

4.1 Description of the County

4.1.1 Background

Barrow County is located on the northwestern edge of the planning area, covering approximately 140 square miles. The county is predominantly rural. Barrow County has five municipalities, including Auburn, Bethlehem, Carl, Statham, and Winder. The largest of these is Winder. Barrow County also includes a portion of Braselton which is divided among four counties. Fort Yargo State Park is also located in the County.

4.1.2 Population

The most recent population figures from the 2000 U.S. Census show the County population to be 46,144. Table 4-1 shows the 2000 population, by census zone. The 2000 census also projected that Barrow County's population would grow 57 percent between 2000 and 2010, faster than any other County in the ten-county planning area. The 2004 population is estimated to be 57,660.

**Table 4-1
Barrow County and Census Zone Population**

City	Population
Auburn CCD, Barrow County, Georgia	15,100
Bethlehem CCD, Barrow County, Georgia	7,602
Statham CCD, Barrow County, Georgia	5,632
Winder CCD, Barrow County, Georgia	17,810
Total	46,144

Source: 2000, U.S. Census

4.1.2.1 Seasonal Population Changes

The County does not experience any significant seasonal changes in population.

4.1.2.2 Number of Households

The total number of households in the County planning area in 2000 was 17,304. Table 4-2 shows the number of single and multi-family households in the planning area from the 2000 U.S. Census.

Table 4-2
Housing Units, Barrow County

Type	Amount
Single Family Housing	12,800
Multi-Family Housing	4,504
Total	17,304

Source: 2000, U.S. Census

4.1.3 Economic Activity

As identified by the Georgia Department of Labor (2002) Table 4-3 indicates for the County the number of businesses and number of employees for each sector identified by NAISC code.

Table 4-3
Barrow County Employment by NAICS Category

BARROW COUNTY		
Industry	Number of Firms	Number of Employees
Goods Producing	255	3,190
Agriculture, forestry, & fishing	*	*
Mining	*	*
Construction	178	800
Manufacturing	72	2,185
Food Manufacturing	*	*
Beverage & tobacco mfg	*	*
Textile mills	0	0
Textile product mills	*	*
Apparel Manufacturing	7	244
Leather & allied product mfg	*	*
Wood product Manufacturing	5	44
Paper Manufacturing	*	*
Printing and related activities	*	*
Petroleum and coal products mfg	0	0
Chemical Manufacturing	4	193
Plastics & rubber products mfg	*	*
Nonmetallic mineral product mfg	9	489
Primary metal Manufacturing	*	*
Fabricated metal product mfg	8	33
Machinery Manufacturing	9	81
Computer & electronic product mfg	*	*
Electrical equipment/appliance	0	0
Transportation equipment	*	*
Furniture and related product mfg	10	99
Miscellaneous mfg industries	0	0
Service Producing	586	6,062
Wholesale trade	49	300
Retail trade	131	1,936
Transportation and warehousing	37	277
Utilities		*
Information	6	73
Finance and insurance	42	280

BARROW COUNTY		
Industry	Number of Firms	Number of Employees
Real estate and rental and leasing	37	109
Professional, scientific/tech svcs	61	269
Management: companies/enterprises	0	0
Administrative and waste svcs	58	849
Educational services	5	12
Health care and social services	43	724
Arts, entertainment and recreation	7	20
Accommodation and food services	48	977
Other services (except government)	62	222
Unclassified - industry not assigned	12	17
Total - Private Sector	853	9,269
Total - Government	46	2,447
Federal government	6	106
State government	19	220
Local government	21	2,120

Source: 2002, Georgia Department of Labor

4.2 Waste Disposal Stream Analysis

4.2.1 Inventory of Waste Disposed

In the absence of data provided by the County regarding the amount of waste disposed of from Barrow County, State data were used. The Georgia Division of Environmental Protection collects data from waste disposal facilities throughout the State, including the amount of waste disposed from each City or County. Tonnages from the fourth quarter 2002 through the third quarter of 2003, the last four quarters for which data was reported for Barrow County, show that a total of 8,221 tons of waste was disposed in construction and demolition landfills and 32,317 tons was disposed in municipal solid waste (MSW) landfills. This is equal to 3.47 pounds per day, significantly lower than the State average. Barrow County attributes the lower-than-average amount of waste to the following:

- Effective waste reduction program identified in Section 4.3;
- Illegal disposal, identified as a problem in Section 4.4.3; and

- Waste delivered to the Athens-Clarke County landfill that is identified as Clarke County waste.¹

Table 4-4 shows the results of an analysis that breaks down the waste disposed from Barrow County in MSW and C and D landfills by sector. A telephone survey of landfills in the State of Georgia, conducted by R.W. Beck, Inc., suggests that of the waste delivered to MSW landfills, 66.6 percent is MSW (generated by the commercial or residential sector), 12.3 percent is construction and demolition debris, 14 percent is industrial, and 7.1 percent is sludge or biosolids. These percentages were allocated to the amount of waste disposed of in MSW landfills from Barrow County and its municipalities.

**Table 4-4
Waste Disposed by Sector (4Q 2002 through 3Q 2003)
Barrow County**

Sector	Tons to MSW Landfill	Tons to C&D Landfill	Total Tons
Residential	12,693		12,693
Commercial	8,830		8,830
Industrial	4,524		4,524
C&D	3,975	8,221	10,733
Sludge/Biosolids	2,294		2,294
TOTAL	32,317	8,221	40,539

To breakdown the MSW portion of this by residential and commercial generators, preliminary results from the first season of sampling for the Georgia Department of Community Affairs (DCA) waste composition study were used. Results from 120 samples taken from three landfills in the State indicated that approximately 32 percent of the waste stream comes from commercial generators and 46 percent comes from residential generators. The remaining 22 percent was in transfer trailers and thus the source was not identifiable. For purposes of this analysis, it is assumed that the waste in the transfer trailers has the same residential/commercial split as the rest of the MSW delivered to the MSW landfills.

4.2.1.1 Waste Characterization

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 4-5. These results suggest that 63 percent of the residential and commercial waste disposed of in Barrow County is paper or organic material. Once the waste characterization study is complete, these percentages can be revised to be more specific to the northeast Georgia region.

