

# MECKLENBURG COUNTY

## SOLID WASTE MANAGEMENT 10-YEAR PLAN

EFFECTIVE JULY 1, 1997

This Plan is for the  
Mecklenburg County Planning Area

City of Charlotte

Town of Cornelius

Town of Davidson

Town of Huntersville

Town of Mint Hill

Town of Pineville

Mecklenburg County Unincorporated Area

Prepared by  
Mecklenburg County Engineers  
Solid Waste Management

REVISED  
August 2, 1997



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## SECTION I EXECUTIVE SUMMARY

### I. BACKGROUND

With the passage of HB 859 by the North Carolina General Assembly in 1996, all units of local government are required to prepare and approve a ten-year solid waste management plan by July 1, 1997. The law prescribes in great detail the contents of a plan. Mecklenburg County, the City of Charlotte, and the Towns of Huntersville, Cornelius, Davidson, Mint Hill, and Pineville have a Solid Waste Management Plan (1992). The existing Plan does not meet the requirements of HB 859; for example, it contains no detailed information on current programs or costs and has no program for construction and demolition waste. The Solid Waste Management Plan contained in this document is designed to meet the requirements of HB 859.

A substantial outreach program was conducted as part of the development of the Plan to obtain ideas and comments from the public and other interested parties.

Based on comments received from the public, research on other programs throughout the country, and analysis of the waste streams and programs in Mecklenburg County; the Waste Management Advisory Board has approved and recommends the adoption of this Plan by the participating units of local government. Under the provisions of HB 859, the Plan must be revised every three years. The WMAB anticipates that these tri-annual modifications will reflect our lessons learned and actual progress towards the Plan's goals.

### 2. GOALS

In HB 859 North Carolina set a State goal of 40% per capita reduction in disposal by June 30, 2001. Disposal consists of landfilling or incineration. Local governments have the flexibility to set their own goals based on local conditions. HB 859 states that each plan shall include a goal for the reduction of municipal solid waste by June 30, 2001 and a goal for further reduction by June 30, 2006. The reduction goals are measured from a base year. The base year approved by the State for Mecklenburg County is Fiscal Year 1989/90, which had a disposal rate of 1.43 tons/person/year. To improve understanding by the public, the goals of this Plan are stated relative to the current rate of disposal, rather than the base year.

The Plan establishes the following residential and commercial waste reduction goals, summarized in Table 1-1:

- Reduce the current rate of residential and commercial waste disposal to 0.92 tons/person/year by June 30, 2001 through source reduction, recycling, and composting. This is estimated to be a 12% per capita reduction from Fiscal Year 1996/97. The current estimated County disposal rate is 1.05 tons/person/year which is a reduction of 27% from the base year of 1990. The existing County programs

contributing to this reduction consist principally of education, residential curbside recycling, recycling drop centers, and yard waste collection and processing. The 2001 goal is a reduction of 35% from the base year of 1990.

- Reduce the current rate of residential and commercial waste disposed to 0.84 tons/person/year by June 30, 2006. This is estimated to be a 20% per capita reduction from Fiscal Year 1996/97. This goal is a reduction of 41% from the base year of 1990.

**Table I-I**  
**Summary of Residential & Commercial Waste Goals**

<u>Year</u>	<u>Disposal Rate,</u> <u>tons/person/yr</u>	<u>Reduction,</u> <u>% of Base Year</u>	<u>Reduction,</u> <u>% of Current Year</u>
1989/90: Base Year	1.43	0%	Not Applicable
1996/97: Current Year	1.05	27%	0%
2000/01: First Goal	0.92	35%	12%
2005/06: Second Goal	0.84	41%	20%

The Plan also establishes the following goals for reduction of construction and demolition waste disposal:

- Reduce the disposal rate of construction and demolition waste (disposed in C&D landfills) by 30% from the current level (Fiscal Year 96/97) by June 30, 2001.
- Further reduce the disposal rate of construction and demolition waste by 40% from the current level by June 30, 2006.

### 3. RESIDENTIAL WASTE REDUCTION

The Plan contains the following provisions for reduction of the residential waste stream:

- **Expand emphasis on source reduction.** Significant waste reduction can be accomplished through an extensive program to educate people on how to generate less waste through waste conscious shopping practices, eliminating junk mail, and reuse.
- **Increase recovery of existing curbside recycling materials.** It is estimated that 55% of the material currently targeted in the curbside program is actually recovered. Through increased promotion and education, 75% or more of these materials could be recovered.
- **Increase recycling at apartments.** Presently only 10% of the targeted recyclables are recovered from apartment complexes. An aggressive program should reach, at a minimum, the current curbside rate of 55%.
- **Add OCC (cardboard) and mixed paper to curbside programs.** Combined, these materials comprise 10% to 15% of the residential waste.

- **Increase the number of drop centers and expand special waste programs.** Add additional centers and recover materials such as clothing, computers, and reusable appliances at the staffed County convenience centers.
- **Study Pay-as-you-throw.** Programs that charge residents based on the volume or weight of waste they generate provide an economic incentive to reduce and recycle. The Plan recommends additional research on these type programs. Concerns with “pay-as-you-throw” programs include illegal dumping to avoid fees and providing service to people who do not have the resources to pay for any level of service.

#### 4. COMMERCIAL WASTE REDUCTION

Organizations with commercial waste - including businesses, institutions, schools, and government agencies – are called upon to reduce the amount of waste that they dispose. Government and schools are targeted to lead the way. In the Plan these organizations are referred to as businesses as a matter of convenience.

Beginning now, businesses are called upon to voluntarily remove the following Target Materials from their waste streams:

- Items banned from landfills by the State, such as aluminum cans,
- Corrugated cardboard, and
- Office paper.

The Waste Management Advisory Board will monitor progress towards the goals. As part of the tri-annual updates of the Plan (the first update is to be effective July 1, 2000), the WMAB will consider (1) continuing the voluntary program if the community is on target to reach the goals or (2) changing to a mandatory program if the community is not on target to reach the goals.

The following services will be provided to support the voluntary commercial program:

- **Commercial Recycling Drop Centers.** A network of commercial drop off recycling centers, strategically placed to support the collection of designated recyclables, will be established. Some haulers have volunteered to provide containers and hauling services for a six-month commercial drop-off program.
- **Technical Assistance.** An aggressive, long-term education program will be initiated for the development and implementation of reduction, reuse, and recycling programs. Waste audits will be encouraged. These services may be provided through a joint public-private partnership that includes businesses, waste haulers, and local government.
- **Business Recognition Program.** A comprehensive Business Reduction Recognition Program would be implemented to bring attention to successful reduction programs. This program would also include a mentoring system for businesses seeking waste reduction assistance.
- **Zoning/Building Code Requirements.** The local zoning/building code will be amended to require space for separation, storage, and collection of recyclables. The amount of space will be at least equal to that provided for waste disposal containers.

This requirement will apply to (1) all new commercial buildings and (2) additions that increase the size of the building 50% or more. The details of this ordinance will be developed and reviewed by the Building Development Commission.

- **Small Business Recycling Collection.** Units of government within the County will be encouraged to provide recycling collection to small businesses on a fee basis. The residential curbside program passes by many small businesses, which could be added to the residential routes, thereby providing an efficient, cost-effective system for recycling at these businesses.
- **Processing Capacity.** Metrolina Recycling Facility, where the County's residential recyclables are processed, has additional capacity that will be dedicated for processing of recyclables from commercial buildings. There are also several recycling companies with additional capacity to handle an increase in recycling.

## 5. CONSTRUCTION & DEMOLITION (C&D) WASTE REDUCTION

Construction and demolition waste is a significant part, about 33% of our total waste (residential, commercial, and C&D) in Mecklenburg County. As stated in the section entitled *GOALS* the County plans to reduce this waste stream by 30% per capita by the year 2001 and 40% per capita by the year 2006.

- **Education.** Information will be provided to the haulers of C&D materials, building contractors, and demolition contractors on the availability of C&D recycling facilities and information on how to properly separate materials on the job site.
- **C & D Recycling Facilities.** Two C&D recycling facilities are proposed to serve the County: Phoenix Recycling is establishing a facility at Compost Central and BFI has stated that it will have a facility at the Charlotte Motor Speedway Landfill.

## 6. COST AND FUNDING OF THE PROGRAMS

All monies are in 1997 dollars.

The County cost for the residential program is estimated to be \$419,000 per year from FY98/99 through FY00/01; \$429,000 per year from FY01/02 through FY04/05; and \$664,000 from FY05/06 through FY07/08. The level of initial cost for the residential reduction program is slightly greater than the FY1997/98 budget for reduction. If the goals of the program are met, landfill tip fees should be reduced about \$400,000 annually in the early years of the program, increasing to about \$1,600,000 in the later years.

During FY1997/98 the County's reduction efforts will be focused on maintaining existing programs in both the residential and commercial sectors while planning for future years. Current programs include County office recycling and the development of a school recycling program.

The County cost for the commercial program and the construction and demolition program is estimated to be \$595,000 annually. Solid waste hauler license fees will be used to fund these programs.



Beginning July 1, 1998 commercial haulers will be required to obtain a hauling license from the County. The fee for the license will be \$1 per ton of commercial and construction and demolition waste disposed.

Other license requirements will be:

- Haulers must meet health department regulations.
- Haulers are permitted to dispose of waste and recyclables at the facility(s) of their choice.
- Haulers are required to report residential, commercial and C&D waste and recycling tonnages on a monthly basis.
- Haulers must provide waste audits for their customers.
- Haulers must provide information on recycling services to their customers.

In addition a disposal fee will be added to the cost of demolition permits for material to be disposed in C&D landfills or municipal solid waste landfills by non-licensed haulers, i.e. the dump truck operators.

The cost to businesses for separating their wastes will vary with each organization. If the commercial reduction goal is met the cost to dispose of waste in landfills should be reduced by \$2,000,000 to \$3,000,000 annually. Increased recycling may also enable business to reduce their waste management costs by reducing the frequency of collection or reducing the size of their container.

## 7. DISPOSAL FACILITIES

The County should have adequate disposal facilities throughout the life of the Plan, as follows:

- **Alternative Technologies** - The County will continue to research and evaluate alternative solutions for waste disposal, including municipal waste composting. Reliance on landfills will be reduced further as new technologies are demonstrated and become cost effective.
- **US 521 Landfill** - This regional County owned facility will provide disposal capacity for all the residential waste for 12 -15 years beginning in 2001. Union and Lancaster Counties could begin using the facility in mid-1998.
- **BFI Speedway Landfill** - This regional privately owned facility in Concord is under contract for the disposal of Mecklenburg County waste through June 30, 2001. After that the facility will provide a disposal option.
- **Transfer Stations** - At present, some Mecklenburg County waste is tipped at two private transfer stations, the Allied Waste Facility near I-85 and Statesville Rd., and the Waste Management Facility in Gaston County. Private haulers who own landfills will continue to transfer waste as long as it is cost competitive and they have landfill capacity.
- **Construction & Demolition Waste** - There is one C&D landfill in Mecklenburg County, which may be closing in the next several years. There are no pending C&D

permit applications with the State of North Carolina for sites located in Mecklenburg. We anticipate that in future years a substantial portion of the C&D waste stream will be recycled, and that new C&D landfills will be available when there is a need for them.

## **8. OVERSIGHT**

The Waste Management Advisory Board will provide oversight of the Plan, evaluating progress and making recommendations for adjustments in the Plan. The Board will seek input from business organizations, haulers, recycling companies and other appropriate organizations in their considerations.

The WMAB is itself a broad based group of citizens, including representatives from various areas of the County; the Chamber of Commerce; the professions including legal, medical-scientific, financial-accounting, and engineering-technical, the Sierra Club, Duke Power, the Clean City Committee, and the Planning Commission.

## **SECTION 2 INTRODUCTION**

This Plan was prepared in accordance with N.C. General Statute 130A-309.09A(b), the *Solid Waste Management Act of 1996*, which has the purpose of planning for local solid waste needs and protecting public health and the environment.

This Plan is for the Mecklenburg County Planning Area which is Mecklenburg County (unincorporated area), the City of Charlotte and the Towns of Cornelius, Davidson, Huntersville, Mint Hill, and Pineville. Throughout this document the term *Mecklenburg County* refers to the Mecklenburg County Planning Area.

