Guilford County

PLANNING & DEVELOPMENT DEPARTMENT

Environmental Services Program

Solid Waste Management Plan

3-Year Update

Guilford County,

North Carolina

Archdale, Gibsonville, Greensboro, Guilford County, High Point, Jamestown, Oak Ridge, Pleasant Garden, Sedalia, Stokesdale, Summerfield, Whitsett

June 2012

DRAFT

Table of Contents

Section — Page

EXECUTIVE SUMMARY ES-1
- Introduction ES-1
- Planning Area Goals ES-1
- Waste Quantities and Composition ES-2
- Waste Reduction Goals ES-2
- Assessment of Programs and Services ES-3
- Plan Implementation ES-6

1.0 INTRODUCTION 1-1
- 1.1 Background 1-1
- 1.2 Geographical Area 1-2
- 1.3 Planning Area Goals 1-2

2.0 WASTE STREAM EVALUATION 2-1
- 2.1 Introduction 2-1
- 2.2 Total Waste Stream Managed 2-1
- 2.3 Current Waste Stream Characteristics 2-2
  - 2.3.1 Waste Stream Analysis by Sector 2-2
  - 2.3.2 Waste Stream Composition 2-2
    - 2.3.2.1 Residential Waste Composition 2-2
    - 2.3.2.2 Commercial Waste Composition 2-3
    - 2.3.2.3 Industrial Waste Composition 2-4
- 2.4 Waste Stream Projections for Guilford County 2-4
  - 2.4.1 Municipal Solid Waste 2-4
  - 2.4.2 Construction and Demolition Waste 2-5

3.0 WASTE REDUCTION GOALS 3-1
- 3.1 Historical Waste Reduction Efforts 3-1
- 3.2 Future Waste Reduction Goals 3-2
- 3.3 Targeted Waste Tonnage Reductions 3-2

4.0 THE PLANNING PROCESS AND PUBLIC PARTICIPATION 4-1

5.0 ASSESSMENT OF PROGRAMS AND SERVICES 5-1
- 5.1 Introduction 5-1
- 5.2 Reduction 5-1
- 5.3 Collection 5-2
- 5.4 Recycling and Reuse 5-3
- 5.5 Composting and Mulching 5-6
- 5.6 Incineration Element 5-7
- 5.7 Transfer Outside Geographical Area 5-7
- 5.8 Disposal 5-7
- 5.9 Education 5-8
- 5.10 Special Waste 5-9
- 5.11 Illegal Disposal / Litter 5-10
- 5.12 Purchasing Recycled Products 5-11
- 5.13 Disaster Response 5-11

Section Page

6.0 SOLID WASTE COSTS AND FINANCING METHODS 6-1
6.1 Introduction 6-1
6.2 Description of Program Costs 6-1
6.3 Financing Methods 6-2

7.0 PLAN IMPLEMENTATION 7-1
7.1 Introduction 7-1
7.2 Recommended Actions 7-1
7.2.1 Source Reduction 7-1
7.2.2 Collection 7-1
7.2.3 Recycling and Reuse 7-2
7.2.4 Composting and Mulching 7-2
7.2.5 Incineration Element 7-2
7.2.6 Transfer Outside Geographical Area 7-2
7.2.7 Disposal 7-2
7.2.8 Education 7-3
7.2.9 Special Waste 7-4
7.2.10 Illegal Disposal/Litter 7-4
7.2.11 Purchasing Recycled Products 7-5
7.2.12 Disaster Response 7-5
7.2.13 Abatement of Abandoned Mobile Homes 7-5
7.3 Implementation Schedule 7-6

Appendices

A Resolutions to Adopt the 2009 Solid Waste Management Plan Update
B Notice for Public Meeting
C Map of Permitted Solid Waste Management Facilities in Guilford County
D Waste Characterization Summary
E Waste Reduction Goal Sheet
F Planning Elements
G Map of Identified Temporary Disaster Debris Storage Sites
H Guilford County Recycling and Waste Prevention Policy
I Guilford County Scrap Tire Disposal Policy
J Animal Mortality Emergency Response Plan
K Discarded Computer Equipment & Television Management Plan

Introduction

This Solid Waste Management Plan Update (Update 2012) discusses the current solid waste practices used within Guilford County (County) and possible changes that can be made to improve solid waste management and to reduce solid waste generation over the next ten years. Plan updates will follow at least every three years to allow for improvements and continuous monitoring of the Plan implementation. It is the intention of the municipal representatives who have participated in this planning process to continue to meet regularly and further develop and implement strategies for waste reduction and for future solid waste management alternatives. In light of the current state of the economy, a great deal of emphasis must be placed on providing the maximum benefit and level of service while using the least amount of public funding possible. It is likely that, as budgetary constraints increase and federal and state assistance decrease, non-mandated solid waste programs will be targets of budget cuts. The County and its municipal planning partners have agreed that using solid waste disposal tax distributions to help maintain existing programs and services is the best, and possibly the only viable, course of action. Recommended enhancements to these existing programs, as outlined in Update 2012, will be accomplished largely through the use of staff time and expertise and will focus on public outreach and education.

The planning area includes Guilford County and the following municipalities: Archdale, Gibsonville, Greensboro, High Point, Jamestown, Oak Ridge, Pleasant Garden, Sedalia, Stokesdale, Summerfield, and Whitsett.

Planning Area Goals

Guilford County's long-term goal is to help reduce waste generation within the County and participating municipalities. The County and its municipal partners will strive to educate the entire community about solid waste and recycling, and to make solid waste disposal and recycling easy and accessible to everyone. These efforts will aid in the prevention of improper waste disposal and will provide greater protection for the public health and for the environment. Our goals are summarized as follows:

- Goal 1 – Develop a Solid Waste Management Plan that is in conformance with state requirements and with local objectives.
- Goal 2 – Identify any deficiencies in existing solid waste management programs and systems that must be addressed in order to meet local needs and provide protection for the public health and for the environment.

- Goal 3 – Develop local reduction goals and programs for Guilford County.
- Goal 4 – Develop and implement a comprehensive, ongoing public education program and encourage public participation in the long-term planning process.
- Goal 5 – Continue the solid waste management process so that the feasibility of future options can be thoroughly investigated, and recommendations based on those investigations can be presented to the participating jurisdictions for review and adoption.

Waste Quantities and Composition

Guilford County and its municipalities disposed of approximately 565,000 tons of waste in Fiscal Year (FY) 2010-11 (North Carolina Division of Waste Management), not including yard debris or recyclables. The County and municipalities actually managed a total of approximately 670,000 tons of waste including recyclables (60,000 tons) and yard waste materials (45,000 tons) that were diverted from landfilling. Of the total tons of waste managed for the County, it is estimated that 29 percent is residential, 26 percent is commercial waste, 23 percent is industrial waste, and 22 percent is construction and demolition (C&D) waste.

Waste Reduction Goals

Waste reduction is calculated by comparing current figures to the per capita disposal rate established during the baseline fiscal year of 1991-92 of 1.35 tons per person per year. In 2009, Guilford County and its municipalities established a local waste reduction goal of 0% to be reached by FY 2012-13 and to be maintained through FY 2018-19. In FY 2008-09, the County achieved this goal with a disposal rate of 1.33 tons per capita. This waste reduction trend escalated dramatically in FY 2009-10, when the disposal rate dropped to 1.20 tons per capita, and continued to improve in FY 2010-11, when the disposal rate dropped further to 1.15 tons per capita.

It is the belief of the municipal planning partners that this major reduction in waste is due, for the most part, to the state of the economy in North Carolina in particular and in the entire country in general. Although most of the recommended waste reduction actions set forth in the 2009 Update were implemented, it is highly unlikely that they could have produced such a major change in disposal rates. In addition, should the economy rebound, it would be highly unlikely that these reduced disposal rates could be sustained.

Upon careful consideration of these factors in conjunction with future waste projections, the updated reduction goals for Guilford County and its municipal partners are as follows:

- FY 2015-16 5%
- FY 2021-22 3%

To maintain a level of 5 percent per capita waste reduction in FY 2015-16 and a level of 3 percent per capita waste reduction in FY 2021-22, Guilford County must hold its per capita disposal rate to 1.28 tons in FY 2015-16 and 1.31 tons in FY 2021-22. Based on population projections and using the new per capita rates, the County's future landfill disposal should be limited to 689,487 tons for FY 2015-16 and 738,195 tons for FY 2021-22.

Assessment of Programs and Services

It is the hope of Guilford County and its municipalities to maintain the ability to fund current solid waste programs and maintain current solid waste services. Through the following efforts, progress will be made towards meeting the goals established within this Solid Waste Management Plan Update.

- **Waste Reduction** – The County and its municipal planning partners intend to develop internal waste reduction and recycling policies and to work to reduce the toxicity of chemicals being used by government agencies and facilities. Current efforts to disseminate information to the public about waste reduction will be expanded to include more web-based content and additional outlets for distribution of the Guilford County Solid Waste Services Guide.

- **Collection** – All households within Guilford County and its municipalities have curbside trash and recycling collection available. Guilford County currently licenses private residential collection services to operate in the unincorporated areas and smaller towns. The County, along with its municipal planning partners, intends to develop and present for adoption a policy requiring licensed garbage collectors to provide recycling collection, with minimum standards, and the option for yard waste collection as part of their license to operate. This policy would support state landfill bans and help increase the County diversion rate. The cities of Greensboro and High Point will continue to examine the potential for additional or expanded multifamily trash and recycling collection services.

- **Recycling and Reuse** – Recycling rates for the entire County remain unpredictable. In 2008, the state announced a new goal of 2 million tons recycled annually by 2012. In order to reach this goal, the Division of Environmental Assistance and Outreach (DEAO) has calculated Guilford County must increase its per capita recycling rate of 337.18 pounds by 34%, or 114.27 pounds to reach a target of 451.45 pounds per person per year. Because of current economic conditions, the County and its municipal planning partners intend to focus on education and outreach efforts to increase the diversion rate, using available staff time to replace dollars when possible. The City of Greensboro/Guilford County residential household hazardous waste disposal program will continue to accept

electronic waste, including computer equipment and televisions, for recycling and disposal. In addition, County staff will continue to work with schools to encourage administrative and classroom recycling and provide assistance in the implementation of recycling programs.

- **Composting and Mulching** – The County and its municipal planning partners share a major concern about the effect of changes in the state rules governing compost facilities. It is anticipated that the implementation of these new rules will place an undue financial burden on municipal composting facilities and make costs associated with their operation prohibitive. It is likely that, if the two existing municipal composting facilities are forced to cease operations, the recovery rate for yard waste will be greatly reduced. It is also likely that the use of burning as a means of yard trash disposal will increase dramatically as a result.

- **Disposal** – The City of High Point's Kersey Valley landfill, now the only operating MSW landfill in Guilford County, has ample disposal capacity for the planning period at its current disposal rate. The City of Greensboro's Solid Waste Transfer Station and Republic Waste Services' Bishop Road Transfer Station transport all of their MSW to Republic Services' Uwharrie Environmental Landfill in Montgomery County. Life expectancy of this facility is not entirely predictable, and the County and its municipalities intend to continue to engage regional planning partners in discussions about a regional disposal plan. C&D disposal facilities appear to be adequate for the planning period, with the City of Greensboro's White Street Landfill, WCA, Inc. of High Point and A-1 Sandrock C&D Landfill continuing operations. In addition, there are currently 14 active LCID landfills in operation throughout the County.

- **Education** – Current efforts are being focused on educating the residential, commercial, and industrial sectors about the benefits of recycling. The County intends to continue to promote and expand its public outreach campaign, "For PETE's Sake Recycle." The Cooperative Extension Service provides solid waste and recycling educational opportunities for residents, including grass-cycling and composting classes. Information about solid waste and recycling programs is made available to residents and businesses through collection service providers, in County and municipal offices and facilities and on government and corporate websites. Government-sponsored events highlighting Earth Day and America Recycles day have garnered media attention and assisted in community education efforts. The County intends to continue to provide elementary school recycling education programs, to make classroom recycling lessons available to elementary, middle and high school teachers, and to encourage and provide assistance with administrative and classroom recycling programs. In addition, the County and its municipal partners will work to expand public awareness of businesses and service providers that incorporate

substantial "green" procedures and policies into their operations through the development of a recognition program.

- **Special Waste** – The City of Greensboro and Guilford County provide a collection site for residential household hazardous waste and electronics, including computer equipment and televisions. The County developed and opened two new electronics collection sites in advance of the July 2011 landfill ban on computer equipment and televisions. The City of High Point has also begun accepting discarded electronics at their material recovery facility. In addition, the County is working to continue its annual spring clean-up event (HHW, scrap tires and whites goods are accepted from residents), its annual e-waste collection event in cooperation with the Town of Pleasant Garden, and its bi-annual clean-up event (HHW, scrap tires and whites goods are accepted from residents) in partnership with the City of High Point, and to expand special collection events to other areas of the County. A new clean-up event, in cooperation with the Town of Summerfield, was held in June 2011. It is hoped that this successful new event will become an annual program as well. The County also intends to promote and support the activities of private companies that are beginning to process and recycle other special wastes, including asphalt shingles, discarded mattresses, prescription medications, and Styrofoam.

- **Illegal Disposal/Litter** – In an effort to reduce illegal disposal and littering, the County employs enforcement and educational personnel that deal specifically with littering and illegal dumping. The County environmental enforcement officer employs surveillance cameras to monitor illegal dump sites and identify and prosecute violators. A new application for reporting littering, illegal dumping and illegal burning is being added to the County website. When feasible, County environmental services staff partner with the Sheriff's Prison Farm to assist property owners with the clean-up of illegal dump sites. The cities of Greensboro and High Point and the towns of Jamestown and Pleasant Garden sponsor and promote local events in the spring (Great American Clean-up) and fall (NC Big Sweep) that are designed to enlist the community in efforts to clean up neighborhoods and waterways. During this planning period, the County and its municipal partners intend to support, promote and expand NCDOT's Adopt-a-Highway program.

- **Purchasing Recycled Products** – The County has expanded its internal recycling program and reaffirmed its Recycling and Waste Reduction policy through all departments. The policy encourages the practice of environmentally preferable purchasing, and provisions for EPP have been included in bid specifications by the County Purchasing Department. In addition, the County Purchasing Department has worked with solid waste staff to develop a listing of recycled content products available for purchase and a list of qualified vendors of recycled products. The Town of

Summerfield has developed and adopted its Recycling and Waste Prevention Policy, and the County continues to encourage other municipalities to adopt similar measures.

- **Disaster Response** – The County has worked with its municipal partners to identify suitable sites for the temporary storage of disaster debris. County staff is working with NC DENR staff to have these sites evaluated and approved for their future use. In addition, the County's animal mortality emergency response plan is included in the 2012 Update. All of this information is disseminated to emergency management personnel for inclusion in the County's Emergency Management Plan.

- **Abatement of Abandoned Mobile Homes** – Based on state legislation, the County and its municipal planning partners have evaluated the issue of abandoned mobile homes and determined that the development of an abatement program is not necessary at this time. It is intended that the issue be revisited at least every three years in conjunction with the plan update process.

