
Three-year Update to the Solid Waste Management Plan for Macon County, Town of Franklin and Town of Highlands



Resource conservation today, for a sustainable tomorrow

July 1, 2012 to June 30, 2022

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SECTION I: INTRODUCTION AND LOCAL CONTACT INFORMATION

Introduction

This document serves as the Three-Year Update to the Ten-Year Solid Waste Management Plan that was prepared in June 1997. This update, as well as the original Solid Waste Management Plan was prepared in accordance with N.C. General Statute 130A-309.09A (b) for the purpose of meeting local solid waste needs and protecting public health and the environment. The sections of this plan follow the order of items listed in a Ten Year Plan Guide published on the NC DENR Division of Waste Management website. New and/or updated information has been added as necessary for the purpose of comparing current progress with waste reduction goals and developing new goals for the purpose of meeting community needs, local government waste reduction goals, and state waste reduction goals.

Through implementation of this updated comprehensive solid waste management plan and the additional plan updates that will follow every three years, the Macon County planning area provides for the management of solid waste and its reduction for a sustained 7-10 years. The planning area includes Macon County, the Town of Franklin, and the Town of Highlands.

The three (3)-year update was developed through cooperation of the Macon County Solid Waste Department, the Macon County Board of Commissioners, the Town of Franklin, and Town of Highlands. Representatives of the Macon County Solid Waste Department, Macon County Board Solid Waste Liaisons, the Town of Franklin and the Town of Highlands met in February 2012 to discuss the three-year update. Both Towns were given information on the update to use in guiding their discussions. The Town representatives were asked to meet with their Boards of Aldermen to discuss the plan; address the status of past actions; discuss the possibility of new actions, and return this information to the Solid Waste Department. The information received from each municipality was then incorporated into the 3-year update. The Solid Waste Staff also reviewed the status of their waste reduction and recycling programs and compiled supporting data from tonnage reports, financial reports, et cetera, and included them in this report in order to complete a comprehensive picture of the waste management program in Macon County. The draft report was then made available to the public for comment before completing the final draft.

Macon County's long range vision is for a comprehensive waste management program. This program would provide waste reduction and recycling programs, disposal capacity, and waste collection services to all members of the community at an equitable price. The vision includes the elimination of improper disposal of waste and expanded waste reduction opportunities that are reasonably convenient for residents. The vision is for a community that understands the environmental benefits of waste reduction and proper waste disposal. This vision is translated into seven (7) long-range planning goals listed below.

Planning Area Goals

- Goal 1** To provide everyone in the community with waste reduction and recycling opportunities, disposal capacity, and waste collection services.
- Goal 2** To inform and educate the public about the benefits and need for waste reduction and recycling.
- Goal 3** To meet the established local waste reduction goals.
- Goal 4** To protect public health and the environment.
- Goal 5** To increase the efficiency and cost-effectiveness of the solid waste program.
- Goal 6** To decrease improper waste disposal.
- Goal 7** To extend the remaining capacity of the MSW Landfill by all means available.

Local Contact Information:

For more information regarding this plan, or for any solid waste recycling, collections, or disposal questions, please see the contact list below:

Macon County:

County Manager:	Jack Horton	Ph: (828) 349-2022	email: jhorton@maconnc.org
Solid Waste Director:	Chris Stahl	Ph: (828) 349-2100	email: cstahl@maconnc.org
Recycling Coordinator:	Joel Ostroff	Ph: (828) 349-2252	email: joetroff@maconnc.org
S.W. Business Manager:	June Cassada	Ph: (828) 349-2215	email: jcassada@maconnc.org
S.W. Enforcement Officer:	Joe Belcher	Ph: (828) 349-2251	email: jbelcher@maconnc.org
MSW Landfill Scalehouse:		Ph: (828) 349-2077	
Highlands Transfer Station Scalehouse:		Ph: (828) 526-2073	
Buck Creek Convenience Center:		Ph: (828) 526-0393	
Carson Convenience Center:		Ph: (828) 369-2552	
Highlands Road Center:		Ph: (828) 369-6971	
Holly Springs Convenience Center:		Ph: (828) 349-4205	
Iotla Bridge Convenience Center:		Ph: (828) 369-6699	
Nantahala School Site Convenience Center:		Ph: (828) 321-1326	
Nantahala Junaluska road Convenience Center:		Ph: (828) 321-0786	
Otto Convenience Center:		Ph: (828) 369-0949	
Scaly Mountain Convenience Center:		Ph: (828) 526-0453	

To find the Waste Recycling and Disposal Site nearest you, please see County Map with locations indicated. The Map can be found in Appendix C of this Update.

Town of Franklin:

Asst. Town Manager: Summer Woodard Ph: (828)524-2516 email: swoodard@franklinnc.com

Town of Highlands:

Public Works Director: Lamar Nix Ph: (828)526-2118 email: lamar.nix@highlandsnc.org

SECTION II: THE PLANNING PROCESS AND PUBLIC PARTICIPATION

The Macon County Solid Waste Department developed this Three-year Update to the Plan. Input was received from staff and Board representatives from Macon County, and the Towns of Franklin and Highlands.

An electronic draft of the Three-year Update to the Solid Waste Management plan was made available in the Macon County Manager's office and the offices of the Towns of Franklin and Highlands for public review and comment on March 23, 2012. A public meeting was held on May 8, 2012 at 6:00 p.m. in the Macon County Courthouse and Administration Building. The Macon County Board of Commissioners and the community members in attendance were invited to ask questions and discuss the Three-year Update to the Solid Waste Management Plan. The meeting was advertised in the *Franklin Press* and the *Highlander*; notices for the public meeting are shown in Appendix B.

The Three-year Update to the Plan was reviewed and revised based on public comment. It was submitted to the elected boards of each participating local government for approval (see Appendix A). The final version of the Three-year Update to the Solid Waste Management Plan will be submitted to the North Carolina Department of Environment and Natural Resources. Additionally, the Plan will be posted on the Macon County website, and copies will be filed in the Macon County Commissioner’s Office, the Macon County Solid Waste Management Department office at the Macon County MSW Landfill, and the Administration offices of the Towns of Franklin and Highlands.

SECTION III: GEOGRAPHIC AND SOLID WASTE STREAM EVALUATION

Population and Demographic Information

This solid waste management plan covers unincorporated areas of Macon County and the Towns of Franklin and Highlands. The majority of Macon County's residents live in unincorporated areas (see Table 1).

Table 1. Estimated Population, 2012

MUNICIPALITIES & COUNTY	POPULATION
Town of Franklin	3,963
Town of Highlands	959
Macon County - unincorporated areas	26,543
TOTAL	34,465

Source: Population figures estimated from US Census Bureau County QuickFacts and City-Data.com and Economic Development Administration Report

Macon County has experienced slower than expected growth over the past decade (projected 1.8% per year; actual 1.3% per year). Data from the U.S. Census Bureau (Appendix G) illustrates that a real estate and construction industries, along with service industries are the primary non-governmental employers in the County. The collapse of the local housing and building markets, therefore, can be identified as the primary contributor to slower growth rates, and higher unemployment rates in Macon County. As much of this development has centered on second homes (vacationers and retirees), it is anticipated that the economic impacts will be felt for several years to come. Therefore, it is not anticipated that Macon County will experience rapid growth that could have a major impact on current waste disposal rates over the next ten years.

Appendix G also includes a summary of demographic information, (i.e. gender, age, housing, income, labor force, social characteristics, and race for Macon County taken from the US Census Bureau website.

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, institutional activities, and bulky residential waste. Construction and demolition waste is generated from construction activities.

Macon County and its municipalities managed approximately 36,332.16 tons of waste in FY 2010-11 of which 29,957.28 tons were disposed of in the landfills. The term waste managed refers to all waste that Macon County handled, including waste disposed, recycled, recovered and other diverted materials. An estimate of the waste landfilled by sector is shown in Table 2. These calculations are based on tonnages provided by Macon County Solid Waste Department staff.

Table 2. Estimated Waste Managed by Sector, FY 2010-11

TYPE OF WASTE	TONS	PERCENT OF WASTE STREAM (%)
Residential	16,531.99	55.2
Non-residential	8,297.83	27.7
Construction and Demolition	5,127.46	17.1
TOTAL	29,957.28	100

Source: Macon County Solid Waste Department staff; solid waste scale house records

The waste estimates by sector for Macon County are 55.2% of the waste managed is residential waste, 27.7% is non-residential (commercial, industrial, institutional, and bulky wastes), and 17.1% is construction and demolition waste. All wastes are disposed of in the Macon County MSW Landfill on Lake Emory Road, north of Franklin. Land Clearing and Inert Debris (LCID) is incorporated into the yard waste grinding operations at the MSW Landfill and Highlands Transfer Station facilities. There has been a major shift in the waste stream over the past three years. This shift is tied to the economic downturn in the real estate market; the major industry in Macon County. The collapse of the local building industry has had the result of a loss of over 50% of the annual C&D waste stream compared to pre-collapse tonnage rates (2006-2007). This has also resulted in the percentage of waste coming from the C&D waste stream dropping from 25.3% in 2008 to the current 17.1% in 2011. While the percentage of the residential waste stream has grown from 43.8% to 55.2% over the same three year period; the actual ton disposed of has remained steady (16,402.91 tons of residential waste in 2008; 16,531.99 tons in 2011).

The County does not have a study, at this time, for the composition of its own residential waste. Therefore, Table 3 is derived from a 2008 “Quick Waste Stream Analysis” that was prepared for Macon County by the NC DPPEA (now NCDEAO). This state study shows that the most prevalent materials in the residential waste stream are paper and food wastes. Using the 16,532 tons of residential waste that Macon County and its municipalities estimated were disposed in FY 2010-11, the amounts of different materials in the local waste stream can be calculated.

Table 3. Estimate of Residential Waste Composition

MATERIAL	STATE ESTIMATE (%)	ESTIMATED 2007-08 COUNTY TONS DISPOSED
Paper	45.7%	7,555
Plastics	9.1%	1,505
Food Wastes	18.9%	3,125
Glass	6.1%	1,008
Textiles	4.1%	678
White Goods	2.5%	413
Steel Cans	1.7%	281
Aluminum	1.0%	165
Wood Waste	9.8%	1,620
Electronics	1.1%	182
TOTAL	100.0%	16,532

Source: Quick Waste Stream Analysis for Macon County, provided by NC DPPEA

SECTION IV: LOCAL WASTE REDUCTION GOAL

Macon County has continued our commitment to waste reduction and recycling. We have operated a recycling program since 1992. Over the past twenty years, we have experienced strong and steady recycling rates, and continue to lead the state with top ten performances in per capita recycling rates over each of the past ten years. Despite these successes, Macon County has never been able to reduce disposal rates below the baseline disposal rate of 0.82 tons per capita was set in FY 1991-92. The current disposal rate in Macon County is 0.87 tons per year per capita. This represents an increase in disposal rate of 6.1% over the baseline rate, and is the lowest per capita disposal rate realized since the baseline year. As discussed throughout this Update, the drop in Construction and Demolition materials tonnage is a major factor in the current rate. However, the disposal rate has been on a steady decline for seven straight years (Table 4), pre-dating the economic downturn. Additionally, The Update to the Solid Waste Management Plan from 2003 set a goal of 1.00 tons per capita for FY 2012-13; and the 2009 Update set a revised goal of 0.95 tons per capita for FY 2011-12. Based on current disposal rates, we are projecting to realize lower disposal rates than anticipated in either of the referenced previous Updates.

Table 4. Tons per Capita Disposed FY 2004-05 Through 2011-12

YEAR	TONS PER CAPITA RATE
FY 2004-05	1.15
FY 2005-06	1.12
FY 2006-07	1.10
FY 2007-08	1.08
FY 2008-09	0.95
FY 2009-10	0.91
FY 2010-11	0.87
FY 2011-12 (Projected)	0.84

Source: Macon County Solid Waste Department staff; solid waste scale house records

Disposal and recycling rates in Macon County have been dominated by external forces over the past three years. The following paragraphs take a more comprehensive look at some of the factors that have impacted disposal and recycling rates in recent years, and that will be considered as Macon County establishes new waste reduction goals for FY 2014-15 and FY 2021-22.

The largest impact to the disposal rate in Macon County over the past three years has been the virtual collapse of the local housing market and building industry. This impact is demonstrated by the drop of C&D tonnage from over 10,000 tons in the mid-2000's, to just over 5,000 tons in 2010-11. It is also illustrated by the number of building permits issued by the Macon County Inspections Department (Appendix G). Between 2005 and 2008, the Inspections Department issued an average of 324 building permits. Between 2009 and 2011, that number plummeted to only 102 permits per year; with a low of 77 permits issued in 2011. While it is impossible to ignore the impact this drop in tonnage represents to the County and its Citizenry; it has had a positive impact on disposal rates. Macon County is experiencing amongst our lowest disposal rates in twenty years. Negatively, the drop in C&D disposal rates has resulted in hundreds of thousands of dollars in lost revenues from tipping fees; which, in turn, limits funding to expand or improve many of our other recycling programs. This impact is also felt in total recycling rates, as the amount of vegetative debris and pallets ground for mulch has dropped almost 1,300 tons since the last update.

In internal factor positively influencing our recycling and disposal rates over the past few years has been the development of the Materials Recovery Facility at the former Bale Facility, adjacent to the MSW Landfill. This facility serves a combination of purposes with materials recovery as a central goal (many of these operations will be discussed in later Sections of this Update). The facility processes approximately 10-20 tons of waste per day. The average recovery rate is approximately 1.5 tons per day. In the two years this facility has been in operation, just over 800 tons of material has been removed from the waste stream prior to disposal. While this operation is small and somewhat "grass-roots", it accounts for approximately 6% of the total tons recycled in Macon County. E-waste, scrap metal, clean wood waste and pallets, and cardboard are the major components of the recovered tonnages.

Finally, as discussed in previous Updates to the Solid Waste Management Plan, part-time residents and tourists continue to inflate our per capita disposal rate. Seasonal residents or second home owners in Macon County inflate our per capita disposal rates because they are simply not counted as part of the population. Figures taken from the US Census Bureau list approximately 8,826 vacant homes in Macon County; accounting for 36% of the total number of households (Appendix G). According to the Macon County Tax Administrator, Richard Lightener, some estimates show as high as 48% of homes in Macon County belong to seasonal or part-time residents. In a County of only 34,000, the introduction of approximately 16,000-20,000 additional residents that may reside here for as much as six months or more per year, clearly has a major impact on our ability to realize lower per capita disposal rates.

Additionally, Macon County attracts a great number of tourists each year. While Macon County is 77th out of a hundred Counties in population, it ranks 29th in the State in economic impact from tourism. It can be assumed from these numbers that, as with part-time residents, there are a great many more people contributing to the waste stream than the 34,465 population figure. It is also reasonable to assume that vacationers and short-time visitors would not be as concerned or aware of the County's commitment and availability of recycling opportunities, and would, therefore contribute more to the disposal rate than the recycling rate in Macon County.

