



BUNCOMBE COUNTY

SOLID WASTE MANAGEMENT PLAN

ASHEVILLE • BILTMORE FOREST • BLACK MOUNTAIN
BUNCOMBE COUNTY • MONTREAT • WEAVERVILLE • WOODFIN

2012 - 2022 Planning Period

JULY 2012



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Section 1

Introduction and Local Contacts

1.1 Introduction

Pursuant to NC General Statute 130A-309A(b), each unit of local government is required to develop a Ten Year Solid Waste Management Plan and update the Plan every three years. In Buncombe County, the original plan was adopted in 1997 and has been updated every three years. This 2012 Plan Update, completed in cooperation with all six municipal governments, was prepared in accordance with the 2012 Solid Waste Management Plan Guidance. The Plan serves as both a reference for the public and local governments of Buncombe County and as a guide for future planning decisions.

Buncombe County and its municipal partners continue to support and refine the vision and goals for managing solid waste that were established during the previous Plan Updates. Their shared vision for the 2012-2022 planning period supports a comprehensive solid waste management system serving residents, institutions, and businesses that:

- Protects the health, safety, and general well being of all citizens of Buncombe County;
- Enhances and maintains the quality of the environment, conserves natural resources, and prevents water and air pollution by providing for a comprehensive, rational, and effective means of regulating the disposal of solid waste within the County;
- Is integrated, efficient, and effective;
- Provides disposal capacity, waste collection services, and waste reduction programs at an equitable price;
- Includes the elimination of improper disposal of waste and the reduction of illegal dumpsites;
- Provides incentives for individuals to sort their own solid waste prior to collection;
- Provides for a mechanism to enforce state and local recycling goals within the County;
- Provides waste reduction opportunities that are convenient for residents; and
- Educates the community to increase the understanding of the environmental benefits of waste reduction and proper waste disposal.

1.2 Local Contacts

The solid waste representatives (with phone numbers) for the seven local governments in Buncombe County are:

City of Asheville

David Foster, Assistant Director of Public Works

828-259-5857

Town of Biltmore Forest

Terry Crouch, Public Works Director 828-274-3919

Town of Black Mountain

Pam Hoen, Senior Administrative Assistant 828-419-9300

Town of Montreat

Ron Nalley, Town Administrator 828-669-8002

Town of Weaverville

Michael Boaz, Town Manager 828-645-7116

Town of Woodfin

Jason Young, Town Administrator 828-253-4887

Buncombe County

Jerry Mears, Solid Waste Manager 828-250-5467

Kristy Smith, Bioreactor Manager 828-250-5473

Stephen Hunter, Buncombe County Transfer Station 828-250-6205

Roger Presley, Mobile Home & Junk Vehicle Removal 828-250-5470

Waste Pro, Residential Trash Pick-up 828-684-7790

1.2 Solid Waste Facilities

There are numerous facilities within Buncombe County for recycling and disposal of household waste, construction and demolition (C&D) waste, yard waste and other items. The locations of these facilities are depicted in Figures 1-1 through 1-4. Most, but not all of the facilities accept waste and recyclables from residents.



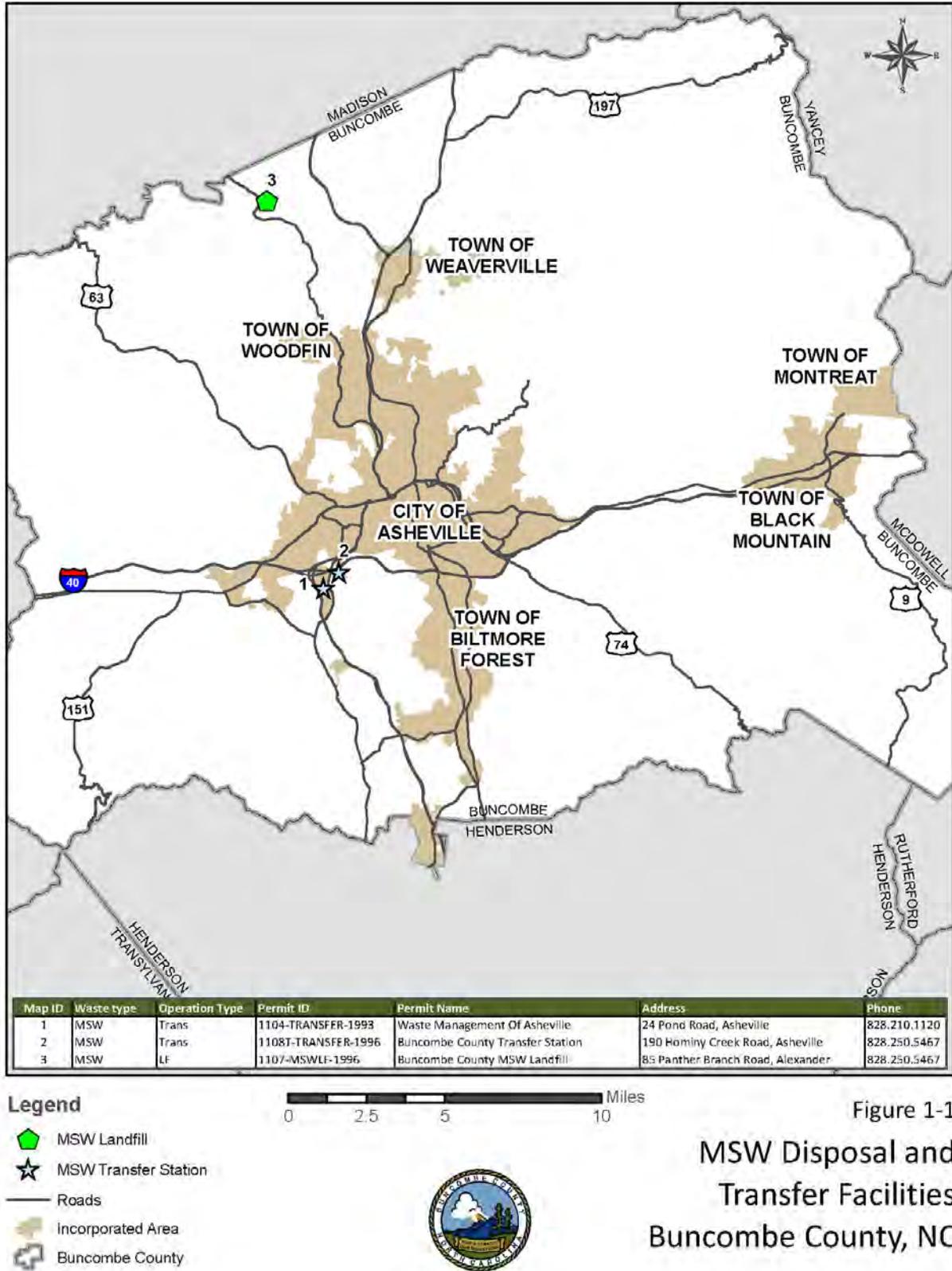


Figure 1-1
MSW Disposal and
Transfer Facilities
Buncombe County, NC

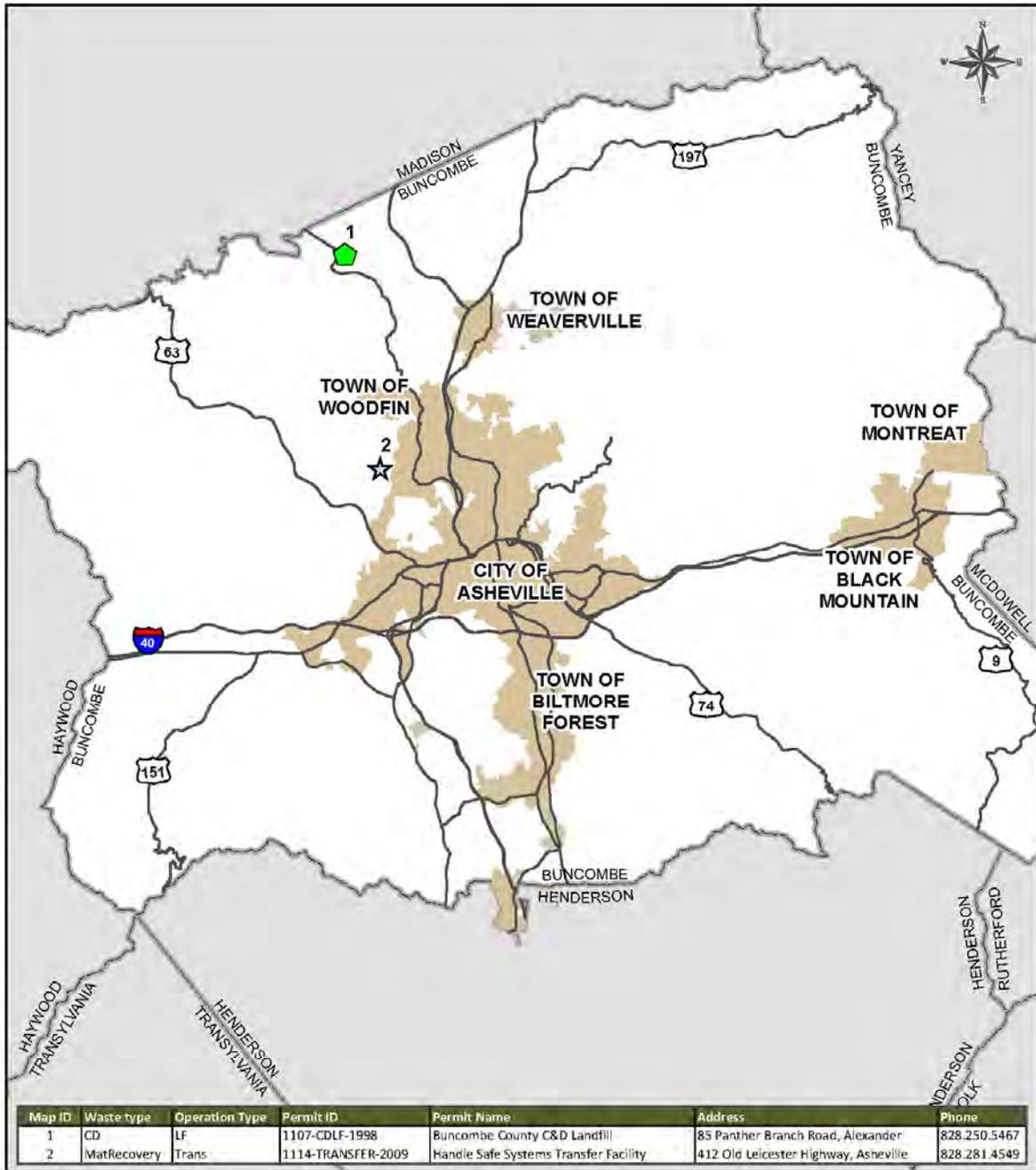
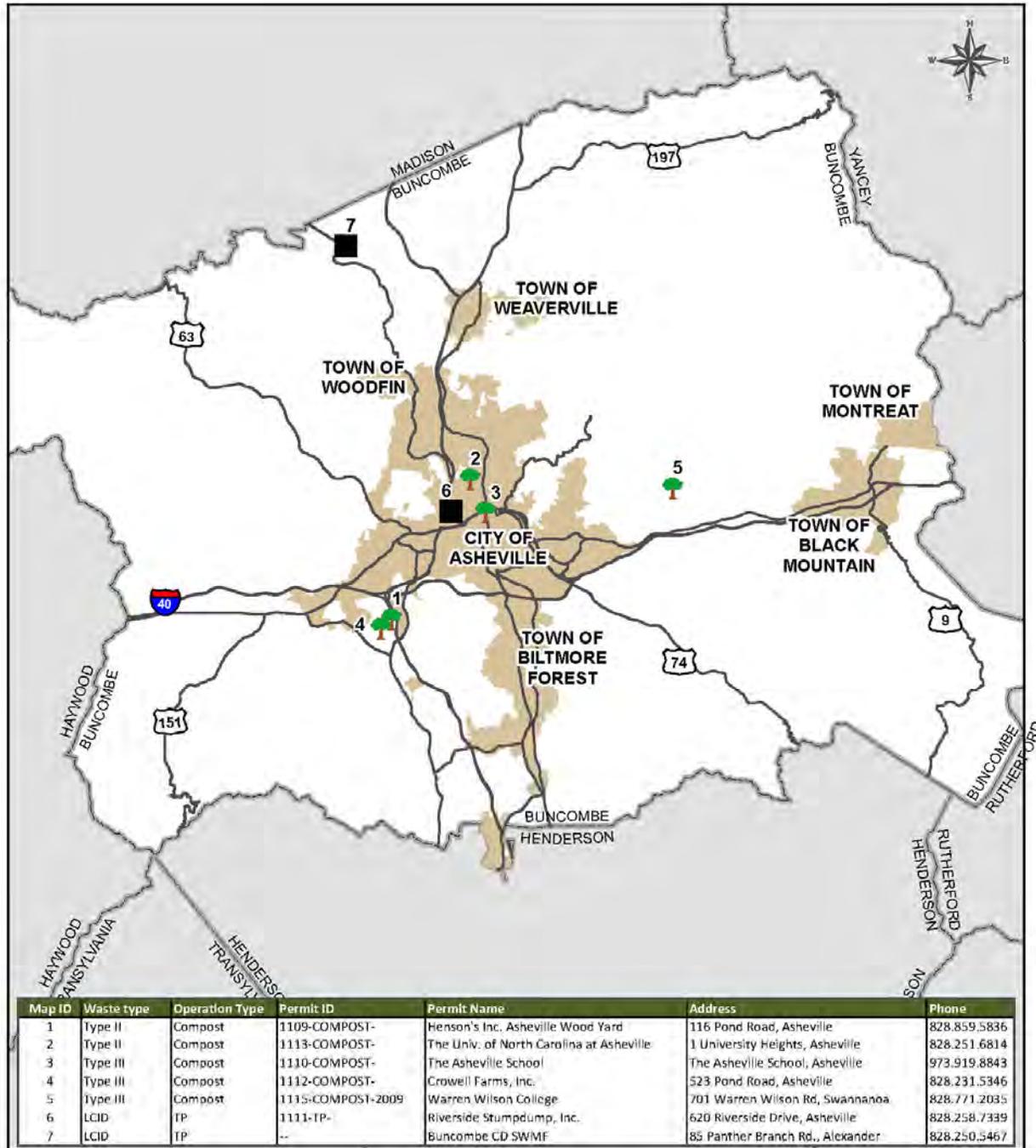


Figure 1-2
 C&D Waste Disposal,
 Transfer, and
 Recovery Facilities
 Buncombe County, NC