The sections of the Plan are as follows:

- Section 3. Geographic and Solid Waste Stream Evaluation
- Section 4. Waste Reduction Goals
- Section 5. The Planning Process and Public Participation
- Section 6. Solid Waste Management Methods: Assessment of Programs and Description of Intended Actions
- Section 7. Education, Special Wastes, Illegal Disposal, and Purchasing: Assessment of Programs and Description of Intended Actions.
- Section 8. Solid Waste Costs and Financing Methods



## SECTION 3. GEOGRAPHIC AND SOLID WASTE STREAM EVALUATION

### I. GEOGRAPHIC AREA

This Plan is for the Mecklenburg County Planning Area which consists of Mecklenburg County (unincorporated area), the City of Charlotte and the Towns of Cornelius, Davidson, Huntersville, Mint Hill, and Pineville (see Figure 3-1). Throughout this document the term *Mecklenburg County* refers to the Mecklenburg County Planning Area. The majority of Mecklenburg County's residents live in the City of Charlotte.

**Table 3-1  
Estimated Population - 1996**

<u>Municipalities &amp; County</u>	<u>Population</u>
Charlotte	481,000
Cornelius	8,100
Davidson	5,300
Huntersville	8,000
Mint Hill	16,200
Pineville	3,300
Mecklenburg County (unincorporated)	52,100
TOTAL	574,000

The County is experiencing rapid growth, with an average growth rate of 2.5% annually. Growth has in the past been most rapid in the south and southeast areas of the County. As these areas are now highly developed, growth is accelerating in the northern portion of the County.

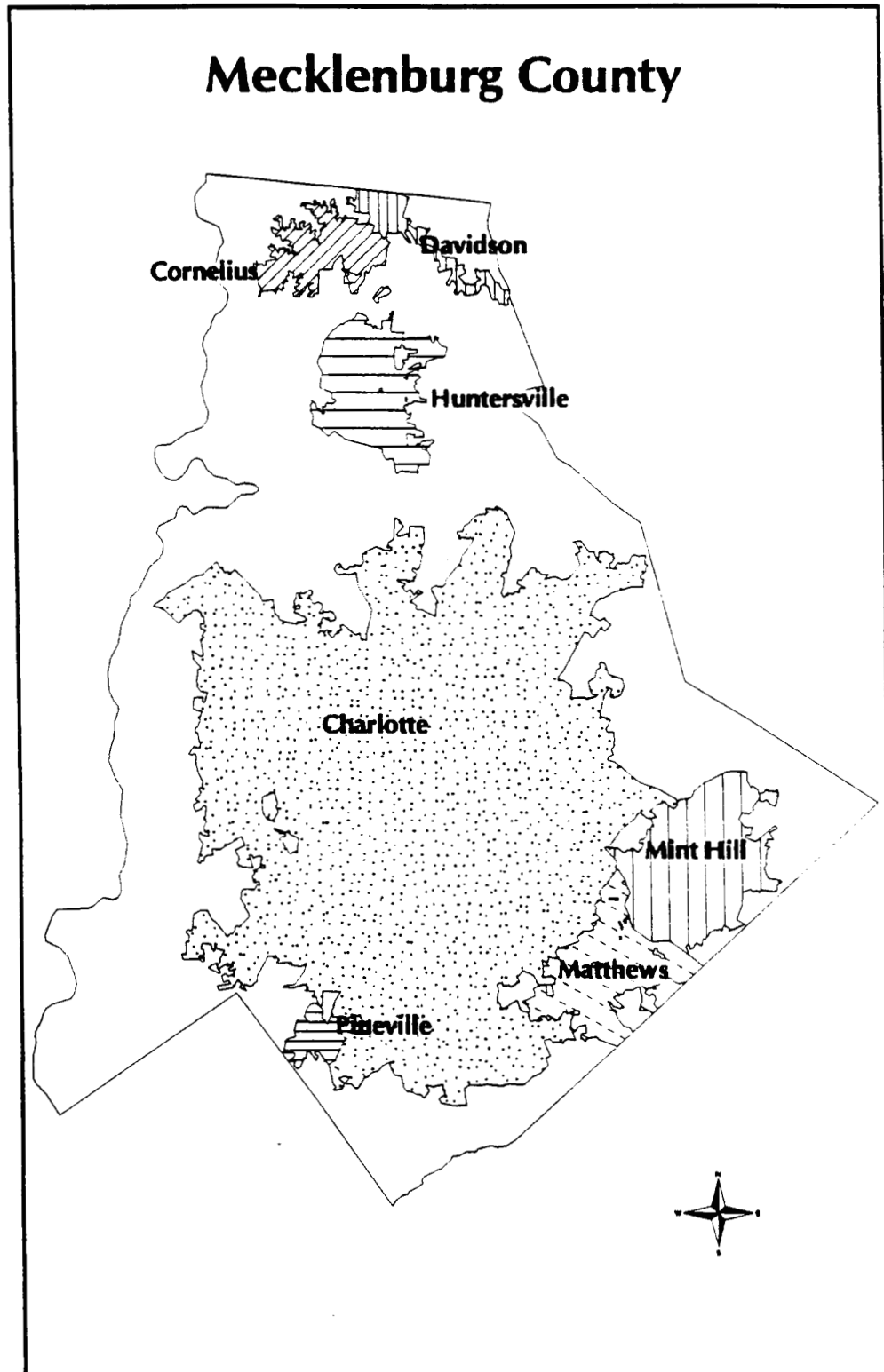
The County is projected to have a population of 620,000 in 2001 and 680,000 in 2006.

All of the municipalities provide residential waste services to their citizens either by self-performing collection or by contract with private waste management companies, with the exception that some of the towns consider apartment waste as commercial waste. In the County (unincorporated) residents must contract for collection with private haulers.

Commercial disposers privately contract all commercial waste disposal.

The County provides drop centers so that citizens have presently have three sites at which all residential wastes and recyclables are accepted, an additional four sites at which recyclables only are accepted, and one site at which household hazardous waste is accepted.

Figure 3-1



## 2. WASTE STREAM EVALUATION

In this Plan residential waste refers to waste generated by households (individual and multi-family dwellings). The term commercial waste refers to commercial, industrial, and institutional wastes. Construction and demolition waste is generated from construction activities, and is disposed of as C&D waste, either at the Speedway Landfill or the North Meck C&D Landfill.

### A. Total Residential and Commercial

Mecklenburg County disposed of 600,297 tons of waste in FY 1995-96. See Table 3-2.

**Table 3-2  
Residential and Commercial Waste Disposed - FY 1995-96**

<u>Disposal Site</u>	<u>Tons</u>	<u>% of Disposal Stream</u>
Speedway Landfill*	534,927	89%
Export to SC Landfills**	65,370	11%
Total	600,297	
<u>Waste Type</u>	<u>Tons</u>	<u>% of Disposal Stream</u>
Residential	228,741	38%
Commercial	371,556	62%
Total	600,297	

\*Weighed by County Staff \*\*Reported by exporters

### B. Residential

An estimate of the composition of the County's residential waste stream is shown in Table 3-3, which was prepared from the USEPA document entitled *Characterization of Municipal Solid Waste in the United States: 1994 Update*.

### C. Commercial

The County conducted a commercial waste composition analysis in 1990. The study consisted of a visual analysis for two weeks at the two landfills used by the County. Waste composition of the selected components was estimated by a visual observation of the volumetric percentage of the total load. No extensive hand sorting, picking or weighing was involved. The material categories for identification were bulky waste, corrugated paper, newsprint, other paper, plastics, metals, yard waste, wooden materials, construction debris, and tires. The results of the analysis are shown in Table 3-4, with paper waste broken down according to the paper waste stream shown in *Characterization of Municipal Solid Waste in the United States: 1994 Update*.

**Table 3-3**  
**Estimate of Residential Waste Composition - FY1996/97**

From Appendix C, Characterization of Municipal Solid Waste in the US: 1994 Update

Item	Mecklenburg Generated=		271,212	without yardwaste	Calculated Disposed tons
	%	Calculated Waste Generated, tons	Measured Recycled, tons	Assumed Recycled, tons	
<b>Durable Goods</b>					
Major Appliances	3.26%	8,842	1,990		6,852
Small Appliances	0.53%	1,437	114		1,323
Furniture and Furnishings	5.92%	16,056	10		16,046
Carpets and Rugs	1.96%	5,316			5,316
Batteries, lead acid	0.09%	244	29	215	0
Miscellaneous	11.58%	31,406			31,406
<b>TOTAL</b>	<b>23.34%</b>	<b>63,301</b>	<b>2,143</b>		<b>61,158</b>
<b>Nondurable Goods</b>					
Newspapers	11.60%	31,461	25,720		5,741
Books	0.84%	2,278			2,278
Magazines	1.71%	4,638	326		4,312
Office Papers	1.88%	5,099	372		4,727
Telephone Books	0.47%	1,275	300		975
Junk Mail	2.75%	7,458			7,458
Other Commercial Printing	3.73%	10,116			10,116
Tissue Paper & Towels	1.91%	5,180			5,180
Paper Plates & Cups	0.18%	488			488
Plastic Plates & Cups	0.07%	190			190
Trash Bags	0.89%	2,414			2,414
Disposable Diapers	2.56%	6,943			6,943
Other Paper	2.52%	6,835			6,835
Clothing & Footwear	2.71%	7,350			7,350
Towels, Sheets, Pillow C	0.68%	1,844			1,844
Miscellaneous	1.85%	5,017			5,017
<b>TOTAL</b>	<b>36.35%</b>	<b>98,586</b>	<b>26,718</b>		<b>71,868</b>
<b>Containers and Packaging</b>					
Glass	10.58%	28,694	6,215		22,479
Steel	2.51%	6,807	857		5,950
Aluminum Cans	1.38%	3,743	400	2,000	1,343
Foil	0.31%	841			841
Corrugated Boxes	2.78%	7,540	2,777		4,763
Paper Milk Cartons	0.25%	678			678
Folding Cartons	3.13%	8,489			8,489
Paper Bags & Sacks	2.09%	5,668			5,668
Wrapping Papers	0.07%	190			190
Other Paper	0.97%	2,631			2,631
Plastic Milk & Drink Bottles	1.02%	2,766	1,179		1,587
Plastic Bags & Sacks	1.00%	2,712			2,712
Plastic Wraps	1.54%	4,177			4,177
Other Plastic	3.79%	10,279			10,279
<b>TOTAL</b>	<b>31.42%</b>	<b>85,215</b>	<b>11,428</b>	<b>2,000</b>	<b>71,787</b>
<b>Other Wastes</b>					
Food	7.28%	19,744			19,744
Miscellaneous	1.61%	4,367	182		4,185
<b>TOTAL</b>	<b>8.89%</b>	<b>24,111</b>	<b>182</b>		<b>23,929</b>
<b>GRAND TOTAL</b>	<b>100.00%</b>	<b>271,212</b>	<b>40,471</b>		<b>228,741</b>



**Table 3-4**  
**Estimate of Commercial Waste Composition - FY1996/97**

<u>Material</u>	<u>Estimated Weight, Percent</u>	<u>Estimated Weight, tons</u>
Corrugated	26	96,604
Other Paper	26	96,604
Books*	0.5	1,860
Magazines*	1.9	7,060
Newspaper*	4.1	15,234
Office Paper*	11.7	43,472
Telephone Books*	0.6	2,229
3rd Class Mail*	3.0	11,147
Other Commercial Printing*	4.1	15,234
Newspaper	0	0
Plastics	10	37,156
Construction Debris	12	44,587
Wooden Material	12	44,587
Metals	5	18,578
Tires	2	7,431
Bulky Waste	1	3,716
Yard Waste	0	0
Other Waste	6	22,293
TOTAL	100	371,556

\*Other Paper waste broken down according to the paper waste stream shown in *Characterization of Municipal Solid Waste in the United States: 1994 Update*

Mecklenburg County contains many businesses that are paper generators; including financial institutions and utilities. It also contains many small businesses. Table 3-5 shows the composition of firms by size and number of employees.

