

INTRODUCTION

This Plan was prepared in accordance with North Carolina General Statute 130A-309.09A for the purpose of meeting local solid waste needs and protecting public health and the environment (APPENDIX F-1, page 62).

Alamance County's thorough implementation of this Solid Waste Management Plan and the updates that will follow every three years provides for the management of solid waste and its reduction for the next ten years. The current three-year update covers July 1, 2009 through June 30, 2019.

D-1. Planning Area

MUNICIPALITY	CONTACT	TITLE
Alamance County	Greg Thomas	Solid Waste Director
Village of Alamance	Ben York	Village Clerk
City of Burlington	Bob Patterson	Public Works Director
Town of Elon	DiAnne Enoch	Town Clerk
City of Graham	Donnie Braxton	Public Works Director
Town of Green Level	Sandra McCollum	Town Clerk
Town of Haw River	Jeffrey Earp	Town Manager
City of Mebane	James Jobe	Public Works Director
Town of Ossipee	Patti Dorsett	Town Clerk
Town of Swepsonville	Angela Stewart	Town Clerk

The planning area includes Alamance County and nine of its ten municipalities (APPENDIX A-1, page 48). Waste generated in Mebane is considered to be Alamance County waste, whereas waste generated in Gibsonville is considered to be Guilford County waste. Therefore, Gibsonville is not included in the planning area for this Solid Waste Management Plan.

VISION STATEMENT

Alamance County's long range objective is to provide for an integrated, comprehensive, solid waste management program. This program would ensure disposal capacity, waste collection services and provide waste reduction and recycling programs to all members of the community. This vision includes the reduction of improper disposal of waste, convenient waste reduction and recycling opportunities for residents and an increased public awareness of the associated environmental benefits this program supports. The County's long range solid waste planning goals are outlined below.

PLANNING GOALS

Goal 1: To provide adequate waste disposal capacity, waste collection services, waste reduction and recycling opportunities for everyone in the community.

Goal 2: To protect public health and the environment.

Goal 3: To meet the established local waste reduction goals.

Goal 4: To decrease improper waste disposal and litter.

Goal 5: To increase the efficiency and cost-effectiveness of the solid waste program.

Solid waste management is one of the most critical challenges facing Alamance County and its municipalities today. The scarcity of landfill space, rising disposal costs, environmental concerns and State and Federal regulations have required local governments to develop and implement new methods of alternative solid waste management, handling and disposal.

In response to these challenges and laws, Alamance County submits this Solid Waste Management Plan. The Plan follows the State recommended program and presents specific objectives, ordinances and programs. The Alamance County Solid Waste Management Plan addresses each component of the State's solid waste management planning guidance document for an integrated solid waste management system. This Plan demonstrates the County's current assessment and future implementation of programs to meet State mandates and recommendations.

THE PLANNING PROCESS AND PUBLIC PARTICIPATION

Prior to developing this 3-year update to the Solid Waste Management Plan, the Alamance County solid waste management staff met with a representative from the North Carolina Department of Environment and Natural Resources (NCDENR) in late January 2009. At this meeting, staff asked questions, voiced concerns and discussed other planning under the revised Solid Waste Management Act (APPENDIX F-1, page 62). It was concluded that the County would update information on current and possible future programs along with addressing new regulations since the previous update in 2006. Alamance County staff completed and reviewed drafts of the document in March 2009. All municipalities, cities and towns were contacted for input, progress and updates.

The final version of the plan was completed in April 2009 and forwarded to all municipalities for review and adoption by resolution. County solid waste management staff was available for presentation of the plan to the local governing bodies.

The public was invited to review the proposed plan. Copies were available for public review at the May Memorial, Graham Public, Mebane Public and North Park Libraries. There was also access to the proposed plan on the Alamance County website, www.alamance-nc.com. A public meeting was advertised in the Burlington Times-News and on the County website. The public meeting was held on April 27, 2009 in Graham at the Youth Services Building at 7:00 P.M (APPENDIX H-1, page 173).

The Alamance County Solid Waste Management Plan was adopted by resolution by all of the municipalities. The County Commissioners adopted the Plan on June 1, 2009 (APPENDIX I-1 through I-10, pages 174-185).

HISTORICAL BACKGROUND

Alamance County began operation of the landfill located in Swepsonville, NC on Alfred Road in 1971. Prior to that time, many of the County municipalities operated small landfills or "dumps." Initially, the unlined Swepsonville facility was funded by the general tax fund; therefore, no user fees for disposal were required from Alamance County business/industry and residents.

1971	• Opened landfill in Swepsonville
1987	• First waste stream analysis of incoming waste to Swepsonville landfill, performed by Hazen & Sawyer engineering firm
1988	• Began placing shredded tires into separate area of the landfill (tire monofill)

1989	<ul style="list-style-type: none"> • Second waste stream analysis prepared by the Piedmont Triad Council of Governments • The Alamance County Board of Commissioners appointed a task force, the "Recycling and Solid Waste Commission," to investigate alternatives to landfilling. Many solid waste decisions were based on recommendation made by the task force. • A 550-gallon container for used motor oil recycling was placed at the landfill convenience center • North Carolina Solid Waste Management Act of 1989, Senate Bill 111 enacted
May 1989	<ul style="list-style-type: none"> • Commercial/Industrial Corrugated Cardboard Ban; Direct result of Hazen & Sawyer waste stream analysis
July 1989	<ul style="list-style-type: none"> • Scales installed at the landfill to weigh incoming waste • The first tipping fee of \$8.00 per ton became effective at the landfill • Recycling incentive implemented at the landfill convenience center. Residential users with one bag of recyclables could deposit two bags of household trash at no charge • Recycling drop-off center established at the Alamance County Landfill convenience center
1990	<ul style="list-style-type: none"> • Twelve additional recycling drop-off sites established throughout Alamance County • Lead acid batteries accepted at the landfill for recycling • Five-year fee schedule was adopted by Alamance County in order to plan for establishing a high tech replacement landfill
January 1990	<ul style="list-style-type: none"> • State-mandated Whole Scrap Tire landfill ban implemented
October 1990	<ul style="list-style-type: none"> • State-mandated Used Oil landfill ban implemented
1991	<ul style="list-style-type: none"> • Request for proposals to compost waste stream. Due to high percentage of textile waste, it was not feasible to compost waste stream
January 1991	<ul style="list-style-type: none"> • State-mandated White Goods and lead acid battery ban implemented at the landfill
October 1991	<ul style="list-style-type: none"> • Request for proposals to transport solid waste outside of Alamance County. Based on the cost analysis it was not cost-effective to transport the waste stream outside the county.
December 1991	<ul style="list-style-type: none"> • Alamance County developed its first Solid Waste Management Plan prior to the State's development of a solid waste management planning guidance document.
Spring 1992	<ul style="list-style-type: none"> • In conjunction with the local Resource Conservation and Development Agency, Alamance County contracted for the shredding of 6,000 tons of stockpiled brush and yard waste. Over 99% of the product was sold as landscape mulch. As a result of this program, the tipping fee for pure loads of yard waste was reduced to \$19.00 per ton. Burlington, Graham, Mebane, Elon and Haw River established yard waste collection programs to meet State mandates and take advantage of the reduced tipping fee.
August 1991	<ul style="list-style-type: none"> • Alamance County and Browning-Ferris Industries (BFI) entered into a seven year contract which called for BFI to design, construct and operate a privately owned Materials Recovery Facility (MRF) for acceptance, processing and marketing of source-separated recyclables from municipal and commercial recycling programs. The facility was designed to be regional in scope, accepting recyclables from BFI or other recycling programs in Guilford, Randolph and other surrounding counties. The contract also called for other services such as commercial waste audits, education and public information services.

July 1992	<ul style="list-style-type: none"> Expanded the recycling program to include "Ten Target Recyclables": newspaper, office paper, corrugated cardboard, cardboard tubes and cones, aluminum cans, steel food cans, metal coat hangers, HDPE 2 (milk and water jugs), PETE 1 (beverage containers) and glass bottles and jars. The ban had an immediate impact on the volume of solid waste received at the landfill, resulting in a 36% waste reduction. BFI Recyclery became operational which included a buy-back center for recyclables Reduced the County's twelve recycling drop-sites to six drop-sites Several Alamance County municipalities instituted curbside recycling programs with a private contractor
January 1993	<ul style="list-style-type: none"> State-mandated Yard Trash in MSW landfills ban implemented
October 1993	<ul style="list-style-type: none"> Swepsonville facility closed Temporary Austin Quarter Municipal Solid Waste Transfer Station opened in Saxapahaw
November 1993	<ul style="list-style-type: none"> Construction and Demolition (C&D) Cell opened at Austin Quarter facility
July 1994	<ul style="list-style-type: none"> State-mandated Antifreeze and Aluminum Can landfill bans implemented
March 1994	<ul style="list-style-type: none"> Landfill Cell 1 construction completed and becomes operational Temporary Austin Quarter Municipal Solid Waste Transfer Station closed
1995	<ul style="list-style-type: none"> Reduced the County's six recycling drop-sites to four drop-sites
December 1995	<ul style="list-style-type: none"> Vinyl siding accepted at the landfill for recycling
June 1996	<ul style="list-style-type: none"> Initiated White Goods Program in response to G.S. 130A-309.80 legislation passed by the State
October 1998	<ul style="list-style-type: none"> Coble's C&D Landfill opened in southern Alamance County
1999	<ul style="list-style-type: none"> Vinyl siding recycling at the landfill discontinued due to lack of a local market. Diverted into C&D Cell for disposal. Landfill expansion, construction of Cell 2B, completed
August 1999	<ul style="list-style-type: none"> The BFI Recyclery discontinued operations in Alamance County
September 1999	<ul style="list-style-type: none"> Alamance County Recycling Ordinance amended. Plastics, cardboard tubes/cones, metal coat hangers, metal cans and green/blue glass discontinued as mandatory recyclables due to lack of local markets
August 2000	<ul style="list-style-type: none"> Carolina Resource Recovery, a composting facility, opened in western Alamance County
2001	<ul style="list-style-type: none"> Baler operation began for several recyclables collected at the landfill convenience center
August 2001	<ul style="list-style-type: none"> Cell 2B became operational
October 2002	<ul style="list-style-type: none"> Alamance County held its first one-day Paint and Pesticide Collection Event
December 2002	<ul style="list-style-type: none"> Eight acre plot located at the former Swepsonville landfill was approved by the State to be used as an Emergency Storm Debris site
April 2003	<ul style="list-style-type: none"> Planning and design of landfill expansion completed, Cell 1A & 2A (approx. 13 acres) and expansion of C&D area (approx. 2 acres)
June 2004	<ul style="list-style-type: none"> Alamance County hosted one-day Paint and Pesticide Collection Event
April 2005	<ul style="list-style-type: none"> Alamance County Landfill assumed the previously contracted heavy equipment (cut and cover) operation
September 2005	<ul style="list-style-type: none"> Landfill expansion, Cell 1A & 2A, completed
October 2005	<ul style="list-style-type: none"> Alamance County hosted one-day Paint and Pesticide Collection Event
2006	<ul style="list-style-type: none"> Received State-funded grant for capital improvements to White Goods Program. New equipment and training for personnel for onsite Freon removal were acquired.

