenience center activities as well as processing recyclable material for market will be complimented by peripheral convenience centers also accepting recyclables. The central convenience center and recycling hub will also be the depository for lead acid batteries. County participation in state sponsored household hazardous waste collection days will help curb the landfiling of household hazardous wastes. Curbside efforts may be established as effected jurisdictions determine appropriate.

Extensive examinations of established recycling programs throughout the state illustrate the paramount roll flexibility plays, in both public, private and joint recycling efforts. The Cumberland County Solid Waste Department is required to accept a high degree of responsibility in determining the appropriate mode of program delivery (i.e., private, public, or combination effort), as well as in the areas of marketing and material accepted. Whether public, private or combination thereof, the recycling program is characterized by flexibility, appropriate for a market sensitive program.

EDUCATION

The Plan emphasizes education, recognizing accurate information as the cornerstone to successful implementation. The Solid Waste Department will be required to utilize significant resources designed to educate the region in four primary areas: schools, business and industry, private organization, and the media. The Solid Waste Department will be able to draw on the consulting resources of an educationally oriented eight member Advisory Board. Proper education can be a powerful tool in promoting the benefits of effective back-yard composting.
STAFFING AND TRAINING

Components of the Plan require a variety of staffing and training decisions. It is appropriate that those decisions be made by the affected jurisdiction based on statutory requirements, needs, and resources. Regional training goals are required to ensure all staff members are reasonably competent regarding solid waste and environmental issues and in compliance with all applicable laws.

BUDGET AND FINANCE

Conceptually a blend of revenue sources designed to produce an equitable allocation of costs are required for Plan funding. Grant and revenue sharing opportunities offered by state and federal agencies may be utilized in order to comply with regulations mandated by those jurisdictions. Supplemental funding shall include but not be limited to user fees as well as alternative forms of funding. Plan administrators are required to evaluate funding options based on state, federal and local statutory requirements, funding availability, as well as regional needs and requirements.
PART II
CHAPTER I
DESCRIPTION OF THE MUNICIPAL SOLID WASTE REGION

A. GENERAL DESCRIPTION

Cumberland County has elected to become a single-county region for the purpose of developing its Solid Waste Regional Plan. There are three municipalities within the county which account for nearly 24 percent of the population based on the 1990 census. These municipalities include Crossville, Crab Orchard, and Pleasant Hill which had populations of 6930, 876, and 494, respectively in 1990.

Cumberland County occupies 681.6 square miles (mi²) of land in the Cumberland Plateau Physiographic Province of East-Central Tennessee (See Figure I-1 and Figure I-2). The major physiographic feature of this region is the Cumberland Plateau with Brady, Bear Den and Crab Orchard, and Hench Mountains.

The County also has several lakes available for recreational use (e.g., Lake Tansi, Lake Catherine, Lake St. George, Lake Linger, and Holiday Lake). The county is home to the Catoosa Wildlife Management Area, Ozone Falls State Natural Area and Cumberland Mountain State Park as well.

The primary land uses of the region include managed park land, farmland, and forests.

B. RATIONALE FOR REGIONAL FORMATION

Cumberland County elected to become a single-county region in order to protect the interests of its citizens. Cumberland County is able to provide viable solid waste disposal alternatives without imposing a high tax burden on its residents and businesses.

C. INSTITUTIONAL STRUCTURE

There are seven members of the regional Solid Waste Management Board. These members include: Everett Bolin, Les Cavell, Al Cunningham, Barry Field, Beth Sherrill, Mike Stubbs, and Billy Swafford.
For the purpose of developing this plan, the Board was separated into four committees: Reduction/Education, Composting, Collection, and Recycling. Each member was assigned to at least one committee. Figure I-3 illustrates the Board structure.

It is important to note that because the region encompasses only one county, coordination with local governments was simplified. Representatives of local municipal governments and industries, as well as concerned citizens, compose the Solid Waste Regional Board. In addition residents of the county and county government personnel have taken an active role in the meetings of the Solid Waste Regional Board. Hopefully, with such active participation of municipal and county governments the implementation phase of this plan will be easier.

Figure I-3
Solid Waste Management Board Organizational Chart

Barry Field
Chairperson

Everett Bolin
Vice-Chairperson

Mike Stubbs
Secretary

Reduction/Education
Mike Stubbs
Beth Sherrill

Composting
Beth Sherrill
Everett Bolin

Collection
Everett Bolin
Al Cunningham

Recycling
Les Cavell
Barry Field
Mike Stubbs
D. DEMOGRAPHICS

The 1993 population of Cumberland County is 36,679, based on U.S. Census Bureau projections. The resulting population density is 53.8, which is a 5.5 percent increase over the density reported in the September 1991 District Needs Assessment for the Upper Cumberland Development District. The data given in Tables I-1 through I-6 is based on information found in the District Needs Assessment and reported by the U.S. Census Bureau in 1990.

The total population of Cumberland County increased 21 percent during the period from 1980 to 1990, and is anticipated to grow at an average annual rate of 1.8 percent over the next ten years (See Table I-6). The tremendous growth is due largely, in part, to the influx of retirees to various communities throughout the County.

It is anticipated that the quantity of solid waste generated and disposed of in the region will grow at a proportional rate. However, with the introduction of the tipping fee in September 1993, individuals and industries within the region may look toward landfiling alternatives. The actual effect this will have on the land disposal of waste is unknown.

Table I-1
Population and Density, 1990

<table>
<thead>
<tr>
<th>County</th>
<th>Area (mi²)</th>
<th>Population</th>
<th>Avg. Density (Population/mi²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>681.6</td>
<td>34,736</td>
<td>51.0</td>
</tr>
<tr>
<td>Regional Total</td>
<td>681.6</td>
<td>34,736</td>
<td>51.0</td>
</tr>
</tbody>
</table>

Table I-2
Distribution of the Total Regional Population by Urban and Rural Areas, 1990

<table>
<thead>
<tr>
<th>County</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>%</td>
<td>Population</td>
</tr>
<tr>
<td>Cumberland</td>
<td>6,930</td>
<td>20.0</td>
</tr>
<tr>
<td>Regional Total</td>
<td>6,930</td>
<td>20.0</td>
</tr>
</tbody>
</table>
### Table I-3
**Distribution of the Total Regional Population by Sex and Age, 1990**

<table>
<thead>
<tr>
<th>Age</th>
<th>Total</th>
<th>Male</th>
<th>%</th>
<th>Female</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>2,108</td>
<td>1,088</td>
<td>51.61</td>
<td>1,020</td>
<td>48.39</td>
</tr>
<tr>
<td>5-17</td>
<td>6,013</td>
<td>3,072</td>
<td>51.09</td>
<td>2,941</td>
<td>48.91</td>
</tr>
<tr>
<td>18-44</td>
<td>12,736</td>
<td>6,295</td>
<td>49.43</td>
<td>6,441</td>
<td>50.57</td>
</tr>
<tr>
<td>45-64</td>
<td>7,771</td>
<td>3,660</td>
<td>47.10</td>
<td>4,111</td>
<td>52.90</td>
</tr>
<tr>
<td>65+</td>
<td>6,108</td>
<td>2,690</td>
<td>44.04</td>
<td>3,418</td>
<td>55.96</td>
</tr>
<tr>
<td><strong>Regional Total</strong></td>
<td><strong>34,736</strong></td>
<td><strong>16,805</strong></td>
<td><strong>48.38</strong></td>
<td><strong>17,931</strong></td>
<td><strong>51.62</strong></td>
</tr>
</tbody>
</table>

### Table I-4
**Distribution of Regional Population by Education (Age ≥ 25), 1990**

<table>
<thead>
<tr>
<th>Education</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 8th Grade</td>
<td>5,444</td>
<td>23.08</td>
</tr>
<tr>
<td>Grade 8</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>High School (1-4)</td>
<td>11,766</td>
<td>49.88</td>
</tr>
<tr>
<td>College (1-4)</td>
<td>5,579</td>
<td>23.65</td>
</tr>
<tr>
<td>Post Graduate/Professional (&gt;4)</td>
<td>799</td>
<td>3.39</td>
</tr>
<tr>
<td><strong>Regional Total</strong></td>
<td><strong>23,588</strong></td>
<td><strong>100.00</strong></td>
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### Table I-5
**Distribution by Type of Housing and Occupancy (13,426 housing units)**

<table>
<thead>
<tr>
<th></th>
<th>Total Units</th>
<th>Occupied</th>
<th>Owner</th>
<th>Rented</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Single Family</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1, Detached</td>
<td>26,228</td>
<td>26,228</td>
<td>22,334</td>
<td>3,894</td>
</tr>
<tr>
<td>1, Attached</td>
<td>474</td>
<td>474</td>
<td>265</td>
<td>209</td>
</tr>
<tr>
<td><strong>Multi-Family</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>706</td>
<td>706</td>
<td>69</td>
<td>637</td>
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<tr>
<td>3-4</td>
<td>511</td>
<td>511</td>
<td>43</td>
<td>468</td>
</tr>
<tr>
<td>5-9</td>
<td>335</td>
<td>335</td>
<td>64</td>
<td>271</td>
</tr>
<tr>
<td>10-19</td>
<td>273</td>
<td>273</td>
<td>13</td>
<td>260</td>
</tr>
<tr>
<td>20-49</td>
<td>70</td>
<td>70</td>
<td>0</td>
<td>70</td>
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<tr>
<td>50 or more</td>
<td>0</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Institutional</td>
<td>529</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Mobile Home/Trailer</td>
<td>5,243</td>
<td>5,243</td>
<td>4,083</td>
<td>1,160</td>
</tr>
<tr>
<td>Other</td>
<td>367</td>
<td>367</td>
<td>233</td>
<td>134</td>
</tr>
<tr>
<td><strong>Regional Total</strong></td>
<td>34,736</td>
<td>34,207</td>
<td>27,104</td>
<td>7,103</td>
</tr>
</tbody>
</table>

### Table I-6
**Regional Population Projections, 1994-2003**
*(1993 Population: 36,679)*

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>37,349</td>
<td>38,030</td>
<td>38,724</td>
<td>39,431</td>
<td>40,151</td>
<td>40,883</td>
<td>41,662</td>
<td>42,256</td>
<td>42,893</td>
<td>43,539</td>
</tr>
<tr>
<td>Regional Total</td>
<td>37,349</td>
<td>38,030</td>
<td>38,724</td>
<td>39,431</td>
<td>40,151</td>
<td>40,883</td>
<td>41,662</td>
<td>42,256</td>
<td>42,893</td>
<td>43,539</td>
</tr>
</tbody>
</table>
E. ECONOMIC ACTIVITY

Apart from the increase in economic activity due to the steady increase in population, there are no foreseeable changes which are expected to drastically alter waste generation rates and quantities over the next ten years. It is anticipated that the economic growth rate of 3.2 percent, as published by UT Center for Business and Economic Research will be maintained. Tables I-7 through I-14 outline the current economic status of the region.

Table I-7
Basic Economic Information for the Region in 1991

<table>
<thead>
<tr>
<th>County</th>
<th>Population</th>
<th>MSA County (yes/no)</th>
<th>Total Employment</th>
<th>Total Earnings</th>
<th>Per Capita Income</th>
<th>% Population Below the Poverty Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>34,736</td>
<td>No</td>
<td>14,551</td>
<td>$236,242</td>
<td>$12,420</td>
<td>18.1</td>
</tr>
<tr>
<td>Regional Total</td>
<td>34,736</td>
<td>No</td>
<td>14,551</td>
<td>$236,242</td>
<td>$12,420</td>
<td>18.1</td>
</tr>
</tbody>
</table>

Table I-8
Percent of Total Employment (1990 Non-Agricultural Employment = 13,677)

<table>
<thead>
<tr>
<th>County</th>
<th>Manufacturing</th>
<th>Construction</th>
<th>Trade</th>
<th>Finance</th>
<th>Service</th>
<th>Govt.</th>
<th>Transportation Pub. Utilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>2,899</td>
<td>872</td>
<td>3,227</td>
<td>1,505</td>
<td>3,244</td>
<td>1,520</td>
<td>410</td>
</tr>
<tr>
<td>Regional Total</td>
<td>2,899</td>
<td>872</td>
<td>3,227</td>
<td>1,505</td>
<td>3,244</td>
<td>1,520</td>
<td>410</td>
</tr>
<tr>
<td>Percent</td>
<td>21.2</td>
<td>6.4</td>
<td>23.6</td>
<td>11.0</td>
<td>23.7</td>
<td>11.1</td>
<td>3.0</td>
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</tbody>
</table>

Table I-9
Agricultural Employment, 1990

<table>
<thead>
<tr>
<th>County</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>817</td>
</tr>
<tr>
<td>Regional Total</td>
<td>817</td>
</tr>
</tbody>
</table>
Table I-10
Major Generators of Commercial and Non-Hazardous Waste in 1991

<table>
<thead>
<tr>
<th>County</th>
<th>Screening Criteria Applied</th>
<th>Number of Generators</th>
<th>Estimated Total Quantity of Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Regional Total</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Table I-11
Summary of Institutions Housing More Than 100 Persons

<table>
<thead>
<tr>
<th>County</th>
<th>Total Number of Institutions</th>
<th>Total Number of Students/Residents</th>
<th>Estimated Quantity of Waste Generated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Regional Total</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table I-12
Summary of Major Health Care Facilities in the Region

<table>
<thead>
<tr>
<th>County</th>
<th>No. of Facilities</th>
<th>No. of Beds</th>
<th>Infectious Waste Management</th>
<th>Est. Quantity of Solid Waste Generated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>4</td>
<td>493</td>
<td>1</td>
<td>Incineration</td>
</tr>
<tr>
<td>Regional Total</td>
<td>4</td>
<td>493</td>
<td>1</td>
<td>Incineration</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>
### Table I-13
**Sources of Local Revenue in the Region**

<table>
<thead>
<tr>
<th>County</th>
<th>Property Tax</th>
<th>Local Sales Tax</th>
<th>Wheel Tax</th>
<th>Local Waste Collection Fee</th>
<th>User Fee/ Tipping Fee</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Regional Total</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

### Table I-14
**Revenue Data for Fiscal Year 1993**

<table>
<thead>
<tr>
<th>County</th>
<th>Total Assessed Property Value</th>
<th>Total Property Tax Revenue</th>
<th>Total Sales Subject to Sales Tax</th>
<th>Total Local Sales Tax Revenue</th>
<th># Registered Vehicles</th>
<th>Total Wheel Tax Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>$366,733,028</td>
<td>$5,163,000</td>
<td>$265,792,616</td>
<td>$5,498,850</td>
<td>29,368</td>
<td>0</td>
</tr>
<tr>
<td>Regional Total</td>
<td>$366,733,028</td>
<td>$5,163,000</td>
<td>$265,792,616</td>
<td>$5,498,850</td>
<td>29,368</td>
<td>0</td>
</tr>
</tbody>
</table>
CHAPTER II
ANALYSIS OF THE CURRENT SOLID WASTE MANAGEMENT SYSTEM FOR THE REGION

A. WASTE STREAM CHARACTERIZATION

The Cumberland County landfill receives waste from industries/companies and residents from within the County. Tables II-1 through II-5 outline the characteristics of the annual waste stream.

Since no formal study of the volume and nature of the solid waste landfilled in the region has been performed, national projections are assumed to represent the county waste composition percentages. This same assumption was made for the development of the 1991 District Needs Assessment.

Cumberland County’s waste generation increases during the summer months due to tourism. Fairfield Glade’s disposal rate doubles during the summer and Cumberland Mountain State Park increases their disposal rate as well.

Cumberland County has established a $40 per ton tipping fee for Class I/II waste and a $20 per ton tipping fee for Class III/IV waste. These fees have been in effect since September 1993.