**Table 3-5**  
**Mecklenburg County Firms and Employees**  
(1990 Department of Commerce Survey)

<u>Number of Employees</u>	<u>Number of Firms</u>	<u>Employees in Category</u>	<u>Percent of Firms</u>	<u>Percent of Employees</u>
1-4	9,048	22,620	49.2	5.8
5-9	3,612	25,284	19.7	6.5
10-19	2,578	37,381	14.0	9.5
20-49	1,899	65,516	10.3	16.7
50-99	678	50,850	3.7	13.0
100-249	429	75,075	2.3	19.2
250-499	100	37,500	0.5	9.6
500-999	39	29,250	0.2	7.5
1000+	24	48,000	0.1	12.3
TOTAL	18,407	391,466	100.0	100.0

### D. Construction and Demolition (C&D)

In FY1996/97 the total C&D waste stream reported to the NC Division of Waste Management was 320,380 tons, based on reported tonnage at the North Meck and BFI C&D landfills. Table 3-6 shows the estimated composition of the C&D waste based on a study prepared for Mecklenburg County by Gershman, Brickner, & Bratton, Inc. (GB&B) in 1995.

**Table 3-6**  
**Estimate of C&D Waste Stream - FY1996/97**

<u>Material</u>	<u>Estimated Weight</u> %	<u>Estimated Weight,</u> tons
Wood	34	108,930
Gypsum Wallboard	13	41,650
Concrete, Brick, Block	8	25,630
Roofing Materials	7	22,430
Cardboard/Mixed Paper	7	22,430
Metal	4	12,810
Miscellaneous	27	86,500
TOTAL	100	320,380

### E. Land Clearing and Inert Debris (LCID)

In FY1993-94 GB&B estimated the total LCID waste stream as 280,00 tons. Table 3-7 shows the estimated composition of the LCID waste stream based on observations by GB&B at a large LCID Landfill. Because LCID waste is not weighted or reported, and because its quantity would seem to be related to the quantity of construction, the data in Table 3-7 is an order-of-magnitude estimate.

**Table 3-7**  
**Estimate of LCID Waste Stream - FY1993/94**

<u>Material</u>	<u>Estimated Weight</u> %	<u>Estimated Weight,</u> tons
Asphalt	7.9	22,100
Concrete	7.9	22,100
Reinforced Concrete	2.6	7,300
Bricks, Blocks	4.0	11,200
Soil/Dirt	12.9	36,100
Stumps/Trees	64.6	181,000
Clean Wood	<0.1	100
Pallets	<0.1	100
TOTAL	100	280,000

## SECTION 4. WASTE REDUCTION GOALS

### I. MUNICIPAL SOLID WASTE GOAL

Mecklenburg County establishes in this Plan the following local goals:

- Reduce the current rate of residential and commercial waste disposal to 0.92 tons/person/year by June 30, 2001 through source reduction, recycling, and composting. This is estimated to be a 12% per capita reduction from Fiscal Year 1996/97. The current estimated County disposal rate is 1.05 tons/person/year which is a reduction of 27% from the base year of 1990. The existing County programs contributing to this reduction consist primarily of education, residential curbside recycling, recycling drop centers, and yard waste collection and processing. The 2001 goal is a reduction of 35% from the base year of 1990.
- Reduce the current rate of residential and commercial waste disposed to 0.84 tons/person/year by June 30, 2006. This is estimated to be a 20% per capita reduction from Fiscal Year 1996/97. This goal is a reduction of 41% from the base year of 1990.

Table 4-1 shows baseline and projected disposal rates.

**Table 4-1  
Population and Waste Projections: Municipal Solid Waste**

<u>FY Year</u>	<u>Population</u>	<u>Waste Disposed, tons</u>	<u>Rate, tons/person, year</u>	<u>Waste Reduction, % of base yr</u>	<u>Waste Reduction, % of current yr</u>	<u>Disposed If No Reduction, tons</u>	<u>Reduction, tons</u>
1989-90 base year	486,180	695,214	1.43	0%	NA	695,214	0
1996-97 current	574,000	602,700	1.05	27%	0%	820,820	218,120
PROJECTED, ASSUMES THAT WASTE REDUCTION GOALS ARE MET							
2000-01	620,000	570,400	0.92	35%	12%	886,600	316,200
2005-06	680,000	571,200	0.84	41%	20%	972,400	401,200

This Plan is designed to reduce Mecklenburg County's Municipal Solid Waste disposal stream by 316,200 tons in FY 2000-01 and 401,200 tons in FY 2005-06. The waste reduction necessary to meet the goals is further broken down in Table 4-2.

**Table 4-2  
Waste Reduction Goals by Sector**

<u>Reduction Source</u>	<u>Current Reduction, tons</u>	<u>Reduction Goal FY 2000-01, tons</u>	<u>Reduction Goal FY 2005-06, tons</u>
Current Programs	218,120	235,600	258,400
Additional Residential Programs		20,000	30,000
Additional Commercial Programs		60,600	112,800
TOTAL	218,120	316,200	401,200

An overview of how the additional residential reduction and additional commercial reduction is presented in the following sections. Detailed description of specific waste reduction activities is in Section 6 entitled *Assessment of Programs and Description of Intended Actions*.

### A. Residential Waste

The Plan targets 20,000 tons in FY 2000-01 and 30,000 tons in FY 2005-06 for additional reduction in residential waste. In Table 4-3 the residential waste reduction methods to be used to meet the goals are summarized.

**Table 4-3  
Targeted Additional Residential Waste Reduction**

<u>Disposal Reduction Program</u>	<u>FY 2000-01 Additional Reduction, tons</u>	<u>FY 2005-06 Additional Reduction, tons</u>
Source Reduction	3,000	4,000
Enviro Shopping		
Backyard Composting/Provide Compost Bins		
Recycling		
Increase Curbside Participation	5,000	7,500
Increase/Improve Multi-family Participation	6,000	9,000
Add Materials to Program: OCC, Household Paper Mix	5,000	8,000
Expand Special Wastes	1,000	1,500
Computer/Electronic Program		
Salvage/Reuse Programs		
TOTAL	20,000	30,000

### B. Commercial Waste

The Plan targets 60,600 tons in FY 2000-01 and 112,800 tons in FY 2005-06 for additional reduction in commercial waste. Table 4-4 summarizes the commercial waste reduction programs to be used to meet the goals.

**Table 4-4  
Targeted Commercial Waste Reduction**

<u>Disposal Reduction Program</u>	<u>FY 2000-01 Additional Reduction, tons</u>	<u>FY 2005-06 Additional Reduction, tons</u>
Voluntary Source Separation: Commercial & Institutional Buildings	60,600	112,800
Corrugated Cardboard		
Office Paper		
Aluminum Cans and Other Items Banned From Landfills		
TOTAL	60,600	112,800

## 2. CONSTRUCTION & DEMOLITION WASTE

This Plan establishes the following goals for reduction of the Construction & Demolition Waste Stream:

- Reduce the disposal rate of construction and demolition waste (disposed in C&D landfills) by 30% from the current level (Fiscal Year 96/97) by June 30, 2001.
- Further reduce the disposal rate of construction and demolition waste by 40% from the current level by June 30, 2006.

As a basis for this goal, Mecklenburg establishes a base year of FY1996/97. In this year 320,380 tons of C&D waste were disposed, based on preliminary C&D landfill reports. The per capita rate is 0.56 tons/person/day. Table 4-5 shows baseline and projected disposal rates.

**Table 4-5  
Population and Waste Projections: Construction & Demolition Waste**

<u>FY Year</u>	<u>Population</u>	<u>Waste Disposed, tons</u>	<u>Disposal Rate, tons/person/day</u>	<u>Waste Reduction, %</u>	<u>Waste If No Reduction, tons</u>	<u>Reduction, tons</u>
1996/97 base year	574,000	320,380	0.56	0%	320,380	0
PROJECTED, ASSUMES REDUCTION GOALS ARE MET						
2000-01	620,000	241,800	0.39	30%	347,200	105,400
2005-06	680,000	231,200	0.34	40%	380,800	149,600.

The Plan targets 105,400 tons in FY 2000-01 and 149,600 tons in FY 2005-06 for reduction in Construction & Demolition waste. Table 4-6 summarizes the waste reduction methods to be used to meet the goals. A detailed description of specific waste reduction activities is in Section 6 entitled *Assessment of Programs and Description of Intended Actions*.

**Table 4-6  
Targeted Construction & Demolition Waste Reduction**

<u>Reduction Method</u>	<u>Targeted Materials</u>	<u>FY 2000-01 Reduction, tons</u>	<u>FY 2005-06 Reduction, tons</u>
Recycling	Soil, gypsum, concrete, rebar, aluminum siding, plastic buckets, carpet, and others.	105,400	149,600



## SECTION 5 THE PLANNING PROCESS AND PUBLIC PARTICIPATION

The development of the Plan was the responsibility of the Waste Management Advisory Board. This Board is appointed by the Board of County Commissioners and has 20 members. The WMAB is a broad based group of citizens, including representatives from various areas of the County; the Chamber of Commerce; the professions including legal, medical-scientific, financial-accounting, and engineering-technical; the Sierra Club; Duke Power; the Clean City Committee; and the Charlotte-Mecklenburg Planning Commission.

The preparation of the Plan took place in two distinct phases, an information phase and a Plan development and consensus building phase.

- Phase I - Information Gathering

The Waste Management Advisory Board (WMAB) and staff solicited input from the public on what goals and programs they wanted included in the new Plan. Mailings went to numerous groups and organizations. The mailings (1) gave notice of 4 public meetings that were held, (2) contained a questionnaire that could be returned to the County, and (3) gave an Internet address that could be used for responding. The meetings were also advertised as follows: two ads in Charlotte Observer's Mecklenburg Neighbors, ad in Charlotte Post, public service announcements, an insertion in the water/sewer bill, and posters. The mailing went to:

- Town managers
- Neighborhood Associations
- Solid waste haulers
- Recycling vendors
- Black Political Caucus
- Building Development Commission
- AIA Environmental Committee
- Charlotte Apartment Association
- Charlotte Chamber of Commerce
- Urban League
- Clean City Committee
- Manufacturing Council
- League of Women Voters
- Southpark Area Council
- Airport Area Council
- University City Area Council
- Rotary clubs
- Environmental groups

- Phase II - Plan Development and Consensus Building

After the public meetings and receipt of the mail and Internet responses, the WMAB and staff compiled all the responses and from them produced the *Status Report*, outlining the main goals and programs. The *Status Report* was distributed through mailings to the same groups approached in Phase I plus the attendees at the public meetings. Substantial response was received regarding the commercial portion of the Plan, with the Plan undergoing substantial modification as a result of comments received. During this Phase, a substantial effort was made to reach the commercial and business community including the following activities:

- Presentations
  - Manufacturer's Council of Chamber of Commerce
  - Environmental Committee of AIA
  - Board of County Commissioners
  - Restaurant Association
  - South Park Area Council
  - Airport Area Council
  - University City Area Council
  - Mint Hill Lions Club
  - Town Councils of Davidson, Mint Hill, Pineville, Cornelius, Huntersville
  - Planning representatives from 5 towns
  - Solid waste haulers
  - Charlotte City Manager's Office
  - Building Development Commission
  - Hotel/Motel Group of the Greater Charlotte Hospitality & Tourism Association
  - City Council Restructuring Government Subcommittee
  - Charlotte Chamber Advisory Board
- Meetings
  - Mike Cozza, WBTV
  - Kristin Morris, The Leader (newspaper)
  - Joel Gilland, Harris Group (real estate)
  - Mike Fuller, D & L (waste hauler)
  - Tony Davies, BFI
  - Eric Porr, USA Waste
  - Kurt Schmidt, Carolina Paper Board
  - FCR (recycling firm)
- Phone discussions
  - Rita Plyler, Plyler Paper Stock
  - Mike Kuric, Weyerhauser
  - Mohammed Jenetain, Greater Charlotte Hospitality & Tourism Association
  - Vance Corriaga, Business Journal



## SECTION 6

### SOLID WASTE MANAGEMENT METHODS

#### ASSESSMENT OF PROGRAMS AND DESCRIPTION OF INTENDED ACTIONS

Each solid waste management method is described below. Each section contains an assessment of the current program and a summary of intended actions.