July 2006	• Several Alamance County municipalities contracted with Tidewater Fibre Corporation (TFC) in Durham, NC to pick up curbside recycling for their residents (Burlington, Graham, Haw River, Elon and Green Level)
May 2007	• Alamance County hosted one-day Paint and Pesticide Collection Event
January 2008	• State mandate for ABC permit holders to recycle beverage containers went into effect
Spring 2008	• Alamance County Landfill assumed the previously contracted yard waste/mulch program
July 2008	• Tipping fees increased in response to State-mandated \$2.00 per ton Solid Waste Disposal Tax (Senate Bill 1492)
September 2008	• Alamance County purchased 115 acres adjacent to the landfill
October 2008	• Alamance County hosted one-day Paint and Pesticide Collection Event

The Austin Quarter Solid Waste Management Facility (Alamance County Landfill) presently consists of six separate disposal/recycling areas:

1. EPA Subtitle D lined Municipal Solid Waste Cell
2. Construction & Demolition Cell (two-foot compacted clay liner)
3. Brush & Yard Waste Area
4. White Goods/Appliances and Metals Area
5. Tire Area
6. Convenience Center drop-off site for bagged residential trash and recyclable material

STAFFING

- Solid Waste Director
- Solid Waste Specialist
- Landfill Superintendent
- Administrative Officer

- Landfill Assistants (2)
- Landfill Attendants
 - Full-time (4)
 - Part-time (3)
- Heavy Equipment Operators (6)

(APPENDIX B-4, page 57)

I. GEOGRAPHIC AND SOLID WASTE STREAM EVALUATION

GEOGRAPHIC AREA

This Solid Waste Management Plan covers Alamance County and nine of its incorporated municipalities (D-2).

D-2. Population Estimates, July 2007

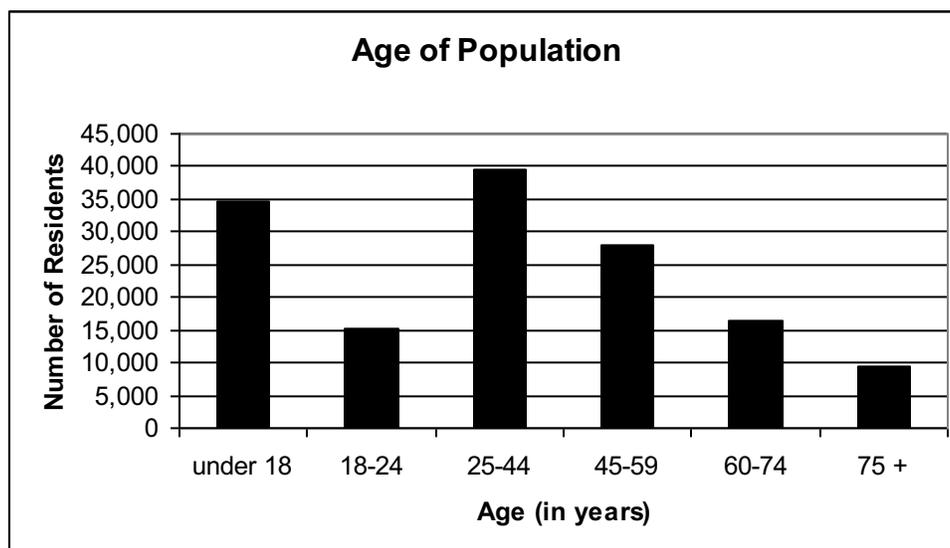
MUNICIPALITIES & COUNTY	POPULATION
City of Burlington*	49,323
City of Graham	14,597
City of Mebane*	7,879
Town of Elon	7,219
Town of Green Level	2,422
Town of Haw River	2,033
Town of Swepsonville	1,177
Town of Ossipee	470
Village of Alamance	366
Alamance County - unincorporated areas	54,816
TOTAL	140,302

Source: <http://demog.state.nc.us>.

*Note: Portions of these cities are located in two counties. These numbers reflect the Alamance County portion.

According to the Piedmont Triad Council of Governments (PTCOG), the total area of Alamance County is 434.8 square miles, with a population density of 303.7 people per square mile in 2000. Over 60% of Alamance County's population is under 45 years old (D-3).

D-3. Age of Alamance County Residents, 2007



Source: <http://demog.state.nc.us>

Population percentages by race and origin are shown in D-4. Hispanics make up almost 11% of the local population, coming from various races.

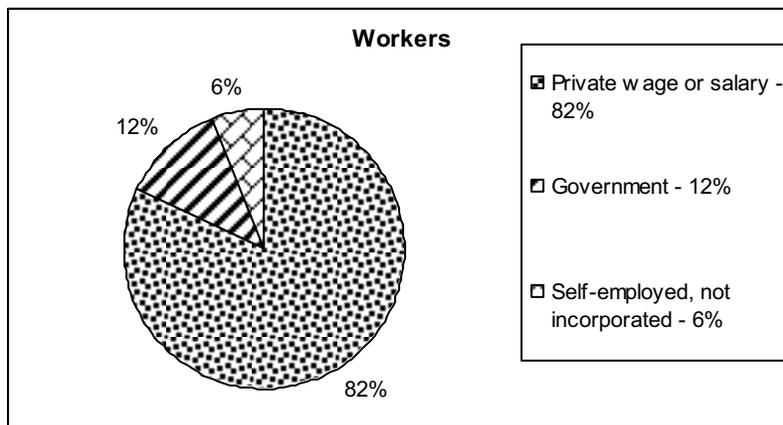
D-4. Alamance County Race Proportions, 2007

Race	Percentage of Population
White	78.50%
Black	18.80%
Asian	1.21%
Multi-racial	0.94%
American Indian	0.51%
Hawaiian or Pacific Islander	0.04%

Source: US Census Bureau

In 2007, the average household size in Alamance County was 2.46 people with a median income of \$41,502. By far, the majority of workers are employed by private business and industry (D-5).

D-5. Category of Employees, 2007



Source: www.city-data.com

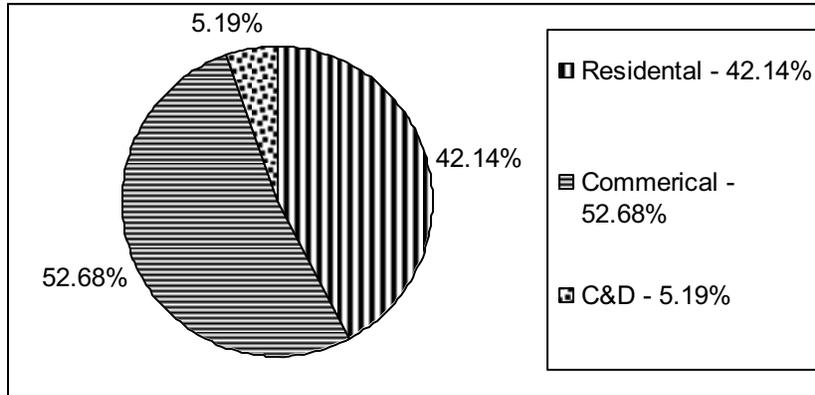
WASTE STREAM EVALUATION

In this plan, residential waste refers to waste generated by households (individual and multi-family dwellings). The term non-residential waste refers to waste generated from commercial, industrial and institutional activities. Construction and demolition (C&D) waste is generated from construction activities and is separated from non-residential waste in this plan because it is disposed of in a different landfill cell than most non-residential waste.

Alamance County and its municipalities disposed of 87,469 tons of municipal solid waste (MSW) and C&D waste in FY 07-08 at the Alamance County Landfill. In addition, 39,914 tons of waste was transported out of the county for disposal in the same time frame. A private construction/demolition landfill located in the southern part of the county accepted 32,060 tons of waste produced in Alamance County. An unknown amount of land clearing and inert debris is also disposed of in private, permitted and non-permitted sites within the County.

An estimate of the waste received at the Alamance County Landfill by type is shown in the next chart (D-6.) Recyclables are not included in these totals. These calculations are based on reports as generated by the landfill's scale software program.