Table II-1
Quantity of Solid Waste Received for Disposal/Incineration in Calendar 1991

<table>
<thead>
<tr>
<th>County</th>
<th>Tons Disposed</th>
<th>Population (1991)</th>
<th>Waste Disposed Per Capita (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>29,733</td>
<td>35,376</td>
<td>0.84</td>
</tr>
<tr>
<td>Regional Total</td>
<td>29,733</td>
<td>35,376</td>
<td>0.84</td>
</tr>
</tbody>
</table>
### Table II-2
Origin of Regional Solid Waste in 1991 (tons per year (tpy))

<table>
<thead>
<tr>
<th>County</th>
<th>Residential</th>
<th>Institutional/Commercial</th>
<th>Non-Hazardous Industrial</th>
<th>Special</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>11,893</td>
<td>8,920</td>
<td>8,920</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Regional Total</td>
<td>11,893</td>
<td>8,920</td>
<td>8,920</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### Table II-3
Categories of Solid Waste in the Region (tpy)

<table>
<thead>
<tr>
<th>County/Facility</th>
<th>Yard Waste</th>
<th>Sewage Sludge</th>
<th>Construction Demolition</th>
<th>Tires</th>
<th>White Goods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Y/N Qty</td>
<td>Y/N Qty</td>
<td>Y/N Qty</td>
<td>Y/N Qty</td>
<td>Y/N Qty</td>
</tr>
<tr>
<td>Cumberland</td>
<td>Y 903</td>
<td>N 0</td>
<td>Y 1806</td>
<td>Y 181</td>
<td>Y 903</td>
</tr>
<tr>
<td>Regional Total</td>
<td>Y 903</td>
<td>N 0</td>
<td>Y 1806</td>
<td>Y 181</td>
<td>Y 903</td>
</tr>
</tbody>
</table>
Table II-4
Description of Waste Stream by Materials

<table>
<thead>
<tr>
<th>Waste Category</th>
<th>National (%)</th>
<th>Calculated Regional Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper &amp; paperboard</td>
<td>40.0</td>
<td>11,893.2</td>
</tr>
<tr>
<td>Glass</td>
<td>7.1</td>
<td>2,111.0</td>
</tr>
<tr>
<td>Ferrous Metals</td>
<td>6.5</td>
<td>1,932.6</td>
</tr>
<tr>
<td>Aluminum</td>
<td>1.4</td>
<td>416.3</td>
</tr>
<tr>
<td>Other Non-Ferrous Metals</td>
<td>.6</td>
<td>178.4</td>
</tr>
<tr>
<td>Plastics</td>
<td>8.0</td>
<td>2,378.6</td>
</tr>
<tr>
<td>Rubber &amp; Leather</td>
<td>2.5</td>
<td>743.3</td>
</tr>
<tr>
<td>Textiles</td>
<td>2.1</td>
<td>624.4</td>
</tr>
<tr>
<td>Wood</td>
<td>3.6</td>
<td>1,070.4</td>
</tr>
<tr>
<td>Food Waste</td>
<td>7.4</td>
<td>2,200.2</td>
</tr>
<tr>
<td>Yard Waste</td>
<td>17.6</td>
<td>5,233.0</td>
</tr>
<tr>
<td>Misc. Inorganic Waste</td>
<td>1.5</td>
<td>446.0</td>
</tr>
<tr>
<td>Other</td>
<td>1.7</td>
<td>505.5</td>
</tr>
<tr>
<td><strong>TOTAL MUNICIPAL SOLID WASTE</strong></td>
<td><strong>100.0</strong></td>
<td><strong>29,732.9</strong></td>
</tr>
</tbody>
</table>

Table II-5
Unmanaged Waste in Cumberland County (tpy)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>38,036</td>
<td>29,733</td>
<td>8,303</td>
<td>22.0</td>
</tr>
<tr>
<td>Regional Total</td>
<td>38,036</td>
<td>29,733</td>
<td>8,303</td>
<td>22.0</td>
</tr>
</tbody>
</table>

* Wastes that are "outside" the collection system such as materials in roadside dumps, litter, etc.
B. WASTE COLLECTION AND TRANSPORTATION SYSTEMS

Cumberland County and four municipalities/communities (Crossville, Pleasant Hill, Fairfield Glade, and Tansi) within the County provide waste collection service for residents, industries, and institutions of the region.

Within the County, 8,727 households are serviced solely by convenience centers, 4,028 receive house-to-house pick-up, and 671 have direct commercial/contracted service. Figure II-3 shows the waste collection service available throughout the region.

The State requires that at least 90 percent of the County must be within the service area of collectors; otherwise, the County must provide at a minimum a convenience center for the collection of solid waste. With the 14 convenience centers and door-to-door pick-up available for four communities, waste collection and transportation service in the region is more than adequate. However, the convenience centers are not designed to the state standards established in Rule 1200-1-7-.11.

C. SOURCE REDUCTION AND RECYCLING SYSTEMS

No formal public waste reduction/recycling programs exist within the County. However, there is one private recycling center available in Cumberland County (See Figure II-3). Lynch Recycling, a private, for-profit company, operates an aluminum recycling center. The center, located on Highway 70 in Crossville, is open weekdays from 8:00 a.m. until 5:00 p.m. and on Saturday from 8:00 a.m. until 12:00 noon. In 1991, Lynch Recycling collected 90 tons of aluminum. Currently, they are recycling an average of 20,000 pounds per month.

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

1. Waste Processing Facility

There are no waste processing facilities located within Cumberland County. Therefore this section is not applicable.
2. **Composting**

There are no composting facilities located within Cumberland County (See Table II-6). However, it is anticipated that as part of Cumberland County's commitment to the reduction of solid waste landfilling, a composting program may be implemented in the future.

<table>
<thead>
<tr>
<th>County</th>
<th>Facility Location</th>
<th>Waste Processed (tpy)</th>
<th>Composted Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yard Waste</td>
</tr>
<tr>
<td><strong>Existing</strong></td>
<td></td>
<td></td>
<td>---</td>
</tr>
<tr>
<td><strong>Planned</strong></td>
<td></td>
<td></td>
<td>---</td>
</tr>
</tbody>
</table>

Cumberland  TBD  TBD  TBD  TBD  TBD
Regional Total TBD  TBD  TBD  TBD  TBD

3. **Waste-to-Energy/Incineration**

There is one waste-to-energy (WTE)/incineration facility located in Cumberland County. This facility is used to disinfect, process, or burn infectious waste. The permitted capacity of the incinerator is 400 pounds per day (73 tpy). Construction of a WTE/incineration facility as a disposal alternative for municipal solid waste is not proposed due to opposition of area citizens to this concept. This opposition was strongly expressed during the report development process.
Table II-7
Solid Waste Incinerators or Waste-to-Energy Facilities

<table>
<thead>
<tr>
<th>County</th>
<th>Facility Location</th>
<th>Design Capacity (tpy)</th>
<th>Current Use (tpy)</th>
<th>Anticipated Operating Life of Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>Cumberland Medical Center, Inc.</td>
<td>73</td>
<td>39</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Operating Facilities

Planned Facilities

---
---
---
---

E. DISPOSAL FACILITIES - LANDFILLS AND BALEFILLS

Cumberland County currently operates a 22.81-acre landfill on Flynn's Cove Road in the southwestern part of the County. However, 8.7 acres of this facility are scheduled for closure in December 1994.

The County, in an effort to maintain compliance with both state and federal regulations, has elected to design a 14.7-acre "subtitle D" facility (Fill Area 3). In addition, the County has also sited and is in the process of permitting a Class III/IV facility (Fill Area 2).

The capacity of Fill Area 3 is 373,700 cubic yards (186,850 tons). Fill Area 2 has a 389,580 cubic yards (194,790 tons) capacity. The closure date for the Class I facility is estimated to be July 2004, while the Class III/IV facility is expected to close in December 2015, if the 25 percent recycling requirement is met. Tables II-8 through II-11 summarize the status of the landfills in Cumberland County.
Table II-8
Existing Solid Waste Landfills in the Region

<table>
<thead>
<tr>
<th>County</th>
<th>Name of Landfill</th>
<th>Location</th>
<th>Permitted Capacity (acres)</th>
<th>Current Rate of Waste Accepted (tpd)</th>
<th>Remaining Capacity (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>Cumberland County Landfill Fill Area 1</td>
<td>Flynn's Cove Road</td>
<td>8.7</td>
<td>96.66</td>
<td>37,200.0</td>
</tr>
<tr>
<td>Regional Total</td>
<td></td>
<td></td>
<td>8.7</td>
<td>96.66</td>
<td>37,200.0</td>
</tr>
</tbody>
</table>

Table II-9
Existing Landfills Expected to Close Before 2003

<table>
<thead>
<tr>
<th>County</th>
<th>Location</th>
<th>Current Use (tpd)</th>
<th>Current Annual Use (tpy)</th>
<th>Anticipated Date of Closure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>Cumberland County Landfill Fill Area 1</td>
<td>96.66</td>
<td>35,283</td>
<td>December 1994</td>
</tr>
<tr>
<td>Regional Total</td>
<td></td>
<td>96.66</td>
<td>35,283</td>
<td></td>
</tr>
</tbody>
</table>

Table II-10
Planned Expansions and Planned New Facilities Which Will Operate for Ten Years or More

<table>
<thead>
<tr>
<th>County</th>
<th>Proposed Facility</th>
<th>Location</th>
<th>When Will Capacity be Available</th>
<th>Permitted Capacity Sought (acre)</th>
<th>Design Rate of Waste Disposed (tpd)</th>
<th>Potential Expansion (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>1</td>
<td>Flynn's Cove Road</td>
<td>Jan. 95</td>
<td>14.7</td>
<td>57</td>
<td>Yes</td>
</tr>
<tr>
<td>Planned New Regional Capacity</td>
<td></td>
<td></td>
<td></td>
<td>14.7</td>
<td>57</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Table II-11
Existing and Planned Capacity in the Region at the Close of the Next Ten Years (tons)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Existing</th>
<th>Planned</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>62,219</td>
<td></td>
<td>62,219</td>
</tr>
<tr>
<td>1994</td>
<td>37,200</td>
<td></td>
<td>37,200</td>
</tr>
<tr>
<td>1995</td>
<td></td>
<td>186,850</td>
<td>186,850</td>
</tr>
<tr>
<td>1996</td>
<td></td>
<td>150,202</td>
<td>150,202</td>
</tr>
<tr>
<td>1997</td>
<td></td>
<td>131,375</td>
<td>131,375</td>
</tr>
<tr>
<td>1998</td>
<td></td>
<td>112,204</td>
<td>112,204</td>
</tr>
<tr>
<td>1999</td>
<td></td>
<td>92,683</td>
<td>92,683</td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td>72,791</td>
<td>72,791</td>
</tr>
<tr>
<td>2001</td>
<td></td>
<td>52,615</td>
<td>52,615</td>
</tr>
<tr>
<td>2002</td>
<td></td>
<td>32,134</td>
<td>32,134</td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td>11,346</td>
<td>11,346</td>
</tr>
</tbody>
</table>

F. COSTS OF THE CURRENT SYSTEM

Cumberland County and its municipalities spent $1,239,237 on solid waste programs during Fiscal Year 1993. The detailed financial statements of the County and municipalities expenditures are shown in Table II-12. Figure II-1 illustrates the current system cost.
Table II-12
Solid Waste Expenditures

<table>
<thead>
<tr>
<th>ITEM</th>
<th>CUMBERLAND COUNTY</th>
<th>CROSSVILLE</th>
<th>FAIRFIELD GLADE</th>
<th>TANSI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WASTE COLLECTION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wages</td>
<td>$87,784.00</td>
<td>$149,500.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering Services</td>
<td></td>
<td>$1,000.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle Maintenance</td>
<td></td>
<td>$22,000.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collection Fees</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Supplies</td>
<td>$32,375.00</td>
<td>$11,200.00</td>
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<td></td>
</tr>
<tr>
<td>Trustee's Commission</td>
<td>$500.00</td>
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<td></td>
</tr>
<tr>
<td>Equipment</td>
<td>$10,000.00</td>
<td>$32,500.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor Vehicles</td>
<td>$115,000.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Charges</td>
<td>$686.00</td>
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<td>$1,072.00</td>
<td></td>
</tr>
<tr>
<td>Capital Outlay</td>
<td></td>
<td></td>
<td>$111,250.00</td>
<td></td>
</tr>
<tr>
<td><strong>LANDFILL AND WASTE DISPOSAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wages</td>
<td>$91,375.00</td>
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<td></td>
</tr>
<tr>
<td>Vehicle Maintenance/Repair</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Supplies</td>
<td>$30,000.00</td>
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<td></td>
<td></td>
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<tr>
<td>Gas, Oil, Diesel</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machinery/Equipment</td>
<td>$2,579.00</td>
<td></td>
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</tr>
<tr>
<td>Other Charges</td>
<td>$30,000.00</td>
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<td></td>
</tr>
<tr>
<td>Engineering Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Development</td>
<td>$250,000.00</td>
<td></td>
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<tr>
<td><strong>CONVENIENCE CENTERS</strong></td>
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</tr>
<tr>
<td>Guards</td>
<td>$75,712.00</td>
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<td></td>
</tr>
<tr>
<td>Operating Lease Payments</td>
<td>$7,500.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilities</td>
<td>$5,000.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RECYCLING PROGRAMS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wages</td>
<td>$30,000.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilities</td>
<td>$7,500.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplies</td>
<td>$10,000.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building Improvements</td>
<td>$7,500.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL EXPENDITURES</strong></td>
<td>$794,511.00</td>
<td>$328,322.00</td>
<td>$96,124.00</td>
<td>$20,280.00</td>
</tr>
</tbody>
</table>
G. REVENUES

Cumberland County and its municipalities received $1,464,218 on solid waste programs during Fiscal Year 1993. The detailed financial statements of county and municipalities revenues are shown in Table II-13, while Figure II-2 illustrates the revenues of the current system on a percentage basis.

Table II-3
Solid Waste Revenues

<table>
<thead>
<tr>
<th>ITEM</th>
<th>CUMBERLAND COUNTY</th>
<th>CROSSVILLE</th>
<th>FAIRFIELD GLADE</th>
<th>TANSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>REVENUES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Service Charges</td>
<td>$15,000.00</td>
<td>$263,000.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extra Dumpster Services</td>
<td>$1,000.00</td>
<td>$4,200.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sale of Recycled Materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Fund Transfer</td>
<td>$755,000.00</td>
<td>$398,000.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grants</td>
<td>$27,518.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL REVENUES</td>
<td>$798,518.00</td>
<td>$655,700.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
</tbody>
</table>
H. PUBLIC INFORMATION AND EDUCATION PROGRAM

There are no solid waste public information/education programs operating in the Region.

I. PROBLEM WASTES

There are several types of problem wastes which Cumberland County is required to address. These wastes include tires, automotive fluids, and lead acid batteries. State law requires that every county provide at least one site for the collection of these problem wastes by January 1, 1995, unless adequate collection already exists within the county. In addition, every Class I disposal facility must provide a temporary storage area for tires.
1. **Household Hazardous Waste**

There are no facilities within the Region dedicated to the collection, management or disposal of household hazardous waste on a daily basis. However, Cumberland County plans to participate in the annual state sponsored collection day.

2. **Waste Tires**

At the Cumberland County Landfill, waste tires and large rubber products are accepted for disposal. These rubber products are stockpiled in the waste tire storage area until the state-provided tire shredder is available.

The tire shredder, which comes to the county twice each year, is used to cut the rubber products into sizes suitable for disposal.

3. **Automotive Fluids**

One site at the Community Complex is dedicated to the collection of waste oil. However, there are no facilities within the Region dedicated to the collection and disposal other automotive fluids.

