

**Dawson County**  
**Multi jurisdictional Solid Waste Management Plan**  
**Short Term Work Program Update**

July 1, 1999

The original plan, adopted in 1993, contained the following work program. The status of the program is also noted.

Activity	Dawson County	City of Dawsonville	Status
Collection	Residents use either private collection services or bring waste directly to landfill	Same as county	No change
Reduction	Voluntary Recycling and Home Composting	Same as county	Proposed transfer station will incorporate expanded recycling facilities
Disposal	Operation of Shoal Hole Road MSWL facility	No involvement	Facility will reach capacity in approximately 30 days, county will contract for disposal of waste from transfer station to an out of county commercial facility
Finance	Revenue from tipping fees and county's general fund operates MSWL	No involvement	No Change. Transfer station to continue to charge per ton tipping fees, operating costs continue to be subsidized from general fund and lease of facility to commercial collection firms
Education	No county funded programs	No city funded programs	Budget restrictions and policy decisions not expected to change

The handout presented at the second public hearing is attached; as well as copies of the newspaper advertisement. Also attached is the five year chart requested by the Georgia Mountains RDC.

The current programs and activities are considered by the Dawson County Board of Commissioners to be successful in meeting the goals of the state's Solid Waste Management Plan.

## Report of Accomplishments

The following information covers the period 1992 through 1998.

### Collection Element

Work Item/Year Scheduled      No action, other than operation of the existing landfill, was proposed in the original plan. No collection services are offered by county, or city, government and none were proposed in currently adopted plan.

Future Status      No change in collection method anticipated.

### Educational Activities

Work Item/Year Scheduled      No action proposed in original plan. The Board of Commissioners of Dawson County and the City Council of Dawsonville did not budget funds for any educational activities in the original plan.

Future Status      No future funds for education activities are anticipated.

### Waste Reduction

Work Item/Year Scheduled      Construct Recycling Station in 1992.

Project Status      Containers available for aluminum, steel and glass.

Future Status      Expand recycling program to include paper, plastic and cardboard materials if a buyer can be identified.

### Disposal

Work Item/Year Scheduled      Permit Phase Two Operations starting in 1997.

Project Status      Not pursued, decision made to close landfill when current permitted area reaches capacity. This decision also eliminated the need to purchase equipment.

Future Status      Disposal of residential waste received at county operated transfer station will be by contract with private collection/disposal firm.

## DAWSON COUNTY SWMP IMPLEMENTATION RESPONSIBILITY AND COSTS

DESCRIPTION	98-99	99-00	00-01	01-02	02-03	PROJECT INVOLVEMENT	EST. COST	FUNDING SOURCE
COLLECTION	X					COUNTY CONSTRUCTS TRANSFER STATION	\$300,000	GENERAL FUNDS & TIPPING FEES
REDUCTION	X					IMPROVED RECYCLABLE MATERIAL COLLECTION FACILITIES INCORPORATED INTO TRANSFER STA	COST INC. IN TRANSFER STA. CONST.	GENERAL FUNDS
DISPOSAL	X	X	X	X	X	COUNTY CONTRACTS WITH PRIVATE COLLECTION FIRM	\$45,000	GENERAL FUNDS, PLUS LEASE FEES FOR USE OF TRANSFER STA
CLOSURE/POST CLOSURE ACTIVITIES	X	X	X	X	X	COUNTY MONITORING	\$15,000/yr	GENERAL FUNDS

*Keep Dawson Beautiful*

*Diana Dean 706 344 3292*

A PR 2/15/93



**MULTIJURISDICTIONAL  
SOLID WASTE MANAGEMENT PLAN**

**DAWSON COUNTY, GEORGIA**

**FEBRUARY 1992**

**REVISED MAY 1992**

**REVISED OCTOBER 1992**

**REVISED JUNE 1993**



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Moreland Altobelli Associates, Inc.

**MULTIJURISDICTIONAL  
SOLID WASTE MANAGEMENT PLAN**

**DAWSON COUNTY, GEORGIA**

**Prepared for:**

**The Dawson County Commissioner  
P.O. Box 192  
Dawsonville, Georgia 30534**

**Kenneth Long, Sole Commissioner**

**FEBRUARY 1992**

**REVISED MAY 1992**

**REVISED OCTOBER 1992**

**REVISED JUNE 1993**

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MorelandAltobelliAssociates,Inc.

**DAWSON COUNTY**  
**SOLID WASTE MANAGEMENT PLAN**

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**DAWSON COUNTY**  
**SOLID WASTE MANAGEMENT PLAN**

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## **SUMMARY**

### **S.1 AUTHORIZATION**

This Solid Waste Management Plan for Dawson County is multijurisdictional, its production having been authorized by the Commissioner of Dawson County and representatives for the City of Dawsonville, Georgia. The area considered in this Plan includes all of Dawson County and the incorporated municipality of Dawsonville; there are no other active governments in the County.

### **S.2 OBJECTIVES**

The objective of this plan is to meet the requirements of the Georgia Comprehensive Solid Waste Management Act of 1990 as it pertains to Dawson County and Dawsonville. The basic goals established in the Act are as follows:

1. To insure that the amount of solid waste being received at the Dawson County Landfill during fiscal year 1992 will be reduced by 25 percent by July 1, 1996.
2. To insure community solid waste management systems will be adequate for the next decade to meet the collection, handling and disposal capacity needs of Dawson County.

The plan will address both the minimum planning standards and procedures as set forth in the Georgia Solid Waste Plan and the special considerations peculiar to Dawson County.

### **S.3 BACKGROUND**

The citizens of Dawson County have recognized the need for generating a comprehensive plan for handling solid waste within the County and have implemented several strategies to meet the need. General county tax revenues are utilized for the operation of the existing Shoal Hole Road Municipal Solid Waste Landfill (MSWL). The current facility is projected to be adequate for at least the next ten years.

The Dawson County Solid Waste Management Plan, SWMP, will provide a guide for how the County will continue to handle solid waste for the next ten years, implement reductions in quantities placed in the landfill, and fund its solid waste operations.

**S.4 ACTION PLAN**

The plan develops criteria for collection, disposal, and reduction of solid wastes by involving public and private actions. A system designed to enhance and promote voluntary separation of recyclable goods will be presented within this plan.

## **SECTION 1 DEMOGRAPHIC INFORMATION**

### **1.1 DEFINITION OF STUDY AREA**

The Solid Waste Plan of Dawson County is multijurisdictional because the area considered in the Plan includes all of Dawson County and the incorporated municipality of Dawsonville.

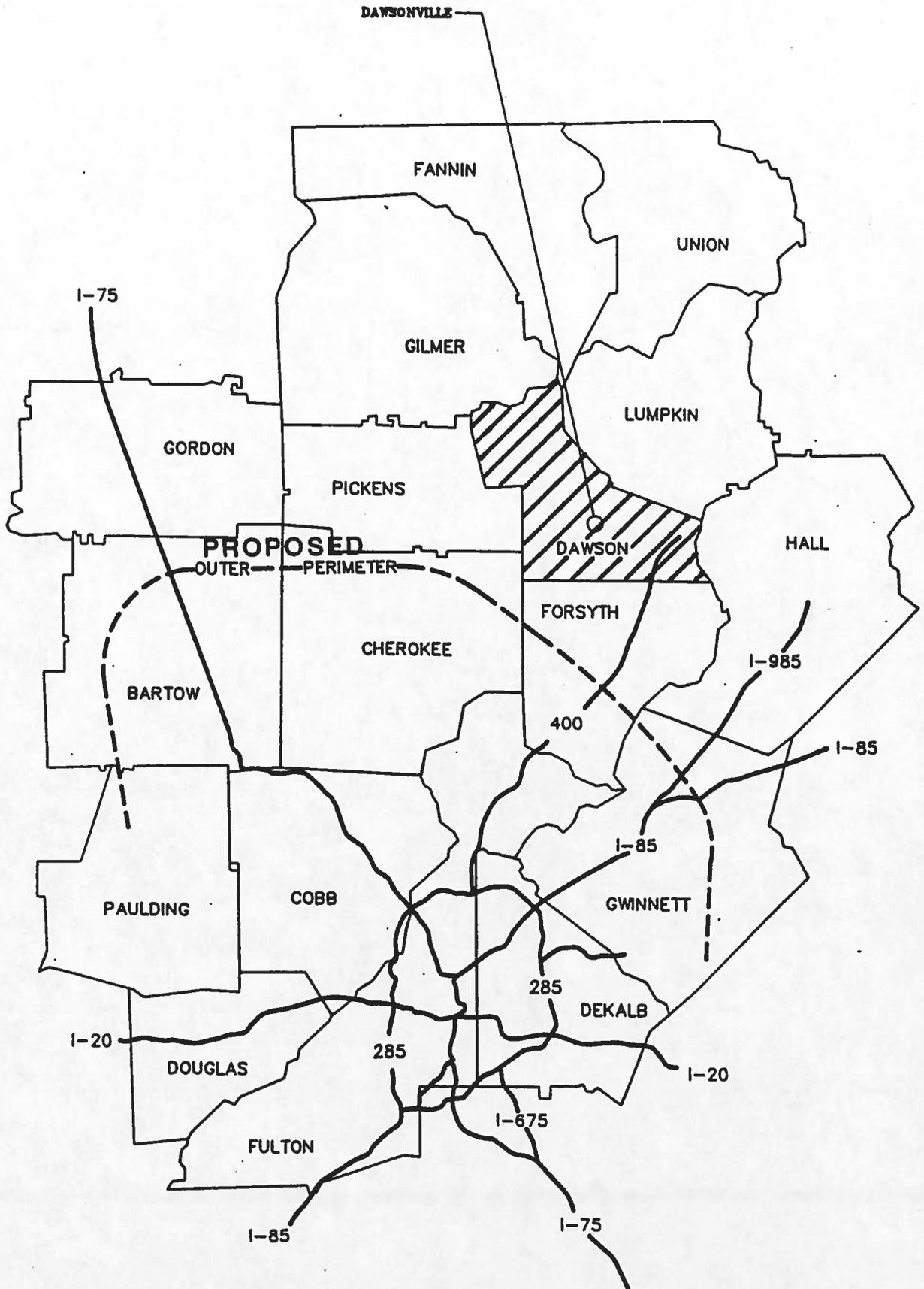
### **1.2 POPULATION, HOUSING AND EMPLOYMENT**