D-6. Estimated Waste Received by Type, FY 07-08

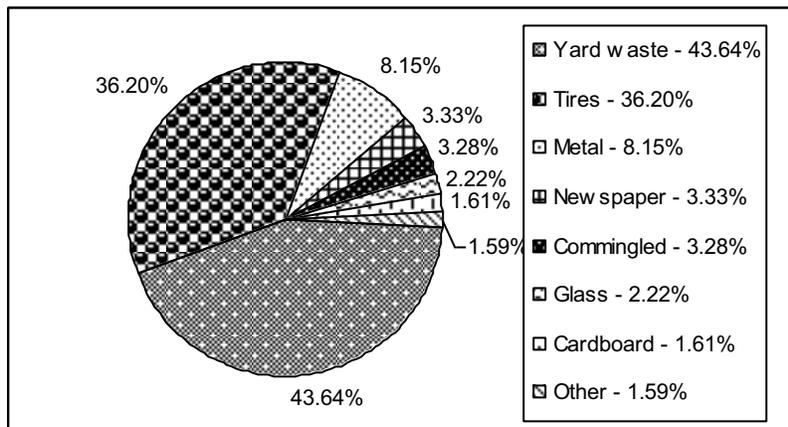


Source: Alamance County Landfill scale reports.

Based on landfill scale weights, 36,860 tons of the landfilled waste is residential waste; 46,084 tons is commercial/industrial waste; and 4,526 tons is construction/demolition waste. A total of 93,310 tons of waste was accepted for disposal or recycling at the Alamance County Landfill for FY 07-08. A private, permitted construction/demolition landfill located in southwestern Alamance County reported to the State/County disposal of approximately 57,855 tons of which 32,317 tons were designated as Alamance County waste in fiscal year 2007-2008.

Recyclables are also part of the waste stream evaluation. In FY 07-08, residents of Alamance County recycled 9,966 tons of material. Yard waste and tires combined continue to be the biggest portion of that total. An estimate of recycled material by type is shown in the chart below (D-7). These calculations include totals from the Alamance County Landfill and Tidewater Fibre Corporation. An unknown amount of recyclable material is brought directly to buy-back centers by residents.

D-7. Estimated Recycled Material by Type, FY 07-08



Source: Alamance County's Solid Waste Management Annual Report
 Note: "Other" category includes White Goods, Magazines/Phone Books, Plastic and Aluminum

A regional waste stream analysis was prepared in 1989 by the Piedmont Triad Council of Governments and included Alamance, Caswell, Davidson, Guilford, Randolph, and Rockingham Counties (APPENDIX C-1, page 58). Alamance County does not have a current study of its own waste, although a study was performed in 1987 by Hazen & Sawyer. The residential and commercial average weight compositions from this study are show below (D-8 and D-9).

D-8. Alamance County Landfill Average Weight Compositions - Residential 1987

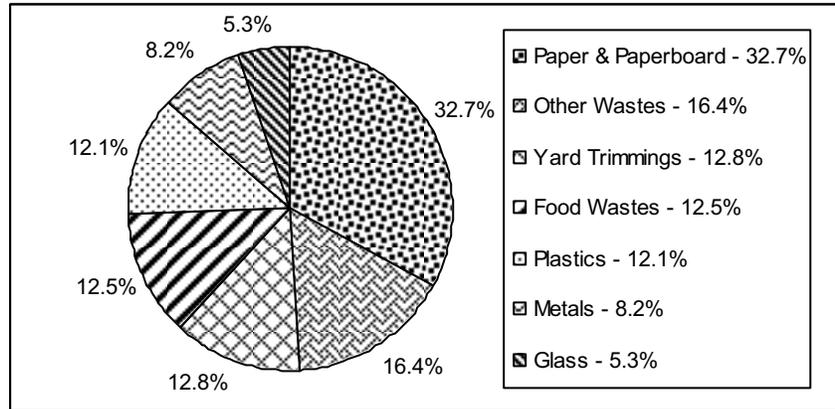
CATEGORY	TOTAL NET WEIGHT (LB)	WEIGHT PERCENTAGE (%)
Newspapers	135.0	15.8
Corrugated Boxboard	84.0	9.8
All Other Paper	162.0	18.9
Plastics	113.0	13.2
Rubber, Leather	2.0	0.2
Wood	4.0	0.5
Textiles, garments	56.5	6.6
Yard Waste	16.0	1.9
Food Waste	147.5	17.2
Miscellaneous	0.0	0.0
Ferrous	62.5	7.3
Aluminum	10.0	1.2
Glass, Ceramics	64.5	7.5
Hazardous Materials	0.0	0.0
TOTAL	857	100

D-9. Alamance County Landfill Average Weight Compositions - Commercial 1987

CATEGORY	TOTAL NET WEIGHT (LB)	WEIGHT PERCENTAGE (%)
Newspapers	60.5	3.0
Corrugated Boxboard	482.5	23.8
All Other Paper	568.5	28.0
Plastics	166.5	8.2
Rubber, Leather	0.0	0.0
Wood	120.5	5.9
Textiles, garments	72.5	3.6
Yard Waste	103.5	5.1
Food Waste	181.5	9.0
Miscellaneous	9.0	0.4
Ferrous	95.0	4.7
Aluminum	26.0	1.3
Glass, Ceramics	109.5	5.4
Hazardous Materials	31.5	1.6
TOTAL	2,027	100

In 2007, the Environmental Protection Agency (EPA) characterized, nationally, the municipal solid waste stream. For their study, residential and commercial wastes are combined in the waste stream. Their results of material generated by percentage, based on weight are below (D-10).

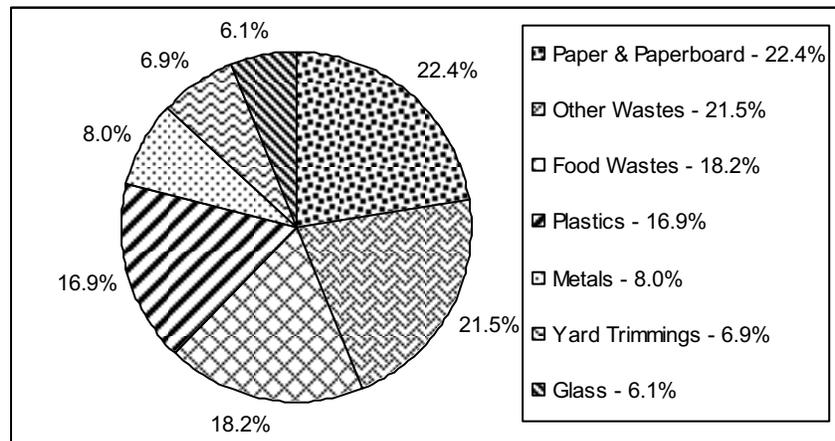
D-10. Types of Material Generated, Based on Weight, 2007



Source: EPA's Municipal Solid Waste in the United States, 2007 Facts and Figures
 Note: "Other Wastes" include: Rubber and Leather, Textiles, Wood, Misc. Inorganic Wastes

The EPA measured what material was generated as waste, then also, after recycling and recovery, the actual make up of the material actually discarded either into a landfill or incinerated (D-11).

D-11. Discarded Material After Recycling & Recovery, Based on Weight, 2007



Source: EPA's Municipal Solid Waste in the United States, 2007 Facts and Figures
 Note: "Other Wastes" include: Rubber and Leather, Textiles, Wood, Misc. Inorganic Wastes

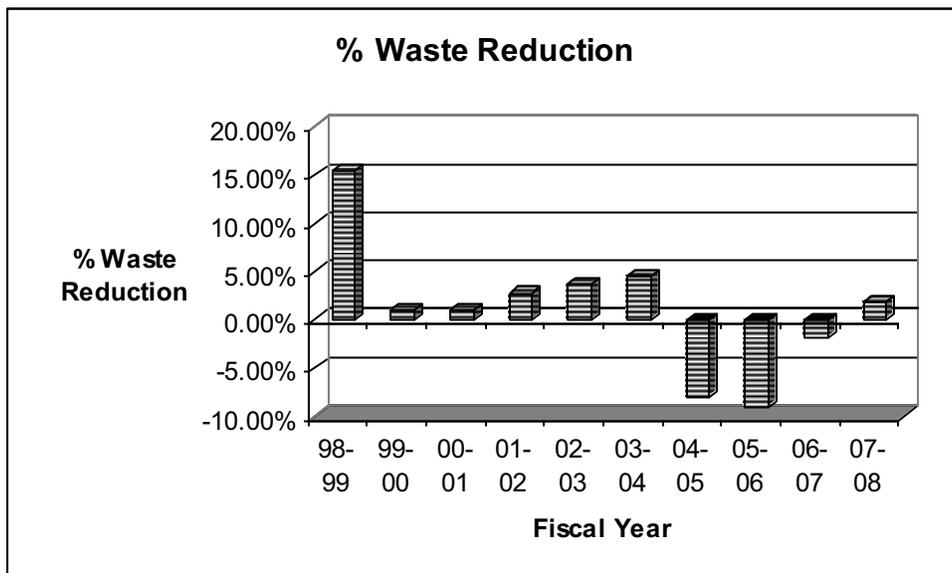
According to the EPA, on average, nationally, every person produces 4.62 pounds of waste per day, with over half of that either recycled, composted or incinerated with energy recovery. The North Carolina average is 6.82 pounds of waste per day. Alamance County residents average 5.91 pounds produced per day. While Alamance County is ahead of the state average, all North Carolina residents are lagging behind the national average.