Plan Implementation

All of the actions recommended in this 2012 Update are scheduled for implementation through the end of FY 2012-13. Because ongoing budget cuts are anticipated as county and municipal governments struggle to maintain core services, no additional expenditures are planned for the remainder of the current 3-year planning period. Should economic conditions improve during this time frame, the County and its municipal planning partners will reopen discussions about the potential for increasing waste reduction and diversion through the addition or expansion of solid waste services and programs.

SECTION 1.0
INTRODUCTION

1.1 Background

In accordance with North Carolina General Statute 130A-309.09A(b), the local governments of Guilford County combined their efforts in 1997 to produce a comprehensive solid waste management plan for the entire County. The ten-year plan included waste reduction goals and identified existing and potential programs needed to meet these established goals. The plan was finalized and adopted by the participating Guilford County jurisdictions in accordance with the July 1, 1997 deadline established by state regulations.

The regulations require that local governments update their solid waste management plans at least every three years. The intent of the regulations is to keep the plan current and provide a means to re-evaluate existing solid waste management practices. An updated plan was adopted by the local governments of Guilford County and submitted to the Division of Waste Management in June 2000, June 2003, June 2006 and again in June 2009. In 2010, the plan was updated to include the management of discarded electronics. Most recently, the 2009 Update has been revised to reflect the County's most recent examination of solid waste management issues in this 2012 Guilford County Solid Waste Management Plan Update (2012 Update).

The 2012 Update discusses current solid waste practices within Guilford County, the impact that the current fiscal situation is likely to have on those practices and possible changes that can be made to improve solid waste management and to reduce solid waste generation over the next ten years. The local and municipal partnership that developed the 2012 Update will continue to evaluate solid waste management from a regional perspective. By developing lines of communication with neighboring counties, towns and cities that manage solid waste, planning partners have been able to gain a more complete understanding of the solid waste challenges and issues that face us all, now and in the future. So far, regional solid waste group meetings have proven to be an effective means of exchanging ideas and coordinating efforts to lobby state elected officials. There is interest on the part of regional group members to work together on public information campaigns and to discuss regional disposal options.

Plan updates will follow, at minimum, every three years and will include enhancements to existing solid waste management programs and practices, as well as the development

of new programs and strategies that meet the changing needs of our local community and our region.

1.2 Geographical Area

The current planning area includes Guilford County and the following municipalities: Archdale, Gibsonville, Greensboro, High Point, Jamestown, Oak Ridge, Pleasant Garden, Sedalia, Stokesdale, Summerfield, and Whitsett. According to records maintained by the North Carolina Office of State Budget and Management, the total County population increased by 6 percent between July 2007 and July 2010. Population distribution within the County as estimated in July 2010 is shown in Table 1-1.

Table 1-1
Guilford County, North Carolina
ESTIMATED POPULATION - JULY 2010

Towns and County	Population
City of Archdale	334
Town of Gibsonville	3,276
City of High Point	99,439
City of Greensboro	270,063
Town of Jamestown	3,396
Town of Oak Ridge	6,330
Town of Pleasant Garden	4,507
Town of Sedalia	626
Town of Stokesdale	5,068
Town of Summerfield	10,275
Town of Whitsett	592
Guilford County – Unincorporated Areas	86,465
TOTAL	490,371

Source: North Carolina State Demographics

1.3 Planning Area Goals

By implementing the key actions listed in the 2012 Update and by pursuing a regional approach to solid waste management, the County can help the state move closer to its waste reduction goal of 40%, and make a significant contribution to the new state goal of 2 million tons of material recycled annually. The County and its municipal partners have summarized their commitment to waste reduction in the following goals:

- Goal 1 – Develop a Solid Waste Management Plan that is in conformance with state requirements, that supports local objectives and that addresses new and existing state solid waste legislative mandates.

- Goal 2 – Identify any deficiencies in existing solid waste management programs and systems that must be addressed in order to meet local needs and provide protection for the public health and for the environment.
- Goal 3 – Develop local reduction goals and programs for Guilford County.
- Goal 4 – Develop and implement a comprehensive, ongoing public education program and encourage public participation in the long-range planning process.
- Goal 5 – Maintain an ongoing planning process, re-establishing the regional dialog that was begun in 2006, so that future options and partnerships can be thoroughly investigated and considered by the planning partners.

SECTION 2.0
WASTE STREAM EVALUATION

2.1 Introduction

The purpose of this Section is to present the quantities, characteristics, and projections of municipal solid waste streams that will require management in Guilford County during the ten-year planning period. In this plan, the term "municipal solid waste" or "MSW" is used to describe the wastes that are generated by the residential, commercial, and industrial sectors of Guilford County. The term "construction and demolition" debris or "C&D" waste is used to describe any waste resulting solely from construction, remodeling, repair, or demolition operations on pavement, buildings, or other structures.

2.2 Total Waste Stream Managed

Table 2-1 presents historical quantities of waste managed in Guilford County. This summary includes the MSW and C&D tonnages landfilled plus the waste diverted through recycling and yard waste composting programs.

Table 2–1
Guilford County, North Carolina
TOTAL WASTE MANAGED

Fiscal Year	Population[1]	MSW[2] Tons Landfilled	C&D Tons Landfilled	Total Tons Diverted	Total Tons Managed
1997 - 1998	385,852	467,536	51,949	69,318	588,803
1998 - 1999	391,008	474,945	52,772	69,206	596,923
1999 - 2000	393,434	613,768	142,987	184,347	941,102
2000 - 2001	422,179	555,284	174,728	202,135	932,147
2001 - 2002	425,931	544,138	214,429	80,814	839,381
2002 - 2003	428,643	538,715	170,866	70,384	779,965
2003 - 2004	431,606	491,060	168,165	65,600	724,825
2004 - 2005	434,949	441,231	205,035	79,332	725,598
2005 - 2006	442,355	476,040	227,566	81,819	785,425
2006 - 2007	451,087	531,626	169,834	79,145	780,605
2007 - 2008	460,784	491,268	138,381	91,449	721,098
2008 - 2009	468,344	471,392	153,370	102,655	727,417
2009 - 2010	475,953	451,038	120,164	112,227	683,429
2010 - 2011	490,371	442,721	123,864	105,678	672,263

[1] Population Projections taken from North Carolina State Demographics, Projected Annual County Population Totals (http://www.demog.state.nc.us)
[2] Includes residential, commercial, and industrial.

NOTES:
- Historical data taken from North Carolina Solid Waste Management Annual Reports and DENR's County Waste Disposal Reports.

2.3 Current Waste Stream Characteristics

2.3.1 Waste Stream Analysis by Sector

For the purposes of this plan, the total waste stream in Guilford County has been divided into four sectors based on types of waste generators; namely, the residential, commercial, industrial and C&D sectors. The wastes generated by three of these sectors (residential, commercial, and industrial) constitute municipal solid waste. Table 2-2 presents the percentages of waste estimated to be generated by the four identified sectors.

Table 2-2
Guilford County, North Carolina
WASTE ESTIMATES BY SECTOR

Measurement	MSW			Total MSW	C&D Waste	Total Waste Stream
	Residential Waste	Commercial Waste	Industrial Waste			
Percentage	29%	26%	23%	78%	22%	100%

Source: NCDENR Local Government Assistance Office.

2.3.2 Waste Stream Composition

At this time, no waste characterization studies have been performed, in conjunction with this plan, to determine the composition or makeup of the waste stream generated by each sector in the County. However, estimates of the waste components found in the three sectors comprising the MSW stream in Guilford County have been compiled using statistics presented in Volume I of the North Carolina Recycling and Solid Waste Management Plan.

2.3.2.1 Residential Waste Composition

The state's plan estimates that paper, organics, and plastics are the most prevalent materials found in the residential waste stream. Using the percentage estimates compiled by the state, and the residential waste tonnage estimated to have been generated in Guilford County during FY 2010-11, the amounts of different materials found in this portion of the County's MSW stream have been calculated and are presented in Table 2-3.

Table 2-3 Guilford County, North Carolina ESTIMATE OF RESIDENTIAL WASTE COMPOSITION – FY 2010-11		
Material	State Estimate (Percent)[1]	Estimated Tons Generated
Paper & Paperboard	28.5%	36,600
Yard Waste	13.4%	17,200
Food Scraps/Organics	13.9%	17,800
Rubber, Leather, Textiles	8.4%	10,800
Plastics	12.4%	15,900
Glass	4.6%	5,900
Metals	9.0%	11,600
Wood	6.4%	8,200
Other Misc. Waste	3.4%	4,400
TOTAL	**100%**	**128,400**

[1] Percentages derived from US EPA 2010 total municipal solid waste generation data.
[2] Other includes rubble/C&D debris.

2.3.2.2 Commercial Waste Composition

Using the percentage estimates compiled by the state, and the commercial waste tonnage estimated to have been generated in Guilford County during FY 2010-11, the amounts of different materials found in this portion of the County's MSW stream have been calculated and are presented in Table 2-4. As is shown in Table 2-4, the state estimates indicate that the most prevalent materials found in the commercial waste stream include paper, cardboard, and organics.

Table 2-4 Guilford County, North Carolina ESTIMATE OF COMMERCIAL WASTE COMPOSITION – FY 2010-11		
Material	State Estimate (Percent)[1]	Estimated Tons Generated
Paper	26%	29,900
Cardboard	26%	29,900
Organics / Yard Waste	16%	18,400
Other[2]	15%	17,300
Plastics	8%	9,200
Metals	6%	6,900
Glass	3%	3,500
TOTAL	**100%**	**115,100**

[1] Percentages derived from North Carolina Recycling and Solid Waste Management Plan, 1992, Volume 1, pages 6-17.
[2] Other includes textiles, wood, and rubble/C&D debris.

2.3.2.3 Industrial Waste Composition

The state's plan showed that the waste materials, which were the main components of the industrial waste stream, include paper, cardboard, textiles, plastics, and organics. Using the percentage estimates compiled by the state, and the industrial waste tonnage estimated to have been generated in Guilford County during FY 2010-11, the amounts of different materials found in this portion of the County's MSW stream have been calculated and are presented in Table 2-5.

Table 2-5
Guilford County, North Carolina
ESTIMATE OF INDUSTRIAL WASTE COMPOSITION – FY 2010-11

Material	State Estimate (Percent)[1]	Estimated Tons Generated
Paper	26%	26,500
Cardboard	24%	24,400
Other[2]	20%	20,300
Plastics	14%	14,300
Organics / Yard Waste	10%	10,200
Metals	5%	5,100
Glass	1%	1,000
TOTAL	**100%**	**101,800**

[1] Percentages derived from North Carolina Recycling and Solid Waste Management Plan, 1992, Volume 1, pages 6-17.
[2] Other includes textiles, wood, and rubble/C&D debris.

2.4 Waste Stream Projections For Guilford County

2.4.1 Municipal Solid Waste

Municipal solid waste projections have been revised to reflect a decrease in the per capita generation rate since the last update. The waste quantities, which cover the planning period of July 1, 2012 through June 30, 2022, are presented in Table 2-6. It has been assumed that the per capita solid waste generation rate documented during FY 2010-11 (see Table 3-1) will remain constant throughout the ten-year period covered by this 2012 Update. Likewise, the "sector percentage estimates," presented in Table 2-2, have been assumed to be constant and have been used to estimate the quantities of MSW anticipated to be generated by the individual sectors that comprise MSW (residential, commercial, and industrial waste).

Table 2-6 Guilford County, North Carolina FUTURE MSW TONNAGE PROJECTIONS BY SECTOR[1]						
Year	Population	Residential Waste	Commercial Waste	Industrial Waste	Total MSW	Total Waste Stream
2012-2013	493,167	164,470	147,460	130,440	442,370	567,140
2013-2014	499,007	166,420	149,200	131,990	447,610	573,860
2014-2015	504,846	168,360	150,950	133,530	452,840	580,570
2015-2016	510,731	170,330	152,700	135,090	458,120	587,340
2016-2017	516,753	172,340	154,510	136,680	463,530	594,270
2017-2018	522,775	174,350	156,310	138,270	468,930	601,190
2018-2019	528,796	176,350	158,110	139,870	474,330	608,110
2019-2020	534,818	178,360	159,910	141,460	479,730	615,040
2020-2021	540,808	180,360	161,700	143,040	485,100	621,930
2021-2022	546,811	182,360	163,500	144,630	490,490	628,830

[1] A per capita generation rate of 1.15 tons/person/year waste used to project total waste stream tonnages throughout the period. Tonnages rounded to the nearest 10 tons.

2.4.2 Construction and Demolition (C&D) Waste

The C&D waste quantity projections for Guilford County during the planning period of July 1, 2012 through June 30, 2022 are presented in Table 2-7. These projections have been derived using the C&D tonnages presented in the state's County Waste Disposal Report for the period July 1, 2010 - June 30, 2011. It has been assumed that the "sector percentage estimates" for C&D waste, presented in Table 2-2, will remain constant throughout the planning period.

Table 2-7 Guilford County, North Carolina FUTURE C&D TONNAGE PROJECTIONS				
Year	Population	Total MSW[1]	C&D Waste[2]	Total Waste Stream
2012-2013	493,167	442,370	124,770	567,140
2013-2014	499,007	447,610	126,250	573,860
2014-2015	504,846	452,840	127,730	580,570
2015-2016	510,731	458,120	129,220	587,340
2016-2017	516,753	463,530	130,740	594,270
2017-2018	522,775	468,930	132,260	601,190
2018-2019	528,796	474,330	133,780	608,110
2019-2020	534,818	479,730	135,310	615,040
2020-2021	540,808	485,100	136,830	621,930
2021-2022	546,811	490,490	138,340	628,830

[1] A per capita generation rate of 1.15 tons/person/year waste used to project total waste stream tonnages throughout the period. Tonnages rounded to the nearest ten tons.

3.1 Historical Waste Reduction Efforts

The state has designated FY 1991-92 as the baseline year for comparing reduction efforts. The per capita generation rate was established in the 1997 Solid Waste Management Plan to be 1.48 tons per year based on a total waste stream of 523,930 tons and a population of 353,536. However, there has been a discrepancy in the reporting of the per capita rate in the North Carolina Solid Waste Annual Report due to the exclusion of C&D waste from the calculation. Table 3-1 provides a summary of historical waste reduction efforts for both the County and state per capita rates. The County's baseline per capita rate of 1.35 tons per year, as established by the state, has been used in the development of future reduction goals for this update.

Table 3-1
Guilford County, North Carolina
HISTORICAL WASTE REDUCTION

Fiscal Year	Population[1]	MSW[2]	C&D	Total Tonnage	Per Capita Rate Tons Per Year		Waste Reduction[3]	
							County 1.48 TPY	State 1.35 TPY
1991 - 1992								
SWM Plan:	353,536	471,540	52,390	523,930	1.48	(8.12)	---	---
State:				471,541	1.35	(7.40)	---	---
2000 - 2001	421,048	555,284	174,728	730,012	1.73	(9.50)	-17.1%	-28.4%
2001 - 2002	424,032	544,138	214,429	758,566	1.79	(9.80)	-20.9%	-32.5%
2002 - 2003	428,794	538,715	170,866	709,581	1.65	(9.06)	-11.5%	-22.2%
2003 - 2004	431,199	468,049	191,175	659,224	1.53	(8.38)	-3.4%	-14.3%
2004 - 2005	434,693	441,231	205,035	646,266	1.49	(8.15)	-0.7%	-10.4%
2005 - 2006	442,355	476,040	277,566	703,606	1.59	(8.71)	-7.4%	-17.8%
2006 - 2007	451,087	531,626	169,834	701,460	1.56	(8.55)	-5.4%	-15.5%
2007 - 2008	460,784	491,268	138,381	629,665	1.37	(7.51)	7.4%	- 1.0%
2008 - 2009	468,344	471,392	153,370	624,762	1.33	(7.31)	10.1%	1.4%
2009 - 2010	475,953	451,038	120,164	571,202	1.20	(6.58)	18.9%	11.1%
2010 - 2011	490,371	442,721	123,864	566,585	1.15	(6.33)	22.3%	14.8%

[1] Population projections taken from North Carolina State Demographics, Projected Annual County Population Totals (http://www.demog.state.nc.us)
[2] Includes residential, commercial, and industrial.
[3] The waste reduction rate differs due to a discrepancy in the North Carolina Solid Waste Annual Report due to the exclusion of C&D waste from the calculation.