The 1990 population of Dawson County was 9,429 according to the U.S. Bureau of Census, Department of Commerce. Dawsonville is the County seat and only municipality within the County; its population was 467 citizens based on the 1990 census. Much of the County's growth in housing and industry has occurred within the Georgia State Route 400 corridor. The proposed development of a second perimeter highway around Atlanta will be likely to provide the catalyst for growth in population and commercial activity. Dawson County's relationship to metro Atlanta and the regions major highways is shown in Figure 1-0.

Dawson County has experienced continuous population growth since 1970. From 1970 to 1980, the county had a growth rate of 31.2 percent. The growth rate for the decade 1980 to 1990 was 97.5 percent. Significant growth is expected to continue into the twenty-first century at a rate greater than the state's average population growth. Table 1-0 is the population data for Dawson County and the City of Dawsonville. A comparison of Dawson County to the Georgia Mountains Region is shown in table 1-1.

Table 1-2 shows the population projections for a ten-year period beginning in 1991. The projections are based upon the 1990 census data and a constant growth rate of five percent per year. The growth projections shown in Table 1-1 assume that Dawson County's future growth will reflect past growth trends and factors which typically influence growth (birth, death, immigration and emigration), and these trends will continue into the future at a similar rate.

# LOCATION MAP



**FIGURE 1.0**

**TABLE 1-0**

**1990 CENSUS POPULATION DATA**

<u>Cities</u>	<u>Population</u>
Dawsonville	467
Unincorporated Dawson County	8,962
Total	<hr/> 9,429

Source: U.S. Census Bureau, 1990 Census

**AGE GROUP BREAKDOWN**

<u>AGE GROUP</u>	<u>1990 PROJECTED POPULATION</u>	<u>%</u>
0-4	589	6.25%
5-14	1,434	15.21%
15-14	776	8.23%
25-34	1,380	14.64%
35-44	1,759	18.65%
55-64	682	7.23%
65+	1,805	19.14%
TOTAL	9,436	100.8%

(1) Source Georgia Department of Community Affairs, 1989

**TABLE 1-1**  
**POPULATION GROWTH IN DAWSON COUNTY**

<b>Year</b>	<b>Dawson County (Unincorporated)</b>	<b>Dawsonville</b>	<b>Total County</b>	<b>Percent Change from Previous Decade</b>	<b>Georgia Mountains Region</b>	<b>Percent Change</b>
1960	3,283	307	3,590		169,686	
1970	3,431	208	3,639	+ 1.4%	192,598	+ 13.5%
1980	4,432	342	4,774	+31.2%	244,012	+26.7%
1990	8,962	467	9,429	+97.5%	304,462	+24.8%

Source: Georgia Mountains Regional Development Center, 1991  
& U.S. Census.

**TABLE 1-2**

**DAWSON COUNTY POPULATION PROJECTIONS**

<u>Year</u>	<u>GMRDC Projection</u>
1990 Actual 9,429	
1991	9,925
1992	10,427
1993	10,935
1994	11,449
1995	11,969
1996	12,495
1997	13,027
1998	13,565
1999	14,109
2000	14,659
2001	15,216
2002	15,779

**Source:** Projections based on data provided by Georgia Mountain Regional Development Center, 1991

Dawson County is approximately 210 square miles in size. Of this, 65 percent of the county is timberland or idle land, 18 percent is public land, 17 percent is developed, and 0.6 percent is water covered. Table 1-3 provides a summary of the existing land uses in the County.

**TABLE 1-3**

**EXISTING LAND USE: DAWSON COUNTY - 1990  
(Including the City of Dawsonville)**

<u>Land Use Category</u>	<u>Total Acres</u>	<u>Percent</u>
Residential	14,343	10.67
Commercial	988	0.74
Public/Semi-Public (Schools, Gov't Buildings, etc.)	336	0.25
Agricultural	6,950	5.17
Industrial	146	0.10
Timberland/Idle Land (Forest in private ownership)	86,887	64.64
Public/Open Space (State & Federal Forest Land)	23,928	17.80
Water-Covered (Lake Lanier)	<u>841</u>	<u>0.63</u>
	134,419	100.00%

**Source:** Georgia Mountains Regional Development Center, 1990.

Residential land uses comprise 63 percent of the developed land within the County, including Dawsonville. The Georgia Mountains Regional Development Center has determined that most of the residential densities are low density at less than 5 units per acre. A small amount of moderate density development at 5-10 units per acre is found in the Dawsonville area. Housing units in Dawson County are primarily standard single family homes and mobile homes; a small percentage are multi-family units. The housing summary is shown in Table 1-4; note that 26% of the housing units are classified as seasonally occupied.

**TABLE 1-4**

**HOUSING SUMMARY-DAWSON COUNTY**

**Type of Unit**

Single Family Dwelling.....	58.0%
Mobile Homes.....	13.7%
Multi-Family Dwellings .....	02.3%
Seasonal.....	26.0%

The manufacturing, construction and retail components of Dawson County's economy have significant impacts on the volume and character of the waste stream generated by the county. Current trends in business and settlement patterns are concentrating growth in southern Dawson County. This growth is in the Georgia S.R. 400 corridor. Large new residential, commercial and industrial developments are located along the length of the corridor.

The two largest employment categories are manufacturing and retail trade. Service industries are the third leading employer within the county. Table 1-5 presents a breakdown of employment by industry for 1989.

**TABLE 1-5****EMPLOYMENT BY INDUSTRY: DAWSON COUNTY - 1989**

<b><u>Industry</u></b>	<b><u>1989 Employees</u></b>	<b><u>1989 Percentage</u></b>
Agriculture & Forestry	36	3.13
Construction	70	6.09
Manufacturing	221	19.22
Transportation & Public Utilities	49	4.26
Wholesale Trade	48	4.17
Retail Trade	144	12.52
Finance, Insurance, Real Estate	40	3.48
Services	132	11.48
Non-Classified	<u>410</u>	<u>35.65</u>
<b>TOTAL</b>	<b>1150</b>	<b>100.00%</b>

- Sources:**
1. Dawsonville-Dawson County Comprehensive Plan 2010; Georgia Mountain Regional Development Commission, 1991
  2. U.S. Bureau of Census, County Business Patterns, 1982-1988.
  3. Georgia Department of Labor, Georgia Employment and Wage Averages, 1988-1989.

**SECTION 2**  
**BASIC INVENTORY AND ASSESSMENT**

**2.0 INTRODUCTION**

The inventory of the solid waste stream was conducted using the following definitions of waste as developed by the Georgia Environmental Protection Division (EPD) in Chapter 391-3-4 of the Solid Waste Management Rules and Regulations:

"Asbestos-Containing Waste" means any solid waste containing more than 1 percent, by weight, of naturally occurring hydrated mineral silicates separable into commercially used fibers, specifically the asbestiform varieties of serpentine, chrysotile, cummingtonite-grunerite, amosite, riebeckite, crocidolite, anthophyllite, tremolite, and actinolite, using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1.

"Biomedical Waste" means any solid waste which contains pathological waste, biological waste, cultures, and stocks of infectious agents and associated biologicals, contaminated animal carcasses (body parts, their bedding, and other wastes from such animals), chemotherapy waste, discarded medical equipment and parts, not including expendable supplies and materials which have not been decontaminated, as further defined in Rule 15.

"Construction/Demolition Waste" means waste building materials and rubble resulting from construction, remodeling, repair, and demolition operations on pavements, houses, commercial buildings and other structures. Such wastes include, but are not limited to asbestos containing waste, wood, bricks, metal, concrete, wall board, paper, cardboard, inert waste landfill material, and other nonputrescible wastes which have a low potential for groundwater contamination.

"Hazardous Waste" means any solid waste which has been defined as a hazardous waste in regulations promulgated by the Board of Natural Resources, Chapter 391-3-11.

"Industrial Waste" means solid waste generated by manufacturing or industrial processes that is not a hazardous waste under regulations promulgated by the Board of Natural Resources, Chapter 391-3-11.