¹ Because the Athens-Clarke County landfill only accepts waste from Athens-Clarke County and Oglethorpe County, it is suspected that when haulers from other counties deliver waste to this landfill, they identify the source as Athens-Clarke County.

Table 4-5
Projected Characterization of MSW Disposed from Barrow County¹

Material	Average
Newspaper	4.9%
Corrugated Cardboard	9.6%
Office	2.5%
Magazine/Glossy	3.0%
Paperboard	3.9%
Mixed (Other Recyclable)	3.3%
Other (Non-recyclable)	10.0%
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%
Other Rigid Plastic	3.9%
Total Plastic	16.9%
Clear	2.0%
Green	0.5%
Amber	1.6%
Other	0.5%
Total Glass	4.6%
Steel Cans	1.9%
Aluminum Cans	1.0%
Other Ferrous	2.9%
Other Non-Ferrous	0.8%
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%
Other Organics	0.8%

Total Organics	26.0%
Drywall	0.2%
Wood	3.1%
Inerts	0.2%
Carpet	1.4%
Other C&D	1.0%
Total C&D	5.9%
Televisions	0.1%
Computers	0.1%
Other Electronics	1.3%
Tires	0.3%
HHW	0.2%
Other Inorganics	0.9%
Total Inorganics	2.8%
Total	100.0%

¹ Based on sampling data from Georgia Waste Characterization, Fall 2003

4.2.1.2 Unique Conditions and/or Seasonal Variations

Barrow County knows of no unique conditions or seasonal variations that will dramatically change the amount of waste projected for Barrow County.

4.2.1.3 Waste Generating Disasters

Without knowing the type and degree of an unanticipated disaster, Barrow County can not project the amount or type of waste that would need to be managed. However, any additional yard trimmings that would need to be disposed would be delivered to one of the two inert landfills located in Barrow County. Any additional MSW would be collected by a private hauler and delivered to the landfill associated with that hauler.

4.2.2 Projections of Waste to be Disposed

Table 4-6 shows waste projections based on the estimated per capita waste disposed in the most recent year for which data are available. In Barrow County, approximately .79 tons were disposed of per capita per year, .63 tons per capita per year were disposed in MSW landfills. If this per capita disposal rate were to remain the same, it is estimated that 76,421 tons per year would be disposed by the end of the planning period.

**Table 4-6
Waste Disposal Projections at Current Per Capita Disposal Rate
Barrow County**

Estimated Per Capita Disposed	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Population	57,660	61,300	65,170	69,284	73,657	78,307	80,000	85,050	90,419	96,127
Tons	45,840	48,734	51,810	55,080	58,557	62,254	63,600	67,615	71,883	76,421

4.2.2.1 Per Capita MSW Disposal Reduction Goal

In 1991, the Northeast Georgia Regional Solid Waste Management Plan projected that .71 tons per capita per year were being disposed in MSW landfills from Barrow County. Although these are the best historical data available, it is important to recognize that tonnage data from 1991 when most landfills in the State did not have scales, are estimates. However if these data and the EPD data on current tonnages are used, the per capita disposal rate into MSW landfills declined by approximately 10.8 percent between 1991 and 2003. If the County is to aim for a 25 percent reduction goal from 1991 per capita disposal rates, it would aim for a per capita disposal rate of .532 tons per person per year, or 51,132 tons in MSW landfills in 2013.

4.3 Waste Reduction Element

4.3.1 Inventory of Waste Reduction Programs

In this Section, current waste reduction programs (both public and private) are inventoried and assessed to determine their effectiveness in helping the planning region meeting the State’s waste reduction goal, as well as their ability to mitigate environmental risks.

4.3.1.1 Source Reduction Programs

The County has a number of reuse programs and agencies designed to increase waste reduction. Reuse agencies in Barrow County include: Potter’s House, homeless shelter, battered women’s shelter, Benevolent Ministries, and Habitat for Humanity.

Habitat for Humanity in particular makes a significant waste reduction contribution through reuse. The organization recycles aluminum cans to generate additional funds for home construction. They also recycle Christmas trees and yard trimmings for mulch and use compost for plant food.

The commercial/industrial sector conducts waste audits, and/or waste exchanges privately.

The County also promotes source reduction through public education programs which are detailed in the Public Education and Involvement section of this Plan.

4.3.1.2 Recycling

Residents in unincorporated Barrow County currently receive curbside recycling service through Robertson Sanitation. The program currently recycles No. 1 and 2 plastics, steel and aluminum cans, glass, newspaper, magazines, and junk mail.

All County residents currently have access to two County operated, unmanned drop-off centers that accept corrugated cardboard, newsprint, and magazines.

The City of Auburn contracts with a private hauler to provide weekly curbside collection for residents. Businesses in Auburn contract with private haulers for container collection.

The City of Statham uses the County drop-off sites.

The City of Winder contracts with BFI, Inc. to collect glass, cans, paper, and #1 and #2 plastic beverage bottles.

Local private businesses offer citizens the opportunity to recycle batteries, scrap metal, white goods (without freon), aluminum cans, motor oil, antifreeze, and copper.

In addition, Keep Barrow Beautiful works with all Barrow County schools to promote recycling of newspaper and school/office paper. All schools have recycling bins for newspaper and office/school paper.

Commercial/industrial recycling is handled privately with each business contracting individually for recycling services.

Financial incentives are the motivator for the Barrow County public school system and the Keep Barrow Beautiful program. Both entities generate additional funding through recycling. The school system receives funds for newspaper and computer ink cartridge recycling. Keep Barrow Beautiful generates additional funding from newspaper recycling.

Keep Barrow Beautiful also sponsors the Great American Cleanup event, two Saturdays per year, where residents can bring tires, scrap metal, telephone books, cell phones, ink jet cartridges, corrugated cardboard, magazines, and newsprint.

Table 4-7 shows the programs currently available in Barrow County. Table 4-8 lists private entities that accept materials from the planning area for recycling and reuse.