NOTES:

- Historical Data from North Carolina Solid Waste Management Annual Reports and DENR's County Waste Disposal Reports.
- Total MSW during FY 1991-92 includes waste disposed of in landfills plus tonnage diverted from landfills via recycling, composting, and mulching efforts plus C&D waste.
- ( ) indicates per capita rate in pounds per person, per day.

3.2 Future Waste Reduction Goals

In its FY 2010-11 NC Solid Waste Annual Report, the state again reports that its goal of 40 percent waste reduction will not be achieved. Few local governments have been able to establish source reduction programs and expand recycling programs that are sufficient to meet this goal. In the fall of 2008, the state announced a new goal of recycling 2 million tons per year by 2012. Guilford County and its municipalities established a local waste reduction goal of 0% to be reached by FY 2012-13 and to be maintained through FY 2015-16. As indicated in Table 3-1, the per capita disposal rate began a dramatic decline in FY 2007-08 which continues through the present time, placing the County well ahead of the stated goal. Several factors contribute to Guilford County's reduction in solid waste tonnage. They are as follows:

- A reduction in waste disposal in Guilford County, based on the current economy.
- Greater public awareness of solid waste issues in Guilford County.
- Increased availability of recycling opportunities for residents and businesses.
- Expanded public education efforts.

Upon careful consideration of the above items in conjunction with future waste reduction estimates, waste reduction goals have been updated using the method outlined by the NC Solid Waste Section. The new goals are as follows:

- FY 2015-16 __5__%
- FY 2021-22 __3__%

3.3 Targeted Waste Tonnage Reductions

By examining population estimates and past waste disposal figures, the waste reduction goals can be converted from percents to tons diverted. As discussed previously, the baseline year (FY 1991-92) disposal rate is 1.35 tons per capita. This tonnage per capita figure was calculated using demographics information provided by the North Carolina Office of State Budget and Management and waste tonnage information provided by the County. At this per capita disposal rate, Guilford County would dispose of 689,487 tons in FY 2015-16 and 738,195 tons in FY 2021-22 (see Table 3-2).

Table 3-2 Guilford County, North Carolina THREE- and TEN-YEAR WASTE and POPULATION PROJECTIONS			
Year	Population	Waste Disposal	Per Capita Disposal Rate
Baseline Year, 1991-92	353,536	523,930	1.35
Year	Projected Population	Projected Waste	
Fiscal Year 2015-16	510,731	689,487	
Fiscal Year 2021-22	546,811	738,195	
Source: Population figures from Office of State Budget and Management, baseline year waste tonnage from Guilford County Solid Waste Management Plan.			

To achieve the per capita waste reduction goal of 5 percent in FY 2015-16 and 3 percent in FY 2021-22, Guilford County must limit the increase in its per capita disposal rate from the current 1.15 tons to 1.28 tons in FY 2015-16 and 1.31 tons in FY 2021-22 (see Table 3-3). With these new per capita rates, the County's future landfill disposal should be limited to 653,736 tons for FY 2015-16 and 716,322 tons for FY 2021-22.

Table 3-3 Guilford County, North Carolina TARGETED WASTE REDUCTION – FY 2015-16 and FY 2021-22		
Calculations	FY 2015-16	FY 2021-22
1. Baseline year per capita disposal rate (FY 1991-92 unless alternate approved by Section)	1.35	1.35
2. Percent waste reduction goal	5%	3%
3. Targeted per capita disposal rate (Subtract line 2 from 1.0 and multiply result by line 1)	1.28	1.31
4. Estimated population for FY 2015-16 and FY 2021-22. (Available at http://www.osbm.state.nc.us/osbm/index.html)	510,731	546,811
5. Projected tonnage for disposal at baseline disposal rate (Multiply line 1 by line 4)	689,487	738,195
6. Targeted annual tonnage for disposal (Multiply line 3 by line 4)	653,736	716,322
7. Targeted annual tonnage to reduce (Subtract line 6 from line 5)	35,751	21,873

SECTION 4.0

THE PLANNING PROCESS AND PUBLIC PARTICIPATION

Guilford County, as the lead agency, has worked with its municipal solid waste planning partners in the development of this three-year update of the County-wide solid waste management plan. Workshop sessions were held with staff and elected officials present representing the County and each municipality. Participants collected and reviewed data, reviewed the progress made in implementing the 2009 Plan Update, and made careful and deliberate determinations as to whether or not this 2012 Update should contain revisions to the goals and objectives previously established. A public meeting was then held on March 28, 2012 to receive input on the solid waste management plan goals and objectives drafted by participants in the three-year update. The public was notified of this meeting through a legal notice provided to the local print media, through televised promotion of the meeting and through meeting notices posted by the local governments in government facilities, on government websites and in local newsletters. Appendix B provides a copy of the public notice. In addition, the County established a web page designed to inform the public about the solid waste management plan and the current planning process. The website provided a printable copy of the 2009 Update, the 2012 Update draft, including new data on disposal and recycling rates, and information about the March 28th public meeting. An opportunity for public comment was an integral part of the web page. Interested parties were encouraged to complete a short questionnaire and also to provide comments and feedback relating to solid waste services and issues. Inviting public comment online proved to be a valuable tool that enabled participants to reach a larger number of residents and, as a result to gain more insight into public perceptions and concerns.

A listing of those participating in the plan's development is provided as follows:

- Guilford County –
  - Staff: Susan Heim, Environmental Services Coordinator; Lee Hill, Environmental Enforcement Officer; Betty Garrett, Interim Director, Planning & Development; Tobin Shepherd, Environmental Health Director; Casey Smith, Budget, Management & Evaluation.
- City of Archdale –
  - Staff: Jeff Wells, Planning Director; D. J. Señeres, Stormwater Manager; Jason Miller, Planner.
- Town of Gibsonville –
  - Staff: R. Benjamin Baxley, Town Manager; Coy May, Public Works Director.

- City of Greensboro –
    - Staff: Jason Jernigan, Landfill Supervisor; Sheldon Smith, Field Operations; Gail Hay, Field Operations.
- City of High Point –
    - Staff: W. Chris Thompson, Public Services Director; Richard McMillan, Asst. Public Services Director; Steven Pendry, Landfill Superintendent; Melanie Bruton, MRF Superintendent.
- Town of Jamestown –
    - Staff: Paul Blanchard, Public Works Director.
- Town of Oak Ridge –
    - Staff: Bruce Oakley, Town Administrator; Heather Birch, Town Clerk.
- Town of Pleasant Garden –
    - Elected Officials: Nancy Jo Smith, Mayor Pro Tem.
- Town of Sedalia –
    - Elected Officials: Howard Morgan, Mayor.
- Town of Stokesdale –
    - Staff: Carolyn Joyner, Town Clerk.
- Town of Summerfield –
    - Staff: Michael Brandt, Town Administrator; Phyllis Franks, Assistant to Town Administrator.
    - Elected Officials: Mark Brown, Mayor.
- Town of Whitsett –
    - Staff: C. Gary Deal, Town Administrator.
- NC Department of the Environmental & Natural Resources –
    - Staff: Hugh Jernigan, Waste Management Specialist.

SECTION 5.0
ASSESSMENT OF PROGRAMS AND SERVICES

5.1 Introduction

Each solid waste management method is described below as required by North Carolina General Statute 130A-309.09A(b). Each section includes a description of the current program and identifies potential changes. It should be noted that, due to the downturn in the nation's economy, increasing budgetary constraints make it difficult for local and municipal governments to continue to fund solid waste and recycling services at usual levels. It is the intention of the County and its municipal planning partners to strive to maintain the programs and services that are currently in effect. However, as federal and state funding support decreases, it is probable that solid waste programs will be evaluated under intense scrutiny and non-mandated and ancillary programs will be the likely targets of budget cuts.

5.2 Reduction

With regard to municipal waste reduction activities within Guilford County, each of the municipalities providing solid waste services devotes some attention to encouraging support of waste reduction/reuse and recycling activities in the informational literature that they produce.

State offices and state supported colleges and county schools are required by legislation and executive order to practice waste reduction whenever possible and to have recycling programs in place for aluminum, office paper, plastic bottles, corrugated cardboard, fluorescent lamps and discarded electronics. County solid waste management planning partners have been working with representatives from the County schools to promote and expand these reduction and recycling programs, and will continue to provide encouragement and support whenever possible. Internally, Guilford County's waste reduction and recycling policy remains in effect, and the County continues to expand its internal recycling program to increase its waste diversion rate. In addition, language requesting reduced packaging and recyclable packaging has been integrated into the County's purchasing specifications, bid packages and requests for proposals. The Town of Summerfield adopted its own "Recycling and Waste Prevention Policy" in February 2012, and other municipalities within the County's jurisdiction are considering similar action. County staff will continue to work with municipal planning partners to promote reduction, recycling and environmentally preferable purchasing, and to reduce the toxicity of chemicals used by government agencies and facilities.

5.3 Collection

Guilford County licenses private residential collection companies to provide services in the unincorporated areas and smaller towns. The County Commissioners set the maximum allowable fees and hold the haulers accountable through the license process. As of July 1, 2008, the maximum fee for residential garbage and recycling collection services in the unincorporated areas is $16.50 per household per month.

Republic Services maintains the largest customer base with approximately 25,400 households in the unincorporated areas of Guilford County, 2,857 customers in the Town of Summerfield, 1,404 customers in the Town of Stokesdale, 285 customers in the Town of Sedalia, 1,281 customers in the Town of Pleasant Garden and 283 customers in the Town of Whitsett. Waste Industries serves a customer base of approximately 716 customers in the unincorporated areas of Guilford County and 1,922 households in the Town of Oak Ridge.

Handy's Garbage Service has expanded its customer base to approximately 130 households in unincorporated Guilford County and Joe's Sanitation Service has remained steady, with approximately 100 customers in the unincorporated areas. Waste Management is also licensed for residential collection, but serves no residential customers in Guilford County at this time.

The cities of Archdale, Greensboro and High Point provide residential collection services within their municipal boundaries, as do the towns of Gibsonville and Jamestown. The towns of Sedalia and Whitsett contract for residential collection services for all households within town limits; these services are paid for by the towns. The towns of Oak Ridge, Stokesdale and Summerfield franchise a private garbage collection company to contract directly with individual residents for collection services, if desired.

Currently, white goods collection service is offered by Greensboro, High Point, Jamestown, Gibsonville, and privately by most licensed haulers operating in the unincorporated areas of the County and in the incorporated towns. The Guilford County Scrap Tire and White Goods Collection Facility opened in April 2005 and accepts white goods from residents, commercial businesses and municipalities.

In FY 06-07, County and municipal staff evaluated the feasibility of a universal collection program and the role such a program could play in residential recycling, including yard waste collection. The issue of universal collection was revisited again in 2010. In both instances, it was determined that residents of incorporated towns and cities and residents of the unincorporated areas all had access to trash and recycling options. In addition, County-licensed residential garbage collectors expressed concerns about a

universal collection program affecting their ability to remain in business within the County.

5.4 Recycling and Reuse

Recycling rates for the entire County remain unpredictable. After a significant drop, recycling tonnage seems to have stabilized somewhat. The City of Greensboro reduced its curbside recycling collection from weekly to bi-weekly in 2008 in order to reduce expenses. The City of High Point has also reduced its recycling collection to a bi-weekly schedule and converted to 96 gallon recycling toters for residential customers. High Point reports an increase in recycling tonnages, probably as a result of the conversion to the larger recycling containers. Economic conditions, combined with higher scrap metal prices, have affected the recovery rates on both scrap tires and white goods. Comingled curbside programs have experienced a similar decrease in the number of metal cans collected. Table 5-1 provides an historical summary of the tons diverted by material type, while Table 5-2 indicates the percent diversion rates.

Table 5-1
Guilford County, North Carolina
TONS DIVERTED BY MATERIAL TYPE

Year	Tires	White Goods	Household Hazardous Waste	Glass/ Metal/ Paper/ Plastic	Yard Waste	Total Tons Per Year
1997-98	6,300	1,662	188	25,335	35,833	69,318
1998-99	7,031	1,310	185	32,810	27,870	69,206
1999-00	7,658	1,156	181	30,415	144,937	184,347
2000-01	7,723	1,604	212	40,563	152,033	202,135
2001-02	8,126	2,654	228	45,956	23,850	80,814
2002-03	8,746	1,476	246	39,100	30,998	80,566
2003-04	9,200	1,522	209	39,656	15,013	65,600
2004-05	8,395	1,440	212	44,466	24,819	79,332
2005-06	7,361	1,731	263	44,208	28,256	81,819
2006-07	7,598	1,387	403	41,388	28,369	79,145
2007-08	7,065	543	478	43,034	40,329	91,449
2008-09	6,480	332	587	50,643	44,613	102,655
2009-10	7,132	236	736	53,125	50,998	112,227
2010-11	7,526	169	845	51,743	45,395	105,678

The County has focused its efforts to increase recycling participation on public education and community outreach. In 2008, the County obtained private funding to produce a solid waste services guide that includes information about solid waste and recycling for the unincorporated areas and for all of the towns and cities within its jurisdiction. Due to the many changes in both County and municipal services since the guide was printed, the

County and its planning partners will develop an update to be inserted into the guides so that they remain a viable source of information for the community. A newly designed and expanded solid waste web page provides an interactive waste disposal guide and map of disposal sites, information about proper disposal and special programs and services (such as scrap tire and white goods disposal, household hazardous waste, electronics recycling), assistance with illegal dumping and littering and notice of special clean-up events that feature recycling opportunities. A revised downloadable version of the solid waste services guide will also be made available once it has been completed.

An online solid waste questionnaire was designed to encourage public input for use in the development of the 2009 Update. The overwhelming majority of responses received indicated that the public was unaware of upcoming landfill bans on rigid plastic bottles, used oil filters, wooden pallets, computer equipment and televisions. As a result, the County and its municipal partners have committed to the expansion of their public awareness campaign.

The County expanded its internal recycling program to include offices that had not previously had recycling services available. The programs have proven to be very successful and very popular with employees. Through the reduction in waste that has resulted, the County has been able to decrease solid waste collection services at these facilities.