4. **Lead Acid Batteries**

Although lead acid batteries may be traded-in to some battery retailers, a permanent facility dedicated to the proper collection and disposal of lead acid batteries does not exist within the Region.

5. **Litter**

Beyond participation in the Adopt-a-Highway program, no formal system dedicated to the collection of litter exists within the Region.

6. **SYSTEM MAP**

The map shown in Figure II-3 illustrates the regional solid waste management system for 1993.
K. STRENGTHS AND WEAKNESSES OF EXISTING SYSTEMS

Cumberland County’s solid waste management system is not adequate to meet the future needs of the Region. To provide an integrated system to the County, the Region must consider the addition of source reduction, recycling, and education programs to complement land disposal.

Although the existing solid waste management system provides superior collection service to the region, the existing 14 convenience centers do not meet new state standards. The centers must either be upgraded or relocated to meet the new requirements.

In addition, the Class I disposal facility is scheduled for closure in December 1994. A new "subtitle D" landfill consisting which has yet to be permitted, is scheduled to open in January 1995. This facility will have a total estimated lifespan of nine years if recycling is implemented.

The Class III/IV disposal facility is proposed to open in January 1995 which will operate for 20 years. The ability of the facilities to be cost-effective (i.e., to maintain projected lifespans) is contingent upon the region establishing an effective recycling system.

As a whole, the region is deficient in the operation of an integrated system. The existing system has not been designed with the flexibility needed to handle future waste streams. However, the region does have the commitment to provide the County with a system that is both efficient and effective.
CHAPTER III
GROWTH TRENDS, WASTE PROJECTIONS,
AND PRELIMINARY SYSTEM STRUCTURE

In order to project growth trends and waste volumes for the region over the next ten years, a number of significant assumptions were made. Changes in any one of the assumptions could potentially impact what is actualized within the region. Any trend or projection analysis is designed to be used as a flexible tool, rather than a firm, accurate control.

A. GROWTH PROJECTIONS

Cumberland County's population is expected to grow at an average annual rate of 1.8 percent over the next ten years. It is assumed that the increase in solid waste generation will occur at the same rate unless source reduction steps are taken to lower the volume of waste (e.g., industrial and residential recycling of products typically landfilled).

<table>
<thead>
<tr>
<th>County</th>
<th>Total Waste Disposed in FY 1993</th>
<th>Projected Population 1993</th>
<th>Annual Per Capita Generation (tons/person/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>30,810</td>
<td>36,679</td>
<td>0.84</td>
</tr>
<tr>
<td>Total</td>
<td>30,810</td>
<td>36,679</td>
<td>0.84</td>
</tr>
</tbody>
</table>

The quantities shown in Table III-2 are calculated by multiplying the population by the annual per capita generation rate given in Table III-1.
Table III-2
Quantity of Solid Waste Requiring Disposal (tons)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>31,391</td>
<td>31,964</td>
<td>32,547</td>
<td>33,141</td>
<td>33,746</td>
<td>34,362</td>
<td>35,016</td>
<td>35,516</td>
<td>36,051</td>
<td>36,594</td>
</tr>
<tr>
<td>Total</td>
<td>31,391</td>
<td>31,964</td>
<td>32,547</td>
<td>33,141</td>
<td>33,746</td>
<td>34,362</td>
<td>35,016</td>
<td>35,516</td>
<td>36,051</td>
<td>36,594</td>
</tr>
</tbody>
</table>

An economic growth rate of 3.2 percent was assumed as published by the UT Center for Business and Economic Research.

Table III-3
Quantity of Solid Waste Requiring Disposal (in tons) Adjusted for Population and Economic Growth

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>33,258</td>
<td>34,322</td>
<td>35,421</td>
<td>36,554</td>
<td>37,724</td>
<td>38,931</td>
<td>40,177</td>
<td>41,462</td>
<td>42,789</td>
<td>44,158</td>
</tr>
<tr>
<td>Total</td>
<td>33,258</td>
<td>34,322</td>
<td>35,421</td>
<td>36,554</td>
<td>37,724</td>
<td>38,931</td>
<td>40,177</td>
<td>41,462</td>
<td>42,789</td>
<td>44,158</td>
</tr>
</tbody>
</table>

Table III-4
Quantity of Waste Requiring Disposal (in tons) Adjusted for Population Changes, Economic Growth, and Waste Reduction and Recycling

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>28,269</td>
<td>25,742</td>
<td>26,565</td>
<td>27,415</td>
<td>28,293</td>
<td>29,198</td>
<td>30,132</td>
<td>31,097</td>
<td>32,092</td>
<td>33,119</td>
</tr>
<tr>
<td>Total</td>
<td>28,269</td>
<td>25,742</td>
<td>26,565</td>
<td>27,415</td>
<td>28,293</td>
<td>29,198</td>
<td>30,132</td>
<td>31,097</td>
<td>32,092</td>
<td>33,119</td>
</tr>
</tbody>
</table>
Table III-8
Annual Projections of Solid Waste Requiring Disposal Adjusted
for All Applicable Factors (tpy)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>28,269</td>
<td>25,742</td>
<td>26,565</td>
<td>27,415</td>
<td>28,293</td>
<td>29,198</td>
<td>30,132</td>
<td>31,097</td>
<td>32,092</td>
<td>33,119</td>
</tr>
<tr>
<td>Total</td>
<td>28,269</td>
<td>25,742</td>
<td>26,565</td>
<td>27,415</td>
<td>28,293</td>
<td>29,198</td>
<td>30,132</td>
<td>31,097</td>
<td>32,092</td>
<td>33,119</td>
</tr>
</tbody>
</table>

B. MULTI-COUNTY REGION PROJECTIONS

This section does not apply.

C. PRELIMINARY SYSTEM DESIGN

Cumberland County's solid waste management system offers a variety of collection services to its region. With 14 convenience centers located throughout the County and door-to-door pick up offered in Crossville, Fairfield Glade, Tansi and Pleasant Hill, residents of the region are well-served. It is anticipated that a reduction in the number of convenience centers may occur to provide a more cost-effective level of service to the region. Even with such a reduction, the quality of the regional collection system will remain superior.

The landfill which serves the region is scheduled to close in December 1994. The County plans to open both a Class I facility and a Class III/IV facility in January 1995. If recycling is implemented, the lifespans of these facilities are 9 years and 20 years, respectively.

With this capacity, the disposal element of the solid waste management system is adequate. However, there are four elements of the system which are lacking: composting, source reduction/recycling, education, and hazardous waste collection. The region plans to establish programs to meet these needs. The solid waste system that Cumberland County proposes consists of the following elements:
- Waste Collection and Transportation
  - convenience centers
  - recycling center
  - door-to-door pickup

- Solid Waste Disposal
  - 1 Class I facility
  - 1 Class III/IV facility
  - composting

- Source Reduction/Recycling

- Educational Programs

- Household Hazardous Waste Collection

The system has been designed such that the Class III/IV disposal facility will accept 15 percent of the waste diverted from the landfill, and 10 percent will be recycled. No estimate has been made of the percentage of waste diverted from the Class I facility through source reduction nor has the projected percent of waste handled through composting been determined.
CHAPTER IV
WASTE REDUCTION

A.  ESTABLISHING A BASE YEAR QUANTITY

The University of Tennessee report entitled "Managing Our Waste: Solid Waste Planning in Tennessee," dated February 1990, recorded the population and quantity of solid waste generated and disposed in 1989 for Cumberland County (See Table IV-1) as 34,200 people and 49,660 tons.

Based on this 1989 disposal rate, Cumberland County is required to attain a 25 percent reduction in solid waste landfilled by 1995. The regional per capita disposal rate of 1.452 tons per person was calculated using the formula below:

\[
\frac{TWD}{TRP} = WDR_{PC}
\]

where
- TWD = Total waste disposed or incinerated
- TRP = Total regional population
- \( WDR_{PC} \) = Regional annual per capita waste disposal rate

B.  1995 WASTE REDUCTION PER CAPITA DISPOSAL TARGET

By 1995, the State of Tennessee requires that Cumberland County reduce its per capita quantity of waste disposed by 25 percent. The 1995 target per capita reduction of 0.36 tpy (726 ppy) was calculated using the formula below:

\[
WDR_{PC} \times .25 = TR_{PC}
\]

where
- \( WDR_{PC} \) = Average 1989 per capita rate
- \( TR_{PC} \) = Target per capita reduction rate
Table IV-1
Population and Quantities of Waste Disposed of at Municipal Solid Waste Disposal Facilities and Incineration, in 1989

<table>
<thead>
<tr>
<th>County</th>
<th>1989 Population</th>
<th>1989 Total Waste Disposed (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>34,200</td>
<td>49,660</td>
</tr>
<tr>
<td>Regional Total</td>
<td>34,200</td>
<td>49,600</td>
</tr>
</tbody>
</table>

C. DESCRIBE HOW THE REGION WILL MEET THE STATEWIDE REDUCTION GOAL

The County will open a Class III/IV landfill. Disposal of Class III/IV material in the new facility will divert a significant amount of material currently going to the Class I area. The new facility should account for approximately 15 percent of the regions reduction.

The County will initiate a county-wide recycling program designed to address problems associated with curbside and convenience center collection methods. It is estimated that an additional 10 percent reduction can be gained through recycling.

It appears that composting will be initiated in order to continue source reduction within the County.

D. TEN-YEAR IMPLEMENTATION

There are no waste reduction strategies which are not addressed in another chapter. Therefore this section does not apply.

E. STAFFING AND TRAINING NEEDS

There are no waste reduction strategies which are not addressed in another chapter. Therefore this section does not apply.
<table>
<thead>
<tr>
<th>Year</th>
<th>Previous Reductions</th>
<th>Recovered &amp; Recycled</th>
<th>Diverted to Alternative Disposal</th>
<th>Economic Incentives</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985 to 1989</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>1990</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1991</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1992</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1993</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1994</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1995</td>
<td>0</td>
<td>5,521.96</td>
<td>8,282.93</td>
<td>0</td>
<td>0</td>
<td>13,804.89</td>
</tr>
<tr>
<td>Subtotal</td>
<td>0</td>
<td>5,521.96</td>
<td>8,282.93</td>
<td>0</td>
<td>0</td>
<td>13,804.89</td>
</tr>
<tr>
<td>1996</td>
<td>0</td>
<td>5,622.72</td>
<td>8,434.89</td>
<td>0</td>
<td>0</td>
<td>14,056.81</td>
</tr>
<tr>
<td>1997</td>
<td>0</td>
<td>5,725.38</td>
<td>8,588.07</td>
<td>0</td>
<td>0</td>
<td>14,313.45</td>
</tr>
<tr>
<td>1998</td>
<td>0</td>
<td>5,829.92</td>
<td>8,744.89</td>
<td>0</td>
<td>0</td>
<td>14,574.81</td>
</tr>
<tr>
<td>1999</td>
<td>0</td>
<td>5,936.21</td>
<td>8,904.32</td>
<td>0</td>
<td>0</td>
<td>14,840.53</td>
</tr>
<tr>
<td>2000</td>
<td>0</td>
<td>6,049.32</td>
<td>9,073.99</td>
<td>0</td>
<td>0</td>
<td>15,123.31</td>
</tr>
<tr>
<td>2001</td>
<td>0</td>
<td>6,135.57</td>
<td>9,203.36</td>
<td>0</td>
<td>0</td>
<td>15,338.93</td>
</tr>
<tr>
<td>2002</td>
<td>0</td>
<td>6,228.06</td>
<td>9,342.1</td>
<td>0</td>
<td>0</td>
<td>15,570.16</td>
</tr>
<tr>
<td>2003</td>
<td>0</td>
<td>6,321.86</td>
<td>9,482.80</td>
<td>0</td>
<td>0</td>
<td>15,804.66</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>61,653.93</td>
<td>85,578.51</td>
<td>0</td>
<td>0</td>
<td>147,232.44</td>
</tr>
</tbody>
</table>
### Table IV-3

**Estimated Quantities of Waste Removed or Diverted from the Waste Stream for Specific Sectors of the Region for 1995 (tons)**

<table>
<thead>
<tr>
<th></th>
<th>Recovered and Recycled</th>
<th>Diverted to Alternative Disposal</th>
<th>Quantities Expressed As A Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crossville</td>
<td>1,006.24</td>
<td>1,509.35</td>
<td>18.22</td>
</tr>
<tr>
<td>Fairfield Glade</td>
<td>940.17</td>
<td>1,410.26</td>
<td>17.03</td>
</tr>
<tr>
<td>Pleasant Hill</td>
<td>71.73</td>
<td>107.59</td>
<td>1.30</td>
</tr>
<tr>
<td>Tansi</td>
<td>145.20</td>
<td>217.80</td>
<td>2.63</td>
</tr>
<tr>
<td>Cumberland County</td>
<td>3,358.62</td>
<td>3,245.00</td>
<td>60.82</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,521.96</strong></td>
<td><strong>8,282.93</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

### F. RESPONSIBILITIES FOR IMPLEMENTATION

There are no waste reduction strategies which are not addressed in another chapter. Therefore this section does not apply.

### G. PROGRESS REPORTS

There are no waste reduction strategies which are not addressed in another chapter. Therefore this section does not apply.
CHAPTER V
WASTE COLLECTION AND TRANSPORTATION

A. COLLECTION SYSTEM

Cumberland County currently operates 14 convenience centers throughout the region. Using the criteria established in Rule 1200-1-7.11 there are no underserved areas. Based on this state guideline, the region could operate three centers and maintain an acceptable level of service for its residents.

B. REGIONAL NEEDS

Although the level of service provided to residents by Cumberland County is acceptable, inefficiencies within the program exist. Current centers are unsightly and present litter control problems. The current system makes efficient utilization of program resources difficult at best.

As indicated in the previous section, the County operates 14 convenience centers throughout the region. Each existing center utilizes approximately 20 green boxes with 6 cubic yard capacities for accepting commingled waste. The system requires three front-end loaders, which must be replaced every 8 years (on a rotating basis), and run continuously from the centers to the landfill disposing of waste. For a variety of reasons, existing centers do not meet state standards. The County will be required to operate a minimum of three enhanced convenience centers that meet new state standards. It is important to note that three is a minimum number and exceeding minimum requirements may be appropriate.

These centers will be equipped to handle
- Commingled waste;
- Recyclables;
- Tires;
- Waste oil/automotive fluids; and
- Batteries (received at central recycling center only See Chapter VI).
Increased costs associated with new convenience center standards dictate fewer centers. However, the remaining centers will be required to function at a higher level than currently provided. Demanding state standards coupled with fiscal responsibility require efficiency in both the collection and transportation of waste. Convenience centers meeting rigorous 1991 state standards will need to employ contemporary techniques, technologies, and equipment in order to streamline costs and reduce overhead. It is important to note that a 42-yard packer receiver (roll-off container) is equivalent to 28.7 6-yd green boxes. Continuing reliance on green box technology coupled with increasing population demands creates the potential for large environmentally unstable centers.

Equipment required to provide this level of service includes:

- 35-yard three compartment recycling receiver;
- compactor;
- 42-yard packer receiver;
- waste oil tank;
- automotive fluid tank; and
- 1 truck (system wide) and hoist capable of transporting the new roll-offs and containers.

Transportation requirements dictate at least one extra transportation container for each type container used, assuming a full container picked up is replaced with an empty. As antiquated centers are closed and new centers come on line, the surplus of green boxes produced can be incorporated into the recycling program or used to satisfy commercial customer needs.

In many instances individual, objective comparisons of green box versus roll-off technologies are required in order to determine the most appropriate application for the given situation. Factors including but not limited to statutory compliance, availability of funds, capital and operating costs, convenience center size, activity and location, as well as support equipment and personnel costs associated with the given technology will impact on implementation choices.