While it is evident from the previous paragraphs that factors beyond the scope of the Solid Waste Department have a major impact on disposal rates in Macon County, there are positives that can be gleaned from the data. Macon County has shown a steady decline in disposal rates for each of the past seven years (Table 4); pre-dating the economic downturn. Recycling rates are down overall, primarily due to drops in wood waste and scrap metal, but many commodities remain strong, and revenue from the sale of recycled commodities has continued to trend upwards, bringing in over \$360,000.00 in FY 2010-11; helping to offset the lost waste tonnage revenue.

The disposal rate for FY 2010-11 was 0.87 tons per capita, which represents an increase of 6.1% above the baseline rate. The projection for FY 2011-12 is even lower at 0.84 tons per capita. Considering the discussion above, **Macon County is setting a disposal rate goal of 0.85 tons per capita for FY 2014-15; and an identical goal of 0.85 tons per capita for FY 2021-22** (See Waste Reduction Goal Worksheet, Appendix E). These goals represent an overall increase in disposal rates of 3.7% relative to the baseline disposal rate of FY 1991-92. The disposal rates represented by these goals are lower than any goals proposed in previous Updates to the Solid Waste Management Plans. At the same time, these goals are in line with current disposal rates and do not represent additional drops in disposal rates. While these goals may appear less than aggressive, Macon County feels that they are realistic. Given the outside forces that contributed to the current disposal rates, Macon County feels that; as the local economy begins to recover and grow; and in consideration of lost revenues limiting expansion of current programs and development of new programs; that holding the current disposal rates is as aggressive as can be realistically achieved moving forward. To that end, Macon County feels that the recommended 40% waste reduction goal of the North Carolina Department of Environment and Natural Resources, Division of Solid Waste Management is not achievable for Macon County during the ten-year time period of this update. However, Macon County will continue to aggressively pursue waste reduction through primary means such as recycling, reuse, waste diversion and recovery, mulching, and pursuing technological advances in the solid waste industry as is financially feasible.

Table 5. Three and Ten Year Waste and Population Projections

YEAR	POPULATION	WASTE DISPOSAL (tons)	DISPOSAL RATE (tons/capita/year)
Baseline Year, 1991-92	24,071	19,738	0.82
FY 1998-99	29,364	28,020	0.95
FY 2001-02	31,042	32,483	1.05
FY 2004-05	32,264	37,209	1.15
FY 2007-08	34,711	37,463	1.08
FY 2010-11	34,465	29,957	0.87
YEAR	PROJECTED POPULATION	PROJECTED WASTE DISPOSAL AT BASE RATE (tons)	PROJECTED WASTE DISPOSAL AT GOAL RATE (tons)
FY 2014-15	35,827	29,378	30,453
FY 2021-22	39,217	32,158	33,334

The waste reduction goals can be converted from a percentage to tons diverted by examining population estimates and waste disposal figures for FY 2010-11. Based on the per capita disposal rate for FY 2010-11 (0.87 tons per capita) and the revised estimates for population, Macon County would dispose of 31,170 tons in FY 2014-15, and 34,119 tons in FY 2021-22 (Table 5). To meet the local goal of 2.3% per capita waste reduction by FY 2014-15 and FY 2021-22, Macon County must reduce its per capita disposal rate to 0.85 tons per capita. Using the targeted per capita rates, the target annual tonnage remaining for disposal by Macon County would be 30,453 tons by FY 2014-15 and 33,334 tons by FY 2021-22. In other words, 717 tons of future annual waste disposed must be diverted from landfills by FY 2014-15, and 785 tons diverted by FY 2021-22 (Table 6) in order for Macon County to reach these goals.

Table 6. Targeted Waste Reduction, FY 2008-09 and 2015-16

Fiscal Year	Population	Waste Disposed (tons)	Disposal Rate (tons/cap/yr)	Goal Per Capita Reduction (%)	Goal Disposal Rate (tons/cap/yr)	Goal Waste Disposed (tons)	Proposed Waste To Be Diverted (tons)
1991-92	24,071	19,738	0.82	--	--	--	--
2004-05	32,264	37,209	1.15	--	--	--	--
2007-08	34,711	37,463	1.08	--	--	--	--
2010-11	34,465	29,957	0.87	--	--	--	--
2014-15	35,827	**31,170	0.87	2.3	0.85	30,453	717
2021-22	39,217	**34,119	0.87	2.3	0.85	33,334	785

** - Projected waste disposed based on FY 2010-11 per capita disposal rate.

SECTION V: WASTE HANDLING CHARACTERIZATION

Residential Waste

Macon County operates eleven staffed Convenience Centers located throughout the County (Appendix C). These Centers are open 4 – 7 days per week, 40 – 80 hours per week. Residents may bring household waste and recycling to the Centers at no charge. Additionally, some small businesses are allowed to utilize the Centers for recycling only. Household waste is collected in 40-yard roll-off containers, or compactors. Full containers are taken from the Centers to the Macon County MSW Landfill (Permit #57-04) for disposal by the contracted hauler, J&B Disposal. Recycling containers are brought from the Centers, to the Recycling Processing Center, located at the MSW facility. Residential waste collected at the Highlands Transfer Station Convenience Center is transferred from the drop-off area to the transfer station in 40-yard roll-off containers.

Non-residential Waste

Non-residential wastes are defined as commercial, industrial, institutional, and bulky residential wastes. These wastes are delivered to either the Macon County MSW Landfill facility (Permit #57-03) located at 1448 Lakeside Drive in Franklin, or the Highlands Transfer Station (Permit # 57-04T), located at 1080 Rich Gap Road in Highlands. Wastes taken to the Highlands Transfer Station are transferred by the franchise hauler to the MSW Landfill via 48-foot walking floor trailers for disposal. These wastes may be delivered via the generator, or by the Franchisee, J&B Disposal. Upon arrival at either facility, inbound wastes are weighed in order to track tonnages entering the landfill, and so that the tipping fee can be applied to the waste. Depending on the nature and size of the load, wastes may be delivered directly to the landfill, or they may be diverted to the Materials Recovery Facility for processing.

Construction and Demolition Waste

Construction and Demolition (C&D) Waste is handled in the same manner as non-residential waste. Macon County closed a C&D Landfill in 2008, and now commingles MSW and C&D wastes at the Macon County MSW Landfill. C&D Waste generators may deliver wastes to the MSW Landfill for disposal, or to the Highlands Transfer Station for transfer to the MSW Landfill.

Land Clearing and Inert Debris (LCID)

LCID is accepted from residents and businesses in Macon County. LCID may be delivered to the Yard Waste area at the MSW Landfill and Highlands Transfer Station facilities. LCID is stored in the yard waste areas until it is ground into mulch by a contracted vendor. The resulting mulch is then mixed in a 50-50 ratio and transferred to the MSW Landfill as an approved alternate daily cover material. Inert debris (concrete, brick, asphalt, stone) is accepted only at the MSW Landfill. The material is accepted at a reduced tipping fee and is utilized by the landfill for construction of temporary interior roads.

Special Wastes and Banned Waste

The Macon County Solid Waste Department handles many additional special wastes for disposal or recycling at the MSW Landfill and Transfer Station facilities. The following section lists methods for processing these wastes (e.g. electronic waste, scrap tires, scrap metal and white goods, etc.) in more detail.

The Solid Waste Department also has a comprehensive waste screening program at the MSW Landfill and Transfer Station facilities. Banned wastes are managed according to the nature of the waste. Many banned materials are simply diverted into recycling programs. These include, but are not limited to, plastic bottles, aluminum cans, electronic wastes, pallets and clean wood waste, tires and white goods. Many of these items are targeted for recovery at the Materials Processing Center. Other, hazardous or liquid wastes are also managed based on the nature of the individual wastes. A predominate waste requiring special management is paint. Wet paint is rejected and returned to the generator or hauler with instructions to mix the paint with saw dust, cat litter or other absorbing agent and, once dry, return the can for disposal. The Solid Waste Department recommends to all customers with small amounts of liquid wastes that they simply use up the material for its intended purpose and bring back the empty container for disposal or recycling. Other banned wastes; hazardous wastes; are not managed by or permitted for disposal at any solid waste facility in Macon County. Should these materials arrive at the Landfill or Transfer Station, the generator is notified that they cannot be taken at the facility. Solid Waste staff always try to assist generators with proper management of hazardous wastes. Generators may be directed to the NC DEAO website, www.p2pays.org, listing companies permitted in the management of various hazardous waste types. Should an individual possess or attempt to dispose of an acutely hazardous waste, the Hazardous Waste and Waste Management Divisions of NCDENR would be contacted for assistance.

SECTION VI: SOLID WASTE MANAGEMENT METHODS ASSESSMENT OF PROGRAMS AND DESCRIPTION OF INTENDED ACTIONS

A more thorough discussion of how Macon County will continue to try and meet waste reduction goals through current programs is described in this section. Macon County's emphasis over the next three years will be focused on increased participation in recycling and waste reduction by residents through education and increased awareness of the current and new recycling programs. The County is not currently looking to make massive changes to current programs due to costs combined with lost revenues, and the lack of financially feasible secondary markets for additional recycling waste streams. The per capita disposal rate has decreased by almost 20% over the past three years, primarily due to the loss of Construction and Demolition debris, as noted above. Over the same period percentage of the waste stream recycled has remained steady, and constitute 21% of the overall waste stream. Referring to a report provided by NC DPPEA, Macon County recovered 252.1 pounds per capita in FY 2010-11, compared to 180.65 pounds per capita in FY 1998-99. This recovery rate ranks eighth out of the States 100 Counties. These facts serve as evidence that Macon County's current solid waste reduction programs are working.

These results also make Macon confident that additional waste reduction goals can be met through the current programs.

Solid Waste Management Methods lists actions that have been taken or are being considered to increase our waste reduction efforts. Each solid waste management method as required by North Carolina G.S. 130A-309.09A (b) is described below. Each section includes an assessment of the current program and a summary of the intended actions.

A. Source Reduction

Current Program:

The Macon County Solid Waste Management Department continues to include source reduction as part of the overall recycling program. The main focus of waste reduction has been to inform citizens on how to reduce the amount of waste they generate as part of educational presentations to schools, civic and community groups put on by the Recycling Coordinator. Source reduction is one of the most difficult facets of the recycling program because it is entirely consumer driven. Packaging and product packing are increasing exponentially partially due to increased packaging the increase in on-line shopping. Private industry is driving source reduction in some areas such as providing reusable grocery bags as an alternative to the traditional paper or plastic bags. Many stores also offer return services for plastic bags.

The Towns of Franklin and Highlands do not have any comprehensive source reduction programs at this time. Both Towns have instituted programs whereby Board meeting agenda packets are managed electronically on tablets and no paper copies are made; greatly reducing the amount of paper consumed by the Towns.

Intended Actions:

The Macon County Solid Waste Management Department plans to increase its efforts toward waste reduction through various seminars. Additionally, Macon County has developed an Internet homepage with a link to the Solid Waste Management Department. The Solid Waste Department utilizes this forum to provide Macon County residents with information on recycling and waste reduction programs that are offered by the County as well as State and alternate agency programs. Macon County feels that education and promotion of waste reduction opportunities serves as the County's best outlet to realize its waste reduction goals.

Information on recycling and reuse programs is also available to patrons of the County's Convenience Center Drop-off Sites via an information board and/or pamphlets developed by the Solid Waste Department.

The County, along with the Cooperative Extension Service will continue to promote and conduct demonstrations on alternate uses for organic wastes such as composting, mulching, and organic gardening.

The Towns of Franklin and Highlands do not have any plans for additional source reduction programs of their own.

B. Collection of Solid Waste

Current Program:

Solid waste is collected by the Macon County Solid Waste Management Department at eleven (11) recycling drop-off centers, including centers at each landfill, that are located throughout the county (see map in Appendix C). The recycling drop-off centers are staffed by county personnel. Half of the centers are open seven day per week. Residential solid waste is accepted at each center in a 40 cubic yard capacity roll-off container or compactor unit. J&B Disposal of Franklin hauls the solid waste from the recycling drop-off centers to the Macon County MSW Landfill. A variety of recyclable materials are also accepted at the recycling drop-off centers and the Macon County MSW Landfill (see Section C). A private curbside solid waste collection service is also available through J&B Disposal Waste in Macon County. Macon County has contracted waste collection services with J&B Disposal for unincorporated areas of Macon County. The current contract runs through March 2016.

The Town of Highlands collects residential and non-residential wastes within the city limits of its municipality. Highlands offers residential curbside pick-up twice a week and non-residential dumpster as needed and drops off waste at the Highlands Transfer Station located off of Rich Gap Road.

The Town of Franklin has contracted all of the waste collection services through J&B Disposal. Residential curbside pick-up is offered once a week, and non-residential dumpster pick-up as needed. All solid waste generated inside the Town of Franklin is hauled to the Macon County MSW Landfill.

Intended Actions:

The Macon County Solid Waste Management Department plans to refurbish or construct new recycling drop-off centers until all of the sites have been updated with compactors and compartmentalized recycling containers. The County feels that this will increase their collection efficiency for MSW and recyclables, and allow them to increase the quantity of recyclables that they currently collect. The new recycling drop-off centers will be more efficient in two ways. On the hauling side, the higher capacity compactor units will reduce the number of privately contracted hauling trips to the landfill. The compactor units will also reduce the number of roll-off containers required, thus allowing more physical room at the site for recycling operations. Further, the new recycling containers are more user friendly than the current recycling trailers. Our goal is to increase participation by making the centers easier for the public to use. While this has been a goal for a number of years, a lack of funds has continued to hamper our ability to make these improvements. We are not, however, abandoning this goal moving forward.

C. Recycling and Reuse

Recycling

Current Program:

Macon County has been operating a recycling program since 1992. Currently, the county is recycling or diverting about 21% of the managed waste. The 11 collection centers have a variety of collection bins. There are eleven material categories currently collected at the centers: newspaper, cardboard, mixed paper, aluminum cans, steel cans, clear, brown, and green glass, #1 plastic (PETE), #2 plastic (HDPE), and wine corks. There are thirteen additional commodities collected at the MSW Landfill facility; and limitedly at the centers. They are: mixed rigid plastics, used clothing, clean wood waste and pallets, mercury containing devices, electronic wastes, lead acid batteries, used oil, used cooking oil, used oil filters, anti-freeze, rechargeable batteries, cell phones, ink cartridges and toner cartridges.

There is no charge to drop off recyclables and the recycling service is available to all county residents. Macon County Solid Waste Management Department personnel haul the recycling materials from the recycling drop-off centers to the Recycling Processing Center (RPC) at the Macon County MSW Landfill. The materials are further processed and baled at the RPC and shipped to recycling companies. A tipping fee is applied to recovered materials including electronic wastes and bulky mixed plastic wastes, and all materials captured from the waste stream at the Materials Recovery Facility.

While participation in Macon County's Recycling programs is encouraged, there are no local mandates or requirements for participation. The success of the program is more notable because it is entirely voluntary (beyond landfill bans); and, the County does not have curbside collection of recyclables. It is, therefore, the commitment of both Macon County and the residents of Macon County that guide the success of the recycling programs.