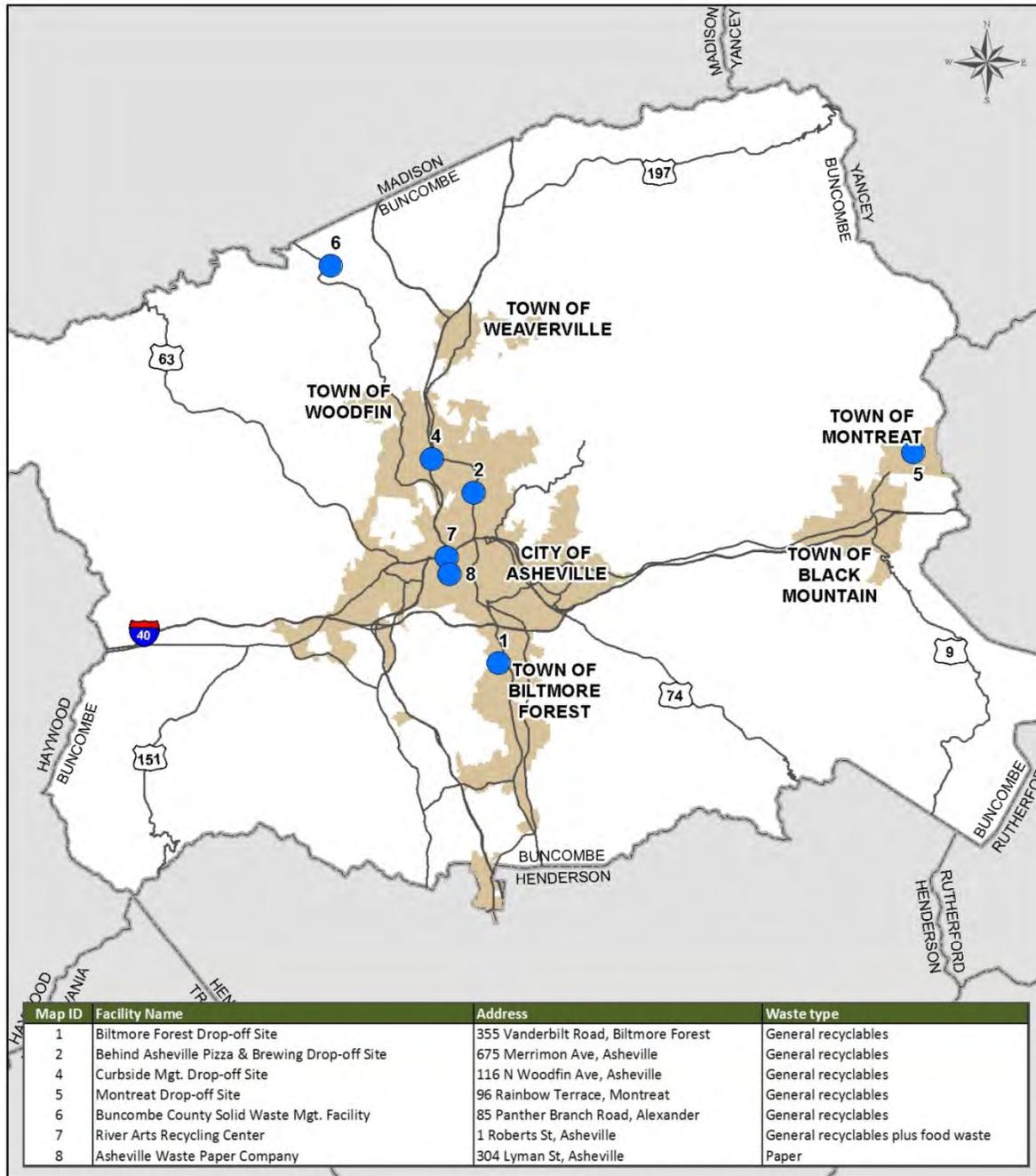


Legend

- Composting Facility
- Treatment / Processing Facility
- Roads
- Incorporated Area
- Buncombe County



Figure 1-3
Yard Waste and
Composting Facilities
Buncombe County, NC



Legend

-  Recycling Drop-off Facility
-  Roads
-  Incorporated Area
-  Buncombe County



Figure 1-4
**Recycling Drop-off Facilities
 Buncombe County, NC**

Section 2

Public Participation

Buncombe County, with assistance from CDM Smith, was the lead agency in preparing the 2012 Plan Update. Additional support was provided from the following:

- The municipal governments participated in the Plan preparation by providing information describing their solid waste programs, updates on previous intended actions, and new intended actions. Once the information was incorporated into the draft Plan, the municipal governments reviewed the draft and provided additional feedback, comments, and clarification to the County and its consultant.
- The Buncombe County Environmental Affairs Board (EAB) participated in the 2012 Plan’s review process. The EAB is comprised of at least five at-large citizens, one County Commissioner (or designee) and representatives from industry, public utilities, real estate, building, and two municipalities. An informational presentation was provided to the EAB on March 23, 2012.

A draft of the Plan has been placed in all Buncombe County Public Libraries to facilitate public review and comment. The draft Plan has also been posted on Buncombe County’s web site. A paid advertising notice of the opportunity to review the plan was placed in the Asheville Citizen-Times and Mountain Xpress (see Figure 2-1). A public meeting will be held on May 10th from 4:00 to 6:00 pm at 199 College Street in Asheville to receive comments on the Plan.

The public comment period spans May 1 through May 14, 2012. Additional opportunities for public input in the planning process will be provided at each meeting of elected municipal officials when the draft Plan is presented for review and consideration. The draft Plan must be adopted by each local government by resolution. Copies of the resolutions adopting the Plan will be provided in Section 9.

**PUBLIC COMMENT REQUESTED
FOR SOLID WASTE PLAN**

The 2012 update to the Buncombe County Ten Year Solid Waste Management Plan is available for public review and comment from May 1 through May 14.

The plan can be viewed online at www.buncombecounty.org/common/solidwaste/BCSolidWastePlan.pdf and at the following locations throughout the County:

Black Mountain Library East Asheville Library Enka-Candler Library Fairview Library Leicester Library North Asheville Library	Oakley/South Asheville Library Pack Memorial Library Skyland/South Buncombe Library Swannanoa Library Weaverville Library West Asheville Library
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Comments may be faxed to (828) 250-5478
 ATTN Ten Year Plan;
 emailed to 2012TenYearPlan@buncombecounty.org
 or mailed to: ATTN Ten Year Plan,
 Buncombe County Solid Waste Management Facility,
 81 Panther Branch Road, Alexander, N.C. 28701
 (post-marked no later than May 14, 2012)

A public meeting will also be held to receive comments on the Plan on Thursday, May 10 from 4-6 p.m. at 199 College Street, Asheville, NC 28801.

Figure 2-1.
Paid Advertising Notice

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Section 3

Waste Characterization

The following paragraphs summarize the most recent information and estimates available regarding waste generation and composition. No waste composition studies have been performed in Buncombe County in recent years; therefore, only rough estimates are available for characterizing the types of waste generated by residents, businesses, institutions, and industry.

3.1 Waste Generation

Residential dwelling units, businesses, industries, government entities, and institutions all generate waste that is ultimately collected, processed, and disposed through solid waste service providers (both public and private). The County tracks the origin of waste that is accepted at the Buncombe County Subtitle D Landfill, thereby allowing a rough examination of waste generation totals by sector. Table 3-1 provides estimated waste totals by sector during FY 2011. Note that this accounts for only 55 to 60 percent of the overall waste stream in the County since much of it is exported to landfills outside the County. A significant portion of waste transported outside the County originates from the commercial sector.

The following sections summarize available data for the major waste types including municipal solid waste (MSW), C&D waste, and land clearing and inert debris (LCID).

Table 3-1
Estimated Waste Disposed by Sector at the Buncombe County Solid Waste Management Facility, FY 2008 and 2011

Waste Sector	Tons (FY08)	Percent of Waste Stream (FY08)	Tons (FY11)	Percent of Waste Stream (FY11)	Change from FY08 to FY11
Residential	91,847	44.1%	83,733	58.9%	14.8%
Commerical	40,574	19.5%	25,684	18.1%	-1.4%
Industrial	863	0.4%	621	0.4%	0.0%
Yard Waste	1,345	0.6%	1,437	1.0%	0.4%
C&D Debris	68,206	32.8%	25,811	18.2%	-14.6%
Food Waste	1,409	0.7%	1,977	1.4%	0.7%
MSD Industrial	1,326	0.6%	717	0.5%	-0.1%
Other	2,519	1.2%	2,068	1.5%	0.2%
TOTALS	208,089	100.0%	142,048	100.0%	100.0%

Notes:

Source: Buncombe County FY 2008 and 2011 Solid Waste Reports.

"Other" includes animal carcasses, waste received from charities, and asbestos.

3.1.1 Municipal Solid Waste

The distribution of MSW is primarily driven by population and growth patterns throughout the County and plays an important role in how efficiently the solid waste services can be provided. Therefore, an important element of any management plan is an evaluation of the population and growth patterns in the service area. Table 3-2 shows current and projected population estimates for each of the local jurisdictions and the unincorporated portion of the County. Buncombe County's total population is expected to grow from approximately 239,000 to 282,000 by the year 2025, which is a 1.2 percent average annual increase. Despite efforts to reduce waste generation, this projected growth of both residents and businesses is likely to increase waste generation throughout the County and its' jurisdictions.

Table 3-3 shows the tons of residential MSW managed by each municipality for FY 2011. The larger pounds per person estimates for Biltmore Forest and Montreat are a reflection of commercial and/or institutional waste that is collected along with residential waste, thereby skewing the estimate. Similarly, certain Towns such as Montreat have a large number of summer visitors which also significantly skew the estimates. As a comparison to the last Plan Update, the municipalities reported an overall decrease in the amount of waste managed per person, dropping from 1,176 pounds per person in 2008 to 1,060 pounds per person in 2011. This reflects a trend observed statewide over the last three years, and is largely attributed to reduced economic activity.

On a daily basis, the amount of waste managed was 2.90 pounds per person, which compares favorably to the national average (2007) reported by the Environmental Protection Agency (EPA) of 4.43 pounds per person.

3.1.2 C&D Waste

In FY 2011, 25,811 tons of C&D waste were brought to the Buncombe County Waste Management Facility for disposal. The County-operated C&D landfill has accepted C&D waste since 2004. The five

**Table 3-2
Existing (2011) and Projected (2025) Population**

Jurisdiction	Population 2011 ¹	Population 2025 ²
Asheville	76,636	90,112
Biltmore Forest	1,433	1,800
Black Mountain	7,848	19,146
Montreat	724	812
Weaverville	3,500	5,000
Woodfin	7,000	6,500
Total Incorporated Area ³	97,141	123,370
Unincorporated Area ⁴	142,038	158,408
Buncombe County Total	239,179	281,778

Notes:

1. The FY 2011 population estimates were provided by each jurisdiction in their 2010-2011 Solid Waste Management Annual Report.
2. Population projections for 2025 were taken from the Long Range Transportation Plan prepared by the Asheville Area Metropolitan Planning Organization (AAMPO) which used State population projections through 2020 and linear trend analysis to project to 2025.
3. Calculated by adding the total of the six municipal estimates.
4. Calculated by subtracting the sum of municipalities' populations from the Buncombe County total population.

Table 3-3
Residential MSW Managed by Municipal Jurisdictions in Buncombe County
(includes Landfilled Tonnage, White Goods, Recyclables, and Yard Waste)

Jurisdiction	Population 2011	Tons of Waste Managed FY11	Pounds/Person Managed FY11	Pounds/Person Managed FY08	Change from FY08 to FY11 (Pounds/Person)
Asheville	76,636	39,262	1,025	1,154	-129
Biltmore Forest	1,433	1,846	2,577	2,620	-43
Black Mountain	7,848	3,868	986	1,163	-178
Montreat	724	678	1,872	2,647	-774
Weaverville	3,500	3,008	1,719	1,194	524
Woodfin	7,000	2,803	801	885	-84
Total Incorporated Area	97,141	51,464	1,060	1,176	-116

Notes:

Tonnage and population estimates from 2008 and 2011 Solid Waste Management Annual Reports for each jurisdiction.

year trend in C&D waste disposal is shown in Table 3-4. The amount of C&D waste disposed decreased significantly in 2009 and again in 2010 as construction starts declined due to the slowing economy. 2011 marked the first year in the past three to see an increase in the amount of C&D waste landfilled. That increasing trend is expected to continue as the economy begins to improve and construction activity increases.

3.1.3 LCID

Land clearing operations produce such waste as trees, tree parts, stumps, rock, soil stone and other materials. Land clearing debris and yard waste are not permitted by the State for disposal in MSW landfills. There are currently no permitted and active LCID landfills in Buncombe County. One privately-owned facility, the Riverside Stump Dump operates under an active Treatment and Processing permit (#11-11). Several facilities in Buncombe County have active permits to operate compost facilities. These include Henson's Asheville Woodyard, the Asheville School, University of North Carolina at Asheville, and Crowell Farms.

The local jurisdictions reported collection of 14,526 tons of yard waste in FY 2011. Most of the yard waste was composted or mulched at municipal/County facilities and used in landscaping projects, delivered to farmers, or sold or given away to residents.

3.2 Waste Composition

No recent studies have been completed to accurately characterize the composition of the County's solid waste stream. In lieu of County-specific data, estimates provided by other sources can be used to approximate the types of waste materials generated in Buncombe County. Table 3-5 lists the estimated percentage of materials generated in the nation's MSW waste stream (based on 2010 EPA-

Table 3-4
C&D Waste Landfilled

Fiscal Year	Landfilled
2006	58,730
2007	66,388
2008	68,206
2009	32,529
2010	16,970
2011	28,321

Source: Buncombe Co. Landfilled Waste by Sector FY11 Report and Annual County Waste Disposal FY11 Report.

reported data) and the corresponding amount of waste generated in Buncombe County, based on these estimates. The waste stream estimates suggest the opportunity to reduce the amount of waste landfilled by increasing the recycling rate of several materials, most notably paper/paperboard, glass, and plastics. According to the waste composition estimate, these three materials totaled 145,182 tons during FY 2011, or exactly 50 percent of the overall waste stream, yet recent estimates of the residential waste stream suggest that just under 18% of all residential waste is currently being recycled in the County.

Opportunities and intended actions to increase the amount of recycling are discussed further in Section 6.

**Table 3-5
Estimated MSW Composition**

Material	National Average Percent of Waste Stream ¹	Estimated Waste Stream in Buncombe County (Tons) ²
Materials in Products		
Paper and Paperboard	28.5%	82,920
Glass	4.6%	13,384
Total Metal	9.0%	26,185
Plastic	12.4%	36,077
Rubber, Leather & Textiles	8.4%	24,440
Wood	6.4%	18,621
Other	3.4%	9,892
Other Materials		
Food Scraps	13.9%	40,442
Yard Trimmings	13.4%	38,987
TOTALS	100.0%	290,947

Notes:

1. USEPA, 2010. *Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2010.*
2. *Tons of waste disposed in landfills, tons of recyclables collected, and tons of yard waste collected during FY 2011. Tires and HHW excluded.*

Section 4

Waste Reduction Goal

The 1991 amendment to the Solid Waste Management Act of 1989 established a statewide goal to reduce the amount of landfilled material 40 percent by 2001 (on a per capita basis). Statewide, the goal was not met, however per capita disposal rates have dropped over the last five years and are now below the baseline fiscal year (FY) rate of 1.07 tons per person per year established in 1991-1992. The statewide per capita waste disposal rate in FY11 was 0.99 tons per person per year – which is 7.5 percent below the baseline rate. In Buncombe County, the per capita disposal rate has mirrored the declining trend statewide. Since FY08, Buncombe County’s per capita waste disposal rate has declined by 36 percent, from 1.47 to 0.94 tons per person per year (Table 4-1).

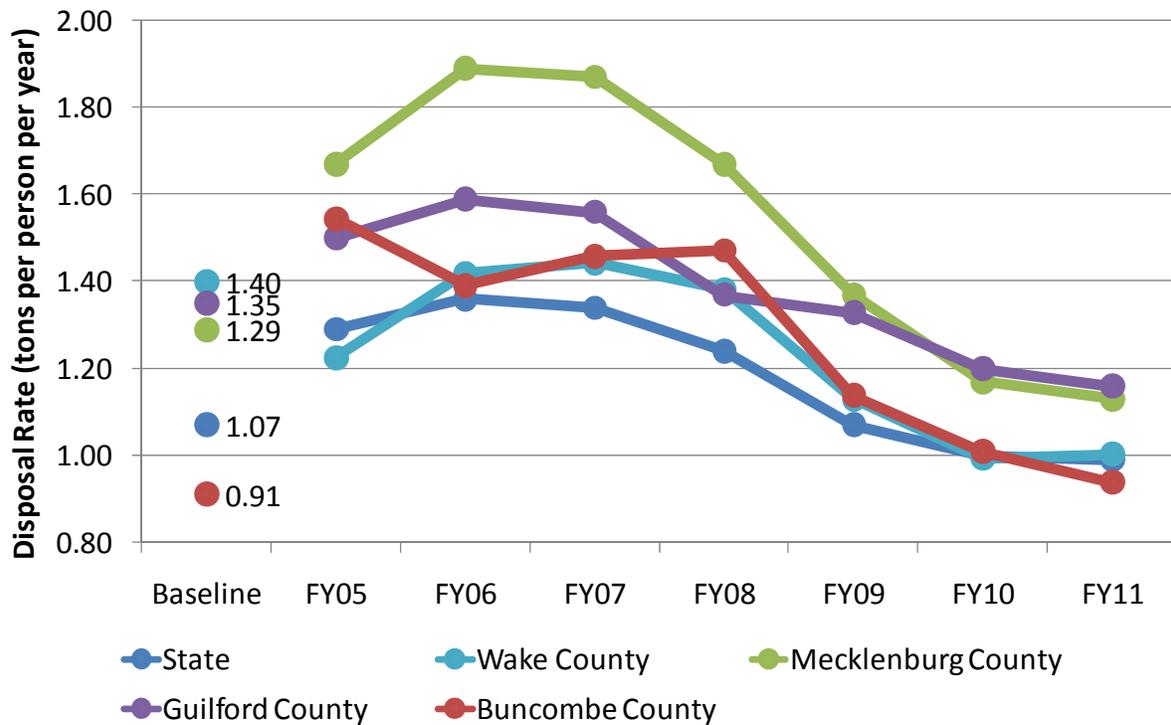
Table 4-1
Buncombe County Waste Disposal and Waste Reduction Rates

Fiscal Year	MSW Tons Disposed	Buncombe Co. Population	Waste Disposal Rate	% Change from Baseline ¹
04-05	332,213	215,112	1.54	69.7%
05-06	301,430	216,738	1.39	52.8%
06-07	322,738	221,320	1.46	60.2%
07-08	331,932	225,609	1.47	61.7%
08-09	259,216	227,875	1.14	25.0%
09-10	232,304	230,421	1.01	10.8%
10-11	224,529	239,179	0.94	3.2%

¹ Buncombe County's baseline rate from FY1989 was 0.91 tons per person per year.