II. LOCAL WASTE REDUCTION GOALS

NCDENR's Division of Solid Waste established local waste reduction goals based on FY 90-91, the first full fiscal year after the North Carolina Solid Waste Management Act of 1989 was enacted. Alamance County uses an approved alternative baseline year of FY 89-90. The annual landfill tonnage of that fiscal year was the largest tonnage recorded at the previous landfill in Swepsonville. Alamance County's Solid Waste Management Plan, written in December 1991, established a local waste reduction goal of 20% from the County alternative baseline year in correspondence with the State's goal.

Alamance County annual waste reduction percentages are shown below (D-12).

D-12. Alamance County Waste Reduction, FY 91-92 to FY 07-08



Source: NCDENR, Solid Waste Section

NCDENR measures waste disposal in a per capita rate, considering population with tons of waste disposed. The County alternative baseline year disposal rate was 1.10 tons per capita. In FY 07-08, Alamance County's calculated tons were 154,442 and the population was 143,154 which is a per capita disposal rate of 1.08 tons per year (D-13).

D-13. Three-, Six- and Ten-Year Population and Waste Projections

YEAR	POPULATION	WASTE DISPOSAL (in tons)	PER CAPITA DISPOSAL RATE
Alt. Baseline Year FY 89-90	106,956	117,862	1.10
FY 07-08	143,154	154,442	1.08
YEAR	PROJECTED POPULATION	PROJECTED WASTE DISPOSAL (in tons)	PROJECTED PER CAPITA DISPOSAL RATE
FY 11-12	150,524	152,029	1.01
FY 14-15	156,121	148,315	0.95
FY 18-19	163,197	143,613	0.88

Source: NCDENR, Solid Waste Section, <http://demog.state.nc.us/>, ACL staff

In this Plan, Alamance County has established a local goal of 20% waste reduction from the County's alternative baseline year. The waste reduction goals can be converted from percentages to tons diverted by examining population estimates and past waste disposal figures. To meet the local goal of 20% per capita cut in FY 18-19, Alamance County must reduce its disposal rate from the current 1.08 tons/person to 0.88 tons/person (D-14). Using the new per capita rate, the target annual tonnage for disposal by Alamance County would be 143,613 tons in FY 18-19. In order to achieve this, 35,904 tons must be diverted from disposal in FY 18-19 (Waste Reduction Goal Sheet, page 32).

D-14. Targeted Waste Reduction, FY 18-19

CALCULATIONS	FY 2018-19
1. Baseline year per capita disposal rate	1.10
2. Targeted per capita disposal rate (20% reduction per capita)	0.88
3. Population for July 2018	163,197
4. Projected tonnage for disposal	179,517
5. Targeted annual tonnage for disposal	143,613
6. Targeted annual tonnage reductions	35,904

Source: NCDENR, Solid Waste Section

In the fall of 2008, the North Carolina Division of Pollution Prevention and Environmental Assistance (DPPEA) released a new recycling challenge to local governments. The goal is to recycle “2 Million Tons by 2012.” In FY 06-07, the state of North Carolina, as a whole, recycled 1.35 million tons of waste, hitting a new record. With this aggressive goal, local governments would need to increase their performance on average by 48% from the July 2007 baseline.

According to DPPEA, Alamance County’s recovery rate, including yard waste, was 145.34 pounds per person in FY 06-07. The State estimates to achieve this initiative, many communities will need to increase their per capita rate to 451 lbs. This means Alamance County will need to increase our recycling tonnage over 21,000 tons by FY 11-12.

Around the same time in 2008, the commodity market sank to rates that hadn’t been seen in over 10 years. Pay-outs for metal, paper products, cardboard and plastic dropped to less than 25% of the previous rates. The sale of recyclables from the Alamance County Landfill funds, in part, programs that are offered at the Landfill. Experts in the recycling industry can’t seem to agree on a turn-around time for these markets to recover.

III. SOLID WASTE MANAGEMENT METHODS

A. REDUCTION, REUSE AND RECYCLING - Meeting the Waste Reduction Goals

Education applicable to source reduction and reuse of waste materials is an integral part of Alamance County's solid waste education program. Most solid waste literature focuses on the importance of source reduction, reuse and recycling in the County. The Alamance County Cooperative Extension Service teaches source reduction measures for agriculture, homemakers and lawn and garden applications. These programs also teach practical non-hazardous alternatives for household, lawn and garden use. The importance of purchasing materials with recycled content is also stressed in helping to close the "recycling loop."

Increases in landfill tipping fees and associated disposal costs have provided incentives for businesses and industries to closely examine their waste generation and take source reduction or materials substitution measures. The County's discussion of the possible implementation of volume-based tipping fees for high volume/low weight materials led two large industrial generators of these waste materials to require that their vendors substitute more readily recyclable cardboard for polystyrene.

Alamance County Landfill, per regulations, performs waste screenings on 1% of the loads that are taken in the MSW landfill. In these screenings, staff looks for any recyclable material, hazardous waste and any other landfill-banned items that made it in with the residential and commercial garbage.

This plan is designed to reduce Alamance County's waste by 35,904 tons in FY 18-19. To do this, Alamance County will target all types of waste generated (D-15).

D-15. Approximate Waste Reduction by Type

WASTE TYPE	TARGETED TONS TO REDUCE FY 11-12	TARGETED TONS TO REDUCE FY 14-15	TARGETED TONS TO REDUCE FY 18-19
Residential	4,440	3,947	4,814
Commercial/Industrial	5,551	4,935	6,018
Construction & Demolition	547	486	593
GOAL	10,538	9,368	11,425

Source: ACL Staff (assumes targets are met at the intervals stated)

1. RESIDENTIAL

Source Reduction

Current Program: County staff is available to offer information concerning source reduction methods within the community. Assistance may involve distribution of literature and referrals to available resources, such as the NC Division of Pollution Prevention and Environmental Assistance.

Several of the municipalities offer tips in their quarterly newsletters and bi-monthly water bills.

Intended Actions: Alamance County has redesigned their website. We have added new information and resources on it concerning source reduction. Source reduction will be included in our updated/revised

education program that is in development for the community and schools. The County will also continue to offer assistance as outlined above throughout the planning period.

Reuse

Current Program: Several non-profit agencies exist in Alamance County whose goals include, but are not limited to, the reuse of materials. Agencies like Goodwill Industries, Elon Homes for Children, and the Hospice League along with miscellaneous church groups all collect used items such as clothing, furniture, appliances, books, toys, etc. for redistribution to families in need and for sale to others. Alamance County has several consignment shops that all accept used clothing on consignment for sale to the public.

Intended Actions: Alamance County has redesigned their website. We have added new information and resources on it concerning reuse. Reuse will be included in our updated/revised education program that is in development for the community and schools.

Recycling

Alamance County has banned from the landfill several recyclable materials to stimulate participation in the recycling program.

Current Program: Alamance County presently has three drop-off sites for recyclables. There is an unmanned recycling center in the northern section of the County. Another is contracted at the BFI facility on the western side of the County. The third is located at the landfill household convenience center located in the southern section of Alamance County. All three of these centers accept the following items as mandatory recyclables:

- Newspaper and Inserts
- Corrugated Cardboard
- Aluminum Cans
- Clear and Brown Glass

Additionally, the following voluntary recyclables are accepted at the Alamance County Landfill drop site:

- PET #1 plastics
- HDPE #2, both natural and mixed
- Magazines and Catalogs
- Phone Books
- Steel/metal Cans

Alamance County has a franchise agreement with TFC in Durham, NC for curbside pick up of residents in unincorporated areas of the County. Most of the municipalities also contract with TFC to manage their curbside residential programs. Mebane currently holds a contract with Waste Industries for the same service. These contractors will accept the following items:

- Brown, Clear and Green glass
- Plastic Bottles – PET#1 and HDPE#2
- Newspaper and Inserts
- Magazines and Catalogs
- Junk Mail and Office Paper
- Cardboard boxes and Paper Bags
- Aluminum and Steel Cans
- Chipboard and Carrier Stock (cereal boxes, 12-pack containers, etc.)

The choice for recyclables disposal in the unincorporated areas of the County rests with the individual resident. They have the option of transporting and disposing of their own materials at the recycling drop-off centers, selling materials at buy-back centers or contracting at personal expense with a rural franchisee for curbside collection.

Alamance County instituted a Recycling Ordinance banning “target” recyclables from disposal in the Alamance County Landfill. This list is market and regulation driven and may be revised with the approval of the Alamance County Board of Commissioners.

Alamance County Solid Waste Ordinance states all haulers, municipal or commercial, that arrive at the Alamance County Landfill with banned recyclables in their load are subject to the assessment of a double tipping fee for all tons delivered in that load, or \$25, whichever amount is greater.

Several municipalities in Alamance County offer a curbside recycling program to their single-family residents through a private contractor. Collection is bi-monthly. The municipalities continue to play a major role in the success of the recycling program.

Multi-family establishments institute in-house collection or contract for private recyclables collection for their residents. Education, bi-monthly collection and vendor-supplied containers are part of the collection programs.

Alamance County and its municipalities covered in this plan recycled approximately 6,425 tons of the residential waste stream in FY 07-08, not including yard waste and tires (D-16).

D-16. Total Tons Recycled in Alamance County, FY 07-08

MATERIAL	TONS
Glass - Clear	87.8
Glass - Brown	109.54
Glass – Pleasant Grove Mix	5.7
Plastics	25.57
Aluminum	3.67
Metal (Steel Cans, White Goods, etc.)	832.39
Newspaper	304.47
Cardboard	147.8
Magazines	27.15
Other Paper	1.79
Commingled Recyclables	4,879.25
TOTAL	6,425.13

Source: Tons recycled derived from County and Municipal Solid Waste Reports and Federal Wastepaper.