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Table 4-7
Recycling Programs in Barrow County (2003)

Type of Program	Jurisdictions	Population Served	Operated by	Materials Accepted
Curbside Recycling	Unincorporated County	N/A	Robertson Sanitation	No. 1 Plastics
				No. 2 Plastics
				Steel Cans
				Aluminum Cans
				Glass
				Newspaper
				Magazines
Curbside Recycling	City of Winder	12,000	BFI, Inc.	Glass
				Cans
				Paper
				No. 1 Plastics
				No. 2 Plastics
Curbside Recycling	City of Auburn	15,100	Private Haulers	No. 1 Plastics
				No. 2 Plastics
				Steel Cans
Unstaffed Drop-off Centers	All County Residents	16,354 households	Keep Barrow Beautiful and haulers	Newspaper
				Magazines
				Corrugated
Great American Cleanup Days	All County Residents	46,144	Keep Barrow Beautiful	Tires
				Scrap Metal
				Telephone Books
				Cell Phones
				Ink Jet Cartridges
				Corrugated Cardboard
				Magazines
				Newsprint
Commercial Recycling	City of Auburn Businesses	N/A	Private Haulers	N/A
Commercial Recycling	All County Businesses	N/A	Private Haulers	N/A

**Table 4-8
Businesses that Accept Recyclables from the Planning Area**

Name	Location	Accepts Material from:		Materials Accepted
		Geographic Area	Sector	
Collins Auto Salvage, Inc.	Auburn, GA	Barrow County	Residential and Commercial	metals, ferrous metals, autos, aluminum cans, metal appliances
Orr's Recycling Center	Winder, GA	Barrow County	Residential and Commercial	aluminum cans, non-ferrous metals

Source: Georgia Department of Community Affairs

4.3.1.3 Yard Trimmings Program and Facilities

Since neither the County nor Robertson Sanitation offer curbside pick up for yard trimmings, residents are encouraged to mulch and compost yard trimmings. Keep Barrow Beautiful (KBB) provides residents with home composting bins at a nominal cost. Any resident wishing to home compost can contact KBB to receive a composting bin. KBB provides educational materials on home composting free of charge. Composting demonstrations are also conducted by the Barrow County Public School System and the Barrow County Cooperative Extension Service.

The County's Roads and Bridges Department collects limbs and stumps and grinds them into mulch which is available to County business and residents at no charge.

The Roads and Bridges Department also grinds Christmas trees collected by Keep Barrow Beautiful during its annual "Bring One for the Chipper" event. The mulch generated by this event is sold by J. R.'s Mulch Factory with the proceeds going to KBB for use in beautification and education projects.

The County also has several inert landfills where yard trimmings can be taken. In the City of Auburn, collection of yard trimmings is provided on an on-call basis with private haulers.

The City of Winder picks up leaves and limbs. The leaves are disposed of on City property per EPD standards. Limbs are mulched and the mulch is stockpiled and provided to the public at no charge. Table 4-9 summarizes the County's yard trimmings programs.

**Table 4-9
Yard Trimmings Programs (2003)**

Program	Owner/Operator	Jurisdictions Served	Materials Accepted	Final Disposition
Home composting educational program	Keep Barrow Beautiful	Barrow County	Vegetative food, yard trimmings	Residents pay \$15 per bin and make and use compost
Municipal Limb and Stump Grinding	Barrow County Roads and Bridges Department	Barrow County	Limbs and stumps	Mulched and offered to businesses and residents at no charge
Bring One for the Chipper	Barrow County Roads and Bridges Department	Barrow County	Christmas trees	On-site mulching/grinding for retail sale. Proceeds go to KBB.
Drop-off Program	Barrow County	Barrow County	Yard trimmings	Inert landfilling
Curbside Collection	Private Hauler	City of Auburn	Yard trimmings	N/A
Curbside Collection	City of Winder	City of Winder	Leaves and limbs	Leaves are disposed per EPD standards on City property. Limbs are mulched and mulch is given free to the public.

4.3.1.4 Items Requiring Special Handling

Keep Barrow Beautiful maintains a list of private companies that accept items requiring special handling throughout the year. Items accepted by these companies include:

- Lead acid batteries;
- Tires;
- White goods;
- Motor oil;
- Antifreeze; and
- Scrap metal.

Residents can also dispose of tires and scrap metal during Keep Barrow Beautiful's annual Great American Cleanup days which are held twice each year.

Barrow County's Fleet Maintenance Department collects scrap metal and tries retrieved from illegal dumping in the County. The County recycles scrap metal with a private business. Tires are recycled by an Atlanta company, Recovery Technologies.

Keep Barrow Beautiful has plans to partner with the Barrow County Fire and Emergency Hazardous Materials Team to start a mercury thermometer recycling program in 2004. Table 4-10 shows programs in the County to handle these materials. KBB also plans to join the City of Winder in a computer recycling program also scheduled to begin in 2004.

**Table 4-10
Programs for Materials Requiring Special Handling (2003)**

Material	Targeted Sector(s) ¹	Management Strategy	Final Disposition of Material(s)
Tires	R	Recovered by County Fleet Maintenance Department through illegal dumping. KBB also collects tires on two annual Great American Cleanup days.	County recycles tires with Recovery Technologies in Atlanta
Scrap Metal	R	Collected by private company and also recovered by County Fleet Maintenance Department through illegal dumping	Fleet Dept. recycles scrap metal with a private company and tires with Recovery Technologies in Atlanta
Electronics	R	County plans to enter into a joint program with the City of Winder in 2004	To be determined
Mercury	R	County plans to partner with the Fire and Emergency Hazardous Materials team in a joint program in 2004	To be determined
Batteries	R	Collected by private company	N/A
White Goods	R	Collected by private company	N/A
Motor Oil	R, C	Collected by private company	N/A
Antifreeze	R, C	Collected by private company	N/A

¹ R= Residential, I=Industrial, C=Commercial, CD= C&D
Source:

4.3.1.5 Contingency Strategy

The County contracts with private haulers. Should their service become interrupted due to a disaster or other unforeseeable occurrence, there are a number of other companies that the County could employ on short notice.