The local governments continue to take actions to increase waste reduction rates on a per capita basis. For example, several municipalities have expanded the types of materials that are collected for recycling curbside and the City of Asheville has just recently switched to single stream recycling using 96-gallon roll out carts. Nevertheless, many factors continue to impact per capita waste generation rates that bear little relationship to the extent to which residents, businesses, and institutions make progress in implementing waste reduction programs and reducing the amount of landfilled material. Natural disasters, construction starts, industrial output, and the health of the economy all influence waste generation rates. The downturn in the economy since 2008 has undoubtedly been the largest factor. Fewer construction starts, reduced industrial output, and less overall consumption of goods have resulted in less waste disposal. The declining per capita disposal rate is evident in other counties, including Mecklenburg, Guilford, and Wake (Figure 4-1). Statewide, the waste disposal rate has dropped by 27 percent over the last five years. As the economy begins to expand, the true impact of waste reduction measures, such as the increase in recycling, will be easier to distinguish.

Figure 4-1
North Carolina Per Capita Waste Disposal Rates



The local governments in Buncombe County have previously established a collective goal of 40 percent waste reduction for all solid waste. Recognizing that a 40 percent reduction in waste disposal will be difficult to achieve over the next ten year planning period, especially considering that the amount of waste currently landfilled is still more than 3 percent higher than the baseline year, a more modest goal to 10 percent, when compared to the baseline year was established in the 2009 Plan Update. A near-term goal was set to help pave the way for realizing a net 10 percent reduction in per capita waste disposal over the baseline year. The near-term goal called for a 20 percent reduction in waste disposal by FY 2011, compared to FY 2008 rates, which would result in a disposal rate of 1.18 tons per person per year or less. That goal was already met in FY 2009 by achieving a disposal rate of 1.14 tons per person per year – albeit a slow economy undoubtedly contributed significantly to the reduction. Nevertheless, having already met that near-term goal, Buncombe County’s new near term goal calls for another 10 percent reduction over the next three years, resulting in a FY 2014 disposal rate at or below 0.84 tons per person per year. The various options the County and municipal governments will consider to help achieve this goal are discussed in Section 6. The 2012 Waste Reduction Goal Sheet is included on the following page.

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

Local Government Name: Buncombe County

Previously established waste reduction goal: 40 %

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: New ten year goal (set in FY2009) is 10% %

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 11
1. Baseline year per capita disposal rate (FY 1991-1992 unless alternate approved by Section)	0.97
2. Percent waste reduction goal	10 %
3. Targeted per capita disposal rate (Subtract line 2 from 1.0 and multiply result by line 1)	0.87
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)	261,491
5. Projected tonnage for disposal at baseline disposal rate (Multiply line 1 by line 4)	253,646
6. Targeted annual tonnage for disposal (Multiply line 3 by line 4)	227,497
7. Targeted annual tonnage to reduce (Subtract line 6 from line 5)	26,149

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:

Efforts to achieve the above waste reduction goal will focus primarily on increasing recycling rates and source reduction. Approximately 60 percent of the targeted reduction is expected to come from increases in recycling and 40 percent through source reduction.

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Section 5

Waste Handling Characterization

5.1 Solid Waste Facilities

Based on a review of facility reports provided to the DWM and reports provided by the local jurisdictions, 293,826 tons of MSW were generated in Buncombe County in FY 2011. This includes both MSW and C&D waste sent to disposal facilities or transferred. It also includes recyclables recovered by the local jurisdictions, which totaled just over 41,000 tons, household hazardous waste (HHW) and tires. It should be noted that the actual amount of waste recovered and recycled in the County is greater since business and institutional recycling is not monitored or controlled by the local jurisdictions. A summary of the amounts and types of solid waste managed in Buncombe County is shown in Table 5-1. The location of in-County disposal and recycling facilities are provided in the figures/maps included in Section 1.

**Table 5-1
Management of Solid Waste Generated in Buncombe County (FY 2011)**

Management Practice	Facility Location	Tons Disposed (FY 2011)	Percent of Category	Percent of All MSW Waste
Landfilled MSW				
Palmetto Landfill (SC)	Wellford, SC	103,581	46.5%	
Buncombe County Landfill	Alexander, NC	116,830	52.4%	
Union County Landfill (SC)	Union County, NC	2,310	1.0%	
BFI-Charlotte Motor Speedway Landfill (NC)	Concord, NC	139	0.1%	
Total Tons MSW Landfilled		222,860	100%	75.8%
C&D Landfilled and/or Recovered				
Buncombe County C&D Unit ¹	Alexander, NC	24,094	90.6%	
WCA Shiloh Landfill (SC)	Piedmont, SC	2,510	9.4%	
Total Tons C&D Waste Landfilled and/or Recovered		26,604	91%	9.1%
Recyclables Recovered				
Household Recyclables (glass, metal and plastic containers, household grades of paper)		26,697	64.4%	
White Goods ²		260	0.6%	
Yard Waste ²		14,526	35.0%	
Total Tons Recycled		41,483	100%	14.1%
Landfilled Tires				
Buncombe County Tire Facility - US Tire ⁴	Concord, NC	2,698	100.0%	
Total Tons Tires Landfilled		2,698	100%	0.9%
HHW⁵				
Buncombe County HHW Facility ³	Alexander, NC	181	100.0%	
Total Tons HHW		181	100%	0.06%
TOTAL MSW GENERATED		293,826		100.0%

Notes:

1. A small amount of C&D waste was disposed in the Buncombe County Subtitle D Landfill.
2. Data sources are the Buncombe County and Municipal Solid Waste and Materials Management FY2011 Annual Reports.
3. While some HHW is recycled, this analysis includes all as disposed.
4. Tires are collected at the Buncombe County Solid Waste Management Facility and then taken to US Tire in Concord, NC.

5.2 Solid Waste Materials Flow

Once the waste is collected, the materials within the County and its jurisdictions flow through several channels and may be disposed at a number of facilities. Many factors influence the flow of solid waste materials from the point of generation to the point of disposition. These factors may include the following:

- Material type;
- Collection service cost;
- Facility tipping fees;
- Value of recovered materials;
- Proximity of disposal facilities and the time associated with disposal;
- Relationship of each facility owner/operator to the hauling entity;
- Existing service agreement terms; and
- Hauler preferences

The sections below summarize the material flow for residential solid waste and non-residential waste.

5.2.1 Residential vs. Non-Residential Waste Flow

Residents of Buncombe County and its jurisdictions have multiple options for disposing of MSW, recyclables, yard waste and C&D waste. Figure 5-1 depicts a generalized process flow chart for residential waste in Buncombe County.

Non-residential waste is generated primarily from commercial, industrial, and institutional (CII) sources. This waste may include MSW, recyclables, and yard waste. The flow for non-residential waste often differs from residential waste, which is somewhat true for Buncombe County and its jurisdictions. Non-residential waste that is not collected by the municipalities may be delivered to one of several landfills, including the Buncombe County Subtitle D Landfill. Figure 5-2 provides a flow chart of the non-residential waste flow process.

Waste Management of Asheville continues to transport a significant portion of the County's non-residential solid waste stream out of the County. The amount of waste transferred out of Buncombe County continues to fluctuate, but averages just over 50 percent. The transfer of half of the waste stream outside of the County reduces the ability of the local governments to utilize certain waste reduction measures that might otherwise be employed if this waste was in their control. The transfer of waste outside of the County also hinders the County's ability to operate the landfill efficiently, protect the citizen's investment in the facility, and keep disposal costs as low as possible. Although the State retains the ability to enforce bans on landfill disposal even when it is transferred out-of-state, County enforcement of state and local bans on landfill disposal of certain materials is made possible when waste is brought to the County-owned landfill.

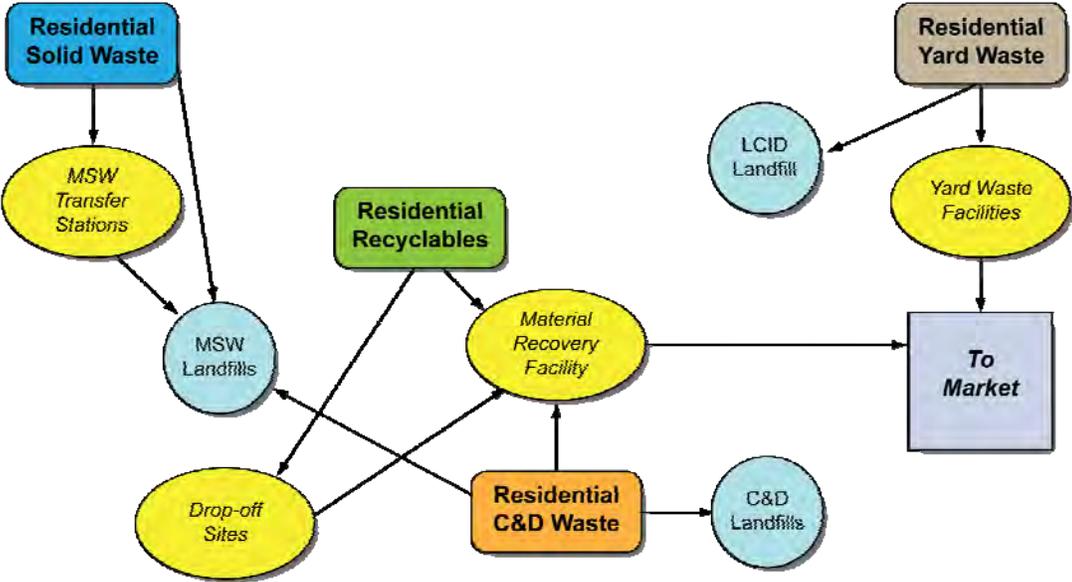


Figure 5-1. Residential Waste Flow

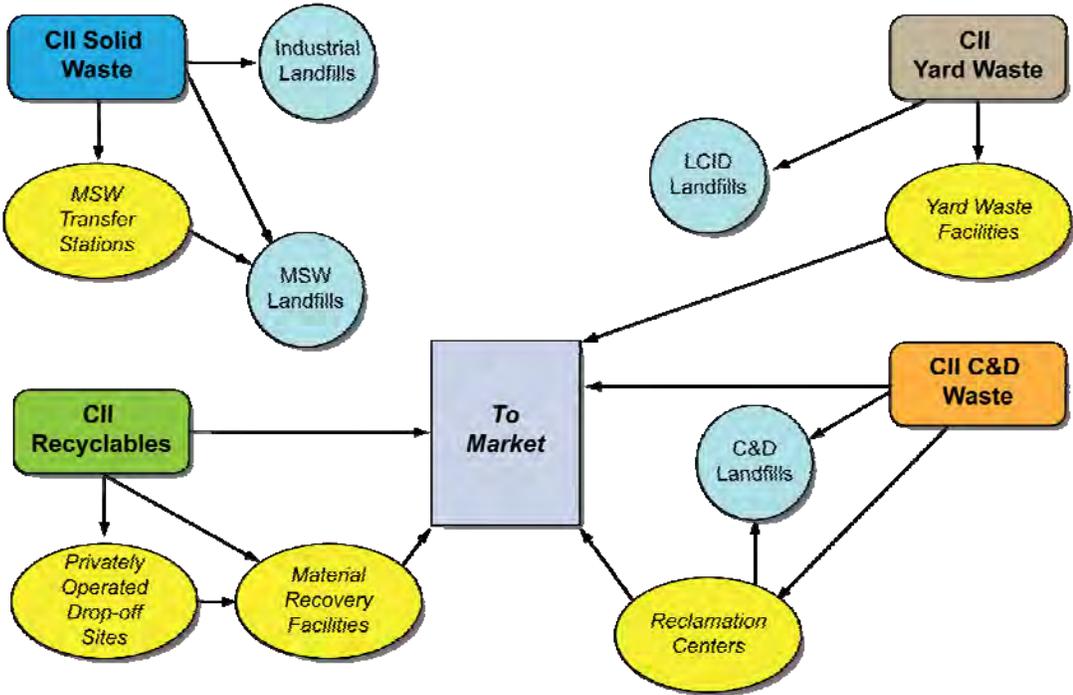


Figure 5-2. Non-Residential Waste Flow

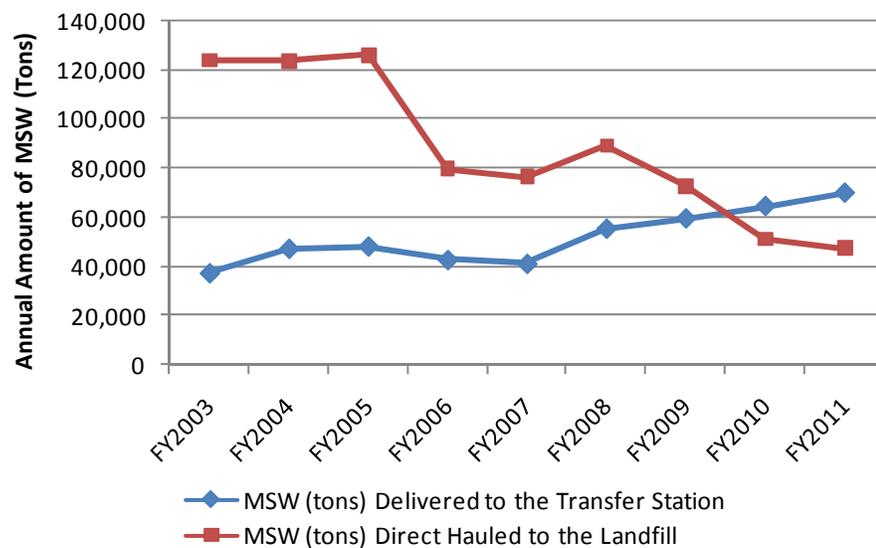
5.2.2 MSW Waste Flow

All six Buncombe County municipalities collect MSW curbside by their own forces or through contract with a private waste management firm. All residentially collected MSW is taken either directly to the Buncombe County Solid Waste Management Facility (Permit No. 1107-MSWLF-1996) or indirectly through the county’s transfer station (Permit No. 1108T-TRANSFER-1996). Proportionally, approximately 60 percent of the MSW flow (both residential and non-residential) comes through the transfer station, and 40 percent is direct hauled to the Subtitle D Landfill at the Solid Waste Management Facility. The ration of waste delivered to the transfer station versus direct hauled to the landfill has steadily increased over the last decade, as shown in Figure 5-3. The generally shorter driving distance is thought to be one of the more significant factors for this trend, which perhaps results in a net savings to haulers as gas prices have increased, and allows them to complete routes more efficiently.

In the unincorporated portion of the County, residents have the option of contracting with WastePro, the County’s residential waste collection vendor, or they can bring their waste to the landfill or transfer station themselves. The County does not operate convenience centers or drop-off facilities. Approximately 51 percent of households in the unincorporated area of the County pay for trash pickup through Waste Pro. Of the remaining 24,700 households, it is estimated that only about 5,000 bring their waste to the landfill or transfer station. It is unclear how the almost 20,000 households that do not contract with Waste Pro and do not regularly use the landfill or transfer station dispose of their waste. Illegal methods of disposal such as roadside dumping, placing waste in commercial dumpsters, and burning are likely to occur in certain instances. The County’s illegal dumping enforcement program continues to work to prevent such instances.

Approximately 70 to 75 percent of the MSW disposed at the Buncombe County Subtitle D Landfill originates from the residential sector (about 84,000 tons in FY2011) and 20 to 25 percent originates from the CII sector (about 26,000 tons in FY2011). The vast majority of CII-generated MSW (about 104,000 tons in FY2011) is routed through the Waste Management Transfer Station (Permit No. 1104-TRANSFER-1993) and hauled to Waste Management’s Palmetto Landfill in Wellford South Carolina. A very small fraction goes to other Subtitle D Landfills outside of the County.