"Inert Waste" means wastes that will not or are not likely to cause production of leachate of environmental concern. Such wastes are limited to earth and earth-like products, concrete, cured asphalt, rock, bricks, yard trash, stumps, limbs, and leaves. This definition excludes industrial and demolition waste not specifically listed above.

"Liquid Waste" means any waste material that is determined to contain "free liquids" as defined by Method 9095 (Paints Filter Liquids Test), as described in "Test Methods for the Evaluation of Solid Wastes, Physical/Chemical Methods" (EPA Pub. No. SW-846).

"Municipal Solid Waste" means any solid waste resulting from the operation of residential, commercial, governmental, or institutional establishments except such solid waste disposed

of in a private industry solid waste disposal facility. The term includes yard trash, but does not include solid waste from mining, agricultural, or silvicultural operations.

"Putrescible Wastes" means wastes that are capable of being quickly decomposed by microorganisms. Examples of putrescible wastes include, but are not necessarily limited to, kitchen wastes, animal manure, offal, hatchery and poultry processing plant wastes, dead animals, garbage and wastes which are contaminated by such wastes.

"Solid Waste" means discarded putrescible and nonputrescible wastes, except water-carried body waste and recovered materials, and shall include garbage, rubbish such as paper, cartons, boxes, wood, tree branches, yard trimmings, furniture and appliances, metal, tin cans, glass, crockery, or dunnage; ashes; street refuse; dead animals; sewage sludges; animal manures; industrial wastes such as waste materials generated from industrial operations; residue from solid waste thermal treatment technology; food processing wastes; demolition wastes; abandoned automobiles; dredging wastes; construction wastes; and any other waste material in a solid, semisolid, or liquid state not otherwise defined in O.C.G.A. 12-8-20, et. seq. Such term shall not include any material which is regulated pursuant to Article 2 of Chapter 5 of Title 12, the Georgia Water Quality Control Act or Chapter 9 or Title 12, the Georgia Air Quality Control Act of 1978.

"Special Solid Waste" means any solid waste not otherwise regulated under the Georgia Hazardous Waste Management Act, O.C.G.A. 12-8-60, et seq., and Rules promulgated thereunder, originating or produced from or by a source or generator not subject to regulation under O.C.G.A. 12-8-24.

These definitions are important when considering land disposal of garbage and refuse. Only garbage can be disposed of in a sanitary landfill; refuse (generally residential yard waste, construction demolition wastes and open area wastes) can be disposed either in a sanitary landfill or in a dry trash landfill. Solid waste in a sanitary landfill must be covered with at least six inches of soil within 24 hours. A dry trash landfill can accept inert wastes only which must be covered with at least one foot of soil every 30 days. The solid waste management plan does not consider hazardous waste, liquid waste, asbestos-containing waste and biomedical waste. County classifications of solid waste consider residential waste as waste placed in cans or bags and collected from residences or left at the landfill's drop-off bin. Commercial waste is material placed in containers at a business and collected by private collection services.

## **2.1 CURRENT COUNTY SOLID WASTE MANAGEMENT**

The operation and maintenance of the Dawson County MSWL is the responsibility of the Dawson County Solid Waste Department. This department has three full-time employees and occasionally draws on the resources of other county departments for personnel and equipment. The City of Dawsonville has no involvement in landfill operations.

Disposal of household and commercial refuse is carried out at the County's 35 acre Shoal Hole Road MSWL facility. Currently Phase One, 10.38 acres or nearly 33 percent of the site, is in operational use. It is projected that the present 10 acres in operation will meet the needs of the County for the next 8 years (see appendix A.1). Prior to phase one reaching capacity, operational plans for a portion of the remaining 25 acres will need to be developed and approved by the state EPD.

In reviewing the site plan, an estimated 10 acres of the remaining 25 can be utilized for a landfill. It is the intention of Dawson County to apply for a horizontal expansion into this area. Construction of an approved horizontal expansion will provide disposal capacity to Dawson County and the City of Dawsonville for approximately 28 years. The current staffing is adequate for the quantity of waste handled and facility size.

## **2.2 CURRENT QUANTITY OF WASTE**

Dawson County maintains calibrated scales at the Shoal Hole Road landfill entrance. Daily weight records are maintained for both the amount of refuse that passes into the landfill for which tipping fees are paid and residential waste brought by individuals. Tipping fees in Dawson County depend upon the manner and the type of transportation by which the solid waste is brought to the landfill site. A pick-up truck or a trailer is charged on a cash basis: \$5/covered load, \$10/loose load, and commercial vehicles are billed monthly at a rate of \$15/ton. Visual inspections were made of the household and commercial refuse in order to obtain estimates of the type and quantities of materials entering the landfill. The scale data for 1991 indicates that Dawson County disposed of 5,546 tons of solid waste. The percentage of solid waste, by category, was:

- Commercial and Industrial - 24%
- Household and Municipal - 68%
- Inert (yard trimmings, dirt, bricks, leaves) - 8%

## **2.3 CURRENT COLLECTION SYSTEM**

No public collection services are provided in Dawson County or Dawsonville therefore there are no collection costs for either government. Residents, businesses and industries are responsible for transporting their waste to the Shoal Hole Road MSWL. Many independent private companies provide collection services on a contract basis. Individuals not employing a contract carrier may drop off their residential waste at a collection bin located at the landfill entrance. Private haulers and companies with billing accounts must be weighed on entering and exiting the landfill after disposing of their waste. The following private haulers and businesses within Dawson County dispose of waste at the Shoal Hole Road Site and maintain billing accounts:

- Dawson County Garbage

- G & G Sanitation
- Big Canoe
- B & M Sanitation
- Priest Garbage Company
- American Refuse Systems
- Melling Racing
- Cooke Scraping
- Spains Sanitation

Private haulers within Dawson County collect fees from their customers for their pickup services which cover disposal costs, operating overhead and profit. The landfill scales have been in place at the Shoal Hole Road MSWL since January 11, 1991. Tipping fees are assessed for all waste except residential waste in bags left in bins at the landfill. There is no charge for deposits of less than six bags. The household waste is weighed before being placed in the landfill. Table 2-0 illustrates the seasonal variations in average tonnage disposed of in Dawson County. The current population density in Dawson County is approximately 45 persons/sq. mile. Using the RDC's projected population and the County available for development (public lands excluded), the projected population density for the year 2003 is 92 persons/sq mile. The area of the population density will be adequately served by the current collection system in Dawson County and the City of Dawsonville for the next ten years. Governments with curbside programs or multiple collection sites typically have population densities of at least several hundred persons per square mile.

#### **2.4 CURRENT WASTE STREAM**

The composition of the waste stream in Dawson County was verified by visual inspection of waste at the tipping face and survey data compiled by the Regional Development Commission and Moreland Altobelli. The surveys detail the quantity and types of solid waste produced by household and commercial generators. The surveys were conducted using separate questionnaires for residential, commercial and industrial solid waste generators. Table 2-1 shows the combined percentage of waste by major category for each type of generator. Table 2-2 shows a breakdown of the monthly waste stream by quantity for Dawson County.

Table 2-3 compares the municipal waste stream of Dawson County to a national average, Banks County and Gwinnett County.

#### **2.5 CURRENT DISPOSAL FACILITIES**

Dawson County is currently served by the 35 +/- acre Shoal Hole Road MSWL. Currently fill is taking place on a 10.38 acre tract, permitted for 10.1 years in which 8 years are remaining. Thereafter, expansion will occur into the remaining 25 +/- acres upon acceptable preventive

measures being taken; i.e. installation of liners and similar devices. Please see section 2.1 for further details on a horizontal expansion.

The Shoal Hole Road MSWL is operated by the Dawson County Commissioner and is the only operating facility within the County. Waste from outside the County is generally not accepted. There are two exceptions; a portion of the Big Canoe development and Amicalola Falls State Park are in Dawson County as well as adjacent counties. The Big Canoe corporation alternates its disposal between Dawson and Pickens counties. All of the Amicalola refuse comes to Dawson County. The Shoal Hole Road MSWL currently has a 3-member staff. The staff includes the scale house operator and two equipment operators. The landfill's equipment inventory consists of equipment ranging in age from 1 to 21 years. The equipment inventory includes 1---963 Loader (1987), 1---1991--613C Pan (1991), and 1--D-5 Dozer (1971).

## **2.6 LAND LIMITATIONS FOR LANDFILL EXPANSIONS**

Criteria for siting areas suitable for MSWL's are established in Circular 14: The Criteria for Performing Site Acceptability Studies for Solid Waste Landfill in Georgia, published by the Department of Natural Resources. Using this criteria, Dawson County was analyzed for suitable areas. Figure 2-1 shows suitable areas as determined by physical and other characteristics and constraints. Such physical characteristics include geology, floodplains, wetlands, significant groundwater recharge areas, distances to airports, public surface water intakes, national historic sites, and county boundaries. Other significant limitations considered were county zoning ordinances and the county's future land use plan.

Dawson County is located in the Appalachian Highlands. The northwest corner of the county is located in the Blue Ridge Mountains District of the Southern Blue Ridge Province. The southern section of the county is located in the Upland Georgia Subsection of the Southern Piedmont Province.