#### I. SOURCE REDUCTION

##### A. Program: COMMERCIAL WASTE ASSESSMENT/OFF-SITE CONSULTING

**Description:** A free waste assessment service is provided to local businesses upon request and after the business receives a business waste reduction kit, *Waste In the Workplace*. During FY 94-95, staff introduced the *Waste In the Workplace* kit to 10 businesses in the Charlotte Rotary Club and offered consulting services to businesses as an incentive to setting up their own waste reduction program in their place of business. Four of the ten businesses requested on-site assistance.

Once the on-site waste assessment is completed, a final report that includes waste reduction and recycling recommendations is prepared for the customer.

**Assessment:** In FY95-96, a total of 4 single business and one multi-tenant complex (with 13 businesses) waste assessments were conducted by 2 waste reduction staff members. A waste sort was performed at one business.

Due to the time required to interview company personnel, conduct an assessment, prepare a final report with recommendations, and develop an action plan this service exceeds current level resources.

##### B. Program: BUSINESS KIT

**Description:** The *Waste in the Workplace Kit* is an educational tool designed to help the commercial sector set up waste reduction and recycling programs without on-site county assistance. The kit is a by-product of earlier waste reduction workshops sponsored jointly by the County and private sector. Workshops are labor intensive and limited in the number of businesses reached. The kit assists businesses to develop their own programs with minimal help from County waste reduction specialists. A kit consists of a file folder, containing a series of informational pieces that can be used independently or collectively. The folder information pieces are: a six step guide on setting up a waste reduction program; a recycling vendor list; waste assessment worksheets; *TrashFlash* newsletter; business case studies; and information on recycling drop centers.

**Assessment:** Introduced in March of 1995, 700 kits have been distributed to local businesses, either through direct requests for information or distribution at special events promoting commercial waste reduction and recycling. A database tracking distribution information is maintained for call-in requests.

An informal follow-up survey was conducted to determine the usefulness of kits. More than half of the businesses that received the kit either started or improved an existing recycling program. Survey results indicate that the business kit is an effective tool that enables businesses to begin recycling programs on their own.

### **C. Program: INTERNET HOMEPAGE**

**Description:** Mecklenburg County's recycling and waste reduction information is available via the Internet. Due to the dynamic nature of the Internet and the ease of updating files, information can be changed frequently on the home page. Information on the homepage includes: County operated recycling drop-off centers, County operated composting and mulch facilities, Metrolina Recycling Center, business waste reduction and recycling, household hazardous waste disposal, *TrashFlash*), classes, workshops, and upcoming events.

**Assessment:** The homepage has been on the Internet since May 8, 1996. Over 500 "hits" occurred from May until December 1996. The effects of the homepage on waste reduction and recycling tonnage increases are not yet known. Communication links between the city, the County, towns, and state officials are strengthened as information can be accessed and updated immediately. A decrease in the amount of information disseminated in print form is an additional benefit.

### **D. Program: ULS DAY-SOURCE REDUCTION CAMPAIGN**

**Description:** The Source Reduction Core Process sponsored a holiday source reduction campaign beginning November 21 and ending January 1, 1997. The Board of County Commissioners designated Thursday November 21 as Use Less Stuff (ULS) Day to kick-off this holiday waste reduction campaign.

A Junk Mail Terminator kit and a holiday waste reduction booklet were distributed as part of the campaign. A Compost Bin Giveaway Day was held in honor of the campaign. Staff disseminated informational pieces and responded to the general public's recycling questions. A series of radio advertisements were aired during the 6-week campaign. A number of radio and TV interviews also occurred. A holiday waste reduction television PSA was produced and aired on 4 Charlotte area TV stations. A weekly column ran in Mecklenburg Neighbors with tips on reducing waste during the holidays.

**Assessment:** Approximately 800 junkmail terminator kits and Holiday Waste Reduction Guides were requested and distributed during a 4-week period. 107 compost bins were given away at the Compost Bin Giveaway Day. The ULS campaign is a concentrated

informational blitz that has state and national support and resources available. The campaign should remain as an annual residential program.

### **E. Program: WATER QUALITY COALITION**

**Description:** Mecklenburg County Solid Waste Management is a member of a partnership of Charlotte-Mecklenburg environmental agencies called the Water Quality Coalition. Other members are Charlotte-Mecklenburg Storm Water Services, Mecklenburg Department of Environmental Protection, Charlotte-Mecklenburg Utility Department, and Mecklenburg County Soil and Water Conservation District. The coalition works during public awareness raising events such as the Southern Spring Show, Big Sweep, Earth Day Charlotte, and a Used Oil Recycling Container Giveaway Day.

**Assessment:** 92,000-93,000 people attended the Southern Spring Show this year. Approximately 2,000 recycling information handouts were distributed.

A used oil recycling container giveaway was held. Approximately 250 containers were distributed. Coalition members interacted with mall patrons talking about recycling and the importance of keeping used motor oil out of the watershed and gave out recycling information.

By working through the Coalition, Solid Waste Management is able to participate in many more public awareness raising events that could not occur if the source reduction staff attempted to do it alone.

### **F. Program: RECOGNITION PROGRAM**

**Description:** An annual recycling recognition program has been in effect since 1971. Award recipients' on the Metrolina Environmental Concern Association Recycler Award, which is displayed in the County's Hal Marshall Services Center Building. The Waste Management Advisory Board (WMAB) and the County present an annual Outstanding Recycling award in four different categories: Outstanding Individual, Outstanding Small Business/Organization, Outstanding Student and Outstanding Business. In 1996, the WMAB broadened the scope of the awards to officially include source reduction efforts in addition to recycling. Nominations are solicited in February through news releases to the media. The awards are presented in the spring or summer at a meeting of the Board of County Commissioners. Winners receive a plaque of recognition made from recycled materials and their names are engraved on the Metrolina Environmental Concern Association Recycler Award.

**Assessment:** Interest in the annual awards has decreased over the past several years. County staff believes that this is because recycling has become an accepted part of Mecklenburg County and no longer viewed as an exceptional activity. For the 1994 awards only 12 nominations were received; although awards were subsequently given in all four categories. For the 1995 awards 15 nominations were received and only two awards made. News releases were sent to all media outlets; notices appeared in the

Charlotte Observer, Leader and Creative Loafing; nomination deadline extended, etc. Interest is just not high. The WMAB is reviewing the current awards program.

### **G. Program: COMPOSTING WORKSHOPS/EDUCATION**

**Description:** Mecklenburg County Solid Waste Management began sponsoring backyard-composting workshops in 1993, the year the state banned yard waste from landfills. This is also the year that the County's Recycling Division, in conjunction with the Master Gardening program of the County Cooperative Extension Service, built Compost Garden, a composting demonstration site designed to teach residents how to reduce and recycle yard waste. The first classes took place in the Hal Marshall Services Center. In 1995 and 1996, the spring and fall workshops were held at Compost Central. The 1996 workshop fee was \$5 and included a wire composting bin, composting manual and bag of compost.

**Assessment:** Evaluations of the workshops submitted by the participants are excellent both for the instructor and for the material, and most respondents say they would definitely recommend attending a workshop. Attendance averages 150 per season, and the Spring 1997 sessions brought in almost 300 people. Staff is also looking at other ways to promote backyard composting that might reach larger groups of people: such as demonstrations at festivals, conventions, Earth Day, etc.; producing a simple, local conditions oriented brochure; special family composting workshops; vermicomposting; helping develop a school curriculum and/or working to train teachers; and other possibilities. A joint City/County grant from the State in 1997 will implement four neighborhood Compost Fairs where bins and "how to" materials will be given free.

### **H. Program: NEWSLETTER**

**Description:** *Trash Flash, Recycling, Resource Recovery and Landfill News From Mecklenburg County*, a quarterly newsletter, was created in 1992 as a means of informing elected officials, government management and other interested entities about solid waste issues and particularly County achievements in that area. In 1992, the newsletter went to approximately 350 - 400 people. In 1995, the newsletter was redesigned to become a self-mailer. In 1996 the mailing list expanded to a new total of 1200. The expanded mailing list includes people who have enrolled in compost workshops, people who have requested recycling information and businesses that requested waste reduction information.

**Assessment:** It's difficult to assess the impact of *Trash Flash* because it is non-subscription and unsolicited. The newsletter includes a telephone number for people to call if they do not wish to receive the newsletter, and in 1996 there was only one request to remove a name. *Trash Flash* issues are also on the Internet. The Department has received phone calls and letters that compliment the newsletter, saying that the information on composting, grass cycling, waste reduction at holiday time and recycling has been very helpful. *Trash Flash* is non-technical and easy to read.

### **I. Program: COMPOST GARDEN**

**Description:** The Compost Garden was built in 1993 at Compost Central and was designed to be a demonstration site for composting and for a variety of herbs and plants growing in compost amended soil.

**Assessment:** To address the need for long-term maintenance of the garden a coalition of solid waste, cooperative extension, the master gardeners and volunteers has drafted and is implementing a plan to restore and maintain the garden. Since 1995, Mecklenburg County has sponsored backyard compost classes at the site and that has increased awareness of the garden and also of its need for continued upkeep. The County should reexamine the garden's potential and then assign a core process to carry out and manage its operation.

### **J. Program: OTHER**

**Description:** The source reduction core process staff makes presentations/demonstrations on a variety of waste reduction topics to all age groups. Staff makes recycling and waste reduction information available at a variety of public events including local, state, and national conferences; Earth Day Charlotte; and serves as information brokers for recycling information requested by businesses, the public, and colleagues in the solid waste management field.

**Assessment:** The effects of presentations/demonstrations, and participation at public events on waste reduction and recycling tonnage increases are unknown. Presentations and events are well received. Presentations/demonstrations services are not advertised by the source reduction core process due to the small staff size. Speaking/presenting at local, state, and national conferences are effective tools for raising awareness and promoting solutions to solid waste issues.

### **K. Intended Actions**

**Expand emphasis on source reduction.** Significant waste reduction can be accomplished through an extensive program to educate people on how to generate less waste through waste conscious shopping practices, eliminating junk mail, and reuse. These measures will increase the understanding of the correlation between waste generation and consumer behaviors.

**Study Pay-as-you-throw.** Programs that charge residents based on the volume or weight of waste they generate provide an economic incentive to reduce and recycle. The Plan recommends additional research on these type programs. Concerns with "pay-as-you-throw" programs include illegal dumping to avoid fees and providing service to people who do not have the resources to pay for any level of service.

**Technical Assistance for the Commercial Sector.** An aggressive, long-term education program will be initiated for the development and implementation of reduction, reuse,

and recycling programs. Waste audits will be encouraged. These services may be provided through a joint public-private partnership that includes businesses, waste haulers, and local government.

**Business Recognition Program.** A comprehensive Business Reduction Recognition Program would be implemented to bring attention to successful reduction programs. This program would also include a mentoring system for businesses seeking waste reduction assistance.

## 2. COLLECTION

### A. Commercial

**Description:** 6 private haulers collect all commercial waste in the County. The two largest haulers collect approximately 80% of the commercial waste.

- **Assessment:** The private sector provides adequate capacity for commercial collection.

### B. Residential - City of Charlotte

**Description:**

- Single Family

The City of Charlotte provides self-performed collection to 105,718 single-family housing units. The City has privatized collection to 34,074 single-family units.

The City of Charlotte collection provides:

- Residential Rollout Garbage Collection. Weekly curbside automated collection (95-gallon containers).
- Residential Recyclables Collection. Weekly curbside collection using 16 gallon bins.
- Residential Yard Waste Collection. Weekly curbside collection.
- Bulky Items and Used Tire Collection. Upon request.

City forces collect from 3/4 of the city. The remaining 1/4 has been privatized (BFI). Each single-family unit is estimated to have 1.2 tons/year.

- Multi-Family

The City of Charlotte provides privatized garbage and recyclables collection from 57,676 multi-family units. Collection of recyclables is offered to those apartment complexes which wish to have the service. Each multi-family unit is estimated to have 0.7 tons/year.

**Assessment:** The current service is adequate and no changes are planned.

### **C. Residential - Town of Cornelius**

**Description:** The Town of Cornelius provides contracted curbside solid waste collection once a week consisting of two collections: garbage (96 gallon container) and yard waste. This service is provided to 2, 888 units. A weekly contracted recycling collection is also provided to 2,928 units. Apartments are considered commercial property.