Figure 5-3. Annual Amount of MSW Delivered to the Buncombe County Transfer Station and Subtitle D Landfill



5.2.3 C&D Waste

C&D waste disposal for residents and businesses is offered at the Buncombe County C&D Landfill (Permit No. 1107-CDLF-1998). No other C&D disposal sites are permitted in Buncombe County.

5.2.4 Land Clearing and Inert Debris (LCID)

LCID, otherwise known as untreated wood, limbs, and yard wastes, is accepted at the Buncombe County Solid Waste Management Facility and at the Riverside Stump Dump (Permit No. 1111-TP). Each municipality collects yard waste curbside from its residents and delivers it to one of these two facilities, or one or more private composting facilities (see Figure 1-3 for a list).

5.2.5 White Goods

White goods are accepted from residents at the Buncombe County transfer station and landfill. Biltmore Iron and Metal Company, Inc. receives the white goods from the County and removes any refrigerants or gases that may be present. The City of Asheville, Town of Black Mountain, Montreat and Weaverville also collect white goods (at varying frequencies) curbside along residential routes.

5.2.6 Scrap Tires

Scrap tires are accepted from residents at the Buncombe County transfer station and landfill. The County received 2,698 tons of tires during FY2011 and collected another 804 tires from State or County designated nuisance sites. Buncombe County contracts with US Tire Recycling for tire disposal/recycling.

5.2.7 Electronics

Electronics are accepted at multiple public and private (business) locations throughout the County. Please refer to Section 6 for a discussion of electronics recycling and disposal options.

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Section 6

Assessment and Actions

As part of the Plan Update process, the State requires local governments to assess the adequacy of solid waste management programs and services, identify impediments, and consider solutions to minimize the impediments and achieve goals. To facilitate this process, the State has specified that current programs be inventoried and analyzed with regard to the following planning elements:

- Reduction;
- Collection;
- Recycling and Reuse;
- Composting and Mulching;
- Incineration;
- Transfer Outside of Geographic Area;
- Disposal;
- Education;
- Special Wastes;
- Illegal Disposal/Litter;
- Purchasing of Recycled Products; and
- Collection of Discarded Electronics
- Management of Abandoned Manufactured Homes

In addressing this planning requirement, the local jurisdictions of Buncombe County have provided (through survey) summaries of their current programs and the status of intended actions from the previous Plan Update. New intended actions aimed at achieving the local government's goals and objectives are discussed in the following pages.

6.1 Source Reduction

Various local governments offer and/or support a number of public education and outreach activities that deal with source reduction. These activities are described below. Waste reduction activities and programs are detailed in the sections on recycling and reuse.

6.1.1 Current Activities

Residential Source Reduction

Buncombe County supports and promotes source reduction activities for residents through a variety of means. In addition to providing information on their web site, several educational, public outreach, and other programs are in place to help reduce the amount of waste generated and landfilled. These include:

- The quarterly newsletter “One Person’s Trash...” which provides tips and information about specific source reduction opportunities such as grasscycling; and
- The County and City of Asheville continue to co-sponsor the Mobile Environmental Learning Center (MELC) as a public education service. MELC, which is operated by the Land of Sky Regional Council, teaches students how to reduce their waste at the source.

Source reduction activities and programs offered or sponsored by the municipalities include:

- The City of Asheville routinely offers compost bin sales events. They received a grant in 2009 through the North Carolina Division of Pollution Prevention and Environmental Assistance (DPPEA) to sell bins at a subsidized price; and
- The Town of Weaverville promotes source reduction activities including grasscycling, xeriscaping, and junk mail reduction.

Commercial and Industrial Source Reduction

The Land of Sky Regional Council’s (LOSRC) Waste Reduction Partners (WRP) offers waste reduction assessments to businesses, industries, and institutions in western North Carolina, including Buncombe County. Since 2000, Waste Reduction Partners has helped clients find ways to reduce or recycle over 177,000 tons of solid waste headed to landfills and save over \$14.5 million. County and City of Asheville staff have also worked with local industries to provide advisory services for waste reduction. For example, Asheville coordinated efforts through LOSRC to assist ABC permit holders understand and meet recycling requirements of HB 1518.

Institutional Waste Reduction

All seven local jurisdictions have taken steps to reduce in-house waste generation through increased use of electronic communication, promoting recycling in government offices, and other means.

The City of Asheville developed a Sustainability Master Plan and has hired an intern to help implement specific actions of the plan, including those dealing with solid waste and recycling issues. The Plan promotes activities for source reduction and provides opportunities for increasing waste reduction and recycling efforts within City Departments.

6.1.2 Intended Actions and Impediments

Table 6-1 lists the intended actions established by the jurisdictions of Buncombe County to meet their goals pertaining to waste reduction. A summary of progress made toward actions specified in the previous Plan Update is included in Appendix B.

The relatively low cost of solid waste disposal that exists in most parts of North Carolina including Buncombe County, is an impediment to source reduction efforts. While local governments strive to provide effective services at the least cost, current fee structures do not provide significant incentive

to eliminate waste at the source. As landfill space becomes less available, the local jurisdictions should consider additional source reduction efforts, including those that create financial incentives such as pay-as-you-throw systems.

Table 6-1. Waste Reduction Intended Actions

Jurisdiction	Intended Action
Asheville	1. Provide education of waste reduction through Land of Sky Regional Council and Mobile Environmental Learning Center.
	2. The WRP Program, County and City solid waste staff, and others, will continue to work with businesses, industries, and institutions to further their waste reduction efforts.
Buncombe County	3. County Departments will strive to use fewer disposable items, purchase products with longer life, and print all documents double-sided.
	4. Provide education of waste reduction through Land of Sky Regional Council and Mobile Environmental Learning Center
	5. The WRP Program, County and City solid waste staff, and others, will continue to work with businesses, industries, and institutions to further their waste reduction efforts.

6.2 Collection

6.2.1 Current Activities

Table 6-2 provides a summary of curbside collection services offered in Buncombe County for residential and commercial solid waste, recyclables, yard waste, and bulky waste.

Solid Waste Collection

Collection frequencies, providers, and methods vary among the seven local jurisdictions, but there are many similarities. Five of the six municipalities operate their own solid waste collection service (Asheville, Biltmore Forest, Montreat, Weaverville, and Woodfin). In the unincorporated portions of Buncombe County, curbside solid waste collection is offered through a franchise hauler, Waste Pro. Approximately 51 percent of households in the unincorporated area of the County pay for trash pickup through Waste Pro. Of the remaining 24,700 households, it is estimated that only about 5,000 bring their waste to the landfill or transfer station. It is unclear how the almost 20,000 households that do not contract with Waste Pro and do not regularly use the landfill or transfer station dispose of their waste.

The majority of CII generated solid waste is collected by private haulers on the open market. In some instances, Town staff collect from small businesses or CII establishments self-haul to a disposal or transfer facility.

Recyclables Collection

As noted in Table 6-2, most Buncombe County jurisdictions that provide curbside collection of recyclables use a private contractor. Of the six jurisdictions offering curbside service, half of them offer it weekly, and half offer it every other week. By the end of March 2012, Asheville will have converted to single stream curbside recycling using 96-gallon roll out carts instead of bins. This switch was made based on the successful results of a pilot program conducted in four neighborhoods.

**Table 6-2
Curbside Collection Services Provided in Buncombe County Jurisdictions**

Jurisdiction	Residential Waste		Commercial Waste		Recyclables		Yard Waste		Bulky Waste	
	Frequency	Provider	Provider	Provider	Frequency	Provider	Frequency	Provider	Frequency	Provider
Asheville	Weekly	City	City &	Curbside Mng.	Every other wk	City	Twice per Month	City	By Request	City
	<i>fully-automated/96-gal cart</i>		Open Market	<i>96-gal cart</i>			<i>leaves collected in season</i>			
Biltmore Forest	Weekly	Town	Town	No Curbside Collection	No Curbside Collection	Town	Monthly	Town	No Curbside Collection	
	<i>manual</i>						<i>leaves collected in season</i>			
Black Mountain	Weekly	By Contract	Open Market	Every other wk	GDS	GDS	Weekly	GDS	Weekly	GDS
	<i>manual</i>			<i>18-gal bins and blue bags</i>			<i>leaves collected year round</i>		<i>no added fee</i>	
Montreat	Weekly ¹	Town	Open Market	Weekly ¹	Town	Town	Weekly	Town	Twice a year	Town
	<i>manual</i>			<i>blue bags</i>			<i>leaves collected in season</i>		<i>Fee if picked up on non-scheduled days</i>	
Weaverville	Weekly	Town	Open Market	Weekly	Curbside Mng.	Town	Weekly	Town	By Request	Town
	<i>manual</i>			<i>blue bags</i>			<i>leaves collected in season</i>		<i>no added fee</i>	
Woodfin	Weekly	Town	Town &	Every other wk	Curbside Mng.	Town	Weekly	Town	No Curbside Collection	
	<i>manual</i>		Franchise Haulers	<i>bins</i>			<i>leaves collected in season</i>			
Buncombe County	Weekly	Franchise Hauler	Open Market	Weekly	Waste Pro USA	Waste Pro USA	No Curbside Collection	Collection	By Request	Waste Pro
	<i>manual</i>			<i>blue bags, bin (fee), or cart (fee)</i>					<i>fee-based</i>	

Notes:

¹ Collected twice weekly from June through August.



Yard Waste and Bulky Waste Collection

Curbside yard waste collection service is offered in four Towns on a weekly basis. Asheville offers yard waste collection twice a month. Leaves are collected in season, and most offer curbside Christmas tree collection during the holidays. Most of the municipalities use their own staff and equipment to collect their yard waste, with the sole exception of Black Mountain, who uses GDS. Bulky waste collection is offered in four municipalities on a weekly, by-request, or semi-annual basis. Curbside collection of yard waste is not offered in the unincorporated areas of Buncombe County.

As of the date of this Draft Plan (March 2012), the Town of Montreat is considering changes to its yard waste collection program which include (1) the requirement for leaves to be placed in biodegradable paper bags; (2) leaves will only be collected between October through December and again in May; and (3) loose piles of yard debris up to 3 cubic yards will be collected for free and anything in excess of that amount will result in an additional fee. This proposed change is consistent with the Towns desire to move toward a Pay-as-You-Throw approach for yard waste.

6.2.2 Intended Actions and Impediments

Table 6-3 lists the intended actions established by the jurisdictions of Buncombe County to meet their goals pertaining to collection. A summary of progress made toward actions specified in the previous Plan Update is included in Appendix B.

The remote and rural nature of portions of Buncombe County hinders the ability to provide cost-effective collection service in certain isolated areas. At the same time, residents living in these areas are required to make up to 70-mile round trips to the nearest drop-off center (the Transfer Station or Landfill) when they wish to dispose of HHW or other special wastes. The County should continue to evaluate the need and feasibility of collection and/or drop-off options in these areas.

Table 6-3. Collection Intended Actions

Jurisdiction	Intended Action
Buncombe County	<ol style="list-style-type: none"> 1. Citizens will continue to be provided access to collection service information on the County hotline, web site, and government channels and through bill-inserts and the County's quarterly newspaper. 2. The County will continue to collect special wastes such as HHW, electronics, oil, batteries, tires, white goods, at the landfill on designated collection days.
Montreat	<ol style="list-style-type: none"> 3. Continue to evaluate and move toward implementing a Pay-As-You-Throw system for brush and yard waste collection and disposal. 4. Prepare a proposal for Board consideration to better use the convenience center behind the Town Services Building. The proposal will suggest limiting access to the area, staffing it at certain times of the week, and charging a small fee for garbage disposal at the site.

6.3 Recycling and Reuse

6.3.1 Residential Recycling

The total tons of material recycled and waste disposed by each jurisdiction's residential sector during FY 2011 is shown in Table 6-4. Five of the seven local jurisdictions have reported increases in the percentage of waste recycled versus landfilled over the last three years. Almost 18 percent of residential waste was recycled (not including yard waste).

Table 6-4

Residential Waste Disposed and Recycled by Buncombe County Jurisdictions, FY 2011¹

Jurisdiction	2011 Population	Tons of Waste Disposed	Tons Recycled	Percentage of Waste Recycled 2011	Change in Percent Recycled vs. Waste Disposed from 2008
Asheville	76,636	23,734	6,662	28.1%	-2.5%
Biltmore Forest	1,433	460	246	53.4%	3.5%
Black Mountain	7,848	2,898	536	18.5%	1.9%
Montreat	724	233	70	30.1%	10.5%
Weaverville	3,500	1,221	346	28.4%	9.7%
Woodfin	7,000	1,550	844	54.5%	37.6%
Buncombe County (unincorporated ²)	142,038	53,636	6,041	11.3%	-1.7%
Overall	239,179	83,733	14,745	17.6%	-4.1%

Notes:

¹ Waste disposed and tons recycled shown in the table include residential waste and a small amount of commercial waste collected by municipalities. Totals do not include tires, white goods, cardboard, or other recyclable items collected directly at the landfill or transfer station.

² Buncombe County totals account for waste collected by its' franchise hauler and recyclables collected via the blue bag program as well as residential waste from unincorporated Buncombe County who do not subscribe to the curbside collection program.

Source: FY 2008 and 2011 Solid Waste Management Annual Reports and Buncombe County's own Solid Waste Reports.

The types of recyclables accepted curbside by the City and Towns expanded in early 2012 to include plastics #1 through #7, including clamshells, yogurt cups and food trays; and more cardboard/chipboard materials including cereal boxes, frozen food boxes, and juice and beverage containers (see inset at left). This change is expected to result in an increase in recycling participation and tonnage over the next several years.

The City of Asheville continues to explore opportunities to promote and increase the efficiency and effectiveness of the City's recycling program. Some of the accomplishments of the program in recent years include:

- The City continues to provide outreach and education efforts at the Bele Chere Festival with 200 high-visibility recycling containers, a recycling booth, and multiple giveaways during the festival such as stickers, baseball tickets, temporary tattoos, and bottle openers. When able, staff removed visible recyclables from waste containers during the festival;
- The City continues to participate in the national *Cans for Cash* contest to encourage aluminum can recycling. This contest was



What may I Recycle?

- Metal Cans & Empty Aerosol Cans - Aluminum, Steel, Tin
- Plastic Bottles, Jars & Plastic Food Containers #1 through #7 **NEW 2012** (Exception: black non-washable trays and Styrofoam)
- Glass Bottles and Jars - Clear, Brown, Green
- Aluminum Pie Tins and Food Trays
- Milk & Juice Cartons **NEW 2012**
- Juice Boxes **NEW 2012**
- Newspapers & Inserts
- Corrugated Cardboard
- Mixed Paper:
 - Catalogs, Junk mail, Magazines, Egg cartons (paper), Envelopes,
 - Manila Envelopes, Office Paper, Phone books, Glossy Paper,
 - Post-it-Notes, Cereal boxes, Brown paper bags, Paper towel rolls,
 - Shredded paper (pieces in paper bag with top rolled down), Etc!

sponsored by the US Conference of Mayors;

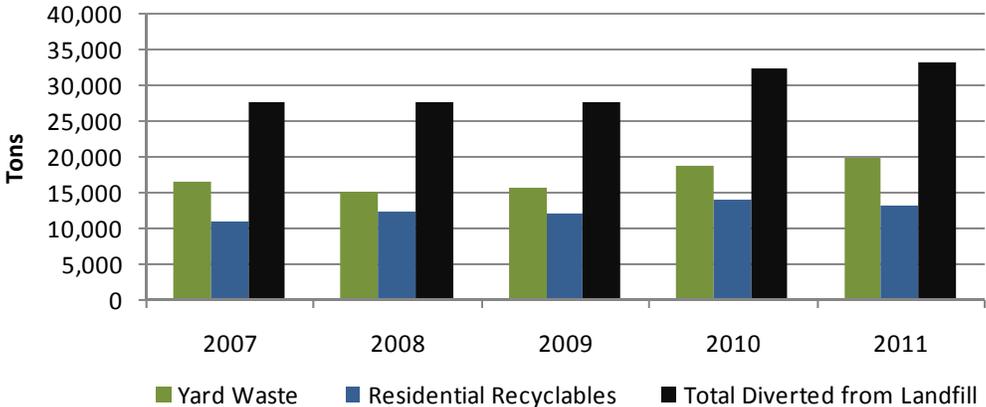
- Residents committed to recycling were rewarded with Asheville Tourists baseball tickets. Residents signed a pledge to recycling and were then awarded the tickets. Staff also participated at a recycling event at an Asheville Tourists baseball game;
- To increase education efforts the website was continually updated with new recycling resources and press releases were issued for all new projects or issues. Press release topics included: all recycling contests, plastic bag recycling options, recycling theft, and recycling tips.
- The City’s recycling brochure has been updated to improve its content and overall appearance.