Recyclable materials and instructions for preparing those materials are listed in brochures provided to customers of both the private companies and the municipal programs. The City of Greensboro provides 20 unmanned recycling drop-off locations for residents, some of which are also available for use by bars and restaurants to facilitate ABC recycling. The City of High Point maintains 11 recycling drop-off locations for residents. The County partnered with Republic Waste Services on the development of a recycling convenience site at the scrap tire and white goods facility, which adjoins the Republic MSW transfer station. Initially, only limited materials were accepted at this site for recycling. However, residents may now drop off all commonly accepted household recyclables, in addition to electronics, large and small appliances and tires. The County intends to re-evaluate the effectiveness and convenience of this drop-off location (current hours of operation are limited to 8 a.m. to 4 p.m., Monday through Friday) in an effort to provide a higher level of service and to make the drop-off program more attractive for residents.

County staff have had success working with Guilford County Schools to promote the availability of a recycling program for all schools within its jurisdiction, and with individual schools to initiate and help sustain administration and classroom recycling.

County staff will continue to work with schools to expand their internal recycling efforts and to provide the recycling education necessary to make these internal programs effective and successful. Based on the opening of a new, local Styrofoam recycling facility in Randolph County, County staff will encourage the school system to implement a recycling program to divert the Styrofoam trays and dishes used in the cafeterias for feeding students and faculty.

The County continues to make recycling containers available to community organizations and event coordinators in order to encourage recycling at public events. The City of High Point provides a similar recycling container lending program for events held within the city.

All of the towns, cities and unincorporated areas of the County have curbside recycling collection available to their residents, with the exception of the towns of Jamestown and Whitsett. The Town of Jamestown provides a drop-off site for residential recycling that has been very successful. In FY 09-10, the Town of Whitsett worked with its curbside garbage collection contractor to provide a recycling drop-off site for town residents. The site has proven to be extremely popular, and, as a result, the Town intends to maintain this service.

In FY 10-11, the County expanded its electronics recycling program to include two new drop-off locations. In addition, the County provides electronics recycling through the Household Hazardous Waste Collection Program and at several special collection events held annually throughout the County. As a result, electronics diversion has increased substantially to a level of 685 tons in FY 10-11.

A private company, WCA of High Point continues to operate a C&D landfill/mixed waste processing facility in High Point. The facility currently processes approximately 65,000 tons of C&D material per year, with a diversion rate of about 30 percent. The diversion rate has dropped by approximately 5% over the past several years, and remains well below the original projections of 50 to 60 percent. Another C&D treatment and processing facility, Salvage America, has been adversely affected by the economic downturn of recent years and, as a result, has discontinued its treatment and processing operations and now focuses on the recovery of junk motor vehicles instead.

Two new recycling businesses are beginning operations in Guilford County. The first is an asphalt shingle recovery facility that has just recently received its permit to operate. It is anticipated that this facility will begin accepting shingles for processing sometime in 2012. The reclaimed asphalt shingles generated from this operation will be used in hot-mix asphalt for paving projects. The second new recycling business is a mattress recycling facility that began processing discarded mattresses in 2011. It is the intention of

this company to work with municipalities and local trash haulers to obtain the feedstock necessary to maintain and expand their operations. The waste diverted as a result of these two new businesses will help Guilford County to attain its waste reduction goals and support the state's recycling objective of 2 million tons by 2012.

Table 5-2
Guilford County, North Carolina
PERCENT DIVERSION RATES

Year	Total Solid Waste (MSW and C&D) Tons Per Year	Tons Per Year Diverted	Total Tons Per Year	% Diversion
1997-98	519,485	69,318	588,803	11.77%
1998-99	527,717	69,206	596,923	11.59%
1999-00	756,755	184,347	941,102	19.59%
2000-01	730,012	202,135	932,147	21.68%
2001-02	758,566	80,814	839,380	9.63%
2002-03	709,581	70,384	779,965	9.02%
2003-04	659,224	65,600	724,825	9.05%
2004-05	646,266	79,332	725,598	10.93%
2005-06	703,606	81,819	785,425	10.41%
2006-07	701,460	79,145	780,605	10.14%
2007-08	629,649	91,449	721,098	12.68%
2008-09	624,762	102,655	727,417	14.11%
2009-10	571,202	112,227	683,429	16.42%
2010-11	566,585	105,678	672,263	15.72%

5.5 Composting and Mulching

The Cooperative Extension Service at the Guilford County Agricultural Center promotes residential backyard composting through composting classes and demonstration sites.

Three municipalities currently recycle yard waste: the City of High Point recycles approximately 14,000 tons per year; the Town of Jamestown recycles approximately 900 tons per year; the City of Greensboro recycles approximately 31,000 tons per year. All of the incorporated municipalities within the County that provide franchised curbside collection services for their residents have been successful in adding yard waste collection to their programs. Most licensed garbage collectors provide yard waste collection for their residential customers, and recycle the yard waste they collect through the City of High Point's Ingleside Compost Facility or the City of Greensboro's White Street Landfill compost site.

Guilford County provides a Christmas tree recycling program for residents annually. The program includes three drop-off locations that are accessible seven days per week from

December 26th through January 15th. Trees are chipped and processed for use as mulch at County parks and facilities. Currently, the program generates between 50 and 100 tons of mulch annually.

The County and its municipal planning partners share a major concern about the effect of changes in the state rules governing compost facilities. It is anticipated that the implementation of these new rules will place an undue financial burden on municipal composting facilities and may prohibit their continued operation.

5.6 Incineration

Incineration with or without energy recovery is not feasible at this time due to high costs and air quality problems. Based on a cursory review of the current incineration technology available, it has been determined that this disposal method remains uneconomical. However, rumors persist of private interest in the potential for an incinerator operation in the Piedmont Triad area.

5.7 Transfer Outside Geographical Area

The MSW transfer station owned by the City of Greensboro began operations in September of 2006. The transfer station transports all MSW (approximately 225,000 tons per year) to the Uwharrie Environmental Landfill, located in Montgomery County, North Carolina.

Republic Services of North Carolina currently trucks an average of 11,000 tons of MSW per month from its Bishop Road transfer station out of the County. In FY 2010-11, an approximate total of 135,000 tons of Guilford County MSW was transported from the facility to the company's Uwharrie Environmental Landfill in Montgomery County for disposal.

5.8 Disposal

The City of High Point's Kersey Valley Landfill is now the only MSW landfill operating in Guilford County, having at least enough capacity remaining at its current disposal rate to continue operations through the end of the planning period. The City of Greensboro eliminated MSW disposal at its White Street Landfill in conjunction with the opening of its MSW transfer station, and continues to transport all of its MSW tonnage (approximately 225,000 tons per year) to the Uwharrie Environmental Landfill. Republic Services' Bishop Road Transfer Station, an alternative MSW disposal site located just south of Greensboro, currently receives over 11,000 tons of waste per month, or approximately 135,000 tons per year. This facility also transports waste to the Uwharrie Environmental Landfill in Montgomery County, which it owns and operates. At its

current permitted disposal rate of 3,000 tons per day, an estimate of the remaining capacity at Uwharrie can be extrapolated as approximately 12.5 years.

Because permitted MSW landfill space is extremely limited in the County, and because the waste being transferred out of county goes to a privately owned MSW facility that has a limited capacity remaining, future disposal is a serious concern for Guilford County and its municipalities. In FY 2006-07, County staff initiated a regional solid waste planning group that includes, in addition to the municipal planning partners, representatives from the counties of Davidson, Forsyth, Randolph, Rockingham and Stokes, the cities of Asheboro, Burlington and Reidsville and the town of Kernersville. Past meetings of this group have resulted in minimal interest in a regional disposal plan, but circumstances are changing and a regional dialogue will allow discussion to continue. Currently, a new MSW landfill has been proposed in Rockingham County, and Randolph County is exploring the potential for re-opening its MSW landfill.

The White Street Landfill, the WCA of High Point C&D Landfill and Processing and Treatment Facility and A-1 Sandrock C&D Landfill are the disposal sites currently available for C&D material in Guilford County. These facilities have adequate suitable area for C&D capacity to continue operations through the duration of the planning period.

There are currently 14 active Land Clearing and Inert Debris (LCID) landfills in Guilford County. The permitting process is not difficult for this type of landfill, and new facilities have been constructed as necessary to meet the demands of development that might occur in the area.

5.9 Education and Public Outreach

In FY 09-10, Guilford County obtained a state grant for the purchase of a recycling mascot, around which the County's new recycling education and outreach campaign was developed. The mascot, named PETE, is a giant plastic bottle based on the Recycle Guys characters and the campaign slogan is, "For PETE's Sake Recycle!" In cooperation with local media, PETE was introduced to the public through a series of television and radio segments just prior to the effective date of the landfill ban on plastic bottles in 2009. Since that time, PETE has become a popular local celebrity who makes appearances in schools and at community events and public functions. The campaign has successfully branded the County's efforts to promote proper disposal, waste reduction and recycling.

The Cooperative Extension Service (housed at the Guilford County Agricultural Center) provides solid waste and recycling education opportunities for residents on topics ranging from water conservation to backyard composting. The Cities of High Point and Greensboro offer printed materials about solid waste and recycling services available to

their residents, and both cities have environmental educators on staff to promote community understanding and use of those programs. Many of the County's licensed private garbage collectors also provide printed instructional materials for their customers.

The City of Greensboro/FCR, Inc. and the City of High Point host educational classes for area students at their recycling facilities (MRFs). The Cooperative Extension Service visits area schools and demonstrates landfill processes, and conducts a program that demonstrates vermi-composting.

In FY 06-07, County staff worked with school system curriculum and instruction directors to have recycling designated as part of both the 2nd grade and 5th grade standard course of study. This has enabled environmental educators throughout the County to gain access to individual schools and to work with teachers and administrators to bring recycling education to elementary school classrooms. The County has continued to provide a recycling assembly program to an average of 8 elementary schools per fiscal year. The program has been very well received by students, teachers and parents, and has led to an increased interest in recycling education initiatives.

In FY 2007-08, the County obtained private funding to produce a solid waste services guide that includes information about solid waste and recycling for unincorporated areas and for all of the towns and cities within its jurisdiction. Because of a number of changes to available programs and services over the past few years, the municipal planning partners will work to develop an update to be inserted into the printed guides. The updated guide will be available at County and municipal offices and facilities. The downloadable version will also be updated and made available on County and municipal websites. In addition, an expanded County solid waste website now provides residents and businesses with information about rules and regulations, proper disposal, new legislation, collection services, disposal options, environmental enforcement/illegal dumping and burning, recycling and other solid waste programs and initiatives (http://countyweb.co.guilford.nc.us/environmental-services-home).

5.10 Special Waste

Special wastes include tires, white goods, yard waste, household hazardous wastes (such as paint, pesticides, fluorescent tubes and bulbs, used motor oil and oil filters, and household chemicals) and e-waste. The County accepts scrap tires and white goods at its collection facility, located at 2138 Bishop Road, and also accepts white goods at the Northeast Fire Station convenience site. The cities of Greensboro and High Point offer curbside collection of white goods from residents.

The City of Greensboro and Guilford County will continue to provide a Household Hazardous Waste disposal program through Ecoflo, Inc. at the company's Greensboro facility. The program includes disposal of used oil filters, computer equipment and televisions, thereby helping the community comply with the landfill bans on those materials. Many of the auto parts stores in the County provide used oil, oil filter and battery collection. In addition, a number of area retailers now accept rechargeable batteries and fluorescent tubes and bulbs for recycling. Guilford County and the City of Greensboro will continue to sponsor a Spring Cleanup Day where County residents can dispose of scrap tires, white goods, household hazardous wastes and pesticide containers. A similar event, co-sponsored by the County and the City of High Point, has been held bi-annually in 2009 and 2011. The County has further expanded its special cleanup program with an annual spring e-waste collection day in the Town of Pleasant Garden and a new summer cleanup day in the Town of Summerfield. Because of the success of these events, the County will continue to work with its municipal partners to expand its program of residential cleanup days to better serve the entire community.

In November of 2010, the County and its municipal planning partners developed and adopted an electronics management plan (Appendix K). The plan provides for the safe disposal of discarded computer equipment, televisions and other electronics for residents by means of a drop-off program. Currently, four drop-off sites are available: HHW Collection Facility, Guilford County Scrap Tire & White Goods Collection Facility, City of High Point Material Recovery Facility and the Guilford County Sheriff's Prison Farm. In addition, a special e-waste collection event is held annually at the Pleasant Garden town hall, and e-waste is also accepted at other special collection events throughout the County.

Another waste stream that has begun to be targeted for better disposal options is prescription medications. The Town of Pleasant Garden partners with a local drug store and the Guilford County Sheriff's Department to sponsor a prescription drug take-back program, held in conjunction with its annual blood drive. In addition, several local drugstores and national chains have begun to accept prescription medications for disposal through ongoing in-store programs or through special public events.

The County and its municipal planning partners continue to evaluate the issue of abandoned mobile homes. At this time, no problems have been identified that would warrant the development of an abatement program. Currently, all jurisdictions hold property owners responsible for mitigating any violations involving abandoned mobile homes on their land.

5.11 Illegal Disposal / Litter

Guilford County employs solid waste enforcement and educational personnel that deal directly with littering and illegal dumping. The County's environmental enforcement officer employs surveillance cameras at targeted illegal dump sites to identify and prosecute offenders. In 2012, the County will be unveiling a new web-based application that will allow citizens to report littering violations. Reports will generate a letter to the responsible party citing the date and location of the littering incident, the impact of littering on the community and ways in which the offender can become a part of the solution to the littering problem. County solid waste staff work with inmate labor crews from the Guilford County Sheriff's Prison Farm to manage a countywide cleanup program for illegal dumpsites that contain at least 50 percent or more white goods. Over 1,500 tons of waste have been removed from Guilford County sites as a result of this program. The North Carolina Department of Transportation (NCDOT) also cleans up illegal dumpsites along state-maintained roads. In addition to solid waste regulations, Guilford County also enforces zoning regulations that include illegal dumping, junk cars, and other illegal disposal issues.

The cities of Greensboro and High Point, as affiliates of Keep America Beautiful, participate in KAB sponsored cleanup programs, including The Great American Cleanup. Both cities, as well as some of the incorporated towns, participate in state sponsored cleanup programs such as Adopt-a-Highway and Big Sweep. Both cities also do litter indexing throughout their jurisdictions, and the City of High Point uses state inmate labor to help keep targeted areas picked up. The County provides staffing and support to these efforts whenever possible.

5.12 Purchasing Recycled Products

Guilford County adopted its Recycling and Waste Reduction policy in April 2001. County solid waste staff has worked with the Purchasing Department to develop a list of recycled and recycled content products available for purchase by County offices and facilities. A list of qualified vendors of these products has also been developed. In addition, solid waste and purchasing staff have worked together in an effort to analyze purchasing and bid opportunities based on environmentally preferable purchasing standards. The Town of Summerfield adopted a recycling and waste reduction policy in 2012 that includes environmentally preferable purchasing provisions. The solid waste management planning partners intend to promote the expansion of these existing policies, and to encourage other local governments to adopt similar recycling practices and waste reduction policies.

5.13 Disaster Response

The County and its municipal planning partners have developed a list of sites deemed suitable for use for the temporary storage of disaster debris. County staff will work with NCDENR staff to have these sites approved. Information on approved sites will be shared with Guilford County Emergency Services in an effort to ensure ample disaster debris storage capacity. A map of these sites is included in Appendix I.