The Town of Highlands provides corrugated cardboard recycling service to its residents and businesses. In FY 2010-11, Highlands recycled 170.04 tons of corrugated cardboard.

The Town of Franklin has placed recycling bins at all Town operated facilities (town hall, police station, fire station, treatment plants) for the recycling of newspaper, office paper, aluminum cans and plastic soda bottles.

A partial list of materials recycled in FY 2010-11 by Macon County, Franklin, and Highlands is shown in Table 7.

Table 7. Macon County Recycling or Diversion in Tons, FY 2010-11

MATERIAL	MACON COUNTY (TONS)	TOWN OF FRANKLIN (TONS)	TOWN OF HIGHLANDS (TONS)
Glass – clear, brown, green	397.88		
Plastics – All grades	130.97		
Aluminum cans	15.27		
Steel cans	Listed in metals below		
White goods & metals	429.88		
Newspaper	200.62		
Corrugated cardboard	783.27		170.04
Mixed Paper	799.78		
Electronic Waste	90.98		
Clothing	25		
Yard Waste & Pallets	2,094.77		
Materials Useful (Inerts used in road building at Landfills)	1,396.46		
TOTAL	6,364.88	0	170.04
Used oil	5,873 gallons		
Used antifreeze	0 gallons		
Lead-acid batteries	71 batteries		
Used Oil Filters	13 Barrels		

Source: tons recycled derived from County and Annual Solid Waste Management reports

Intended Actions:

As mentioned previously, Macon County plans to construct and/or renovate the recycling drop-off centers as it becomes financially feasible. This will include adding new compartmentalized recycling containers to the drop-off centers. The new containers will increase efficiency for recyclable collection and improve the appearance of the centers.

The Macon County Recycling Coordinator will continue to research new potential recycling markets for the inclusion of additional waste streams. Additionally, Macon County will continue to seek local generators that have identified waste streams that can be targeted for recycling. Financial limitations prohibit further major changes in our current recycling programs. However, we will continue to research all available options to increase our recycling

rates. Education will continue to be our focus concerning our residential waste stream, especially targeting the youth of Macon County via school recycling programs.

The Town of Franklin is considering placing recycling bins along the sidewalks of the downtown area. The bins would be placed along Main Street and near the Gazebo/Town Square areas.

Reuse

Current Program:

There is a pallet drop-off program in operation at the Macon County MSW Landfill at this time. Pallets are collected at the landfill and stockpiled. Residents and businesses are allowed to remove whole pallets for reuse. As needed, the County contracts with a private company to grind the stockpile of pallets and clean wood waste. The resulting mulch is used as approved alternate daily cover at the MSW landfill.

Macon County promotes various non-profit organizations such as REACH or Habitat for Humanity, and directs residents to take reusable items to those organizations.

The Towns of Franklin and Highlands do not have a reuse program in place at this time.

Intended Actions:

Macon County will continue to operate the pallet re-use program. Other potential programs for reuse of materials will be investigated and implemented if they demonstrate a potential reduction of the waste stream, and are not cost prohibitive.

The Towns of Franklin and Highlands have no plans to implement a reuse program at this time.

D. Composting and Mulching

Composting

Current Program:

Macon County is not currently operating a composting facility.

The Macon County Cooperative Extension Service operates a composting demonstration site at the Environmental Resource Center (ERC), located at the MSW Landfill. This facility is open to the public to view and ask questions about composting.

The Towns of Franklin and Highlands do not have a composting program.

Intended Actions:

The Solid Waste Management department has, and will continue to investigate sources of organic wastes as feed stock to support a composting program. Composting will resume at such time as adequate, dependable organic sources have been identified. Costs of additional containers and man-hours to perform source separation of organics from potential users waste streams have been cited as reasons for them not to pursue inclusion in the composting program.

The Towns of Franklin and Highlands do not have plans to implement a composting program.

Mulching

Current Program:

Brush, yard waste and land clearing debris is accepted along with pallets and clean wood waste at the Macon County MSW Landfill, and stockpiled. Additionally, brush, yard waste and land clearing debris is accepted at the Highlands Transfer Station facility. When there is a sufficient amount, Macon County contracts with a contractor to grind the brush and yard waste. Grinding occurs approximately twice per year at each landfill. Approximately 2,094.77 tons of wood waste was managed in FY 2010-11. The resulting mulch is utilized as alternate daily cover at the Macon County MSW Landfill.

Intended Actions:

The Macon County Solid Waste Management Department will continue to operate the mulching operation at the Macon County MSW Landfill and Highlands Transfer Station facilities. Macon County intends to seek to add pallets and clean wood waste to the mulch operation at the Highlands Transfer Station. Currently this material is being transferred to the MSW facility for grinding or reuse. Macon County will also continue to seek alternate uses of the mulch material as a fuel or feedstock to any industry that can make use of the material as such.

The Towns of Franklin and Highlands do not have plans to implement a mulching program.

E. Incineration with Energy Recovery

Current Program:

Incineration with energy recovery is not part of Macon County's or the Towns' of Franklin and Highlands current program.

Intended Actions:

Neither Macon County nor the Towns' of Franklin and Highlands have intentions of including incineration with energy recovery as part of their Solid Waste Management Programs during the next ten years.

F. Incineration without Energy Recovery

Current Program:

Incineration without energy recovery is not part of Macon County's or the Towns' of Franklin's and Highlands' current program.

Intended Actions:

Neither Macon County nor the Towns' of Franklin and Highlands have intentions of including incineration with energy recovery as part of their Solid Waste Management Programs during the next ten years.

G. Transfer of Solid Waste Outside Geographic Area

Current Program:

The transferring of solid waste is not currently part of the Solid Waste Program in Macon County.

Intended Actions:

Macon County is not currently looking at disposal options outside of our geographic area, with the possible exception of large amounts of waste that might result from a natural disaster. In the case of a natural disaster, Macon

County may seek to transfer disaster-related debris to an out-of-county facility in order to preserve local landfill space.

H. Disposal of Solid Waste

Current Program:

Macon County operates the Macon County MSW Landfill located just north of Franklin on Lakeside Drive.

Macon County completed construction of Phase II of the MSW Landfill and the Macon County Baling Facility in FY 1997-98. The Baling operation was ceased in 2006 as part of the dissolution of the Mutual Solid Waste Agreement between Macon and Jackson Counties. The former bale facility has been converted into a treatment and processing and MRF facility. We are currently accepting approximately 20% of the waste stream through the MRF facility. 40-yard containers from the Convenience Centers, and route collection trucks by-pass the MRF and are delivered directly to the landfill for disposal, unless a waste screening is to be performed on a particular load. Smaller vehicles are directed to the MRF both to separate them from the larger collection vehicles and landfill equipment, and so that their loads can be screened for recoverable materials. The MRF facility began as a program for the recovery of cardboard and scrap metal. The facility has now grown in materials recovered and has added all regular commodities as well as mixed rigid plastics and electronic wastes to the materials recovered. Over the past two years, we have recovered in excess of 800 tons of materials at the MRF facility. Another positive impact from closure of the bale facility has been realized by Macon County. Under the bale disposal method, Macon County had an average in-place waste density of approximately 1018 lbs per cubic yard during the years 1999-2005. Baling was replaced by "loose" or area filling of wastes compacted by a large Terex compactor in 2006. In the years since (2006-2011), the in-place waste density has increased to 1,724 lbs per cubic yard. This has resulted in an increased compaction rate of 69% over the previous six-year period. This has had the same impact on the landfill of recycling an addition 40% of the waste stream. This has continued to increase the remaining life of the landfill by several years. The annual Landfill Capacity Analysis will be completed in June of 2012, but based on figures from the 2011 Analysis, the current landfill Cell has approximately six years of remaining life. Additionally, Cell III, sited adjacent to the current landfill will provide over twenty years of additional disposal space for Macon County.

The Towns of Franklin and Highlands do not own or operate any landfills. They dispose of their solid waste at Macon County facilities.

Intended Actions:

Macon County's plan is to continue handling the disposal of the solid waste in the current manner. Macon does plan to expand upon the success of the MRF facility by adding additional waste streams for diversion, such as clean wood waste, and by increasing the percentage of waste that is handled through the facility. It is likely that by the next Update to the Solid Waste Management Plan, Macon County will be underway with development of Cell III, at the Macon County MSW Landfill.

I. Community and School Education

Community Education

Current Program:

The focus of our recycling program is directed at educating the public regarding recycling opportunities in Macon County. The Macon County Recycling Coordinator and Solid Waste Director conduct seminars and workshops for various community organizations when requested. The Recycling Coordinator also visits science classes at the county schools to discuss solid waste reduction and recycling. Macon County has augmented their presentations with the help of a Local Government Grant from the North Carolina Division of Environmental Assistance and Outreach. Under this grant, Macon County commissioned the construction of three large standing cut-out figures featuring the Recycle Guys. These display cut-outs are designed to draw heightened attention to the department's information booth at public venues. Additionally, the Macon County Solid Waste Department is creating a Recycle

Guy character costume; the Litter Lady. The costume will be worn at public venues, school presentations and other educational events promoting recycling.

Also highlighting our education programs is the Environmental Resource Center (ERC) located at the MSW landfill. The ERC is a primary tool for the County in promoting recycling, reuse and conservation. The ERC is made up of a large conference room, which can be utilized by school groups, environmental and related civic organizations free of charge. The conference room will also be used as a classroom for recycling seminars, as well as landfill operators training classes. The ERC is currently being used by the Master Gardeners program sponsored by the Cooperative Extension Office. The ERC also contains a computer library that includes five workstations with high-speed internet access. These workstations will be available to school and civic groups to research and find information involving various environmental issues. The grounds around the ERC are also being used for planting, composting and other natural resource demonstrations. The ERC has hosted various conferences presented by DENR including storm debris management workshop and a seminar on tire and white goods recycling programs. The ERC also hosts the pesticide collection program for Macon County.

Also expanding and promoting our community education and awareness of recycling is a mobile recycling trailer. This trailer was purchased via a grant from the Solid Waste Management Trust Fund. The trailer, and reusable recycling containers are made available to Town and County civic events such as *Taste of Scotland*, *Pumpkin Fest*, and the *Macon County Fair*. The event trailer has been a very popular addition to these events, and presents a positive face on the importance of recycling in Macon County to event participants. The Chamber of Commerce and Towns in Macon County are seeking to add the event trailer and bins to all of their annual events. Once the event is over, the trailer is brought to the RPC for processing of the recyclables collected.

The Towns of Franklin and Highlands do not have any solid waste education programs. The Town of Franklin does want to explore ways to promote recycling within the town limits including, at a minimum, promoting the use of County operated facilities to town residents and businesses. The Town of Franklin intends to add a tab on their website that links to the Macon County Solid Waste page.

Intended Actions:

The County plans to continue developing the education program. The Macon County Recycling Coordinator will continue to develop new programs and present new education materials to local community organizations and schools. The Recycling Coordinator will also assist industries to find new markets for recyclable material and keep the public informed of solid waste issues. The goal of the programs will be to increase the level of participation in residential recycling through more intensive public education. Education can be enhanced by targeting specific audiences, recyclable materials, and the utilization of multiple methods of communication including pamphlets containing recycling and special waste disposal information.

In addition to the promotional campaign, the Macon County Solid Waste Management Department has developed an Internet Home Page. The homepage will provide information to citizens about the solid waste services in the county, including topics such as recycling, composting, and “enviro-shopping.” The homepage will also provide links to other internet sites related to solid waste issues.

The Towns of Franklin and Highlands do not have plans to implement a solid waste education at this time.

School Education

Current Program:

The youth of Macon County have always been a focus of our education program. If we can get them thinking about recycling while they are young, they will be better recyclers as adults. The Recycling Coordinator visits science classes at the county schools to discuss solid waste reduction and recycling. Macon County has expanded the visual presentations promoting recycling as outlined in the section above. Macon County has also initiated an “adopt-a-bin” program at many of the County schools. Interested schools and/or classrooms are given a recycling bin which they use in the classroom for recycling of mixed paper. These bins, once full, are taken to a nearby convenience center or brought to the RPC for processing. In addition to the waste removed from the school’s waste stream, it is

felt that children recycling in the classroom will translate to them taking the idea of recycling home and working with their parents to develop home recycling programs. The adopt-a-bin program in all but two of Macon County's schools.

There are no schools under the jurisdiction of the Towns of Franklin and Highlands.

Intended Actions:

Continue to develop and expand the school education programs; and hopefully, reinstitute the poster contest and recycling fair. Foster direct involvement of local school faculty in educating school children on the benefits of recycling through presentations and other educational programs. We hope to extend the "adopt a bin" program to put a recycling bin in every elementary school classroom. The program is not necessarily designed to collect large amounts of recyclables, but rather to keep kids thinking about recycling. One major hurdle in implementing this program is developing a collection system to service the bins that is not overly burdensome to the schools.

J. Special Waste Management

Tires

Current Program:

Tires are collected free of charge at the Macon County MSW Landfill, at the Highlands transfer station and the Junaluska Recycling Center in Nantahala. Additionally, two local tire merchants have spotted their own trailers for the collection and recycling of scrap tires. These trailers are monitored by Macon County for appropriate weights and sources of tires. Money from the statewide tire tax helps fund the tire-recycling program. The County received \$108,340.34 from the tire tax and grant funds in FY 2010-11.

In 2011, Macon County solicited bids for tire recycling services. The bid was awarded to Northeast Georgia Tire Recycling, Inc., of Hartwell, Georgia at a price of \$91.00/ton with no fuel surcharge. This price reflects a savings of approximately \$20.00 per ton for the collection and processing of scrap tires, compared to the previous service contract.

U.S. Tire Recycling Partners, L.P. and Northeast Georgia Tire Recycling, Inc, collected approximately 908 tons of scrap tires in Macon County in FY 2010-11.

The Towns of Franklin and Highlands do not collect tires.

Intended Actions:

Tire collection and hauling will remain the same for Macon County and the Towns of Franklin and Highlands.

White Goods and Scrap Metal

Current Program:

White goods and Scrap Metal are collected at the Macon County MSW Landfill and the Highlands Transfer Station. White goods and scrap metal are delivered to the white goods handling area consisting of a concrete pad, a concrete retaining wall, and a Freon removal area. Macon County performs all Freon removal in house with equipment purchased with the help of a White Goods Grant. In 2009 Macon County awarded a contract to DeSoto Trail of Franklin for the processing and transport of white goods and scrap metal. The County receives a portion of the sale of the scrap metal to help fund the program. For FY 2010-11, Macon County collected 429.88 tons of white goods and scrap metal. This is a drastic decrease from previous years and is attributable to two factors. First, while the price of scrap metal was high, a cottage industry formed with various persons collecting scrap metal and selling it without the metal passing through the landfill facility. Second, a private enterprise has opened in Macon County that will purchase scrap metal. Therefore, many people and several businesses have found it more advantageous to take their metal to the private company rather than delivering it to the landfill.