**TABLE 2-0****DAWSON COUNTY****SEASONAL VARIATION IN WASTE STREAM TONNAGE**

<b>PERIOD</b>	<b>AVERAGE MONTHLY TONNAGE/ PERIOD</b>	<b>PERCENT* CHANGE</b>	<b>(80%) COMMERCIAL/ INDUSTRIAL</b>	<b>(5%) RESIDENTIAL/ HOUSEHOLD (WITH FEE)</b>	<b>(15%) R/H (NO FEE)</b>
<b>JANUARY 1 to APRIL 30</b> Winter/Spring	406	-12.2%	324.8	20.3	60.9
<b>MAY 1 to AUGUST 31</b> Summer	493	+6.7%	394.5	24.7	73.9
<b>SEPTEMBER 1 to DECEMBER 31</b> Fall/Winter	488	+5.6%	390	24.4	73.1

\*Compared to the Average Monthly Weight of 462 Tons/Month

**TABLE 2-1**

**DAWSON COUNTY**

**TYPICAL MONTHLY WASTE STREAM QUANTITIES (1992)**

<u>ITEM</u>	<u>TONS/MONTH</u>
Aluminum Cans	24.25
Other Metal Cans	6.52
Newspapers	27.43
* Paper Products	75.76
Corrugated Paper	68.09
** Plastic	33.68
Glass	33.90
Styrofoam	2.91
Food Waste	95.81
Rubber	16.00
Yard Waste	0.73
Metal	16.22
Construction/Demolition	40.90
Textiles	19.51
*** Agriculture	23.28
<b>TOTAL APPROXIMATELY</b>	<b>485 Tons/Month</b>

- \* Includes all papers products
- \*\* Includes all plastics
- \*\*\* Includes waste from local chicken hatchery

**TABLE 2-2****COMPARISON OF SOLID WASTE COMPOSITION**

	<b>EPA REPORT TO CONGRESS (1)</b>	<b>DAWSON COUNTY (2)</b>	<b>NATIONAL AVERAGE (3)</b>	<b>GWINNETT COUNTY (4)</b>	<b>BANKS COUNTY (5)</b>
Paper	34.8	35.32	38.0	40.0	35.80
Yard Waste	17.6	3.64	17.2	18.0	1.50
Food Waste	15.4	19.75	7.8	12.0	18.30
Glass	8.9	6.99	9.0	9.0	12.90
Metal	3.1	9.34	9.5	---	8.50
Wood	---	4.68	3.7	---	0.50
Textiles	---	4.02	2.2	2.0	3.17
Rubber & Leather	---	3.41	2.5	2.0	0.38
Plastic	2.6	6.94	8.1	5.0	14.50
Miscellaneous	6.1	3.75	2.0	3.0	4.45

\* Includes all types of paper products

\*\* Includes Aluminum cans

**Sources:**

1. U.S. EPA, 4th Report to Congress, Unpublished Notes
2. Fichtner U.S.A., Inc. Addendum to Final Report, August 1989
3. Moreland Altobelli Associates, Inc.

In Dawson County, the Blue Ridge Mountains District is a mass of rugged mountains and ridges ranging in elevation from 3000 to 3500 feet. The differing rates of erosion have produced valleys from 1500 to 2000 feet below the adjacent summits. The southern boundary of the District makes contact with the Piedmont Province (Dahlongea Upland District) at an elevation of about 1700 feet. This boundary has a NE-SW trend which reflects the general trend of the districts within the Upland Georgia Subsection of the Piedmont Province.

The central section of Dawson County is located in the Dahlongea Upland District. This District is characterized by hills with surface elevations of 1200 feet and stream valleys approximately 200 to 300 feet below the adjacent surface. The southeastern boundary of this District is formed by the low, linear, parallel ridges of the Hightower-Jasper Ridges District.

The southeastern section of Dawson County is located in the Hightower-Jasper Ridges District and the Central Uplands District. The Hightower-Jasper Ridges District is characterized here by a series of low, linear parallel ridges of elevations approximately 200 feet. Modified rectangular drainage patterns reflect the structural control of streams in the district. The County's southeast corner is located in the Central Uplands District. This area is characterized by low, linear ridges about 1400 feet above sea level, and separated by broad open valleys. Streams flowing through this section are generally transverse to the structure and occupy valleys 150 to 200 feet below the ridge crest.

Dawson County is geologically limited in suitable areas to site a landfill due to high elevation rugged mountain and parallel ridges and deep valleys made up of Blue Ridge and Piedmont Crystalline rocks. The drainage patterns generally reflect the structural control of the streams. It should be noted that floodplain areas are unsuitable for landfills.

One private airstrip is located in Dawson County and with a runway length of 4,200 feet is capable of supporting turbo prop operations. A landfill would be prohibited within a 10,000 foot radius from the ends of the runway.

One significant groundwater recharge area, as designated by the Hydrogeologic Atlas 18, published by the Georgia Geologic Survey is located on the southern border of the County. It consists of a crystalline rock overlain by a thick weathered zone, saprolite, which is relatively porous, coupled with a low (less than 8%) slope. According to the criteria for performing site acceptability studies for solid waste landfills in Georgia published by the DNR, municipal solid waste landfills shall not be sited within two miles of a significant ground-water recharge area unless the landfill has a liner and leachate collection system.

The size of a potential site is a consideration due to the economics of liners, leachate collection systems, and related safeguards which may be required for public health considerations. The cost will depend upon the geologic and hydrogeologic variables. Development costs may make very small site uneconomical. Other unsuitable areas according to the DNR site acceptability regulations include locations within a 1/2 mile distance from the County boundary and areas in which wetlands are located.

Finally, County zoning ordinances and policy guidelines in the form of land use plans are factors which have significant influence in facility siting decisions.

The Land Use Regulations (Zoning Ordinance) for Dawson County were adopted in 1989. Article V Section 501 states that dumping or reduction of garbage other than at County-operated sanitary landfills shall not be permitted.

From a land use standpoint, the eastern one-third Dawson County would be classified as unsuitable due to the high density of residences and businesses. A groundwater recharge area and Lake Lanier, a public water source, are also in this area.

## **2.7 CURRENT EDUCATION AND PUBLIC INVOLVEMENT**

No formal educational programs related to solid waste issues currently exist in Dawson County or the City of Dawsonville. This plan and the goals that are a result of this plan will be the first step in implementing such a program. The County's planning staff and the University of Georgia's Cooperative Extension Agency maintain an informational display at the courthouse which frequently contains handouts on issues such as recycling and composting. Public involvement in the planning process that created this plan has to date been achieved by advertising the public hearings. The current efforts are considered adequate by County staff and officials.

## **2.8 CURRENT REVENUES AND FINANCING**

The Shoal Hole Road MSWL generates revenue through the collection of tipping fees paid by the private haulers at the MSWL site. Fees are assessed on all but household garbage brought by residents to the landfill and left in the central collection bin. The tipping fees are as follows:

- |                 |                 |
|-----------------|-----------------|
| ▪ Pick Up Truck | \$5.00 Per Load |
| ▪ Trailer       | \$5.00 Per Load |
| ▪ Commercial    | \$15.00 per ton |

The total expenses for fiscal year 1991, which ended December 31 were \$86,055. The tipping fees generated by Dawson County for fiscal year 1991 were \$36,952. The Dawson County landfill's operating costs for 1991 were \$49,103. The operational costs are made up from the County's general fund. Table 2-4 is a comparison of expenses and revenues projected for fiscal year 1992 to the 1991 Dawson County Landfill budget.