Identified sites include the White Street and Kersey Valley landfills, the Ingleside composting facility, the Guilford County Sheriff's Prison Farm, Bryan Park Guilford County and parcels of land purchased by the County as open space in the area of Oak Ridge. In addition, the County will work with its municipal solid waste planning partners to identify potential debris storage sites in the towns.

The County and its municipal planning partners developed and adopted an animal mortality emergency response plan and incorporated it into the solid waste management plan in December of 2006 as Appendix J.

SECTION 6.0
SOLID WASTE COSTS AND FINANCING METHODS

6.1 Introduction

The purpose of this Section is to provide information on the costs associated with the collection, processing, and disposal of waste managed by Guilford County's local governments. As prescribed by North Carolina General Statutes 130A-309.09A (b)(7), a description and assessment of the full cost of solid waste management, including the costs of collection, disposal, waste reduction, and other programs and methods of financing are presented.

6.2 Description of Program Costs

Below is a description of cost associated with the County's and municipalities' solid waste programs. Many of the small towns franchise private collectors who provide service in their communities and bill their residents directly for the service. In these cases, the total program cost reflects the total amount paid by residents for solid waste services.

Table 6-1
Guilford County, North Carolina
RESIDENTIAL SOLID WASTE MANAGEMENT COSTS – FY 2010 -11

	Collection	Disposal	Reduction/Reuse & Recycling	Mulching, Composting, & Other Programs*	Total Program Cost
Guilford County	N/A	N/A	N/A	$888,696	$888,696
City of Archdale	$472,408	$105,343	$105,528		$683,279
City of Greensboro	$2,591,412	$10,556,037	$20,280,129		$33,427,578
City of High Point	$5,015,000	$1,788,000	$1,654,000	$881,000	$9,338,000
Town of Gibsonville	$74,029	$100,796	$70,350	$16,704	$261,879
Town of Jamestown	$135,679	$43,701	$27,653	$73,756	$280,789
Town of Oak Ridge	---	---	---	---	$368,837
Town of Pleasant Garden	*Residents contract individually with private collectors.*				
Town of Sedalia	---	---	---	---	$47,356
Town of Stokesdale	---	---	---	---	$248,065
Town of Summerfield	---	---	---	---	$512,081
Town of Whitsett	---	---	---	---	$32,569

**Other programs include scrap tire, household hazardous waste, electronics and white goods processing.*

6.3 Financing Methods

The solid waste services/programs managed by the local governments which comprise Guilford County are funded through a variety of mechanisms, including tip fees, property taxes/general funds, household charges, sale of recyclables and equipment, grants, and state solid waste tax and program revenues. Table 6-2 presents a summary of the financing methods used to fund solid waste services/programs managed by the local governments that comprise Guilford County. In the cases where financing methods are not indicated, the municipality allows the service provider to collect fees directly from its customers. As can be seen, the financing methods used most often by local governments within the County include fees (tipping fees, customer service charges) and property taxes/general funds.

Table 6-2
Guilford County, North Carolina
SOLID WASTE FINANCING METHODS USED BY LOCAL GOVERNMENTS WHICH COMPRISE GUILFORD COUNTY

	Fees	Property Taxes/ General Fund	Sale of Recyclables/ Commodities/ Equipment	Grants	State SW Tax & Program Distributions	Other
Guilford County	---	X	X	X	X	---
City of Archdale	X	---	X	X	---	---
City of Greensboro	X	X	X	X	---	---
City of High Point	X	X	X	---	---	---
Town of Gibsonville	X	X	---	---	---	---
Town of Jamestown	X	X	---	---	---	---
Town of Oak Ridge	---	---	---	---	---	---
Town of Pleasant Garden	*Residents contract individually with private collectors.*					
Town of Sedalia	---	X	---	---	---	---
Town of Stokesdale	---	---	---	---	---	---
Town of Summerfield	---	---	---	---	---	---
Town of Whitsett	---	X	---	---	---	---

SECTION 7.0
PLAN IMPLEMENTATION

7.1 Introduction

This Section presents the plan of action for solid waste system components, which will supplement existing solid waste programs and best serve the future solid waste management needs of the citizens of Guilford County. The integration of these system components will enhance the capabilities of the local governments of the County to develop environmentally sound and economical solid waste management systems that meet local waste reduction, recycling and composting goals and which utilize public or private landfills that meet all regulatory requirements for those wastes which cannot be recovered. These planning actions have been summarized on the planning elements sheets as required by the state and included as Appendix F.

7.2 Recommended Actions

7.2.1 Reduction

- Each municipality should continue producing and distributing informational literature encouraging waste reduction, including an updated version of the Guilford County Solid Waste Services Guide.

- Work with municipal planning partners to develop internal policies to promote reduction, recycling and environmentally preferable purchasing, and to reduce the toxicity of chemicals used by government agencies and facilities.

7.2.2 Collection

- Develop and institute a policy requiring County licensed garbage collectors to provide recycling collection, with minimum standards, and yard waste collection as part of their license to operate in Guilford County. The new policy should be in place prior to the renewal of licenses in December 2012.

- The City of High Point will consider the potential for expanding solid waste collection services to multifamily complexes.

- The City of Greensboro will evaluate the results of a pilot program to provide residential recycling collection to subsidized housing projects

- Continue to evaluate the need for additional collection services to be provided by licensed garbage collectors (for example, bulky item collection).

- Continue to monitor the availability of collection services for residents of unincorporated Guilford County.

7.2.3 Recycling and Reuse

- Work with Guilford County Schools to help promote internal recycling in schools and at administrative offices.

- Work with local media to provide regular recycling education spots aimed at both residents and businesses.

- Expand the recycling recognition program to provide incentive for businesses and civic organizations to develop or expand recycling programs and initiatives.

7.2.4 Composting and Mulching

- Continue to monitor anticipated changes in state rules governing compost facilities.

- List on County and municipal websites locations of government facilities where compost and mulch are available to the public.

- Continue to offer educational programs on backyard composting through the Guilford County Agricultural Center.

7.2.5 Incineration Element

- Re-evaluate incineration as a means of disposal during FY 2014-15 or sooner if a change in technology occurs.

7.2.6 Transfer Outside Geographical Area

- City of Greensboro MSW transfer station and Republic Waste MSW transfer station will continue operations. No need for additional transfer stations has been identified in Guilford County at this time.

7.2.7 Disposal

- The City of High Point's Kersey Valley Landfill will continue MSW disposal at its current rate throughout the ten-year planning period.

- WCA of High Point C&D Landfill and Treatment and Processing Facility will continue to operate.
- A-1 Sandrock C&D Landfill will continue to operate.
- The City of Greensboro will continue its C&D landfill operation.
- The County and its municipal and regional planning partners will continue to pursue and evaluate long-term disposal options.
- The County and its municipal planning partners will continue regular solid waste management meetings planning meetings and update its solid waste management plan as needed.

7.2.8 Education

- Work with civic organizations to provide recycling education to their memberships and to assist them in integrating recycling education and programs into their events.
- Continue to provide a County-sponsored recycling presentation for elementary schools throughout the County.
- Continue to provide educational programs on backyard composting, vermi-composting and other environmental issues through the Guilford County Cooperative Extension.
- Continue to provide a comprehensive public education program for materials banned from landfills.
- Implement a County recognition program to expand public awareness of organizations, businesses and service providers that incorporate green procedures and policies into their operations.
- Continue the Guilford County/City of High Point America Recycles Day recycling competition for elementary schools.
- Continue the City of Greensboro America Recycles Day event for elementary and middle schools within the city.
- The High Point Furniture Market Authority will implement a "Green Partnerships" program with furniture market companies to promote and

recognize recycling efforts and to increase the tonnage of recyclables collected during furniture markets.

7.2.9 Special Waste

- Continue operations of the Guilford County Scrap Tire and White Goods Collection Facility.

- Continue the City of Greensboro/Guilford County Household Hazardous Waste Collection Program and work with the contractor to provide the collection of e-waste and televisions in conjunction with this program at no cost to Guilford County or the City of Greensboro.

- Continue the annual Guilford County Spring Clean-up event for disposal of scrap tires, white goods, e-waste and HHW for residents, the annual Guilford County/Pleasant Garden E-Cycle event for the disposal of electronics, and the bi-annual Clean & Green High Point even for the disposal of scrap tires, white goods, e-waste and HHW for residents.

- Work to establish the Guilford County/Town of Summerfield Summer-Cycle Clean-up event as an annual event for the disposal of scrap tires, white goods, scrap metal and electronics.

- Promote NCDA-sponsored pesticide disposal programs through annual clean-up events.

- Work with the new local mattress recycling company to promote the option for recycling discarded mattresses through County and municipal websites.

- Work with the new local Styrofoam recycling company to promote the option for recycling clean Styrofoam through County and municipal websites.

- Work with local drugstores to promote scheduled and ongoing prescription drug take-back events and programs through County and municipal websites.

7.2.10 Illegal Disposal/Litter

- Continue to support and be active in the NC Solid Waste Enforcement Officers Association.

- Continue working with cities and small towns to use the surveillance program at identified illegal dump sites.

- Continue the cleanup and educational programs sponsored by Guilford County, the cities of Greensboro and High Point and NCDOT.
- Continue to promote and operate the HHW collection program.
- Continue to work with local KAB affiliates to promote anti-litter education and outreach.
- Promote and assist the new local mattress recycling company.
- Promote the County's web-based program that allows residents to report illegal dumping, littering and illegal burning.
- Continue to cite and prosecute perpetrators of illegal dumping and illegal burning.

7.2.11 Purchasing Recycled Products

- Continue to work with DENR and DEOA to develop a training program about recycled products and related economic and environmental issues.
- Continue to expand the opportunity for County environmentally preferable purchasing.
- Continue to work with municipal planning partners to develop and implement internal recycling and EPP policies.

7.2.12 Disaster Response

- The County will work with its municipal partners and NCDENR staff to have the identified disaster debris storage sites evaluated and approved for future use.
- County solid waste staff will continue to work with and update County Emergency Management and Public Health staff concerning disaster response planning as it relates to solid waste.
- The County and its municipal planning partners will update the solid waste management plan at least every 3 years and more frequently if necessary.

7.2.13 Abatement of Abandoned Mobile Homes

- The County will work with its municipal partners to re-examine the need for a plan for the abandoned mobile homes in Guilford County.

7.3 Implementation Schedule

Most recommended actions included in the 2012 Update involve the continuation of existing programs and services in the face of reduced funding. All recommendations for the expansion or addition of programs are intended to be implemented in the upcoming 2012-13 fiscal year.

APPENDIX A

Resolutions to Adopt the 2012 Guilford County Solid Waste Management Plan Update

Documents to added as Plan Adoption Process progresses.

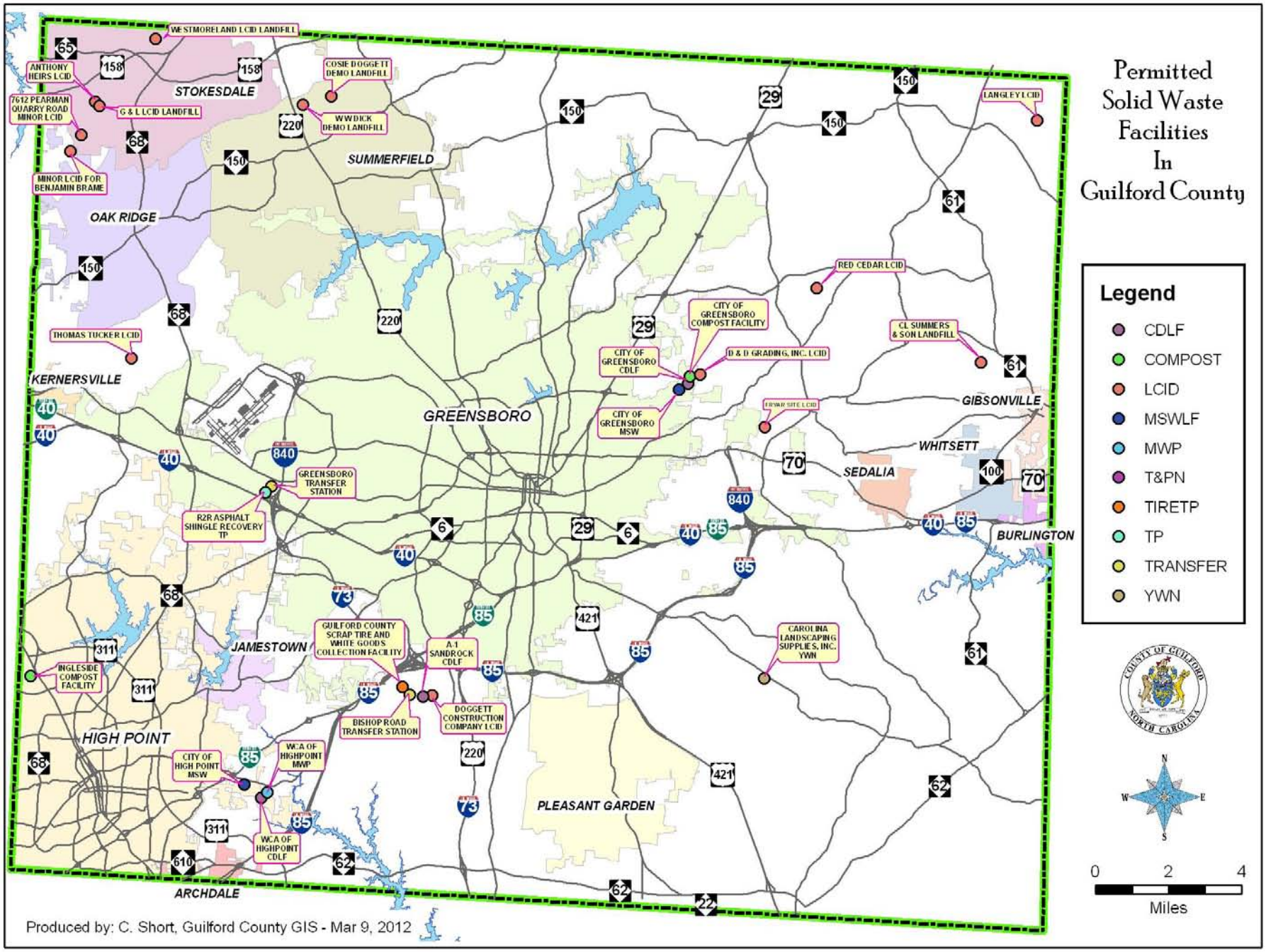
APPENDIX B

Notice of Public Meeting

Documents to added as Plan Adoption Process progresses.