In an emergency situation, collection could be performed on an interim, short-term basis by the County's Roads and Bridges Department, the I.W. Davis crews with

whom the County contracts, and the Marshall's Department which normally handles code enforcement.

Since Barrow County is located in close proximity to recycling locations in Walton, Gwinnett and Clarke Counties, recyclables could be transported to one of the recycling facilities in these counties by one of the aforementioned County Departments.

Barrow County estimates that the length of time required to bring a contingency option on line would be determined by the Chairman of the Barrow County Board of Commissioners who serves as the County Manager. Having at his disposal a highly trained and competent staff to guide and inform him, the length of time to formulate a plan should be one to three weeks.

4.3.2 Assessment of Waste Reduction Programs

Based on the information reported in the Waste Disposal Stream Analysis, results indicate that 63 percent of the residential and commercial waste disposed of in landfills sampled statewide is paper or organic material. Based on these results, it appears that strengthening or expanding waste reduction programs targeting paper and organic waste might lead to the diversion of additional materials from the Barrow County waste stream.

4.3.3 Needs and Goals

Based on the inventory and assessment, adequacy of current programs and other programmatic options, including costs, Barrow County has developed the following waste reduction needs and goals:

- Ensure that the County continues to pursue the State's 25% reduction in the amount of solid waste received at disposal facilities;
- Increase emphasis on recycling programs targeting paper and other recyclables; and
- Operate financially sustainable waste reduction programs for the next 10 years.

4.4 Collection Element

4.4.1 Inventory of Existing Collection Programs

Barrow County residents can have their waste and recyclables collected by Robertson Sanitation, who has a permit to operate in the County. Businesses contract for commercial collection with either Robertson Sanitation or BFI Sanitation.

Barrow County offers two unstaffed locations for recycling of magazines, newspapers, and corrugated cardboard.

Residential curbside and recycling pick up is arranged between the residential hauler and the resident. Commercial collection is arranged between the individual business

and their preferred hauler. Unstaffed recycling centers are managed by Keep Barrow Beautiful and Robertson Sanitation and SP Recycling Corp.

Yard trimmings are not collected.

The City of Winder offers residents curbside collection of solid waste once per week. The City also offers curbside collection of yard trimmings.

Table 4-11 identifies the haulers operating in the County and Table 4-12 describes the collection programs operating in the County.

**Table 4-11
Haulers Operating in Barrow County**

Hauler Name	Hauler Address	Sector Served ¹	Jurisdiction(s) Served	Arrangement ²
Robertson Sanitation	51 Patrick Mill Road, SW Winder, GA 30680 (770) 867-4367 Hal Risher, Jr. General Manager	R, C	Barrow County	Operates under permit from Barrow County and contracts directly with residential and commercial customers.
BFI Sanitation	75 Curtis Road Lawrenceville, GA 30045 (678) 407-6125	C	Barrow County	Operates under permit from Barrow County and contracts directly with commercial customers.
SP Recycling Corp.	384 Maltbie Street Lawrenceville, GA 30045 (770) 995-0014 LuAnn Chambers, Division Manager	R, C	Barrow County	Contracts with Barrow County to collect recyclables from County centers.
City of Winder	83 W May St, Winder, GA 30680 (770) 867-7121	R	City of Winder	Residents contract with the City for MSW and yard waste curbside pick-up.

1 R= Residential, I=Institutional, C= Commercial, CD= C&D

2 i.e., contract with local government, franchise agreement with local government, independent contract with generators, etc.

Source: Barrow County Solid Waste Department

**Table 4-12
Inventory of Collection Programs**

Type	Collector	Program Description	Jurisdictions Served	Sectors Served ¹	Contractual Arrangements
Curbside Collection	Private Hauler	Curbside collection of garbage and recyclables.	Barrow County	R	Residents contract directly with haulers

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Type	Collector	Program Description	Jurisdictions Served	Sectors Served ¹	Contractual Arrangements
Curbside Collection	City of Winder	Curbside collection of garbage	City of Winder	R	Residents contract with the City
Curbside Collection	BFI, Inc.	Curbside recyclables collection	City of Winder	R	Residents contract with BFI
Curbside Collection	City of Winder	Curbside Yard Waste Collection	City of Winder	R	Residents contract with the City
Unstaffed Drop-off	Robertson Sanitation and SP Recycling Corp.	Open 7 days a week for residential recyclables.	Barrow County	R	Contract with County to managed unmanned sites.
Commercial Collection	Private Haulers	Pick up of commercial refuse	Barrow County	C	Entities arrange for collection with hauler of choice.
Commercial Collection	Private Haulers	Container Pick up	City of Winder	C	Entities arrange for collection with hauler of choice.

4.4.1.1 Contingency Strategy

Barrow County contracts with private haulers. Should this service become interrupted, there are a number of other solid waste haulers that the generators in the County could employ. The County is currently in the process of finalizing a Solid Waste Ordinance that will clearly define the guidelines for putting a new vendor in place.

Should another vendor not be immediately available, Barrow County has a privately owned landfill with the County as an additional resource. For collection in an emergency situation, Barrow County's Roads & Bridges Department, the I.W. David crews with whom the County contracts, and the Marshall's Department, which handles code enforcement, could all be relied on in the short-term interim.

The amount of time required to bring a contingency plan online would be determined by the Chairman of the Board who serves as the County Manager. The Chairman has a highly trained and competent staff to guide and inform him so the estimated time would be about two to three weeks.

The City of Winder has been offered the use of the City of Monroe's transfer station in the event of an emergency situation.

4.4.2 Assessment of Collection Programs

Existing collection programs are sufficient to handle the solid waste and recyclables generated in the County. Both residents and businesses have the option of contracting directly with a private hauler or using one of the unstaffed collection centers. However, the illegal dumping problem in the County may be improved if the County had more control over the collection system. The new solid waste ordinance that is being finalized will also give the County greater enforcement authority.

4.4.3 Inventory of Illegal Dumping/Littering

Illegal dumping is a problem in Barrow County. Since the County does not contract directly with a solid waste vendor, residents are free to choose their method of garbage disposal which, unfortunately, often leads to residents dumping their trash illegally.

