

JOINT SOLID WASTE MANAGEMENT PLAN

LINCOLN COUNTY CITY OF LINCOLNTON

2005-2014



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TABLE OF CONTENTS

TABLE OF CONTENTS 2

Introduction..... 3

Public Participation 4

1. Description of the County 5

 Location and Size..... 5

 Background..... 5

2. Waste Disposal Stream Analysis..... 10

 Inventory of Waste Disposed..... 10

 Projections of Waste to be Disposed 12

3. Waste Reduction Element 15

 Inventory of Waste Reduction Programs 15

 Yard Trimmings Programs and Facilities 16

 Items Requiring Special Handling 17

 Assessment of Waste Reduction Programs..... 17

 Needs and Goals 17

4. Collection Element 18

 Inventory of Existing Collection Programs 18

 Assessment of Collection Programs 18

 Inventory of Illegal Dumping/Littering 19

 Assessment of Programs to Address Illegal Disposal..... 19

 Needs and Goals 19

5. Disposal Element..... 21

 Inventory of Solid Waste Disposal Facilities..... 21

 Assessment of Disposal 25

 Statement of Needs and Goals 25

 Statement/Demonstration of 10-Year Disposal Capacity 25

 Contingency Strategy..... 26

6. Education and Public Involvement Element 27

 Inventory of Public Education and Involvement 27

 Assessment of Public Education and Involvement..... 27

 Statement of Needs and Goals 28

7. Land Limitation Element 29

 Inventory of Land Areas 29

 Procedures for Siting Solid Waste Facilities 35

 Assessment of Land Limitation 36

 Needs and Goals 36

8. Implementation Strategy..... 37

 Summary of County Need and Goals 37

 Statement/Demonstration of 10-Year Collection Capability 37



Introduction

The term “solid waste” includes four categories of solid waste generated in Lincoln County: municipal (this refers to solid waste in both cities and counties), construction/demolition, inert and industrial. These types of wastes vary in composition, potential environmental and health related problems, and management requirements. Although each of these will be discussed in this plan, the emphasis is on municipal solid waste in that this waste is currently presenting the most concerns and requires more stringent and expensive management efforts.

Municipal solid waste, or what we commonly refer to as “garbage” or “trash,” is more accurately defined as the combined residential and nonresidential (institutional, commercial, governmental and industrial waste which is co-managed with residential and nonresidential waste) solid waste generated and handled in a given city or county area. It does not generally include other types of solid waste such as industrial or agricultural wastes which are handled separately. Municipal solid waste includes food scraps, packaging material, yard waste, discarded appliances, used tires and other similar items. In Lincoln County, municipal solid waste is collected by private and public haulers and is being exported to Wilkes County and Columbia County for proper disposal.

The concern with municipal solid waste is that, if it is not handled properly, it can cause aesthetic, health and environmental problems including diseases, air pollution from fires and contaminated water resources and unsightly litter. In addition, concern has mounted in recent years over the amount of resources being discarded and the use of expensive landfill capacity for materials which need not be placed in landfills. Consequentially, the practice of just “throwing it away” is no longer appropriate.

Georgia Comprehensive Solid Waste Management Act

In 1989, the Georgia General Assembly passed SR 103 creating the Joint Solid Waste Management Study Committee to analyze the status of solid waste management in Georgia and to make recommendations for a comprehensive revision of the 1972 Solid Waste Management Act. The Study committee labored during the summer and fall, 1989, and released its report in December of that year. The findings and recommendations in the study committee report were drafted as legislation and introduced as an administration bill in the 1990 session of the General Assembly as SB 533, the Georgia Comprehensive Solid Waste Management Act. The bill unanimously passed both houses of the General Assembly.

SB 533 (the Act) provides a sound framework for comprehensively managing solid waste. The first step in implementing the ACT has been the development of the Georgia Solid Waste Management Plan. The purpose of the State plan is essentially threefold:

1. to present a status report of solid waste management in Georgia.
2. to set forth the state strategy for reducing and managing solid waste, and
3. to establish the procedures and criteria for local/regional solid waste plans and other components of local/regional solid waste management strategy.

This document, the *Joint Lincoln County- Lincolnton Solid Waste Management Plan*, represents the next step in the planning process and includes data in seven topic areas or “elements” that are considered critical as components of the solid waste management planning process. These seven elements are:

1. Waste Disposal Analysis Element
2. Waste Reduction Element
3. Collection Element
4. Disposal Element
5. Land Limitation Element
6. Education and Public Involvement Element
7. Implementation Strategy

Information is gathered and analyzed for each of these seven elements. This is used in turn to set various local goals for Lincoln County. In addition to local goals, two statewide goals are required by the Comprehensive Solid Waste Management Act. These goals are as follows:

- **Goal 1** - To insure that the amount of solid waste being received at disposal facilities during the coming years will be reduced by 25% per capita.
- **Goal 2** - To insure that community solid waste management systems will be adequate to meet the ten-year handling capability and capacity needs identified in the local solid waste management plan.

Public Participation

As required by the minimum solid waste planning standards, two public hearings were held in Lincoln County to elicit community input as to the solid waste needs and goals of Lincoln County. The first public hearing was held prior to preparing the plan on July 15, 2004.. A second public hearing was held following the completion of the first draft of the plan on August 24, 2004. A third public hearing was held on September 16, 2004 following the completion of the final draft of the plan. Comments and suggestions at each of these hearings were taken into consideration and incorporated into the plan. Finally, neighboring communities and state agencies were sent copies of the plan to review and comment on the contents of the plan.

1. Description of the County

Location and Size

Lincoln County and the County seat of Lincolnton are located in east-central Georgia, approximately 40 miles northwest of Augusta. Lincoln County is a densely forested, rural area covering 258.2 square miles.

Background

Lincolnton is the county seat and only incorporated city in Lincoln County. Lincolnton was selected in 1798 as a central location for the county courthouse and jail. Located in the northern part of the 13-county Central Savannah River Area, Lincoln County is a triangular shaped county bounded on two sides by the J. Strom Thurmond Reservoir (formerly Clark Hill). Lincoln is bordered on the east by the Georgia-South Carolina State line, south by Columbia and McDuffie counties, west by Wilkes County, and north by Elbert County. Lincolnton is 41 miles northwest of Augusta and 55 miles east of Athens.

Lincoln County has experienced significant change during the past three decades. Clarks Hill Lake has become a popular sports area for northeast Georgia, and particularly for the Augusta Metropolitan area. This factor, coupled with increasing manufacturing opportunities, has led to a steadily increasing rate of population growth and a dramatic change of image for Lincoln County.

Population

Lincoln County and City of Lincolnton Population, 1980-2025

	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025
Lincoln County	6719	7023	7465	8029	8353	8549	8733	8927	9202	9455
Lincolnton	1406	1441	1476	1536	1595	1632	1665	1702	1753	1800

Source: Woods & Poole Economics, Inc.

Lincoln County and City of Lincolnton Population Change, 1985-2025

	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025
Lincoln County	N/A	4.32%	5.92%	7.02%	3.88%	2.29%	2.11%	2.17%	2.99%	2.68%
Lincolnton	N/A	2.4%	2.4%	3.9%	3.7%	2.29%	2.11%	2.17%	2.99%	2.68%

N/A= Not Available

Source: Woods & Poole Economics, Inc.

Seasonal Population Changes

Lincoln County does not experience any significant seasonal changes in population, but the area is a popular second home spot since the county is situated on a lake. Lake property is popular, but not just used seasonally. The jurisdictions are not familiar with



any unique conditions or seasonal variations that will change the amount of waste projected on a seasonal basis.