C. TEN-YEAR IMPLEMENTATION

It is the goal of the plan that convenience centers operating January 1, 1995 are in compliance
with applicable state regulations. Over the implementation period additional centers beyond the three required will be brought on line as regional requirements dictate.

D. STAFFING AND TRAINING NEEDS

Ultimately staffing requirements will be dictated by the number of centers (the minimum of three centers may be exceeded). It is the goal of this plan that all applicable state staffing regulations be met. The Cumberland County Solid Waste Department will ensure that all convenience center operators have appropriate introductory and supplemental training regarding proper waste identification, separation, and disposal procedures. Furthermore, convenience center operators will be expected to provide primary and continuing solid waste education and assistance to the residents of the county.

E. BUDGET

The County will finance the new convenience centers and recycling centers through general funds. In addition, the County will apply for grants to aid with the capital costs of developing the new collection system.

The operating costs of the facility will be funded by the County through the Solid Waste Department. The budget is shown in Table V-1.

F. SCHEDULE

The ten-year implementation schedule is shown in Figure V-1.

G. MULTI-COUNTY REGION RESPONSIBILITIES

This section does not apply.

H. LOCATION OF FACILITIES

Figure V-2 indicates examples of primary site options for convenience centers.
Table V-1
Waste Collection and Transportation Ten-Year Budget

<table>
<thead>
<tr>
<th>ITEM</th>
<th>CAPITAL COST</th>
<th>OPERATING COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Acquisition</td>
<td>$15,000.00</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>$15,000.00</td>
<td></td>
</tr>
<tr>
<td>Site Work</td>
<td>$48,000.00</td>
<td></td>
</tr>
<tr>
<td>Front-End Loader Replacement</td>
<td>$125,000.00</td>
<td></td>
</tr>
<tr>
<td>Equipment Replacement Frequency</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Truck and Hoist Replacement</td>
<td>$75,500.00</td>
<td></td>
</tr>
<tr>
<td>Truck and Hoist Replacement Frequency</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Containers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compactor</td>
<td>$9,710.00</td>
<td>$150,000.00</td>
</tr>
<tr>
<td>42–yd packer receiver</td>
<td>$5,910.00</td>
<td>$12,100.00</td>
</tr>
<tr>
<td>40–yd open top</td>
<td>$4,135.00</td>
<td>$9,000.00</td>
</tr>
<tr>
<td>35–yd 3 compartment receiver</td>
<td>$5,760.00</td>
<td></td>
</tr>
<tr>
<td>Salaries and Training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance and Fuel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL COST (for three centers)</td>
<td>$402,100.00</td>
<td>$171,100.00</td>
</tr>
<tr>
<td>TOTAL COST (for each additional center)</td>
<td>$40,848.33</td>
<td>$33,500.00</td>
</tr>
</tbody>
</table>

Figure V-1
Ten-Year Implementation Schedule

<table>
<thead>
<tr>
<th>ITEM</th>
<th>YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Acquisition</td>
<td>X</td>
</tr>
<tr>
<td>Convenience Center Design/Construction</td>
<td>X</td>
</tr>
<tr>
<td>Equipment Purchase</td>
<td></td>
</tr>
<tr>
<td>Staff Training</td>
<td></td>
</tr>
<tr>
<td>Establish Waste Collection/Disposal Fee</td>
<td></td>
</tr>
<tr>
<td>Planning</td>
<td></td>
</tr>
<tr>
<td>Collection of Data</td>
<td></td>
</tr>
<tr>
<td>Annual Report/Plan Updates</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER VI
RECYCLING

A. REGIONAL NEEDS

In order to meet the 25 percent waste disposal reduction goal, recycling will be a necessary part of Cumberland County's solid waste management system. Due to the County's diversity as a region, two recycling methods will be utilized: convenience center recycling and curbside recycling. However, the Region currently has no facilities or programs in place to provide either recycling method.

B. SPECIFIC ACTIONS

Because recycling activities are not a part of the regional system, the entire area is underserved. A program is proposed to be in place by January 1, 1995, that will serve the entire county. This program will utilize convenience center recycling. Curbside recycling may be established at a later date in Crossville, Fairfield Glade, Pleasant Hill, and Tansi.

A large portion of materials received at the Cumberland County Landfill can and should be recycled. Recyclable materials include the materials listed in Table VI-1. Major revenues from recycling programs typically come from aluminum, glass and paper, with aluminum being the most valuable recyclable product.

Implementation of a regional recycling program will be developed through the Cumberland County Solid Waste Department. Specific features of a regional recycling program will be dictated by fiscal and political considerations, and ultimately by scope and degree of private and public sector participation. Initially the Region will require at least one centralized storage/receiving facility with appropriate material handling equipment for the marketable recyclables accepted. The facility will need to be designed with the capability, if required, to accept materials from municipalities and private haulers as curbside programs come on line.

The new convenience centers which meet 1991 standards will provide containers for recyclables. The center design will promote flexibility with regard to operations and materials accepted. Space for household waste, tire storage, and automotive fluids will also be provided.
Each County convenience center will be equipped with containers for recyclables, as well as containers for commingled waste. Space for storage of tires and automotive fluids will also be provided. Tires will be transferred to the landfill storage area for safety reasons prior to recycling or disposal. Waste oil and other automotive fluids will be moved by a contract hauler directly from the recycling point. As the market for recyclable materials develops, additional materials will be added to the program.

<table>
<thead>
<tr>
<th>Material</th>
<th>Estimated Value ($/ton)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Cans</td>
<td>300-600</td>
</tr>
<tr>
<td>Ferrous/Bi-metal Cans</td>
<td>5-15</td>
</tr>
<tr>
<td>Aluminum Scrap</td>
<td>300-500</td>
</tr>
<tr>
<td>Ferrous Scrap</td>
<td>15</td>
</tr>
<tr>
<td>Green Glass</td>
<td>5-15</td>
</tr>
<tr>
<td>Clear Glass</td>
<td>10-15</td>
</tr>
<tr>
<td>Brown Glass</td>
<td>8-13</td>
</tr>
<tr>
<td>Mixed Glass</td>
<td>2-10</td>
</tr>
<tr>
<td>Plastic HDPE</td>
<td>20-60</td>
</tr>
<tr>
<td>Plastic PET</td>
<td>20-60</td>
</tr>
<tr>
<td>Old Newspaper</td>
<td>10-20</td>
</tr>
<tr>
<td>Corrugated Cardboard</td>
<td>10-20</td>
</tr>
<tr>
<td>High Grade Paper</td>
<td>50-100</td>
</tr>
</tbody>
</table>

As a region, a reduction goal of 726 pounds per year per person has been set. To meet this goal, the region must encourage participation. This can be accomplished through education on source reduction and recycling (See Chapter IX). At this time, there are no plans to create/expand markets for recovered materials on products with a recycled content.
Staffing requirements regarding recycling will be dependent on the extent to which the private sector is utilized. Issues such as market research, reporting, and education will also impact staffing requirements. Regional staffing decisions will be made by the Solid Waste Department.

The Regional Solid Waste Planning Board will establish an education oriented Advisory Committee which will work closely with the Cumberland County Solid Waste Department. In order for a recycling program to work in the region the public will require introductory as well as on-going education. Resources like the Middle Tennessee Recycling Co-op, Solid Waste Department staff members, the Advisory Committee as well as other sources well need to be utilized in an ongoing manner to fulfill educational requirements. It is necessary that the Solid Waste Department coordinate educational activities in order to ensure information is disseminated is appropriate for the needs and capabilities of the Region.

The Regional recycling program will first be funded through alternative revenue sources. The program budget will be supplemented by any monies derived from the sale of recyclables (See Table VI-2).

C. RECYCLING PROGRAM COORDINATION

Cumberland County will encourage recycling through its education program. This program will target households, schools, businesses, and industries. The region will encourage efficiency with regard to duplication of services. The County Solid Waste Department will assess the regions needs and capabilities and determine private and public sector roles. Administrative considerations regarding public versus private sector recycling include:

1. Recycling and marketing experience/expertise
2. Flexibility regarding new materials and markets
3. Public accountability
4. Costs (initial and operating)
5. Efficient utilization of resources
6. Staffing requirement

D. TEN-YEAR IMPLEMENTATION AND SCHEDULE

Regional staffing requirements as well as public and private sector participation assessments will be addressed by the County Solid Waste Department.
The recycling program will comply with all requirements associated with the Tennessee Solid Waste Management Act. All required activity reporting will be provided. The County Solid Waste Department will be responsible for maintaining all records.

The ten-year schedule is shown in Figure VI-1.

**E. ALLOCATION OF RESPONSIBILITY**

The Cumberland County Solid Waste Department will be responsible for the implementation of the recycling program.

**F. LOCATION OF FACILITIES**

The initial recycling center must be offered in a centralized, convenient location in order to promote participation. Below are some of the factors the County Solid Waste Department must consider when choosing the facility site.

1. Population  
2. Travel patterns  
3. Land availability  
4. Utilities  
5. Zoning  
6. Facility impact (environmental and community)

Peripheral recycling collection sites will be provided as convenience centers meeting the Solid Waste Management Act of 1991 open. Although the final site has not been determined Figure VI-2 shows a potential location for the center.
Table VI-2
Recycling Program Ten-Year Budget

<table>
<thead>
<tr>
<th>ITEM</th>
<th>CAPITAL COST</th>
<th>OPERATING COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycling Center Building Construction</td>
<td>$350,000.00</td>
<td></td>
</tr>
<tr>
<td>Equipment (e.g., balers, glass crusher)</td>
<td>$40,000.00</td>
<td>$5,000.00</td>
</tr>
<tr>
<td>Maintenance</td>
<td></td>
<td>$90,000.00</td>
</tr>
<tr>
<td>Salaries</td>
<td></td>
<td>$10,000.00</td>
</tr>
<tr>
<td>Advertising</td>
<td>$10,000.00</td>
<td>$5,000.00</td>
</tr>
<tr>
<td>Equipment and Supplies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td></td>
<td>$5,000.00</td>
</tr>
<tr>
<td><strong>TOTAL COST</strong></td>
<td><strong>$400,000.00</strong></td>
<td><strong>$115,000.00</strong></td>
</tr>
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</table>

Figure VI-1
Ten-Year Implementation Schedule

<table>
<thead>
<tr>
<th>ITEM</th>
<th>YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff</td>
<td>1</td>
</tr>
<tr>
<td>Recycling Center Construction</td>
<td></td>
</tr>
<tr>
<td>Equipment Purchase</td>
<td></td>
</tr>
<tr>
<td>Advertisement</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER VII
COMPOSTING SOLID WASTE PROCESSING, WASTE-TO-ENERGY AND INCINERATION CAPACITY

A. REGIONAL NEEDS

With one incineration facility available to incinerate medical/infectious waste generated by the Cumberland Medical Center, Cumberland County has no plans to build additional facilities to burn municipal solid waste. However, Cumberland County may use composting on a regional level to reduce the amount of solid waste being landfilled.

Composting in one form or another can offer the Region a significant waste diversion capability. There are four basic composting techniques to be considered. Consideration should be based on availability of funding, waste stream characteristics, marketing resources as well as regional input and participation. Roughly characterized the four basic composting techniques include:

1. Large Scale Composting (mechanically processed/total stream)
2. Intermediate-Level Composting (windrow/selective stream)
3. Low-Level Composting (static pile/selective stream)
4. Backyard Composting

A large-scale composting facility, consisting of a materials-handling facility to separate compostable materials from non-compostable materials capable of handling 100 tpd would cost an estimated $8,000,000. Over the life of the facility (20 years) a capital cost allocation results in a capital cost of approximately $20 per ton ($23 per ton with operating costs), which is significant savings compared to the cost of landfilling. However, this cost estimate is only accurate if the facility operates at full capacity. Currently, the region is unable to support a 100 ton per day facility. At this time only a maximum of 20 tons per day could be diverted to a composting facility.

An intermediate-level facility would have a smaller initial capital expense. However, the quality of compost produced could not be controlled as easily. A facility capable of handling a maximum of 25 tons per day would cost approximately $420,000 initially. This would include the purchase of windrow turning equipment, land acquisition, and site development. Based on
a lifespan of ten years, disposal of waste through this method would cost $14 per ton.

Low-level composting would require a smaller initial capital expense than that required by an intermediate facility. A facility capable of handling 15 tons per day would require an initial cost of approximately $300,000. This cost would primarily apply to processing equipment capable of manufacturing compost which meets new federal regulations. Material suitable for low-level composting would require a very selective waste stream.

With appropriate education, backyard composting is a realistic alternative for selective elements in the waste stream. Backyard composting not only reinforces waste consciousness but also eliminates a significant amount of material for the general waste stream. Residents can gain composting benefits with simple backyard static piles or by utilizing any variety of portable composter, such as the Cavell Composter developed by Board member Les Cavell and totally made from recycled materials.

As indicated in Chapters I and II, sufficient capacity is available at the landfill to meet the needs of the region. Therefore, quantitative needs for composting are non-existent. If composting were implemented, the extension of landfill life in the region would be a great benefit. However, it is important to note that unless the compost generated at the large and intermediate level facilities is sold, the diversion does not count toward the 25 percent reduction requirement as set forth by the State.

B. SPECIFIC ACTIONS

This section does not apply. However, Cumberland County plans to promote composting on the individual level through education (See Chapter IX).

C. SCHEDULE

This section does not apply.

D. ALLOCATION OF RESPONSIBILITY

This section does not apply.
E. LOCATION OF FACILITY

This section does not apply.
CHAPTER VIII
DISPOSAL CAPACITY

A. DISPOSAL SUPPLY AND DEMAND

Cumberland County has one landfill in operation which accepts Class I material. This facility is scheduled for closure in December 1994. Two new disposal facilities are currently being designed: a Class I facility and a Class III/IV facility.

These facilities are scheduled to open in January 1995. They have capacities of 373,700 CY (186,850 tons) and 389,580 CY (194,790 tons) respectively.

B. EXCESS CAPACITY

This section does not apply.

C. CAPACITY SHORTFALL

As the analysis shows in Table VIII-1, the regional landfill has the capacity to last for 9.5 years out of the ten year planning period. The landfill should be expanded within the next ten years to prevent the shortfall which will occur in 2003.

D. SCHEDULE

The ten-year budget and implementation schedule are shown in Table VIII-3 and Figure VIII-1, respectively.

E. MULTI-COUNTY RESPONSIBILITIES

This section does not apply.

F. LOCATION

This existing solid waste disposal facility and proposed facilities are shown in Figure VIII-2.
G. REGIONAL EXPORTS

This section does not apply.