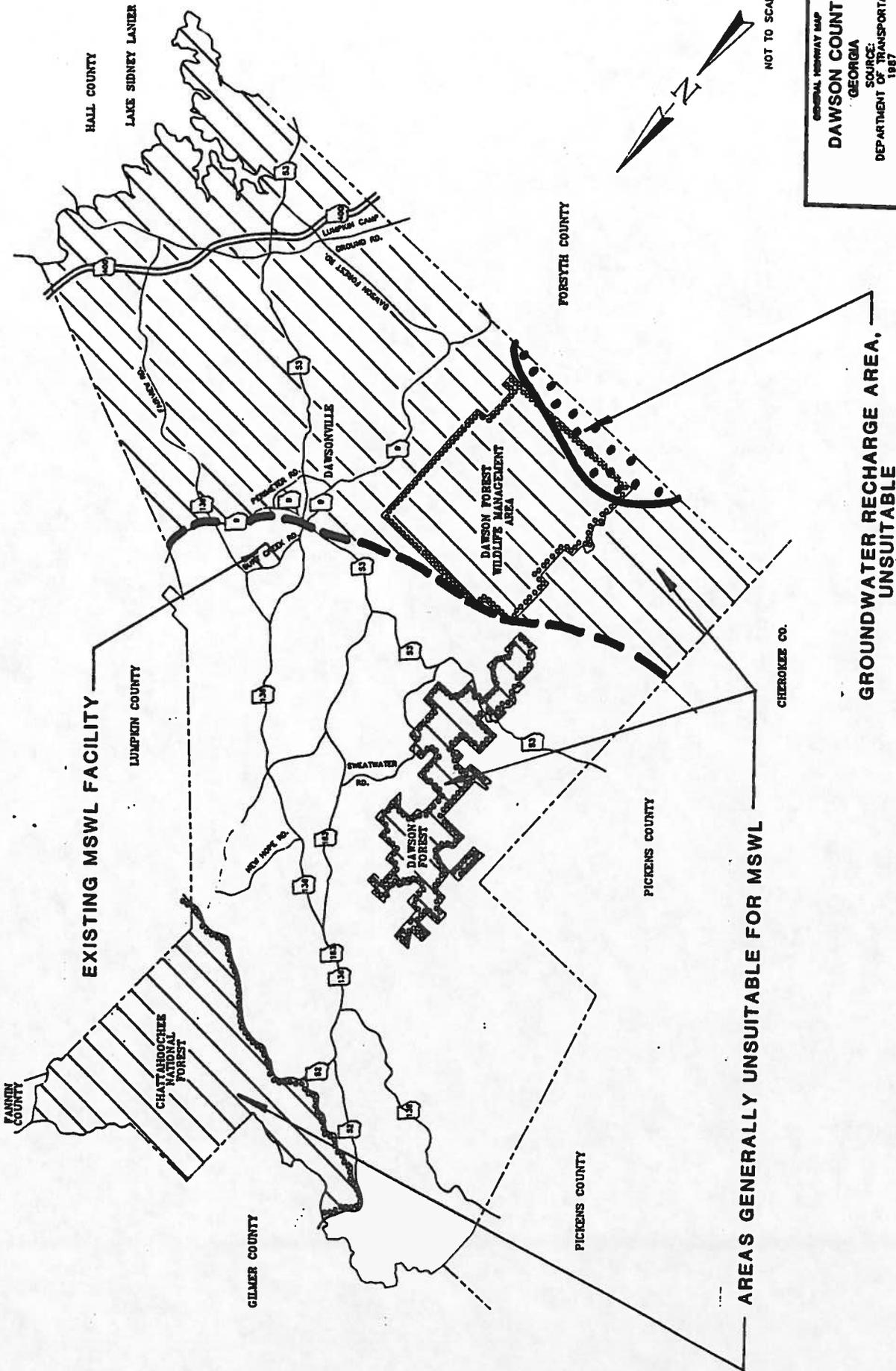
The City of Dawsonville does not have any collection or disposal costs. The City's residents and businesses dispose of waste using the same methods as the County.

**TABLE 2-3**

**SHOAL ROAD MSWL BUDGET**

<b><u>BUDGET</u></b>	<b><u>1991 BUDGET</u></b>		<b><u>1992 PROJECTED BUDGET</u></b>
<b><u>EXPENSES</u></b>			
Personnel (Salaries & FICA)	61,710.20		64,795.71
Utilities (Telephone)	345.44		362.71
Miscellaneous (Uniforms, Seminars, etc.)	1,534.99		1,611.74
Equipment Maintenance (Insurance)	4,161.78		4,369.87
Operational Supplies	<u>18,302.78</u>		<u>19,217.92</u>
<b>TOTAL:</b>	<b>\$86,055.19</b>	<b>TOTAL:</b>	<b>\$90,357.95</b>
 <b><u>REVENUE</u></b>			
<u>Tipping Fees</u>		<u>Tipping Fees</u>	
Commercial Accounts	32,324.40	Commercial	\$50,910.00
Cash Transactions	<u>4,628.00</u>	Cash	<u>\$4,859.00</u>
	36,952.40		\$55,769.00
<b><u>TOTAL OPERATING COSTS:</u></b>	<b>\$49,102.79</b>		<b>\$34,588.95</b>

Source: Moreland Altobelli Associates, Inc. and Dawson County



GENERAL HIGHWAY MAP  
**DAWSON COUNTY**  
 GEORGIA  
 SOURCE:  
 DEPARTMENT OF TRANSPORTATION  
 1987  
 MA MORELAND ALTORELLI ASSOC., INC.

**FIGURE 2-1**  
**SUITABLE / UNSUITABLE AREAS**

**SECTION 3**  
**STATEMENT OF NEEDS AND GOALS**

**3.1 AMOUNT OF WASTE PROJECTED**

The amount of waste projected to be generated is based on the current per capita waste disposal profile. The total quantity of waste per year was estimated by averaging the actual monthly quantities collected from the landfill for 1991. The waste per capita was calculated by dividing the quantity of waste for 1991 (5,546 tons) by the 1990 population (9429). The waste per capita was calculated to be 0.59 tons/year or 3.23 lbs/day. When the projected 1991 population figures are used, the per capita production drops to 3.06 lbs/day, or 0.56 tons/yr.

This low figure can be interpreted as the result of traditional home disposal of household refuse including composting and backyard burning. Illegal road side dumping is a problem in rural communities that keep a portion of the waste stream out of authorized disposal facilities.

**3.2 WASTE REDUCTION**

As required in the Georgia Comprehensive Solid Waste Management Act of 1990, the amount of waste being disposed at MSWL's during fiscal year 1992 should be reduced by 25 percent by July 1, 1996. According to the Georgia Mountains RDC, the projected population for Dawson County in 1992 is 10,427 people. The projected quantity of waste in 1992 is 5,823.30 tons/year, 0.56 tons/year per capita. The goal of 25% reduction by 1996 will decrease the waste per capita to 0.42 tons/year (2.3 lbs/day) using the per capita value derived from the 1991 population and the 1991 waste quantities. The reduction will be achieved by reducing the waste per capita in incremental units from years 1992 to 1996 through recycling efforts. The incremental reduction will encourage citizen participation by gradually introducing them to the concept of recycling. Once the 25 percent reduction is achieved, the disposal facility will maintain or continue to decrease the intake of waste. The following table (Table 3-0) outlines the projected yearly reduction of waste per capita.

To calculate the interim progress toward meeting the 25% per capita disposal reduction goal by 1996, Dawson County will need to compare the actual per capita weight disposal figure for an interim year with that of the base year.

**3.3 DISPOSAL & FINANCING**

Dawson County's goal is to maintain its own landfill dedicated to the disposal needs of the county. Financing for the facility will continue as currently in place with adjustments to the tipping fee to remain competitive with other area facilities.

**TABLE 3-0**  
**WASTE GENERATION**  
**(Based Upon a Projected Average Annual Growth Rate of 0.05)**

Year	Population	NO RECYCLING	WITH RECYCLING	
		Using 0.56 Tons Per Year/ Per Person	Quantity of Waste Generated Per Capita (tons/year)	Total Waste Reduced by 25% Per Capita
1990	9,429 (Actual)			
1991	9,925(1)	5546	0.56	----
1992	10,935	5823	0.56	5823
1993	11,449	6107	0.52	5686
1994	11,969	6394	0.49	5610
1995	12,495	6684	0.45	5386
1996	13,027	6978	0.42	5248
1997	13,565	7275	0.42	5471
1998	13,027	7576	0.42	5697
1999	14,109	7880	0.42	5626
2000	14,659	8187	0.42	6157
2001	15,216	9498	0.42	6391
2002	15,779	8812	0.42	6627

(1) Population Projections by GA. MTNS. RDC.  
(2) Actual Tonnage

**SECTION 4  
IMPLEMENTATION STRATEGY**

**4.1 COLLECTION METHODOLOGY**

Based on the forecasted population density for Dawson County, the present collection method is adequate to meet the needs of the County and the City of Dawsonville over the next ten years. Residential waste will be hauled and deposited by residents to an on-site collection bin at the landfill entrance or collected by private haulers. Commercial/industrial waste will continue to be handled by the generating industry itself or licensed private haulers.

Recycling bins will be placed at the landfill entrance. The current landfill operating permit includes an area for the temporary storage of recycled material. The existing scales will be used to track the quantity of material removed from the waste stream.

**4.2 WASTE REDUCTION TECHNIQUES**

Three options were evaluated based on the parameters of cost, feasibility, acceptability, quantity of reduction, and marketability. The options are voluntary recycling, composting, and a Materials Recovery Facility. Each option was rated on a scale of 1-10 in the above parameters. The ratings are shown in Table 4-0.

**A. Recycling**

Recycling, as defined by the Rules of Georgia Department of Resources Environmental Protection Division Chapter 391-3-4, means any process by which materials which would otherwise become solid waste are collected, separated or processed and reused or returned to use in the form of raw materials or products. The major benefits of recycling are the environmental benefits, marketability, ease of implementation, and volume of waste reduced. The waste identified as most readily recyclable in Dawson County are paper, aluminum, glass, and plastic. Several methods of collecting recyclable material have been evaluated to determine which type would best suit the lifestyle and economic parameters of Dawson County residents.

**Mandatory Recycling**

In this scenario, mandatory recycling is legislated and enforced by the local government. The MSWL would not accept any recyclables in the waste stream. Residents would have to make individual arrangements to have recyclables picked up or transport them to collection centers.

The cost to the County is reduced because all the responsibility is placed on the generator. A burden would be placed on residents and business owners to create individual recycling plans. Enforcement of mandatory recycling by local governments would be difficult.

### **Voluntary Recycling**

In this scenario, residents and business owners voluntarily separate recyclables from their waste stream. The recyclables are taken to recycling centers and disposed of at compactor sites.

The responsibility of voluntary recycling is shared between the generator and the local government. The responsibility placed on the waste generator is in keeping recyclables separated until pick up or drop off. The cost of recycling is absorbed by the local governments with the incoming recycling revenues to aide in financing the program.