Number of Households

Lincoln County and City of Lincoln Total Households, 1980-2025

	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025
Lincoln Co.	2202	2384	2718	2992	3265	3378	3482	3575	3644	3695
Lincolnton	510	547	583	572	561	580	598	614	639	648

N/A= Not Available Source: U.S. Bureau of the Census, Woods & Poole (2002) and CSRA RDC

Lincoln County and City of Lincoln Average Household Size, 1980-2025

	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025
Lincoln Co.	3.05	2.93	2.73	2.66	2.54	2.51	2.48	2.46	2.49	2.52
Lincolnton	2.74	2.93	2.5	2.66	2.54	2.51	2.48	2.46	2.49	2.52

Source: U.S. Bureau of the Census, Woods & Poole (2002) and CSRA RDC

Economic Activity

Employment encompasses the total number of people employed by local businesses and industries, sole proprietors and the self-employed. This includes people living in surrounding areas coming to Lincoln County to work, but does not include residents of Lincoln who commute to jobs outside the County limits.

Table E-1 examines historic sector employment trends in Lincoln County from 1990 through 2025. Overall, total employment increased by 205 or 8.1 percent between 1990 and 2000. Manufacturing, the largest employment sector, fell by 36 percent. All other major sectors grew between 1990 and 2000; Services by 47 percent; state and local government by 34.2 percent; retail trade by 35.4 percent; and transportation, communication and public utilities by 152 percent. Total employment is projected to increase by 380 jobs or 13.8 percent from 2000 to 2025. Sectors growing the most by 2025 will be transportation, communication and public utilities (41.2 percent) and services (41.6 percent).



Lincoln County: Total Employment by Sector; 1990-2025								
	1990	1995	2000	2005	2010	2015	2020	2025
Farm	228	220	222	208	196	186	179	173
Agricultural Services, Other	49	96	96	107	115	121	127	134
Mining	0	0	0	0	0	0	0	0
Construction	148	160	186	182	181	181	182	183
Manufacturing	946	863	606	572	560	556	556	559
Trans, Comm, & Public Utilities	62	94	156	168	181	195	208	221
Wholesale Trade	55	43	32	34	36	38	40	42
Retail Trade	285	367	386	404	420	437	454	473
Finance, Insurance, & Real Estate	64	80	113	117	120	124	130	137
Services	309	369	447	499	544	587	633	680
Federal Civilian Government	26	20	19	17	17	17	17	17
Federal Military Government	33	33	32	32	33	33	33	33
State & Local Government	336	408	451	455	460	464	469	474
Total	2,541	2,753	2,746	2,795	2,863	2,939	3,028	3,126

Table E-2 highlights the relative growth of each sector. Since 1990, manufacturing has been the largest employer, accounting for 22 percent of jobs in 2000. Lincoln’s economy will become increasingly diversified in the coming years, and the service sector is expected to emerge as the largest employer by 2025.

Table E-2

Lincoln County: Employment by Sector (%)								
Category	1990	1995	2000	2005	2010	2015	2020	2025
Farm	8.97%	7.99%	8.08%	7.44%	6.85%	6.33%	5.91%	5.53%
Agricultural Services, Other	1.93%	3.49%	3.50%	3.83%	4.02%	4.12%	4.19%	4.29%
Mining	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Construction	5.82%	5.81%	6.77%	6.51%	6.32%	6.16%	6.01%	5.85%
Manufacturing	37.23%	31.35%	22.07%	20.47%	19.56%	18.92%	18.36%	17.88%
Trans, Comm, & Public Utilities	2.44%	3.41%	5.68%	6.01%	6.32%	6.63%	6.87%	7.07%
Wholesale Trade	2.16%	1.56%	1.17%	1.22%	1.26%	1.29%	1.32%	1.34%
Retail Trade	11.22%	13.33%	14.06%	14.45%	14.67%	14.87%	14.99%	15.13%
Finance, Insurance, & Real Estate	2.52%	2.91%	4.12%	4.19%	4.19%	4.22%	4.29%	4.38%
Services	12.16%	13.40%	16.28%	17.85%	19.00%	19.97%	20.90%	21.75%
Federal Civilian Government	1.02%	0.73%	0.69%	0.61%	0.59%	0.58%	0.56%	0.54%
Federal Military Government	1.30%	1.20%	1.17%	1.14%	1.15%	1.12%	1.09%	1.06%
State & Local Government	13.22%	14.82%	16.42%	16.28%	16.07%	15.79%	15.49%	15.16%



Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Source: Woods & Poole Economics, Inc.								

Major sector employment differences become apparent when comparing Lincoln County to neighboring counties, state and national trends. Lincoln is far more dependent on the manufacturing sector than McDuffie, Wilkes, Georgia and the U.S. (Fig E-2, Table E-3). Manufacturing currently accounts for 22.07% of total employment in Lincoln, significantly more than the 12.63% rate for Georgia and 11.61% for the U.S. Regionally, the manufacturing sector accounts for a higher share of employment in Lincoln than McDuffie (18.42%), but just under Wilkes (29.36%).

Table E-3					
Percentage Employment by Sector, 2000					
	Lincoln	McDuffie	Wilkes	Georgia	USA
Farm	8.08%	5.04%	7.82%	1.39%	1.91%
Agricultural Services, Other	3.50%	1.64%	1.29%	1.13%	1.26%
Mining	0.00%	0.43%	0.28%	0.20%	0.48%
Construction	6.77%	9.35%	3.67%	6.10%	5.68%
Manufacturing	22.07%	18.42%	29.36%	12.63%	11.61%
Trans, Comm, & Public Utilities	5.68%	2.60%	4.84%	6.10%	4.88%
Wholesale Trade	1.17%	1.73%	3.20%	5.69%	4.58%
Retail Trade	14.06%	21.12%	12.52%	16.80%	16.37%
Finance, Insurance, & Real Estate	4.12%	4.71%	4.38%	7.12%	7.94%
Services	16.28%	19.45%	17.41%	28.63%	31.75%
Federal Civilian Government	0.69%	0.39%	0.67%	1.90%	1.68%
Federal Military Government	1.17%	1.32%	0.66%	1.93%	1.25%
State & Local Government	16.42%	13.80%	13.92%	10.39%	10.62%

Source: Woods & Poole Economics, Inc.

Manufacturing

Manufacturing employment in Lincoln County dropped from 946 jobs in 1990 to 606 jobs in 2000, a difference of 340 jobs. In 2000, there were 17 manufacturing companies, which employed 381 people in Lincoln County. The Lincoln County Industrial District was developed in order to attract manufacturers to the area. This industrial park which contains 96 acres of land is complete with water, sewer, electricity, and excellent highway access.

Small and large size firms developing a variety of products represent the manufacturing sector in Lincoln County. Key manufacturers include:

F.D.B., Inc. – Hunting Apparel
 H & H Industrial Maintenance
 Jimtex Yarns Division
 Top Grill LLC – Grills

Reed Ice & Cylinder Exchange Co. Inc.
 Several logging companies
 Boat Dock companies



According to the Georgia Department of Labor, the five largest employers in Lincoln County in 2002 were:

Lincoln County School District
Lincoln County Government
Bells Food Market
Hardee's

Jimtex Yarns Division
McWhorter Logging
Southern Line Service

The relatively small manufacturing sector in Lincoln is evident. At 22.07% of total employment, the sector accounts for less employment than neighboring Wilkes (29.36%), but is higher than neighboring McDuffie and almost double the Georgia (12.63%) and U.S. (11.61%) averages.

The County also focuses on the abundant recreation and tourism opportunities in the county by marketing sport fishing, hunting, hiking, and boating, among many other activities to attract tourism. These major economic activities are unique to Lincoln County because of the lake access and local state park.

Because there are currently only 70 beds in hotels in Lincolnton and Lincoln County, there has been a big push to bring in a Resort Conference Center on the lake. This resort has been marketed heavily as it could expand the tourism component exponentially adding to the economic development of the area. The lake and its possibilities to bring in more and more tourism is a major economic opportunity for Lincoln County.