The Town of Black Mountain has taken steps to increase recycling. The Town had placed four recycling containers in the downtown district in 2008. In May 2011 the Town won a contest that gave them the ability to purchase two recycling containers for the Lake Tomahawk area and two recycling containers for the Rec Park area. The Town would like to pursue additional recycling containers for the parks as funds become available. In October 2011, Rainbow Recycling (a grassroots recycling organization in Black Mountain), Asheville GreenWorks, Curbside Management, and Friends and Neighbors of Swannanoa (FANS) organized the first of quarterly planned hard-to-recycle collection events for underserved areas of the County.

Annual totals of the type of materials recycled through the various residential curbside programs are difficult to distinguish since several of the jurisdictions report comingled tons collected from the blue bag program. In addition to curbside programs, five of seven jurisdictions operate drop-off centers that generally accept the same suite of standard recyclable materials that are collected curbside.

Figure 6-1 shows the amount of residential recyclables and yard waste recovered annually in Buncombe County since FY 2007. As with the previous tables and figures, these amounts reflect materials recovered through residential programs only and do not account for materials recycled through commercial establishments or yard waste generated and recovered by commercial landscapers. Unlike recyclables, yard waste generation and recovery shows significant variability due

Figure 6-1
Five-Year Trend in Residential Recyclables and Yard Waste Recovered



to storm events. Overall, approximately 33,021 tons of recyclables and yard waste were diverted from landfills in FY 2011 through residential collection programs.

Table 6-5 shows the annual totals of the type of materials recycled through curbside and drop-off programs offered by the local jurisdictions. Also included in the total is cardboard (OCC) collected by GDS, Inc. from commercial establishments. In FY 2011, 6 percent more recyclables were collected (not including OCC), compared to the previous four year average; however, the total collected in FY 2011 was down slightly compared to the previous year.

Table 6-5
Materials Recovered from Curbside and Drop-off Recycling Programs

Year	Glass	Plastics	Metals	ONP	OCC ¹	Other Paper	Electronics	White Goods	Comingled Tons	Total
2007	1,421	376	844	2,341	36,226	2,341	98	209	3,079	46,935
2008	1,627	429	263	2,566	38,937	2,542	82	725	3,677	50,849
2009	2,053	514	254	2,015	37,979	2,800	104	599	4,202	50,520
2010	2,208	592	261	1,928	31,887	2,804	160	650	5,012	45,502
2011	2,577	540	271	159	11,295	3,485	92	321	5,525	24,265

Notes:

¹ Includes OCC collected by GDS, Inc. from commercial recycling dumpsters. It is likely that previous years OCC tonnages (2007-2010) have been reported incorrectly.

Source: Local Jurisdiction's Solid Waste Management Annual Reports.

Fluorescent tubes and compact fluorescent bulbs can be recycled at one of 13 fire departments within the County. Bulbs from businesses and schools are not accepted. Residents can also take used bulbs to any Home Depot or Lowes store. In FY 2011, 5.7 tons of bulbs were recycled by Buncombe County. In 2007, Buncombe County received the Outstanding County Program Award from the North Carolina Association of County Commissioners for the Fluorescent Bulb Recycling Program.

Buncombe County Solid Waste is taking part in a Cooking Oil Recycling Program that is a pilot project funded by the Biofuels Center of North Carolina. The Metropolitan Sewerage District of Buncombe County, in collaboration with Blue Ridge Biofuels and Green Opportunities, is working to keep used cooking oils and greases out of the sewers and landfill and to divert them into biodiesel production to be sold back to the community as clean, renewable fuel. A used cooking oil receptacle is now available at the landfill for residents to use.

6.3.2 CII Recycling Programs

Commercial and industrial recycling is a service exclusively offered through contracts with private recycling firms. Curbside Management offers recycling drop-off by businesses at its main facility in Woodfin and behind the Asheville Pizza Company in Asheville. Local government sponsored recycling programs that serve the CII sector include:

- Several municipalities allow businesses to participate in their residential curbside collection program; and
- In conjunction with the local governments, WRP offers on-site waste assessments to businesses and industries (as noted in the Waste Reduction section);

CII establishments may participate in recycling by using one or more local haulers or recycling processors. Collection services for conventional recyclables are relatively available for both large and small establishments; however, small establishments are less likely to participate due to cost factors.

City buildings and departments have continued to join the City of Asheville's internal recycling program, increasing the amount of material collected. As previously noted, the City developed a Sustainability Master Plan and is taken actions to implement the Plan. The solid waste and recycling portion of the plan has a strong focus on increasing waste reduction and recycling efforts within City Departments – the goal being that the City will implement internal practices as an example for other institutions and businesses in the area.

The Town of Black Mountain has implemented an in-house program to collect and recycle spent fluorescent lights and thermostats containing mercury that are generated in Town-owned buildings.

Several of the educational institutions in Buncombe County offer in-house recycling programs. UNC Asheville (UNCA), for example, supports on-campus recycling initiatives aimed at faculty, staff, students, and visitors. Since 2008, UNCA reports that it has decreased landfilled waste by 34.6 percent through a variety of waste reduction practices on campus such as the use of reusable to-go boxes in the dining hall, widespread blue recycling bins, and special faucets encouraging refilling water bottles. UNCA is also participating in Recyclamania, an international competition to increase recycling and reduce waste. UNCA is competing with approximately 550 campuses in the U.S and Canada. Students Asheville-Buncombe Technical Community College (A-B Tech) Sustainability Technology and Digital Media Technology programs recently created and launched Asheville's first interactive recycling kiosk, supported in part from a grant from NCDENR. The kiosk, located at the Asheville Civic Center, urges people to "be social, do good," and features a quiz to test users' green knowledge and a video on recycling. It allows users to take advantage of single-stream recycling and take photo-booth pictures that can be shared via email, Facebook and other social media. A number of Buncombe County Schools have cartridge recycling programs (e.g., Isaac Dickson, Francine Delaney, Owen High School, Black Mountain Primary, and others).

In the Black Mountain area, Rainbow Recycling, working with businesses and local artists have offered and promoted reuse and recycling opportunities in a variety of ways, including:

- Initiation and collection of compostable food scraps from food vendors at the Sourwood Festival for Community Garden composting;
- Continued special recycling collections of packaging and other items (e.g. flower pots) with provision and promotion of local reuse;
- Redistribution of packaging from large businesses in Asheville to small businesses and artisans and galleries in Black Mountain; and
- Promotion and networking of local businesses, artisans and galleries for intercommunity reuse of packaging.

North Carolina House Bill (HB) 1518, which became effective January 1, 2008, requires establishments with Alcoholic Beverage Control (ABC) permits to separate, store, and recycle all recyclable beverage containers. HB 1465, which became effective October 1, 2009, prohibits the disposal of motor oil filters, rigid plastic containers, and wooden pallets in landfills, and adds to the list of already banned materials including oyster shells, yard waste and white goods. Beginning July 1, 2011, computer

equipment and televisions were prohibited from landfills. Distinct recyclable markets exist for each of these banned materials. Businesses that generate these items must identify disposal alternatives (such as recycling). Pallets may be sent to construction and demolition landfills if they are generated as C&D waste (as defined by the N.C. Solid Waste Management Rule 15A NCAC 13B .0532). Pallets from an industry other than construction of homes and buildings are not allowed in any landfill.

A significant opportunity exists to enhance county-wide recycling by increasing participation in the CII sector. Enforcement of the landfill disposal bans on certain materials exists as one such option. Enforcement can be accomplished through inspection of waste loads at transfer stations or the landfill and penalties may be assessed for non-compliance with the bans. Since approximately 50 percent of the waste generated in Buncombe County is currently transferred out of the County, the effectiveness of a County-run enforcement program is limited; however, if more CII-generated waste is brought to the County-owned landfill or the designated County transfer station, the effectiveness of such an enforcement program will result in more CII sector recycling.

Other opportunities to increase CII-sector recycling include mandatory recycling ordinances. Counties that have established such ordinances for businesses, including Mecklenburg, Durham, and Fairfax (Virginia), have all reported gains in recycling.

6.3.3 Recycling Markets

The local jurisdictions in Buncombe County market their materials through their recycling collection provider. For the County and most municipalities, this is currently Waste Pro, GDS, or Curbside Management. Recently, American Recycling which collects, processes, and markets recovered paper has begun operations in Buncombe County, just west of Asheville. Co-mingled contents of the blue bags and recyclables collected in the unincorporated parts of the County are taken to Curbside Management's materials recovery facility (MRF) in Woodfin, and to American Recycling's new facility. In FY 2011, Buncombe County paid an average of \$39.60 per ton of comingled blue bag recyclables for recycling of this material.

6.3.4 Reuse Programs and Opportunities

A combination of for-profit and non-profit organizations offer reuse programs in Buncombe County. These include Habitat for Humanity, Goodwill, and the Salvation Army as well as used goods stores such as Play it Again Sports.

Buncombe County offers a reuse opportunity called the Medical Equipment Rescue Program which collects medical equipment such as wheelchairs and crutches and donates them to the Asheville Buncombe Community Christian Ministry (ABCCM) Medical Clinic. The used medical equipment is accepted at the Buncombe County landfill and transfer station. The ABCCM loans the medical equipment to patients with temporary needs, or gives it to those who will use it permanently.

C&D waste is collected and distributed for reuse in the County through private reuse firms such as Asheville Architectural Salvage and Antiques, and Yesterday's Windows. Trash Inc., a creative reuse center in Asheville (www.trashincasheville.com) offers both opportunities for donating and obtaining an extensive variety of items for reuse.

Beverly-Hanks Associates (a local real estate firm) has partnered with Asheville GreenWorks to provide Buncombe County Solid Waste with two moving box swap sheds. Residents can drop off or pick up moving boxes at the Buncombe County Transfer Station or the Curbside Management facility in Woodfin.

6.3.5 Intended Actions and Impediments

Table 6-6 lists the intended actions established by the jurisdictions of Buncombe County to meet their goals pertaining to recycling and reuse. The list of intended actions focuses on increasing public awareness of recycling opportunities and benefits, as well as improving the effectiveness and efficiency of existing programs. A summary of progress made toward actions specified in the previous Plan Update is included in Appendix B.

There are several recognized impediments to implementing these actions and increasing recycling rates. In Buncombe County, unlike other portions of the State, the demand and/or competition for residential recyclables has never been great enough to allow the City, Town, and County to receive revenue from loads delivered to Curbside Management's facility. With the addition of America Recycles and the continued improvement of the recyclables market, there may be future opportunities for the local jurisdictions to obtain revenue from residentially collected recyclables, through contract negotiations with the recycling firms and/or their haulers. Other governments in North Carolina, such as Wake County, the Town of Cary, and the Town of Fuquay-Varina have teamed together to offer a larger stream of recyclables to local processors, which has resulted in contracts that provide revenue to these governments. The three local governments noted above receive a minimum of \$18/ton for comingled recyclables, and higher rates (up to \$65/ton recently), when recyclable market rates increase.

Some jurisdictions in North Carolina have improved recycling rates by switching to larger, roll-out carts that increase the amount of materials that can be stored, and by using semi- or fully-automated collection vehicles. Asheville is in the final stages of its switch to roll-out carts. These are potential solutions to consider in the other jurisdictions of Buncombe County to achieve even greater recycling in the community.

Table 6-6. Recycling Intended Actions

Jurisdiction	Intended Action
Asheville	1. Consider developing additional educational and promotional materials for the recycling program.
	2. Continue to explore opportunities to promote and increase efficiency and effectiveness of the City's recycling program.
	3. Continue to provide recycling collection service information on the City's web site, government channel, flyers, service guides, press releases, newspaper, magnets, pamphlets, vehicle wraps, community newsletters, and/or other means as deemed appropriate and effective.
Buncombe County	4. Consider implementation of a bin collection system to increase participation in the recycling program.
	5. Target rural areas who do not currently subscribe to curbside programs to increase recycling participation.
	6. Revise educational flyers on an ongoing basis and encourage citizens to recycle all materials offered for collection through County web site, government channels, periodic flyers, quarterly newsletters and public awareness days.
	7. Promote LOSRC's Waste Reduction Partners as a means to help find markets for reusable items.
Black Mountain	8. Inspect loads at the landfill and penalize those who dump recyclable material.
	9. Continue distribution of recycling brochures to new residents to the area and continue to provide access to the collection service/recycling information on the Town website.
	10. Pursue additional recycling containers for the parks as funds become available.

6.4 Composting and Mulching

6.4.1 Current Activities

As shown in Table 6-2, all jurisdictions offer curbside yard waste collection on a weekly or every-other-week basis. The amounts collected and processed, the end-use, and the destination of the yard waste is shown in Table 6-7.

Table 6-7
Municipal Yard Waste Program Summary, FY 2011

Jurisdiction	Tons Processed	End Use	Destination
Asheville	8,866	Composted/Mulched	Private Facilities
Biltmore Forest	1,140	Composted/Mulched	Riverside Stump Dump
Black Mountain	434	Alternative Daily Cover	Buncombe County Landfill
Montreat	374	To Farmer or Mulched	Riverside Stump Dump & Buncombe County Landfill
Weaverville	1,441	Landfilled	Town owned Inert Debris Landfill
Woodfin	408	Composted/Mulched	Commercial Facilities or Residents
Buncombe County	1,437	Alternative Daily Cover and mulch for residents	Buncombe County Landfill and Residents
Total	14,100		

Source: FY 2011 Solid Waste Management Annual Reports.

Buncombe County accepts yard waste at the landfill for \$20 per ton. Black Mountain is currently the only municipality which delivers its' curbside-collected yard waste to the landfill. The County has modified its grinding/mulching operation to be compliant with State requirements and is again offering mulch for sale to the public at \$10 per truckload. The County is also using the ground-up yard waste mixed with soil in a 30-70 ratio as alternative daily cover (ADC) on the Subtitle D Landfill. In addition to providing a disposal option for the yard waste, this approach reduces the amount of soil that is required and used for ADC and increase the organic content of the waste mass. By increasing the organic content of the waste mass, there is an added benefit of enhanced waste decomposition, increased waste density, and improved airspace utilization.

The City of Asheville collects brush and bagged leaves twice monthly. Loose leaves are collected during leaf season. Most of the City's yard waste is sent to private mulching/composting facilities. The City also takes loosed leaves to a yard waste notification site and uses the material for internal landscaping projects. Loads of leaves are delivered to homeowners and businesses free of charge by request. Christmas trees are mulched at a drop-off center in the City and the mulch is given away each January.

The Town of Black Mountain offered voluntary Christmas tree recycling with help from a private company. The trees were mulched and offered to residents or used at the Town's Community Garden.

The County, City of Asheville, certain Towns, and the North Carolina Cooperative Extension have continued to encourage backyard composting as a source reduction mechanism. The City of Asheville maintains composting tips and information on its' web site and the County routinely highlights the benefits of composting in its' "One Person's Trash..." newsletter.

Several private facilities in Buncombe County have active permits to operate compost facilities. These include Henson’s Asheville Woodyard and Crowell Farms. The Asheville Woodyard performs mulching and slow-wood composting. Crowell Farms composts a number of materials, including shredded brush grease trap waste, and leaves from the City of Asheville

The Riverside Stump Dump is permitted as a LCID facility. They grind brush received at the facility and sell it as mulch.

6.4.2 Intended Actions and Impediments

Table 6-8 lists the intended actions established by the jurisdictions of Buncombe County to meet their goals pertaining to composting and mulching. A summary of progress made toward actions specified in the previous Plan Update is included in Appendix B.

A recognized impediment, and one which is observed in many local governments across North Carolina, is the limited options for beneficial reuse of collected yard waste. In a typical year, there is more supply than demand for yard waste that is composted and mulched, and offered back to residents or businesses.