### **B. Materials Recovery Facility (MRF)**

An MRF is defined in Chapter 391-3-4 as a solid waste handling facility that provides for the extraction from solid waste of recoverable materials, materials suitable for use as fuel or soil amendment or any combination of such materials.

An MRF accepts municipal solid wastes and a stream of all types of non-hazardous waste, then separates the recyclables and compostable materials from the stream. The waste generator is not responsible for presorting the waste disposed of at an MRF. Separation of comingled material is performed by mechanical and manual means. The waste is separated into cardboard, aluminum, paper, plastic, and unrecyclables. The waste is then baled and disposed of at a recycler or the MSWL. Unrecyclable waste may be shredded or bailed before it is placed in the landfill.

Most of the responsibility would be placed on the County government as operator of the facility. Waste generators would continue to dispose of waste without separation. Although the MRF alternative is the simplest for waste generators, the capital costs are several million dollars for development and construction. Annual operating and maintenance costs can be substantial. The full amount of waste reduction can best be achieved in this scenario. Due to a centralized operation, the recyclable products may be handled, stored and transported in the most economical manner. Balers and shredders can be used on the waste to be disposed of in the landfill. Baling and/or shredding the disposed waste increases the density in the landfill and therefore the life of the landfill. Over-the-road collection vehicles will be operated into the MRF and not the landfill, thereby eliminating costs associated with maintenance of all-weather access and cleaning of vehicles in order to prevent tracking of mud on public roads.

### **C. Composting**

Composting is the biological degradation of inert materials such as grass cuttings, brush, leaves and other organic matter by naturally occurring organisms. These organisms breakdown the inert matter into a humus-like material. The yard waste is dumped into

piles where it is left to decompose, with periodic mixing. This mixing is to insure that optimum oxygen and low moisture content ratios are maintained to elevate the temperature within the interior of the pile to 100-120°F to achieve organic decomposition.

Prospective compostable waste composes 28% of Dawson County's current waste stream. Of this 28% of compostable waste, 24% is made up of yard waste and 86% is made up of moist food and agricultural waste. When the moisture content exceeds 60%, conditions become too wet so that water will fill the pore space required for air diffusion, and cause anaerobic conditions to result. The cost of composting is variable depending on the type of equipment needed to be used. Special equipment such as shredders, windrowers, sprinklers, aeration piping and various other equipment require an expensive initial cost but is less labor intensive and speeds up the composting process. Composted waste may be used for landfill cover, landscaping for roads, parks, etc. or sold to the public.

### **Evaluation of Waste Reduction Techniques**

The local governments involved in the plan have decided to reduce waste by implementing a voluntary recycling program. This technique is the highest rated in Table 4.0. It was the consensus of the local government officials and community representatives that voluntary recycling would be the most desirable waste reduction technique. Significant issues of local concern were minimum expenses for start-up and operation, ease of use and accessibility. The low volume of waste generated by a small number of households who receive collection service from private contractors would also lend itself to voluntary recycling by the collection firms. Households contracting for pick-up would separate recyclables prior to pick-up and the contractor would place the items in the proper bin at the landfill entrance.

MRF and composting operations were considered too expensive to implement. The County's population and waste stream are also too small to justify either process.

### **4.3 EDUCATION AND PUBLIC AWARENESS INVOLVEMENT**

Education of Dawson County citizens will be a key element to creating successful recycling program.

Education of citizens will be achieved through seminars, public information meetings and handouts. Information will not only be provided for the adult population but will include children as well. The educational material will include the following information:

- The expense of disposing of solid waste in an environmentally safe manner
- The role of waste reduction in protecting the environment

- How to start/manage a home waste reduction program
- How to identify recyclable items
- The preparation needed before depositing recyclable products
- How to separate and store recyclable products
- Where to deposit recyclable products
- How to compost at home
- How to reduce the waste generated

The educational process will target city, town and county meetings, church groups, business associations, civic clubs, neighborhoods, garden clubs and schools. Citizen involvement should not be limited to participation but expanded to incorporate comments and suggestions that could improve the entire program.

Implementation of the plan's education element will be carried out by the County commissioner and the planning staff. The intention of the County government is to continue the present cooperative efforts between the community, University of Georgia's Cooperative Extension Program and County staff. Currently no funds are budgeted for this work and no future expenditures are planned. A small cost is incurred by the County government and County Board of Education for photo copying material for distribution. The cost for this is assumed to be a very small portion of each governments budget for this activity.

#### **4.4 IMPLEMENTATION AND FINANCING**

As discussed in Section 4.2, recycling is considered the most effective method to achieve waste reduction. A voluntary recycling program will be implemented. The operating income for Dawson County solid waste disposal is generated by tipping fees, recycling revenue and monies from the County's general funds.

In order to maintain a budget similar to the current funding level over the life of the plan, the tipping fees must be increased beginning in 1993. Any shortfall will be paid for from general fund sources. Currently the tipping fees are \$15/ton. The fees will be increased to approximately \$25.50/ton by 2002. The projected recycling revenue for a one month period is shown in Table 4-1. Certain recycled items were singled-out for this projection that have the greatest marketability.

Table 4-2 shows the projected quantities of materials within the waste stream for the ten-year period beginning in 1992 and ending 2002. This projection was computed using the combined 1991 tonnage per month figures for municipal and industrial waste generators. This figure was then multiplied by 12 (number of months in a year) to arrive at the annual tonnage rate. This was then multiplied by the projected annual population growth rate of 5% per year to forecast the projected tonnage per year. Note that this table projects quantities without any reduction for recycling activities.

Table 4-3 details the recycling revenue projections.

Table 4-4 is a schedule of major events for the ten year plan.

Table 4-5 outlines the responsibilities of the governments for implementation of plan elements.

Table 4-6 has been included to show a breakdown of conceptual development costs for a subtitle D landfill. This is based on a six acre site including a liner and subliner. If the County's request for a horizontal expansion is approved, these are the estimated costs needed to fund that expansion. The only costs that will be eliminated since the County already has a landfill will be access costs, the expense of scales and some clearing costs. The remaining costs are the same as building a new landfill.

Table 4-7 is the 10 year cost projections for a horizontal expansion based again on a six acre site. The overall estimate to construct this horizontal expansion is approximately \$150,000 per acre. Please note that this is only an approximation and again excludes the cost of scales, access construction and some clearing expenses.

**TABLE 4-0 RATING OF WASTE REDUCTION OPTIONS**

<b>Method</b>	<b>Cost</b>	<b>Feasibility</b>	<b>Public Acceptability</b>	<b>Per Capita Reduction</b>	<b>Marketability</b>	<b>Overall</b>
Voluntary Recycling	7	10	8	7	6	7.6
Composting	3	5	7	3	2	4.0
MRF	1	3	8	8	8	5.6

**SCALE**      1      10  
Worst      Best

**TABLE 4-1****MONTHLY ESTIMATED INCOME FROM RECYCLING (1992)**

<b>TARGETED ITEM</b>	<b>AVG. PRICE PER LB.</b>	<b>MONTHLY TOTAL (LBS)</b>	<b>25% OF MONTHLY TOTAL (LBS)</b>	<b>INCOME</b>
Glass	0.002	67,800	16,950	339.00
Aluminum	0.25	48,500	12,125	3,031.25
Plastic	0.01	67,260	16,815	168.15
Metals	0.0142	32,440	8,110	81.10
Newspaper	0.005	54,860	13,715	68.58
Cardboard	0.01	136,180	34,045	<u>340.45</u>
<b>TOTAL</b>				<b>\$4,028.53</b>

**Sources:**

1. Assumes an average success rate of 25% recovered from the waste stream.
2. Estimated Income from table above is reduced by 50% in Table 4.1 to account for fluctuations in recycling efforts and market conditions.

**TABLE 4-2**

DALSON COUNTY, GEORGIA  
SOLID WASTE PLAN

HORELAND ALTOBELLI ASSOCIATES, INC.