Intended Actions: The County will continue to offer the recycling services as outlined above. The list of target recyclables will be expanded this fiscal year to reflect new state bans. Alamance County has redesigned their website. We have added new information and resources on it concerning recycling. Recycling will be included in our updated/revised education program that is in development for the community and schools. The current County franchise agreement with TFC will expire in September 2009. This contract will be reviewed, updated, and action taken by the Board of County Commissioners.

2. COMMERCIAL/INDUSTRIAL

Source Reduction

Current Program: When requested, the Alamance County Landfill staff inspects incoming loads and makes recommendations to business and industry concerning the reduction of waste. Local haulers provide waste surveys, educate customers as to banned target recyclables and landfill acceptance standards. They also make recommendations to business and industry concerning the management of waste.

Intended Actions: The County will continue to offer assistance as outlined above. An educational program for local business will be developed that includes, among other items, updates on any solid waste legislation. The landfill staff will also be marketing to businesses to be a resource for their source reduction, reuse and recycling needs.

Reuse

Current Program: County staff is currently providing information to businesses and industries concerning pallet recycling. Resources include current listings of local pallet recyclers and companies that reuse pallets.

Intended Actions: The County will continue to offer assistance as outlined above. An educational program for local business will be developed that includes, among other items, updates on any solid waste legislation. The landfill staff will also be marketing to businesses to be a resource for their source reduction, reuse and recycling needs and will promote networking between businesses to encourage reuse.

Recycling

Current Program: Alamance County was the first county in the State to institute mandatory recycling of commercially generated corrugated cardboard. This ban of cardboard from the Alamance County Landfill created a huge demand for collection of this material from area business and industry. Commercial garbage haulers, private haulers and local paper recyclers responded by offering a range of collection services that meet a specific generator's needs.

Waste audits conducted by haulers allow business and industry to analyze their individual waste generation and implement the most cost-effective collection programs possible, by deciding to haul materials themselves, having materials hauled by individual recycling companies or contracting with private waste haulers for collection.

Alamance County Recycling Ordinance currently lists five items as “target” recyclables (APPENDIX G-2, page 77). These items are required to be recycled by both residential and commercial generators. Markets for most of the banned “target” recyclables are found within the County along with markets for other recyclables such as plastics and metal.

The State ABC recycling legislation went into effect January 1st, 2008. This mandates that all ABC permit holders shall separate, store and provide for the collection of all recyclable beverage containers.

Intended Actions: The County will develop an educational program for local business that will include, among other items, updates on any solid waste legislation. The landfill staff will also be marketing to businesses to be a resource for their source reduction, reuse and recycling needs.

3. CONSTRUCTION AND DEMOLITION

Current Program: The County currently strongly encourages proper separation of materials to all users of the landfill facility. A color-coded sheet describing the separate waste disposal/recycling areas is distributed to building contractors, business/industry and new customers unfamiliar with the current acceptance standards (APPENDIX B-1, page 53).

Alamance County Landfill does have a separate C&D Cell designated. Separating these materials as requested and unloading them in the proper areas conserves space in the MSW Cell. The benefits are ultimately passed on to the user in the form of lower tipping fees.

Intended Actions: The County will consider a means of diverting clean wood waste (unpainted, untreated structural lumber, and pallets) for the purpose of creating boiler fuel or mulch.

4. SPECIAL WASTES

Tires

Current Program: Scrap tires are collected and stockpiled in a designated area at the Alamance County Landfill. The Contractor currently picks up tires with approximately 69% being recycled and the rest monofilled offsite. This service is provided at a cost of \$76.56 per ton. Having only one contractor in the state probably puts the county at a disadvantage regarding cost and service. Reimbursements from the State Scrap Tire Disposal Tax fund the operation of this program; thus, offering free disposal to the landfill users. Free disposal is granted only if proper documentation confirms that the scrap tire disposal tax has been paid. Tire disposal for pre-approved cleanup projects is available through the State Tire Grant program.

Intended Actions: The contract for tire handling and disposal is sent out for bids periodically. During the bidding process, recycling percentages are considered as well as the cost per ton. If economically feasible, a vendor with a higher recycling percentage will be selected. The County will consider future alternative methods of disposal, as they become available.

White Goods & Scrap Metals

Current Program: White goods and scrap metals are collected and stockpiled in a designated area at the Alamance County Landfill. After receiving a white goods grant from the State, the County was able to purchase the necessary equipment and training for personnel to begin managing Freon removal onsite. The recovered Freon is then taken to ACR Supply Company in Burlington where the CFCs are reprocessed.

Reimbursements from the State White Goods Disposal Tax fund the operation of this program. White goods are disposed of at no cost to the landfill users. The tipping fee for disposal of scrap metal is \$36.00 per ton. Separation of these materials by the landfill users has contributed greatly to the success of this program.

Intended Actions: The County will continue managing the white goods in-house, adding to the cost savings already seen. To increase the flexibility in managing the program, the County intends to increase the number of employees certified for Freon removal.

Household Hazardous Waste

Current Program: Alamance County holds periodic one-day Paint and Pesticide Collection events. The County Agricultural Extension Office, State Pesticide Disposal Assistance Branch and Alamance County partner to sponsor these events. Pesticides are accepted up to two times a year based on grant funding availability. The participation from the citizens continues to increase at each scheduled event.

The Alamance County Landfill currently accepts completely solidified latex paint (non-hazardous) for disposal in the MSW Cell. Alternatives for disposal of used motor oil, oil filters, antifreeze and lead-acid

batteries are currently in place at the Alamance County Landfill. These materials have designated areas where they are segregated and ultimately recycled. Presently, a private oil company empties the used oil storage containers on a regular schedule, monitors the antifreeze storage area and picks up full drums of oil filters as needed. Once a pre-determined amount of lead-acid batteries are collected, our private battery company contractor is contacted to schedule a pick up.

Landfill staff informs many users of disposal services available through local private companies. These companies will accept other types of HHW materials for a fee. There are also several local free collection sites for used oil and all battery types. Home Depot currently accepts fluorescent tubes for recycling from homeowners.

Intended Actions: The County has researched several of the permanent HHW programs operating in nearby counties. The establishment of a similar HHW program does not appear to be a cost-effective option for the County at this time.

After several successful programs, the County is considering increasing the frequency of these one-day collection events. Also being considered is an expansion of the types of materials accepted at the events to better provide for homeowner's needs.

Alamance County has redesigned their website. We have added new information and resources on it concerning Household Hazardous Waste. HHW will be included in the updated/revised education program that is in development for the community and schools.

Yard Waste

Current Program: Starting in the spring of 2008, Alamance County Landfill assumed responsibility for all aspects of the yard waste processing operation. Previously, the program was administered by Piedmont Conservation Council Incorporated.

A grinding service company is contracted twice a year to process the stockpile of yard waste. A per-ton rate is charged to the County for this service.

Costs for the wood and yard waste processing operation are offset by the sale of marketable materials (mulch) and landfill yard waste user fees. In an effort to encourage more separation of clean wood and yard waste from other landfilled wastes, lower tipping fees for these materials are charged.

Alamance County and its municipalities encourage residents to practice backyard composting of leaves, grass clippings, garden trimmings, and vegetable food waste. Alamance County Cooperative Extension Service encourages composting in several of their public programs.

Many of the County's municipalities have separate fall leaf collection. They have their own approved leaf disposal method or site, in addition to the yard waste services provided by the County.

The City of Burlington currently has a compost warehouse at the South Burlington Wastewater Treatment Plant. Yard waste and wastewater-treated sludge are combined to make a compost material that can be used for lawns and gardens.

Intended Actions: The County will continue to provide the services as outlined above. Additionally, the County has purchased a truck for deliveries to area businesses and residents and also increased available hours for mulch sales.

Alamance County has redesigned their website. We have added new information and resources on it concerning composting. Composting will be included in the updated/revised education program that is in development for the community and schools.

Abandoned Manufactured Homes

Current Program: Alamance County has produced an agreement that can be enacted with an owner of an abandoned manufactured home if they are in need of disposal. It states that the owner agrees to pay one half of the moving costs to bring the unit(s) to the Alamance County Landfill. The metal will be recycled. The revenue from the sale of that metal will cover the County's cost of disposal and the remainder of the moving costs.

Intended Actions: The County will continue to provide the services as outlined above.

Electronic Waste

Current Program: The County began a comprehensive electronics recycling program in August 2009. It is located at the Convenience Center at the Alamance County Landfill and is open 7 days a week to anyone living in Alamance County. One day collection events are also an option in the future. We accept essentially anything that plugs into the wall. Some of these items (i.e. exercise equipment, lamps) are diverted to our scrap metal recycling program. The remaining material is sorted into different categories and packed for shipment to a qualified electronics recycler. Currently, we have a service contract with one of the three selected recyclers from the NC term contract 926A.

When the program began, information and details were added to the Alamance County website. On site, flyers were given out to incoming customers informing them of the new program. Information on the program was added to our educational brochures and any presentations done for outside groups.

During daily collection, we log each full pallet or box with an item count depending on the category. For each shipment, we record a net weight of outbound electronics for recycling using on-site scales. The contractor, within 45 days after shipment, provides us with the breakdown of weights and their item count for each category.

The City of Burlington is in process of developing their plan to deal with these items once the landfill ban goes into effect, which could include periodic one-day collection events. The City of Mebane currently accepts computer equipment and televisions in their bulky item pick-ups from homeowners. Those items are periodically brought to the recycling area at the Landfill, sorted and packed. The other seven municipalities located within the county refer homeowners directly to the recycling program at the Landfill.