Additional information about the county's economic growth and economic base can be found in the county's Comprehensive Plan.



2. Waste Disposal Stream Analysis

Inventory of Waste Disposed

Lincoln County is a rural county with both limited industry and limited commercial activity. By far, the largest contributor to the solid waste stream in Lincoln County is the residential sector. Local officials estimate that the current County waste stream could be classified as typical household waste. This residential waste consists mainly of items typically found in what is commonly called “household garbage.” These items include paper products, plastics, glass, aluminum and ferrous materials. Commercial areas are limited primarily to the incorporated area of Lincolnton. The composition of commercial and industrial waste consists of items such as food processing waste, cotton and fabric scraps, and wood product waste.

Lincoln County reported disposing of 556.49 tons of municipal solid waste in 2003. The City of Lincolnton reported disposing of 898.77 tons of municipal solid waste in 2003. This data has not been maintained Georgia Division of Environmental Protection, but was collected from the respective places that each jurisdiction disposes of their waste. Normally, GA EPD collects and maintains data related to waste disposed by the county’s jurisdictions, but because there are several private haulers that service residents out in the unincorporated county, disposal rates for the county are not accurate. The total tonnages shown below, for the county, were collected from the Wilkes County Transfer Station. Private haulers may not always take the waste to this transfer station, but may dispose of it elsewhere. The tonnages collected from the Wilkes County Transfer Station are quite low for a county with a population of over 8,000. The following table shows municipal solid waste tonnage information for Lincoln County and the city of Lincolnton during the past 3 years.

Community	Total Tonnage	Total Tonnage	Total Tonnage
	2003	2002	2001
Lincoln County (unincorporated)	556.49	463.15	380.41
Lincolnton	898.77	880.84	907.93
Total	1,455.26	1,343.99	1,288.34

Source: Columbia County Baker Place Landfill (Lincolnton)
Wilkes County Transfer Station (Lincoln)

Construction and demolition tonnages for the county were not available.

Waste Characterization

As noted above, Lincoln County is a rural county with both limited industry and limited commercial activity. By far, the largest contributor to the solid waste stream in Lincoln County is the residential sector. Local officials estimate that the currently County waste stream could be classified as typical household waste. This residential waste consists mainly of items typically found in what is commonly called “household garbage.” These items include paper products, plastics, glass, aluminum and ferrous materials. Commercial areas are limited primarily to the incorporated area of Lincolnton. The composition of commercial and industrial waste consists of



items such as food processing waste, cotton and fabric scraps, and wood product waste.

Preliminary analysis of waste characterization from the DCA sampling study shows the percentage of each type of material in the commercial and residential waste disposed of in an MSW landfill, shown in Table 2-2. These results suggest that 63 percent of the residential and commercial waste disposed of in Lincoln County is paper or organic material.

**Table 2-2
Projected Characterization of MSW Disposed from Lincoln County¹**

<u>Material</u>	<u>Average</u>
Newspaper	4.9%
Corrugated Cardboard	96%
Office	25%
Magazine/Glossy	30%
Paperboard	3.9%
Mixed (Other	
Recyclable)	3.3%
<u>Other (Non-recyclable)</u>	<u>10.0%</u>
Total Paper	37.2%
#1 PET Bottles	1.7%
#2 HDPE Bottles	1.2%
#3-#7 Bottles	0.3%
Expanded Polystyrene	1.6%
Film Plastic	8.1%
<u>Other Rigid Plastic</u>	<u>3.9%</u>
Total Plastic	16.9%
Material	Average
Clear	2.0%
Green	0.5%
Amber	1.6%
<u>Other</u>	<u>0.5%</u>
Total Glass	4.6%
<u>Other Non-Ferrous</u>	<u>0.8%</u>
Total Metal	6.6%
Yard Waste	1.5%
Wood (non-C&D)	2.1%
Food Waste	11.9%
Textiles	3.8%
Diapers	2.7%
Fines	3.3%
<u>Other Organics</u>	<u>0.8%</u>
Total Organics	26.0%
Drywall	0.2%
Wood	3.1%
Inerts	0.2%
Carpet	1.4%
<u>Other C&D</u>	<u>1.0%</u>
Total C&D	9%
Televisions	0.1%
Computers	0.1%



It should be noted that the state’s 25% waste disposal reduction goal is a per capita reduction goal based upon all MSW disposed within the state. It does not exclude waste generated from out-of-state sources and disposed in landfills located within the state.”

The impact of out-of-state waste imports plays a role in the state achieving its 25% waste disposal reduction goal. Imported MSW is not exempt from the waste reduction disposal goal and must be factored into the overall equation. Waste disposed from out-of-state sources accounted for 10.8% of the MSW stream and 8.4% of the total waste stream disposed in the state. Imported waste has grown from representing 0.1/lb/person/day in 1998 to 0.8 lb/person/day in FY 2003.

**Georgia Waste Disposal and Population
FY 1994 to FY 2003**

Year	Population	Total Waste Landfilled (millions of tons ¹)	Total Waste Landfilled (pounds/person /day)	Total Waste Disposed in MSW Landfills (Tons)	Out of State Waste ²	Total Municipal Solid Waste (pounds/person/day)	GA MSW (pounds/person/day)
1994	6,990,658	8.58	6.73	7,222,291	138,946	5.66	5.55
1995	7,161,485	9.54	7.30	7,684,271	149,481	5.88	5.77
1996	7,334,311	9.78	7.31	7,222,499	160,000	5.40	5.28
1997	7,503,138	9.86	7.20	7,925,222	172,150	5.79	5.66
1998	7,673,965	10.75	7.68	9,026,078	193,819	6.44	6.31
1999	7,844,792	11.43	7.98	9,382,622	453,875	6.55	6.24
2000	8,015,626	12.71	8.69	9,724,736	511,472	6.65	6.30
2001	8,186,453	13.36	8.94	10,678,980	893,651	7.15	6.55

For more information regarding Georgia’s solid waste management or for a glossary of terms used in this report, contact the Georgia Department of Community Affairs, Office of Environmental Management at 404-679-4940, or online at www.dca.state.ga.us/environmental/swar.html during FY 2003.

² Virtually all out-of-state waste is MSW.

Lincoln County is rural in nature. The county’s solid waste total tonnage for the past three years does not seem to be accurate, so for waste disposal projections, this plan will use the city tonnages and population for solid waste disposal projections for the county. The city’s tonnages are accurately recorded at the Columbia County landfill each year. The county waste is taken by various private haulers to various transfer stations and landfills and is not accurately recorded.

The city’s total population in 2001, 2002, and 2003 was 1,602, 1,610, and 1,617 respectively. This equates to an average of 1,112.86 pounds of municipal solid waste generated per person in Lincolnton per year, or 3.05 pounds of municipal solid waste per person per day in Lincolnton. Using 3.05 pounds per person as an estimate of future solid waste generation in the county, the following table outlines the county’s solid waste disposal needs through 2014:

Municipal Solid Waste Tonnages

Community	Total Tonnage 2003	Total Tonnage 2002	Total Tonnage 2001
Lincoln County (unincorporated)	556.49	463.15	380.41
Lincolnton	898.77	880.84	907.93
Total	1,455.26	1,343.99	1,288.34



Source: Columbia County Baker Place Landfill (Lincolnton)
 Wilkes County Transfer Station (Lincoln)

**Table 2-3
 Waste Disposal Projections at Current Per Capita Disposal Rate
 Lincoln County (including Lincolnton)**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Population	8,498	8,549	8,608	8,659	8,677	8,711	8,733	8,753	8,790	8,832
Pounds/Day	25,918.9	26,074.5	26,254.4	26,410.0	26,464.9	26,568.6	26,635.7	26,696.7	26,809.5	26,937.6
Total Tons/Yr	4,730.20	4,758.59	4,791.43	4,819.82	4,829.84	4,848.76	4,861.01	4,872.14	4,892.73	4,916.11

Population Source: Woods and Poole Economics, Inc.