10 YR PROJECTED WASTE INCREASE (IN TONS/YR.)  
(No reduction for recycling factored)

26-Feb-92

	% OF TOTAL	YEARS										
		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
ALUM. CANS	5.00%	291.17	305.72	321.01	337.06	353.91	371.61	390.19	409.70	430.18	451.69	474.28
OTHER METAL CANS	1.34%	78.03	81.93	86.03	90.33	94.85	99.59	104.57	109.80	115.29	121.05	127.11
NEWSPAPER	5.65%	329.02	345.47	362.74	380.88	399.92	419.92	440.91	462.96	486.11	510.41	535.93
PAPER PRODUCTS	15.62%	909.60	955.08	1,002.83	1,052.98	1,105.62	1,160.91	1,218.95	1,279.90	1,343.89	1,411.09	1,481.64
CORRUGATED PAPER	14.04%	817.59	858.47	901.39	946.46	993.79	1,043.48	1,095.65	1,150.43	1,207.95	1,268.35	1,331.77
PLASTIC	6.94%	404.14	424.34	445.56	467.84	491.23	515.79	541.58	568.66	597.09	626.95	658.30
GLASS	6.99%	407.05	427.40	448.77	471.21	494.77	519.51	545.48	572.76	601.40	631.47	663.04
STYROFOAM	0.60%	34.94	36.69	38.52	40.45	42.47	44.59	46.82	49.16	51.62	54.20	56.91
FOOD WASTE	19.75%	1,150.10	1,207.61	1,267.99	1,331.39	1,397.96	1,467.85	1,541.25	1,618.31	1,699.22	1,784.19	1,873.39
RUBBER	3.33%	193.92	203.61	213.79	224.48	235.71	247.49	259.87	272.86	286.50	300.83	315.87
YARD WASTE	0.15%	8.73	9.17	9.63	10.11	10.62	11.15	11.71	12.29	12.91	13.55	14.23
METAL	3.34%	194.50	204.22	214.43	225.16	236.41	248.23	260.65	273.68	287.36	301.73	316.82
CONST/DENO	8.43%	490.90	515.45	541.22	568.28	596.70	626.53	657.86	690.75	725.29	761.55	799.63
TEXTILES	4.02%	234.10	245.80	258.09	271.00	284.55	298.77	313.71	329.40	345.87	363.16	381.32
AGRICULTURE	4.80%	279.52	293.49	308.17	323.58	339.76	356.74	374.58	393.31	412.98	433.62	455.31
TOTAL		5,823.30	6,114.47	6,420.19	6,741.20	7,078.26	7,432.17	7,803.78	8,193.97	8,603.67	9,033.85	9,485.54

SOURCE: PROJECTIONS BY HORELAND ALTOBELLI ASSOCIATES, INC.

**TABLE 4.3**

DAKSON COUNTY, GEORGIA  
RECYCLING REVENUE

MORELAND ALTOBELLI ASSOCIATES, INC.

10 YR PROJECTIONS

TABLE 4-4

26-Feb-92

LBS REVENUE	1992		1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	LBS	AMOUNT	LBS	AMOUNT	LBS	AMOUNT	LBS	AMOUNT	LBS	AMOUNT	LBS	AMOUNT	LBS	AMOUNT	LBS	AMOUNT	LBS	AMOUNT	LBS	AMOUNT	LBS	AMOUNT
TOTAL HEIGHT (TONS)	190.52		400.10		630.12		882.19		1,080.60		1,134.57		1,191.28		1,250.81		1,313.33		1,378.91		1,447.87	
GLASS	0.02	\$3,597	91,555	\$1,831	144,190	\$2,884	201,871	\$4,037	247,273	\$4,945	259,623	\$5,192	272,599	\$5,452	286,221	\$5,724	300,528	\$6,011	315,534	\$6,311	331,315	\$6,626
ALUMINUM	0.25	\$1,165	65,490	\$16,373	103,140	\$25,785	144,400	\$36,100	176,876	\$44,219	185,710	\$46,428	194,992	\$48,748	204,736	\$51,184	214,970	\$53,743	225,704	\$56,426	236,992	\$59,248
PLASTIC	0.01	\$6,757	119,192	\$1,192	187,715	\$1,877	262,808	\$2,628	321,914	\$3,219	337,992	\$3,380	354,885	\$3,549	372,620	\$3,726	391,245	\$3,912	410,781	\$4,108	431,325	\$4,313
METALS	0.0142	\$29,195	61,312	\$871	96,560	\$1,371	135,187	\$1,920	165,591	\$2,351	173,862	\$2,469	182,552	\$2,592	191,674	\$2,722	201,255	\$2,858	211,304	\$3,001	221,872	\$3,151
PAPER	0.0045	\$173,264	363,862	\$1,637	573,046	\$2,579	802,286	\$3,610	982,723	\$4,422	1,031,805	\$4,643	1,083,376	\$4,875	1,137,513	\$5,119	1,194,373	\$5,375	1,254,011	\$5,643	1,316,728	\$5,925
CARDBOARD	0.0056	\$47,044	98,795	\$652	155,592	\$1,027	217,835	\$1,438	266,827	\$1,761	280,154	\$1,849	294,156	\$1,941	308,856	\$2,038	324,294	\$2,140	340,487	\$2,247	357,516	\$2,360
TOTAL		\$10,741		\$22,556		\$35,523		\$49,733		\$60,918		\$63,961		\$67,158		\$70,514		\$74,038		\$77,735		\$81,623

Source: Moreland Altobelli Associates, Inc.

file:dacs35.ch1

TABLE 4.4

DAWSON COUNTY  
SOLID WASTE MANAGEMENT PLAN

	JANUARY '93	'94	'95	'96	'97	'98	'99	'2000	'2001	'2002
<p>SPRING '92</p> <ul style="list-style-type: none"> <li>■ May 92 Adoption</li> </ul>										
		<ul style="list-style-type: none"> <li>■ Educational Activities</li> </ul>								
		<ul style="list-style-type: none"> <li>■ Voluntary Recycling</li> </ul>								
<ul style="list-style-type: none"> <li>■ Construct Recycling Station</li> </ul>										
<ul style="list-style-type: none"> <li>■ Purchase Equipment</li> </ul>										
<ul style="list-style-type: none"> <li>■ Existing Phase One Operations</li> </ul>										
		<ul style="list-style-type: none"> <li>■ Plan Evaluation &amp; Annual Report Jan/Feb Each Year</li> </ul>								
										<ul style="list-style-type: none"> <li>■ Permitting for Phase Two Operations</li> </ul>

**TABLE 4.5  
MULTI-JURISDICTIONAL RESPONSIBILITIES**

<b>ACTIVITY</b>	<b>DAWSON COUNTY</b>	<b>CITY OF DAWSONVILLE</b>
Collection	Commercial, Industrial and Residential waste brought to landfill by private contracts or residents	Use County Landfill
Reduction	Voluntary Recycling & Home Composting	Voluntary recycling; Home Composting
Disposal	Landfill Operations at current County facility	No Activity
Finance	Tipping fees and general revenue	No Activity
Education	Voluntary efforts by concerned citizens	Same as County

**TABLE 4.6**

**SUBTITLE D LANDFILL CONCEPTUAL DEVELOPMENT COSTS**

Item	Unit	Unit Cost	Total	Subtotal
<u>Clearing</u>	6 Acres	\$750/Acre	\$4,500	\$4,500
<u>Grading</u>	92,460 c.y.	\$1.25/c.y.	\$115,575	\$115,575
<u>Leachate</u> Solid Pipes Manholes Collection Storage	460 l.f. 34 v.f. 460 l.f. lump	\$20/l.f. \$75/v.f. \$15/l.f. \$150,000	\$9,200 \$2,550 \$6,900 \$150,000	\$168,650
<u>Storm Drain</u> French Drain R.C.P. Headwalls Structures	460 l.f. 230 l.f. 2 Each 34 v.f.	\$7.50/v.f. \$45/l.f. \$500 \$75/v.f.	\$3,450 \$10,350 \$1,000 \$2,550	\$17,350
<u>Erosion</u> Silt Fence Grassing Sediment Bas. Rip Rap Diversion	920 l.f. 1 Acre 1 Each 46 Tons 1,380 c.y.	\$2.75/l.f. \$800/Acre \$10,000 \$25/ton \$1.75/c.y.	\$2,530 \$800 \$10,000 \$1,150 \$2,415	\$16,895
<u>Liner System</u> HDPE Liner Sand Filter Subliner	261,360 s.f. 30,056 tons 46,000 c.y.	\$0.50/s.f. \$15/ton \$1.25/c.y.	\$130,680 \$450,846 \$57,500*	\$639,026

**TOTAL COST**

**\$961,996**

Operation costs for a subtitle d facility are essentially the same with a slight increase due to operational changes. We anticipate these costs to approach and additional \$23,000 per year.

\* Subliner is a part of the liner system constructed of onsite clay material compacted to 98% std. proctor

**TABLE 4.7**

MORELAND ALTOBELLI ASSOCIATES, INC.

DAWSON COUNTY, GEORGIA  
10 YR PROJECTION OF SOLID WASTE REDUCTION AND DISPOSAL BUDGET INCLUDING NEW LANDFILL COSTS.