**Assessment:** The current service is adequate and no changes are planned.

### **D. Residential - Town of Davidson**

**Description:** The Town of Davidson provides contracted curbside solid waste collection once a week consisting of two collections: garbage and yard waste. This service is provided to 1,511 units. A weekly contracted recycling collection is also provided to 1,188 units. Front-end loader boxes are provided for apartments and the community. Town forces provide a special leaf collection during the fall.

**Assessment:** The current service is considered adequate and no changes are planned.

### **E. Residential - Town of Huntersville**

**Description:** The Town of Huntersville provides contracted curbside garbage and recycling collection once a week and self-performed yard waste collection once a week. Bulky items are collected for a fee. The Town encourages alternatives to disposal and tips are printed regularly in the town newsletter. Solid waste brochures are distributed in the new resident packets.

**Assessment:** The current service is considered adequate and no changes are planned.

### **F. Residential - Town of Mint Hill**

**Description:** The Town of Mint Hill provides contracted backyard collection of single-family household garbage twice a week, two - 30 gallon containers maximum. Once a week curbside collection is provided for recycling, rubbish, and yard waste. This service is provided to 5,404 units. Apartments are considered commercial property.

**Assessment:** The current program is considered adequate and no changes are planned.

### **G. Residential - Town of Pineville**

**Description:** The Town of Pineville provides contracted curbside solid waste collection once a week consisting of three collections: garbage (95 gallon container), rubbish, and recycling. This service is provided to 790 units. Apartments are considered commercial property. A community front-end loader box is also provided.

**Assessment:** The current service is adequate and no changes are planned.

## H. Residential - Unincorporated County

**Description:** Private haulers provide Collection in the unincorporated County. Charges vary, but are about \$18 per month. The hauler is required to offer collection of recyclables as a condition of his Solid Waste Haulers License. Residents who do not wish to pay this charge can dispose of their waste at three full-service Recycling Drop Centers operated by the County.

**Assessment:** The current system is adequate, however from time-to-time there are stranded areas in the unincorporated County in which service cannot be obtained. As the City and Towns grow, and the unincorporated County contracts, this may become a greater problem.

### I. Intended Actions

Work with stranded areas to have service provided, possibly by the City or nearby Town.

## 3. RECYCLING/REUSE

### A. Program: RECYCLING DROP CENTERS

**Description:** The County has 7 Recycling Drop Centers--3 staffed and 4 unstaffed. Both the unstaffed and staffed recycling centers accept the same materials that are collected in the curbside program from city residents (aluminum/steel/tin cans, #1 & #2 plastic bottles, phonebooks, spiral paper cans, magazines/catalogs, newspapers, glass bottles and jars) as well as cardboard and mixed paper (office paper, junk mail, boxboard). The 3 staffed centers also accept the following recyclables for free from county residents:

White goods (*appliances with and without freon*)  
Scrap metal (*aluminum and ferrous*)  
Lead Acid (*Car batteries*)  
Household, and rechargeable (Ni-Cad) batteries  
Tires  
Motor oil & antifreeze and transmission fluid (*no brake fluids*)  
Oil filters  
Eyeglasses  
Plastic 6-pack rings  
Foam rubber  
Paint (*oil/water based*)

The staffed centers have a paint exchange where latex and oil-based paints are collected and either made available to the public for re-use or, if unusable, mixed with a drying compound and then landfilled.



Certain items (scrap metal, bulky items) may be purchased by the public for a nominal fee (\$5.00 for appliances and riding lawn mowers- \$3 everything else)

The staffed centers also accept household waste from county residents, both bagged and bulky at no charge.

**Assessment:** During FY 1995-96 the following amounts of material were collected for recycling:

White goods ( <i>appliances with and without freon</i> )	2301.96 tons
Scrap metal ( <i>aluminum and ferrous</i> )	497.99 tons
Car batteries	23.83 tons
Household, and rechargeable ( <i>Ni-Cad</i> ) batteries	<i>(program new-no tonnage figures exist)</i>
Tires	<i>900,000 tires</i>
Motor oil & antifreeze and transmission fluid	198.29 (39,657 gallons)
Oil filters	<i>(program new-no tonnage figures exist)</i>
Eyeglasses	<i>-0- (Minimal)</i>
6-pack rings	<i>-0- (Minimal)</i>
Foam rubber	6.93 tons
Newspapers	7.54 tons
Cardboard	657.61 tons
Co-mingled containers	438.53 tons
<i>(aluminum/steel/tin cans, #1 &amp; #2 plastic bottles, spiral cans)</i>	
Magazines/Junk Mail/Mixed paper	302.56 tons
Total	4435.24 tons ( <i>excludes tires, oil filters, eyeglasses, 6 pack rings, household</i>

Revenue from the sale of recyclables was \$112,356.88 in 1995. Revenue from the sale of items (appliances, lawn mowers, etc.) to the public from the 3 staffed recycling centers was \$4,465.00

Household garbage (*landfilled*) from the 3 staffed centers was 4623.2 tons. This includes paint (*oil/water based*) which is dried and landfilled. Approximately 35.91 tons (7,980 gallons) of paint are solidified and landfilled per year. A small amount of usable paint is taken at the 3 staffed recycling centers by the public to be reused. However, the amount of paint reused is unknown.

The unstaffed centers experience on-going problems with illegal dumping of trash. Pictorial signs and the availability of take-home information for customers may help reduce contamination of the recycling bins and trash left behind at the unstaffed centers. With the addition of the paint exchange at the staffed centers, some HHW has been left at the sites. Closer ties with local organizations that may need paint (such as school drama departments, local theatre companies) and increased publicity about the paint exchange may help move paint more rapidly.

Targeted publicity to the regions surrounding the centers could significantly increase the amount of material being collected. The Compost Central recycling center is being relocated to increase its ease of use by customers. Increase training (including site visits) for site managers regarding other waste programs (HHW, local C&D sites, etc.) will improve customer service. Improved ties between administration/publicity (such as cross-training days at the sites) and the sites should also improve customer service and better meet the publicity needs of the sites.

### **B. Program: MATERIAL RECOVERY FACILITY**

**Description:** Recyclables collected from curbside, apartments and drop centers in Mecklenburg County are processed at the Metrolina Recycling Facility. The regional facility also processes recyclables collected in Union County, NC and Gaston County, NC. A minimal quantity of commercial recyclables from Mecklenburg County is processed at the facility. The facility is owned by Mecklenburg County and operated by FCR, Incorporated.

The recyclables are source separated (separated at point of pick up) into two categories, commingled and fiber. The commingled consists of:

- Glass (Flint, Green, Amber, and Mixed)
- Plastic - PET
- Plastics - HPDE Natural
- Plastics - HPDE Pigmented
- Aluminum
- Ferrous

The fiber consist of:

- Old newspaper (ONP)
- Old corrugated cardboard (OCC)
- Office Mix
- Magazines

FCR is paid a service fee of \$34.00 per ton for all incoming tonnage if the fiber does not require sorting. If the fiber requires sorting, for example old newspaper and magazines are mixed, the service fee increases to \$36.00 per ton for all incoming tonnage. After the first 30,000 tons are received, the service fee is reduced by \$8.00 per ton. In addition, FCR receives twenty-five (25) percent of revenues received from the sale of the commodities (sorted recyclables).

The commercial program is independent of Mecklenburg County. FCR solicits businesses for their recyclables. In turn, for the use of the facility for the commercial program, FCR pays the County \$15.00 per ton for recyclables requiring sorting and \$10.00 per ton for recyclables that require baling only. FCR receives all revenue generated from the sale of commodities resulting from the commercial program.

**Assessment:** In fiscal FY1996/97, 40,782 tons of material were processed at the facility. Mecklenburg County curbside programs (City of Charlotte, Multi-family, and the Townships) accounted for 26,944 tons or approximately 66% of the recyclables. The drop centers accounted for 5,284 tons or approximately 13%. The commercial program accounted for 4,003 tons or approximately 10%. The remaining 4,551 tons or approximately 11% was received from Union and Gaston Counties and other sources.

In FY1996/97, the County received net revenue of \$470,164 from the sale of commodities and service fees from the commercial program. The debt service on the facility is approximately \$480,000 per year.

The current facility has ample capacity for the requirements of the Plan and no changes are planned in the physical facility.

### **C. Program: APARTMENT RECYCLING**

**Description:** Apartment dwellers, working through property owners and managers in conjunction with The Charlotte Apartment Association, began receiving service at 19,000 units. Today, private sector provides service to 24,000 units. Recycling containers differ, depending upon configuration of the complex. Some units operate under the curbside recycling scenario, while other have on-site centralized containers for collection of recyclables. Property owners and managers make the decision of whether or not their complex participates in the program. They also make the decision on container type to be used. The Charlotte Apartment Guide magazine lists recycling as an amenity offered by participating complexes.

**Assessment:** Thanks to persistent efforts from the Charlotte Apartment Association, apartment recycling became a reality. Reports on program success are negative, addressing problem areas such as: low participation; litter and trash contamination; stolen or lost containers; and complex frustration dropouts. The County estimates that about 9% of potential recyclables are being recovered from the apartments.

A pilot program with the City, County, Charlotte Apartment Association, the Charlotte Housing Authority, and the Clean City Committee has begun an aggressive marketing push in 17 multi-family complexes.

Several thousand new apartments are expected to be constructed in the Charlotte-Mecklenburg area within the next year. It is expected that an amendment to the City/County building codes will require provisions for recycling in trash handling areas.

### **D. Private Paper Recyclers**

**Description:** There are a more than a dozen companies within the region that accept fiber. Their services range from drop off centers to full-service collection.

**Assessment:** The type and quality of service as well as the number of companies in the region seem to vary according to the strength of the markets. When markets are good

publicity/recruitment of office recycling is quite active. Unfortunately, fluctuating paper markets also cause fluctuations in available service, which may allow local businesses to conclude that recycling paper is not appropriate. This makes it more difficult to establish an ingrained attitude towards the necessity of office recycling within the business community if we have to rely solely on the private sector to provide such a service.

There are approximately 300,000 tons of fiber waste within Mecklenburg County per year. Current recycling amounts for fiber are at a minimum approximately 66,000 tons/yr with a current potential facility capacity at 206,000 tons/yr (minimum).

A local ordinance mandating the recycling of fiber may significantly increase progress towards a waste reduction goal while establishing a strong local infrastructure.

### **E. Private Metal Recyclers**

**Description:** There are a more than a dozen companies within the region that accept scrap metal. Their services range from drop off centers to full-service collection.

**Assessment:** Markets and infrastructure for metals recycling are fairly well established and relatively stable. Metal prices make recycling this material a much better option for companies than landfilling.

Total recoverable metal waste for recycling in Mecklenburg County is unknown. Current recycling amounts for metals are at a minimum approximately 41,000 tons/yr with a current potential facility capacity at 203,000 tons/yr (minimum).

### **F. Private Plastics Recyclers**

**Description:** There are a more than a dozen companies within the region that accept or broker plastics. Their services range from drop off centers to full-service collection.

**Assessment:** There are approximately 31,000 tons of plastic waste within Mecklenburg County/yr. Current recycling amounts for plastic are at a minimum approximately 2,900 tons/yr with a current potential facility capacity at 30,400 tons/yr (minimum).

Plastics recycling is still somewhat in its infancy. A variety of plastics are not currently feasible to recycle. Contributing factors are: unestablished markets, confusion over identifying resin types, and lagging technology and infrastructure. Advancing technology may increase the ability to recycle a wider variety of plastics in the future. Most types of "clean" separated plastic are more easily recycled when volumes are higher. If the county facilitates collection of specific types of plastics through local drop off centers or recycling mandates, the potential to increase these recycling rates and establish local infrastructure exists. For example: Shrink-wrap, vinyl siding, ABS (computer housing), expanded polystyrene, etc.

## G. Pallet Recyclers

**Description:** There are a more than eight companies/organizations within the region that accept pallets for recycling or re-using as mulch. Their services range from drop off centers to full-service collection. Mecklenburg County offers its northern recycling drop off center as a location for pallet recycling. There are a number of "scavengers" that pick up small amounts of pallets from companies.

**Assessment:** There are approximately 36,000 tons of pallet waste within Mecklenburg County/yr. Current recycling amounts for pallets are at a minimum approximately 27,000 tons/yr with a current potential facility capacity at 62,000 tons/yr (minimum).