Table 6-8. Composting and Mulching Intended Actions

Jurisdiction	Intended Action
Asheville	1. Evaluate and explore options to increase yard waste collection efficiency to reduce cost while maintaining an appropriate level of service.
	2. Continue promotion of the Back Yard Composting Program and consider conducting additional bin distribution and composting education programs.
	3. Investigate and evaluate options for a food waste diversion program and consider piloting such a program to determine participation, costs, and benefits.
Buncombe County	4. Continue promotion of the Back Yard Composting Program and consider conducting additional bin distribution and composting education programs.

6.5 Incineration

6.5.1 Current Activities

Waste incineration is not practiced in Buncombe County, or in any nearby counties. Because of the potentially long lead time associated with identifying a sufficient waste stream, siting, designing, permitting, negotiating an energy contract, procurement, financing, constructing, and startup testing of a waste-to-energy (WTE) facility, this option deserves thorough consideration well in advance of when it’s actually needed. Current estimates are in the range of five to seven years – and potentially greater, depending a variety of factors. Buncombe County does not plan to consider incineration, with or without energy recovery, during the next three years, but will revisit the need during preparation of the next Plan Update in 2015.

6.5.2 Intended Actions and Impediments

There are no current intended actions established by the jurisdictions of Buncombe County related to incineration. The amount of waste generated in the County is not currently considered sufficient to make an incineration or WTE facility economically feasible, at least compared to existing disposal

technologies, without regional cooperation. Therefore, cost is an impediment to further pursuing incineration or WTE at this time.

6.6 Transfer Outside Geographic Area

6.6.1 Current Activities

Waste Management of Asheville continues to transport a significant portion of the County's solid waste stream out of the County. The amount of MSW transferred out of the County over the last five year period is shown in Table 6-9. The amount of waste transferred out of Buncombe County continues to fluctuate, but averages around 50 percent. Most of the waste going out of the County over the last five years was delivered to the Palmetto County Landfill which is located approximately 70 miles south of Asheville. Several other landfills located in North Carolina, Tennessee, and South Carolina also have received a portion of Buncombe County's MSW in recent years.

Table 6-9
Summary of MSW Transferred Outside Buncombe County (tons)

Facility Name	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Palmetto Landfill (SC)	155,336	147,265	115,360	NA	103,581
Union County Landfill (SC)	14,420	3,939	3,008	NA	2,310
BFI-Charlotte Motor Speedway Landfill (NC)	411	499	576	NA	139
Iris Glenn Landfill (TN)	56	63	0	NA	0
Uwharrie Env. Reg. Landfill (NC)	0	20	108	NA	0
Total Out of County Disposal	170,223	151,786	119,052	117,221	106,029
Total In County Disposal (at Buncombe County Landfill)	117,215	143,994	131,895	115,083	116,830
Total MSW Disposal	287,438	295,780	250,947	232,304	222,860
Percent of Waste Transferred Out of County	59.2%	51.3%	47.4%	50.5%	47.6%

Source: NCDENR DWM County Waste Disposal Reports. FY 2010 data for individual out-of-County landfills was not available.

6.6.2 Intended Actions and Impediments

There are no current intended actions established by the jurisdictions of Buncombe County pertaining to waste transfer outside of the geographic area.

The transfer of half of the waste stream outside of the County reduces the ability of the local governments to utilize certain waste reduction measures that might otherwise be employed if this waste was in their control. The transfer of waste outside of the County also hinders the County's ability to operate the landfill efficiently, protect the citizen's investment in the facility, and keep disposal costs as low as possible.

Because much of the waste that is transferred out of the County originates from commercial and institutional establishments serviced by private waste haulers, the local jurisdictions would benefit from having more control over this waste in order to protect their investment in the County-owned landfill. One option that has been considered, but has not been implemented, is a licensing

requirement for all waste haulers in the County. As part of the licensing requirement, haulers would be required to deliver all MSW collected in the County to the County’s Subtitle D Landfill. While this has numerous benefits, including reducing truck miles, keeping the cost of disposal low, and allowing increasing the ability to utilize and enforce certain waste reduction measures, it would also decrease the lifespan of the landfill by using airspace at a more rapid rate.

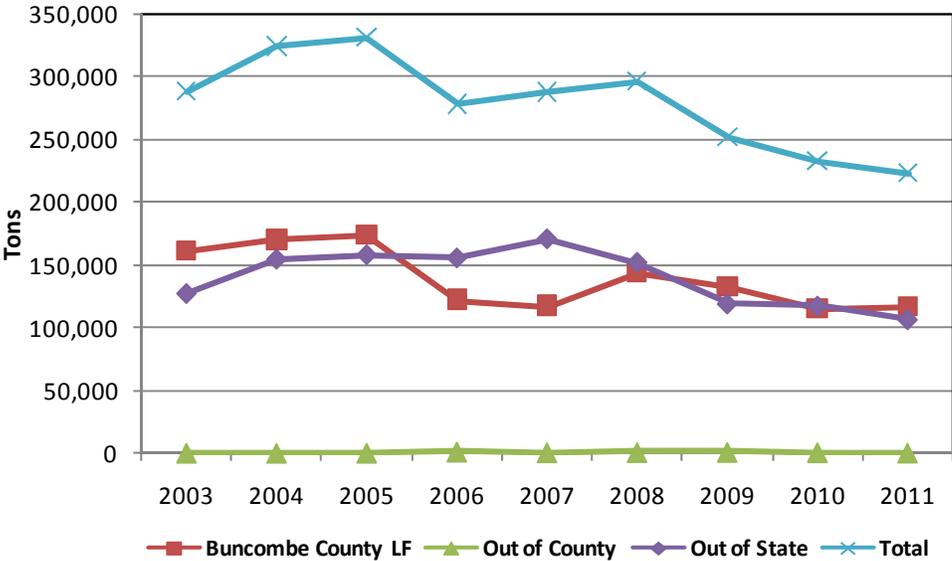
6.7 Disposal

As of June 2012, there were two permitted and active disposal facilities in Buncombe County: The Buncombe County Subtitle D (MSW) Landfill and the Buncombe County C&D Landfill.

6.7.1 MSW Disposal

Figure 6-2 shows the amount of Buncombe County-generated MSW disposed at in-County, out-of-County, and out-of-State facilities for FY 2000 through FY 2011, based on County disposal reports provided by the State. The Buncombe County Subtitle D Landfill has been accepting waste since September 29, 1997.

**Figure 6-2
Tons of Buncombe County-Generated MSW Disposed**



Tipping fees for loads of MSW at the Subtitle D Landfill and County-operated transfer station were increased on September 1, 2009 to \$43 per ton and \$47 per ton respectively. These and other fees for accepting certain materials serve as revenue sources to the County’s enterprise fund. The tipping fee increase will help maintain a positive solid waste enterprise fund balance. A reduction in waste that is transferred to out of County landfills will generate more revenue from tipping fees and help keep fees as low as possible. Additional discussion of program funding is presented in Section 5.

Based on analysis of airspace utilization and waste flow, the constructed portion of the Subtitle D Landfill (Cells 1 - 6) is projected to reach capacity between March and July 2015. Ten cells are planned for the Subtitle D Landfill, which were originally anticipated to provide approximately 30 years of

disposal capacity. At current disposal rates, accounting for a 1 to 5 percent annual increase in disposal rates and accounting for already used airspace, the entire Subtitle D Landfill is currently expected to last until between 2027 and 2032.

Since 2006, Buncombe County has been working with the SWS and Environmental Protection Agency (EPA) to study the recirculation of leachate at the Subtitle D Landfill. The recirculation of leachate has the potential benefits of reducing leachate treatment costs; increasing airspace; achieving rapid stabilization of the waste; increasing gas generation which can be harvested for energy production; and reducing post-closure monitoring and maintenance.

Beginning in 2008, the County began studying the feasibility of implementing a landfill gas-to-energy project at the landfill. A variety of options were considered to make beneficial use of landfill gas, including both public and private scenarios for ownership and operation. Backed by \$3.0 million in funding from the American Recovery and Reinvestment Act (ARRA) and \$500,000 in funding from the Federal Energy and Water Bill, the County decided to construct a facility to collect, condition, and burn landfill gas to generate electricity. Plans and specifications for a landfill gas fired electric generator and an enhanced gas collection system were prepared and the facility was constructed during 2010 and 2011. The facility became operational in November 2011 and currently generates revenue from the sale of electricity and renewable energy credits. Additional measures are being implemented to potentially sell greenhouse gas credits (also known as carbon credits) to help further offset solid waste program costs and pay for new programs.

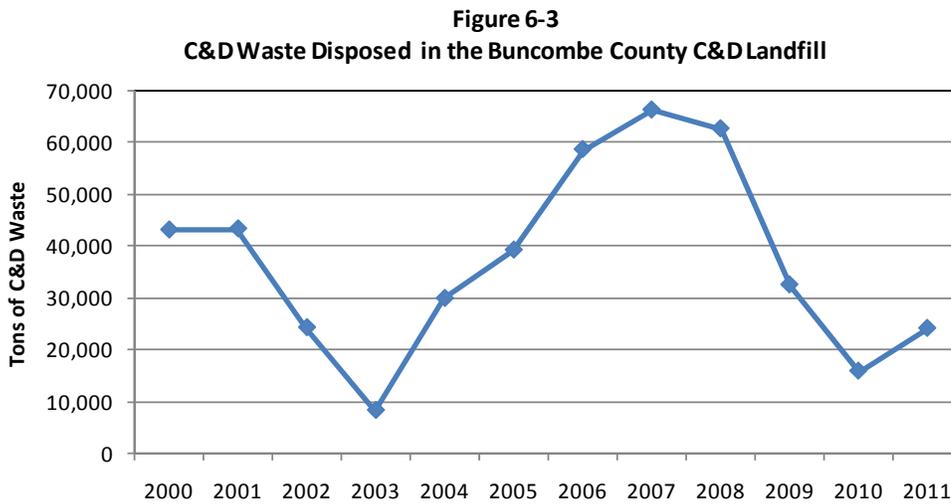
The County intends to continue to implement measures, such as the use of ADC and the recirculation of leachate to maximize the overall life of the Subtitle D Landfill, regardless of the amount of waste received. As previously noted, existing measures are already in place that help preserve landfill space including the state's ban on certain materials and the local ordinance that prevents loads containing more than five percent corrugated cardboard, untreated wood products suitable for mulching, concrete, cinder blocks, brick, concrete with steel or any similar type metals from being placed in the Subtitle D Landfill. Loads meeting this definition are subject to a fine if placed in the landfill.

In the event of a storm or other debris-generating disaster, the County will store the debris temporarily at the old landfill, which is a permitted site for storing disaster debris, or at the current landfill, upon receiving permission from the SWS. Management options will be considered based on the volume and type of debris, but may include burial, burning, and/or grinding and mulching for use in landscaping or ADC.

6.7.2 C&D Waste Disposal

C&D waste generated within Buncombe County is typically disposed at the Buncombe County C&D Landfill located at the County's Solid Waste Management Facility. The amount of C&D waste disposed at the landfill over the last 12 years is shown in Figure 6-3. C&D waste generation is linked closely to economic activity and construction starts. As would be expected, the amount of C&D waste disposed during 2009 and 2010 was significantly lower than previous years. It should be noted that, at times, C&D waste is also disposed in the Subtitle D landfill, therefore the annual tonnages depicted in the figure do not always reflect the amount of C&D waste generated in the County. The remaining life for the current phase of the C&D Landfill was previously estimated to expire in mid-to-late 2009; however, the economic slowdown extended its life. The County is currently moving forward with construction of the next phase of the C&D Landfill. The usable airspace for all eight phases of C&D

landfill should provide, at a minimum another 20+ years of C&D disposal, unless C&D disposal rates increase significantly.



6.7.3 LCID Disposal

North Carolina solid waste regulations preclude disposal of land clearing debris, including yard waste, in sanitary landfills. Management and disposal options for LCID include processing at compost/yard waste facilities or placement in LCID or C&D landfills. There are no permitted and active LCID landfills in Buncombe County. The Riverside Stump Dump, which is permitted as a Treatment and Processing Facility, accepts yard waste and operates as a mulching/ composting facility. Two other private facilities in Buncombe County have active permits to operate compost facilities

As shown in Table 6-7, the municipalities reported collection of 19,865 tons of yard waste in FY 2011. The State does not track LCID waste in the same manner as C&D waste, therefore totals for each management/disposal location are unknown.

6.7.4 Intended Actions and Impediments

Table 6-10 lists the intended actions established by the jurisdictions of Buncombe County to meet their goals pertaining to waste disposal. A summary of progress made toward actions specified in the previous Plan Update is included in Appendix B.

Table 6-10. Disposal Intended Actions

Jurisdiction	Intended Action
Buncombe County	<ol style="list-style-type: none"> 1. Continue to monitor and record conditions at the Landfill as part of the landfill bioreactor project (EPA Project XL). 2. Continue using ground-up yard waste and posi-shell as alternative daily cover for the Subtitle D Landfill and consider using tarps as an option. 3. Provide for uninterrupted, efficient operation of the landfill-gas-to-energy facility at the Subtitle D Landfill in order to maximize revenue from sale of energy (electricity), renewable energy credits (RECs), and greenhouse gas credits.

6.8 Education

6.8.1 Current Activities

The jurisdictions of Buncombe County have long understood the importance and impact of solid waste-related education and outreach activities. Recycling, in particular, requires frequent, clear, and concise instructions to effect long-term participation and build familiarity with the ever increasing types of recyclable materials. Table 6-11 depicts the current education activities of the Buncombe County jurisdictions.

Table 6-11
Education Efforts Undertaken By Buncombe County Jurisdictions

Jurisdiction	School	Radio/ TV	Newspaper	Mail/News- letter	Take- Home Items	Hotline	Website		Recycle Guys	Workshops or Meetings	Events	Social Media
							Basic	Comprehensive				
Asheville	✓	✓	✓	✓	✓			✓	✓		✓	✓
Biltmore Forest							✓					
Black Mountain			✓	✓	✓		✓		✓			
Montreat			✓	✓	✓		✓			✓		
Weaверville				✓								
Woodfin				✓			✓					
Buncombe County	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓

Source: 2011 Annual Reports and information from municipal web sites.

Education for Residents

The local jurisdictions use their websites to convey information regarding basic solid waste services including pickup schedules, procedures, acceptable materials, special waste pickups, fees, and contact information. Several of the jurisdictions offer a more comprehensive selection such as information on reuse, tips on generating less waste, and the location of public and privately operated sites to recycle or dispose special waste items. Through a print brochure, the “One Person’s Trash...” newsletter, and a website table, the County offers a recycling guide offering facility locations and acceptable material lists. Some municipal jurisdictions have established links to Buncombe County’s web site as a means of providing a consistent and clear message for disposal and recycling opportunities available to all citizens of the County.

The City of Asheville has developed a comprehensive website offering information to residents about all facets of its solid waste services and programs. The website continues to be updated with new recycling information and press releases summarizing new projects or issues. Press release topics included: recycling contests, recycling pilot program results, and recycling tips for example.

A majority of the jurisdictions focus their residential education efforts through newspaper ads, mailing newsletters or take home items from displays/kiosks at government facilities. Black Mountain has recently reviewed and revised their business and small event recycling guidelines as well as their recycling and sanitation brochures.

Several grassroots, non-profit organizations operate in Buncombe County, and offer a variety of educational and outreach activities. These include:

- **Asheville GreenWorks** (formerly called Quality Forward), an affiliate of Keep America Beautiful, works to achieve a clean and green Asheville and Buncombe County through community organizing, educating and environmental stewardship (www.ashevillegreenworks.org); and
- **Rainbow Recycling**, a local grassroots organization within the Black Mountain-Swannanoa Valley area, helps promote outreach and education efforts throughout the community by educating citizens through public events, presentations, news articles, and newsletters (www.rainbowrecycling.org). The organization publishes a recycling-reuse guide for the Black Mountain area and for Buncombe County.

Education in the Schools

LOSRC continues to operate the Mobile Environmental Learning Center. This mobile classroom travels to schools in Buncombe County and adjacent counties, educating children on the subjects of reducing, reusing, recycling, reintegrating, closing the loops, and HHW. The County and City Asheville continue to provide funding for this outreach effort.

Many of the schools in Buncombe County have teachers and students who are interested in issues such as recycling and work to promote waste reduction practices. Several of the public schools, such as Bernardsville Elementary and West Buncombe Elementary offer reuse/recycling services for used cell phones, digital cameras, PDA's, laser and inkjet cartridges. In addition to keeping these materials out of the landfill, the program provides the added benefit of a revenue source for the schools. Evergreen Community Charter School conducts student-led trash audits. Other schools maintain active recycling clubs. Buncombe County Solid Waste Staff continue to support these programs and provide educational opportunities in the classroom on a by-request basis.