Table VIII-1
Tons Per Year

<table>
<thead>
<tr>
<th>Year</th>
<th>DEMAND: Tons of Waste Requiring Disposal</th>
<th>SUPPLY: Existing &amp; Planned Capacity</th>
<th>Surplus (+)</th>
<th>Shortfall (-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>29,733</td>
<td>29,733</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>31,373</td>
<td>31,373</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>18,158</td>
<td>168,692</td>
<td>150,534</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>18,490</td>
<td>150,202</td>
<td>131,712</td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>18,827</td>
<td>131,375</td>
<td>112,204</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>19,171</td>
<td>112,204</td>
<td>92,683</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>19,521</td>
<td>92,683</td>
<td>72,791</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>19,892</td>
<td>72,791</td>
<td>52,615</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>20,176</td>
<td>52,615</td>
<td>32,134</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>20,480</td>
<td>32,134</td>
<td>11,346</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>20,789</td>
<td>11,346</td>
<td>9,443</td>
<td></td>
</tr>
</tbody>
</table>
Table VIII-2
Projected Net Disposal Capacity (tpy)

<table>
<thead>
<tr>
<th>Year</th>
<th>Cumberland County</th>
<th>Regional Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993 base year</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1994</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1995</td>
<td>+150,534</td>
<td>+150,534</td>
</tr>
<tr>
<td>1996</td>
<td>+131,712</td>
<td>+131,712</td>
</tr>
<tr>
<td>1997</td>
<td>+112,204</td>
<td>+112,204</td>
</tr>
<tr>
<td>1998</td>
<td>+92,683</td>
<td>+92,683</td>
</tr>
<tr>
<td>1999</td>
<td>+72,791</td>
<td>+72,791</td>
</tr>
<tr>
<td>2000</td>
<td>+52,615</td>
<td>+52,615</td>
</tr>
<tr>
<td>2001</td>
<td>+32,134</td>
<td>+32,134</td>
</tr>
<tr>
<td>2002</td>
<td>+11,346</td>
<td>+11,346</td>
</tr>
<tr>
<td>2003</td>
<td>-9,443</td>
<td>-9,443</td>
</tr>
</tbody>
</table>
Table VIII-3
Disposal Capacity Ten-Year Budget

<table>
<thead>
<tr>
<th>CAPITAL COSTS</th>
<th>CLASS 1 FILL AREA 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Installation — Class I</strong></td>
<td></td>
</tr>
<tr>
<td>Leachate Migration Control System</td>
<td>$92,500.00</td>
</tr>
<tr>
<td>Synthetic Liner and Geonet</td>
<td>$496,100.00</td>
</tr>
<tr>
<td>Clay Liner</td>
<td>$217,800.00</td>
</tr>
<tr>
<td>Buffer, Road, Pond, Etc. Construction</td>
<td>$576,400.00</td>
</tr>
<tr>
<td>QA/QC</td>
<td>$70,000.00</td>
</tr>
<tr>
<td>Engineering and Geology</td>
<td>$50,000.00</td>
</tr>
<tr>
<td><strong>TOTAL CAPITAL COSTS</strong></td>
<td>$1,502,800.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OPERATING COSTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class I Landfill</strong></td>
<td></td>
</tr>
<tr>
<td>Salaries</td>
<td></td>
</tr>
<tr>
<td>Supervisors ($25,000/year)</td>
<td>$25,000.00</td>
</tr>
<tr>
<td>Operators ($20,000/year)</td>
<td>$80,000.00</td>
</tr>
<tr>
<td>Equipment Lease</td>
<td>$80,000.00</td>
</tr>
<tr>
<td>Equipment</td>
<td>$35,000.00</td>
</tr>
<tr>
<td>Leachate Treatment</td>
<td>$95,000.00</td>
</tr>
<tr>
<td>Daily and Intermediate Cover</td>
<td>$47,714.29</td>
</tr>
<tr>
<td>Environmental Monitoring</td>
<td>$5,000.00</td>
</tr>
<tr>
<td>Engineering</td>
<td>$5,000.00</td>
</tr>
<tr>
<td><strong>TOTAL ANNUAL OPERATING COSTS</strong></td>
<td>$372,714.29</td>
</tr>
</tbody>
</table>

Figure VIII-1
Disposal Capacity Implementation Schedule

| ITEM                  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 |
|-----------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Close Existing Landfill| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Permit/Oper Class I   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Permit/Oper Class III/IV | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Close Class I         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
CHAPTER IX
PUBLIC INFORMATION AND EDUCATION

A. REGIONAL NEEDS

A solid waste plan, that includes the citizens it serves, obviously requires an effort to recruit involvement and foster citizen understanding of the process. To date this vital step is deficient. Therefore, the region requires a public relations/education program emphasizing the importance of the solid waste management plan, the gathering and dissemination of accurate, practical information and an ongoing assessment of both program and public needs to better respond to future changes.

B. MEETING IDENTIFIED NEEDS

Embracing the successful philosophy "early to bed, early to rise, work like heck and advertise," it is felt good public relations and education is of critical importance to assure the needed support and ultimate long term success of the solid waste management plan. To assure the success of the plan and avoid the inconsistencies often characterized by programs heavily dependent on volunteer help, it is held that a full time employee or significant resource be devoted to this area. Public relations/education efforts appear ultimately to be a cost effective means for familiarizing citizens of the region with current and impending statutory mandates and emphasizing the scope and size of the collective effort required for compliance.

An effective public relation position/resource is needed to establish rapport with schools, businesses and industry, private organizations, and the media. In conjunction with the Solid Waste Department, decisions must be made regarding the amount and kind of education materials utilized and the appropriate mode of delivery. A public relations/education effort plays a significant role in establishing a recycling and reuse network of supplier partnerships and markets for recycled goods.

A significant educational goal will be providing students, in a tradition setting, waste management information. Business and industry may require alternative modes of delivery, that those offered in the traditional educational setting. An assessment of needs coupled with the provision of pertinent waste management information will optimize business and industry
involvement in the process. Private organizations may provide a wealth of knowledgeable, highly motivated individuals who generally can support this program and assist in the gathering and dissemination of waste management information as deemed appropriate by the Solid Waste Department. The media plays a major role in the public relations/education process. Local newspapers and radio stations, which have been helpful in the past, will be invaluable through advertisements and public service announcements. These four groups, which are highly structured, will allow for the greatest public impact for regional efforts.

The Middle Tennessee Recycling Cooperative appears to be a powerful resource the region can explore. Public relations/education and material marketing resources makes participation in the program an attractive option.

An education-oriented Citizen Advisory Committee appointed by the Solid Waste Planning Board will be a significant resource to the Solid Waste Department. The eight member committee will serve either one or two-year staggered terms. The committee will serve as an educational resources for the Solid Waste Department. Committee members will represent various sectors of the region (i.e. a, business and industry, media, education). Appointments and vacancies will be filled by the Board. The Solid Waste Manager will provide educational needs and other input as necessary regarding committee appointments.

C. SCHEDULE

The ten-year budget and implementation schedule can be found in Table IX-1 and Figure IX-1, respectively.

D. MULTI-COUNTY RESPONSIBILITY

This section does not apply.
Table IX-1
Public Information and Education Budget

<table>
<thead>
<tr>
<th>ITEM</th>
<th>CAPITAL COST</th>
<th>OPERATING COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff</td>
<td>$30,000.00</td>
<td></td>
</tr>
<tr>
<td>Advertising</td>
<td>$10,000.00</td>
<td></td>
</tr>
<tr>
<td>Equipment and Supplies</td>
<td>$10,000.00</td>
<td>$1,000.00</td>
</tr>
<tr>
<td>Training Programs</td>
<td></td>
<td>$15,000.00</td>
</tr>
<tr>
<td><strong>TOTAL COST</strong></td>
<td><strong>$10,000.00</strong></td>
<td><strong>$56,000.00</strong></td>
</tr>
</tbody>
</table>

Figure IX-1
Ten-Year Implementation Schedule

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Meet with Local Interest Groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop Brochures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Develop Seminar Program</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER X
PROBLEM WASTES

A. HOUSEHOLD HAZARDOUS WASTE

Cumberland County generates tons of household hazardous waste each year which is virtually unaccounted for in the current solid waste management system. To offer the region an environmentally safe method of disposing this waste, the County plans to participate in the state sponsored hazardous waste collection program. This program will provide one collection day per year.

To ensure that the public is aware of the event and what materials will be accepted, the County will advertise in the local newspaper and on radio stations. Signs and hand-outs indicating acceptable material will also be available at the collection center. To further promote the event, flyers will be available at grocery stores and gas stations throughout the region.

The County's cost for this program will be small since the state is funding most of the operation. The County is responsible for providing a site for the collection activities, representatives on-site throughout the collection day, and advertisement for the event. Table X-1 outlines costs expected to be incurred for the event.

<table>
<thead>
<tr>
<th>Cost</th>
<th>Item</th>
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<tbody>
<tr>
<td>Advertisement</td>
<td>$1,000.00</td>
</tr>
<tr>
<td>Staff</td>
<td>$ 300.00</td>
</tr>
</tbody>
</table>

| TOTAL COST | $1,300.00 |

The schedule for implementing the program depends upon the availability of the contractor.
B. WASTE TIRES

A waste tire storage facility is available at the County landfill. This facility stores tires until the state tire shredder, which comes twice each year, is available. If necessary, one landfill operator will be responsible for aiding the shredder staff.

Once the tires are shredded, the material will be disposed of in the Class I facility. However, the tires will be disposed in the Class III/IV facility beginning in 1995.

C. WASTE OIL

With only one collection center, the Region offers minimal management for waste oil. A program for the collection of waste oil, however, will be implemented as part of the solid waste management system. It is proposed that the County will contract with a private waste oil hauler to provide waste oil collection sites (one at each convenience center and the landfill).

D. LEAD ACID BATTERIES

The County offers no management for lead acid batteries. However, a facility to ensure the proper storage of the batteries will be built at the central recycling center. Residents of the region will be able to dispose of old batteries during landfill operating hours.

E. LITTER

The region possesses a Tennessee Department of Transportation grant for the collection of litter along the highway. The region plans to use a portion of these funds for education. The County also plans to continue to promote the Adopt-a-Highway program.

F. INFECTIOUS WASTE

The region has no plans for developing a system to handle infectious waste. Cumberland Medical Center has the only incinerator permitted in the County. This incinerator is capable of handling the volume of waste generated at the medical facility.
G. OTHER PROBLEM WASTES

No other wastes pose a significant problem to the County.
CHAPTER XI
IMPLEMENTATION: SCHEDULING, STAFFING, AND FUNDING

A. SYSTEM DEFINITION

The new system will consist of five primary elements: waste collection and transportation, landfills, recycling/source reduction, educational programs, and household hazardous waste collection.

The waste collection and transportation element includes opening a minimum of three convenience centers that meet enhanced state requirements. The new centers will offer a place for the disposal of household solid waste, automotive fluids, tires, and recyclables. One center will serve as the primary recycling center.

Door-to-door pickup will continue to be utilized in the four communities currently served. Curbside recycling will be offered as affected jurisdiction determine appropriate.

The disposal capacity of the region will be adequate if the 25 percent recycling goal is met. Two new landfills are in the design process and are scheduled to open in January 1995. The Class I facility will have a total of 373,700 CY of storage and the Class III/IV facility will have a total of 389,580 CY of storage. These facilities will be built adjacent to the current landfill so that no change in transportation routes is expected to occur.

Staffing requirements and private sector participation associated with waste collection, transportation, landfills, recycling/source reduction, education, and household hazardous wastes will be determined by the Cumberland County Solid Waste Department.

Hazardous waste collection will also be an element of the new regional solid waste management system. The County plans to coordinate with the State to provide one collection day each year.

Figure XI-1 shows the anticipated flows for each component of the solid waste management system.
Figure XI-1
Solid Waste Flow Diagram
(in thousand tons for 1995)
B. IMPLEMENTATION SCHEDULE

Figure XI-2 shows the implementation schedule for the entire solid waste management system over the next ten years.

C. STAFFING AND TRAINING REQUIREMENTS

The staffing and training requirements for the new Solid Waste Management system are provided in Table XI-2.

D. BUDGET

Conceptually, a blend of revenue sources designed produce an equitable allocation of costs are required for funding of the Plan. Grant and revenue sharing opportunities offered by state and federal agencies may be utilized in order to comply with regulations mandated by those jurisdictions. Supplemental funding shall include but not be limited to user fees as well as alternative forms of funding. Plan administrators are required to evaluated funding options based on state, federal and local statutory requirements, funding availability, as well as regional needs and requirements. The budget for the new system is given in Table XI-3.

Figure XI-2
System Implementation Schedule

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Table XI-2
System Staffing and Training Requirements

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<tr>
<td>Waste Collection and Transportation</td>
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<td>I</td>
<td>AT</td>
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<td>Recycling</td>
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<td>Education</td>
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</table>

I = Staff in Place
A = Additional Staff Required
T = Staff Training Required

Table XI-3
System Budget

<table>
<thead>
<tr>
<th>ITEM</th>
<th>CAPITAL COST</th>
<th>OPERATING COST</th>
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<tr>
<td>Waste Collection and Transportation</td>
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<td>$1,502,800.00</td>
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<td>$10,000.00</td>
<td>$56,000.00</td>
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<tr>
<td>TOTAL</td>
<td>$2,314,900.00</td>
<td>$714,815.00</td>
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</table>
CHAPTER XII
RESPONSIBILITIES

A. PLAN ADOPTION

This plan has been developed by the Cumberland County Solid Waste Management Board. The county will be responsible for the implementation of the plan. This includes the development of recycling and educational programs as well as the collection and disposal of solid waste, recyclables, and problem wastes as provided by the laws of Tennessee.

This plan to reflect appropriate comments submitted during the public hearings for plan review. The Board and the county thereafter adopted this plan as documented in Appendix E.

B. SUBMISSION

The Region is required to submit three signed copies of this plan to the Governor's State Planning Office prior to July 1, 1994.
CHAPTER XIII
FLOW CONTROL

Flow control issues will be addressed by the Cumberland County Commission and Solid Waste Department on an individual basis.
PART III
APPENDIX A

Legal Documentation and Organization of the Region
STATE OF TENNESSEE, CUMBERLAND COUNTY

I, Pete Stubbs, County Clerk of Cumberland County, Tennessee, do hereby certify that the foregoing Resolution 493-1, which appears in Quarterly Minutes Book #33, page 205, is a full, true, and perfect copy of same as appears on record now on file in my office.

Witness my hand and official seal at office in Crossville, Tennessee
this 28th day of April, 1994.

Pete Stubbs, Cumberland County Clerk
CUMBERLAND COUNTY COMMISSION MEETING
MARCH 21, 1994
7:00 P.M.

BE IT REMEMBERED that the Cumberland County Commission met in regular
session on Monday, March 21, 1994 at the Cumberland County Courthouse. The
Cumberland County Commission Meeting was called to order by Deputy Sheriff,
Eddie Hedgecoth. Commissioner Beecher Frasier, Jr. gave the Invocation and
Commissioner Nancy Hyde led the Pledge of Allegiance to the Flag of the
United States of America.

There were present and presiding the Chairman, County Executive, Mitch
Eldridge. Also present were County Clerk, Pete Stubbs, County Attorney, James
Thompson, and the following County Commissioners:

Steven C. Douglas    Robert D. Mayfield
Bobby Houston       Nancy Hyde
Linda C. Hassler    Creed Lynn Tollett
Edward G. Ellenberg(absent)    Taylor Swafford(absent)
Clyde England       Robert L. Orme
Gene Hall           Michael Speich
Gordon Bill Carson  Billy C. Tays(absent)
Beecher Frasier, Jr. Charles Seiber

A quorum being present, the Cumberland County Commission Meeting was opened
in due form of law and the following proceedings were had to-wit:

1. AGENDA FOR MARCH 21, 1994 CUMBERLAND COUNTY COMMISSION MEETING:

On motion of Commissioner Mayfield, second by Commissioner Hyde, moved to approve
the agenda with additions for the March 21, 1994 Cumberland County Commission
Meeting.

The motion carried with a voice vote from the Commission present.

2. MINUTES OF FEBRUARY 22, 1994 CUMBERLAND COUNTY COMMISSION MEETING:
On motion of Commissioner Mayfield, second by Commissioner Orme, moved the minutes of the February 22, 1994 Cumberland County Commission Meeting be approved, treat same as read, made a matter of record, and filed.

The motion carried with a voice vote from the Commission present.

3. SECOND DISTRICT CONSTABLE:

On motion of Commissioner Ryker, second by Commissioner Houston, moved to nominate Rick Myers to serve as Second District Constable.

There being no other nominations for Second District Constable, Rick Myers was appointed to serve as Second District Constable with an unanimous voice vote from the Commission present.