Alamance County will establish a separate line item code for revenue from the State in regards to the newly established electronics legislation. The expenditures from those funds will be tracked on a departmental level.

Intended Actions: The County will continue to provide the services as outlined above.

B. COLLECTION OF SOLID WASTE

1. Residential

Current Program: All but one of Alamance County's nine municipalities included in this Plan, (Burlington, Graham, Mebane, Elon, Green Level, Haw River, Town of Ossipee and the Village of Alamance) provide weekly collection of household trash for individual households and some multi-family dwellers, either through their own programs or through private contractors. Disposal is also available for other multi-family dwellers with on-site dumpsters, but the cost of disposal rests with the property owner.

Curbside collection of household trash is also an option for all rural residents who may choose to contract with one of the rural franchised garbage haulers for a County approved fee (APPENDIX A-3, page 50). There is a three bag or can disposal limit (three 32-gallon bags/cans) for this weekly collection.

A household trash/recycling convenience center is located at the Alamance County Landfill. This center is open extended hours throughout the week including Saturdays and Sundays (APPENDIX B-3, page 56). This recycling center accepts target recyclables, used motor oil, oil filters, antifreeze, lead-acid batteries and voluntary recyclables (such as plastics, magazines and phonebooks).

Municipal residential trash collection programs provide for the collection of bulky waste, brush and white goods. Several of the municipalities and franchise haulers use vehicles with automated collection equipment or features for maximum efficiency in the collection of residential solid waste.

Intended Actions: The County will continue to support the residential solid waste collection programs as outlined above. The current franchise agreements will expire by the end of FY 08-09. These will be reviewed and action taken by the County Board of Commissioners.

2. Commercial/Industrial

Current Program: Commercial and industrial waste comprises almost 53% of the Alamance County waste stream. These waste materials are collected and hauled by a number of private commercial garbage haulers. The responsibility for collection and disposal rests with the generator, except for a few small businesses which municipalities continue to collect along with residential garbage collection. Storage and disposal requirements for all solid wastes are addressed and specified in the Alamance County Solid Waste Ordinance (APPENDIX G-1, page 66).

Licensing of all garbage haulers that charge a fee for their hauling services is a requirement of the Alamance County Solid Waste Ordinance. This annual licensing authorizes and empowers the Alamance County Solid Waste Director "to inspect facilities, equipment, or operating methods of any person collecting, transporting, and disposing of solid waste, residential household garbage or recyclable material." If the Solid Waste Director finds that a licensee has violated the solid waste ordinance, a written notice may be made to the offender. If a violation continues, the license may be revoked.

Intended Actions: The County will continue to support the commercial/industrial solid waste collection programs as outlined above.

C. DISPOSAL OF SOLID WASTE

1. INCINERATION WITH OR WITHOUT ENERGY RECOVERY

Current Program: Incineration with and without energy recovery is not part of the County's current program. The County does not consider incineration to be a viable option due to the local waste flow, high capital/operating costs, high transfer costs and consistent waste composition requirements.

Intended Actions: The County does not plan to use incineration with or without energy recovery.

2. MIXED WASTE PROCESSING FOR MATERIALS RECOVERY AND MSW COMPOSTING

Current Program: Mixed waste processing for materials recovery and MSW composting was thoroughly evaluated in April 1991. Alamance County issued a Request for Proposals (RFP) in order to solicit vendor proposals concerning MSW composting, mixed waste processing for materials recovery and Materials Recovery Facilities for the acceptance, processing and marketing of recyclables collected in residential curbside, industrial and commercial recycling programs. This RFP was an effort made by the County to

thoroughly study and ultimately implement recommendations made in 1990 by the Alamance County Recycling and Solid Waste Commission, a group composed primarily of municipal representatives and individual citizens.

Thorough examination of the vendor proposals by County Staff and Bob Difiore of Hazen & Sawyer Engineering revealed the following:

- Mixed waste processing systems for materials recovery have unproven records pertaining to actual materials recovered, marketability of recovered materials and actual reductions in landfilled waste.
- Alamance County's waste stream does not lend itself readily to MSW composting because it consists primarily of commercial/industrial origins and contains a much less than average compostable total. This means that the waste reduction usually associated with composting is unusually low and the resulting residue disposal is high. The combination of composting and residue disposal costs results in an undesirably high total cost for disposal by this method.
- A recyclables processing MRF was deemed to have the least risk associated with markets and total costs. A comprehensive, recycling program (with separation at the source) in conjunction with an identified volume of recyclable materials in the waste stream provides a means of achieving reduction and recycling goals. The BFI Recyclery operated from 1992 until 1999.
- Present and developing waste management processes and technologies will be evaluated and implemented when feasible in the future. It is Alamance County's intention that its waste management activities be cost-effective, practical, accessible and technically sound.

Intended Actions: The County does not plan to use mixed waste processing for materials recovery or municipal solid waste composting.

3. TRANSFER OF SOLID WASTE OUTSIDE OF GEOGRAPHIC AREA

Current Program: While in the permitting process for a new landfill site, proposals were considered by the County from vendors in November 1991 to construct and operate a transfer system to transport solid waste to a disposal facility outside of Alamance County. This operation would have been a privately owned-and-operated facility with the operator responsible for siting, permitting, and all requirements applicable to the entire transfer system. Special considerations were given during the evaluation of these proposals:

- Costs, both short-term and projected for transfer and disposal
- Risk bearing responsibilities of the vendor and the County
- Back-up plans for waste transfer and disposal in the event that the primary component is unable to accept the waste stream
- Transfer and disposal guarantees provided to the County
- Guarantees expected from the County in regard to tonnage and materials acceptance
- Projected life expectancy of disposal sites

After extensive study, Alamance County rejected proposals for solid waste transfer and proceeded with plans for a new Alamance County Landfill. Long-range projections revealed that this option would provide the most efficient and cost-effective means of waste disposal for the citizens and businesses of the County.

Intended Actions: The County does not intend to transfer solid waste outside of its geographic area. In the event of major fire or catastrophe, residential and commercial/industrial waste could potentially be transferred to a regional facility.

Alamance County has explored regional alternatives to waste handling with surrounding counties.

4. DISPOSAL

Alamance County has several disposal facilities located within its borders (APPENDIX A-2, page 49). The majority are privately owned and operated.

A. Municipal Solid Waste

Current Program: Application was made in October 1991 to the State for permitting and constructing a new Alamance County Landfill. The site for which the application was made was approximately 423 acres in size. Hazen & Sawyer performed testing, planning and design applicable to the new landfill development. Approximately 90 acres will be developed for trash disposal. This facility is designed to meet the current State and EPA Subtitle D minimum regulations that require liners and a leachate collection system for groundwater protection. At the current incoming tonnage, a projected life span of 70 more years has been estimated for this facility.

The County has privatized many aspects of the operation and development of its landfill facility. Contractual agreements are listed below:

- Joyce Engineering provides engineering services in the design and development of the landfill facility. Another Contractor performs semi-annual aerial photography work and the resulting data is submitted to Joyce Engineering for interpretation.
- Groundwater wells and surface water points are sampled semi-annually and the underdrain system is sampled tri-annually.
- Leachate is currently pumped and hauled by a private tanker company under contract. It is properly disposed of at the East Burlington Wastewater Treatment Plant.
- Landfill leachate is monitored quarterly and annually as required by the City of Burlington permit and semi-annually as required by the State. County staff collects the samples and forwards them to an independent laboratory to meet these requirements. In addition, a professional sampling firm performs the semi-annual sampling and testing as required by the City of Burlington and the State.

All contracts are designed to fully adhere to local and state permit requirements. Contracts are monitored for compliance and updated upon expiration. APPENDIX B-2, page 54 provides a detailed description of the MSW Cell specifications. Hours of operations are located in APPENDIX B-3, page 56.

In 2005, the County assumed the previously contracted cut and cover operations along with C&D Cell management. Heavy equipment was acquired and additional employees were hired and trained.

Alamance County Landfill purchased approximately 115 acres of additional land in September 2008 (APPENDIX A-5, page 52). Currently, the purpose of this land is to be used as a buffer from surrounding properties.

Intended Actions: The County will continue to explore new methods and alternatives of MSW disposal. Alamance County will continue to provide for the safest and most cost-effective means of MSW disposal. Plans for future development are included in D-19, page 31.

B. Construction and Demolition Waste

Current Program: Construction and demolition debris (bricks, concrete, wood, lumber, roofing, shingles, asphalt, gravel, drywall and pallets) are segregated in a permitted separate fill area at the Alamance County Landfill. A lower tipping fee is offered for pure loads of specific types of waste, which has increased the separation of these materials. This separation decreases the amount of materials that have to be landfilled in the MSW disposal area.

To address the upcoming State-mandated ban on wooden pallets from the MSW landfill, the County directs these either to the C&D Cell or the Brush and Yard Waste area at the Alamance County Landfill.

Intended Actions: The County will continue to explore new methods and alternatives of construction and demolition waste disposal. Plans for future development are included in D-19, page 31.

C. Land Clearing and Inert Debris

Current Program: The County does not operate a Land Clearing and Inert Debris (LCID) landfill. Vegetative land clearing debris (brush, trees, and stumps) are currently separated into the Brush and Yard Waste area and recycled into landscape mulch. Inert debris (bricks, concrete, gravel, etc.) is landfilled in the County's C&D Cell.

D. Special Wastes

Special wastes are briefly discussed here due to disposal considerations. Most of these special waste materials are recycled and are fully addressed earlier in the Plan.

Current Program: The Alamance County Landfill has handling capabilities and recycling/disposal options in place for all non-hazardous and non-regulated special wastes currently banned from landfill disposal by the State. These materials include whole tires, white goods, used oil, oil filters and lead-acid batteries.