APPENDIX C

Permitted Solid Waste Management Facilities in Guilford County


Permitted Solid Waste Facilities In Guilford County
Legend
CDLF
COMPOST
LCID
MSWLF
MWP
T&PN
TIRETP
TP
TRANSFER
YWN
WESTMORELAND LCID LANDFILL
ANTHONY HEIRS LCID
7612 PEARMAN QUARRY ROAD MINOR LCID
G & L LCID LANDFILL
MINOR LCID FOR BENJAMIN BRAME
COSIE DOGGETT DEMO LANDFILL
WW DICK DEMO LANDFILL
LANGLEY LCID
RED CEDAR LCID
CITY OF GREENSBORO COMPOST FACILITY
CITY OF GREENSBORO CDLF
D & D GRADING, INC. LCID
CITY OF GREENSBORO MSW
CL SUMMERS & SON LANDFILL
THOMAS TUCKER LCID
GREENSBORO TRANSFER STATION
R2R ASPHALT SHINGLE RECOVERY TP
GUILFORD COUNTY SCRAP TIRE AND WHITE GOODS COLLECTION FACILITY
A-1 SANDROCK CDLF
INGLESIDE COMPOST FACILITY
BISHOP ROAD TRANSFER STATION
DOGGETT CONSTRUCTION COMPANY LCID
CAROLINA LANDSCAPING SUPPLIES, INC. YWN
CITY OF HIGH POINT MSW
WCA OF HIGHPOINT MWP
WCA OF HIGHPOINT CDLF
STOKESDALE
SUMMERFIELD
OAK RIDGE
KERNERSVILLE
GREENSBORO
GIBSONVILLE
WHITSETT
SEDALIA
BURLINGTON
JAMESTOWN
HIGH POINT
PLEASANT GARDEN
ARCHDALE
0 2 4
Miles
Produced by: C. Short, Guilford County GIS - Mar 9, 2012

Permitted Solid Waste Facilities in Guilford County

FACILITY TYPE	FACILITY NAME	FACILITY ADDRESS	REMAINING CAPACITY
CDLF	WCA of High Point C&D Landfill	5830 Riverdale Dr	estimated 31 years
CDLF	City of Greensboro C&D Landfill	2503 White St	
CDLF	A-1 Sandrock C&D Landfill	2091 Bishop Rd	estimated 21 years
COMPOST	Ingleside Compost Facility (City of High Point)	3001 Ingleside Dr	n/a
COMPOST	City of Greensboro Compost Facility	2503 White St	n/a
LCID	Langley LCID	7400 Brooks Bridge Rd	
LCID	Anthony Heirs LCID	7700 Anthony Rd	
LCID	Benjamin Brame Minor LCID Landfill	8735 Warner Rd	
LCID	Fryar Site LCID	5233 McLeansville Rd	
LCID	Doggett Construction Company LCID	2075 Bishop Rd	
LCID	Cosie Doggett Demolition Landfill	2124 Scalesville Rd	
LCID	D & D Grading, Inc. LCID	1411 Rankin Mill Rd	
LCID	Westmoreland LCID Landfill	7984 Lester Rd	
LCID	C L Summers and Son Landfill	2359 Wagoner Rd	
LCID	G & L LCID Landfill	7690 Anthony Rd	
LCID	W W Dick Demolition Landfill	7965 Winfree Rd	
LCID	7612 Pearman Quarry Road Minor LCID	7612 Pearman Quarry Rd	
LCID	Thomas Tucker LCID	230 Marshall-Smith Rd	
LCID	Red Cedar LCID	5614 Country Hills Dr	
MSWLF	City of Greensboro MSW Landfill	2503 White St	
MSWLF	City of High Point Kersey Valley MSW Landfill	3748 East Kivett Dr	at least 12 years
MWP	WCA of High Point MWP	5830 Riverdale Dr	n/a
TIRETP	Guilford County Scrap Tire & White Goods Collection Facility	2138 Bishop Rd	n/a
TP (MATREC)	R2R Asphalt Shingle Recovery (not operational as of 3-2012)	6311 Burnt Poplar Rd	n/a
TRANSFER	City of Greensboro MSW Transfer Station	6310 Burnt Poplar Rd	n/a
TRANSFER	Republic Waste Bishop Road Transfer Station	2140 Bishop Rd	n/a
YWN	Carolina Landscaping Supplies, Inc. YWN	2544 Alamance Church Rd	n/a

APPENDIX D

Waste Characterization Summary

WASTE CHARACTERIZATION SUMMARY

WASTE ESTIMATES BY SECTOR						
Measurement	MSW			Total MSW	C&D Waste	Total Waste Stream
	Residential Waste	Commercial Waste	Industrial Waste			
Percentage	29%	26%	23%	78%	22%	100%
Source: NC DENR FY 2007-08 County Waste Disposal Report.						

ESTIMATE OF RESIDENTIAL WASTE COMPOSITION	
Material	Estimated Percentage of Waste Stream[1]
Paper & Paperboard	28.5%
Yard Waste	13.4%
Food Scraps/Organics	13.9%
Rubber, Leather, Textiles	8.4%
Other[2]	3.4%
Plastics	12.4%
Glass	4.6%
Metals	9.0%
Wood	6.4%
TOTAL	**100%**

[1] Percentages derived from US EPA 2010 total municipal solid waste generation data.
[2] Other includes rubble/C&D debris.

ESTIMATE OF COMMERCIAL AND INDUSTRIAL WASTE COMPOSITION		
Material	Commercial	Industrial
	State Estimate (Percent)[1]	State Estimate (Percent)[1]
Paper	26%	26%
Cardboard	26%	24%
Other[2]	15%	20%
Organics / Yard Waste	16%	10%
Plastics	8%	14%
Metals	6%	5%
Glass	3%	1%
TOTAL	**100%**	**100%**

[1] Percentages derived from North Carolina Recycling and Solid Waste Management Plan, 1992, Volume 1, pages 6-17.
[2] Other includes textiles, wood, and rubble/C&D debris.

APPENDIX E

Waste Reduction Goal Sheet

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

Local Government Name: Guilford County

Previously established waste reduction goal: 0 %

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 %

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 *(FY 1991-1992 unless alternate approved by Section)*	1.35
2. Percent waste reduction goal	0 %
3. Targeted per capita disposal rate (Subtract line 2 from 1.0 and multiply result by line 1)	1.31
4. Estimated population in the new waste reduction goal year (Available at Office of State Budget and Management website: Projected Annual County Population Totals 2010-2019)	546,811
5. Projected tonnage for disposal at baseline disposal rate (Multiply line 1 by line 4)	738,195
6. Targeted annual tonnage for disposal (Multiply line 3 by line 4)	716,322
7. Targeted annual tonnage to reduce (Subtract line 6 from line 5)	21,873

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:

Due to current economic conditions, the County and its municipal partners realize that funding for new or expanded waste reduction and recycling programs will not be available, and funding for existing programs may be cut. Therefore, our waste reduction plan will focus on maintaining existing programs and on public education and outreach, as detailed in the 2012 Update planning elements.

APPENDIX F

Planning Elements

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Reduction

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
Continued producing and distributing informational literature encouraging waste reduction. -- *Ongoing*	Develop a County policy encouraging deconstruction, especially for redevelopment projects. -- *FY09-10*	Death of planning director and lack of a replacement has stalled the development of the policy.	Continue to produce distribute informational literature encouraging waste reduction.	Ongoing	
Expanded the distribution of the Guilford County Solid Waste Services Guide through town halls, County offices and other public facilities. -- O*ngoing*			Develop an update page for insertion into the Guilford County Solid Waste Services Guide and continue distribution through town halls, County offices and other public facilities.	FY 12-13	
			Work with municipal partners to develop internal policies to promote reduction, recycling and environmentally preferable purchasing, and to reduce the toxicity of chemicals used by government agencies and facilities.	FY 12-13 and Ongoing	

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Collection

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
Through countywide meetings, municipal planning partners and local solid waste companies investigated the desirability and feasibility of a universal collection program in Guilford County. Recommendations were made to the Board of County Commissioners to maintain the licensing program for private solid waste companies, to increase public outreach and education efforts, to hold additional special disposal events and to establish at least 3 convenience sites where residents could drop off household trash and recyclables. – *FY 10-11* The City of Greensboro revised its bulk collection from weekly to every other week, coinciding with recycling collection route. – *FY 10-11* The City of High Point reduced the frequency of curbside recycling collection services to residents to bi-weekly. – *FY 10-11*	Develop and institute a policy requiring County licensed garbage collectors to provide recycling collection, with minimum standards, and yard waste collection as a part of their license to operate in Guilford County. – *FY 11-12*	Current County licenses are effective through December 31, 2012. It was thought better to institute these new requirements, if approved, when licenses are renewed.	The City of High Point will consider the potential for expanding solid waste collection services to multifamily complexes. The City of Greensboro will evaluate the results of a pilot a program to provide residential recycling collection to subsidized housing projects. Develop and institute a policy requiring County-licensed garbage collectors to provide recycling collection, with minimum standards, and yard waste collection as a part of their license to operate in Guilford County. The new policy should be in place prior to the renewal of licenses in December 2012.	FY 11-12 and Ongoing FY 11-12 FY 12-13	

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Collection

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
The Town of Gibsonville discontinued municipal collection of commercial accounts and franchised a private company to contract with individual businesses for these collection services. – *FY 09-10*			Continue to monitor the availability of collection services for residents of unincorporated Guilford County.	FY 12-13 & Ongoing	
The Town of Oak Ridge renewed its franchise agreement with Waste Industries to provide residential solid waste and recycling collection to residents. – *FY 11-12*			Continue to evaluate the need for additional collection services to be provided by licensed garbage collectors (for example, bulky items)	FY 12-13 & Ongoing	
All incorporated towns having franchised solid waste collection for their residents have included curbside yard waste collection as a part of their franchise agreements. – *FY 11-12*					

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Recycling and Reuse

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
Developed and implemented County public education program for landfill bans on rigid plastic bottles, pallets, used oil filters, computer equipment and televisions. – *FY 09-10 to 11-12* City of High Point MRF expanded the materials accepted for recycling to include all rigid plastic bottles. – *FY 09-10* Expanded a pilot convenience site for residential recycling with sponsorship from Republic Waste. – *Ongoing* Continued to implement internal recycling programs at County offices & facilities. – *Ongoing* State landfill bans on rigid plastic bottles, pallets, used oil filters, computer equipment and tv's have been implemented at all public and private landfills and transfer stations within the County. 10/09 – 7/11.			Work with Guilford County Schools to help promote internal recycling at administrative offices. Work with local media to provide regular recycling education spots aimed at residents and businesses. Expand recycling recognition program to provide incentive for businesses and civic organizations to develop or expand recycling programs.	FY 12-13 & Ongoing FY 12-13 & Ongoing FY 12-13 & Ongoing	

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Recycling and Reuse

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
Town of Whitsett developed an unmanned recycling drop-off site for town residents. *FY 09-10* Continued to promote recycling at public events. –*Ongoing*. Continued to work with schools to promote administrative and classroom recycling. –*Ongoing*. Continued to work with private companies and local recycling facilities in an effort to develop additional convenience sites for recycling drop-off for residents. –*Ongoing*. The City of Greensboro worked with its recycling contractor to ensure that all rigid plastic bottles, not just PET and HDPE, are accepted for recycling.- *10/09*					

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Composting and Mulching

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
Continued educational programs on backyard composting. - *Ongoing* Continued operations of the City of High Point's Ingleside Composting Facility. – *Ongoing* Continued operations of the City of Greensboro's composting program. –*Ongoing* All incorporated towns having franchised solid waste collection for their residents have included curbside yard waste collection as a part of their franchise agreements. – *FY 11-12* Monitored anticipated changes in state rules governing compost facilities. – *Ongoing*.	List on county and municipal websites locations of government facilities where compost and mulch are available to the public. Promote cooperative extension's backyard composting program through County and municipal websites. Expand Christmas tree recycling drop-off program to include additional sites.	County website is under construction; this information will be made available online as soon as possible. County website is under construction; this information will be made available online as soon as possible. This action has been tabled due to the decrease in number of Christmas trees brought to drop-off sites in 2010-11 and 2011-12.	Continue to monitor anticipated changes in state rules governing compost facilities. Continue to offer educational programs on backyard composting through the County Agricultural Center.	FY 12-13 & Ongoing Ongoing	

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Incineration with/without Energy Recovery

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
Discussion of incineration with municipal planning partners showed no interest in pursuing this as a disposal option. – 1/*12*			Re-evaluate incineration options to determine cost-effectiveness and identify environmental liabilities.	FY 14-15	

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Transfer Outside Geographic Area

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
Republic Waste Services continued the operation of its MSW transfer station, transporting waste to its Uwharrie Landfill in Montgomery County. – *Ongoing*. City of Greensboro continued the operation of its MSW transfer station, transporting waste to the Uwharrie Landfill in Montgomery County. – *Ongoing*.			No new transfer stations are currently being proposed, and no need for additional transfer stations has been identified at this time.		

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Disposal

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
City of Greensboro continued C&D disposal at its White Street landfill. – *Ongoing.* City of High Point's Kersey Valley landfill continued to provide MSW disposal. – *Ongoing.* WCA, Inc. C&D Treatment and Processing Facility and Landfill continued operations. – *Ongoing.* A-1 Sandrock, Inc. opened and has continued to operate a new C&D landfill/treatment and processing facility. – *9/09 & Ongoing.* Continued regular County solid waste management planning meetings. – *Ongoing.* City of Greensboro opened discussions about MSW disposal with Randolph County. – *7/11 & Ongoing.*	The City of Greensboro will have additional C&D landfill capacity permitted within the next several years. Continue to engage regional planning partners in discussion about a long-range, regional plan for disposal.	City of Greensboro staff have re-evaluated C&D capacity and determined that permitting additional C&D landfill space is not necessary at this time. Staff time did not permit the resumption of regional meetings during this period.	City of High Point's Kersey Valley landfill will continue MSW disposal throughout the 10-year planning period. WCA, Inc. C&D Treatment and Processing Facility and Landfill has been sold but will continue operations under a new name. Continue regular County solid waste management planning meetings. Reinstitute regular regional solid waste management planning meetings to explore possible partnerships and long-range regional disposal options.	FY 12-13 and Ongoing FY 12-13 and Ongoing FY 12-13 and Ongoing FY 12-13 and Ongoing	

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Education with the Community and Through the Schools

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
Continued to focus efforts on educating the residential, commercial, and industrial sectors about the benefits of recycling. – *FY 09-10 & Ongoing.*	Seek grant funding to expand existing education programs.	Grant funding was not pursued due to the 20% matching funds requirement.	Continue to provide a County-sponsored recycling presentation for elementary schools throughout the County.	FY 12-13 & Ongoing	
Continued educational programs on grass-cycling and backyard composting through the Cooperative Extension. – *FY 09/10& Ongoing.*	Expand public awareness of businesses and service providers that incorporate green procedures and policies into their operations by developing a recognition program.	Although a recognition program was developed there was insufficient staff time to pursue it during this time period.	Implement a County recognition program to expand public awareness of organizations, businesses and service providers that incorporate green procedures and policies into their operations.	FY 12-13 & Ongoing	
Continued to distribute the Guilford County Solid Waste Services Guide. - *Ongoing.*			Work with civic groups to provide recycling education to their memberships and integrate recycling education into their events.	FY 12-13 & Ongoing	
Continued to provide a County-sponsored recycling presentation for elementary schools throughout the County. - *Ongoing.*			Continue Guilford County/City of High Point America Recycles Day recycling competition for elementary schools.	FY 12-13 & Ongoing	
Worked with civic groups to provide recycling education to their memberships and integrate recycling into their group meetings and public events. – *FY 09-10 & Ongoing.*			Continue City of Greensboro America Recycles Day event for elementary and middle schools.	FY 12-13 & Ongoing	

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Education with the Community and Through the Schools