The Towns of Franklin does not provide collection services. The Town of Highlands collects white goods, free of charge, once per year. The white goods are taken to the white goods area at the Highlands Transfer Station.

Intended Actions:

Macon County will maintain its current White Goods and Scrap Metal program. Macon County may consider expanding the program to include metal sorting to increase the value of the recycled scrap metal.

The Towns of Franklin and Highlands have no plans to add a white goods and scrap metal recovery operation.

Lead-acid batteries

Current Program:

Lead-acid batteries are collected at the Macon County MSW Landfill, Highlands Transfer Station, and at remote Recycling Drop-off Centers. Macon County received approximately 71 lead-acid batteries in FY 2010-11. This represents a dramatic drop in the number of batteries collected at the last Update. Like scrap metal, it is assumed that the loss of lead-acid batteries from the Macon County recycling program is due to the value of the lead contained in the batteries. Additionally, several auto parts retail stores also provide battery recycling, and new battery sales include a core charge unless the battery to be replaced is returned to the store.

The Towns of Franklin and Highlands do not collect lead-acid batteries.

Intended Actions:

Macon County plans to continue the lead-acid battery recycling program, and possibly expand collection to additional Recycling Drop-off Centers.

The Towns of Franklin and Highlands do not have plans to begin collecting lead-acid batteries.

Used Motor Oil

Current Program:

Collection of used motor oil is provided free to all county residents at the Macon County MSW Landfill, Highlands Transfer Station and at remote Recycling Drop-off Centers. Macon County received approximately 5,900 gallons of used oil in FY 2010-11.

The Towns of Franklin and Highlands do not collect used motor oil.

Intended Actions:

The Macon County Solid Waste Management Department intends to continue the collection of used motor oil, and possible provide oil collection areas at additional Recycling Drop-off Centers.

The Towns of Franklin and Highlands do not have plans to begin collecting used oil.

Used Oil Filters

Current Program

Macon County collects used oil filters at the Macon County MSW Landfill and the Highlands Transfer Station. Used oil filters are taken, free of charge, from residential customers. Commercial customers may also use the oil filter recycling program. However, most shops have arrangements to handle the oil filters themselves. In FY 2010-11, the Macon County Solid Waste Department collected 13 barrels of used oil filters. In 2011, Macon County

purchased an oil filter crusher for use at the MSW Landfill facility with the aid of a State grant. The oil filter crusher will help control the costs of oil filter recycling, which is billed by the barrel. By crushing the filters before putting them in the barrel, fewer pick ups will be required; and residual oils are removed from the filter and placed in the oil recycling containers.

Intended Actions

The Macon County Solid Waste Management Department intends to continue the collection of used oil filters.

The Towns of Franklin and Highlands do not have plans to begin collecting used oil filters.

Household Hazardous Waste

Current Program:

Macon County and the Towns of Franklin and Highlands do not have a household hazardous waste program at this time. Persons interested in disposal of potentially hazardous waste are directed to websites hosted by NCDENR and NCDEAO for databases of specialists that handle specific wastes. Macon County does participate in Pesticide Disposal Program in Cooperation with North Carolina Cooperative Extension and North Carolina Department of Agriculture. Pesticides are collected once every two years on-site at the Environmental Resource Center. Approximately, 1,200 pounds of pesticides, and 649 containers were collected at the last collection day on May 25, 2010. A private vendor transfers pesticides into bulk containers and takes them away for proper disposal. Additionally, the local Extension Office has installed a small building for the collection and storage of pesticides and empty pesticide containers between collection events.

Intended Actions:

Macon County is considering hosting a household hazardous waste collection event. A vendor, permitted in management of household hazardous waste would be selected to collect, transport and properly dispose of wastes collected at the event.

Towns of Franklin and Highlands do not have plans to begin collecting household hazardous waste.

Fluorescent Lights & Mercury Containing Devices

Current Program:

The Macon County Solid Waste Management Department is currently accepting used mercury containing devices at the MSW Landfill facility. The Thermostat Recycling Corporation supplies the County with containers for the collection of used devices. Once full, the containers are shipped back to the TRC, and a replacement container is returned to the County. This program is open to residents and businesses in Macon County.

Macon County, under guidance of North Carolina Session Law 2010-180, has developed a recycling program for mercury containing waste lamps removed from all governmental facilities. This program is being operated under the direction of the Building and Grounds Maintenance Department. Southeast Recycling Technologies has been contracted by the County to transport and process these waste lamps for recycling.

The Towns of Franklin and Highlands are partnering with Macon County in participation in the mercury containing waste lamp recycling program for their respective municipalities.

Intended Actions:

The Macon County Solid Waste Management Department may seek to add fluorescent tube recycling to existing universal waste management program. Should Macon move forward with this program, the Solid Waste Department will seek a permit amendment including an operations plan of how the material will be received, stored, and

recycled. Additionally, an emergency response plan will be developed in the case of a release of mercury. Once the permit amendment is approved by NC DENR, the management of the fluorescent lamps would be handled at the Materials Recovery Facility, and employees will be trained in proper management of said materials.

Macon County also intends to continue managing mercury containing devices via the services of the TRC group. The Towns of Franklin and Highlands do not intend to manage mercury containing devices (including waste lamps and thermostat switches) beyond those wastes which may be generated by the Towns themselves.

Animal Mortality

Current Program:

The Macon County MSW Landfill does accept deceased animals for disposal. Citizens arriving at the landfill with a dead animal are directed to the landfill where a hole is dug in the working face. Deceased animal(s) are placed in the hole and covered with waste prior to compaction. Animals arriving for disposal are required to be covered or bagged as is practical to reduce possible transfer of disease to customers and landfill personnel.

Intended Actions:

Macon County does not anticipate any changes to the handling of animal mortality waste at this time.

Computer/Electronics Disposal

Current Program:

Macon County began recovering all electronic waste for recycling in January 2009. Macon County is operating the electronics program in under contract with Creative Recycling, an approved electronics recycler in North Carolina. Computers, monitors and peripherals, televisions, and all other electronic devices are accepted at the Macon County MSW Landfill Facility at the Treatment and Processing Materials Recovery Facility, and at the Highlands Transfer Station in Highlands. This program is available to all citizens of Macon County and the incorporated areas of Franklin and Highlands. Normal tipping fee rates apply to electronics as non-household or bulky wastes. The Finance Department will create a special line-item for the receipt of State funds made available via the electronics recycling program. Tipping fees collected, along with any additional revenue generated from this program will be used to fund the electronic recycling program. There is no revenue generated from the sale of electronics.

Citizens wishing to dispose of electronics shall delivery them separately (not bagged or mixed with other wastes) to a designated area within the Material Recovery Facility (MRF) located at the MSW Landfill Facility. Electronics may also be delivered to the Highlands Transfer Station in Highlands, and will be transported to the MRF by the County's contracted hauler. The electronics collection area is managed by landfill staff that sort and stack the electronics in Gaylord boxes or on pallets that are then wrapped in plastic for transport. Once sixteen-twenty pallets/Gaylords have been collected, Creative Recycling is contacted for a pick-up of the electronic waste. Creative Recycling dispatches a tractor-trailer to the facility for pick up of the materials which are loaded into the trailer by landfill personnel. Once the trailer is loaded, the load is taken to the weigh scales and manifested. The weight of the load is recorded and records of each load and weight are maintained at the scalehouse. Additionally, once the electronic waste is received at a Creative Recycling processing facility, the electronics are sorted by type and weighed. Creative recycling then sends a weight report and certificate of recycling back to the Solid Waste Department.

Items accepted in the electronic waste recycling program include: televisions (all types), computer towers, monitors and peripherals, copiers, fax machines, telephones, DVD players, VCRs, etcetera. You may contact the Solid Waste Department for a complete list of acceptable items, but as a general rule, if has "a cord and a board" it can be taken into the program. Electronic wastes can be delivered to the landfill or transfer station at any time under normal operating hours. In FY 2010-11, Macon County recycled approximately 91 tons of electronic wastes.

Intended Actions:

Macon County intends to continue the electronic waste recycling program. The program has already demonstrated a very high diversion rate via citizens delivering electronic waste for recycling, or by landfill staff recovering electronic wastes observed in waste loads delivered to the landfill.

Mobile Home Disposal

Current Program:

The Macon County Solid Waste Department does not currently have a program for the disposal of mobile homes. The landfill does not accept “whole” or “in-tact” mobile homes. Citizens wishing to dispose of a mobile home must demolish the home on-site after the removal of all white goods, mercury containing switches and after completing a demolition permit from the Code Enforcement Department. All recyclable materials (metals and white goods) must be segregated before delivery to the landfill. Metals are diverted to the scrap metal pile for recycling or Freon removal. The remaining wastes are delivered to the landfill in covered containers, added to the regular waste stream and disposed of in the Macon County MSW Landfill.

Macon County does have a program in place to provide assistance to any resident wishing to dispose of an abandoned mobile home. The Abandoned Mobile Home Project Initiative is a voluntary program that allows residents to apply for up to \$1,000.00 in assistance in disposing of an abandoned mobile home. Residents must complete application forms and return them to the Macon County Building Inspections office, along with a demolition permit and permit fee of \$100.00. Once an applicant is approved, a pre-demolition meeting is held with the home owner and their contractor, and a representative of the Building Inspections Department and the Solid Waste Department. The purpose of this meeting is to insure that proper disposal and recycling steps are taken and that service to any utilities is disconnected and properly abandoned or approved for re-use (e.g. septic tanks, wells). The demolition material is then taken to the MSW Landfill and the first \$1000.00 in tipping fees are paid by the program. Any tipping fees above \$1000.00 are due from the applicant. Should tipping fees be at or below \$900.00, the program also refunds the demolition permit fee to the applicant. This program is available to any resident of Macon County and the incorporated areas therein. The program is not available to individuals that manage mobile homes as a business; such as a mobile home park owner or mobile home retailer.

Macon County began this program in 2009. To date, the program has assisted in the removal of seventeen mobile homes at a cost to the program of \$14,035.04

Intended Actions:

Macon County intends to continue operation and funding of the Abandoned Mobile Home Project Initiative. No changes to the program are anticipated at this time.

K. Prevention of Illegal Disposal and Management of Litter

Illegal Disposal - Operated Sites

Current Program:

Macon County has a Solid Waste Ordinance in place that prohibits illegal disposal and operation of an open dump, and sets requirements for proper storage and disposal of household solid waste. The Macon County Solid Waste Management Department depends on local law enforcement to enforce the litter laws. In July 2002, Macon County hired a full-time Solid Waste Enforcement Officer to enforce the County Solid Waste Ordinance. Over the past three years, the Enforcement Officer has responded to 1,325 complaints. Of these complaints, 1050 have been resolved (cleaned up); at an additional 275 complaint sites, no solid waste violation was found; and approximately 45 complaints remain open. The complaints included illegal dumping, improper storage or transport of waste, trash left outside closed recycling centers, and referrals from other County and State agencies. The Macon County Enforcement Officer has also assisted the regional DENR office in several cases of illegal disposal. Additionally, the Macon County Sheriff’s office has used inmate labor for various community programs including a roadside

cleanup project that began March, 2004. Over the past three years, they have cleaned up numerous roadways and seventeen illegal dumpsites, and collected over 33 tons of debris. To report suspected illegal dumping or improper storage of solid waste, contact the Solid Waste Enforcement Officer at (828) 349-2251.

The Town of Highlands also has a solid waste Ordinance in place, which prohibits illegal disposal and operation of an open dump. The Town depends on the town police to enforce the litter laws.

The Town of Franklin does not have a solid waste Ordinance.

Intended Actions:

Macon County will continue to develop the program to enforce the Solid Waste Ordinance. Additionally, the County may revise the existing Ordinance to further address regulations and penalties for littering, transporting uncovered waste, and improper waste disposal.

The Town of Franklin does not intend to pass a Solid Waste Ordinance at this time.

The Town Highlands has no plans to revise their existing Ordinance.

Litter Management

Current Program:

Macon County and the Town of Highlands have a solid waste Ordinance in-place that prohibits littering.

The Solid Waste Enforcement Officer and local law enforcement will continue to address the problem of littering in Macon County.

Macon County businesses and civic groups participate in the North Carolina State Adopt-A-Highway program. Currently the state program has 45 active contracts in Macon County.

The Macon County Sheriff's Department and the Macon County Commissioners established a community service program where one alternative for convicted offenders who are sentenced to community service work, will be picking up trash along the county roads. This program began in January 1998. See description of Sheriff's Department roadside cleanup program listed above.

The Town of Franklin does not have a litter management program at this time.

Intended Actions:

The Macon County Sheriff's Department will continue to operate the community service program for convicted offenders to assist in litter management.

Macon County may seek to revise the Solid Waste Ordinance to adopt policies and fines for littering and improper disposal issues.

The Town of Franklin does not have any plans to begin a litter management program.

The Town of Highlands has no plan upgrade the or amend their current littering Ordinance.

L. Purchase of Recycled Materials and Products

Current Program:

Neither Macon County nor the Town of Franklin has a recycled product purchasing program in place at this time. However, Macon County and the Town of Franklin do purchase recycled paper products when available and economically feasible.

The Town of Highlands has a policy of purchasing recycled paper in the Town offices.

Intended Actions:

No changes are to these policies are planned by Macon County or the Towns.

The “Plan of Action” worksheets have been attached in Appendix F. These worksheets provide an assessment of the previous plan with current status and give new and/or revised actions to achieve goals set through FY 2021-22 for each of the planning elements.

SECTION VII. SOLID WASTE COSTS AND FINANCING METHODS

Description and Assessment of Costs:

Macon County

Description:

Macon County operates one MSW Landfill, one Materials Recovery Facility, one Recycling Processing Center, and one Transfer Station in the county as well as 11 staffed recycling drop-off centers. Collection of county solid waste is handled by J&B Disposal. The Town of Highlands provides collection services to residents within town limits. The Town of Franklin has contracted all collection services through J&B Disposal. The solid waste costs shown below are separated by the county-operated program and the two municipal programs.

The total operational cost for the county-operated solid waste program during FY 2010-11 was \$2,212,460. The annual cost of the Macon County collection and disposal was \$1,837,440. This includes the operation of the recycling and disposal facilities and collection from the recycling drop-off centers. Waste reduction program costs, including recycling, collection, reuse, mulching, etc. totaled \$375,020. A summary of the county-operated solid waste program costs is shown in Table 8.

Table 8. Macon County Solid Waste Program Costs, FY 2010-11

COST	SOLID WASTE COLLECTION & DISPOSAL	RECYCLING COLLECTION & PROCESSING	TOTAL
PROGRAM COST	\$1,837,440	\$375,020	\$2,212,460
COST PER TON	\$61.34	\$56.00	\$60.90
COST PER PERSON	\$53.31	\$10.36	\$64.19

Source: Macon County Solid Waste Department and Finance Department Records.

Town of Franklin

Description:

The Town of Franklin has contracted all waste collection services through J&B Disposal, Inc. Therefore, the Town does not experience any costs, nor does the Town collect any revenue from the collection or disposal of solid waste.