Most companies have some amount of pallet waste in their garbage on a regular basis. If they receive significant amounts of pallets then pallet disposal may become a major concern. Landfilling pallets tends to be a more costly option than transporting them to a recycler/mulch facility.

A voluntary recycling program with strong publicity may help larger companies who may already spend thousands of dollars on pallet disposal each month. In addition, alternatives to wood pallets need to be explored. Re-usable, more durable pallets are a less costly, more environmental solution in the long run. The county could become more involved in setting up a durable pallet program. The new C&D recycling facility may also improve waste reduction in this area.

## H. Automotive Recycling

**Description:** The 3 staffed county recycling drop off centers accept used motor oil, transmission fluid, antifreeze, oil filters, and car batteries from county residents at no charge.

**Assessment:** There are approximately 457,000 (do-it-yourself) gallons of used oil within Mecklenburg County per year. During FY 95-96 the County recycled 39,657 gallons of used motor oil from the 3 county-staffed recycling centers. In addition, many local automotive companies will take back used motor oil from their customers (Q Lube, Western Auto, Pep Boys, independent garage owners, etc.). The amount recycled through these outlets is unknown.

An unknown quantity of antifreeze was collected for recycling at the 3 staffed recycling centers.

29 tons of car batteries were collected at the 3 staffed recycling centers from County residents.

The amount recycled from independent stores and garages is unknown.

An oil filter recycling program at the 3 staffed recycling centers began in August 1996. Three - 40 gallon drums have been collected for recycling from August-December. Oil filter recycling participation is less than expected and needs to be publicized.

### **I. Southeast Waste Exchange**

**Description:** The Southeast Waste Exchange (SEWE) is a non-profit industrial service and information clearinghouse sponsored by the Urban Institute at The University of North Carolina at Charlotte. The Program was established to identify and bring together industrial waste generators with potential users, and companies seeking waste management services with those who can provide them. The Southeast Waste Exchange provides information, research, and educational services to assist industries on developing waste management strategies that are environmentally safe and economical. SEWE publishes a bi-monthly catalog listing materials available or wanted, and products and service available. Types of materials listed through the exchange include: acids, alkalis, inorganic chemicals, solvents, organic chemicals, oils and waxes, plastics and rubber, textiles and leather, wood and paper, metals and metal sludges, and other miscellaneous materials.

**Assessment:** The effects of the SEWE on waste reduction and recycling tonnage increases in Mecklenburg County are unknown. The SEWE does not keep statistical data specific to Mecklenburg County.

#### **I. Intended Actions**

The following actions will be taken:

**Increase recovery of existing curbside recycling materials.** It is estimated that 55% of the material currently targeted in the curbside program is actually recovered. Through increased promotion and education, 75% or more of these materials could be recovered.

**Increase recycling at apartments.** Presently only 10% of the targeted recyclables are recovered from apartment complexes. An aggressive program should reach, at a minimum, the current curbside rate of 55%.

**Add OCC (cardboard) and mixed paper to curbside programs.** Combined, these materials comprise 10% to 15% of the residential waste.

**Increase the number of residential drop centers and expand special waste programs.** Add additional centers and recover materials such as clothing, computers, and reusable appliances at the staffed County convenience centers.

**Establish commercial recycling drop centers.** A network of commercial drop off recycling centers, strategically placed to support the collection of designated recyclables, will be established. Some haulers have volunteered to provide containers and hauling services for a six-month commercial drop-off program.

**Provide technical assistance to the commercial sector.** An aggressive, long-term education program will be initiated for the development and implementation of reduction, reuse, and recycling programs. Waste audits will be encouraged. These services may be provided through a joint public-private partnership that includes businesses, waste haulers, and local government.

**Establish a business recognition program.** A comprehensive Business Reduction Recognition Program would be implemented to bring attention to successful reduction programs. This program would also include a mentoring system for businesses seeking waste reduction assistance.

**Establish Zoning/Building Code requirements.** The local zoning/building code will be amended to require space for separation, storage, and collection of commercial recyclables. The amount of space will be at least equal to that provided for waste disposal containers. This requirement will apply to (1) all new commercial buildings and (2) additions that increase the size of the building 50% or more. The details of this ordinance will be developed and reviewed by the Building Development Commission.

**Establish small business recycling collection.** Units of government within the County will be encouraged to provide recycling collection to small businesses on a fee basis. The residential curbside program passes by many small businesses, which could be added to the residential routes, thereby providing an efficient, cost-effective system for recycling at these businesses.

**Provide processing capacity.** Metrolina Recycling Facility, where the County's residential recyclables are processed, has additional capacity that will be dedicated for processing of recyclables from commercial buildings. There are also several recycling companies with additional capacity to handle an increase in recycling.

## **4. COMPOSTING AND MULCHING**

### **A. Program: COMPOSTING AND MULCHING FACILITIES**

**Description:** The County has 2 composting and mulching facilities, Compost Central and North Meck. Incoming material is ground and designated either as mulch or precursor material for composting in windrows. Mulch products are regular mulch and pallet mulch. Compost products are nuggets (woody pieces that are retained by the trommel) and compost. Some compost is marketed by New Solutions in retail garden stores.

**Assessment:** In 1996 60,131 tons of yard waste were received of which approximately 90% was residential and 10% commercial. The products produced by this program are considered to be of high quality. The County is able to sell all of its production.

## **B. Intended Actions**

Continue the present program.

## **5. DISPOSAL: RESOURCE RECOVERY**

### **A. Existing Facilities**

**Description:** The County currently owns a 235 t/day incinerator with energy recovery. This facility was closed in 1995 due to cost considerations. The County is currently trying to identify modifications or alternatives that which will make it cost effective for the facility to reopen, and in addition the County is currently attempting to sell the facility.

**Assessment:** The County does not know of any resource recovery technology that is economically viable. The County does not know of any demonstrated resource recovery technology other than incineration.

### **B. Intended Actions**

The County will continue to seek to make the best use possible of the existing incinerator either by reopening it or by selling it. In addition, the County will continue to monitor available resource recovery technology. Emphasis will be placed on municipal waste composting. The County wishes to utilize resource recovery as a means to minimize the use of landfills provided that the technology used is (1) demonstrated, (2) has an acceptable cost, (3) is environmentally acceptable, and (4) is clearly preferable to landfilling.

## **6. DISPOSAL: TRANSFER OUTSIDE THE GEOGRAPHIC AREA**

### **A. Existing Facilities**

**Description:** A transfer station is a facility in which MSW collection vehicles take waste to be consolidated into larger capacity vehicles for transportation to landfills some distance away. Mecklenburg County does not own nor operate a transfer station. A transfer station was opened in Mecklenburg County in October 1996 (FY1996/97). A transfer station is located in Gaston County that receives waste from Mecklenburg.

**Assessment:** A total of 65,370 tons of Mecklenburg County MSW was taken to transfer stations for disposal at landfills other than the CMS/BFI Landfill. A penalty of \$929,261 was paid to BFI on this export tonnage in FY1996/97. This penalty was not offset by tipping fees and was paid by tax revenues. Because of recent acquisitions and consolidations of hauling and landfill companies the amount of waste exported could increase substantially, perhaps to 175,000 tons.



## **B. Intended Actions**

The County is currently considering actions to make possible control by the County of the siting of future transfer stations.

## **7. DISPOSAL: LANDFILLING**

### **A. Existing Facilities**

**Description:** Since the closing of the University City Resource Recovery Facility (the incinerator) in October 1995, all Mecklenburg County municipal solid waste (MSW) is disposed of in landfills. The County has a contract with Browning-Ferris Industries, Incorporated (BFI) for the use of the Charlotte Motor Speedway/Browning-Ferris Industries (CMS/BFI) Landfill in Cabarrus County.

The Use Fee has a base of \$28.405 per ton in September 1992 and is adjusted annually on July 1 by the Consumer Price Index (CPI). In fiscal year 1997 the Use Fee is \$31.59 per ton.

The County acts as fee collector at the landfill and is responsible for the collection of all tipping fees (a per ton fee charged to customers using the landfill) for waste generated in Mecklenburg County. The monies collected for tipping fees are in turn used to pay the Use Fee charged by BFI. The first 300,000 tons of waste disposed of at the CMS/BFI Landfill are charged to the County at the Use Fee. All waste in excess of 300,000 tons is charged to the County at a rate of 75% of the Use Fee.

The contract with BFI is a "put-or-pay" contract. That is, all waste generated within Mecklenburg County must be disposed of in their landfill with the exception of the waste that is incinerated in Mecklenburg County facilities or recycled. Waste that is disposed of elsewhere (exported waste) is subject to a penalty at a rate of 45% of the Use Fee.

A total of 628,191 tons the County's MSW was disposed of in landfills in fiscal year 1996 at a total cost to the County of \$15,385,187.26. The total tonnage and cost include residential, commercial, and exported commercial MSW. The total expenditures include the Use Fee and Export Penalty charges.

**Assessment:** The County will have access to adequate landfill capacity through the life of this Plan. The facilities that are/may be available are:

<u>Site</u>	<u>Owner</u>	<u>Comment</u>
CMS Landfill	BFI	BFI has stated that will have capacity through 2009
Anson Landfill	Allied	Permitted but not constructed. Has 20+ years capacity, but requires transfer.
Screaming Eagle 521 Landfill	Meck County	Has near term capacity. Requires transfer. Discussed below. Offers capacity through 2015-20 for residential waste with highly attractive tip fee.

**B. Intended Actions:**

The County is currently proceeding a program to construct the 521 Landfill. The construction application for the landfill has been submitted to the Solid Waste Division for consideration. It is the County’s current intention to use this landfill for residential waste. At the projected rates of waste generation it will provide capacity for residential waste until 2015-2020.

The Charlotte Motor Speedway Landfill currently has capacity at its current waste rates until about 2008-2009. With the opening of the 521 Landfill and the quantity of commercial waste that may be exported via transfer station(s), the CMS Landfill’s life may be extended past 2008-2009.

In addition, a private landfill is being developed in Anson County that can provide disposal capacity for Mecklenburg County via transfer station.

**8. DISPOSAL: CONSTRUCTION & DEMOLITION WASTE**

**A. Facilities**

**Description:** Construction and demolition (C&D) waste is solid waste resulting from construction, remodeling, repair, or demolition operations on pavement, buildings, or structures, but does not include inert, land clearing, yard waste, hazardous or liquid waste, friable asbestos and appliances. Approved C&D landfill sites are required by law to measure the weight of waste entering the landfill and provide groundwater monitoring. The only C&D landfill (North Mecklenburg Landfill) permitted in Mecklenburg County is owned and operated by the private sector.

**Assessment:** The North Mecklenburg Landfill near Huntersville disposed of approximately 286,000 tons of C&D waste in fiscal year 1997, and BFI reported that 34,000 tons were disposed at the CMS Landfill C&D facility.

To reduce the amount of C&D waste disposed, there must be recycling facilities available.

## **B. Intended Actions**

The County has entered into a public/private partnership with Phoenix Recycling, Inc. to provide C&D recycling. A facility is currently under construction. If this facility is successful, the County believes that additional private facilities come into operation.

BFI has indicated that it is going to open a C&D recycling facility at the CMS Landfill.