4. RESOLUTION 394-1-GENERAL PURPOSE SCHOOL FUND, BUDGET AMENDMENT, $172,183.00:

On motion of Commissioner Mayfield, second by Commissioner Orme, moved to adopt resolution 394-1.

The motion carried with a voice vote from the Commission present.

5. RESOLUTION 394-2-CHAPTER I 94.01, BUDGET AMENDMENT, $46,345.50:

On motion of Commissioner Tollett, second by Commissioner Hasler, moved to adopt resolution 394-2.

The motion carried with a voice vote from the Commission present.

6. RESOLUTION 394-3-REAPPOINTMENT OF RUBY HOST AND JOE LOONEY TO SERVE AS TRUSTEES OF THE CUMBERLAND COUNTY LIBRARY BOARD FOR A TERM OF THREE YEARS:

On motion of Commissioner Seiber, second by Commissioner Mayfield, moved to adopt resolution 394-3.

The motion carried with a voice vote from the Commission present.

7. RESOLUTION 394-4-APPOINTMENT OF SHERRI DEVOS TO THE CUMBERLAND COUNTY LIBRARY BOARD TO SERVE THE REMAINDER OF THE UNEXPIRED TERM OF MELANIE SHERRILL, WHICH TERM SHALL BE COMPLETED JUNE 30, 1995:

On motion of Commissioner Seiber, second by Commissioner England, moved to adopt resolution 394-4.

The motion carried with a voice vote from the Commission present.

8. RESOLUTION 394-5-TO RECOGNIZE TREVOR HERLEY, CUMBERLAND COUNTY VOLUNTEER FIREMAN:

On motion of Commissioner Hall, second by Commissioner Orme, moved to approve resolution 394-5.

The motion carried with a voice vote from the Commission present.
9. RESOLUTION 394-6 TO RECOGNIZE KENNETH CAREY, JR., CUMBERLAND COUNTY VOLUNTEER FIREMAN:

On motion of Commissioner Hall, second by Commissioner Orme, moved to approve resolution 394-6.

The motion carried with a voice vote from the Commission present.

10. CUMBERLAND COUNTY BOARD OF EQUALIZATION:

On motion of Commissioner Orme, second by Commissioner Frasier, moved to appoint Charlie Simmons, Jim Music, Venable Goss, Buxie Copeland, and Albert Bertram as members to the Cumberland County Board of Equalization.

The motion carried with a voice vote from the Commission present.

11. SOLID WASTE BOARD FOR CUMBERLAND COUNTY:

On motion of Commissioner Tollett, second by Commissioner Carson, moved to appoint Billy Swafford to replace Richard Campbell on the Solid Waste Board for Cumberland County.

The motion carried with a voice vote from the Commission present.

RENOVATIONS TO CIRCUIT COURT CLERK OFFICE:

Commissioner Hall requested an explanation as to why renovations had begun in the Circuit Court Clerk's office without the remodeling bids first being approved by the Building and Grounds Committee.

Commission Chairman Eldridge told the Commission that he would look into the matter of the bid process for renovations to the Circuit Court Clerk's office and would report his findings back to the Commission.

DELIQUENT TAX COMMITTEE REPORT:

Delinquent Tax Committee Chairman, Commissioner Ryder, informed the Commission that the County Attorney, James Thompson, would draft a resolution to present to the Commission in April, 1994 with a method of disposing of approximately two-hundred (200) parcels of delinquent tax property which have been on the tax roll since 1974.

BUILDING AND GROUNDS COMMITTEE REPORT:

Commissioner Douglas detailed to the Commission that the Building and Grounds Committee had met with Cumberland County School Board Members and representatives from Upland Design Group to review preliminary plans concerning the school building program. Commissioner Douglas disclosed to the Commission that the Building and Grounds Committee had rejected the presented four-phase school building plan and the Building and Grounds Committee had moved to stay with the original school building program concept.
12. ELECTION OF NOTARIES:

On motion of Commissioner England, second by Commissioner Hyder, moved to approve the notaries as presented.

The motion carried with a voice vote from the Commission present.

13. ADJOURNMENT:

On motion of Commissioner Orme, second by Commissioner Frasier, moved the Cumberland County Commission Meeting be adjourned.

The motion carried with a voice vote from the Commission present.

The Cumberland County Commission Meeting of March 21, 1994 was adjourned at 8:00 o'clock P.M.

MINUTES APPROVED FOR ENTRY THIS _______ DAY OF ________________________, 1994.

Mitch Eldridge, Chairman, Cumberland County Commission

Pete Stubbs, Cumberland County Clerk
STATE OF TENNESSEE, CUMBERLAND COUNTY

I, Pete Stubbs, County Clerk of Cumberland County, Tennessee, do hereby certify that the foregoing appointment of Billy Swafford to replace Richard Campbell on the Solid Waste Board for Cumb. Co. which appears in Quarterly Minutes Book #34, page 93, is a full, true, and perfect copy of same as appears on record now on file in my office.

Witness my hand and official seal at office in Crossville, Tennessee this 28th day of April, 1994.

Pete Stubbs, Cumberland County Clerk
March 11, 1994

The Honorable Mitch Eldridge,  
Cumberland County Executive  
Courthouse Box 1  
Crossville, TN 38555

Dear Mitch:

Billy Swafford has been appointed by me to be the City of Crossville’s representative on the Solid Waste Board for Cumberland County. My appointment was ratified by the Crossville Board of Commissioners at a regular meeting held on March 8, 1994. Please see that Mr. Swafford receives all necessary materials and meeting notifications.

Thank you for your attention to this matter.

Sincerely,

Earl Dean  
Mayor

On motion of Commissioner Tollett, second by Commissioner Carson, moved to appoint Billy Swafford to replace Richard Campbell on the Solid Waste Board for Cumberland County.

The motion carried with a voice vote from the Commission present.
CUMBERLAND COUNTY
MUNICIPAL SOLID WASTE REGION BOARD
Crossville, Tennessee 38555

Board Members
Everett Bolin - Les Cavell - Al Cunningham
Barry Field - Beth Sherrill - Mike Stubbs - Billy Swafford

Municipal Solid Waste Board Members
May 5, 1994

Barry Field, Chairperson

Everett Bolin, Vice Chairperson

Mike Stubbs, Secretary

Les Cavell

Al Cunningham

Beth Sherrill

Billy Swafford
CUMBERLAND COUNTY
MUNICIPAL SOLID WASTE REGION BOARD
Crossville, Tennessee 38555

Board Members
Everett Bolin - Les Cavell - Al Cunningham
Barry Field - Beth Sherrill - Mike Stubbs - Billy Swafford

Solid Waste Advisory Board

2 Year Terms

Business:
Scott Shanks
Wayne Watkins

Media:
David Spates
Mike Moser

Education:
John Sайлors/Emogene Teeples
Annette Shaffer

Other:
University Extension Office
Roger Thackston
Berniece Atkinson
Denise Judd
Bryan Denton

Mission Statement: The Cumberland County Solid Waste Advisory Board is an education-oriented resource.

Activities and Implementation Role: The Advisory board serves as educational consultants to the Solid Waste Director. Based on their particular areas of experience, individual board members provide site-specific management and education expertise on a wide range of solid waste issues. The Solid Waste Manager has used and will continue using this resource in disseminating solid waste information with a variety of delivery modes, in both traditional and non-traditional education settings.
APPENDIX B

Documentation for Adjustments to the Base Year Generation
THIS APPENDIX DOES NOT APPLY
APPENDIX C

Public Participation Activities
CUMBERLAND COUNTY
MUNICIPAL SOLID WASTE REGION BOARD
Crossville, Tennessee 38555

Board Members

Everett Bolin - Les Cavell - Al Cunningham
Barry Field - Beth Sherrill - Mike Stubbs - Billy Swafford

Workshops and Public Information Meetings,
Information and Educational Activities


Formal Seminars/Workshops Attended By Board Members
1. Legal & Financial Issues In Solid Waste (Chattanooga, TN)
2. Solid And Hazardous Waste Conference (Gatlinburg, TN)
3. National Recycling Conference (Nashville, TN)
4. Solid Waste Assistance Workshop Series (4)
5. U. T. Industrial Source Reduction (Crossville, TN)
6. Numerous Miscellanies Presentations

Site Visits Conducted By Board Members
2 Minnesota Total Stream Composting Facilities
1 Tennessee Total Stream Composting Facilities
7 Tennessee Recycling Operations

1 Public Hearing #1 12/15/93
1 Public Hearing #2 Tentatively Scheduled For May 1994

____________________

Mike Stubbs, Secretary
CUMBERLAND COUNTY
MUNICIPAL SOLID WASTE REGION BOARD
Crossville, Tennessee 38555

Board Members
Everett Bolin - Les Cavell - Al Cunningham
Barry Field - Beth Sherrill - Mike Stubbs - Billy Swafford

May 5, 1994

The following (9) pages is a full and true copy of the Cumberland County Municipal Solid Waste Region Board Public Hearing #1, held December 15, 1993. Original documents are contained in the Cumberland County Municipal Solid Waste Region Board Minutes.

Mike Stubbs, Secretary

STATE OF TENNESSEE COUNTY OF CUMBERLAND
Sworn to before me this 5th day of May, 1994
by Mike Stubbs

By: Wella D. Loveday
Commissioner
4-4-1995 Notary
EXPIRY 4-4-1995
The Municipal Solid Waste Region Board

PUBLIC HEARING #1
December 15, 1993 - 6:00 p.m.
Large Courtroom of the Justice Center

Members Present:
   Everett Bolin
   Al Cunningham
   Beth Sherrill
   Mike Stubbs
   Barry Field
   Les Cavell

Others Present:
   Others (26)
   Mitch Eldridge
   Chuck Burgess
   Bruce Frasier
   Media (2)
   BWS&C (2)

Call To Order
Barry Field opened the Hearing and turned it over to representatives of BWS&C.

Presentation by Jack Tompkins and Al Hogan, BWS&C
"An Overview Of The Solid Waste Management Act"

Public Comment

The following is a list of all speakers offering public comment and a characterization of the comment(s)

Dwain Lee Jones: Inquires how one can, "be brought up to speed on the solid waste program"
*Mr. Jones advised to contact the County Solid Waste Mgr., Chuck Burgess

Helena Schmidt: Supports county recycling and some type of composting

Charles Lord: Supports source reduction - State wide deposit on cans - Education regarding recycling and curbside recycling in cities

Walter Stark: Supports reuse of wide variety of materials - Inquires who are on the Citizen Advisory Board
*Mr. Stark advised no one presently
Leon Dickinson: Refer to letter #1

Roy South: Supports education on how various household and commercial wastes are handled - Various types of media presentations regarding household hazardous wastes - The public requires more and continuing education

Helen Duncanson: ..."The state is too slow reacting to solid waste issues"

Irene Dickinson: Supports the reuse of a wide range of materials - Opposes any form of incineration

Dana Miller: Supports recycling

Yvonne Seperich: Supports education on household hazardous waste and recycling - Civic organizations, church and community groups are an untapped educational resource

G.A. "Dutchie" Chermel: Supports recycling and composting

Dick Seperich: Supports source reduction with an emphasis on retailer/commercial waste generators

Harold Schmidt: Maintains junk automobiles and junk yards are an environmental threat

Adjournment 7:15 PM
Cumberland Recycling Partners, Inc.

TO: Barry Field, Chair, Cumberland County Municipal Solid Waste Region Board.
RE: Suggestions For The Public Hearing on the Ten Year Waste Management Plan.

The Region Board is mandated to develop a 10 year plan. This certainly means a comprehensive plan, that is, inclusive of all aspects of Waste Management. While the immediate need is a 25 per cent reduction of what goes into the landfill, that is minimal and but a small first step to a ten year plan.

THERE ARE TWO BASIC PRINCIPLES THAT SHOULD BE MET:

1. It must be a program and policy of education and implementation centered on source reduction.
2. It must be evenly and fairly funded by all households, businesses and industries that produce waste and are cared for by the services and collections made by the county and the cities.

THE PLAN SHOULD BE INCLUSIVE OF THE FOLLOWING:

A. SOURCE REDUCTION. In the beginning this will have to be an educational program in the "Hows" and "Whys" of Source Reduction.

B. REUSE. There are a number of effective programs of the Reuse of materials which are frowned upon by many local and regional authorities and businesses. Yet where these have been implemented the reuse programs are very successful. Most notable and controversial in Tennessee is the reuse of soft drink, wine and beer bottles. We urge the Board to recommend and set-up an educational and promotional program so that in time a "Bottle Bill" will be passed through the state legislature.

C. RECYCLE. All aspects of recycling should be prepared and structured into the projected ten year plan. It would include the recycling of:
   1. All kinds of paper and cardboard.
   2. Steel/tin and aluminum cans.
   3. Plastic products. A strong educational program will be required to prepare the people to handle plastics effectively and with desired results. Further, plastic products is an area of need for Source Reduction.
   5. Hazardous Wastes... commercial and industrial
   6. Household hazardous wastes.
   7. Composting
   8. Container glass, such as a proposal Crossville is considering at the moment.

D. An educational and promotional plan for new programming and new advances for each of the ten years of the Plan.

E. "State of the Art" (latest advances and methods) in the use of landfills.

Leon Dickinson, PRES.
Cumberland Recycling Partners.
P. O. Box 39
Pleasant Hill, TN 38578

This paper is made from recycled waste.
TO: Cumberland County Solid Waste Board,
Care of Mr. Farley Field,
Fairfield Glade Community Club,
Public Works Department
P.O. Box 2000, Fairfield Glade, TN 38557

Dear Mr. Field,

I have noted that the Cumberland County Solid Waste Board is just now preparing a 10-year municipal solid waste plan for Cumberland County.

Your three point plan appears to be warranted and I commend the Board for initiating this process. I hope our county will continue to be a leader in both preparing a viable solid waste plan and in its implementation. This will necessarily require funds and I urge the County Executive and the County Commissioners to ensure the availability of the necessary resources.

Some may say that such studies should be left to the state. It is my belief that we must make the effort locally to ensure that what transpires from the process is geared to our local needs and requirements.

We can all be proud of the progress thus far made in our county in solid waste management. Let us not let what has been achieved so far wither, but rather ensure we build on it in the years ahead.

I wish the Board every success in its endeavor which has my full support.

Sincerely,

Philip R. Thomford
(Mayor of Pleasant Hill 1987-91)
recycling, waste reduction, collection and other goals of the Act. We Partners cannot emphasize enough the need for this activity. Over four years we endeavored to inform and involve the citizens of the county. We were only minimally successful. We have a loyal cadre of people who recycle and volunteer to help in recycling. The singular moment when this county rose up to stop an environmental disaster came when the region was threatened with an incinerator. 3,000 people came together. However, since there is no evident present danger, recycling has not taken hold among the general public. (10) We recommend obtaining professional help to educate all citizens. You have engaged an engineering firm; you also need an educational team. (Perhaps the Cumberland Playhouse publicists and producers would assist) Your plan should include specific methods of education to all sections and persons in the County. Only with the general support of the citizens of the County will you be able to prepare a 10-year project (as required by law), evaluate the life and us of the landfill, determine how the waste stream will be handled, and consider alternate proposals. The important part of your Plan may be the 25% reduction, but we feel the more important goal of your actions should be the enlisting of all persons in the County to reduce, reuse, and recycle the tons of waste produced.

In this effort we wish you well and offer our assistance.