Based on the city’s per capita pounds average, the total waste disposal needs of the entire county are not expected to rise substantially during the next ten years. The county’s population growth will not substantially increase during the planning period, and the county does not anticipate significant changes in its per capita disposal rates during the planning period.



3. Waste Reduction Element

Inventory of Waste Reduction Programs

This section provides detailed information on Lincoln County's existing waste reduction programs that target the residential, commercial/institutional, industrial, construction and demolition, and yard trimming sectors and waste streams.

Source Reduction Programs

Inventory

Source reduction is an approach that precedes waste management and addresses how products are manufactured, purchased, and used. Unfortunately, the consumer has little direct control over manufacturing and packaging of the products they use. There are, however, source reduction options for the consumer. Some of these options are:

- **Product reuse.** Using reusable products instead of their disposable equivalents reduces the amount of materials that must be managed as waste.
- **Reduced Materials Volume.** Larger containers can reduce the amount of packaging used. For example, a single 16-ounce can uses 40 percent less material than two (2) 8-ounce cans.
- **Increased Product Lifetime.** The solid waste stream can be significantly reduced by purchasing products with longer lifetimes over short-lived alternatives designed to be discarded at the end of their useful lives.
- **Decreased Consumption.** Consumers can be educated on what materials are difficult to dispose of or are harmful to the environment. Buying practices can be altered (i.e. buying in bulk) to reflect this environmental consciousness.

Assessment

There are currently no source reduction programs in place in Lincoln County. Implementation of such programs could significantly benefit Lincoln County's waste reduction efforts. As public awareness of source reduction options increases citizens will then become more capable of using their buying power to influence the packing decisions of manufacturers of the products they use. Benefits of this "educated purchasing" will be evident in both the short and long term.

Recycling

Inventory

As the summary below denotes, Lincoln County provides opportunities for the recycling of cardboard, aluminum cans, and newspaper through recycling bins located in Lincoln County. Additionally, the City of Lincoln provides curbside pickup of recycling for newspapers,

aluminum, and cardboard for all of its municipal residents. Once the recyclables are collected, they are then picked up by a private company, Smurfit, and taken to their plant for recycling. Plants are the locations where Smurfit purchases, receives and processes various recyclable materials for shipment to paper mills and other end users of recyclable material. SSRC Augusta (Smurfit) processes all grades of paper for shipment to both internal and external mills.

**Lincoln County
Recycling Options**

Jurisdiction	Recyclable Accepted	Facility Type	Type of Consumer
Lincoln County (unincorporated)	Cardboard, aluminum, newspaper	County’s Drop-off Site	All County Residents
Lincolnton	Cardboard, aluminum, newspaper	Curbside Pickup	All City Residents

Assessment

Lincoln County’s inability to profitably recycle could be changed through the existence of some type of regional, multi-county recycling agreement. Such an agreement would eliminate the problem of insufficient quantities, and reduce transportation costs by dispersing the costs to each participating county. This type of agreement could exist apart from the regional landfill agreement that is under discussion, or exist as a full scale materials recovery facility (MRF) in conjunction with the regional landfill agreement.

Yard Trimmings Programs and Facilities

Inventory

The City of Lincolnton provides curbside pickup of leaves, limbs, and other yard debris for its residents and takes it to the Lincolnton inert landfill. There are currently no such programs in operation in the unincorporated areas of the County, but yard trimmings are not placed in or mixed with municipal solid waste and are most likely burned on private property.

Assessment

It is important then to educate residents about reducing the amount of trimmings being generated and reusing or recycling those that are produced. This will successfully place the responsibility for yard trimmings on property owners. The county and/or city could provide a grinding service to help property owners deal with limbs and large debris. Under this scenario, local government employees would grind the debris and leave it on-site for the property owner to use as mulch or add to a compost pile. The employees would then haul away items (e.g., tree stumps too large or unsuitable to grind). This service could be provided either on a pay-per-use basis or as a standard service paid in the regular sanitation or property tax bill. This would extend the useful life of the inert landfill and reduce disposal.



Items Requiring Special Handling

The county currently does not have an implementation plan for the handling of items requiring special handling. The county is, however, studying the possibility of changing to a single greenbox site location for the county which will be manned throughout the day. Such a system would ensure that items requiring special handling are disposed of appropriately in the county.

Assessment of Waste Reduction Programs

Lincoln County provides an area where recyclables are received from county residents. A drop-off site is available for cardboard recycling. This site is maintained by the county with some equipment being provided by the City of Lincoln. Additionally, a drop box area is available for all county residents to recycle aluminum, glass, plastic and paper products (i.e. newspapers). This site is maintained by the county and the county's Mental Retardation Center collects and transports the recyclables on a regular basis. This service arrangement currently meets the needs of recycling efforts in the county.

Needs and Goals

Based on the inventory and assessment, adequacy of current programs and other programmatic options, including costs, Lincoln County will work to pursue the State's 25% reduction in the amount of solid waste received at disposal facilities. The county has developed the following activities to arrive at the following waste reduction needs and activities:

- Develop education and awareness of recycling programs and opportunities for paper
- Develop sustainable waste reduction programs to continue through the ten year planning cycle.
- Participate in ACCG and GMA's programs designed to give local officials the opportunity to record public service announcements about environmental issues.
- Work with the State's Recycling Coordinator to identify viable recycling projects in the county in coming years.
- Consider developing a regional recycling program.
- Consider developing a county-wide mulching operation to reduce yard trimmings going into the inert landfill and MSW landfill.



4. Collection Element

Inventory of Existing Collection Programs

Lincoln County provides curbside pickup of municipal solid waste for residents residing in the unincorporated areas of the county. This pickup service is provided by a private hauler who contracts directly with residents in the unincorporated areas. The private haulers take most of the county’s municipal solid waste to a transfer station located in Wilkes County, Georgia.

Utilizing city employees, the City of Lincolnnton provides curbside pickup of municipal solid waste for its residents. Municipal solid waste collected by the city is hauled to the Columbia County landfill in Columbia County, Georgia.

**Table 5-11
Haulers Operating in Planning Area**

Hauler Name	Sector Served	Jurisdiction(s) Served	Arrangement
McGahee Sanitation 4414 Iron Hill Road Dearing, GA 30808	Lincoln County – residential	Lincoln County	Contract with citizens
Waste Management 208 Prep Phillips Dr. Augusta, GA 30901	Lincoln County – residential	Lincoln County	Contract with citizens
City of Lincolnnton employees	City of Lincolnnton - residential	Lincolnton	Citizens are billed on utility bill.

Inventory of Collection Programs

Type	Collector	Program Description	Jurisdictions Served	Sectors Served ¹	Number of Households served	Contractual Arrangements
Curbside Collection	McGahee Sanitation 4414 Iron Hill Road Dearing, GA 30808	Weekly curbside collection of garbage	Lincoln County	R, C	3,265 – number of actual customers is not known	Private contracts with collectors
Curbside Collection	Waste Management 208 Prep Phillips Dr. Augusta, GA 30901	Weekly curbside collection of garbage	Lincoln County	R, C	3,265 – number of actual customers is not known	Private contracts with collectors
Curbside Collection	City of Lincolnnton	Weekly curbside collection of garbage	Lincolnton	R	561	City has an exclusive arrangement for collection

Assessment of Collection Programs

Collection programs in Lincoln County are currently being evaluated to determine if residents and businesses are receiving sufficient collection service. In areas in northern Lincoln County where the population is spread out and are not very densely populated, service may be strained. Some collectors will not go to scarce areas or will not travel down dirt roads, causing some residents not to be serviced. Additionally, there are only two haulers that collect household trash



in Lincoln County and if a resident is not getting satisfactory collection service, then the customer does not have much bargaining power with the hauler, since there is little to no competition. Residents may call the county, but the county cannot control inefficient haulers or service providers.