## **9. DISPOSAL: LAND CLEARING & INERT DEBRIS**

### **A. Facilities**

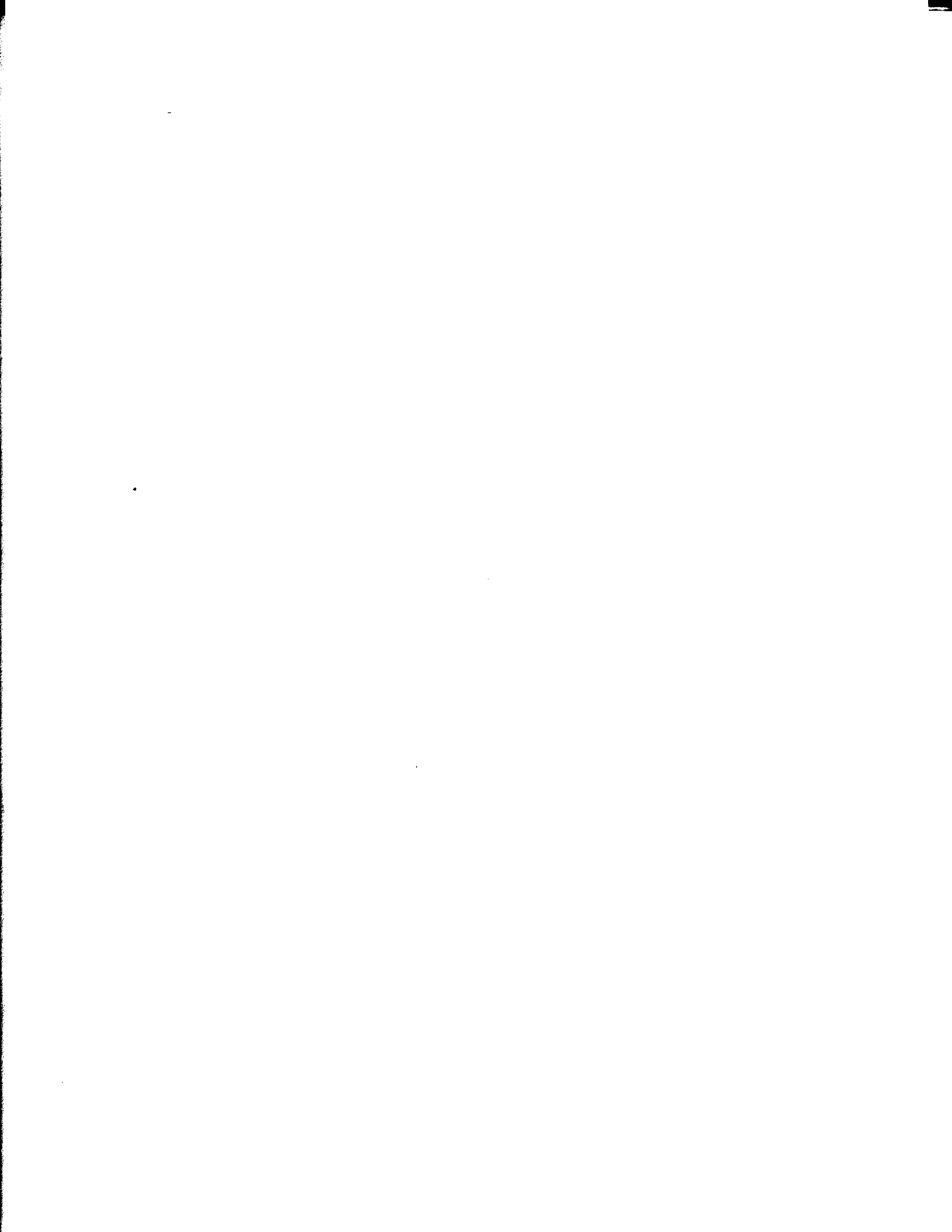
**Description:** Land clearing and inert debris wastes (LCID) are generated from land clearing activities such as trees and stumps and virtually inert debris such as brick, concrete, concrete block, uncontaminated soil, rock, and gravel which is likely to retain its chemical and physical structure. Unlike MSW and C&D waste disposal sites, landfills permitted to accept LCID are not required to weigh waste entering the disposal site nor provide groundwater testing.

**Assessment:** An estimated 280,000 tons of land LCID were disposed in sixteen (16) permitted LCID landfills in Mecklenburg County during fiscal 1996. Twenty-nine (29) small (less than 2 acres) landfills for on-site disposal of LCID were recorded in fiscal 1996. The total number of recorded on-site LCID landfills since 1981 is 2,012.

Also, an unknown quantity of inert waste generated from structure and roadway demolition was disposed in seventeen (17) privately owned Beneficial Fill sites. Beneficial Fill sites are small disposal sites requiring no excavation and receiving only inert waste (concrete, brick, block, uncontaminated soil, and gravel) to improve use potential. Generally these sites are parcels of land containing ravines, dried ponds, or other depressions the owner would like to fill for future development of the land. Beneficial Fill sites do not require a solid waste permit.

### **B. Intended Actions**

Planning for LCID waste does not fall within the requirements of HB 859.



## **SECTION 7**

### **EDUCATION, SPECIAL WASTES, ILLEGAL DISPOSAL AND PURCHASING: ASSESSMENT OF PROGRAMS AND DESCRIPTION OF INTENDED ACTIONS**

#### **I. COMMUNITY AND SCHOOL EDUCATION**

**Description:** Various education programs are discussed in Section 6. In addition to those programs, an education center is located at the Metrolina Recycling Center with a full time educator. Visitors to the Center receive education on recycling and can view both first-hand and by closed circuit TV the unloading and processing of recyclables. Approximately 10,000 visitors of all age groups come to the Center each year. The Charlotte-Mecklenburg School System has an environmental program for children in the primary schools. Each student will visit the Center at some time in his or her early primary education.

County staff provides presentations to school-age children upon request. A quarterly newsletter, *Trash Talk*, is distributed to schools, daycare facilities, libraries and other children's organization.

**Assessment:** The current program is adequate.

**Intended Action:** Continue the current program.

#### **2. SPECIAL WASTE MANAGEMENT**

##### **A. Tires**

**Description:** The County provides two avenues for the disposal of scrap tires. The first is the County's Super Recycling Centers and the County Metal Recovery Facility on Highway 16. The second is through the County's Rebate Program that is provided to tire retailers to reimburse disposal cost accrued through private disposers.

Tires are collected at the County's Super Recycling Centers and the County facility on Highway 16 by Tire Disposal and Recycling Service, Incorporated. There is no charge for the disposal of scrap tires generated within Mecklenburg County for loads containing less than five tires or loads accompanied by a Scrap Tire Certification Form. Scrap tires that are being disposed of by manufacturers because they do not meet the manufacturer's standards for salable tires or scrap tires delivered without a Certification Form are charged \$0.58 for small tires (diameter less than 20 inches) and \$1.95 for large tires (diameter 20 inches or greater) or a flat rate of \$58.00 per ton.

In addition to collection at the County facility, the County offers a Rebate Program for tire retailers. On a quarterly basis, with the submittal of proper documentation, the County will reimburse retailers for the disposal of tires not to exceed \$0.58 for small tires (diameter less than 20 inches) and \$1.95 for large tires (diameter 20 inches or greater) or a flat rate of \$58.00 per ton. The retailers must submit a Summary Sheet summarizing the quantity of tires, a Scrap Tire Certification form, and a copy of the receipt for the disposal of the tires.

**Assessment:** The County provided for the disposal of approximately 900,000 tires in fiscal year 1996 at a cost of \$588,303. Of this amount, the State of North Carolina provided \$540,452 in funds through its Scrap Tire Disposal Fund. The current program is adequate.

**Intended Action:** Continue the current program.

## **B. WHITE GOODS**

**Description:** White Goods are collected at no charge at the County's Super Recycling Centers and the County Metal Recovery Facility on Highway 16. Upon removal of the CFC's by County personnel, the white goods are bailed and sold as scrap metal.

**Assessment:** The County provided for the disposal of 28,327 white good units at a cost of \$303,857. Funding was received in the amount of (1) \$47,078 for the sale of 2,411 tons of scrap metal and (2) 472,863 from the State of North Carolina provided through its White Goods Disposal Fund. The current program is adequate.

**Intended Action:** Continue the current program.

## **C. HOUSEHOLD HAZARDOUS WASTE**

**Description:** Household hazardous waste is received from the public at no charge at Heritage Environmental Services, Incorporated in conjunction with the Mecklenburg County Super Centers. Materials accepted at the Super Drop Centers are discussed in Section 6.3.A. entitled *Program: RECYCLING DROP CENTERS*. At Heritage waste is accepted 9:00 AM to 2:00 PM, Tuesday through Saturday, except holidays and Saturdays in a holiday weekend. Heritage takes title to the waste as it is collected from the residents. The waste is categorized according to five major classifications: paint, flammables, cleaners, batteries, and other. This information is stored in a database, along with the corresponding weights and total weights. Residents' addresses are also included in the database.

**Assessment:** The County provided for the disposal and/or recycling of approximately 78,000 pounds of household hazardous waste in FY1996/97. The cost of the program is \$0.90 per pound or approximately \$70,000 for FY1996/97.

**Intended Action:** The County will continue the program, but is considering alternatives collection mechanisms.

### 3. PREVENTION OF ILLEGAL DISPOSAL

**Description:** In 1984 the County received a delegation of authority to enforce the North Carolina Solid Waste Management Rules, which it administers through the Mecklenburg County Department of Environmental Protection (MCDEP). This delegation provided the County authority to administer State rules countywide, including limited permitting and citing violators. The County does not have authority to permit sanitary landfills and C&D landfills or the permitting and inspection of County-owned facilities. The County does not have the authority to assess civil penalties.

MCDEP currently inspects the following sites and appraises the NC Solid Waste Section and site owners/operators of compliance status.

<u>Facility Type</u>	<u>Number</u>	<u>Frequency</u>
Sanitary Landfill	1	Quarterly
C&D Landfill	1	Monthly
LCID Landfill	14	Monthly
Transfer Station	1	Monthly
Medical Waste Incinerator	1	Monthly

**Assessment:** MCDEP feels that the authority to assess civil penalties would improve enforcement. There is currently no support from the State to provide this authority. MCDEP has learned that criminal remedies could be pursued under NCGS 130A-25, and is doing this through the Environmental Court.

**Intended Actions:** Continue to work to increase the ability to penalize violators.

### 4. MANAGEMENT OF LITTER

**Description:** The Mecklenburg County Department of Environmental Protection may cite open dumping violations, except within the City of Charlotte. Failure to comply may result in referral of the case to NCDEHNR for civil penalties or could be pursued criminally under NCGS 130A-25. MCDEP may criminally cite violations under NCGS 14.399 "Littering" if persons depositing the waste can be identified.

The Mecklenburg County Health Department (MCHD) may cite open dumping violations under the Mecklenburg County Solid Waste Regulations. MCHD may also cite violations for rodent infestation and providing mosquito-breeding conditions.

The 26th Judicial District Environmental Court can assist local agencies to resolve solid waste non-compliance situations.

Within the City of Charlotte; the Solid Waste Services, Community Improvement Division may cite open dumping violations under the local litter control ordinance Section 10-70.

**Assessment:** Litter and illegal dumping, especially of construction and demolition waste are a problem in the County.

**Intended Action:** Continue the current enforcement program. The County intends to add C&D boxes at the Super Drop Centers when the C&D recycling program begins so that homeowners have a convenient, reasonably priced point of disposal for incidental quantities of residential C&D wastes.

## **5. OPEN DUMPING OF HAZARDOUS WASTE**

**Description:** The Mecklenburg County Department of Environmental Protection refers improper disposal of hazardous waste to the North Carolina Department of Environment, Health and Natural Resources, Division of Solid Waste Management for action under the Resource Conservation and Recovery Act. MCDEP no longer staffs a hazardous waste position.

**Assessment:** The current program is adequate.

**Intended Action:** None.

## **6. PURCHASE OF RECYCLED MATERIALS AND PRODUCTS**

**Description:** The Board of County Commissioners adopted a resolution in August 1996 which:

- Supports the aims of waste reduction and recycling within County Government.
- States that County employees are expected to source reduce, participate in the office recycling program PaperChase, and purchase products that contain recycled materials.
- Directs the Waste Management Advisory Board to establish a Waste Reduction Task Force that will have the responsibility to (1) establish procedures and programs for purchasing recycled, (2) expand PaperChase, and (3) identify collection and recycling options of non-paper recyclables generated in County buildings.

**Assessment:** This program is under development and to date has not had a significant impact.

**Intended Actions:** Continue implementation of the program, especially the establishment of the Waste Reduction Task Force.



## SECTION 8 SOLID WASTE COSTS AND FINANCING METHODS

### I. SOURCE REDUCTION

The FY1996/96 budget for the programs described in Section 6, 1. Source Reduction is \$353,752. Mecklenburg County conducts all of these programs. A Residential Waste Fee of \$10 per household on all households (single and multi-family) provides funding for the programs. This fee is charged on the annual property tax bill.

### 2. COLLECTION

#### A. City of Charlotte

##### 1. Single Family

The City of Charlotte provides self-performed collection to 105,718 single-family housing units. The City has privatized collection to 34,074 single-family units.