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
Developed and implemented a comprehensive public education program for landfill bans on rigid plastic bottles, pallets, used oil filters, computer equipment and televisions. – *FY 09-10 & Ongoing*. Obtained state grant funds to purchase a recycling mascot costume for use in community education and outreach programs, and developed a new outreach campaign, "For PETE's Sake Recycle!. – *FY 09-10 & Ongoing*.			Continue to provide a comprehensive public education program for materials banned from landfills. High Point Furniture Market Authority will implement a "Green Partnerships" program with furniture market companies to promote and recognize recycling efforts and increase the tonnage of recyclables collected during furniture markets.	FY 12-13 & Ongoing FY 12-13 & Ongoing	

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Special Waste/Computer Equipment & Televisions

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
Continued to provide e-waste disposal for residents through the Household Hazardous Waste Disposal Program. -- *Ongoing* Developed and opened 2 new manned County e-waste drop-off sites for residents and businesses. – *FY 10-11 & Ongoing.* Continued the annual Guilford County-Pleasant Garden E-Cycling event. – *FY 10-11 & Ongoing.* Partnered with the City of High Point to provide an annual clean-up event (Clean & Green) for the disposal of tires, white goods, e-waste and HHW by residents. - *FY 08-09 & Ongoing.* Promoted NCDA-sponsored pesticide disposal through annual clean-up events. – *FY 10-11 & Ongoing.* Provided a clean-up event in the Town of Summerfield. – *FY 10-11.*	Expand the County's clean-up event program to include a fall date at Guilford College.	As a partner in the HHW program, the City of Greensboro did not approve a new event at Guilford College that would include HHW disposal.	Work with contractor to provide the collection of e-waste and televisions in conjunction with the Household Hazardous Waste Disposal Program at no cost to Guilford County or the City of Greensboro. Promote NCDA-sponsored pesticide disposal through annual clean-up events. Continue Guilford County spring clean-up event for disposal of scrap tires, white goods, e-waste and household hazardous waste for residents, the annual Guilford County-Pleasant Garden E-Cycle event and the annual Clean & Green High Point event. Continue to provide a clean-up event in the Town of Summerfield.	FY12-13 FY12-13 & Ongoing FY 12-13 & Ongoing FY 12-13 & Ongoing	

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Special Waste/Computer Equipment & Televisions

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
The Town of Pleasant Garden, in partnership with the Pleasant Garden Drug Store and the Guilford County Sheriff's Department, initiated a prescription drug collection event in conjunction with their annual blood drive. – *FY 10-11 & Ongoing*. Additional prescription drug collection events are now being sponsored by various local drug stores throughout the county. – *FY 10-11 & Ongoing*. A mattress recycling company has begun operations, accepting discarded mattresses at no charge from residents. – *FY 11-12 & Ongoing*. A large Styrofoam recycling company has begun operations in Randolph County, accepting clean Styrofoam from residents and businesses for recycling. – *FY 09-10 & Ongoing*.			Work with the new local mattress recycling company to promote the option for recycling discarded mattresses through County and municipal websites. Work with the new local Styrofoam recycling company to promote the option for recycling clean Styrofoam through County and municipal websites. Work with local drug stores to promote scheduled prescription drug take-back events through County and municipal websites.	FY12-13 & Ongoing FY 12-13 & Ongoing FY 12-13 & Ongoing	

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Illegal Disposal/Litter

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
Continued the coordination of the Prison Farm cleanup program. *Ongoing* Continued cleanup and educational programs sponsored by Guilford County, City of Greensboro, City of High Point, and NCDOT. *Ongoing* Continued special cleanup programs to promote proper disposal. *Ongoing* Began working with small towns and the City of High Point to use surveillance program at identified illegal dumping sites. – *FY 09-10 & Ongoing*. Expanded County solid waste website to include a page devoted to illegal dumping and solid waste enforcement. – *FY 11-12.* Continued to promote and operate, in partnership with the City of Greensboro, the HHW program. – *Ongoing.*	Support, promote and expand NCDOT's Adopt-a-Highway program in Guilford County.	Due to the inability to interface with NCDOT program administrator, no progress was made on this key action.	Continue to support and be active in NC Solid Waste Enforcement Officers Association. Continue cleanup and educational programs sponsored by Guilford County, City of Greensboro, City of High Point, and NCDOT. Continue working with cities and small towns to use surveillance program at illegal dumping sites. Continue to work with local KAB affiliates to promote anti-litter education. Continue to promote and operate the HHW program. Promote and assist the new local mattress recycling company.	FY 12-13 & Ongoing FY 12-13 & Ongoing FY 12-13 & Ongoing FY 12-13 & Ongoing FY 12-13 & Ongoing FY 12-13 & Ongoing	

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Illegal Disposal/Litter

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
Promoted the NC DOT Swat-A-Litterbug program and developed a County website-based program to allow the public to report both illegal dumping/littering and illegal burning. – *FY 11-12*. Continued to work with Greensboro Beautiful and Keep High Point Beautiful to promote anti-litter education and outreach. – *FY 09-10 & Ongoing*. Supported and became active in the NC Solid Waste Enforcement Officers Association to advance the capabilities of and provide professional development for County enforcement officer. – *FY 09-10 & Ongoing*. Revised County solid waste ordinance to include a system for issuing citations for illegal disposal/litter. – *FY 10-11*.			Continue to promote the County's website-based program that allows the public to report both illegal dumping/littering and illegal burning. Continue to cite and prosecute perpetrators of illegal dumping/disposal and illegal burning.	FY 12-13 & Ongoing FY 12-13 & Ongoing	

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Purchasing Recycled Products

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
Continued to work with County Purchasing Department to maintain and update a listing of recycled products available for purchase by County offices and facilities. -- *Ongoing* Continued to work with the County Purchasing Department to maintain a list of qualified vendors of recycled products for use by County departments and purchasing agents. -- *Ongoing* Continued to work with County Purchasing Department to analyze purchasing and bid opportunities based on EPP criteria. – *Ongoing* Continue to expand the opportunity for County EPP purchasing. – *Ongoing* Worked with small towns to develop recycling/EPP policies. -- *Ongoing*			Continue to work with DENR and DEOA to develop a training program about recycled products and related economic and environmental issues. Continue to expand the opportunity for County EPP purchasing. Continue to work with small towns to develop and implement internal recycling/EPP policies.	FY 12-13 & Ongoing Ongoing FY 12-13 & Ongoing	

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

Disaster Response

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
Updated list of local private LCID landfills at which vegetative waste could be disposed. – *2/12* Identified a site at the Guilford County Sheriff's Prison Farm as being suitable for use as temporary disaster debris storage area and submitted for DENR approval. – *FY 09-10* Updated Solid Waste Management Plan. – *6/12* Trained County environmental services staff in disaster debris management. – *9/09.*			Update Solid Waste Management Plan.	As needed, but NLT 6/15	

NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN
PLANNING ELEMENTS

PLANNING YEARS 2012 THROUGH 2022

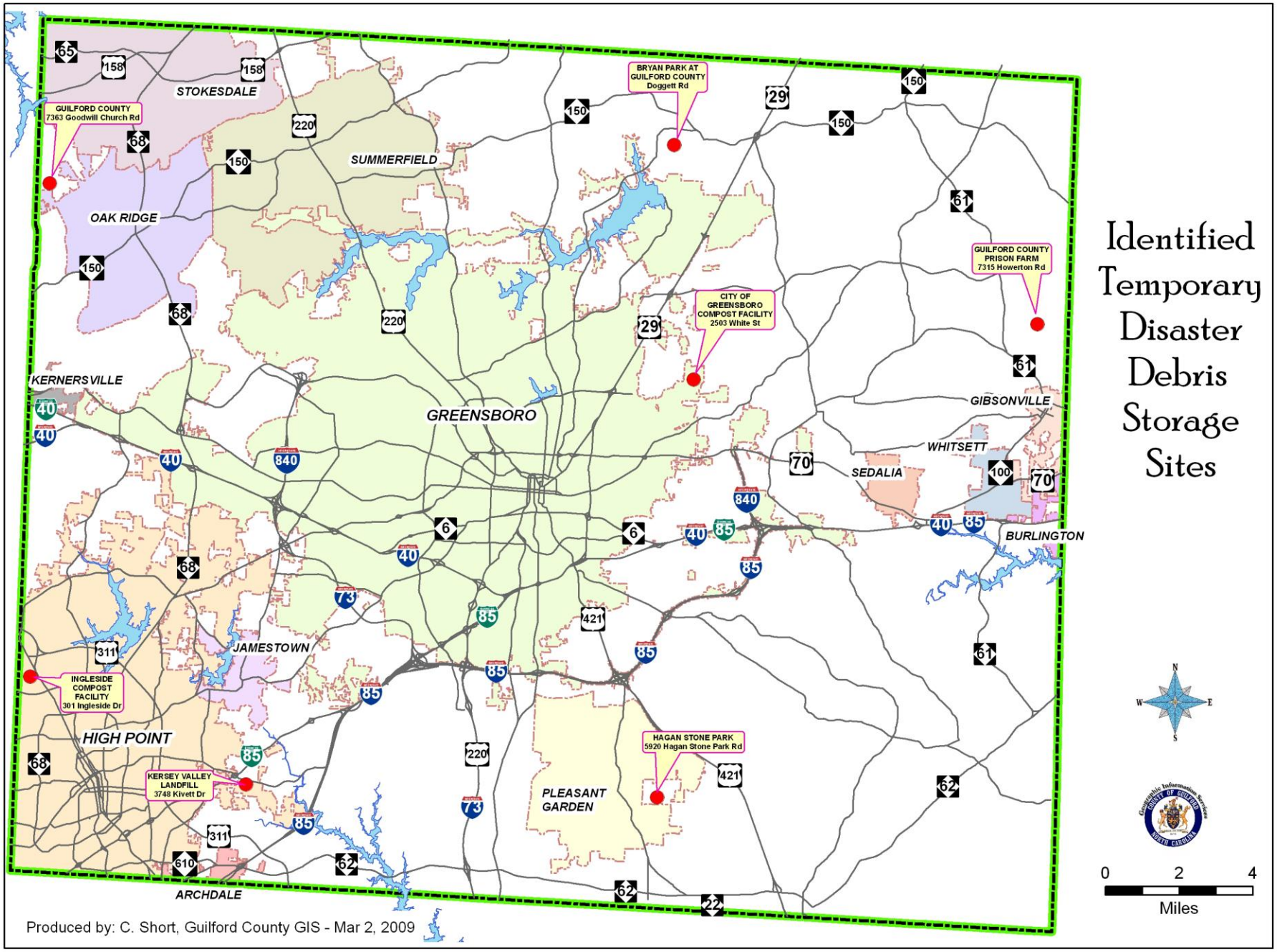
Abatement of Abandoned Mobile Homes

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW OR REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY NOT COMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10TH YEAR
Worked with municipal partners to evaluate the issue of abandoned mobile homes in Guilford County and determined that there was not a need to develop an abatement plan using County and state funds. – *FY 09-10 & Ongoing.*			Re-examine the need for a plan for the abatement of abandoned mobile homes in Guilford County.	FY 12-13	

APPENDIX G

Map of Identified Temporary Disaster Debris Storage Sites in Guilford County

Identified Temporary Disaster Debris Storage Sites



APPENDIX H

County and Municipal Recycling and Waste Prevention Policies

GUILFORD COUNTY RECYCLING AND WASTE PREVENTION POLICY

Purpose

Recycling and waste prevention are important ingredients of responsible government. Even though Guilford County implemented a successful office recycling campaign in 1994, a written policy was not included in the program. The following will serve as the foundation of this policy.

Each Guilford County Department shall make every effort to reduce the amount of solid waste generated and shall recycle or reuse all materials with this capability. Each County Department shall also adhere to proper disposal of bio-wastes and hazardous wastes. Department Directors shall educate each employee as to the content and practice of this policy.

General Correspondence and Publications

When formatting general correspondence and publications, practice the following whenever possible:

- Screen reports and lists to reduce copies.
- Use GroupWise or e-mail.
- Use recycled paper when feasible.
- Decrease margin allowances.
- Use double-sided copying for multiple pages.
- Avoid multiple pages.
- Recycle computer printer and fax machine powder cartridges.
- Single space letters and documents.
- Show the maximum number of slides per page during presentations.

Request For Proposals

The first item to be listed under proposal submission requirements is the following statement: *Proposals are encouraged to be compatible with Guilford County's office paper recycling program. They should be printed on recycled paper; copied front and back, three-hole punched, and stapled in the upper left-hand corner. Three-ring notebooks, spiral bindings, plastic covers, and any other materials contributing to the County's waste stream are not encouraged, but should be reusable.*

RFPs for construction, demolition, or renovation of County facilities must include an additional statement that encourages the vendor to make a good faith effort to reduce, recycle, and reuse building materials. Vendors shall incorporate recycled asphalt into paving projects and use energy efficient electrical equipment.

Purchasing Recycled Products

Products containing recycled materials are to be given preference over those made from virgin materials if the recycled products are of equal quality and if the purchase does not conflict with existing budgetary, operational, or purchasing guidelines. Generally, if the cost of the recycled product does not exceed the cost of the virgin product by more than 5% to 10%, Departments are authorized to request that the recycled product be purchased. Consideration shall be given to durable products and items with minimal packaging.

Whenever possible, Departments shall reuse partitions and furniture and shall purchase moveable partitions instead of fixed partitions. Chairs should be reupholstered and tables refinished as opposed to buying new ones. The use of recycled compost for landscaping is also recommended. The Purchasing Department shall authorize final approval of purchase orders.

	Policy: Recycling and Waste Prevention	**Effective Date:** February 15, 2012
	Policy Number: POL-2012-001	**Revision Effective Date:**
	Responsible Party: Town Manager	**Revision Page Number:**

TOWN OF SUMMERFIELD
Recycling and Waste Prevention Policy

Adopted

February 14, 2012

Effective

February 15, 2012

Town of Summerfield

Recycling and Waste Prevention Policy

I. Purpose

Recycling and waste prevention are important ingredients of responsible government. The Town of Summerfield staff implemented an informal policy in 2007; however, a written policy was not created at that time. This policy serves that purpose.

The Town of Summerfield staff and committee members shall make every effort to reduce the amount of solid waste generated and shall recycle or reuse all materials as proper to do so. Staff and committee members shall follow guidelines and laws regarding proper disposal of bio-wastes, hazardous wastes, electronic wastes, white goods, brown goods, and other sub-genres of wastes.

II. Process

A) When not cost prohibitive, staff will purchase office supplies such as copy paper, paper towels and other products that contain recycled content.

B) Products with recycled content are defined as those containing a minimum of 30% post consumer waste.

C) Staff and committee members will photocopy items using both sides of a page where appropriate for multipage documents.

D) Whenever possible, office supplies such as computers and furniture will be retained and repurposed to their fullest usefulness.

E) Staff shall encourage citizen recycling by continuing to provide recycling receptacles during Town events and Town meetings and at Town owned facilities such as the Summerfield Athletic Park and Summerfield Community Park.