In the 2010-11 school year, Buncombe County Schools received grant funding from LOSRC to kick start a “green schools” program. The school system created on line ‘Green Schools’ web pages for teachers and schools to use for both resources and for documenting their “green” efforts, which include waste reduction, reuse and recycling activities. An annual awards program was instituted to acknowledge these efforts.

Education in the Business Community

As previously noted, WRP provides technical assistance and educational services to business and industry. County and City of Asheville staff have also worked with local industries to provide advisor services for waste reduction. Curbside Management continues to educate the public about the benefits of recycling and increase overall business recycling through their staff and their web site (www.curbie.com).

6.8.2 Intended Actions and Impediments

Table 6-12 lists the intended actions established by the local governments of Buncombe County to meet their goals pertaining to education and outreach. A summary of progress made toward actions specified in the previous Plan Update is included in Appendix B.

As budget shortfalls become increasingly more severe as a result of the economic slowdown, the lack of funding to maintain existing education and outreach programs and implement new ones is an impediment to this solid waste program element.

Table 6-12. Education Intended Actions

Jurisdiction	Intended Action
Asheville	1. Continue the current outreach programs to keep waste reduction in the forefront of the community's mind.
	2. Continue to provide annual funding to the MELC and use it to conduct environmental education activities at public functions, when feasible.
Black Mountain	3. Continue to distribute recycling brochures and calendars to new residents and continue to provide relevant information on the Town's website.
Buncombe County	4. Continue to post the County's quarterly newsletter "One Person's Trash" on the County web site and distribute flyers in utility bills detailing solid waste services offered.
	5. Provide educational opportunities in the classroom as requested, through the LORSC mobile unit.
	6. Provide assistance to any municipality that requests help with solid waste-related educational activities.
	7. Provide landfill tours on special request.
Montreat	8. Distribute updated sanitation and recycling brochures.

6.9 Special Wastes

6.9.1 Current Activities

Special waste management focuses on items that are problematic to dispose and or not suitable for landfill disposal. They include household hazardous waste (HHW), white goods, tires, used motor oil, antifreeze, lead acid batteries, and electronics (e-waste).

Household Hazardous Waste

HHW is currently accepted at a special drop-off area at the Buncombe County Landfill every Friday between 9 a.m. and 3 pm. Paint and paint-related items are accepted with a fee of \$2.00 per gallon. Pesticides, herbicides, insecticides, motor oil, antifreeze, and lead-acid batteries are accepted at no charge. Only HHW generated by residents is allowed. 3RC is under contract to accept, remove, and dispose of the HHW. During FY 2011, Buncombe County collected 361,310 pounds of HHW (which includes 182,000 pounds of electronics) at a cost of \$140,905.

White Goods

Asheville, Black Mountain, Montreat, and Weaverville offer curbside white goods collection on a weekly, semi-annually, and/or by-request basis. Four jurisdictions provide this service on a weekly basis while the rest offer by-request pick-up and/or special seasonal collection events. Buncombe County accepts white goods for drop-off at the Solid Waste Management Facility free of charge. White goods (no microwaves) are also accepted at the Buncombe County Transfer Station.

During FY 2011, Buncombe County was able to recover 260 tons of white goods that were brought to its landfill by the jurisdictions, their contract haulers, and residents. Buncombe County contracts with Biltmore Iron and Metal to collect and haul white goods from the drop-off sites, safely removes CFCs (at the site), and ultimately recycles the CFCs. CFCs are removed with the Envirotech Pro Plus Refrigerant Recovering and Recycling equipment. The equipment's motor provides a vacuum which to prevent release of CFCs into the atmosphere. White goods are collected from the County facilities once every 3 to 4 months, depending on the amount dropped off. Appliances with CFCs are kept in a separate area at County's facility, and remain upright until CFCs are extracted.

Tires

Buncombe County accepts waste tires from all County residents at the Solid Waste Management Facility. There is no fee for drop-off of four tires at a time. During FY 2011, 2,698 tons of tires were collected. An additional 804 tires were removed from nuisance sites throughout the County.

Tires are hand-loaded (laced) in a trailer at the Solid Waste Management Facility, and shipped to US Tire at approximately 1 to 2 day intervals. Buncombe County minimizes costs by only shipping tires when a full load is available. The County also minimizes abuse of the tire program by accepting only ten tires per year per resident.

Used Motor Oil and Antifreeze

Used motor oil and antifreeze are accepted at the Landfill during the HHW collection events. During FY 2011, 4,964 gallons of used oil and 315 gallons of antifreeze were accepted by Buncombe County.

Batteries

Lead-acid batteries are accepted at the Landfill during the HHW collection events. During FY 2011, 558 lead-acid batteries were accepted.

e-Waste

Management of discarded electronics and computers is discussed in Section 6.12.

6.9.2 Intended Actions and Impediments

Table 6-13 lists the intended actions established by the jurisdictions of Buncombe County to meet their goals pertaining to management of special wastes. A summary of progress made toward actions specified in the previous Plan Update is included in Appendix B. The lack of funding is a recognized impediment to expanding the ability of the local jurisdictions to accept and manage special wastes.

At the County level, the elimination of fees for special waste items would serve to increase participation in special waste programs, and reduce the amount of wastes improperly disposed and which may pose threat to human health and the environment. However, the current programs could not be supported without these fees.

Table 6-13. Special Wastes Intended Actions

Jurisdiction	Intended Action
Buncombe County	<ol style="list-style-type: none"> 1. Promote tire collection services and provide information about these services on the County web site. 2. Continue to inform the public that the County's Solid Waste Facility takes white goods at no cost. 3. Continue to work with LOSRC, Cooperative Extension Service, auto dealers, repair shops, and parts stores to distribute educational pamphlets explaining correct disposal methods and disposal locations for used oil and batteries. 4. Continue to offer the HHW permanent collection program and participate in the regional cooperative efforts through the LOSRC.

6.10 Illegal Disposal/Litter

6.10.1 Current Activities

Curbside solid waste services are available to nearly all of Buncombe County’s residents; however, in the unincorporated portions of the County, only about one-half of the residents subscribe to curbside collection services. Residents have access to the various drop-off centers for refuse, recyclables, and special wastes. Together, the curbside and drop-off opportunities help reduce the amount of illegal dumping and littering in the County.

Unfortunately, litter and illegal dumping still occurs and in response, the local jurisdictions have taken actions to better understand and prevent these activities from recurring and have initiated efforts to clean-up after they occur. Many of the anti-litter and clean-up programs are offered through Asheville GreenWorks, and supported by the local municipalities.

Buncombe County has a Junkyard Control Ordinance that regulates all commercial businesses owning or storing junked vehicles. Standards are established for the number of junked or inoperable vehicles a business may keep.

Buncombe County’s Environmental Control Officers routinely respond to reports of illegal dumping. Complaints are investigated promptly and the officers help the responsible parties come into compliance. For sites where no responsible party is identified, the County pays to clean the site using solid waste enterprise funds.

The City of Asheville updated their Solid Waste Management Ordinance in 2008, strengthening the enforcement of the ordinance. The City also has two staff members dedicated on a part-time basis to solid waste code enforcement.

6.10.2 Intended Actions and Impediments

Table 6-14 lists the intended action established by Buncombe County to meet the goals pertaining to illegal disposal and litter. There are no significant recognized impediments to achieve this intended action.

Table 6-14. Illegal Disposal/Litter Intended Actions

Jurisdiction	Intended Action
Buncombe County	1. Continue to working with law enforcement officers to enforce litter and illegal dumping laws.

6.11 Purchasing Recycled Products

6.11.1 Current Activities

Several of the local jurisdictions encourage their governmental departments to purchase recycled products, or have established policies in place which set “buy-recycled” requirements. More emphasis is needed on this waste reduction aspect from all municipalities, not only in their own practices, but in the education and outreach they provide to the residents and businesses they serve.

6.11.2 Intended Actions

Table 6-15 lists the intended action established by Buncombe County to meet the goals pertaining to purchasing recycled products. The potential higher cost of recycled products is recognized as an impediment to achieving the intended action and associated goals.

Table 6-15. Purchasing Recycled Products Intended Actions

Jurisdiction	Intended Action
Buncombe County	1. Ensure that County regulations, ordinances, and other programs do not impede, and where possible, provide incentives for the purchase of recycled products.

6.12 Collection of Discarded Electronics

6.12.1 Existing Program Description

Buncombe County regularly accepts electronics from residents at the Buncombe County Solid Waste Management Facility, 85 Panther Branch Road in Alexander during the Household Hazardous Waste (HHW) collection events each Friday from 9:00 am to 3:00 pm. Residents are limited to dropping off three televisions and computers per month. Additional televisions and computer monitors are charged \$8.00 each (\$10.00 for large console televisions). Businesses may also drop off electronics, but are charged a fee of 30 cents per pound. The following items are accepted:

- Computers (monitors, CPU's, keyboards);
- Calculators;
- Copiers;
- Fax Machines;
- VCR's & DVD Players;
- Telephones;
- Stereos;
- Televisions;
- Cell Phones; and
- Video cameras.

All electronics are unloaded from the Buncombe County resident's vehicle at the designated HHW building (Area 5 of the site). Electronics are separated by type from the list above. Televisions are palletized and shrink wrapped, computer screens are palletized and shrink wrapped, and computers and all other electronics are placed into Gaylord boxes for shipping. Pick up frequency varies depending upon volume, but typically a tractor trailer load is shipped out twice per month by the County's e-steward/R2 certified contract-provider for HHW and electronics recycling, 3RC. A copy of the County's service agreement with 3RC, and a copy of 3RCs certification documents are included in Appendix C.

Buncombe County also participates in electronics recycling events throughout the county at various times and locations. An event was held by Wal-Mart in partnership with Buncombe County in November of 2010 at the East Asheville Wal-Mart. This offsite event was open to any Buncombe County school, government agency, non-profit organization, or resident.

The Town of Black Mountain currently accepts televisions, computers, copiers, laptops, monitors, printers, keyboards, mice, and scanners. In order to arrange for pickup residents are required to call the Sanitation Department at (828) 419-9300 Ext. 602 Monday – Friday before 4:00 p.m. Calls for pickup received after 4:00 p.m. on Tuesday will be scheduled for the following week. These items will be taken to the Buncombe County Solid Waste Management Facility where they will be recycled along with the other electronics that the County receives.

Electronics are collected at the various Hard-to-Recycle Collections that include the rotating program (East, South, West Buncombe), and Asheville City Market (opening of season) and Greenlife Grocery (America Recycles Day, others intended).

Asheville Mall partnered with 5R Processors, Ltd. and Asheville GreenWorks in hosting a household electronics and select white goods collection in September 2011

Other opportunities also exist for residents in Buncombe County to drop-off or mail-in electronics. These opportunities are offered by local electronics sellers and other entities. Some of them are detailed below.

Dell and Goodwill Industries Reconnect Program

Goodwill, with support from Dell, accepts any brand of computer equipment in any condition from consumers and recycles it for free. The following items are accepted:

- Computers
- Monitors
- Printers
- Scanners
- Hard Drives (External or Internal)
- Keyboards
- Mice
- Speakers
- Cords & Cables
- Ink & Toner Cartridges
- Software
- Microsoft Xbox®
- Microsoft Zune®

- Microsoft-branded Webcams

Further information can be found at: <http://reconnectpartnership.com/locations.php?zip=28801>.

Harris Teeter and Engaged Recycling

Harris Teeter has partnered with Engaged Recycling to accept a wide variety of electronics. Participants use the Engaged Recycling web site to identify the electronic items they wish to donate, and determine if they are accepted. At the end of the process, participants are provided a postage paid shipping label they can print and use to ship the electronics free of charge.

Best Buy e-Cycle

Best Buy of Asheville (83 South Tunnel Road) accepts TVs, DVD players, computer monitors, audio and video cables, cell phones, and more. Most items are recycled free with a few restrictions.

Office Supply Stores and Other Independent Retailers

Staples now accepts electronics and other office supply stores have varied electronics recycling programs. Some independent retailers (e.g. Charlotte Street Computers) offer computer and/or electronics recycling.

6.12.2 Public Awareness and Education Program Activities

Buncombe County promotes the every Friday electronics waste collection events at the Solid Waste Management Facility through informational brochures, telephone calls, the solid waste department's website and the quarterly newsletter *One Persons Trash*, which is available in the Saturday newspaper as an insert. This newsletter is also circulated throughout the county and is available electronically on the department's website. Buncombe County has its own television channel and promotes the recycling facility regularly. The local news media News 13 has done several stories highlighting the television recycling program. The Buncombe Life newsletter highlights the information regularly and this newsletter is circulated throughout the county in all county offices and libraries. The City of Asheville and several other municipalities provide information about Buncombe County's electronics recycling program on their webpages. The City of Asheville's Sanitation Services webpage also provides links to Harris Teeter/Engaged Recycling's and Best Buy's e-Waste websites.

The public is made aware of the Town of Black Mountain's electronics recycling program through brochures, information on the Town's website, and also through information that is posted periodically in the local newspaper.

6.12.3 Tracking and Reporting

During FY 2011 Buncombe County accepted 91 tons of electronics at the Solid Waste Management Facility. In FY 2010, 145 tons were recycled, and in FY 2009, 90 tons were recycled. Buncombe County requires their HHW vendor to report the total tonnage of electronics collected at the HHW and report that amount to the County. All computer equipment, televisions and electronic equipment are invoiced separately. Each shipment is manifested and tonnages of electronics recycled are reported to Buncombe County on each invoice. The amount of televisions recycled will be tracked and recorded separately from other electronic equipment, and this information will be reported to the state annually as part of the required local government annual report.

The total tonnage of electronics equipment collected by Black Mountain will be reported through Buncombe County so that the tonnage is not duplicated.

6.12.4 Interaction Between Participating Local Governments

Buncombe County allows all residents of the County to drop-off electronics at the HHW building at the Solid Waste Management Facility each Friday from 9:00 am to 3:00 pm. Buncombe County makes this information available to the municipalities and encourages them to advertise the program through their webpages, recycling brochures, bill inserts, and other means they see appropriate.

The Town of Black Mountain will provide curbside pick-up of electronics for its residents. Buncombe County’s HHW facility will accept the televisions and electronic equipment collected from Black Mountain and will include the materials for recycling. At present time, no other local governments in Buncombe County are collecting electronic materials.

6.12.5 Accounting of Electronics Recycling Funds

The Buncombe County Solid Waste Department tracks the receipt and expenditure of electronics recycling funds in a separate account. A separate line item in the budget is used for revenues received from the state and expenses paid to electronics recycling. The expense of funds from the state program are tracked and only used in support of our electronics recycling program.

The vendor (currently 3RC) responsible for hauling away collected electronics waste from the Solid Waste Management Facility and special off-site electronics waste collection events is required to submit invoices to Buncombe County detailing the costs for electronics waste separate from other services (e.g. HHW management and disposal) that they provide. A separate line item in the budget for expenses specific to electronics recycling is used.

6.12.6 Intended Actions and Impediments

Table 6-16 lists the intended actions established by Buncombe County to meet their goals related to management of discarded electronics. There are no recognized, major impediments to implementing these actions.

Table 6-16. Collection of Discarded Electronics Intended Actions

Jurisdiction	Intended Action
Asheville	1. Continue to promote computer, television and other electronics donation.
	2. Partner with Buncombe County to offer one-day electronics donation events.
Buncombe County	3. Continue to accept electronics at the Landfill on a weekly basis.
	4. Continue to promote computer donation as a reuse method.

6.13 Management of Abandoned Manufactured Homes

6.13.1 Current Activities

House Bill 1134, which became effective July 1, 2009, encourages counties to develop plans that provide for the deconstruction of abandoned manufactured homes and the removal of reusable or recyclable components. The bill requires that each county consider whether to implement a program for the management of abandoned manufactured homes. Counties that decide not to implement a program must state in their Solid Waste Management Plan Update that they considered a program but decided against implementing one. Buncombe County has already begun a program for abandoned

manufactured homes. The Solid Waste Department will remove abandoned manufactured homes free of charge and upon request, given certain conditions are met. These conditions include:

- Property owner must have clear ownership of the mobile home and the property where the mobile home is located;
- This program is offered to private land owners. It is not available to mobile home park owners;
- The program is intended to be used by persons who are unable to remove the mobile home through their own means. Participants agree that they will not develop or sell their property for a period of at least 12 months following the removal of the mobile home. If development does occur within that time period, the property owner will reimburse the County for the removal of the home, as well as for associated administrative costs; and
- Participants agree to maintain their property following removal of the mobile home.