- Whole tires are accepted at the landfill where they are transported out of county. They are either recycled or placed in a monofil so they can easily be reclaimed when reuse and recycling alternatives are in place.
- White goods and other scrap metals are collected at the landfill. Freon is removed, if necessary, and materials are then transported to a metals recycler.
- Used oil is collected at the landfill at the household trash and recycling convenience center in large tanks with secondary containment. All oil collected is recycled either as refined lubrication oil or as a fuel.
- Oil filters also have a designated collection area at the convenience center. These are collected and recycled by a contracted oil recycler.
- Lead-acid batteries are accepted for recycling at the household trash and recycling convenience center at the landfill.
- Antifreeze has a designated collection container for recycling. This material is handled by the contracted oil recycler.
- The landfill staff is contacted prior to any abandoned manufactured homes coming onsite for disposal. The staff spray-paints the date on the side of the home and takes several pictures of each unit. The metal is then removed for recycling. Once all recyclables have been removed, the rest of the unit is landfilled.

- Electronic waste is deposited by homeowners in the Electronic Recycling collection area at the convenience center. The material is recycled by a contracted electronics recycler. The majority of municipalities direct residents to the landfill for disposal of their electronic waste.

Medical waste and other special waste disposal are addressed in the Alamance County Solid Waste Ordinance. Disposal or banning is handled in accordance with State and Federal solid waste regulations. A privately owned and operated medical waste incinerator is located in the County.

Intended Actions: The County will continue to offer and support the services as outlined above. Information has and will continue to be distributed to the public informing them of alternative reuse and recycling disposal sites for all special wastes besides those provided by the County.

E. Disaster Plan/Storm Debris

Current Program: Many municipalities in the County have a designated area to stockpile debris in the event of overflow debris from hurricanes, tornadoes, etc. The County accepts storm debris at its current landfill in Saxapahaw. In addition, the former landfill in Swepsonville is designated as an overflow debris site for a disaster event.

This 8-acre area was utilized during 2002-03 for ice-storm debris collected by the Department of Transportation. This site received approximately 7,000 cubic yards through April 2003.

The City of Burlington has two designated and approved sites to stockpile limb or wooden debris resulting from major natural events. The two sites are Indian Valley Golf Course and the closed landfill located on Anthony Road. Material is stockpiled and then reduced through grinding and/or chipping. The resultant material is either used as mulch at City facilities, utilized in the compost process at the South Burlington Waste Water Treatment Plant or sold for landscaping to the general public.

If a mass animal mortality event occurred, the County would contact the State Veterinarian to seek guidance on disposal options considering the circumstances of the event. The County would work with the home/farm owner, Cooperative Extension Service, NC Department of Agriculture and Consumer Services and State Veterinarian on handling the event safely, with as minimal impact on the general public and environment as possible.

The Alamance County Emergency Operations Plan is found in APPENDIX G-3, page 81.

Intended Actions: The County will continue to offer and support the services as outlined above. The County will work closely with the applicable agencies during a disaster event.

IV. EDUCATION, ILLEGAL DISPOSAL AND PURCHASING

A. COMMUNITY AND SCHOOL EDUCATION

Current Program: Alamance County provides an education and information program consisting of literature, press releases, public seminars, landfill tours and speakers for church, civic, school and business groups.

The following is available:

- Printed material about the recycling program and specific participant instructions to each household and business
- Education and technical assistance for schools, parks, and public buildings concerning their individual recycling programs
- Informational flyers
- Public workshops to educate the public, business and industry about the landfill recyclables ban and the recycling programs necessary to comply with it
- Public speakers are available to any group desiring information about source reduction, reuse, recycling and landfill topics

The Alamance County-Burlington City Schools have implemented a recycling program in classrooms and administrative offices. They recycle office paper, newspaper, aluminum beverage containers, corrugated cardboard and other recyclable materials.

Intended Actions: Alamance County has redesigned their website. New information and resources on it concerning source reduction, reuse, recycling, Household Hazardous Waste and other topics has been added. The County is also developing an update/revision to the current education program for the community and schools.

B. PREVENTION OF ILLEGAL DISPOSAL AND MANAGEMENT OF LITTER

Current Program: Illegal disposal of waste is a problem in Alamance County as in other parts of the State. The best prevention method for illegal disposal is to provide accessible and publicized disposal alternatives for household and special wastes. Every effort has been and will continue to be made by the County and its municipalities to continue to offer these services.

The County Solid Waste Ordinance (APPENDIX G-1, page 66) and other local and State laws are in place stating acceptable storage, handling and disposal practices for solid waste. These also address the penalties for non-compliance.

The County and other local governments condemn illegal dumping and associated littering through well-publicized public proclamations. They also support public and private groups such as Sierra Club, Adopt-a-Highway, Big Sweep and others in their education and clean-up efforts. The County Commissioners have waived the landfill tipping fees for trash resulting from these road and river clean-up activities.

Alamance County Environmental Health staff and local law enforcement help to monitor illegal disposal sites. When these sites are detected or reported, local law enforcement assists the Health Department in

investigation, prosecution and clean-up activities. Carl Carroll, Environmental Health Director (336-570-6367 Ext. 29), is the county contact for illegal disposal sites.

The landfill staff distributes a letter from the Alamance County Sheriff addressing untarped and unsecured loads coming into the facility. In addition the County teams with Keep America Beautiful on their annual tarp distribution day. Along with handing out free tarps, an informational flyer is also distributed.

Currently, the County uses prisoners from the Department of Corrections to pick up trash on incoming roads to the landfill.

Intended Actions: The County and its municipalities will make every effort to continue to offer the services as outlined above. The County will encourage all municipalities to assist in the enforcement of the Solid Waste Ordinance at the local level.

The North Carolina Highway Patrol, Alamance County Sheriff's Department and Alamance County Landfill are jointly working together to address the litter problem directly related to the improper transport of waste.

Other ideas being considered are more frequent tarp distribution events and arranging for additional manpower to concentrate in this area.

C. PURCHASE OF RECYCLED MATERIALS AND PRODUCTS

Current Program: The Alamance County Board of Commissioners and the governing bodies of its municipalities stated a public position that their associated organizations and agencies consider the purchase of materials with recycled content when feasible. The County is currently purchasing paper with a high percentage of recycled content. These practices will continue and be expanded in the future as recycled content materials become less costly.

Alamance Community College is mandated by the State to purchase 100% recycled products equal to the total dollar value of paper products purchased. The Alamance County-Burlington School System is similarly mandated to purchase 50% recycled products equal to the total dollar value of purchased paper products. Both entities must report annually to the NC Division of Pollution Prevention and Environmental Assistance.

Intended Actions: The County will continue to explore new options concerning the purchase of recycled materials and products throughout the planning period.

V. SOLID WASTE COSTS AND FINANCING METHODS

A. DESCRIPTION AND ASSESSMENT OF COSTS

Alamance County does not operate a countywide solid waste collection program, but does operate the solid waste disposal program. All but one of the nine municipalities covered in this Plan offer solid waste collection services. Burlington, Graham, and Mebane maintain their own solid waste collection programs. Elon, Green Level, Haw River, and Alamance townships contract with private solid waste collection service providers. The Town of Swepsonville solid waste collection contractor bills each household directly, so there is no cost to the Town entity. Rural residents have the option of obtaining solid waste collection services from one of the private franchise haulers (APPENDIX A-3, page 50).

Currently, the private franchise haulers charge rural residents \$16.50 per household/month for solid waste collection and \$3.95 per household/month for curbside recyclables collection.

Alamance County's Landfill Budget covers costs of solid waste disposal services and recycling services (APPENDIX E-1, page 60). Rates have been set which cover the cost of services and pass them on to the public in the form of landfill tipping fees (APPENDIX E-2, page 61). This has provided the basis for establishing an Enterprise Fund to cover all current and anticipated costs. Key costs that were assessed in making this determination were:

- Cost of existing landfill including capital and annual operating expenses, closure and post-closure costs, closure financial assurance, environmental protection measures and monitoring
- Replacement costs for designing and developing additional landfill capacity
- Management costs, including planning and technical assistance

A summary of solid waste costs for the county and municipal operated programs are shown below (D-17.) These totals are derived from a cost analysis/financing worksheet.

D-17. County and Municipal Solid Waste Program Costs, FY 07-08

	COLLECTION	DISPOSAL	RECYCLING	YARD WASTE	TOTAL	COST PER HOUSEHOLD
Alamance County*	N/A	\$1,974,942.52	\$682,835.60	\$86,178.23	\$2,743,956.35	\$44.05
City of Burlington	\$1,572,006.48	\$560,611.39	\$483,819.25	\$54,155.36	\$2,670,592.48	\$151.79
City of Graham	\$305,717.71	\$153,982.29	\$132,000	N/A	\$591,700	\$124.44
City of Mebane	\$390,539	\$120,098	\$124,902	N/A	\$635,539	\$177.82
Town of Elon	\$255,000	\$66,000	\$48,000	N/A	\$341,000	\$189.02
Town of Green Level**	\$109,979.83	N/A	\$16,272.63	N/A	\$126,252.46	\$223.85
Town of Haw River	\$80,434	\$22,337	\$25,261	N/A	\$128,032	\$148.01
Town of Ossipee**	\$21,011.42	N/A	\$15,252.86	N/A	\$36,264.28	\$185.97
Village of Alamance**	\$42,607.23	N/A	\$8,514.86	\$5,444.68	\$56,566.77	\$152.88

Source: County and municipal department records

* County disposal costs includes all garbage from the municipalities

** Disposal costs are included in the cost of collection.

Note: No cost for Town of Swepsonville.