The City of Winder experiences illegal dumping on a very infrequent basis and does not deem it to be a significant problem. The City has a \$300 per incident fine for illegal dumping.

4.4.4 Assessment of Programs to Address Illegal Disposal

The existing collection system and programs to address illegal disposal do not fully control the problem.

The City of Winder's strategy of fining offenders has kept illegal dumping to a minimum.

4.4.5 Needs and Goals

Barrow County's goal for collection is to finalize and implement a new solid waste ordinance that will allow haulers to compete on price and service. The new ordinance will also allow the County more enforcement authority.

4.5 Disposal Element

4.5.1 Inventory of Solid Waste Disposal Facilities

Barrow County has one MSW landfill operating in the County. The Oak Grove landfill (Permit number 007-020D (SL)) is owned and operated by Republic Waste. Most of the waste from the County is disposed of at Oak Grove. Significantly less amounts of municipal solid waste from Barrow County are disposed at other landfills, including the Richland Creek landfill in Gwinnett County, the Pine Bluff landfill in Cherokee County, and the Eagle Point landfill in Forsyth County.

The majority of the construction and demolition debris in Barrow County is delivered to US 78 Construction and Demolition Debris Landfill in Walton County and in Oglethorpe County's C&D landfill.

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The City of Statham transports municipal solid waste to the City of Monroe transfer station. The City of Winder uses the Oak Grove landfill which is privately owned and operated by Republic.

Table 4-13 identifies the landfills where waste from Barrow County is likely to go during the planning period.

**Table 4-13
Inventory of Disposal Facilities and Thermal Treatment Technologies to be Used During
the Planning Period (2004 – 2013)**

Facility Name	Jurisdiction(s) Using Facility	Physical Address	Owner/ Operator	Facility Type	Types of Waste Accepted	Year Expected to Reach Capacity
Oak Grove Landfill	Barrow County and Municipalities	Off SR 324 3 mi SW of Winder	Republic Waste	MSWL	MSW	11/1/2008
Cherokee County Pine Bluff Landfill	Barrow County and Municipalities	E Cherokee Dr Between SRRr5 & SRRr20 Canton, GA	USA Waste, Inc.	MSWL	MSW	1/1/2059
BFI East Dekalb Landfill	Barrow County and Municipalities	Off Scales Rd., Lithonia, GA	BFI	C&D	C&D	2/28/05
APAC/GA-DONZI LN PH 5A (L)	Barrow County and Municipalities	ES Moreland AVE, S SHP Center Atlanta, GA		C&D	C&D	8/31/2014
BFI Hickory Ridge Landfill Dekalb County	Barrow County and Municipalities	I-285 & Moreland Ave Atlanta, GA	BFI	MSWL	MSW	6/29/05
Rogers Lake Road C&D Landfill	Barrow County and Municipalities	Ws Rogers Lake Rd N Maddox Rd Lithonia	Apollo Waste Industries	C&D	C&D	4/10/2008
Forsyth County Eagle Point Landfill	Barrow County and Municipalities	Hightower Road Cumming, GA		MSWL	MSW	11/1/2060
BFI Richland Creek Rd Landfill Gwinnett County	Barrow County and Municipalities	Off Richland Crk Rd NW of Buford	BFI	MSWL	MSW	1/29/2021

Facility Name	Jurisdiction(s) Using Facility	Physical Address	Owner/ Operator	Facility Type	Types of Waste Accepted	Year Expected to Reach Capacity
Oglethorpe County C&D Landfill	Barrow County and Municipalities	US 78 One MILEo Crawford	Oglethorpe County	C&D	C&D	2014
US 78 Construction and Demolition Landfill	Barrow County and Municipalities		Walton County	C&D	C&D	6/3/2049
Chambers R&B Landfill	Barrow County and Municipalities	705 Frank Bennett Road, Homer GA	Private	MSWL	MSW	5/21/2040

4.5.1.1 Assurance of 10-Year Capacity

Residents and businesses in Barrow County contract directly with private haulers to dispose of waste generated in the County so the County does not play an active role in ensuring disposal capacity in the County. However, based on the landfills used by private haulers in the County and the remaining capacity in these landfills, it is assumed that most of the solid waste will continue to go to Oak Grove landfill and Pine Ridge landfill, as indicated in Table 4-14.

The County has obtained a letter of capacity assurance from Republic Services, Inc., the owner and operator of the facilities ensuring that both facilities have in excess of 10 years of disposal capacity which will take the County beyond the 10 year planning period. This letter is included at the end of this Section.

**Table 4-14
Disposal Capacity Assurance Summary (2004-2013)**

Barrow County	Year 1 (2004)	Year 2 (2005)	Year 3 (2006)	Year 4 (2007)	Year 5 (2008)	Year 6 (2009)	Year 7 (2010)	Year 8 (2011)	Year 9 (2012)	Year 10 (2013)
Amount of Waste	45,840	48,734	51,810	55,080	58,557	62,254	63,600	67,615	71,883	76,421
Amount to Oak Grove Landfill ¹	36543.41	38850.26	41302.73	43910.01	46681.88					
Amount to Pine Ridge Landfill						49628.73	50701.77	53902.37	57305.02	60922.47
Amount to US 78 C&D Landfill	9296.43	9883.28	10507.17	11170.45	11875.60	12625.26	12898.23	13712.45	14578.06	15498.32

¹ This assumes all projected MSW will be delivered to Oak Grove. In actuality, private haulers in the County are likely to deliver some waste to other landfills in the area.

4.5.1.2 Contingency Strategy

In the event that the landfills where Barrow County waste currently goes becomes unavailable, private haulers collecting the waste would be responsible for finding alternatives.

The amount of time required to bring a contingency plan online would be determined by the Chairman of the Board who serves as the County Manager. The Chairman has a highly trained and competent staff to guide and inform him so the estimated time would be about two to three weeks.

The City of Winder has access to the City of Monroe’s transfer station in the event of an emergency.

4.5.2 Assessment of Disposal

With ten years of disposal capacity assured, the County’s current disposal practices and facilities should be sufficient to carry the County through the next ten-year planning period.