Paul Morrill, President
Cumberland Recycling Partners

Second thoughts:

We know that the Planning Group completed its work, after many months of effort, early in October. Why has it taken so long for the Engineering Company to complete the Plan? You are responsible to the Planning Group! Why is the Plan not available by this date? Also why have a so-called Public Hearing when no one knows what the Plan contains? If you want suggestions from the Public you should give the people some basis for discussion. Finally, the choice of December 15, in the midst of the Christmas season guarantees that very few people will be able to attend. We urge you to have another hearing early in January to which more people can pay attention.
County. For households not in incorporated areas know (6) that Convenience Centers, (four are required by the law), should be put in place. These must be manned and recycling done according to instructions for all the County.

All of us have come to realize that this recycling effort will not be undertaken without additional costs. Some of the investment will be recovered in the marketing of recyclable materials, but everybody should come to terms with the charges. The engineering firm and Mr. Burgess, by various methods, will arrive at per unit or per ton costs. Then the billing to business and individual households will be considered equitable and proper. To assure this fairness, the Partners recommend (7) the establishment of a Waste Handling Utility (similar to other utilities which bill for services rendered).

In so far as possible the Partners also recommend (8) the use of private enterprise. We have in place a collector of metals and aluminum cans (Lynch). Mrs. Lynch was in on the Task Force which led to the initial recycling effort by the County three years ago. We have reason to believe that the Lynch enterprise would expand its activities in its area of expertise if it were offered more space and responsibility. To formulate a public-private collection system for metals would enhance the total recycling program.

In the collection of newspapers we have in place two Senior Citizen programs which should be supported and reimbursed for their efforts. We recommend (9) that other newspaper/magazine collection places be designated (with recompense for volunteer groups who participate), It is entirely possible that a large percentage of waste quantity could be removed from the landfill with these methods.

Another large component of quantity waste in the dumps is corrugated paper and office paper. Some firms, seeing the handwriting on the wall, have already gotten into the bailing of their paper products. Examples are the Dana Corporation and L. P. Shanks (who, by the way, has volunteered to cooperate with other small firms who might wish to use his bailer for preparing corrugated boxes etc. for market) The County Plan should take into account these business efforts and offer similar service at the proposed County Waste Management building.

Whatever plan is finally approved it should satisfy the Act of 1991, be flexible, budgeted and accountable and under the control of a Waste Utility. Certainly the description and implementation of the waste program outlined will obtain the twenty-five percent reduction, of Task 10, required by the act of 1991.

Most important from the standpoint of the Partners is Task 11 which reads: A description of education initiatives aimed at business, industry, schools, citizens and others, which address
recycling, waste reduction, collection and other goals of the Act. We Partners cannot emphasize enough the need for this activity. Over four years we endeavored to inform and involve the citizens of the county. We were only minimally successful. We have a loyal cadre of people who recycle and volunteer to help in recycling. The singular moment when this county rose up to stop an environmental disaster came when the region was threatened with a incinerator. 3,000 people came together. However, since there is no evident present danger, recycling has not taken hold among the general public. (10) We recommend obtaining professional help to educate all citizens. You have engaged an engineering firm; you also need an educational team. (Perhaps the Cumberland Playhouse publicists and producers would assist) Your plan should include specific methods of education to all sections and persons in the County. Only with the general support of the citizens of the County will you be able to prepare a 10-year project (as required by law), evaluate the life and us of the landfill, determine how the waste stream will be handled, and consider alternate proposals. The important part of your Plan may be the 25% reduction, but we feel the more important goal of your actions should be the enlisting of all persons in the County to reduce, reuse, and recycle the tons of waste produced.

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Paul Morrill, President
Cumberland Recycling Partners

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Dec. 18, 1993

TO: SOLID WASTE BOARD OF CUMBERLAND COUNTY

Mr. Barry Field
Fairfield Glade Community Club
Public Works Department, P.O. Box 2000
Fairfield Glade, Tennessee 38557

FROM: Ruth and Robert Peeples

RE: The process of preparing a ten year municipal solid waste plan for Cumberland County.

We could like to urge the County Solid Waste Board to begin, as soon as possible, a recycling program that will reach all areas of the county. Recycling must be a major part of any solid waste plan. If you expect to reduce the amount dumped in the landfill we must have other places to dispose of those materials that are recyclable. At the moment the city of Crossville has the opportunity to recycle glass and eventually make a small profit from it. The ten year plan should support these efforts and formulate new recycling plans.

Thank you.

Ruth & Bob Peeples
Press Release

May 31, 1994

Public Hearing #2

The Cumberland County Solid Waste Region Planning Board will hold its second public hearing regarding the Region's Ten Year Solid Waste Plan. The public will be introduced to the Plan as approved by the Cumberland County Commission, May 16.

Where: Cumberland County Justice Center, Courtroom A
When: Thursday, June 16, 1994
Time: 7:00 PM

For More Information, Call: Mike Stubbs
484-6165
The Municipal Solid Waste Region Board

PUBLIC HEARING #2
June 16, 1994 - 7:00 p.m.
Cumberland County Justice Center Courtroom A

Members Present:  Others Present:
Everett Bolin  Chuck Burgess
Barry Field  Ken Shepard
Beth Sherrill  (3) Media
Mike Stubbs  (25) Others

Call To Order

Everett Bolin recognized a quorum present and called the meeting to order

Presentation by Mike Stubbs,
"An Overview Of The Ten Year Plan As Approved By The Cumberland County Commission"

Public Comment

The following is a list of all speakers offering public comment and a characterization of the comment(s)

Leon Dickerson: How many enhanced Centers will the region have?

G.A. "Dutchie" Chermel: Where will the enhanced centers be located?

Brock Hill: What do Enhanced centers cost?

Yvonne Seperich: Encourages the Region to take advantage of Signal Mountain's education program

Leonard Stark: What will be the hours of the new enhanced centers?

Dana Miller: Three enhanced centers will not be enough.
G.A. "Dutchie" Chernel: *How and where will staff be trained?*

Leon Dickerson: *Theoretically, who would provide resources for a curb side recycling program, in Pleasant Hill for instance?*

Virginia Wiedemann: *Program costs can be reduced w/volunteer help.*

Bud Wilson: *What about hazardous fluids associated with winterizing boats?*

Yvonne Seperich: *Couldn't Fairfield collect hazardous fluids at the marinas?*

Dana Miller: *What type of monitoring will we get for $5000?*

G.A. "Dutchie" Chernel: *What about composting?*

Dana Miller: *What about yard waste?*

Mrs. Rusch: *What does Fairfield do with their leaves?*

G.A. "Dutchie" Chernel: *When does super center open?*

Bud Wilson: *Questions regarding a lined landfill.*

Virginia Wiedemann: *What materials will you recycle?*

Leon Dickerson: *What are your plans for cardboard and news print?*

Harold Schmidt: *What about tires?*

Yvonne Seperich: *Will the solid waste department be adequately funded?*

Leonard Stark: *What about steel belted tires?*

Dana Miller: *Can we uses shredded tires on county roads? Will the landfill be closing in 1994?*
Leonard Stark: *What about separating treated lumber?*
Yvonne Seperich: *Can the partners tour the landfill?*

Bud Wilson: *I think this group of volunteers (M.S.W. Planning Board) has done an unbelievable job.*

*Everett Bolin; motioned not to submit the Crossville deletion for the final plan*
*Beth Sherrill; Second*
*Carried by voice vote*

Adjournment 8:35 PM
APPENDIX D

Export and Imports
THIS APPENDIX DOES NOT APPLY
APPENDIX E

Review by Appropriate Municipal or Regional Planning Commission
MINUTES
ENVIRONMENTAL COMMITTEE
March 31, 1994 - 6:00 P.M.
Justice Center - Courtroom “A”

<table>
<thead>
<tr>
<th>Members Present</th>
<th>Others Present</th>
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<tbody>
<tr>
<td>Steve Douglas</td>
<td>Co. Exec. Mitch Eldridge</td>
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<tr>
<td>Bill Tays</td>
<td>Solid Waste Mgr. Chuck Burgess</td>
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<td>Bob Orme</td>
<td>Solid Waste Trans. Supt. Tom Evitt</td>
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<td>Beecher Frasier, Jr.</td>
<td>Landfill Supt. Bruce Frasier</td>
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<td>Lynn Tollett</td>
<td>Commissioner Ed Ellenberg</td>
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<td>Mike Speich</td>
<td>Commissioner Bill Carson</td>
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<td>Solid Waste Board Members:</td>
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<td></td>
<td>Everett Bolin Jr.</td>
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<td>Barry Field</td>
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<td>Les Cavell</td>
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<td>Mike Stubbs</td>
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<td>Jim Young, WEJE Radio</td>
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<td>Several Interested Citizens</td>
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CALL TO ORDER
The meeting was called to order at 6:00 P.M. by Chairman Orme.

APPROVAL OF MINUTES
The minutes of the March 24, 1994 meeting were approved by voice vote. Motion by Tays, second by Frasier.

DISCUSSION OF PROPOSED 10 YEAR SOLID WASTE PLAN
There was lengthy discussion of the proposed 10 Year Solid Waste Plan between the Committee, Solid Waste Region Board members who developed the plan, and members of the audience. Those areas that drew the most concern and discussion were how the County would finance the Solid Waste Plan and if a household user fee is imposed, would there be any exemptions.

Another area that drew lengthy discussion was the wording of a paragraph on Page 36 about the commitment the County would make to streamline and operate the new mandated convenience centers with the latest technologies. This brought up the question of how efficient green boxes are versus roll offs.

OLSON BUILDING AND PROPERTY
The Committee heard a report from the County Executive on the possible purchase of the Jay Olson Building and property to be used as a Recycling and Super Convenience Center. The Committee supported the report by the County Executive and asked him to work out details of purchase and restrictions that the City of Crossville has on the property and report back as soon as possible.

ADJOURNMENT
Being no further business, the meeting was adjourned at 8:05 P.M.

Next meeting to be held April 7, 1994 at 6:00 P.M. in the Justice Center.

Respectfully submitted,
Lynn Tollett, Secretary
MINUTES
ENVIRONMENTAL COMMITTEE
March 24, 1994 - 6:00 P.M.
Justice Center - Courtroom A

Members Present:
Lynn Tollett
Mike Speich
Beecher Frasier, Jr.
Robert Orme
Bill Tays
Bobby Houston

Others Present:
Co. Exec. Mitch Eldridge
Solid Waste Mgr. Chuck Burgess
Solid Waste Trans. Supt. Tom Evitt
Landfill Supt. Bruce Frasier
Emerg. Mgt. Dir. Keith Garrison
Solid Waste Region Board Members:
   Barry Field, Les Cavell, Everett Bolin, Jr.,
   Beth Sherrill, Al Cunningham
   Ken Shepherd, UCDD
   Lewis Bumpus, CTAS

CALL TO ORDER
The meeting was called to order by Chairman Orme at 6:00 P.M.

APPROVAL OF MINUTES
The minutes of the March 10, 1994 meeting were approved by voice vote - Motion by Speich, second by Tays.

PRESENTATION OF PROPOSED SOLID WASTE PLAN
The committee heard a presentation on the proposed Solid Waste Region Plan for the County from Everett Bolin, Jr., spokesman for the Solid Waste Region Board. A copy of the plan was given to each committee member to study and review for the next Environmental Committee Meeting next Thursday, March 31, 1994 at 6:00 P.M. at the Justice Center. Chairman Orme asked the Solid Waste Board for additional copies of the Ten Year Solid Waste Management Plan so each County Commissioner could have a copy. These will be printed and distributed by the County Executive’s Office when delivered. The next Environmental Committee meeting will be for the purpose of going through the Ten Year Plan and preparing it to be presented to the full County Commission.

REQUEST FROM TOM EVITT
Solid Waste Transportation Supt. Tom Evitt asked the Committee for their approval to purchase $5000.00 worth of new green boxes with the monies already in his budget. On a motion by Speich and second by Tays, the request by Evitt was approved by voice vote.

ADJOURNMENT
The meeting was adjourned at 7:30 P.M.

Respectfully submitted,
Lynn Tollett, Secretary
MINUTES
ENVIRONMENTAL COMMITTEE
April 21, 1994
Justice Center

Members Present
Bill Tays
Lynn Tollett
Robert Orme
Beecher Frasier, Jr.
Steven Douglas

Others Present
Mike Stubbs, Solid Waste Region Board
Everett Bolin, Solid Waste Region Board
Bruce Frasier, Landfill Superintendent

CALL TO ORDER
The meeting was called to order at 6:00 PM by Chairman Orme.

APPROVAL OF MINUTES
The minutes of the April 7, 1994 meeting were approved by voice vote. Motion by Tays, second by Tollett.

REPORT ON WORDING OF 10 YEAR PLAN
The Committee heard a report by Mike Stubbs, member of the Solid Waste Region Board, on wording of 4 areas of the 10 Year Solid Waste Plan and discussed these with the Committee to be sure that both the Committee and the Board were satisfied with these changes. Solid Waste Board members Bolin and Stubbs also discussed with the Committee the wording of the chapter of the 10 Year Plan that addresses how the County will finance this plan. This was agreed on and Commissioner Douglas will work with Stubbs on writing this chapter for final presentation at the next Environmental Committee meeting that will be called when the chapter is complete. (See attached wording changes on 10 Year Plan.)

ADJOURNMENT
The meeting was adjourned at 7:56 PM. Motion by Tays, second by Frasier. Passed by voice vote.

Respectfully submitted,
Lynn Tollett, Secretary
Option

In many instances individual, objective comparisons of green box versus roll-off technologies are required in order to determine the most appropriate application for the given situation. Factors including but not limited to statutory compliance, availability of funds, capital and operating costs, convenience center size, activity and location, as well as support equipment and personnel costs associated with the given technology will impact on implementation choices.

Additions To Executive Summary (Intent Clarifications)

Waste Collection

The changing face of the solid waste challenge is arguably its most confounding feature. Decisions regarding site specific technology options designed to address unstable problems ranging over a 10 year period is neither prudent nor realistic. Dictating a static solution(s) to an expanding, evolving problem displays lack of vision and a basic misunderstanding of the issue. This plan requires administrators to continually evaluate collection techniques, staffing requirements, and convenience center locations with the primary goal being statutory compliance and a secondary goal of fiscal responsibility to those served.

Recycling

Recycling is a significant component of the regional plan. Although currently underserved the region will realize a meaningful service increase in the area of recycling. New convenience centers will serve as recyclable collection sites. Curbside efforts will be established as effected jurisdictions determine appropriate. Extensive examinations of established recycling programs throughout the state illustrate the paramount roll flexibility plays, in both public, private and joint recycling operations. The Cumberland County Solid Waste Department is required to accept a high degree of responsibility in determining the appropriate mode of program delivery (i.e., private vs public sector), as well as in the areas of marketing and materials accepted. Whether public, private or a combination thereof, the recycling program is characterized by flexibility as any highly market sensitive program should.

Staffing & Training

Components of the 10 year plan require a variety of staffing and training decisions. It is appropriate that those decisions be made by the affected jurisdiction, based on statutory requirements, needs and resources. Training goals across the region will be such as to insure that all staff members are reasonably competent regarding solid waste and environmental issues and in compliance with all applicable laws.
ENVIRONMENTAL COMMITTEE MINUTES  
April 7, 1994 - 6:00 PM  
Justice Center - Courtroom A  

Members Present  Others Present  
Bill Tays  Co. Exec. Eldridge  
Bob Orme  Solid Waste Mgr. Burgess  
Beecher Frasier, Jr.  Solid Waste Trans. Mgr. Evitt  
Lynn Tollett  Landfill Supt. Frasier  
Bobby Houston  Solid Waste Reg. Board Members  
Mike Speich  Bolin, Stubbs, Cavell  
Jim Young, WEGE Radio  
Leon & Irene Dickinson, Recycling Partners Members  
Baxter Sherrill, Realtor  

CALL TO ORDER  
The meeting was called to order by Chairman Orme at 6:00 P.M.  