Highlands

Description:

Highlands provides curbside residential pick-up twice a week and non-residential dumpster pick-up as needed. The waste is then disposed of at the Highlands Transfer Station. The Town charges a monthly per household fee and collected approximately 2,440.52 tons of waste in FY 2010-11. The summary of solid waste costs for that year is shown below in Table 9.

Table 9. Highlands Solid Waste Program, FY 2010-11

COSTS	COLLECTION	WASTE DISPOSAL	WASTE REDUCTION	TOTAL
PROGRAM REVENUES	\$563,353	0	0	\$563,353
PROGRAM COST	\$426,201	\$130,838	\$6,314	\$563,353
COST PER TON	\$174.64	\$53.61	\$37.13	\$215.80

Source: Highlands Solid Waste Management Report

Description of Financing Methods:

Currently, the Macon County solid waste program is funded through the annual county household solid waste availability fee, tipping fees, and the sale of recyclables. The tire program is paid for through the tire tax levied by the state. The white goods tax distribution and sale of scrap metal fully supports the white goods and metals recycling program. Franklin residents pay for solid waste management services directly to J&B Disposal. The residents of Highlands pay for solid waste management services through monthly collection fees. See Table 10 for a summary of current financing methods.

Table 10. Solid Waste Financing Methods Used By the Planning Area, FY 2010-11

	Total SWM Operating Budget	Landfill Fee (tip fee)	Property Taxes - General Fund	Collection Fee	Availability Fee	Sale of Recyclables	Grants	Tire & White Good Tax	Other
Macon County	\$2,212,460	34.0%	0%	0%	51.1%	10.0%	2.4%	1.4%	1.1%

Source: Finance Department records plus County and Municipal Solid Waste Management Annual Reports

Assessment of Financing Methods:

Landfill Fees (tip fee):

The MSW waste tipping fee of \$66.00 per ton charged at the Macon County MSW Landfill generated \$778,780.00 in FY 2010-11. The \$66.00 per ton tipping fee at the Wilson Gap Road Construction and Demolition Landfill generated \$569,996.00 in FY 2010-11. The Landfill User fees financed approximately 34.0% of the solid waste budget. The Macon County Code, Chapter 11, states that the Landfill Use Fee is for the operation of the landfill.

The current FY 2010-11 Macon County fee structure for the Landfill Use Fees (tipping fees), as defined in Attachment 2 of the Macon County Code, Chapter 11, and is amended annually as part of the budget Ordinance are as follows:

- Category 1 Construction and Demolition Waste:
 - Amount of Fee: \$66.00 per ton delivered to the Macon County Landfill for disposal.
\$66.00 per ton delivered to the Highlands Transfer Station + \$8.75 per ton transfer fee.

- Category 2 Yard Waste
 - Amount of Fee: \$30.00 per ton delivered to the Macon County Landfill or Highlands Transfer Station.

- Category 3 Tires:
 - Amount of Fee: Exempted.

- Category 4 Material Useful to the Facility:
 - Amount of Fee: \$10.00 per ton delivered to a Macon County Landfill for disposal.

- Category 5 White Goods as Defined by G.S. 130A-290(a)(44)
 - Amount of Fee: Exempted

- Category 6 All other Non-Residential Solid Waste:
 - Amount of Fee: \$66.00 per ton of solid waste delivered to a Macon County Landfill for disposal.

General Fund:

The Macon County general fund is not used to finance the solid waste program.

The Town of Franklin's general fund was not used to finance any solid waste services.

The Town of Highlands' general fund is not used to finance the solid waste budget .

Collection Fee:

The Town of Franklin has contracted with J&B Disposal for all solid waste collection services. Fees for collection are paid directly to J&B Disposal. The Town of Franklin neither incurs costs nor generates revenue from solid waste services.

The Town of Highlands charges a \$16.00/month/household collection fee for residential pick-up and a \$16.00/pick-up fee plus an additional dumpster fee of \$40.00, and a cardboard fee as applicable for non-residential pick-up. These fees generated approximately \$563,353 or 100% of the town's solid waste budget.

The county residences can pay for collection services available through J&B Disposal, Inc. Current fee structure is \$12.00/month for weekly curbside pick-up and \$15.50/month for weekly backyard pickup. These fees are paid directly to J&B Disposal and the county does not receive any of these funds.

Availability Fee:

Macon County Solid Waste Management Department charged an availability fee to all households within the county. The Macon County Code, Chapter 11 states the fee is utilized to defray the cost of providing the landfill facilities in Macon County, including the cost of closing old landfills, solid waste disposal siting, acquiring, and preparing of site, and the cost of new solid waste disposal sites and maintenance of all solid waste disposal sites. In FY 2010-11 the availability fee financed approximately 51.1% of the solid waste budget.

The FY 2010-11 Macon County fee structure for the Availability Fees, as defined in Attachment 1 of the Macon County Code, Chapter 11, and amended by the annual Budget Ordinance, are as follows:

Improved Residential Property: \$72.00 per year.
Improved Commercial Property: \$78.00 per year.

Sale of Recyclables:

Macon County revenue from the sale of recyclables funds approximately 10.0% of the county operated solid waste program and totaled \$366,230. Although we have experienced an overall decrease recycling tonnage, the current markets for commodities has been relatively strong accounting for our highest ever revenues from recycling sales.

Tax Reimbursements:

The Macon County Solid Waste Management Department received an allocation from the White Goods Management Account for \$10,247.49 in FY 2010-11. The County also received an allocation from the tire tax funds and tire grants in the amount of \$108,340.34.

SECTION VIII: DISASTER DEBRIS MANAGEMENT

In the event of a natural disaster, the Director of Emergency Services will open and direct the Emergency Operation Center (EOC). An excerpt from the Macon County Emergency Management Plan pertaining to the Management of disaster debris is included in Appendix G. The Director of Solid Waste Management will be tasked with the responsibility of handling all disaster related debris resulting from the event. Depending on the nature of the event and the amount of debris produced, a number of scenarios could be utilized. Containers for the **collection** of debris would be provided by J&B Disposal, Inc. A letter sent from J&B Disposal, Inc. to Macon County concerning this matter has been attached in Appendix G. At the County's request, containers will be provided to individuals or areas for the collection of debris. Should temporary **storage and processing** of debris (primarily LCID) be required, Macon County will utilize permitted temporary storage and processing sites, located around the County (Appendix C). Should additional sites be required due to waste volumes or location, Macon County will work with DENR Solid Waste section to permit additional sites. The Macon County MSW landfill will be utilized for **disposal** of disaster related debris. In the event that the amount of debris would overrun operations at the landfill or greatly diminish future disposal capacity, Macon County may contract with an out-of-state landfill for additional disposal services. Additionally, Macon County may utilize any number of private contractors to provide services that can not be provided by the County. These may include grinding of LCID, transport of waste out of Macon County and related cleanup and restoration services. The following is a list of emergency contacts in Macon County should a natural disaster occur:

Director of Emergency Services:	David Key	(828) 349-2064
Director of Solid Waste Management:	Chris Stahl	(828) 349-2100
J&B Disposal, Inc.:	Bonita Hamstra	(828) 369-2727

SECTION IX: FACILITIES AND RESOURCES AVAILABLE THROUGH PRIVATE ENTERPRISE

There are no privately operated disposal facilities in Macon County. There is a private enterprise that accepts, and pays for scrap metal.

Macon County currently has a contract with J&B Disposal, Inc. for collection of waste within unincorporated Macon County. Additionally, the Town of Franklin contract with J&B Disposal for all residential collections of waste within the Town limits.

SECTION X: EXECUTIVE SUMMARY

As detailed in this Update, Macon County continues to be committed to providing comprehensive waste recycling and disposal services to the citizens and business in Macon County. Over the past three years, Macon County has expanded recycling programs, both to encompass recently banned materials such as electronic waste and all grades of plastic bottles, and growth in other recycling commodities. Additionally, Macon County has continued to experience a steady decline in per capita disposal rates. It is clear that the recession and corresponding impact on the local construction economy has been the largest contributor to the decline in disposal rates, but the County has also experienced a gradual decline in disposal rates every year since 2005. The Solid Waste Department continues to seek ways to divert recyclable commodities out of the waste stream through education (especially within the school system); recovery via the Materials Recovery Facility; partnerships with local businesses; and expansion of the commodity lines made available for recycling. As always, I give a lot of credit to the people of Macon County for their support of our recycling programs. Without local mandates or household collection of recyclables, it is the citizens of Macon County that are responsible for much of our success. It is through the efforts of my staff and the public that have allowed us to continue to meet our waste reduction goals and, in fact, lower our estimates for future waste reduction goals in each of the last four 3-year Updates to this Plan. Our current goal for 2015 and 2022 is 0.85 tons per capita; 100-pounds per capita lower than projected three years ago. We are already on track to have a lower disposal rate in 2012 than the current estimate, but I hope to see growth return to the County over the next three years and we will try to match that growth with further increases in recycling and recovery to maintain our current disposal rates.

The largest challenge facing the Solid Waste Department over the next ten years will be the development of Cell III. It is projected that Cells I and II will last approximately five more years. We intend to begin preliminary work on Cell III in the FY2012-13 budget year. By the time construction of Cell III begins, it will have been almost twenty years since the County has made this kind of investment in waste disposal as Cell II was completed in 1997. Projections on waste volumes, compaction rates, and volume of Cell III indicate that the Cell could provide disposal capacity to Macon County for thirty years. I think the regulatory demands and cost of development of the new Cell will serve as a great reminder to the County and its citizens the great importance of maximizing the efficiency and utilization of Cell III and that we can use that as additional incentive to promote recycling and waste diversion in Macon County.

In closing, I want to again thank my staff and the public at large for supporting this Department and our programs. I know that if we continue to work together, we can achieve even greater successes than we have experienced to date.

M. Chris Stahl
Macon County Director of Solid Waste Management

Appendix A – Resolutions to Adopt the Solid Waste Management Plan

MACON COUNTY

**RESOLUTION ACCEPTING AND ENDORSING THE SOLID WASTE
MANAGEMENT PLAN OF 2012 FOR MACON COUNTY**

WHEREAS, it is a priority of this community to protect human health and the environment through safe and effective management of municipal solid waste; and

WHEREAS, the reduction of the amount and toxicity of the local waste stream is a goal of this community; and

WHEREAS, equitable and efficient delivery of solid waste management services is an essential characteristic of the local solid waste management system; and

WHEREAS, it is a goal of the community to maintain and improve its physical appearance and to reduce the adverse effects of illegal disposal and littering; and

WHEREAS, Macon County recognizes its role in the encouragement of recycling markets by purchasing recycled products; and

WHEREAS, involvement and education of the citizenry is critical to the establishment of an effective local solid waste program; and


WHEREAS, the State of North Carolina has placed planning responsibility on local government for the management of solid waste; and

WHEREAS, NC General Statute 130A-309.09A (b) requires each unit of local government, either individually or in cooperation with other units of local government, to update the Ten Year Comprehensive Solid Waste Management Plan at least every three years; and

WHEREAS, the Macon County Solid Waste Management Department and the Citizens Solid Waste Advisory Council have undertaken and completed a long range planning effort to evaluate the appropriate technologies and strategies available to manage solid waste effectively; and


NOW, THERE BE IT RESOLVED BY THE GOVERNING BOARD OF MACON COUNTY:

That Macon County's 2012 three-year update to the Ten Year Comprehensive Solid Waste Management Plan is accepted and endorsed and placed on file with the Clerk to the Board on this the 8th day of May, 2012.



Kevin Corbin, Board Chairman

ATTEST:



Jack Horton, County Manager
Clerk to the Board



**A Resolution Approving the Macon County Solid Waste
Management Plan Update
Resolution No. 2012-02-Res**

WHEREAS, NCGS §130A-309.09A(b) requires each unit of local government, either individually or in cooperation with other units of local government, to develop a ten-year Comprehensive Solid Waste Management Plan, and to update said plan every three years; and

WHEREAS, the Town of Highlands adopted a resolution on June 18, 1997, approving the ten-year Macon County Comprehensive Solid Waste Management Plan, and is now required to update said plan; and


WHEREAS, Macon County has prepared an update to said plan, based on information provided by the Town of Highlands;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Commissioners of the Town of Highlands hereby approves the three-year update to the Macon County Comprehensive Solid Waste Management Plan.

Upon motion duly made and seconded, the above resolution was unanimously adopted by the Board of Commissioner at their regularly scheduled meeting held on the 17th day of May, 2012 in the Highlands Community Building, 71 Poplar Street.

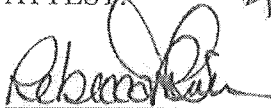
This the 22nd day of May, 2012.





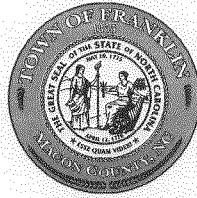
David Wilkes, Mayor

ATTEST:



Rebecca R. Shuler, Town Clerk

TOWN OF FRANKLIN



Post Office Box 1479
Franklin, North Carolina 28744
(828) 524-2516

Resolution Accepting and Endorsing The Solid Waste Management Plan of 2012 for Macon County, The Town of Franklin and Town of Highlands

Whereas, it is a priority of this community to protect human health and the environment through safe and effective management of municipal solid waste; and

Whereas, the reduction of the amount and toxicity of the local waste stream is a goal of this community; and

Whereas, equitable and efficient delivery of solid waste management services is an essential characteristic of the local solid waste management system; and

Whereas, it is a goal of the community to maintain and improve its physical appearance and to reduce the adverse effects of illegal disposal and littering; and

Whereas, The Town of Franklin recognizes its role in the encouragement of recycling markets by purchasing recycled products; and

Whereas, involvement and education of the citizenry is critical to the establishment of an effective local solid waste program; and

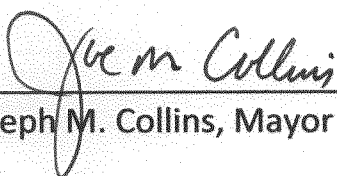
Whereas, the State of North Carolina has placed planning responsibility on local government for the management of solid waste; and

Whereas, N.C. General Statute 130A-309.09A(b) requires each unit of local government, either individually or in cooperation with other units of local government, to update the Ten Year Comprehensive Solid Waste Management Plan at least every three years, and

Whereas, the Macon County Solid Waste Management Department and Citizens Solid Waste Advisory Council have undertaken and completed a long-range planning effort to evaluate the appropriate technologies and strategies available to manage solid waste effectively;

Now, therefore, be it resolved by the Town of Franklin Board of Aldermen that the Three-Year Update to the Solid Waste Management Plan for Macon County, The Town of Franklin and The Town of Highlands for July 1, 2012 to June 30, 2022 is accepted and endorsed and placed on file with the Clerk to the Board.

Adopted this the 4th day of June, 2012.