4.5.3 Statement of Needs and Goals

Barrow 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.

4.6 Education and Public Involvement Element

4.6.1 Inventory of Education and Public Involvement

The bulk of Barrow County’s education and public involvement efforts are conducted by Keep Barrow Beautiful (KBB). KBB works with all public schools within the County to promote newsprint and office classroom paper recycling. In 2003, KBB received a grant from the American Forest and Paper Association (AF&PA) and Keep America Beautiful to aid in promoting 100% classroom recycling of these items. Corporate sponsors provided recycling bins for each classroom in two pilot schools.

KBB also set up a test pilot program with one local high school to test the feasibility of recycling corrugated cardboard. KBB plans to conduct a waste audit to prove to other area schools that recycling will be cost effective by diverting enough garbage out of the normal waste stream to pay for itself so that all schools will recycle corrugated cardboard.

KBB has also tried to become a member of more area industry boards in an effort to develop working relationships with local industry.

KBB also produces and distributes free educational materials promoting home composting. Residents can obtain home composting bins from KBB for a nominal fee. Composting demonstrations are conducted by KBB in the school system

Table 4-15 highlights the public education and involvement opportunities within the County.

Table 4-15
Existing Environmental Education Initiatives

Program/Activity	Jurisdictions Covered	Operated by	Target Audience	Description of Impact
School Paper Recycling Program	Barrow County	Keep Barrow Beautiful	Public Schools	Diverts newspaper and classroom/office paper from waste stream
Pilot School Cardboard Recycling Program	Barrow County	Keep Barrow Beautiful	Public Schools	Diverts corrugated cardboard from the waste stream
Home Composting Program	Barrow County	Keep Barrow Beautiful	Residents	Diverts yard waste and vegetation from the waste stream

4.6.2 Assessment of Education and Public Involvement

Keep Barrow Beautiful provides a good resource to the County to develop and disseminate information about public education on waste reduction. KBB has focused its public education efforts and programs on paper and other recyclables, the two

largest components in the waste stream still being disposed. A Citizen's Advisory Committee offers the opportunity for public involvement on waste reduction and recycling issues in the County.

4.6.3 Statement of Needs and Goals

Barrow County's goal with regard to public education and involvement is to ensure that residents and businesses in the County understand the issues, needs, and goals of the solid waste management system.

4.7 Land Limitation Element

4.7.1 Inventory of Land Areas

In 1997, the Northeast Georgia Solid Waste Management Authority conducted a regional landfill site suitability study. As part of this study, the ten counties developed siting criteria and screened all land within the ten-county area to determine the suitability of all sites for landfill development.

Figure 4-1 shows a map of the ten-county region with areas shaded that are considered unsuitable or of limited suitability for a solid waste disposal facility. These determinations were made based on water protection and land use criteria and host community concerns established by the Northeast Georgia Regional Solid Waste Management Authority. Table 4-16 identifies the criteria and whether the presence of these factors excluded a site altogether or lowered the ranking of the site for landfill suitability.