The county is considering contracting with a private hauler to provide curbside collection to residents out in the county. This alternative will enable the county to save residents money, while at the same time, enabling the county to hold haulers accountable for their service to the residents. This alternative is currently under review by the county and will be considered in the next year.

Inventory of Illegal Dumping/Littering

Private haulers will not service customers in the northern part of the county where the population is sparse, secluded, or on a dirt road. Since this area does not get adequate service, these residents must take their waste to a neighboring county, burn it, or illegally dispose of it on the roadside. There are no known illegal dumpers in the city of Lincoln.

Assessment of Programs to Address Illegal Disposal

Lincoln County is considering a change to the current solid waste collection system to ensure the proper, legal disposal of solid waste in the county. With the population of Lincoln County expected to experience growth during the planning period, the county is pursuing contracting with one solid waste company to collect and haul the waste to a landfill. This way, all of the residents of the county will have solid waste collection at the curb and will thus reduce illegal dumping or burning. It will also enable the county to reduce the cost burden on the citizens, as a large contract will decrease the per household cost.

The County does have a code enforcement officer, but the County is planning on hiring an additional code enforcement officer to enforce solid waste ordinances and policies of the county.

Needs and Goals

Lincoln County's goal for collection is to ensure efficient and effective collection of solid waste in the region over the next ten years.

- Continue to maintain and purchase solid waste equipment needed to properly operate solid waste collection efforts.
- Continue to identify viable collection efforts and implement efficiency programs when feasible.
- Evaluate collection efforts periodically to determine if changes are needed or if new collection mechanisms are feasible.
- Consider collecting yard trimmings or even providing an area for yard trimmings drop off.
- Research the county contracting option to better serve the county.



Contingency Strategy

In the event the primary collection of solid waste becomes interrupted within the county, the County will open up areas around the Transfer Station where residents may haul and drop-off excess waste. When the additional waste is capable of being processed and/or hauled away, it will be processed in accordance with existing processing guidelines.



5. Disposal Element

Inventory of Solid Waste Disposal Facilities

Lincoln County previously operated a sanitary landfill under permit number 090-004D(SL). This landfill was closed by the county. Currently, no sanitary or municipal solid waste landfills operate within the county.

Currently, five (5) inert landfills are in operation in Lincoln County. Table 5-1 below outlines each.

**Table 5-1
Inert Landfills Operating in Lincoln County**

County	Facility Name	Permit Number	Operation Status	Facility Type Description	Facility Address
LINCOLN	ROBERT ASHMORE ROWLAND-YORK ROAD INERT LF	PBR-090-01IL	Operating	Inert Landfill	ROWLAND-YORK ROAD
LINCOLN	BRNNIE THURMOND INERT LANDFILL	PBR-090-02IL	Operating	Inert Landfill	CROOK ROAD
LINCOLN	GRACE BROWN INERT LANDFILL	PBR-090-03IL	Operating	Inert Landfill	CROOK ROAD
LINCOLN	LINCOLN COUNTY RIGHT OF WAY CLEARING INERT LANDFILL	PBR-090-04IL	Operating	Inert Landfill	EBERNEZER CHURCH ROAD
LINCOLN	CITY OF LINCOLNTON, GEORGIA	PBR-090-06IL	Operating	Inert Landfill	POST OFFICE BOX 489

In addition to the landfill data identified above, the following tables outline nearby solid waste facilities in surrounding communities.

Nearby Transfer Stations

County	Facility Name	Permit Number	Operation Status	Facility Type Description	Facility Address	City
MCDUFFIE	CITY OF THOMSON TRANSFER STATION	PBR-097-04TS	Operating	Transfer Station	HWY 278	THOMSON
MCDUFFIE	GEORGIA DISPOSAL AND RECYCLING, INC. TRANSFER STATION	PBR-097-06TS	Operating	Transfer Station	148 INDUSTRIAL RD. N.E.	THOMSON
MCDUFFIE	MCDUFFIE COUNTY TRANSFER STATION	PBR-097-08TS	Operating	Transfer Station	MESENA ROAD	THOMSON
BURKE	SUNBELT MEDICAL SERVICES, INC. TRANSFER STATION	PBR-017-03TS	Operating	Transfer Station	P.O. BOX 215, 615 VESTAL ROAD	SARDIS
BURKE	BURKE COUNTY	PBR-017-05TS	Operating	Transfer Station	602 LIBERTY STREET, P.O. BOX 89	WAYNESBORO
RICHMOND	ARROW GARBAGE SERVICE , TRANSFER	PBR-121-008TS	Operating	Transfer Station	FRONAGE ROAD	AUGUSTA



JOINT SOLID WASTE MANAGEMENT PLAN

County	Facility Name	Permit Number	Operation Status	Facility Type Description	Facility Address	City
RICHMOND	WASTE MGT.OF NO. AUGUSTA-AIKEN TRANSFER STATION	PBR-121-016TS	Operating	Transfer Station	GOSHEN INDUSTRIAL BOULEVARD	AUGUSTA
RICHMOND	SAFETY DISPOSAL SYSTEMS OF GEORGIA,INC.	PBR-121-019TS	Operating	Transfer Station	3105 I-1 SPRING GROVE DRIVE	AUGUSTA
RICHMOND	WASTE MANAGEMENT OF AUGUSTA TRANSFER STATION	PBR-121-137TS	Operating	Transfer Station	3946 GOSHEN INDUSTRIAL BOULEVARD	AUGUSTA
WILKES	WILKES COUNTY CR40 MSWL TRANSFER STATION	PBR-157-02TS	Operating	Transfer Station	150 LANDFILL ROAD	WASHINGTON

Source: Georgia Department of Natural Resources' Environmental Protection Division

Nearby Inert Landfills

County	Facility Name	Permit Number	Operation Status	Facility Type Description	Facility Address	City
BURKE	BURKE COUNTY INERT LANDFILL	PBR-017-01IL	Operating	Inert Landfill	CLARKE ROAD ADJACENT TO EXISTING MSW LANDFILL	WAYNESBORO
BURKE	DNR WILDLIFE RESOURCE DIV. GAME MGT INERT LANDFILL	PBR-017-04IL	Operating	Inert Landfill	DI-LANE PLANTATION	WAYNESBORO
COLUMBIA	SAMPLE & SON,INC.-SR232 INERT LF	PBR-036-01IL	Operating	Inert Landfill	COLUMBIA RD SR 232 25 MILES EAST OF US-221 SR 47	APPLING
COLUMBIA	STEVE DUFFIE-HEREFORD RD. INERT LF	PBR-036-02IL	Operating	Inert Landfill	HEREFORD ROAD	EVANS
COLUMBIA	GUS DUNN	PBR-036-03IL	Operating	Inert Landfill	WASHINGTON ROAD	APPLING
COLUMBIA	CITY OF HARLEM INERT LANDFILL	PBR-036-05IL	Operating	Inert Landfill	LAMPKIN ROAD	HARLEM
COLUMBIA	HERSCHEL MORRIS INERT LANDFILL	PBR-036-06IL	Operating	Inert Landfill	MORRIS ROAD	GROVETOWN
COLUMBIA	COLUMBIA CO. ROADS AND BRIDGES INERT LANDFILL	PBR-036-08IL	Operating	Inert Landfill	LEWISTON ROAD AND I-20	APPLING
COLUMBIA	CITY OF GROVETOWN INERT LANDFILL	PBR-036-08IL-A	Operating	Inert Landfill	NEWMANTOWN ROAD	GROVETOWN
COLUMBIA	TONY MUNDY INERT LANDFILL	PBR-036-09IL	Operating	Inert Landfill	729 BYRD DRIVE	HARLEM
COLUMBIA	COLUMBIA COUNTY ROADS AND BRIDGES INERT LANDFILL	PBR-036-12IL	Operating	Inert Landfill	NORTH SIDE OF COLLINS DRIVE	EVANS
MCDUFFIE	INTERSTATE EQUIP.CO.,INC.-INERT LF	PBR-097-01IL	Operating	Inert Landfill		THOMSON
MCDUFFIE	MCDUFFIE COUNTY INERT LANDFILL	PBR-097-07IL	Operating	Inert Landfill	MESENA ROAD	THOMSON