Joseph M. Collins, Mayor

ATTEST:



Janet Anderson, Town Clerk

Appendix B – Copy of Notice for Public Meeting

**Invoice/ Affidavit
The Franklin Press**

Post Office Box 350
Franklin, NC 28744

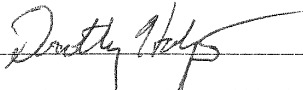
**STATE OF NORTH CAROLINA
COUNTY OF MACON**

PUBLIC NOTICE

AFFIDAVIT OF PUBLICATION Personally appeared before the undersigned, Dorothy Halpin, who having been duly sworn on oath that she is Administrative Assistant of The Franklin Press, and the following legal advertisement was published in The Franklin Press newspaper, and entered as second class mail in the Town of Franklin in said county and state; and that she is authorized to make this affidavit and sworn statement; that the notice or other legal advertisement, a true copy of which is attached hereto, was published in The Franklin Press newspaper on the following dates:

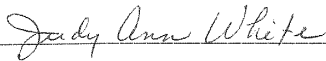
Update to County Solid Waste Management Plan
March 28, 2012

And that the said newspaper in which such notice, paper, document or legal advertisement was published, was at the time of each and every such publication, a newspaper meeting all the requirements and qualifications of Section I-597 of the General Statutes of North Carolina and was a qualified newspaper within the meaning of the Section I-597 of the General Statutes of North Carolina.



Signature of person making affidavit

Sworn to and subscribed before me this 28th day of March 2012



Notary Public

My Commission Expires: September 5, 2014

Filed With: Macon County Solid Waste Management Department
Address: 109 Sierra Drive, Franklin, NC 28734
Total Amount Due: \$46.08

**JUDY ANN WHITE
NOTARY PUBLIC
Macon County
North Carolina**

PUBLIC NOTICE

The Macon County Board of Commissioners will hold a Public Hearing on an Update to the County Solid Waste Management Plan at the May 8, 2012 regular meeting. The Board meeting will begin a 6:00 pm in the Commissioners Board Room on the 3rd floor of the Macon County Courthouse, 5 West Main Street, Franklin, NC, at which time the 2012 Update to the Ten-Year Solid Waste Management Plan will be discussed. The Plan addresses management of solid waste for residents of unincorporated areas of Macon County, the Town of Franklin and the Town of Highlands. All interested residents are invited to attend to discuss and provide comments on the Plan. A draft copy of the Plan is available for review at the Macon County Manger's office in the Courthouse Annex, the Highlands Town Office, the Franklin Town Office, and the Solid Waste Management Administration Office.

Jack Horton
County Manager
Ex Officio Clerk to the Board

The Highlander

Post Office Box 249
134 N. 5th Street
Highlands, NC 28741

AFFIDAVIT OF PUBLICATION

STATE OF NORTH CAROLINA

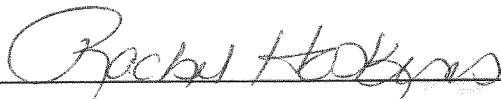
COUNTY OF MACON

Personally appeared before the undersigned Rachel Hoskins, who having been duly sworn on oath that she is the Regional Publisher of The Highlander, and that the following legal advertisement was published in The Highlander newspaper, and entered as second class mail in the Town of Highlands in said county and state; and that she is authorized to make this affidavit and sworn statement; that the notice or other legal advertisement, a true copy of which is attached hereto, was published in The Highlander newspaper on the following dates:

Public Hearing-Update to County Solid Waste

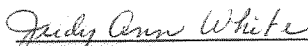
March 29, 2012

And that the said newspaper in which such notice, paper, document or legal advertisement was published, was at the time of each and every such publication, a newspaper meeting all the requirements and qualifications of Section I-597 of the General Statutes of North Carolina and was a qualified newspaper within the meaning of the Section I-597 of the General Statutes of North Carolina.



Signature of person making affidavit

Sworn to and subscribed before me 27th day of Feb. 2011.

 Notary Public

My commission expires September 5, 2014

Filed with: Macon Co. Solid Waste

Address: 109 Sierra Drive, Franklin, NC 28734

Total Amount Due : \$35.49

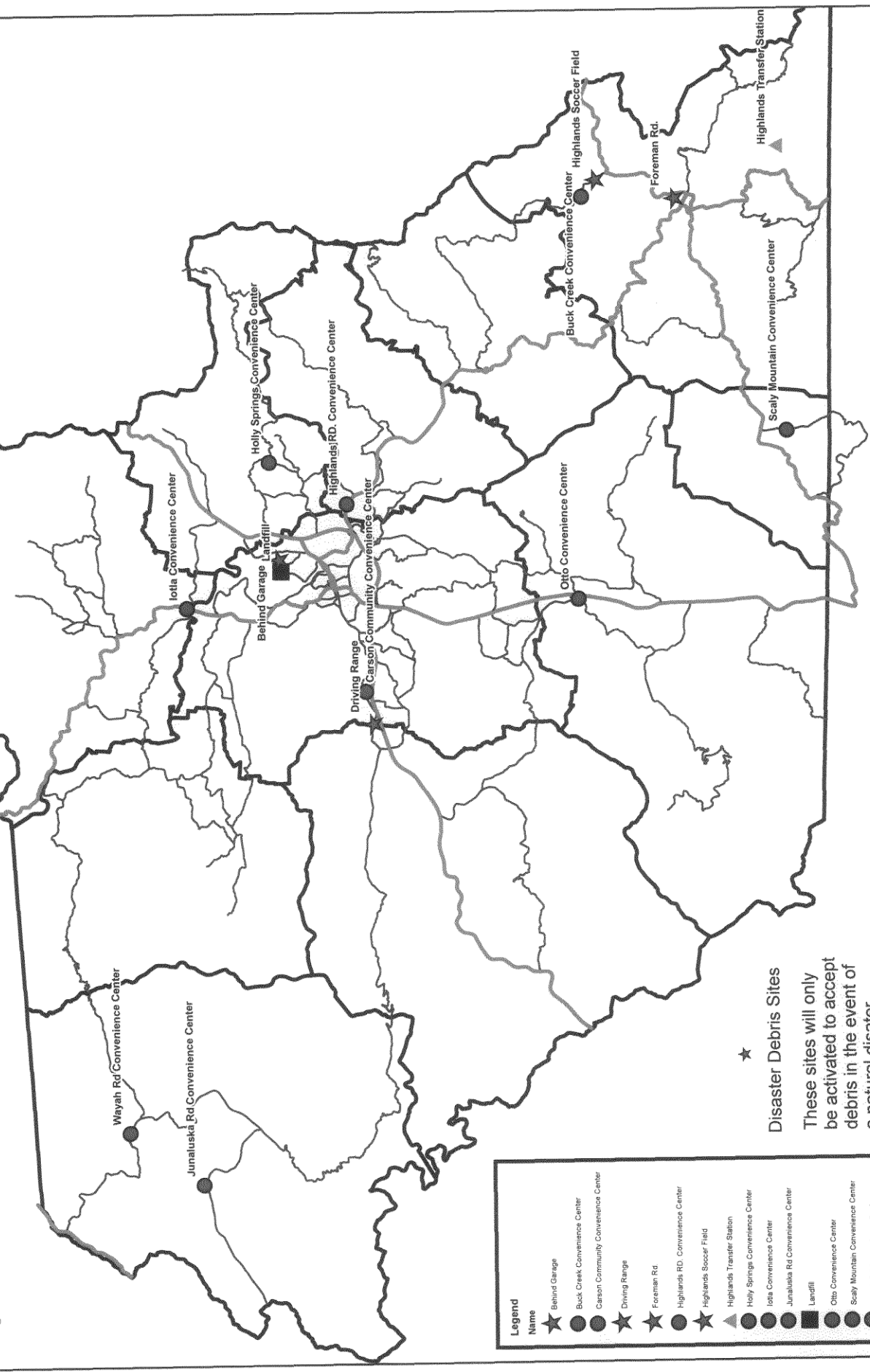
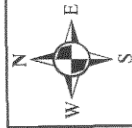
JUDY ANN WHITE
NOTARY PUBLIC
Macon County
North Carolina

PUBLIC NOTICE

The Macon County Board of Commissioners will hold a Public Hearing on an Update to the County Solid Waste Management Plan at the **May 8, 2012** regular meeting. The Board meeting will begin at 6:00 p.m. in the Commissioners Board Room, the 3rd floor of the Macon County Courthouse, 5 West Main Street, Franklin, NC, at which time the 2012 Update to the County Solid Waste Management Plan will be discussed. The Plan addresses management of solid waste for residents of unincorporated areas of Macon County, the Town of Franklin and the Town of Highlands. Interested residents are invited to attend, discuss and provide comments on the Plan. A draft copy of the Plan is available for public view at the Macon County Manager's Office in the Courthouse Annex, the Highlands Town Office, the Franklin Town Office, and the Solid Waste Management Administration Office.

Appendix C – Map of Facilities and Disposal Sites in Macon County

Macon County



Legend	
Name	Symbol
Behind Garage	★
Buck Creek Convenience Center	●
Carson Community Convenience Center	●
Driving Range	★
Foreman Rd	★
Highlands RD. Convenience Center	●
Highlands Soccer Field	★
Highlands Transfer Station	▲
Holly Springs Convenience Center	●
Iola Convenience Center	●
Junaluska Rd Convenience Center	●
Landfill	■
Otto Convenience Center	●
Scaly Mountain Convenience Center	●
Wayah Rd Convenience Center	●
Major Roads	—
Major Highways	==

★
Disaster Debris Sites
 These sites will only
 be activated to accept
 debris in the event of
 a natural disaster.

Appendix D – Local Solid Waste Ordinances

The **Macon County Solid Waste Ordinance** can be found on-line at www.maconnc.org. From the home page, hover over the Your Government tab. When the drop-down menu appears, scroll down to the County Ordinances line and click. This will bring a bulleted menu that includes Solid Waste. Click on the Solid Waste bullet to view the Ordinance. The Solid Waste Ordinance is found under Title V: Public Works; Chapter 50 & 51.

The **Town of Highlands Solid Waste Ordinance** can be found at www.highlandunc.org. From the home page, hover on the Documents tab. When the drop-down menu appears, scroll down to Ordinances and click. This will bring up a menu of Ordinances. The Solid Waste Ordinance is found under Chapter Twelve: Solid Waste Management

Appendix E – Waste Reduction Goal Sheet

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

Local Government Name: Macon County

Previously established waste reduction goal: -16 %

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: -3.7 %

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 2021-22

1. Baseline year per capita disposal rate <i>(FY 1991-1992 unless alternate approved by Section)</i>	0.82
2. Percent waste reduction goal	-3.7 %
3. Targeted per capita disposal rate <i>(Subtract line 2 from 1.0 and multiply result by line 1)</i>	0.85
4. Estimated population in the new waste reduction goal year <i>(Available at Office of State Budget and Management website: Projected Annual County Population Totals 2010-2019)</i>	35,264
5. Projected tonnage for disposal at baseline disposal rate <i>(Multiply line 1 by line 4)</i>	28,916.48
6. Targeted annual tonnage for disposal <i>(Multiply line 3 by line 4)</i>	29,974.40
7. Targeted annual tonnage to reduce <i>(Subtract line 6 from line 5)</i>	-1,057.92

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:

Macon County intends to utilize all available methods, taking account of market availability, economic feasibility and political favorability in reaching its waste reduction goal. The current goal is to have an increase of 3.7% above the baseline disposal rate. The body of this Plan provides an in depth review of programs in place, or planned, that will allow Macon County to reach this goal. The goal set in this plan is based on seven consecutive years of reduction in per capita waste disposal rate, and is the most aggressive goal proposed by Macon County to date. Macon County sees no way to reach the State recommended 40% reduction in baseline per capita disposal rate over the next ten-year period.

Appendix F – Planning Element Sheets

Reduction

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
<p>Recycling information Seminars</p>			<p>Continue Recycling Education Program</p> <p>Continue to Add Reduction Information to Home Page</p>	<p>As Scheduled or Requested</p> <p>Update every six months</p>	<p>Difficult to Quantify; 10-1000's of Tons Possible</p> <p>Difficult to Quantify</p>

Collection

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
	Continue to Add Compactors and Recycling Roll-offs to Centers as is Financially Possible	Lack of funds to purchase additional equipment.	Continue to Add Compactors and Recycling Roll-offs to Centers as is Financially Possible	Attempt to Add to 1 Site per Year as Funds Allow	Difficult to Quantify; Hope to See a 10-30% Increase in Participation in Recycling Program

Recycling and Reuse

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
<p>Develop Program for Clean Wood Waste at MRF</p>			<p>Seek markets for additional commodities</p> <p>Further Develop Recovery Rates at MRF</p>	<p>As available</p> <p>Ongoing</p>	<p>Unknown</p> <p>200-300</p>

Incineration with Energy Recovery

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
None			None		

Incineration without Energy Recovery

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
None			None		

Transfer Outside Geographic Area

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
			Consider transfer of storm debris to landfill outside of Macon County to preserve County landfill space.	N/A	N/A Depending on Disaster Occurrence

Disposal

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
Expand waste volume and waste types for recovery at the MRF Facility			Continue Disposal Operations. Expand waste volume and waste types for recovery at the MRF Facility	Continuous 2011-22	0 100-200 tons

Education with Community and Through Schools

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
<p>Make Presentations and Seminars to School and Civic Groups as Requested</p> <p>Update Internet Homepage</p> <p>Adopt-a-bin program ongoing at all but two schools in Macon County</p> <p>Recycling Programs Developed at Post Office and Franklin Press</p>			<p>Continue Presentations and Seminars to School and Civic Groups as Requested</p> <p>Continue to Add Additional Recycling Information to Web site</p> <p>Continue to gain participation in school "adopt-a-bin" program</p> <p>Continue to work with local businesses toward the establishment of recycling programs.</p>	<p>2011-22</p> <p>Update annually or as new information available</p> <p>2011-22</p> <p>Continuous</p>	<p>Difficult to Quantify Increased Recycling Participation Through Education</p> <p>Difficult to Quantify Increased Recycling Participation Through Education</p> <p>5-10 tons</p> <p>20-40 tons</p>

Special Waste

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
	Consider HHW Collection Event	Cost.	Continue Tire, Battery and White Goods Programs Continue to Participate in NCDOA Pesticide Disposal Program Consider HHW Collection Event	Continuous 2013 2012	1500-3000 Tons 1 Ton 5-10 tons

Illegal Disposal/Litter

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
	<p>Modify Solid Waste Ordinance</p>	<p>Ordinance modification is being developed but has not been completed.</p>	<p>Continue to Develop Anti-Littering and Illegal Disposal Program, Possibly Review and Modify Solid Waste Ordinance</p> <p>Continue Community Service Program</p>	<p>2012-13</p> <p>Continuous</p>	<p>N/A</p> <p>N/A</p>

Purchasing Recycled Products

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
			Macon County will continue to purchase recycled products when feasible	Continuous	N/A

Disaster Response

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
<p>J&B Agree to Provide Collection Assistance</p> <p>Temporary Staging Areas for Organic Waste Identified</p>					

Management of Discarded Computer Equipment and Televisions

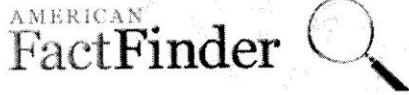
COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
<p>Contracted with Creative Recycling for recycling of CRT's, Computers and peripherals and other electronics.</p>					

Management of Abandoned Manufactured Homes

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
<p>Adopted voluntary abandoned mobile home disposal assistance program.</p> <p>Include Abandoned Mobile Home guidelines for Demolition Permits from the Macon County Code Enforcement Department to include recycling of metals, white goods and Mercury Thermostats</p>	<p>Consider Adoption of an Abandoned Mobile Home Ordinance in Macon County</p> <p>Consider Adoption of HB1134, and adopt program for assistance in disposal of abandoned mobile homes.</p>	<p>County opted to develop local voluntary program to assist with proper disposal of abandoned mobile homes.</p> <p>County opted to develop local voluntary program to assist with proper disposal of abandoned mobile homes.</p>			

Appendix G – Miscellaneous Supporting Information

- Macon County Census Population and Demographic Information
- Residential Building Permit Trend Report
- Macon County Emergency Management Plan – Disaster Debris Management Section
- Letter from J&B Disposal in support of disaster debris cleanup programs



DP05

ACS DEMOGRAPHIC AND HOUSING ESTIMATES

2006-2010 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, for 2010, the 2010 Census provides the official counts of the population and housing units for the nation, states, counties, cities and towns. For 2006 to 2009, the Population Estimates Program provides intercensal estimates of the population for the nation, states, and counties.