APPROVAL OF MINUTES  
The minutes of the March 31, 1994 meeting were approved by voice vote - Motion by Tays, second by Frasier.  

MOTIONS  
- A motion was made by Frasier and seconded by Tays to set a one and a half hour time limit on all future Environmental Committee meetings. Passed by voice vote.  
- After a request from Solid Waste Mgr. Chuck Burgess for half day opening of Landfill due to overflow on weekends at several convenience centers, a motion was made by Tollett and seconded by Speich to open the landfill on Saturdays from 7:30 A.M. till 11:00 A.M. beginning this Saturday. Passed by voice vote.  
- After the Committee heard a report on grants that are open for the County to apply for at this time from Solid Waste Mgr. Burgess, a motion was made by Speich and seconded by Frasier to apply for the Oil Recycling Grant and the Convenience Center Grant and any other Environmental Grants that are now available from the State. Solid Waste Mgr. Burgess will apply for the grants. Passed by voice vote.  
- After hearing from Solid Waste Mgr. Burgess that the Olson property is clear of all restrictions that the City had on it and heard from Realtor Baxter Sherrill who has the property listed, a motion was made by Tollett and seconded by Tays to recommend the purchase of the entire Olson property and building at the April 18, 1994 County Commission meeting with the base price being $155,000 plus an undetermined price for some useful contents that are unpriced at this time. Passed by voice vote. Commissioner Tays will put this item on the Budget Committee meeting agenda next week.  

10 YEAR SOLID WASTE REGION BOARD PLAN  
Heard a report on the plan by Board Member Everett Bolin, Jr. on areas of the plan that had raised some questions at the last meeting. Several new points were brought out on cost comparisons between Roll Offs and Green Boxes (See attached Cost Comparison Sheet) and future convenience centers. Further study of the plan will be continued at the next meeting.  

ADJOURNMENT  
Meeting was adjourned at 7:38 P.M., being no further business.  
Respectfully submitted, Lynn Tollett, Secretary
STATE OF TENNESSEE, CUMBERLAND COUNTY

I, Pete Stubbs, County Clerk of Cumberland County, Tennessee, do hereby certify that the foregoing Cumberland County Commission Meeting Minutes which appears in Quarterly Minutes Book #34, page 122, is a full, true, and perfect copy of same as appears on record now on file in my office.

Witness my hand and official seal at office in Crossville, Tennessee this 19th day of May, 1994.

Pete Stubbs, Cumberland County Clerk
RESOLUTION NO. 493-1

A RESOLUTION AMENDING CUMBERLAND COUNTY'S MUNICIPAL SOLID WASTE PLANNING REGION

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. titles "Solid Waste Management Act of 1991"; and

WHEREAS, with the view that better planning for solid waste will help control the additional costs that will be imposed by the new landfill regulations, help protect the environment, provide an improved 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 work 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. §68-211-811, 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, Cumberland County’s Board of County Commissioners has given consideration to the needs assessment prepared by the Upper Cumberland Development District; 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 is 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 region plans; and

WHEREAS, the primary and prevailing purpose of the municipal solid waste regions are the preparation of municipal solid waste regional 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 31, 1995, and a planned capacity assurance of its disposal 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 Cumberland County.

NOW, THEREFORE BE IT RESOLVED, by the Board of County Commissioners of Cumberland 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
to adequately review the data. Therefore, at this time, we feel that it is in the best interest of the citizens of Cumberland County that Cumberland County become a single county municipal solid waste region. Cumberland County will continue to plan and cooperate with its neighbors in any way necessary to provide the most efficient and cost effective solid waste management system for its citizens; 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 7 members; and

BE IT FURTHER RESOLVED, that pursuant to T.C.A. §68-211-813(b)(1) five (5) Board members shall be appointed by the County Executive and approved by this Board of County Commissioners and, due to the fact that Crossville collects or provides disposal services through its own initiative or by contract, the City of Crossville shall have a Board member appointed by the Mayor of Crossville and approved by the City Council (Board of Alderman) of Crossville; and

BE IT FURTHER RESOLVED, that pursuant to T.C.A. §68-211-813(b)(1) five (5) Board members shall be appointed by the County Executive and approved by this Board of County Commissioners and, due to the fact that Pleasant Hill collects or provides disposal services through its own initiative or by contract, the City of Pleasant Hill shall have a Board member appointed by the Mayor of Pleasant Hill and appointed by the City Council (Board of Alderman) of Pleasant Hill; and

BE IT FURTHER RESOLVED, that members of the Board of 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 two (2) members appointed by the County Executive shall have a four (4) year term, that two (2) members appointed by the County Executive shall have a six (6) year term, that one (1) member appointed by the Mayor of Crossville shall have a two (2) year term, that one (1) member appointed by the Mayor of Pleasant Hill shall have 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 Cumberland 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 Cumberland 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 organizational 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 the 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, Cumberland County, the City of Crossville and the City of Pleasant Hill and to apply for and receive donations and grants from private corporations and foundations; and

BE IT FURTHER RESOLVED, that Cumberland 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
(AN AMENDMENT TO THE LENGTH OF TERMS FOR CUMBERLAND COUNTY'S
MUNICIPAL SOLID WASTE REGION BOARD MEMBERS)

TO THE HONORABLE BOARD OF COUNTY COMMISSIONERS MEETING IN MONTHLY SESSION
THIS 19th DAY OF APRIL, 1993, THE FOLLOWING AMENDMENTS TO THE LENGTH OF
TERMS FOR MEMBERS OF THE MUNICIPAL SOLID WASTE BOARD ARE RESPECTFULLY
SUBMITTED:

Les Cavell - 2 year term (Appt. by Co. Exec.)
Beth Sherrill - 4 year term (Appt. by Co. Exec.)
Everet Bolin - 4 year term (Appt. by Co. Exec.)
Mike Stubbs - 6 year term (Appt. by Co. Exec.)
Barry Field - 6 year term (Appt. by Co. Exec.)
Richard Campbell - 2 year term (Appt. by Mayor of Crossville)
Al Cunningham - 2 year term (Appt. by Mayor of Pleasant Hill)
CUMBERLAND COUNTY COMMISSION MEETING

MAY 16, 1994

7:00 P.M.

BE IT REMEMBERED that the Cumberland County Commission met in regular session on Monday, May 16, 1994 at the Cumberland County Courthouse. The Cumberland County Commission Meeting was called to order by Sheriff Dale Elmore. Commissioner Beecher Frasier, Jr. gave the Invocation and Commissioner Nancy Hyder led the Pledge of Allegiance to the Flag of the United States of America.

There were present and presiding the Chairman, County Executive, Mitch Eldridge. Also present were County Clerk, Pete Stubbs, County Attorney, James Thompson, and the following County Commissioners:

Steven C. Douglas
Bobby Houston
Linda C. Hassler
Edward G. Ellenberg
Clyde England
Gene Hall
Gordon Bill Carson
Beecher Frasier, Jr.
Robert D. Mayfield
Nancy Hyder
Creed Lynn Tollett
Taylor Swafford (absent)
Robert L. Orme
Michael Speich (absent)
Billy C. Tays
Charles Seiber

A quorum being present, the Cumberland County Commission Meeting was opened in due form of law and the following proceedings were had to-wit:

1. **AGENDA FOR MAY, 16, 1994 CUMBERLAND COUNTY COMMISSION MEETING:**

On motion of Commissioner Mayfield, second by Commissioner Tollett, moved to approve the agenda for the May 16, 1994 Cumberland County Commission Meeting.
On motion of Commissioner Carson, second by Commissioner Hassler, moved the minutes of the April 18, 1994 Cumberland County Commission Meeting be approved, treat same as read, made a matter of record, and filed.

The motion carried with a voice vote from the Commission present.

PRESENTATION OF RESOLUTION OF RECOGNITION TO TREVOR KERLEY AND KENNETH CAREY, JR.:

County Executive, Mitch Eldridge, presented plaques with resolutions to Trevor Kerley and Kenneth Carey, Jr., Cumberland County Volunteer Firemen.

3. RESOLUTION 594-1-A TEN(10) YEAR SOLID WASTE MANAGEMENT PLAN DEVELOPED FOR CUMBERLAND COUNTY, TENNESSEE, BY THE CUMBERLAND COUNTY MUNICIPAL SOLID WASTE REGION PLANNING BOARD:

On motion of Commissioner Orme, second by Commissioner Tollett, moved to adopt resolution 594-1.

4. AMENDMENT TO RESOLUTION 594-1:

On motion of Commissioner Ellenberg, second by Commissioner Douglas, moved to amend the charts on pages 4, 40, and 64 of the Ten(10) Year Solid Waste Management Plan to show the land acquisition, site development, equipment purchase, and training will be spread over the period of 1994 through 1996.

The motion failed with a roll call vote of 13 nays, 1 aye, with 2 Commissioners absent.

The original motion to adopt resolution 594-1 a Ten(10) Year Solid Waste Management Plan developed for Cumberland County, Tennessee by the Cumberland County Municipal Solid Waste Region Planning Board carried with a roll call vote of 13 ayes, 1 nay, with 2 Commissioners absent.

5. RESOLUTION 594-2-CREATING THE TENNESSEE 200 IN CUMBERLAND COUNTY COMMITTEE:

On motion of Commissioner Mayfield, second by Commissioner Hyder, moved to adopt resolution 594-2.

The motion carried with a voice vote from the Commission present.

6. RESOLUTION 594-3-GENERAL FUND, BUDGET AMENDMENT, $18,200.00:

On motion of Commissioner Douglas, second by Commissioner Tays, moved to table resolution 594-3.

The motion to table resolution 594-3 carried with a voice vote from the Commission present.
On motion of Commissioner Frasier, second by Commissioner Douglas, moved to adopt resolution 594-4.

The motion carried with a voice vote from the Commission present.

8. **RESOLUTION 594-5-A RESOLUTION AUTHORIZING THE ISSUANCE AND PROVIDING THE DETAILS OF NOT TO EXCEED $7,800,000.00 SCHOOL BONDS, SERIES 1994 OF CUMBERLAND COUNTY, TENNESSEE, AUTHORIZING AND DIRECTING THE SALE THEREOF FOR PUBLIC PURPOSES, LEVYING AND PLEDGING TAXES AND MAKING PROVISION FOR THE PAYMENT THEREOF:**

On motion of Commissioner Douglas, second by Commissioner Frasier, moved to adopt resolution 594-5.

The motion carried with a unanimous vote from the Commission present with Commissioners Swafford and Speich absent.

9. **CANCELLATION OF CONSTABLE BOND FOR JOHN WADE HALL, EIGHTH DISTRICT CONSTABLE:**

Commissioner Douglas reported to the Commission that the County had accepted two(2) Constable Bonds for John Wade Hall and it was at the request of the Brown Rains Insurance Company the Aetna Casualty and Surety Constable Bond be cancelled.

On motion of Commissioner Douglas, second by Commissioner Mayfield, moved the Aetna Casualty and Surety Constable Bond for John Wade Hall be cancelled.

The motion carried with a voice vote from the Commission present.

10. **LOCAL PARKS AND RECREATION FUND (WALKING AND HIKING TRAILS AT FAIRFIELD GLADE):**

On motion of Commissioner Ellenberg, second by Commissioner Tollett, moved to authorize County Executive, Mitch Eldridge, to apply for and accept, if approved, the grant from the Land and Water Conservation Fund.

The motion carried with a voice vote from the Commission present.

**COMMITTEE REPORT—DELINQUENT TAX COMMITTEE REPORT:**

Commissioner Hyder, Chairman of the Delinquent Tax Committee, informed the Commission that from March 19, 1994 through April 27, 1994, seventy-two(72) out of eighty-nine(89) Delinquent Tax Property lots were sold and from April 27, 1994 through May 5, 1994, sixteen(16) more Delinquent Tax Property lots were sold for a total of eighty-eight(88) out of eighty-nine(89) Delinquent Tax Property lots sold by the Delinquent Tax Committee. The County Commission owes a debt of gratitude to Ella Loveday for her help and hard work in helping the Delinquent Tax Committee sell the Delinquent Tax Property lots.

Commissioner Ellenberg requested a report on the "911" Emergency Communications District at the June, 1994 Cumberland County Commission Meeting.
On motion of Commissioner Carson, second by Commissioner England, moved to approve the notaries as presented.

The motion carried with a voice vote from the Commission present.

12. ADJOURNMENT:

On motion of Commissioner Orme, second by Commissioner Hyder, moved the Cumberland County Commission Meeting be adjourned.

The motion carried with a voice vote from the Commission present.

The Cumberland County Commission Meeting of May 16, 1994 was adjourned at 7:30 o'clock P.M.

MINUTES APPROVED FOR ENTRY THIS _____ DAY OF __________________, 1994.

Mitch Eldridge, Chairman, Cumberland County Commission

Pete Stubbs, Cumberland County Clerk
MINUTES
CUMBERLAND COUNTY REGIONAL PLANNING COMMISSION
JUNE 6, 1994

The regular monthly meeting of the Cumberland County Regional Planning Commission was held on Monday, June 6, 1994. Members present were Charlie Simmons, Bob Orme, Ed Ellenberg, Mitch Eldridge, Gene Hall, George Kemmer, and Norm Rusch. Members absent were John Crowder and Kenneth Burnett. Staff Representative James Mills was present. Other present was Mike Stubbs of the Solid Waste Board. Chairman Simmons called the meeting to order at 5:00 p.m.

The Minutes of the May 9, 1994 meeting were unanimously approved.

REVIEW--CUMBERLAND COUNTY TEN YEAR SOLID WASTE MANAGEMENT PLAN
Mr. Mike Stubbs of the Cumberland County Solid Waste Management Board was present to submit for review the county's Ten Year Solid Waste Management Plan. The Planning Commission was informed that Cumberland County and its municipalities had formed a region for solid waste management. Also, the Planning Commission was informed that the county was in the process of getting a landfill permitted and that it has purchased an additional 155 acres for future expansion. It was noted that the Solid Waste Plan called for the establishment of three manned convenience centers in the county. Following further review of the Solid Waste Plan, Chairman Simmons opened the floor for comments. No comments were presented.

REVIEW AND ADOPTION--ANNUAL PERFORMANCE REPORT AND PROGRAM DESIGN
Staff presented for review the Annual Performance Report and Program Design for Fiscal Year 1994-1995. It was noted that the major work activities proposed in the report included the preparation of a Population and Economy Plan, completing the Road Condition Study and Improvements Plan, and initiating a Water Line Study and Improvements Plan. Following a review of the Report and Program Design, Mr. Hall presented a motion that it be adopted. Mr. Rusch seconded this motion and it passed unanimously.

DISCUSSION--RECREATIONAL IMPROVEMENTS
Mr. Hall inquired about the possibility of the county obtaining grant monies for recreational improvements. Staff stated that grant monies were available through the Local Parks and Recreation Fund. He noted that it was too late to submit an application this year. He recommended that the county begin the process of preparing for a future application. Mr. Hall then presented a motion requesting that Staff assist the county in becoming prepared for a future recreation grant application. Mr. Orme seconded this motion and it passed unanimously.

STATUS REPORT--WATER UTILITY DISTRICTS' FIRE HYDRANT POLICIES STUDY
Staff briefly reported on the status of the study of the water utility districts' fire hydrant process. He stated that he had received a response from only one utility district, that being Lantana Utility District. Staff noted that the Lantana Utility District's policy supported the installation of fire hydrants. Following some discussion, Mr. Rusch presented a motion that a follow-up letter be prepared and forwarded to the utility districts which have not yet responded. Mr. Ellenberg seconded this motion and it passed unanimously.

With no other business, the meeting was adjourned at 5:50 p.m.

Chairman

Date

Secretary

Date