APPENDIX I

Guilford County Scrap Tire Disposal Policy

Guilford County Scrap Tire Disposal Policy

Guilford County will provide for the disposal of scrap tires at the Guilford County Scrap Tire and White Goods Collection Facility (facility), located at 2138 Bishop Road, Greensboro, in accordance with North Carolina General Statues, GS 130A-309.51 through 130A-309.63, governing scrap tire disposal. Scrap tires will be accepted for disposal from residential and business customers. All customers will be required to complete a North Carolina Scrap Tire Certification (SCT) form at the time the scrap tires are presented at the facility for disposal. The following criteria will be used to determine whether or not scrap tires are eligible for free disposal. If tires are determined to be ineligible for free disposal, customers shall pay a fee equal to the current cost of disposal at the time scrap tires are presented for disposal. At the discretion of the facility operator, any scrap tires eligible for free disposal that are found to contain dirt, stone, water or other foreign materials may be required to be cleaned of these materials prior to being presented for disposal. Any ineligible scrap tires found to contain dirt, stone, water or other foreign materials may be charged at the per pound rate at the discretion of the facility operator.

Residential Customers:

A one-time allowance per residence of 5 passenger vehicle-sized tires will be accepted at the facility for disposal at no charge. Residents will be encouraged to leave scrap tires with the retailer at the time their replacement tires are purchased and their scrap tire disposal tax is paid. At the time the tires are presented for disposal, residents will complete an STC form. The information contained on this STC form will be logged into the facility database with the name and property address.

After having used the one-time allowance of 5 tires, residents will be required to pay an amount equal to the current cost of the tire disposal. In no instance will residents be permitted to dispose of heavy truck or off-road tires at no charge. The current disposal charges for tires ineligible for free disposal will be posted at the facility.

Commercial Customers:

Businesses generating scrap tires (scrap tire generators) may dispose of them at the facility based on the following conditions:

1. Any scrap tire generator, including tire retailers, businesses with fleet vehicles, junk yards, scrap tire haulers and used tire retailers, presenting scrap tires at the facility for free disposal must provide the facility operator with a copy of the <u>current</u> business license, or other acceptable proof of permission to operate under state, local or municipal government statutes, and federal tax identification number.
2. Scrap tire generators (business owners or employees) may bring scrap tires directly to the facility for disposal. Scrap tire generators may elect to hire a state-registered scrap tire hauler to bring scrap tires to the facility for disposal. It is the responsibility of the scrap tire generator to ensure that any non-employee hauling his/her scrap tires is registered with the State of North Carolina. A registered scrap tire hauler should be required to provide the scrap tire generator with a copy of his/her <u>current</u> North Carolina registration certificate. Registration certificates expire annually. Any scrap tire hauler not in possession of a current registration certificate will not be permitted to dispose of <u>any</u> scrap tires at the facility.
3. The scrap tire generator must complete an STC, including the number of tires being presented for disposal, the dates during which the scrap tires were accumulated and the breakdown of tires by type, each time scrap tires are brought to the facility for disposal. If the scrap tire generator is transporting his/her own scrap tires to the facility for disposal, he/she must complete parts I and II of the STC form, signing and dating each. If the scrap tire generator hires a registered scrap tire hauler to transport his/her tires to the facility, the scrap tire generator must complete and sign part I of the STC form, and the registered tire hauler must complete and sign part II of the STC form.

4. Scrap tire generators that sell tires and that collect the NC scrap tire disposal tax at the point of sale will be permitted to dispose of those tires they accumulate when selling replacement tires at no cost.
5. Scrap tire generators are required to maintain, for a period of at least three (3) years, records of all tire purchases and sales, scrap tire disposal tax collection records and copies of tax forms E500G, as evidence of submission to the NC Department of Revenue, and copies of all completed STC's. These records must be available to County staff if and when requested, to establish the eligibility of scrap tires for free disposal.
6. Junk yards may bring scrap tires to the facility for disposal. In order for junk yards to dispose of scrap tires at no charge, acceptable documentation must be provided to the facility operator to establish the number of tires eligible for free disposal. Copies of North Carolina vehicle titles, complete with signatures and date of transfer are considered to be acceptable documentation. Crushing receipts may be deemed acceptable, provided they are dated within 120 days of the disposal date, include the name, address and telephone number of the crushing company and a certified weight and/or a count of the vehicles being crushed. In either case, junk yards must provide the facility operator with a count of the total number of scrap tires being brought for disposal in advance of unloading any scrap tires at the facility.
7. Used tire dealers may bring scrap tires to the facility for disposal. In order for used tire dealers to dispose of scrap tires at no charge, the following records must be maintained and, if requested, made available to County staff to verify eligibility for free disposal: a completed STC from the original scrap tire generator for all scrap tires purchased for the purpose of resale as used tires; records of all used tire sales. Any scrap tires culled from those obtained from a scrap tire generator for resale, that are later determined to be unacceptable for resale, are not eligible for free disposal. A fee equal to the current cost of disposal must be paid to the facility at the time of disposal.
8. Businesses, including contractors, developers and owners of rental properties, whether residential or commercial, that acquire scrap tires through the clean-up of properties are not eligible to dispose of scrap tires at no charge.
9. Scrap tires must be disposed of in a timely manner. A maximum of 500 scrap tires may be presented for disposal by or on behalf of a scrap tire generator at one time.

Farm Tires:

Tires used in the operation of a bona fide farm are eligible for free disposal. Generally, farms must be at least ten (10) acres in size, and must be actively engaged in agriculture. Farms no longer active may seek permission to dispose of accumulated tires at no charge by contacting the facility operator and providing ownership information and property address. A decision as to the eligibility of tires for free disposal will be based on the decision of the scrap tire program coordinator for NC Department of the Environment and Natural Resources.

Disposal of Cut Tires and Tire Parts and Pieces:

Only whole tires, including tread and sidewalls, will be accepted at the facility for disposal at no charge. Cut tires and tire parts and pieces are permitted to be disposed of in MSW landfills, and therefore will be not accepted at the facility for disposal at no charge. Customers wishing to dispose of cut tires and parts and pieces of tires at the facility may pay the current cost per pound for disposal.

APPENDIX J

Guilford County Animal Mortality Emergency Response Plan

Introduction

In October of 2006, the North Carolina Department of the Environment and Natural Resources Division of Waste Management determined that every County's Solid Waste Management Plan be required to address emergency disposal needs arising from an animal mortality event such as infectious disease (i.e. avian flu) or natural disasters. Appropriate and effective disposal methods are critical to maintaining the public health, animal health and environmental quality. Based on information and recommendations provided by the United States and North Carolina Departments of Agriculture and the United States Environmental Protection Agency, Guilford County will follow the policy and procedures outlined below in the event of an animal mortality emergency.

Reporting Requirements

- If any of the following reportable diseases or any foreign animal disease is suspected, pertinent information should be immediately reported by telephone to the Guilford County Department of Public Health at (336) 641-7777 and to NCDA&CS, Animal Health Programs at (919) 733-7601.
- If Psittacosis, Rabies, or Encephalitis is suspected, also contact the Veterinary Public Health Office at (919) 707-5900.
- WEST NILE VIRUS (WNV) - In North Carolina, state health officials urge people to report dead birds to the Public Health Pest Management Section by calling (877) 790-1747 or sending e-mail to ncwnv@ncmail.net. An online form can be filled out on DENR's Web site. Crows, blue jays and hawks seem to be the most susceptible.

  02 NCAC 52C .0603 REPORTABLE DISEASES
  All persons practicing veterinary medicine in North Carolina shall report the following diseases and conditions to the State Veterinarian's office by telephone within two hours after the disease is reasonably suspected to exist:

- (1) Anthrax;
  (2) Avian Chlamydiosis* (Psitticosis, Ornthosis);
  (3) Avian Encephalomyelitis;
  (4) Avian Influenza (High Pathogenic);
  (5) Avian Influenza (Low Pathogenic);
  (6) Brucellosis (livestock only);
  (7) Classical Swine Fever (Hog Cholera);
  (8) Contagious Equine Metritis;
  (9) Echinococcus;
  (10) Equine Encephalomyelitis* (including Eastern Equine Encephalomyelitis, Venezuelan Equine Encephalomyelitis, Western Equine Encephalomyelitis, and St. Louis Encephalomyelitis);

(11) Equine Infectious Anemia;
(12) Exotic Newcastle Disease;
(13) Foreign Animal Diseases (including, in addition to those listed in this Rule, any disease believed to be absent from the United States and its territories);
(14) Fowl Typhoid (Salmonella gallinarum);
(15) Infectious Laryngotracheitis (other than vaccine induced);
(16) Leishmaniasis;
(17) Mycoplasma gallisepticum/Mycoplasma synoviae;
(18) Paramyxovirus (other than Newcastle; includes menangle virus);
(19) Plague* (Yersinia pestis);
(20) Pseudorabies;
(21) Pullorum (Salmonella pullorum);
(22) Q fever* (Coxiella burnetii);
(23) Rabies (equine and livestock only);
(24) Scabies (cattle and sheep only);
(25) Screw Worm (Exotic myiasis);
(26) Transmissible spongiform encephalopathies (including Bovine Spongiform Encephalopathy, Chronic Wasting Disease, and scrapie);
(27) Tuberculosis;
(28) Tularemia* (Francisella tularensis);
(29) Vesicular Disease (Foot and Mouth, Vesicular Stomatitis, Vesicular Exanthema, Swine Vesicular Disease); and
(30) West Nile (domestic animals only).

- * These diseases must also be reported to the Veterinary Public Health Program (919) 707-5900.
- Refer to the State Veterinarian's website to ensure up to date information at www.ncagr.com/vet/vetdis.htm.
- History Note: Authority G.S. 106-307.2;
  Temporary Adoption Effective December 1, 2002;
  Effective August 1, 2004.

Disposal Options

The following is a brief summary of poultry mortality disposal methods in North Carolina, as specified on the North Carolina Department of Agriculture and Consumer Services website (www.ncagr.com/vet/PoultryDisposal.htm). All disposal must occur within 24 hours.

1. Burial: Not closer than 300 feet to a flowing stream or public body of water. Should be at least three (3) feet above water table and covered with three (3) feet of soil. Can be used anywhere soil conditions allow, primarily for emergency situations. Not recommended for disposal of normal daily mortality.
2. Incineration: Any commercial unit that will completely incinerate the birds. Should be sure they meet local and state air quality requirements. Good procedure anywhere in the state.
3. Rendering: Must be done by a licensed renderer or collector. Care must be taken not to spread disease from farm to farm. Freezing mortality prior to rendering is allowed. Can be a satisfactory method anywhere in the state.

4. Disposal Pit: The bottom of the pit should be at least three (3) feet above the water table. Not a satisfactory procedure in most of Eastern North Carolina and other locations with a high water table.
5. Composter: Requires a permit from the North Carolina Department of Agriculture and Consumer Services. Good procedure in any part of the state.
6. Digestion: Requires a permit from the North Carolina Department of Agriculture and Consumer Services. Permits are limited to one (1) year but can be extended. Generally less satisfactory than other methods of disposal. Can be used anywhere in the state.

Other disposal methods require a special permit from the State Veterinarian's office.

County Disposal Policy and Plan Implementation

Guilford County currently has two MSW landfills in operation: White Street Landfill, owned an operated by the City of Greensboro; and Kersey Valley Landfill, owned and operated by the City of High Point. Neither of these facilities will accept animal carcasses that result from an outbreak of infectious disease, nor will they accept more than a small quantity of animal carcasses resulting from natural causes.

Based on the recommendations of the State Veterinarian, in-house composting may be the best method available for large-scale disposal. In-house composting offers the following advantages:

- An initial pathogen kill takes place at the site, therefore eliminating movement and spreading of the infectious organism and resulting in a biosecure procedure.
- A quick response time results, based on the likely use of on-site personnel and equipment to complete the procedure. No specialized equipment or personnel are required.
- This quick response time minimizes the need for response crews at the scene, freeing them to deal with other premises and situations.
- Because no specialized equipment or personnel are required, in-house composting provides a cost-effective disposal method.
- In-house composting provides an environmentally friendly response, in that the infectious agent is contained within the facility or property where the outbreak originated, any leachate is absorbed and all emissions are bio-filtered through bedding material.

In the event of an animal mortality emergency, Guilford County will immediately notify the State Veterinarian and seek guidance as to the best way to proceed with disposal. Response to any such emergency will be coordinated through the Guilford County Department of Public Health, following the procedures set forth in the Guilford County Department of Public Health All Hazards Plan.

APPENDIX K

Guilford County Discarded Computer Equipment & Television Management Plan

DISCARDED COMPUTER EQUIPMENT & TELEVISION MANAGEMENT PLAN

Introduction

Effective July 1, 2011, discarded computer equipment and televisions will be banned from disposal in landfills in North Carolina, and will be required to be reused or recycled. Local governments will be required to manage the discarded computer equipment and televisions within their jurisdiction. Guilford County and its municipalities have developed this amendment to the Solid Waste Management Plan to meet statutory requirements and to continue to provide residents with electronics recycling through a permanent collection program as well as special collection events.

Existing Programs

- Guilford County and the City of Greensboro currently partner to manage a permanent collection program for residents to recycle electronics, including computer equipment, televisions and any other personal devices containing a microchip. The program is operated by EcoFlo, Inc. at their facility located at 2750 Patterson Street, Greensboro, and is part of the household hazardous waste collection program. The site is open to residents four days per week, Wednesday through Saturday.
- In addition, Guilford County, alone or in conjunction with one or more of its municipal partners, sponsors electronics collection events at various locations throughout the community. Current annual events include Spring Clean-up, E-Cycle and Clean & Green.
- The discarded electronics collected through the permanent program and special collection events are marketed for recycling by the contractor. To date, Guilford County has contracted with EcoFlo, Inc. and Synergy Recycling, LLC for electronics recycling. Guilford County and the City of Greensboro do periodic audits and also ensure that contractors meet the certification requirements established in the legislation.
- Goodwill Industries also operates an electronics recycling collection program for residents at its various locations in Guilford County.

Public Awareness Program

Guilford County works with its municipal partners to promote electronics recycling on all local government websites, and on local government television stations. Guilford County also partners with a local television station and a radio communications company to inform the public of changes in state law, about the permanent electronics collection program and of special electronics collection events. Guilford County provides in-school recycling education programs for students and their parents at elementary schools throughout the school year as well. Information concerning manufacturer take-back programs will also be included in the County's public awareness efforts.

Tracking and Reporting

Guilford County requires its electronics recycling contractors to provide regular reports, by month and by event, detailing the type and number of units recycled as well as the type and tonnage of electronics materials collected. These figures were used to compile the electronics portion of the FY 2008-09 and FY 2009-10 Solid Waste and Materials Management Annual Reports.

Local Government Interactions

- Guilford County currently partners with the City of Greensboro to subsidize and manage the existing e-waste collection program for residents that is a part of the joint HHW program.
- Guilford County provides electronics recycling for residents in the unincorporated areas of the county and in the towns of Gibsonville, Jamestown, Oak Ridge, Pleasant Garden, Sedalia, Stokesdale, Summerfield and Whitsett and in the cities of Archdale and High Point.
- Guilford County partners with the towns and cities within its jurisdiction to provide special e-waste collection events throughout the county.

Accounting for Expenditures

Guilford County will set up a separate Electronics Management Account into which all funds received through distributions from the state's electronics management account are deposited. A detailed register of all expenditures paid from this Electronics Management Account will be maintained, as is currently done with the existing scrap tire and white goods management accounts, and all reporting to the state will be completed and submitted as required by law.