Subject	Macon County, North Carolina			
	Estimate	Estimate Margin of Error	Percent	Percent Margin of Error
SEX AND AGE				
Total population	33,453	*****	33,453	(X)
Male	16,301	+/-189	48.7%	+/-0.6
Female	17,152	+/-189	51.3%	+/-0.6
Under 5 years	1,645	+/-6	4.9%	+/-0.1
5 to 9 years	1,482	+/-223	4.4%	+/-0.7
10 to 14 years	2,047	+/-216	6.1%	+/-0.6
15 to 19 years	1,990	+/-218	5.9%	+/-0.7
20 to 24 years	1,757	+/-149	5.3%	+/-0.4
25 to 34 years	3,109	+/-174	9.3%	+/-0.5
35 to 44 years	3,562	+/-98	10.6%	+/-0.3
45 to 54 years	4,898	+/-170	14.6%	+/-0.5
55 to 59 years	2,539	+/-270	7.6%	+/-0.8
60 to 64 years	2,807	+/-241	8.4%	+/-0.7
65 to 74 years	4,162	+/-53	12.4%	+/-0.2
75 to 84 years	2,541	+/-188	7.6%	+/-0.6
85 years and over	914	+/-157	2.7%	+/-0.5
Median age (years)	47.5	+/-0.6	(X)	(X)
18 years and over	27,081	+/-87	81.0%	+/-0.3
21 years and over	26,061	+/-287	77.9%	+/-0.9
62 years and over	9,386	+/-221	28.1%	+/-0.7
65 years and over	7,617	+/-103	22.8%	+/-0.3
18 years and over	27,081	+/-87	27,081	(X)
Male	12,927	+/-111	47.7%	+/-0.5
Female	14,154	+/-156	52.3%	+/-0.5
65 years and over	7,617	+/-103	7,617	(X)
Male	3,348	+/-18	44.0%	+/-0.6
Female	4,269	+/-102	56.0%	+/-0.6
RACE				
Total population	33,453	*****	33,453	(X)
One race	33,186	+/-123	99.2%	+/-0.4
Two or more races	267	+/-123	0.8%	+/-0.4
One race	33,186	+/-123	99.2%	+/-0.4
White	31,288	+/-266	93.5%	+/-0.8

Subject	Macon County, North Carolina			
	Estimate	Estimate Margin of Error	Percent	Percent Margin of Error
Black or African American	387	+/-134	1.2%	+/-0.4
American Indian and Alaska Native	103	+/-73	0.3%	+/-0.2
Cherokee tribal grouping	25	+/-29	0.1%	+/-0.1
Chippewa tribal grouping	0	+/-127	0.0%	+/-0.1
Navajo tribal grouping	0	+/-127	0.0%	+/-0.1
Sioux tribal grouping	0	+/-127	0.0%	+/-0.1
Asian	200	+/-45	0.6%	+/-0.1
Asian Indian	0	+/-127	0.0%	+/-0.1
Chinese	121	+/-80	0.4%	+/-0.2
Filipino	0	+/-127	0.0%	+/-0.1
Japanese	23	+/-32	0.1%	+/-0.1
Korean	28	+/-47	0.1%	+/-0.1
Vietnamese	0	+/-127	0.0%	+/-0.1
Other Asian	28	+/-45	0.1%	+/-0.1
Native Hawaiian and Other Pacific Islander	2	+/-3	0.0%	+/-0.1
Native Hawaiian	2	+/-3	0.0%	+/-0.1
Guamanian or Chamorro	0	+/-127	0.0%	+/-0.1
Samoan	0	+/-127	0.0%	+/-0.1
Other Pacific Islander	0	+/-127	0.0%	+/-0.1
Some other race	1,206	+/-278	3.6%	+/-0.8
Two or more races	267	+/-123	0.8%	+/-0.4
White and Black or African American	26	+/-54	0.1%	+/-0.2
White and American Indian and Alaska Native	155	+/-75	0.5%	+/-0.2
White and Asian	32	+/-45	0.1%	+/-0.1
Black or African American and American Indian and Alaska Native	0	+/-127	0.0%	+/-0.1
Race alone or in combination with one or more other races				
Total population	33,453	*****	33,453	(X)
White	31,532	+/-311	94.3%	+/-0.9
Black or African American	429	+/-126	1.3%	+/-0.4
American Indian and Alaska Native	265	+/-24	0.8%	+/-0.1
Asian	232	+/-127	0.7%	+/-0.1
Native Hawaiian and Other Pacific Islander	2	+/-3	0.0%	+/-0.1
Some other race	1,260	+/-266	3.8%	+/-0.8
HISPANIC OR LATINO AND RACE				
Total population	33,453	*****	33,453	(X)
Hispanic or Latino (of any race)	1,888	*****	5.6%	*****
Mexican	1,505	+/-191	4.5%	+/-0.6
Puerto Rican	121	+/-137	0.4%	+/-0.4
Cuban	1	+/-5	0.0%	+/-0.1
Other Hispanic or Latino	261	+/-131	0.8%	+/-0.4
Not Hispanic or Latino	31,565	*****	94.4%	*****
White alone	30,598	+/-127	91.5%	+/-0.1
Black or African American alone	362	+/-128	1.1%	+/-0.4
American Indian and Alaska Native alone	103	+/-73	0.3%	+/-0.2
Asian alone	200	+/-45	0.6%	+/-0.1
Native Hawaiian and Other Pacific Islander alone	2	+/-3	0.0%	+/-0.1
Some other race alone	79	+/-120	0.2%	+/-0.4
Two or more races	221	+/-101	0.7%	+/-0.3
Two races including Some other race	16	+/-27	0.0%	+/-0.1
Two races excluding Some other race, and Three or more races	205	+/-101	0.6%	+/-0.3
Total housing units	24,606	+/-192	(X)	(X)

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data).

The effect of nonsampling error is not represented in these tables.

For more information on understanding race and Hispanic origin data, please see the Census 2010 Brief entitled, *Overview of Race and Hispanic Origin: 2010*, issued March 2011. (pdf format)

The ACS questions on Hispanic origin and race were revised in 2008 to make them consistent with the Census 2010 question wording. Any changes in estimates for 2008 and beyond may be due to demographic changes, as well as factors including questionnaire changes, differences in ACS population controls, and methodological differences in the population estimates, and therefore should be used with caution. For a summary of questionnaire changes see http://www.census.gov/acs/www/methodology/questionnaire_changes/. For more information about changes in the estimates see <http://www.census.gov/population/www/socdemo/hispanic/reports.html>.

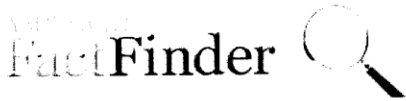
While the 2006-2010 American Community Survey (ACS) data generally reflect the December 2009 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2000 data. Boundaries for urban areas have not been updated since Census 2000. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2006-2010 American Community Survey

Explanation of Symbols:

1. An "***" entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An "-." entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An "-." following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An "+." following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An "****" entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An "*****" entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.



DP04

SELECTED HOUSING CHARACTERISTICS

2006-2010 American Community Survey 5-Year Estimates

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Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, for 2010, the 2010 Census provides the official counts of the population and housing units for the nation, states, counties, cities and towns. For 2006 to 2009, the Population Estimates Program provides intercensal estimates of the population for the nation, states, and counties.

Subject	Macon County, North Carolina			
	Estimate	Estimate Margin of Error	Percent	Percent Margin of Error
HOUSING OCCUPANCY				
Total housing units	24,606	+/-192	24,606	(X)
Occupied housing units	15,780	+/-590	64.1%	+/-2.3
Vacant housing units	8,826	+/-554	35.9%	+/-2.3
Homeowner vacancy rate	1.5	+/-0.8	(X)	(X)
Rental vacancy rate	10.2	+/-4.2	(X)	(X)
UNITS IN STRUCTURE				
Total housing units	24,606	+/-192	24,606	(X)
1-unit, detached	17,961	+/-531	73.0%	+/-2.1
1-unit, attached	222	+/-97	0.9%	+/-0.4
2 units	366	+/-177	1.5%	+/-0.7
3 or 4 units	377	+/-147	1.5%	+/-0.6
5 to 9 units	653	+/-234	2.7%	+/-1.0
10 to 19 units	187	+/-131	0.8%	+/-0.5
20 or more units	96	+/-64	0.4%	+/-0.3
Mobile home	4,644	+/-474	18.9%	+/-1.9
Boat, RV, van, etc.	100	+/-83	0.4%	+/-0.3
YEAR STRUCTURE BUILT				
Total housing units	24,606	+/-192	24,606	(X)
Built 2005 or later	789	+/-220	3.2%	+/-0.9
Built 2000 to 2004	2,805	+/-336	11.4%	+/-1.4
Built 1990 to 1999	5,034	+/-444	20.5%	+/-1.8
Built 1980 to 1989	5,342	+/-499	21.7%	+/-2.0
Built 1970 to 1979	5,067	+/-532	20.6%	+/-2.2
Built 1960 to 1969	2,224	+/-360	9.0%	+/-1.5
Built 1950 to 1959	1,100	+/-212	4.5%	+/-0.9
Built 1940 to 1949	875	+/-200	3.6%	+/-0.8
Built 1939 or earlier	1,370	+/-277	5.6%	+/-1.1
ROOMS				
Total housing units	24,606	+/-192	24,606	(X)
1 room	271	+/-162	1.1%	+/-0.7
2 rooms	571	+/-220	2.3%	+/-0.9
3 rooms	1,736	+/-390	7.1%	+/-1.6
4 rooms	5,712	+/-557	23.2%	+/-2.3

Subject	Macon County, North Carolina			
	Estimate	Estimate Margin of Error	Percent	Percent Margin of Error
5 rooms	5,703	+/-600	23.2%	+/-2.4
6 rooms	4,645	+/-471	18.9%	+/-1.9
7 rooms	2,618	+/-317	10.6%	+/-1.3
8 rooms	1,584	+/-302	6.4%	+/-1.2
9 rooms or more	1,766	+/-245	7.2%	+/-1.0
Median rooms	5.2	+/-0.1	(X)	(X)
BEDROOMS				
Total housing units	24,606	+/-192	24,606	(X)
No bedroom	271	+/-162	1.1%	+/-0.7
1 bedroom	1,699	+/-321	6.9%	+/-1.3
2 bedrooms	8,712	+/-556	35.4%	+/-2.2
3 bedrooms	10,847	+/-599	44.1%	+/-2.4
4 bedrooms	2,328	+/-292	9.5%	+/-1.2
5 or more bedrooms	749	+/-198	3.0%	+/-0.8
HOUSING TENURE				
Occupied housing units	15,780	+/-590	15,780	(X)
Owner-occupied	12,125	+/-496	76.8%	+/-2.0
Renter-occupied	3,655	+/-360	23.2%	+/-2.0
Average household size of owner-occupied unit	2.03	+/-0.07	(X)	(X)
Average household size of renter-occupied unit	2.12	+/-0.18	(X)	(X)
YEAR HOUSEHOLDER MOVED INTO UNIT				
Occupied housing units	15,780	+/-590	15,780	(X)
Moved in 2005 or later	4,449	+/-417	28.2%	+/-2.4
Moved in 2000 to 2004	3,644	+/-408	23.1%	+/-2.4
Moved in 1990 to 1999	4,078	+/-429	25.8%	+/-2.5
Moved in 1980 to 1989	1,554	+/-274	9.8%	+/-1.7
Moved in 1970 to 1979	1,122	+/-188	7.1%	+/-1.1
Moved in 1969 or earlier	933	+/-185	5.9%	+/-1.2
VEHICLES AVAILABLE				
Occupied housing units	15,780	+/-590	15,780	(X)
No vehicles available	903	+/-206	5.7%	+/-1.3
1 vehicle available	5,019	+/-498	31.8%	+/-2.6
2 vehicles available	6,109	+/-536	38.7%	+/-2.8
3 or more vehicles available	3,749	+/-365	23.8%	+/-2.5
HOUSE HEATING FUEL				
Occupied housing units	15,780	+/-590	15,780	(X)
Utility gas	758	+/-226	4.8%	+/-1.4
Bottled, tank, or LP gas	4,361	+/-341	27.6%	+/-2.1
Electricity	8,116	+/-490	51.4%	+/-2.4
Fuel oil, kerosene, etc.	1,232	+/-230	7.8%	+/-1.4
Coal or coke	0	+/-127	0.0%	+/-0.2
Wood	1,262	+/-205	8.0%	+/-1.2
Solar energy	8	+/-13	0.1%	+/-0.1
Other fuel	0	+/-127	0.0%	+/-0.2
No fuel used	43	+/-39	0.3%	+/-0.3
SELECTED CHARACTERISTICS				
Occupied housing units	15,780	+/-590	15,780	(X)
Lacking complete plumbing facilities	27	+/-43	0.2%	+/-0.3
Lacking complete kitchen facilities	2	+/-4	0.0%	+/-0.1
No telephone service available	425	+/-154	2.7%	+/-1.0
OCCUPANTS PER ROOM				
Occupied housing units	15,780	+/-590	15,780	(X)
1.00 or less	15,424	+/-634	97.7%	+/-1.0
1.01 to 1.50	214	+/-131	1.4%	+/-0.8
1.51 or more	142	+/-82	0.9%	+/-0.5
VALUE				
Owner-occupied units	12,125	+/-496	12,125	(X)
Less than \$50,000	1,033	+/-231	8.5%	+/-1.8