The City of Charlotte collection provides the following services at a cost of \$7.12 per month per unit:

- Residential Rollout Garbage Collection. Weekly automated collection (95-gallon containers) at a full cost of \$2,973,781 (all costs are for FY97).
- Residential Recyclables Collection. Weekly collection using 16 gallon bins at a full cost of \$2,575,958.
- Residential Yard Waste Collection. Weekly collection at a full cost of \$2,190,810.
- Bulky Items and Used Tire Collection. As requested at a full cost of \$1,286,247.

The privatized portion of the collection provides the above services at a contract cost of \$2,959,743. The unit cost for the privatized collection is \$7.23 per unit.

In addition to the above collection costs the City pays a tip fee of \$25 per ton for garbage and \$14 per ton for yard waste. Each single-family unit is estimated to have 1.2 tons/year.

##### 2. Multi-Family

The City of Charlotte provides privatized garbage and recyclables collection from 57,676 multi-family units at a contracted cost of \$1,954,312 or a unit cost of \$282 per month. Collection of recyclables is offered to apartment complexes, which wish to have the service. The City pays a tip fee of \$25 per ton. Each multi-family unit is estimated to have 0.7 tons/year.

3. The City has a privatized cost of \$356,805 for maintaining garbage and recycling containers.

The program is funded by household fees of \$38 per year for single family dwelling units and \$23 per year for multi-family dwelling units, and by property taxes.

### **B. Town of Cornelius**

Solid waste collection is privately contracted. The service consists of:

- Once per week single-family residential garbage collection and yard waste collection, \$9.57 per unit per month.
- Recycling collection, \$1.25 per unit per month.

The program is funded by taxes.

### **C. Town of Davidson**

Solid waste collection is privately contracted. The service consists of:

- Once per week single-family residential garbage and yard waste collection, 1,511 units, \$7.95 per unit per month.
- Multi-family, community front-end loader boxes, 1,993 cubic yards per month, \$3.51 per cubic yard.
- Single-family recycling collection, 1,188 units, \$1.58 per unit per month.
- Multi-family recycling collection, 120 pickups per month, \$2.43 per pickup per month.
- The Town provides a special leaf collection. Full cost is \$10,550 per year or \$1.83 per cubic yard.

The program is funded by taxes.

### **D. Town of Huntersville**

The Town of Huntersville provides contracted curbside garbage and recycling collection once a week and self-performed yard waste collection once a week. Cost of the garbage service is \$6.82 per unit per month. Cost of the recycling service is \$1.10 per unit per month. Full cost of the yard waste collection service is \$3.16 per unit per month. Bulky items are collected for a fee of \$15 per item.

Except for bulky items the program is funded by taxes.

### **E. Town of Mint Hill**

The Town of Mint Hill provides contracted backyard collection of single-family household garbage twice a week, two - 30 gallon containers maximum. Once a week curbside collection is provided for recycling, rubbish, and yard waste. This service is provided to 5,404 units. Apartments are considered commercial property. Cost of the collection service is \$14.08 per month per unit. Cost of disposal is \$2.50 per month. Total cost is \$16.58 per month.

The program is funded by taxes.

### **F. Town of Pineville**

Description: The Town of Pineville provides contracted curbside solid waste collection once a week consisting of three collections: garbage (95 gallon container), rubbish, and recycling. This service is provided to 790 units. Apartments are considered commercial property. A community front-end loader box is also provided. Cost of the curbside collection is \$15.86 per month per unit.

The program is funded by taxes.

## **3. RECYCLING/REUSE**

### **A. Recycling Drop Centers**

Mecklenburg County's program for Recycling Drop Centers is described in section 3.A. The full cost of this program is \$723,213 for FY1997/98. This program is funded by the Residential Waste Fee described in Section 8.1.

### **B. Material Recovery Facility**

The County cost for owning and administering the Material Recovery Facility described in Section 6.3.B. is \$623,987 in FY1997/98. This program is funded by the Residential Waste Fee described in Section 8.1.

### **C. Tires**

The County cost for disposal of tires, described in Section 7.2.A., was \$638,000 in FY1996/97. This program is funded by the Scrap Tire Disposal Fund and by the Residential Waste Fee described in Section 8.1.

### **D. White Goods**

The County cost for recycling of white goods, described in Section 7.3.A. was \$353,857 in FY1996/97. This program is funded by the White Goods Disposal Fund and by the Residential Waste Fee described in Section 8.1.

## **4. COMPOSTING AND MULCHING**

The County cost for conducting the program described in Section 6.4.A. \$1,382,700 in FY1997/98. \$742,000 is funded by Tip Fees. The remainder is funded by the Residential Waste Fee described in Section 8.1.

## **5. DISPOSAL: RESOURCE RECOVERY**

The County currently has no disposal by resource recovery.

## **6. DISPOSAL: TRANSFER OF SOLID WASTE OUTSIDE GEOGRAPHIC AREA**

All transfer of waste to facilities outside the geographic area is by private haulers. The County has a "put or pay" contract with BFI in which Mecklenburg County must pay a penalty to BFI for waste not disposed at the CMS Landfill. This penalty is 45% of the County's Use Fee at the CMS Landfill.

The County cost (penalty) in FY1997/98 is \$1,021,744, which will be funded by taxes.

## **7. DISPOSAL: LANDFILL**

The County full cost for landfill disposal, described in Section 6.7.B., in FY1997/98 is \$17,255,373 for disposal of 531,947 tons or \$32.44 per ton. This cost includes administration of the BFI contract and debt service and maintenance for closed landfills. This cost will be funded by tip fees (\$13,845,748), sales of recyclables (\$1,000,500), and taxes (\$2,409,084).

## **8. DISPOSAL: HOUSEHOLD HAZARDOUS WASTE**

The County full cost for disposal of household hazardous waste at Heritage Environmental as described in Section 7.2.C. in FY1997/98 is \$79,000 for 60,000 pounds. This cost includes administrative overhead.

## **9. PROPOSED PROGRAMS**

The estimated full cost for the Intended Actions described in Section 6.1.K and 6.3.K. are shown in Table 8-1. Funding for the residential portion of the program will be provided by the Residential Waste Fee of \$10 annually. Funding for the commercial portion of the program will be provided by a \$1 per ton license fee on waste landfilled in either municipal waste landfills or C&D landfills.

The estimated full cost to the County of the proposed C&D recycling facility described in Section 6.8 is \$30,000, to be paid to the County by Phoenix Recycling as a service charge.

**Figure 8-1  
Estimated Full Cost of Proposed Programs**

**Residential**

Residential Options	Phase I: 1998 - 2000			Phase II: 2001 - 2004			Phase III: 2005 - 2007			Total Cost	
	% Impact	Staff	Staff Cost	Support Cost	Total Cost	% Impact	Staff	Staff Cost	Support Cost		Total Cost
Enviroshopping	5%	40 FTE	\$26,000	\$18,000	\$44,000	5%	42 FTE	\$27,300	\$23,000	\$50,300	\$ 56,300
Toxicity Reduction	1%	17 FTE	\$11,500	\$12,000	\$23,500	2%	14 FTE	\$9,100	\$15,000	\$24,100	\$ 31,383
Junk Mail Stopper	5%	22 FTE	\$13,640	\$20,667	\$34,307	7%	18 FTE	\$11,700	\$18,750	\$30,450	\$ 46,200
Use Less Stuff Day	5%	26 FTE	\$16,900	\$23,333	\$40,233	1.2%	21 FTE	\$13,650	\$23,000	\$36,650	\$ 56,450
Pay-As-You-Throw	--	--	--	--	--	--	--	--	--	--	\$1,100,000
<b>Total</b>	<b>1.6%</b>	<b>1.05 FTE</b>	<b>\$68,040</b>	<b>\$74,000</b>	<b>\$142,040</b>	<b>2.6%</b>	<b>1.00 FTE</b>	<b>\$61,750</b>	<b>\$79,750</b>	<b>\$141,500</b>	<b>\$190,333</b>
<b>Yard Waste Options</b>											
Backyard Composting	2.0%	31 FTE	\$20,150	\$35,667	\$55,817	4%	37 FTE	\$24,050	\$47,750	\$71,800	\$ 117,667
Grasscycling	1.5%	24 FTE	\$15,600	\$14,667	\$30,267	2%	23 FTE	\$14,950	\$20,000	\$34,950	\$ 66,667
Xeriscaping	5%	28 FTE	\$18,200	\$18,000	\$36,200	1%	30 FTE	\$19,500	\$22,500	\$42,000	\$ 88,250
<b>Total</b>	<b>4.0%</b>	<b>.83 FTE</b>	<b>\$53,950</b>	<b>\$68,334</b>	<b>\$122,284</b>	<b>7%</b>	<b>.90 FTE</b>	<b>\$58,500</b>	<b>\$90,250</b>	<b>\$148,750</b>	<b>\$ 272,584</b>
<b>Other Programs</b>											
Ed/Rec Awareness	2.00%	47 FTE	\$30,550	\$63,333	\$93,883	4.0%	45 FTE	\$29,250	\$57,000	\$86,250	\$ 133,833
Awards/Recognition	0.1%	21 FTE	\$13,650	\$13,333	\$26,983	0.1%	20 FTE	\$13,000	\$17,000	\$30,000	\$ 49,467
Policies/Ordinances	--	19 FTE	\$12,350	\$21,000	\$33,350	--	14 FTE	9,100	\$13,750	\$22,850	\$ 38,467
<b>Total</b>	<b>2.01%</b>	<b>.87 FTE</b>	<b>\$56,550</b>	<b>\$97,667</b>	<b>\$154,216</b>	<b>4.01%</b>	<b>.79 FTE</b>	<b>\$51,350</b>	<b>\$87,750</b>	<b>\$139,100</b>	<b>\$ 201,767</b>
<b>GRAND TOTAL</b>	<b>7.01%</b>	<b>2.75 FTE</b>	<b>\$178,540</b>	<b>\$240,001</b>	<b>\$418,540</b>	<b>13.01%</b>	<b>2.69 FTE</b>	<b>\$171,600</b>	<b>\$257,750</b>	<b>\$429,350</b>	<b>\$664,684</b>

**Commercial**

Commercial Program Options	SINOPHASE			PROGAMPHASE			Total (annual)	Staff (FTE)	Salaries & Benefits	Support Costs (annual)	Total (annual)
	Staff (FTE)	Salaries & Benefit	Support Costs (annual)	Staff (FTE)	Salaries & Benefits	Support Costs (annual)					
(Voluntary Program- \$1/ton fee on landfilled garbage)											
Media Campaign, information/support material dev.	1	\$65,000.00	\$240,000.00	0.5	\$32,500.00	\$100,000.00	\$132,500.00		\$100,000.00	\$132,500.00	\$232,500.00
Business recognition program	0.5	\$32,500.00	\$50,000.00	0.5	\$32,500.00	\$50,000.00	\$65,000.00		\$35,500.00	\$65,000.00	\$100,500.00
Commercial drop-off centers*	0.1	\$6,500.00	\$0.00	0.1	\$6,500.00	\$0.00	\$6,500.00		\$200,000.00	\$206,500.00	\$213,000.00
Commercial processing program @ MRF*	0.1	\$6,500.00	\$0.00	0.1	\$6,500.00	\$0.00	\$6,500.00		\$0.00	\$6,500.00	\$13,000.00
City recycling program for small businesses*	0.1	\$6,500.00	\$0.00	0.1	\$6,500.00	\$0.00	\$6,500.00		\$0.00	\$6,500.00	\$13,000.00
Zoning/Building Code Requirements	0.2	\$13,000.00	\$0.00	0	\$0.00	\$0.00	\$13,000.00		\$0.00	\$13,000.00	\$26,000.00
Technical assistance**	1	\$65,000.00	\$110,000.00	1	\$65,000.00	\$110,000.00	\$175,000.00		\$110,000.00	\$175,000.00	\$350,000.00
<b>TOTAL</b>	<b>3</b>	<b>\$195,000.00</b>	<b>\$400,000.00</b>	<b>2.3</b>	<b>\$149,500.00</b>	<b>\$445,500.00</b>	<b>\$595,000.00</b>		<b>\$445,500.00</b>	<b>\$595,000.00</b>	<b>\$1,190,000.00</b>