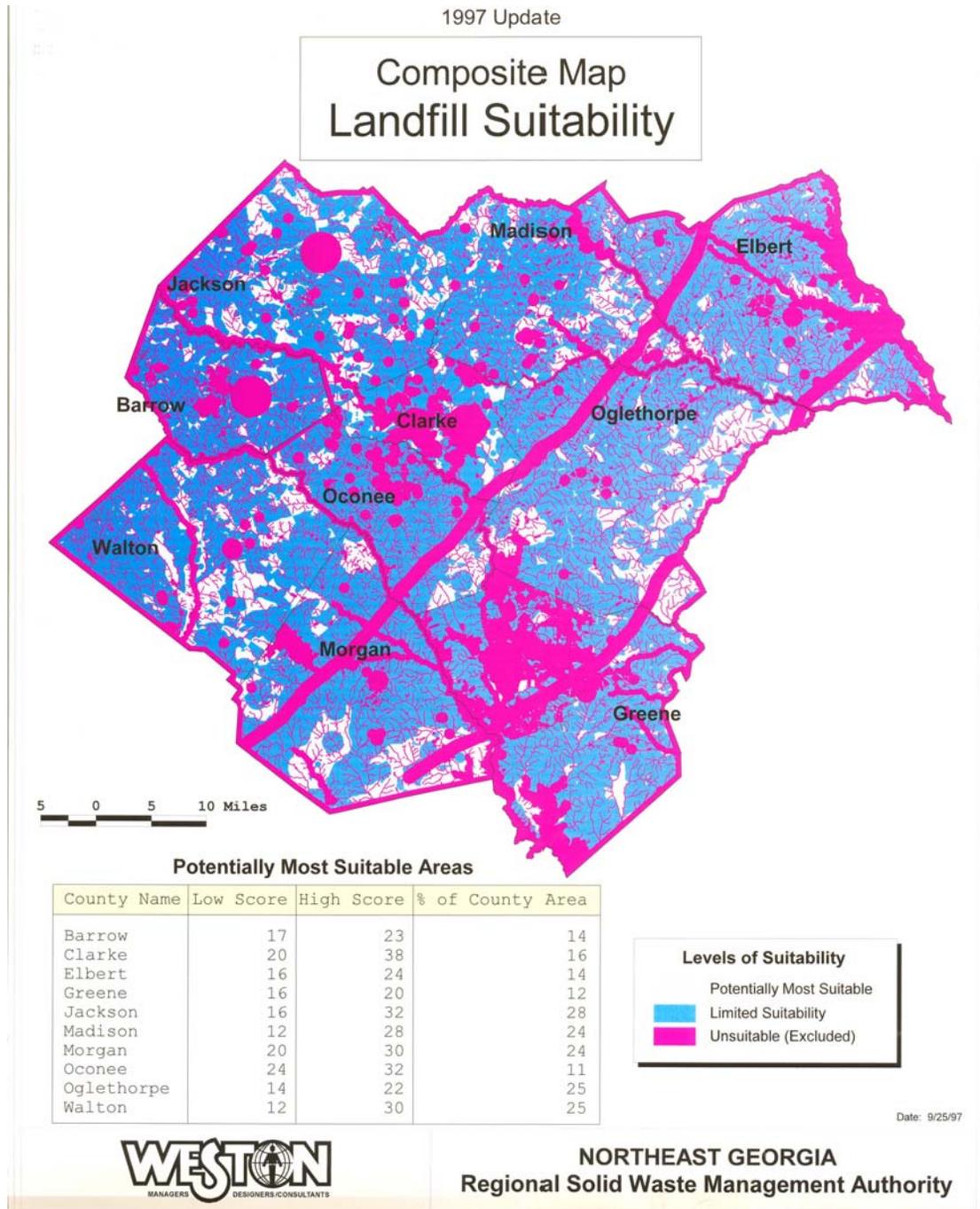


Figure 4-1

**Table 4-16
Regional 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
Land Use	Steep Areas	Exclusionary
	Airports	Exclusionary
	Nonparticipating County Borders	Exclusionary
	Public Lands and Parks	Exclusionary
	Population Density	Exclusionary and Ranked
	Historic and Key Archaeological Sites	Ranked
Host Community Concerns	Biological/Rare Element Sites	Ranked
	Existing Pollution Sources	Ranked

Barrow County does not currently have a zoning ordinance that would limit where solid waste handling facilities could be sited in the County. The County has plans to revise an existing ordinance to address special land uses.

4.7.2 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. The County will 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 (in groundwater recharge area; located within two miles of a municipal water supply; on soils poorly suited for development; on slopes of greater than 25 percent; presence of major highways, roads, and airports; on urban or built up lands; water bodies or wetlands; or on federal, state, or public lands).
- Determine whether the proposed facility or facility expansion is sited in a location that is consistent with 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.

4.7.3 Assessment of Land Limitation

Approximately 86 percent of the land area in Barrow County is considered unsuitable or of limited suitability for siting a landfill, according to the study conducted by the Northeast Georgia Regional Solid Waste Management Authority.

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

4.7.4 Needs and Goals

The goal for the Land Limitation element of the Solid Waste Management Plan is to ensure that proposed solid waste handling facilities are compatible with surrounding areas and are placed in areas suitable for such developments.

4.8 Implementation Strategies

4.8.1 Summary of County Need and Goals

Barrow 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.

4.8.2 Statement/Demonstration of 10-Year Collection Capability

Barrow County's has collection capability for the next ten years. Residents and businesses will continue to contract with private firms but all generators will have the option of using the County convenience center at the landfill. Barrow County will evaluate options to ensure that all residents and businesses have at the source collection in an effort to reduce illegal disposal. The cities in the County will continue to provide collection either through its own forces or through a contract with a private firm.

4.8.3 Statement/Demonstration of 10-Year Disposal Capacity

Residents and businesses in Barrow County contract directly with private haulers to dispose of waste generated in the County so the County does not play an active role in ensuring disposal capacity in the County. However, based on the landfills used by private haulers in the County and the remaining capacity in these landfills, it is assumed that most of the solid waste will continue to go to Oak Grove and Pine Ridge landfills. The County has obtained a letter of capacity assurance from Republic Services, Inc., assuring that both of these facilities have in excess of 10 years disposal capacity.

4.8.4 Short Term Work Program (5-Year List of Programs/Work Activities)

Table 4-17 indicates the five year implementation strategy to meet the County's needs and goals, by element.

Section 4

**Table 4-17
Northeast Georgia
Solid Waste Management Plan Short-Term Work Program
2004 – 2008
Barrow County**

Action	04	05	06	07	08	Responsible Party	\$\$	Possible Funding
AMOUNT OF WASTE ELEMENT								
<i>Goal: To determine the amount and composition of solid waste generated in the region in order to establish a sound information base upon which to make management decisions and determine if state and local goals are met.</i>								
1. The County will use EPD's disposal capacity reports and DCA's waste characterization data to quantify the amount and type of waste disposed in the County.	x	x				County		
COLLECTION ELEMENT								
<i>Goal: To ensure efficient and effective collection of solid waste in the region over the next ten years.</i>								
1. Residents can continue to contract with a private firm for residential curbside collection of solid waste.	x	x	x	x	x	County/Private Firm	N/A (Current cost not available at time of writing)	County Solid Waste Fund
2. City of Auburn will continue to contract with private firm for collection of residential and commercial solid waste.	x	x	x	x	x	City of Auburn/Private Firm	N/A	User Fees
3. City of Bethlehem will continue to contract with private firm for collection of residential and commercial solid waste.	x	x	x	x	x	City of Bethlehem/Private Firm	N/A	User Fees
4. The County will continue to strengthen enforcement of new illegal disposal ordinance as funding allows.	x	x	x	x	x	Barrow County	\$	State enforcement grant

Section 4

**Table 4-17
Northeast Georgia
Solid Waste Management Plan Short-Term Work Program
2004 – 2008
Barrow County**

Action	04	05	06	07	08	Responsible Party	\$\$	Possible Funding
5. City of Statham will continue to provide public collection of residential and commercial solid waste.	x	x	x	x	x	City of Statham	N/A	User Fees
6. City of Carl will continue to contract with private firm for collection of residential and commercial solid waste.	x	x	x	x	x	City of Carl/Private Firm	N/A	User Fees
7. City of Winder will continue public collection of residential and commercial solid waste.	x	x	x	x	x	City of Winder	N/A	User Fees
8. City of Winder will investigate the development of a curbside/drop-off system for recyclables.	x	x				City of Winder/Private Firm	(See Waste Reduction)	User Fees
WASTE REDUCTION ELEMENT								
<i>Goal: To ensure a 25 percent reduction in the amount of solid waste received at disposal facilities and to sustain waste reduction programs for the next 10 years.</i>								
1. County will continue residential recyclables collection through either public or private means with curbside and/or staffed drop-off sites.	x	x	x	x	x	County or Private Firm	Curbside-\$1.50-\$2.50/house/mo. Drop-off - \$10K/site/year	Solid Waste Fund
2. City of Winder will continue to contract with private firm for curbside collection for recyclables.	x	x	x	x	x	City of Winder/Private Firm	\$1.50-\$2.50/house/mo.	Solid Waste Fund