Subject	Macon County, North Carolina			
	Estimate	Estimate Margin of Error	Percent	Percent Margin of Error
\$50,000 to \$99,999	1,608	+/-267	13.3%	+/-2.1
\$100,000 to \$149,999	2,327	+/-283	19.2%	+/-2.1
\$150,000 to \$199,999	2,498	+/-329	20.6%	+/-2.6
\$200,000 to \$299,999	2,271	+/-297	18.7%	+/-2.5
\$300,000 to \$499,999	1,418	+/-237	11.7%	+/-1.9
\$500,000 to \$999,999	691	+/-132	5.7%	+/-1.1
\$1,000,000 or more	279	+/-99	2.3%	+/-0.8
Median (dollars)	167,800	+/-5,734	(X)	(X)
MORTGAGE STATUS				
Owner-occupied units	12,125	+/-496	12,125	(X)
Housing units with a mortgage	6,305	+/-430	52.0%	+/-2.9
Housing units without a mortgage	5,820	+/-423	48.0%	+/-2.9
SELECTED MONTHLY OWNER COSTS (SMOC)				
Housing units with a mortgage	6,305	+/-430	6,305	(X)
Less than \$300	94	+/-66	1.5%	+/-1.0
\$300 to \$499	390	+/-161	6.2%	+/-2.5
\$500 to \$699	833	+/-190	13.2%	+/-2.9
\$700 to \$999	1,800	+/-286	28.5%	+/-4.0
\$1,000 to \$1,499	1,833	+/-258	29.1%	+/-3.7
\$1,500 to \$1,999	867	+/-215	13.8%	+/-3.2
\$2,000 or more	488	+/-116	7.7%	+/-1.9
Median (dollars)	1,008	+/-52	(X)	(X)
Housing units without a mortgage	5,820	+/-423	5,820	(X)
Less than \$100	152	+/-98	2.6%	+/-1.7
\$100 to \$199	1,184	+/-253	20.3%	+/-4.0
\$200 to \$299	2,151	+/-313	37.0%	+/-4.1
\$300 to \$399	988	+/-156	17.0%	+/-2.8
\$400 or more	1,345	+/-195	23.1%	+/-3.0
Median (dollars)	277	+/-8	(X)	(X)
SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME (SMOCAPI)				
Housing units with a mortgage (excluding units where SMOCAPI cannot be computed)	6,216	+/-422	6,216	(X)
Less than 20.0 percent	2,184	+/-247	35.1%	+/-3.4
20.0 to 24.9 percent	897	+/-185	14.4%	+/-2.9
25.0 to 29.9 percent	626	+/-164	10.1%	+/-2.5
30.0 to 34.9 percent	401	+/-140	6.5%	+/-2.2
35.0 percent or more	2,108	+/-286	33.9%	+/-3.8
Not computed	89	+/-73	(X)	(X)
Housing unit without a mortgage (excluding units where SMOCAPI cannot be computed)	5,769	+/-420	5,769	(X)
Less than 10.0 percent	3,097	+/-321	53.7%	+/-4.5
10.0 to 14.9 percent	889	+/-203	15.4%	+/-3.2
15.0 to 19.9 percent	544	+/-180	9.4%	+/-2.9
20.0 to 24.9 percent	386	+/-110	6.7%	+/-1.9
25.0 to 29.9 percent	180	+/-76	3.1%	+/-1.3
30.0 to 34.9 percent	214	+/-93	3.7%	+/-1.6
35.0 percent or more	459	+/-122	8.0%	+/-2.1
Not computed	51	+/-42	(X)	(X)
GROSS RENT				
Occupied units paying rent	3,029	+/-379	3,029	(X)
Less than \$200	0	+/-127	0.0%	+/-1.2
\$200 to \$299	106	+/-74	3.5%	+/-2.5
\$300 to \$499	615	+/-234	20.3%	+/-7.1
\$500 to \$749	1,292	+/-275	42.7%	+/-8.3
\$750 to \$999	763	+/-253	25.2%	+/-7.3
\$1,000 to \$1,499	217	+/-110	7.2%	+/-3.6
\$1,500 or more	36	+/-24	1.2%	+/-0.8
Median (dollars)	676	+/-71	(X)	(X)
No rent paid	626	+/-212	(X)	(X)

Subject	Macon County, North Carolina			
	Estimate	Estimate Margin of Error	Percent	Percent Margin of Error
GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME (GRAPI)				
Occupied units paying rent (excluding units where GRAPI cannot be computed)	2,989	+/-375	2,989	(X)
Less than 15.0 percent	551	+/-242	18.4%	+/-7.5
15.0 to 19.9 percent	336	+/-143	11.2%	+/-4.7
20.0 to 24.9 percent	541	+/-222	18.1%	+/-6.7
25.0 to 29.9 percent	254	+/-103	8.5%	+/-3.5
30.0 to 34.9 percent	107	+/-54	3.6%	+/-1.8
35.0 percent or more	1,200	+/-265	40.1%	+/-8.3
Not computed	666	+/-219	(X)	(X)

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

The median gross rent excludes no cash renters.

In prior years, the universe included all owner-occupied units with a mortgage. It is now restricted to include only those units where SMOCAPI is computed, that is, SMOCAPI and household income are valid values.

In prior years, the universe included all owner-occupied units without a mortgage. It is now restricted to include only those units where SMOCAPI is computed, that is, SMOCAPI and household income are valid values.

In prior years, the universe included all renter-occupied units. It is now restricted to include only those units where GRAPI is computed, that is, gross rent and household income are valid values.

The 2009 and 2010 plumbing data for Puerto Rico will not be shown. Research indicates that the questions on plumbing facilities that were introduced in 2008 in the stateside American Community Survey and the 2008 Puerto Rico Community Survey may not have been appropriate for Puerto Rico.

While the 2006-2010 American Community Survey (ACS) data generally reflect the December 2009 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2000 data. Boundaries for urban areas have not been updated since Census 2000. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2006-2010 American Community Survey

Explanation of Symbols:

1. An '***' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '****' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

Subject	Macon County, North Carolina			
	Estimate	Estimate Margin of Error	Percent	Percent Margin of Error
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RESIDENTIAL BUILDING PERMIT TREND REPORT

12/31/11 EDITION

ASHEVILLE / CHARLOTTE / HICKORY

ST COUNTY	OFFICES	TOTALS												% CHANGE												
		ANNUAL			QUARTERLY				ANNUAL					QUARTERLY												
		2005	2006	2007	2008	2009	2010	2011	2010	2011	2006	2007	2008	2009	2010	2011	Q4-10	Q1-11	Q2-11	Q3-11						
ASHEVILLE																										
NC BUNCOMBE	4	1,883	2,027	1,749	914	645	540	512	134	159	139	118	111	144	129	128	-13.7%	-47.7%	-29.4%	-16.3%	-5.2%	-5.9%	29.7%	-10.4%	-0.8%	
NC HAYWOOD	3	571	573	439	241	164	130	89	20	33	42	35	24	21	24	20	-23.4%	-48.1%	-32.0%	-20.7%	-31.5%	-31.4%	-12.5%	14.3%	-16.7%	
NC HENDERSON	1	1,007	1,087	1,215	428	310	226	205	59	63	60	44	53	62	48	42	11.8%	-64.8%	-27.6%	-27.1%	-9.3%	20.5%	17.0%	-22.6%	-12.5%	
NC JACKSON	2	542	523	446	278	152	157	105	37	47	43	30	21	24	36	24	-14.7%	-37.7%	-45.3%	3.2%	-32.1%	-30.0%	14.3%	50.0%	-33.3%	
NC MADISON	1	337	347	382	249	148	82	77	14	30	19	19	15	20	26	16	4.3%	-31.2%	-40.6%	-44.6%	-61.1%	-21.2%	33.3%	50.0%	-38.5%	
NC HOGSWELL	1	156	175	173	97	69	49	47	7	18	13	11	11	15	11	12	-1.1%	-42.9%	-28.0%	-29.0%	-4.1%	-18.2%	66.7%	-26.7%	9.1%	
NC POLK	2	205	220	198	158	98	108	97	30	14	23	21	25	15	11	16	13.6%	-36.8%	-38.0%	-10.2%	-10.2%	19.0%	40.0%	-40.0%	-23.8%	
NC RUTHERFORD	2	161	189	159	91	52	42	40	9	14	12	7	7	10	10	8	-10.6%	-46.2%	-42.9%	-19.2%	-4.8%	0.0%	42.9%	50.0%	-46.7%	
NC TRANSYLVANIA	2	366	433	353	224	111	109	81	30	31	28	20	23	28	13	17	-18.5%	-46.5%	-50.4%	-1.8%	-25.7%	18.0%	21.7%	-53.6%	36.8%	
NC TRANSTYLVANIA	1	311	238	236	180	76	89	62	17	22	24	16	13	16	14	19	-0.8%	-23.7%	-37.8%	17.1%	-30.3%	-18.8%	23.1%	-12.5%	35.7%	
NC TRANSTYLVANIA	18	5,539	5,512	5,392	2,660	1,826	1,332	1,318	357	451	403	331	301	375	337	302	-7.2%	-47.0%	-56.2%	-16.1%	-14.2%	-6.2%	24.6%	-10.1%	-10.6%	
CHARLOTTE																										
NC CABARRUS	3	---	---	---	553	514	573	664	170	155	137	111	135	181	194	154	---	---	---	---	---	---	---	---	---	---
NC CLEVELAND	3	---	---	---	178	103	127	94	24	26	63	14	20	23	34	17	---	---	---	---	---	---	---	---	---	---
NC GASTON	2	---	---	---	719	470	448	324	142	138	108	63	67	72	121	64	---	---	---	---	---	---	---	---	---	---
NC LINCOLN	2	---	---	---	340	157	140	180	28	31	46	35	27	43	41	39	---	---	---	---	---	---	---	---	---	---
NC MCKENNA	1	---	---	---	12,966	9,225	4,860	2,253	2,455	663	619	448	626	614	792	503	-28.9%	-47.3%	-52.2%	-10.6%	-10.2%	-22.9%	59.3%	50.0%	-34.1%	
NC MCKENNA	1	---	---	---	455	170	152	97	46	51	53	22	25	22	27	23	---	---	---	---	---	---	---	---	---	---
NC MCKENNA	1	---	---	---	196	132	118	69	34	42	27	15	17	17	15	20	---	---	---	---	---	---	---	---	---	---
NC STANLY	1	---	---	---	905	551	466	547	125	137	116	88	131	165	140	111	---	---	---	---	---	---	---	---	---	---
NC UNION	1	---	---	---	252	510	557	585	159	134	153	101	129	213	164	79	---	---	---	---	---	---	---	---	---	---
NC WAKE	2	---	---	---	1,739	746	819	696	305	269	145	100	136	181	211	168	---	---	---	---	---	---	---	---	---	---
NC WAKE	18	---	---	---	12,966	9,225	10,597	6,026	5,532	5,721	1,706	1,598	1,352	997	1,313	1,331	1,699	---	---	---	---	---	---	---	---	---
HICKORY																										
NC ALEXANDER	1	132	145	167	120	52	44	29	10	14	10	10	5	11	8	5	-15.2%	-28.1%	-36.7%	-15.4%	-34.1%	-30.0%	130.0%	-27.3%	-37.5%	
NC BURKE	2	220	287	287	189	127	101	77	26	21	28	26	29	18	19	17	-13.5%	-38.1%	-20.1%	-20.5%	-23.8%	11.8%	-37.5%	5.6%	-42.1%	
NC CALDWELL	3	381	310	279	176	121	87	77	24	21	20	12	21	21	18	11	-10.0%	-36.9%	-21.3%	-28.1%	-11.5%	75.0%	0.0%	-14.5%	-5.6%	
NC CATAWBA	1	766	749	731	378	220	167	136	57	49	41	40	35	37	31	33	-2.4%	-48.2%	-41.8%	-24.1%	-18.6%	-12.5%	5.7%	-16.2%	6.5%	
NC INDELL	1	2,111	1,405	1,573	831	331	319	403	78	79	69	69	90	119	106	88	-12.9%	-47.2%	-60.2%	-3.6%	26.3%	-3.2%	32.2%	-10.9%	-17.0%	
NC WILKES	2	229	262	202	133	109	85	90	20	28	21	16	18	28	27	17	-22.9%	-34.2%	-18.0%	-22.0%	5.9%	13.5%	85.6%	-3.6%	-37.0%	
NC WILKES	8	3,779	3,568	3,209	1,797	960	803	812	195	222	189	197	188	234	209	171	-10.1%	-44.0%	-46.6%	-16.4%	1.1%	0.5%	18.2%	-10.7%	-18.2%	

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MACON COUNTY EMERGENCY OPERATIONS PLAN

DEBRIS DISPOSAL

SECTION – T

I. PURPOSE

This section outlines procedures for disposal and containment of debris in the event an emergency/disaster situation results in wide spread debris (down trees, building materials, etc.).

II. SITUATION AND ASSUMPTIONS

A. Situation

1. The Macon County Landfill is the only site in Macon County presently approved for solid waste disposal.

B. Assumptions

In an emergency/disaster situation, large amounts of debris may be produced. This debris will need to be disposed of properly. Depending on location of heavily damaged areas, temporary landfills may need to be opened to store certain types of debris until disposal can be achieved.

In the event of an emergency/disaster, Macon County may need to be granted a variance in state burning regulations in order to dispose of certain types of debris.

III. CONCEPT OF OPERATIONS

The Macon County Solid Waste Director is responsible for solid waste management in Macon County. He/she will direct the flow of debris disposal within the County during an emergency/disaster situation. The Solid Waste Director will direct other agencies (DOT, Forestry Service, private contractors, etc.), as to locations for temporary storage of debris. The Solid Waste Director will work in conjunction with the Health Department in the event that waste products become a threat to the health and welfare of the community. All debris removed to landfill sites will not be disposed of until after being viewed by Federal Damage Assessment personnel to facilitate reimbursement of removal and disposal costs.

IV. TEMPORARY EMERGENCY DEBRIS SITES

In the event that debris is wide spread, the Solid Waste Director, in conjunction with state regulations, may need to activate temporary sites to store and process debris such as trees, branches, and building materials. When disaster conditions permit, and an estimate can be made as to the amount of debris to be contained, temporary sites will be activated, and/or additional sites may be selected and permitted. Temporary landfill sites should be selected in regards to distance from the damaged areas, across to the site, and types of debris to be contained. Information should be publicized as to the location of the temporary landfill sites and as to what type of material will be accepted at each site.

3/21/12

**Macon County
5 West Main St
Franklin NC 28734**

**Attn: Chris Stahl
Solid Waste Director**

RE: Disaster Plan

Dear, MR. Stahl

Per the request to have in place a disaster plan for Macon County

**J&B Disposal, Inc will make available to you equipment, and personnel
To meet the need of hauling debris and solid waste from roadways etc.**

**Should this situation arise the equipment, and personnel will be made available to the
County upon request.**

A reasonable rate for these services to be agreed upon by both parties.

Sincerely;



**Bonita Hamstra
President**