JOINT SOLID WASTE MANAGEMENT PLAN

County	Facility Name	Permit Number	Operation Status	Facility Type Description	Facility Address	City
MCDUFFIE	THOMAS D. GANTT, JR. INERT LANDFILL	PBR-097-09IL	Operating	Inert Landfill	I-20 AND SR17	THOMSON
MCDUFFIE	MCDUFFIE COUNTY BOARD OF COMMISSIONERS INERT LANDFILL	PBR-097-10IL	Operating	Inert Landfill	MESENA ROAD	THOMSON
MCDUFFIE	CSR/KNOX-RIVERS CONSTRUCTION COMPANY	PBR-097-11IL	Operating	Inert Landfill	WRIGHTSBORO ROAD & CR 21	THOMSON
WILKES	WILKES COUNTY BOARD OF COMMISSIONERS	PBR-157-01IL	Operating	Inert Landfill	COUNTY ROAD 40 ADJACENT TO COUNTY MSW LANDFILL	WASHINGTON
WILKES	TANNER INERT LANDFILL	PBR-157-03IL	Operating	Inert Landfill	OFF BUS US HAY 78/GA 10 ON TANNER ROAD	WASHINGTON

Source: Georgia Department of Natural Resources' Environmental Protection Division

Additionally, there are currently 20 inert landfills operating in Richmond County.



JOINT SOLID WASTE MANAGEMENT PLAN

Nearby Solid Waste Disposal Facilities

County	Facility Name	Permit Number	Operation Status	Dominion	FacilityType Description	Facility Address	City
COLUMBIA	COLUMBIA CO-BAKER PLACE RD (SL), PH 2	036-010D(SL)	Operating	PUBLIC	Municipal Solid Waste Landfill	baker place rd 8 mi se	Appling
COLUMBIA	COLUMBIA CO-SAMPLE & SON (C AND D)	036-017D(C&D)	Operating	Private Commercial	Construction and Demolition Landfill	SR 232 3 miles east of SR 47	Appling
RICHMOND	US ARMY-FT GORDON GIBSON RD PH 1-3 (SL)	121-014D(SL)	Operating	PUBLIC	Construction and Demolition Landfill	FT Gordon, 3 mi se	Grovetown
RICHMOND	RICHMOND CO-DEANS BRIDGE RD PH 2C (SL)	121-016D(SL)	Operating	PUBLIC	Municipal Solid Waste Landfill	w of dean bridge rd	Augusta
WASHINGTON	WASHINGTON CO-KAOLIN RD S #3 (SL)	150-010D(MSWL)	Operating	PUBLIC	Municipal Solid Waste Landfill	kaolin rd 4 mi SW	Sandersville
BURKE	BURKE CO-CLARKE RD (SL)	017-002D(SL)	Operating	PUBLIC	Construction and Demolition Landfill	4 mi se Waynesboro	Waynesboro

Source: Georgia Department of Natural Resources' Environmental Protection Division

Remaining Capacities:

County	Facility Name	Permit Number	Dominion	Report ing Year	Remaining Capacity(CY)	Lincolnt onge Daily Tons	Rate of Fill(CYD)	Estimated Fill Date
RICHMOND	US ARMY-FT GORDON GIBSON RD PH 1-3 (SL)	121-014D(SL)	PUBLIC	2003	173,911.00	38.00	76.00	5/27/2018
RICHMOND	RICHMOND CO-DEANS BRIDGE RD PH 2C (SL)	121-016D(SL)	PUBLIC	2003	781,863.00	609.00	812.00	7/7/2006
WASHINGTON	WASHINGTON CO-KAOLIN RD S #3 (SL)	150-010D(MSWL)	PUBLIC	2003	1,161,004.00	58.00	262.00	6/3/2020
WASHINGTON	WASHINGTON CO-KAOLIN RD S #3 (SL)	150-010D(MSWL)	PUBLIC	2003	92,822.00	32.00	93.00	3/20/2007
COLUMBIA	COLUMBIA CO-SAMPLE & SON (C AND D)	036-017D(C&D)	Private Commercial	2003	1,567,104.00	215.00	326.00	8/27/2018

Source: Georgia Department of Natural Resources' Environmental Protection Division



Assessment of Disposal

The population of Lincoln County is expected to experience some growth during the planning period, so it is reasonable to assume that the County's current disposal programs and operations should be adequate for meeting the County's needs during the 10-year planning period.

During the planning period, the county and the city will monitor the useful life capacities of the facilities where municipal solid waste is taken. In the event a change in locations is needed, new arrangements with other nearby solid waste handling facilities will be negotiated in time to make a smooth transition to the new location. Through this process, both the county and the city will be able to adequately address the 10-year disposal capacity of solid waste originating in their respective jurisdictions.

Statement of Needs and Goals

Lincoln County's goal is to ensure that disposal facilities in the region meet regulatory requirements and can continue to support and facilitate effective solid waste handling programs for the next ten years.

- Ensure that the County continues to pursue the State's 25% reduction in the amount of solid waste received at disposal facilities;
- Negotiate mutual agreements associated with contingency disposal needs with neighboring jurisdictions.
- Monitor disposal capacities at sites where municipal solid waste is currently hauled to ensure that adequate capacity exists for disposal during the planning period.
- Develop scrap tire cleanup program to encourage proper scrap tire disposal and to enforce current illegal dumping ordinances.

Statement/Demonstration of 10-Year Disposal Capacity

The population of Lincoln County is expected to experience some growth during the planning period, so it is reasonable to assume that the County's current disposal programs and operations may need to be adjusted to meet the County's needs during the 10-year planning period. The county is considering changing the collection method in the county, so changing the collection may necessitate a change in the actual disposal of municipal solid waste. One contracted private hauler, which is the method being considered, may already have an agreement with a solid waste landfill or transfer station in place. The county will ensure that the collection arrangement that is agreed upon will include the proper capacity for future growth of the county.

The City currently disposes of their municipal solid waste at the Columbia County – Baker Place Landfill. Since this landfill seeking to close by the end of 2005, Lincoln County is in the process of determining disposal of solid waste collected in the city. The city is considering taking their



municipal solid waste to the Wilkes County Transfer Station or to the McDuffie County Transfer station, each of which do have the ten-year capacity assurance for disposing of the city's waste.

During the planning period, the county and the city will monitor the useful life capacities of the facilities where municipal solid waste is taken. In the event a change in locations is needed, new arrangements with other nearby solid waste handling facilities will be negotiated in time to make a smooth transition to the new location. Through this process, both the county and the city will be able to adequately address the 10-year disposal capacity of solid waste originating in their respective jurisdictions.

The county and each of the municipalities have adequate ability to ensure that municipal solid waste can be collected and disposed of for the next ten years.

Contingency Strategy

In the event the primary disposal of solid waste becomes interrupted within the county, each jurisdiction would direct waste to nearby landfills or transfer stations. Negotiation of such mutual agreements will need to be initiated in the near future to ensure that such an arrangement is in place. It is estimated that it would take approximately three to five days to implement an alternate disposal strategy.