**Table 4-17
Northeast Georgia
Solid Waste Management Plan Short-Term Work Program
2004 – 2008
Barrow County**

Action	04	05	06	07	08	Responsible Party	\$\$	Possible Funding
3. County will determine the feasibility of private or public operation of a yard waste mulching site.	x	x	x	x	x	County/Private Firm	\$15K/year	Solid Waste Fund
4. County will encourage commercial recycling.	x	x	x	x	x	County	\$5K/year	Solid Waste Fund
5. Keep Barrow Beautiful will continue to promote recycling and waste reduction activities in the County.	x	x	x	x	x	Keep Barrow Clean and Beautiful	---	---
DISPOSAL ELEMENT								
<i>Goal: 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.</i>								
1. County will continue to deliver waste to private landfill.	x	x	x	x	x	County	\$24/ton (est. \$51K + 5% per year)	Solid Waste Fund
2. County will develop education and enforcement programs concerning illegal dumping.	x	x				County	\$10K/year	Solid Waste Fund/Donations
3. All municipalities will cooperate with the county for disposal option.	x	x	x	x	x	Municipalities	See costs for counties	---

Section 4

**Table 4-17
Northeast Georgia
Solid Waste Management Plan Short-Term Work Program
2004 – 2008
Barrow County**

Action	04	05	06	07	08	Responsible Party	\$\$	Possible Funding
PUBLIC EDUCATION AND INVOLVEMENT ELEMENT								
<i>Goal: To ensure that residents and businesses in the region understand the issues, needs, and goals of the solid waste management system.</i>								
1. Barrow County will continue to fund the Keep Barrow Beautiful Program for local public education.	x	x	x	x	x	County/KBB	\$21K (from KBB budget)	Solid Waste Fund
2. County will participate in a regional clearinghouse of information on public education and involvement.	x	x	x	x	x	County/RDC	Part of \$20K total, on per capita basis	Solid Waste Fund
3. Citizens Advisory Committee will continue to address public education issues associated with recycling and waste reduction in the County.	x	x	x	x	x	Advisory Committee	---	---
4. County will continue to work with private disposal firm to address public concerns about solid waste.	x	x	x	x	x	County/Advisory Committee/Private Firm	---	---
5. All municipalities will work with the County for coordination of public education activities.	x	x	x	x	x	Cities/County		

Table 4-17
 Northeast Georgia
 Solid Waste Management Plan Short-Term Work Program
 2004 – 2008
 Barrow County

Action	04	05	06	07	08	Responsible Party	\$\$	Possible Funding
LAND LIMITATION ELEMENT								
<i>Goal: To ensure that proposed solid waste handling facilities are compatible with surrounding areas and are placed in areas suitable for such developments.</i>								
1. County will ensure sufficient land use controls are in place.	x	x	x	x	x	County	---	---
2. County will review all permits requests for new solid waste handling facilities or expansions to determine consistency with SWMP.	x	x	x	x	x	County, NEGRSWMA	---	---

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Barrow County Board of Commissioners

233 East Broad Street Winder Georgia 30680 Phone: (770) 307-3010 Fax: (770) 307-3141

Walter E. Elder, III
Chairman

Jerry Lampp
District 1

W.J. "Bill" Brown
District 2

James Roger Wehunt
District 3

Norma Jean Brown
District 4

David Dyer
District 5

Thad Brasfield
District 6

February 16, 2004

Mr. Joseph Tichy
Special Projects Coordinator
Northeast Georgia Regional Development Center
305 Research Drive
Athens, Georgia 30605-2795

Re: Northeast Georgia Regional Solid Waste Management Plan Update

Dear Joe:

This letter serves as confirmation of Barrow County's commitment to participate in the Northeast Georgia Regional Solid Waste Management Plan Update.

The County understands that the update will be a multi-jurisdictional plan covering the ten counties that comprise the Northeast Regional Solid Waste Management Planning Authority and address the following five core planning elements:

1. Waste Reduction;
2. Collection;
3. Disposal;
4. Land Limitation; and
5. Education and Public Involvement.

The plan will also include a waste stream analysis and implementation schedule.

The County understands that all jurisdictions that agree to plan together will maintain the planning relationships established in the approved and adopted plan throughout the planning period, including the five-year Short-Term Work Program update.

The County further understands that all participating local governments must adopt the Solid Waste Plan, the Short-Term Work Program, Plan Amendments and/or Plan Updates before the DCA will make an eligibility determination for any of the local governments participating in the plan. If the County decides to break from the planning arrangement, we understand that we will be responsible for preparing our own individual solid waste management plan.

The County agrees to participate in two public hearings held on behalf of all participating jurisdictions at a central location in the area served by the plan, following all County specific public hearing notice procedures for due notification of the hearings.

Sincerely,

A handwritten signature in black ink that reads 'Larry P. Price'.

Larry P. Price, Chief of Operations
BARROW COUNTY BOARD OF COMMISSIONERS





967 Carl Bethlehem Road Winder, GA 30680 (770) 867-2499 FAX (770) 307-0934

October 15, 2004

Ms. Shannon Navarre
Barrow County Board of Commissioners
233 E. Broad Street
Winder, GA 30680

Dear Ms. Navarre:

The Oak Grove Landfill, Permit No. 007-020D(SL) and Pine Ridge Landfill, Permit No. 018-008D(MSWL) are owned and operated by Republic Services of Georgia, Limited Partnership have in excess of 10 years of disposal capacity.

The landfills are open to the public and accept waste that is acceptable under state and federal regulations from customers in good standing. Barrow County as a customer in good standing of the landfills will be allowed to dispose of the approximate 15,000 tons of waste generated annually for the next ten years at Oak Grove and Pine Ridge as long as they maintain their current status.

If you need any additional information, please give me a call at (770) 867-2499.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark R. Allen". The signature is fluid and cursive, with a large initial "M" and "A".

Mark R. Allen
Area Landfill & Transfer Station Manager