16-Jun-93

YEAR	EXISTING LANDFILL COSTS			NEW LANDFILL COSTS			TOTAL COSTS M=D+E+F+G	INCOME TIPPING FEES I(5)	TONNAGE	TIPPING RATES (4)		INCOME RECYCLING K	INCOME TOTAL L=I+K	SURPLUS OR (DEFICIT) M=H-L	TIPPING FEE NEEDED TO BALANCE BUDGET	
	OPERATING COSTS LABOR AND OPERATIONS (1) A	SPECIAL SOLID WASTE ACCOUNTS (4) B	CAPITAL COSTS (2) C	TOTAL COSTS D=A+B+C	LANDFILL DEVELOPMENT E	LANDFILL MONITORING F				LANDFILL OPERATIONS G	PER TON J					PER LOAD K
1992	\$90,358	\$8,735	\$69,372	\$168,465	\$0	\$0	\$0	\$168,465	\$41,054	5,823.30	\$15.00	\$5.00	\$10,733	\$51,787	(\$116,678)	\$62
1993	\$94,876	\$8,571	\$5,250	\$108,697	\$0	\$17,400	\$0	\$126,097	\$45,981	6,114.47	\$16.00	\$5.00	\$24,305	\$70,286	(\$55,811)	\$44
1994	\$99,620	\$8,685	\$26,375	\$134,680	\$100,000	\$17,400	\$0	\$252,080	\$51,297	6,420.19	\$17.00	\$5.00	\$25,521	\$76,818	(\$175,261)	\$84
1995	\$104,601	\$8,789	\$5,788	\$119,177	\$100,000	\$17,400	\$0	\$236,577	\$56,555	6,741.20	\$17.85	\$7.50	\$26,797	\$83,352	(\$153,225)	\$75
1996	\$109,831	\$8,997	\$6,078	\$124,906	\$100,000	\$17,400	\$0	\$242,306	\$62,352	7,078.26	\$18.74	\$7.50	\$28,136	\$90,488	(\$151,817)	\$73
1997	\$115,322	\$9,528	\$6,381	\$131,231	\$100,000	\$17,400	\$0	\$248,631	\$69,862	7,432.17	\$20.00	\$7.50	\$29,543	\$99,405	(\$149,226)	\$71
1998	\$121,088	\$10,086	\$6,700	\$137,874	\$100,000	\$17,400	\$0	\$255,274	\$77,023	7,803.78	\$21.00	\$10.00	\$31,020	\$108,043	(\$147,231)	\$70
1999	\$127,143	\$10,670	\$7,036	\$144,848	\$100,000	\$17,400	\$0	\$262,248	\$84,918	8,193.97	\$22.05	\$10.00	\$32,571	\$117,489	(\$144,759)	\$68
2000	\$133,500	\$11,286	\$7,387	\$152,173	\$100,000	\$17,400	\$307,000	\$576,573	\$93,622	8,603.67	\$23.15	\$10.00	\$34,200	\$127,822	(\$448,751)	\$143
2001	\$140,175	\$11,931	\$7,757	\$159,863	\$100,000	\$17,400	\$307,000	\$584,263	\$103,220	9,033.97	\$24.31	\$12.50	\$35,910	\$139,130	(\$445,133)	\$138
2002	\$147,184	\$12,609	\$8,144	\$167,937	\$100,000	\$17,400	\$307,000	\$592,337	\$113,798	9,485.54	\$25.53	\$12.50	\$37,705	\$151,503	(\$440,833)	\$133

NOTES:

1. ASSUMED THAT STAFF DOES NOT INCREASE IN SIZE
2. (a) FIRST YEAR CAPITAL COSTS INCLUDES TRUCK TO MOVE RECYCLING BINS, BINS AND SITE IMPROVEMENTS. (b) A \$5000 PER YEAR SINKING FUND IS ESTABLISHED IN 1992 FOR EQUIPMENT REPLACEMENT. (c) 1994 CAPITAL COSTS INCLUDE FINAL PAVING OF RECYCLING AREA
3. TIPPING FEES ARE INCREASED AT 5%/YEAR
4. \$1.00 PER TON SPECIAL SOLID WASTE ACCOUNT; \$0.50 PER TON STATE SUPERFUND FEE
5. TIPPING FEES COLLECTED ON 53%. 47% OF WASTE BALANCE IS DROPPED OFF BY RESIDENTS

SOURCE: MORELAND ALTOBELLI ASSOCIATES, INC.

**STATE OF GEORGIA  
DAWSON COUNTY  
CITY OF DAWSONVILLE**

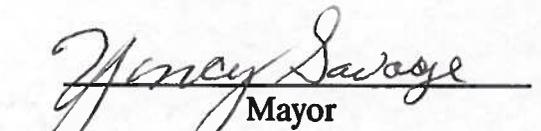
**RESOLUTION**

**WHEREAS, the City of Dawsonville in conjunction with Dawson County has developed a Solid Waste Management Plan as required by the Solid Waste Management Act; and**

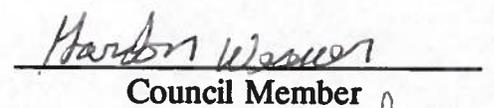
**WHEREAS, this plan has been reviewed and approved by the Georgia Mountains Regional Development Center and the State of Georgia for compliance with the Minimum Planning Standards and Procedures for Solid Waste Management;**

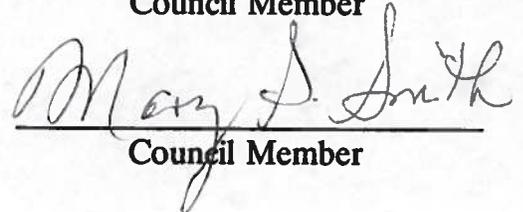
**NOW THEREFORE BE IT RESOLVED that the City Council of Dawsonville hereby officially adopts the SOLID WASTE MANAGEMENT PLAN for Dawson County and the City of Dawsonville, as revised and dated June, 1993, prepared by Moreland Altobelli Associates, Inc.**

Adopted this the 7th day of September, 1993.

  
\_\_\_\_\_  
Mayor

  
\_\_\_\_\_  
Council Member

  
\_\_\_\_\_  
Council Member

  
\_\_\_\_\_  
Council Member

\_\_\_\_\_  
Council Member

**ATTEST:**

  
\_\_\_\_\_  
Clerk

STATE OF GEORGIA  
DAWSON COUNTY

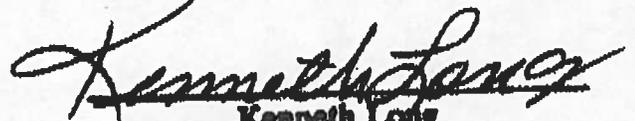
**RESOLUTION**

WHEREAS, Dawson County in conjunction with the City of Dawsonville, has developed a Solid Waste Management Plan as required by the Solid Waste Management Act; and

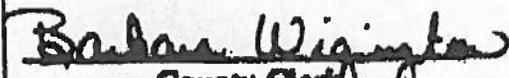
WHEREAS, this plan has been reviewed and approved by the Georgia Mountains Regional Development Center and State of Georgia for compliance with the Minimum Planning Standards and Procedures for Solid Waste Management;

NOW THEREFORE BE IT RESOLVED that the Dawson County Commissioner hereby officially adopts the **SOLID WASTE MANAGEMENT PLAN** for Dawson County and the City of Dawsonville as revised and dated June, 1993 prepared by Moreland Altobelli Associates, Inc.

Adopted, this the 10TH day of SEPTEMBER, 1993.

  
Kenneth Long  
Sole Commissioner

ATTEST:

  
County Clerk



GEORGIA DEPARTMENT OF  
**COMMUNITY AFFAIRS**

Jim Higdon  
COMMISSIONER

Zell Miller  
GOVERNOR

September 17, 1993

Honorable Kenneth Long, Chairman  
Dawson County Board of Commissioners  
Post Office Box 192  
Dawsonville, Georgia 30534

Dear Commissioner Long:

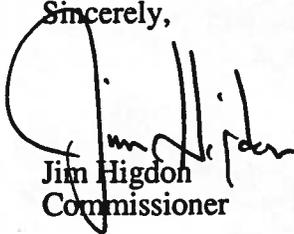
The Georgia Mountains Regional Development Center has notified us that Dawson County has adopted a plan that meets the Minimum Planning Standards and Procedures for Solid Waste Management. Accordingly, it is my pleasure to notify you that Dawson County is eligible for solid waste permits, grants, and loans.

As one of many challenges facing our cities and counties today, effective solid waste management is possible only through proper and thorough long range planning. Not only will solid waste planning provide your local government with more control over its destiny, it will also assist you in dealing more effectively with both short and long-term management decisions. Dawson County's success in managing this pressing issue will be evident through your ongoing efforts in implementing your recently adopted plan.

It is important to note that your county's eligibility status for solid waste permits, grants, and loans simply means that your plan meets the Minimum Planning Standards and Procedures for Solid Waste Management. As a local government official, you should be aware that your plan must be updated no later than December 31, 2003 in order for Dawson County to retain this eligibility.

We commend you for your hard work and dedication. If you have any questions regarding your solid waste management plan, please feel free to call our Governmental Management Division at (404) 656-3851.

Sincerely,



Jim Higdon  
Commissioner

JH/bg

cc: Sam F. Dayton, Executive Director  
Georgia Mountains RDC



GEORGIA DEPARTMENT OF  
**COMMUNITY AFFAIRS**

Jim Higdon  
COMMISSIONER

Zell Miller  
GOVERNOR

September 17, 1993

Honorable Yancy Savage, Mayor  
City of Dawsonville  
Post Office Box 6  
Dawsonville Georgia 30534

Dear Mayor Savage:

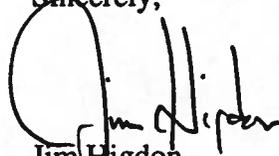
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As one of many challenges facing our cities and counties today, effective solid waste management is possible only through proper and thorough long range planning. Not only will solid waste planning provide your local government with more control over its destiny, it will also assist you in dealing more effectively with both short and long-term management decisions. The City of Dawsonville's success in managing this pressing issue will be evident through your ongoing efforts in implementing your recently adopted plan.

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We commend you for your hard work and dedication. If you have any questions regarding your solid waste management plan, please feel free to call our Governmental Management Division at (404) 656-3851.

Sincerely,



Jim Higdon  
Commissioner

JH/bg

cc: Sam F. Dayton, Executive Director  
Georgia Mountains RDC