6. Education and Public Involvement Element

Inventory of Public Education and Involvement

Introduction

The purpose of this element of the plan is to provide an inventory and assessment of existing educational programs and public involvement alternatives available in Lincoln County. Some of the items to be discussed are:

- Local Government Programs
- Solid Waste Advisory Committee
- Clean and Beautiful Program
- School System Programs
- Litter Control Programs
- RDC Programs
- Civic, Environmental, Church Group Programs

Existing Programs

Inventory

There are currently no active programs in place in Lincoln County for the purpose of public education or public involvement in the field of solid waste management. This plan and the goals that are a result of this plan will be the first step in implementing such a program. As noted above, the county does offer recycling opportunities at the Lincoln County Transfer Station, and the city offers such service through curbside pickup. Word-of-mouth is the primary notice given to citizens of these recycling opportunities.

Assessment

As Lincoln County implements its waste reduction strategies over the next few years, public education and involvement will play a key role in the success or failure of these strategies. In order for the county to meet its reduction goals, it must implement some of the above listed programs. The current lack of public involvement is a hindrance that must be corrected. Participation in the Clean and Beautiful Program or implementation of local school and civic programs will not only be educational, but also provide opportunities for local citizens to participate in County reduction programs.

Assessment of Public Education and Involvement

Because Lincoln County is rural, its public education and involvement program is less extensive. Public education, to a great extent will be a “word of mouth” process. The County could benefit from some of the public education resources available in the region and the State. “Word of



mouth” education is a means by which each individual citizen can assist in the educational process in Lincoln County and Lincoln and is strongly encouraged.

Statement of Needs and Goals

Lincoln County’s goal with regard to public education and involvement is to ensure that residents and businesses in the region understand the issues, needs, and goals of the solid waste management system. The community will work to develop recycling programs and scrap-tire recycling programs throughout the coming years to educate the public about the necessity for recycling and the benefits thereof.

- Educate the County on the importance of continuing to pursue the State’s 25% reduction in the amount of solid waste received at disposal facilities;
- Develop education and awareness programs of recycling, especially of paper and organic waste materials; use DCA’s environmental handouts for distribution.
- Actively participate in the Earth 911 project to gain information and educate the public about recycling programs.
- Consider spearheading a regional Keep America Beautiful affiliate which will encourage public involvement and increase public education opportunities.
- Participate in ACCG and GMA’s programs designed to give local officials the opportunity to record public service announcements about environmental issues; and
- Work with the County Extension Agent and the schools to develop educational programs and to encourage public involvement in environmental clean-up and waste reduction programs.
- Publicize and promote all proposed solid waste reduction programs through the County Extension Service.
- Publicize Scrap Tire Cleanup Project when funded and operational.



7. Land Limitation Element

Maps for many of these criteria can be found within this document.

Inventory of Land Areas

Flood Prone Areas

Inventory

Flooding is defined as the temporary covering of soil with water from overflowing stream and by run-off from adjacent slopes. Water left standing after a rainfall, however is not considered flooding, nor is water in swamps. Flooding is characterized in terms which describe the frequency and duration of the flood and the time of the year that the flood occurs.

Development within floodplain areas is discouraged with the exception of very low impact such as recreational facilities (i.e. trails, open fields, etc.). With this type of land use, the floodplains are utilized without disturbing the natural cycles of the floodplain. These areas **are not** suitable for solid waste facilities.

Floodplains serve three (3) major purposes: Natural water storage and conveyance, water quality maintenance and groundwater recharge. These three purposes are greatly inhibited when floodplains are misused or abused through improper and unsuitable land development. For example, if floodplains are filled in order to construct a building, then valuable water storage areas and recharge areas are lost thus causing unnecessary flooding in previously dry areas.

The City of Lincoln and the unincorporated areas of Lincoln County currently do not participate in the National Flood Insurance Program (NFIP). This is a federal program which allows property owners within the participating area to purchase federally back flood insurance. The Federal Emergency Management Agency (FEMA) has mapped flood prone areas of Lincoln County based on the 100 year floodplain. This is the national standard on which flood management and NFIP insurance requirements are based. These maps are available to the public through FEMA.

Assessment

No solid waste facility in Lincoln County, existing or planned, lies or may lie within, an area designated as the 100-year flood plain.



Wetlands

Inventory

Freshwater wetlands are defined by federal law as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Some examples of wetlands include marshes, swamps, bogs and similar areas. Under natural conditions wetlands help to maintain and enhance water quality by filtering out sediments and other non-point source pollutants from adjacent land uses. In addition to this, they store water and provide habitat for a variety of plant and animal species.

Land uses in wetland areas should be limited to low impact uses such as timber production and harvesting, wildlife and fisheries management, wastewater treatment, and recreation. They are not suitable for solid waste facilities. These land uses as well as others are covered in more detail under Section 404 of the Federal Clean Water Act.

Assessment

No solid waste facility in Lincoln County, existing or planned, lies or may lie within a freshwater wetland area. Therefore, they pose no threat to the integrity of these wetland areas. DNR Rule 391-3-16-.03(3)(e) establishes that solid waste landfills may constitute an unacceptable use of a wetland.

Aquifer Recharge Areas

Inventory

Recharge is the process by which precipitation infiltrates soil and rock to add to the volume of water stored in pores and other openings within them. Aquifers are soils or rocks that yield water to wells. Infiltration and recharge takes place in virtually all soils to some degree. The rate or amount of recharge varies however depending on geologic conditions of the area.

The rural, non-system water supply in Lincoln County comes from ground water sources. Lincoln County is served by the Cretaceous aquifer system. This system is primarily a system of sand and gravel that supplies the majority of the east central Georgia's groundwater.

The Georgia Department of Natural Resources has mapped all of the recharge areas in the state which are likely to have the greatest vulnerability to pollution of groundwater from surface and near surface activities of man. Development in these areas should be limited to very low impact development in which little to no area is covered with impervious surfaces such as roads, parking lots and building pads. The sub-surface integrity of these areas should also be maintained by avoiding development that may contaminate water supplies (i.e. landfills).

Assessment



In order to preserve the existing level of water quality in Lincoln County and therefore, continue to provide the citizens with an adequate, in both quantity and quality, potable water supply, no solid waste facility or landfill shall be located within two (2) miles of any aquifer recharge area in Lincoln County.

Water Quality and Water Supply Watersheds

Inventory

Currently, the City of Lincolnnton operates one surface water intake station. The intake is located on the Thurmond Reservoir in northeastern Lincoln County. The entire lake and watershed is managed by the U.S. Army Corps of Engineers. Therefore, watershed protection is incumbent on the Corps. No other water supply watersheds are located in Lincoln County. Should other intakes be considered, the County or City will comply with all required buffers and setbacks (See Appendix C).

Assessment

No solid waste facility may lie within Lincoln County’s water supply watershed or any water supply watershed in adjacent municipalities. For this reason, they pose no threat to these environmentally sensitive areas.

Water Quality Preservation

Inventory

Lincoln County and its cities currently enjoy a high level of water quality within the County. In order to preserve the existing level of water quality in the county, and to reduce any future costs of maintaining adequate water quality and/or meeting water quality standards, no solid waste facilities shall be located within wetlands, water supply watersheds or floodplains within Lincoln County.

Assessment

Additionally, no solid waste facilities shall be located within two (2) miles of any aquifer recharge area within Lincoln County, and no solid waste facilities shall be located in any HUC 12 watersheds containing an impaired waterbody as listed on the most recent Environmental Protection Agency’s (EPA) 305(b)/303(d) list or within two (2) miles of any such watershed.

Land Use Factors

Land Use Plan/Zoning Restrictions

Inventory



Both Lincoln County and the City of Lincolnton have zoning ordinances in place to govern growth within their respective jurisdictions. Additionally, as required by the Georgia Planning Act of 1989, Lincoln County and the City of Lincolnton do have a Comprehensive Land Use Plan in place.