B. DESCRIPTION OF FINANCING METHODS

Alamance County Commissioners approved a five-year landfill tipping fee schedule in 1990. This decision has allowed for planning and forecasting disposal costs by all landfill users. Since then, the tipping fee schedule has been updated, as needed, to reflect current costs.

It is the County's intent that all solid waste management services be self-supported through recovery of associated costs via user fees. Annually, Alamance County contracts an independent audit of all finances and departments.

The County's municipalities have, for the most part, determined full costs for all solid waste management services but are charging citizens for only a small portion of those costs. In the absence of user fees, services are supported through the property tax structure (D-18).

D-18. County and Municipal Solid Waste Program Revenue Sources, FY 07-08

	Total SWM Budget	Tipping Fees	Property Tax/ General Fund	Household Fees	Volume - Based Fees (PAYT)	Sale of Recyclables	Grants	Tire/ White Goods Tax	Other
Alamance County	\$2,743,956.35	75.2%	N/A	N/A	4.6%	4.4%	2.0%	4.9%	8.9%
City of Burlington	\$2,670,592.48	N/A	56.5%	43.5%	N/A	0%	0%	N/A	0%
City of Graham	\$591,700	N/A	58.0%	42.0%	N/A	0%	0%	N/A	0%
City of Mebane	\$635,539	N/A	97.7%	2.3%	N/A	0%	0%	N/A	0%
Town of Elon	\$341,000	N/A	81.5%	18.5%	N/A	0%	0%	N/A	0%
Town of Green Level	\$130,000	N/A	86%	14%	N/A	0%	0%	N/A	0%
Town of Haw River	\$127,000	N/A	17.4%	82.6%	N/A	0%	0%	N/A	0%
Town of Ossipee	\$37,060	N/A	57.8%	42.2%	N/A	0%	0%	N/A	0%
Village of Alamance	\$56,566.77	N/A	80.9%	0%	N/A	19.1%	0%	N/A	0%

Source: County and municipal department records.
 Note: Not applicable to the town of Swepsonville.

C. ASSESSMENT OF FINANCING METHODS

County financing methods have generated sufficient revenue to operate their current solid waste programs. Revenue funds contribute to annual reserves for landfill closure, post-closure and new construction. The County anticipates only moderate budget increases to fund new services and facilities. The landfill operation and its financial viability are dependent on the flow of materials to the landfill.

Below is a description of the financing methods to be used in upcoming years.

Tipping Fees - The majority of the County's operation of the landfill will continue to be funded through the Enterprise Fund as generated by tipping fees.

Property Tax/General Fund - The majority of the municipal solid waste collection programs is currently funded by the property tax/general fund.

Household Fees - A portion of the municipal solid waste collection programs is currently funded by household fees.

Volume-Based Fees (PAYT) – The Alamance County Landfill currently uses a Pay-As-You-Throw fee schedule for bagged household trash and recyclables. Some of the municipalities are currently exploring development of volume or weight-based fee options to be used toward the funding of their solid waste collection programs.

Sale of Recyclables - The County will continue to use revenue as generated from the sale of recyclables to assist in the funding of related solid waste management programs.

Grants - The County will continue to apply for State grants and will use the funds received toward related solid waste programs.

Tire/White Goods Tax Reimbursements - The County will continue to apply for tire and white goods tax reimbursement funds (dependent upon availability) and will use the funding received toward the existing tire and white goods programs.

Solid Waste Disposal Tax Reimbursement – In FY 08-09, the County and municipalities will begin receiving a tax reimbursement from the State for the Solid Waste Disposal Tax that went into effect on July 1, 2008. The State has encouraged all entities who receive these monies to use them towards their recycling programs.

Other - The County will continue to use interest earnings, as generated from investment/savings accounts set aside for future closure and post-closure, toward the operation of the solid waste management program.

VI. CONCLUSION

A. SOLID WASTE MANAGEMENT POLICIES AND PROCEDURES

The Alamance County Solid Waste Ordinance (APPENDIX G-1, page 66) is a well defined guide to all handling and disposal of solid waste in Alamance County. This Ordinance is designed to adhere fully to all State and Federal requirements. It has and will continue to be updated to reflect compliance with present and future standards. Within FY 09-10, both the Solid Waste Ordinance and Recycling Ordinance will be updated.

Specifically, the Alamance County Solid Waste Management Plan has been developed to achieve these major objectives:

1. To provide adequate waste disposal capacity, waste collection services, waste reduction and recycling opportunities for everyone in the community.

This Plan is designed to be flexible in order to take advantage of the most modern, proven techniques and technologies in waste management when feasible.

The County will continue to study disposal alternatives for Household Hazardous Wastes. Such studies would include representatives of businesses and companies having a special interest in providing readily available options for disposal of these materials.

The County will continue investigation of all program options and liability issues with regard to household hazardous waste collection and disposal.

The County is considering the development of a system for documenting private reduction, reuse, and recycling activities.

2. To increase the efficiency and cost-effectiveness of the solid waste program.

The County will continue to maintain a cost-effective and fully integrated program for managing solid waste in Alamance County.

The County will provide for continual development of a user fee based system to pay the costs of solid waste disposal. In developing these user fee systems, careful consideration will be given to landfill operations, environmental responsibility, technology and closure/post-closure monitoring.

3. To meet the established local waste reduction goals.

The County will ensure that all solid waste practices in the County comply with all of the provisions of the Solid Waste Management Act of 1989 (Senate Bill 111), House Bill 1109 and all related rules and regulations (Federal, State, and local) dealing with solid waste management. This includes the goal of reducing the County's waste stream 20% by 2019.

The County will continue to evaluate various options for solid waste processing, recycling or reduction technologies.

4. To decrease improper waste disposal and litter.

The County will continue to encourage proper waste disposal by making solid waste program opportunities easily accessible to all members of the community.

5. To protect public health and the environment.

The County will continue to provide for the safest means of solid waste disposal that minimizes environmental impacts by reducing the total volume of the waste stream, thereby conserving valuable landfill space.

B. SUMMARY OF INTENDED ACTIONS

D-19. Intended Actions Implementations Schedule

FISCAL YEAR	EVENT
1996-97	<ul style="list-style-type: none"> • Purchase skid-steer loader • Pave portion of landfill access roadway
1997-98	<ul style="list-style-type: none"> • Continue to research "Pay-As-You-Throw" programs • Participate in "Use Less Stuff Day" event in November • Continue to research wood waste diversion methods • Continue to research community education project • Construct mulch distribution area
1999-00	<ul style="list-style-type: none"> • Construct Phase 2, C&D • Additional leachate tank • Construct Cell 2B, MSW (8.5 acres) • Develop borrow area • Expand recycling area
2001-02	<ul style="list-style-type: none"> • Initial Paint and Pesticide Collection Day
2002-03	<ul style="list-style-type: none"> • Building/Scale upgrade
2003-04	<ul style="list-style-type: none"> • Tree thinning
2004-05	<ul style="list-style-type: none"> • Begin recycling magazines and phone books • Utilize Dan River Farm (Department of Corrections) on continuing basis
2005-06	<ul style="list-style-type: none"> • Assume cut and cover operation • Expand White Goods program with grant • Construct Cell 1A, 2A, MSW
2007-08	<ul style="list-style-type: none"> • Assume mulch program
2008-09	<ul style="list-style-type: none"> • Purchase new dozer
2009-10	<ul style="list-style-type: none"> • Complete new waste stream characterization • Tree thinning • Gas extraction system
2010-11	<ul style="list-style-type: none"> • Construct Phase 3, C&D • Phase 1 closure, MSW
Throughout	<ul style="list-style-type: none"> • Continue to address litter problem directly related to the improper transport of waste • Continue to explore options concerning the marketing of recycled materials and products

Source: ACL Staff

WASTE REDUCTION GOAL SHEET
NC LOCAL GOVERNMENT TEN YEAR SOLID WASTE MANAGEMENT PLAN

Local Government Name: Alamance County

Previously established waste reduction goal: 20 %

After considering your government's current and projected solid waste activities, resources, population and economic growth, have you reached your previously established goal? Yes No

Establish a new waste reduction goal: 20 %

WASTE REDUCTION CALCULATION

To provide 10 years of solid waste management planning, as per G.S. 130A-309.09A(b), waste reduction goals need to be updated. Use the following chart to determine the tonnage needed to be diverted from landfills in order to reach the new waste reduction goal.

CALCULATION	FY 18-19
1. Baseline year per capita disposal rate <i>(FY1991-1992 unless alternate approved by Section)</i>	1.10
2. Percent waste reduction goal	20%
3. Targeted per capita disposal rate <i>(Subtract line 2 from 1.0 and multiply result by line 1)</i>	0.88
4. Estimated population in the new waste reduction goal year <i>(Available at Office of State Budget and Management website: <u>Projected Annual County Population Totals 2010-2019</u>)</i>	163,197
5. Projected tonnage for disposal at baseline disposal rate <i>(Multiply line 1 by line 4)</i>	179,517
6. Targeted annual tonnage for disposal <i>(Multiply line 3 by line 4)</i>	143,613
7. Targeted annual tonnage to reduce <i>(Subtract line 6 from line 5)</i>	35,904

Population Link: http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic_data/population_estimates/demog/cpa2010p.html

WASTE REDUCTION PLAN

Given the targeted annual tonnage amount to be reduced, explain how you plan to reach the goal:

16,157 tons by increasing recycling
 8,976 tons by source reduction
 1,795 tons by utilizing composting
 7,181 tons by reuse
 1,795 tons by increasing HHW collections