Assessment

Based on the relatively small projected population increases for Lincoln County through 2014, the existing zoning ordinances should be adequate for controlling growth patterns in the county. For the purposes of this plan, there are currently no conflicting land use or zoning documents in effect. DNR Rule 391-3-4-.05(1)(a) requires that the site must conform to all local zoning/land use ordinances, and that written verification of such be submitted to EPD.

Heavily Developed Areas

Inventory

Lincoln County is a rural county with limited development. The most heavily developed areas are in and around the City of Lincolnton and along the lakefront. Outside of these areas, development is very limited.

Assessment

Because of the rural atmosphere in Lincoln County, there are few heavily developed area restrictions for the county when determining the location of a solid waste handling facility.

Three Mile Distance from a National Historic Site Inventory

There are no National Historic Sites in Lincoln County; however, any future development of solid waste facilities should also avoid the radii of the five National Register Sites which are the Chennault House, the Lamar-Blanchard House in Lincolnton, the Lincolnton Presbyterian Church and Cemetery, the Lincoln County Courthouse and the Matthews House.

No landfill or solid waste transfer facility may be located within a three (3) mile radius around the any historic site or national register site noted herein. Additionally, no landfill or solid waste transfer facility may be located within a three (3) mile radius around any future site or district nominated or designated to be included in the National Register of Historic Places.

Proximity to Airports

Inventory

There are currently no airports in Lincoln County. The nearest airport is located in Washington, Georgia (18 miles).



Assessment

Proximity to airports is not a significant land limitation factor in Lincoln County. The County does not have, nor will it likely have, a demand for an airport facility during the solid waste planning period.

Jurisdictional Boundaries

Inventory

Lincoln County is bordered by Wilkes, McDuffie, Elbert and Columbia Counties in Georgia and McCormick County in South Carolina. The now closed MSW landfill does not touch any of these county boundaries.

Assessment

Until any multi-jurisdictional agreements are made between Lincoln County and its neighboring counties, solid waste facilities should be located in such a way as to not be a detriment to these other jurisdictions. The county respects the siting criteria adopted by its neighboring counties. Because of the rural atmosphere of Lincoln County, and the ample supply of open land, this development criteria should not pose a problem for the county so long as any development does not conflict with a neighboring jurisdiction's siting criteria.

Access

Inventory

There are no operational landfills in Lincoln County. Any future landfills would need to be sited on an easily accessible parcel of land with direct road access that does not interfere with rail system operations. The highway system in Lincoln County is generally well maintained and covers all areas of the county.

Assessment

Access does not present a major hurdle in Lincoln County. Most parcels in the county are easily accessible by road and the roads, while not all paved, are maintained in good condition.

Maps on the following pages delineate many of the areas covered by the above criteria as of the adoption date of this plan.



Composite Map
Landfill Suitability Maps



**Table 5-16
Landfill Suitability Criteria**

	Criteria	Type
Water Protection (Geotechnical)	Major Fault Zone	Exclusionary
	Public Drinking Water Sources	Exclusionary
	Hydrologically Sensitive Area	Ranked
	Private Drinking Water Wells	Ranked
	Lakes, Rivers, and Creeks	Exclusionary
	Floodplains	Exclusionary
	Wetlands	Exclusionary and Ranked
	Steep Areas	Exclusionary
	Land Use	Airports
	Nonparticipating County Borders	Exclusionary
	Public Lands and Parks	Exclusionary
	Population Density	Exclusionary and Ranked
	Historic and Key Archaeological Sites	Ranked
	Biological/Rare Element Sites	Ranked
Host Community Concerns	Existing Pollution Sources	Ranked

Procedures for Siting Solid Waste Facilities

Any entity requesting a renewal or issuance of a solid waste handling permit from EPD must demonstrate that the facility or facility expansion is consistent with the local government’s solid waste management plan. Chapter 391-3-4 of the Georgia Department of Natural Resources’ Environmental Protection Division relates to Solid Waste Management in Georgia. 391-3-4.05 deals specifically with the siting criteria associated with siting landfills and/or solid waste transfer facilities. In addition to the criteria set forth under DNR’s regulations, the county will also use the following criteria to determine whether the issuance of the requested permit is consistent with the Solid Waste Management Plan:

- Determine whether the proposed facility or facility expansion is sited in an area deemed unsuitable according to one of the criteria list above (examples include, but are not limited to: in groundwater recharge areas; located within two miles of a municipal water supply; on soils poorly suited for development; on slopes of greater than 25 percent; in area that do not have easy accessibility to transportation networks; on urban or built up lands; on or around water bodies or wetlands; or on federal, state, or public lands; in compliance with neighboring jurisdiction’s siting criteria).
- Determine whether the proposed facility or facility expansion is sited in a location that is



consistent with any local zoning ordinances.

- Determine whether the proposed facility or facility expansion negatively impacts other natural or cultural resources of the County.
- Determine whether the proposed facility or facility expansion negatively impacts the current solid waste management infrastructure of the County;
- Determine whether the proposed facility or facility expansion negatively impacts collection capability and disposal capacity identified in the Plan.
- Determine whether the proposed facility or facility expansion negatively impacts the County's ability to contribute to the State's 25 percent waste reduction goal.
- Determine whether the proposed facility or facility expansion negatively impacts the financial viability of the County's solid waste management system.

No proposed facility or facility expansion will be sited in the County without a letter from the County Commission stating that the facility is consistent with the Solid Waste Management Plan. The County Commission will hold at least one public hearing to gather input to make this determination.

Assessment of Land Limitation

Based on the siting criteria noted above, approximately 85 percent of the land area in Lincoln County is considered unsuitable for or of limited suitability for siting a landfill or solid waste transfer facility.

The procedure described above, once put into place, will help ensure that facilities sited in the County are consistent with this Plan.

Needs and Goals

The County's goal for land limitation is to ensure that proposed solid waste handling facilities are compatible with surrounding areas and are placed in areas suitable for such developments.



8. Implementation Strategy

Summary of County Need and Goals

Lincoln County has established the following needs and goals as part of its Solid Waste Management Plan:

- To ensure efficient and effective collection of solid waste in the County over the next ten years.
- To contribute to the statewide goal of 25 percent per capita reduction in the amount of solid waste disposed.
- To ensure that disposal facilities in the region meet regulatory requirements and can continue to support and facilitate effective solid waste handling programs for the next ten years.
- To ensure that residents and businesses in the region understand the issues, needs, and goals of the solid waste
- To ensure that proposed solid waste handling facilities are compatible with surrounding areas and are placed in areas suitable for such developments.
- To achieve a balanced and affordable solid waste management plan implementation strategy, while also meeting the goals and requirements of state law.

Statement/Demonstration of 10-Year Collection Capability

Currently residents in Lincoln County contract with private waste collection companies to collect household waste at the curb. The City of Lincoln has its crews collecting weekly at the curbside and hauling it to a landfill. These have been the most economical options for Lincoln County's disposal of solid waste generated within the City and County and has served the county well over the past 10 years. Because of more concentrated growth out in the unincorporated county, the county will be evaluating new opportunities for collection. The current collection methods have also been the best option for Lincoln County in terms of preservation of water quality, historic resources and general health and welfare of its citizens. Therefore, Lincoln County will continue to export all waste generated within the County to either a transfer station or landfill outside of Lincoln County. The city and county both have the capacity to continue effective and efficient waste collection services for the residents.

Short Term Work Program (Implementation Strategy)

The Implementation Strategy for each jurisdiction covered under this Solid Waste Management Plan is attached and outlines the proposed activities to meet the goals and objectives of this plan. The first five years of the Implementation Strategy will serve as the first Short-Term Work Program.

The second half of the Implementation Strategy will be updated in accordance with the planning schedule established and revised from time to time by the Department of Community Affairs.



Appendix

- A. Implementation Strategy
- B. Local Government Transmittal Resolutions
- C. Capacity Letters