6.13.2 Intended Actions and Impediments

There are no intended actions or impediments related to this program element. In the near-term, Buncombe County plans to continue the program as it currently exists.

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Section 7

Program Costs

The local governments of Buncombe County provide a variety of solid waste services, some of which are self-performed while others are contracted to private haulers. The following paragraphs and tables present and compare program costs and residential user fees.

7.1 Summary of Program Costs

Table 7-1 describes annual costs per household of solid waste collection and disposal, reduction, reuse and recycling, and mulch/compost programs based on data reported by the County and municipal jurisdictions in their FY 2011 Solid Waste Management Annual Reports. It should be noted that each program's operation practices and costs are unique depending on the types of services they provide, how the service is delivered, and how costs are grouped/reported on the State's forms. Also, collection contract costs may include limited service to commercial entities which may artificially increase per household costs (e.g., Biltmore Forest). Therefore, caution should be exercised when comparing these costs.

Table 7-1 shows that the program cost and fees are widely variable across the municipal jurisdictions. The overall annual program cost per household ranges from approximately \$152 to \$253. All of the jurisdictions fund the program through their general fund/property taxes. Asheville and Weaverville also collect a household fee to help pay for the cost of residential recycling service.

7.2 County Enterprise Fund

Buncombe County operates its solid waste program as an enterprise fund. In the FY 2011 Solid Waste Department budget, tip fees account for 92 percent of revenue (not including interest on the enterprise fund balance). Additional revenue comes from recycling of white goods, gas rights payments at the old landfill, junkyard fees, reimbursements from the State, rental income and other minor sources. Revenues pay for the many of the activities and programs summarized in Section 6.

The County's landfill gas-to-energy facility became operational in November 2011 and now generates approximately \$25,000 to \$35,000 per month in revenue (before operation expenses) from the sale of electricity and renewable energy credits. Additional measures are being implemented to potentially sell greenhouse gas credits (also known as carbon credits) to help further offset solid waste program costs and pay for new programs. As additional waste is received and gas production, collection, and destruction increases, revenues will increase. This facility will provide revenue as long as sufficient quantities of gas are generated, which is expected to be at least 20 years from present.

7.3 Comparison of Disposal Costs

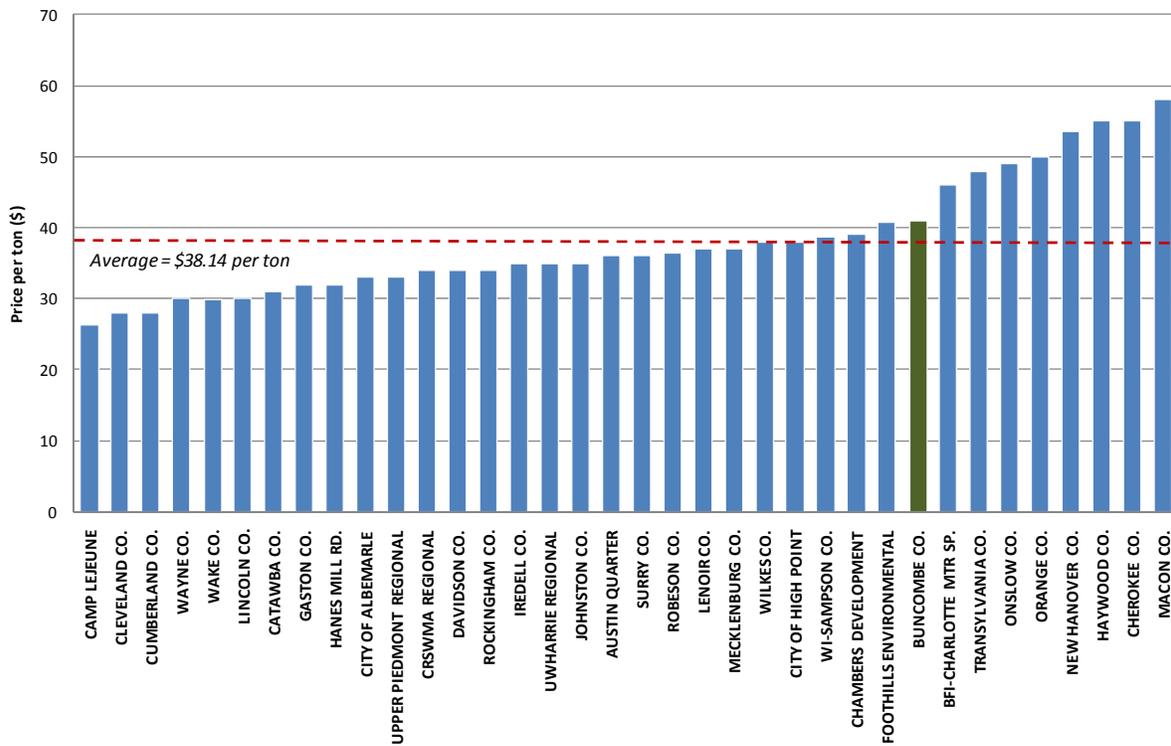
Disposal costs (i.e. tipping fees), are a significant component of the overall cost of solid waste services. As of the end of 2010, tipping fees at the Buncombe County Landfill remained slightly above average, compared to other landfills in the State, as shown in Figure 7-1. It should be noted that tipping fees in this figure reflect 2010 reported values and do not account for the \$2 per ton solid waste tax imposed by the State starting in 2008. More recent data for statewide tipping fees were not available for comparison.

Table 7-1
Buncombe County Plan Jurisdictions' Solid Waste Management Per-Household Program Costs and User Fees
(Reported for FY11)

Jurisdiction	Summary of Program Service Costs for FY11						Summary of Household User Fees for FY11			User Fees
	Collection and Disposal (\$/HH/YR)	Reduction, Reuse and Recycling (\$/HH/YR)	Yard Waste Program (\$/HH/YR)	Overall Program Cost (\$)	Number of Households	Overall Program Cost per Household (\$/HH/YR)	Solid Waste User Fee (\$/month)	Recycling User Fee (\$/month)	Yard Waste User Fee (\$/month)	Total Residential User Fees (\$/HH/YR)
Asheville	\$100.73	\$33.85	\$34.56	\$4,877,853	29,150	\$167.34	--	\$2.95	--	\$35.40
Biltmore Forest	\$128.21	\$16.21	\$62.34	\$132,324	640	\$206.76	--	--	--	--
Black Mountain	\$103.87	\$26.66	\$36.88	\$679,247	4,036	\$168.30	--	--	--	--
Montreat	\$108.46	\$21.92	\$29.23	\$105,665	662	\$159.61	--	--	--	--
Weaverville	\$132.03	\$19.53	NP	\$333,435	2,200	\$151.56	--	\$2.23	--	\$26.76
Woodfin	\$164.38	\$36.89	NP	\$506,957	2,000	\$253.48	\$12.83	\$2.61	\$5.56	\$252.06
Buncombe County	\$52.88	\$7.33	\$1.60	\$6,150,818	99,512	\$61.81	--	--	--	--

Notes:
 Certain municipalities also provide services to some commercial entities, and the total costs shown includes that cost.
 NP = Not provided; "Overall Program Cost" reflects the cost of all three services.
 Source: Solid Waste and Materials Management Annual Reports, July 1, 2010 - June 30, 2011

Figure 7-1
North Carolina MSW Landfill Tipping Fees at End of FY 2010 (\$/ton)
(State Solid Waste Tax is not included)



Section 8

Disaster Debris and Animal Mortality Management

8.1 Disaster Debris Management

Significant quantities of vegetative and other debris were generated during flooding leftover from when Hurricane Ivan passed through in 2004. This event served as a reminder that natural disasters, whether it be hurricanes, floods, tornado, earthquakes, ice storms are other events may results in large amounts of vegetative debris that must be managed.

In the event of a debris-generating disaster, debris would be temporarily stored at the old Buncombe County Landfill, the current landfill (pending approval from the SWS), or one of several private facilities which have applied or are applying for approval to serve as temporary debris storage and reduction sites. Vegetative matter would be reduced and used as ADC or given away for landscaping use. Additional temporary satellite sites for debris management have been considered by the County, but no sites are currently approved for use by the State.

No intended actions have been established by the jurisdictions of Buncombe County that relate to disaster debris management. The lack of formal disaster debris management plans and permitted debris management sites is recognized as an impediment to effectively responding to a disaster which generates large quantities of debris.

8.2 Animal Mortality Management

In the event of a natural disaster or epidemic, the County would not accept animal carcasses for burial at the Landfill. Instead, Federal and State Department of Agriculture recommendations should be followed which suggest that animals should be buried where they were raised, using certain approved disposal methods. Since livestock operations are not abundant in Buncombe County, the potential for needing to bury large numbers of animal carcasses are not anticipated.

Buncombe County does accept (farm) animal carcasses at the Landfill for a fee of \$50.00. The landfill does not accept any animal carcasses without knowing the cause of death. Animals which die of diseases are generally not accepted.

There is an incinerator at the Western Animal Disease Diagnostic Laboratory in Arden that is operated as a division of the North Carolina Department of Agriculture. The Western Animal Disease Diagnostic Laboratory is a branch laboratory within this system that assists owners and their veterinarians in diagnosing diseases of livestock and poultry. The facility utilizes a pathological incinerator during their normal operations as a method for disposing of animal carcasses.

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Section 9 Resolutions

All local government resolutions adopting the Buncombe County Solid Waste Management Plan for the 2012 to 2022 planning period are included in the following pages.

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RESOLUTION NO. 12- 114

RESOLUTION TO APPROVE THE 2012 UPDATE TO THE TEN YEAR SOLID WASTE
MANAGEMENT PLAN FOR THE JURISDICTION OF BUNCOMBE COUNTY

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

WHEREAS, better planning for solid waste will protect public health and the environment, provide for an improved solid waste management system, improve utilization of our natural resources, and control the cost of solid waste management; and

WHEREAS, North Carolina General Statute 130A-309A(b) requires that each unit of local government, either individually or in cooperation with other units of local government, to update their ten year solid waste management plan at least every three years; and

WHEREAS, the City of Asheville was actively involved with the plan's development and will be represented throughout the planning period;

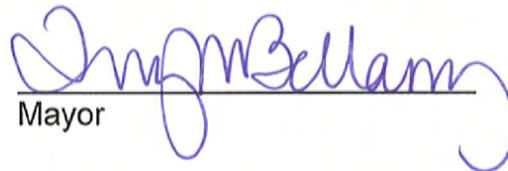
NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ASHEVILLE THAT:

The Council of the City of Asheville approves and adopts the 2012 Update to the Ten Year Solid Waste Management Plan for the Jurisdiction of Buncombe County.

Read, approved and adopted this the 22nd day of May, 2012.



City Clerk



Mayor

Approved as to form:



City Attorney



Resolution to Approve the Buncombe County Solid Waste Management Plan

WHEREAS, better planning for solid waste will protect public health and the environment, provide for an improvised solid waste management system, improve utilization of our natural resources, and control the cost of solid waste management and;

WHEREAS, NC General Statute 130 A-309.09A(b) requires each unit of local government, either individually or in cooperation with other units of local government, to develop a 10-year comprehensive solid waste management plan, and

WHEREAS, the Town of Biltmore Forest was actively involved with the plan's development and will be represented throughout the planning period;

NOW, THEREFORE BE IT RESOLVED that the Town of Biltmore Forest hereby approves and adopts the Buncombe County Solid Waste Management Plan.

Adopted this 9th day of May, 2012

ATTEST:

Nelson E. Smith

Nelson E. Smith – Town Clerk

George F. Goosmann III

George F. Goosmann, III, Mayor



TOWN OF BLACK MOUNTAIN

160 Midland Avenue
Black Mountain, NC 28711

BoA Regular Session
June 18, 2012
Agenda Item 3-G

RESOLUTION R-12-10

RESOLUTION OF THE BOARD OF ALDERMEN TO APPROVE THE BUNCOMBE COUNTY SOLID WASTE MANAGEMENT PLAN FOR THE TOWN OF BLACK MOUNTAIN

WHEREAS, better planning for solid waste will protect public health and the environment, provide for an improved solid waste management system, improve utilization of our natural resources, and control the cost of solid waste management; and

WHEREAS, North Carolina General Statute 130A-309.09A(b) requires each unit of local government, either individually or in cooperation with other units of local government, to develop a 10-year comprehensive solid waste management plan; and

WHEREAS, the Town of Black Mountain was actively involved with the plan's development and will be represented throughout the planning period.

NOW THEREFORE, BE IT RESOLVED by the Board of Aldermen of the Town of Black Mountain hereby approves and adopts the Buncombe County Solid Waste Management Plan.

READ, APPROVED AND ADOPTED this 18th day of June, 2012.

Carl R. Bartlett, Mayor

ATTEST:

Darlene R. Whisenant, Town Clerk

Albert F. Richardson, Jr.,
Interim Town Manager

RESOLUTION # %&!\$* !%&

RESOLUTION APPROVING THE BUNCOMBE COUNTY
SOLID WASTE MANAGEMENT PLAN – 2012 UPDATE

WHEREAS, better planning for solid waste will protect public health and the environment, provide for an improved solid waste management system, improve utilization of our natural resources, and control the cost of solid waste management; and

WHEREAS, NC General Statute 130 A-309.09A(b) requires each unit of local government, either individually or in cooperation with other units of local government, to develop a ten-year comprehensive solid waste management plan; and

WHEREAS, Buncombe County adopted its original plan in 1997, and the plan has been updated every third year since then; and

WHEREAS, the 2012 update to the Buncombe County Solid Waste Plan was completed in cooperation with the Buncombe County Environmental Affairs Board and all six municipalities, and was made available for public review and comment as well; and

WHEREAS, the plan presents a progressive vision for managing solid waste in Buncombe County through the development of intended actions for solid waste planning elements; and

WHEREAS, the Board supports the plan as a collective effort to address solid waste disposal through reduction, recycling and reuse, composting, and other elements necessary to effectively manage solid waste generated in Buncombe County.

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners for the County of Buncombe as follows:

1. That the Board hereby approves and adopts the Buncombe County Solid Waste Management Plan – 2012 Update.
2. That this Resolution shall be effective upon its adoption.

Adopted this 19th day of June, 2012.

ATTEST:


Kathy Hughes, Clerk to the Board

BOARD OF COMMISSIONERS
FOR THE COUNTY OF BUNCOMBE

By: 
David Gantt, Chairman

APPROVED AS TO FORM:


Michael Frue, County Attorney



TOWN OF MONTREAT

P. O. Box 423
Montreat, NC 28757
Tel: (828)669-8002 Fax: (828)669-3810
www.townofmontreat.org

RESOLUTION #12-06-0001 APPROVING THE 2012 BUNCOMBE COUNTY SOLID WASTE MANAGEMENT PLAN

WHEREAS, solid waste planning protects public health and the environment, provides for an improved solid waste management system, improves utilization of our natural resources and controls the cost of solid waste management, and;

WHEREAS, North Carolina General Statute 130A-309A(b) requires each local government unit to develop a Ten Year Solid Waste Management Plan and update the Plan every three years; and

WHEREAS, Buncombe County's original Plan was adopted in 1997 and has been updated every three years with cooperation from each of the six represented municipal partners; and

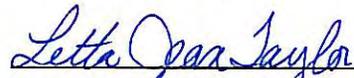
WHEREAS, the 2012 Plan Update was prepared in accordance with the 2012 Solid Waste Management Plan Guidance; and

WHEREAS, the Plan serves as both a reference for the public and local governments of Buncombe County and as a guide for a comprehensive solid waste management system serving residents, institutions and businesses;

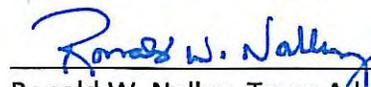
NOW, THEREFORE, BE IT RESOLVED that the Town of Montreat Board of Commissioners hereby adopts and approves the 2012 Buncombe County Solid Waste Management Plan.

READ, APPROVED AND ADOPTED, this 14th day of June, 2012.





Letta Jean Taylor, Mayor



Ronald W. Nalley, Town Administrator

ATTEST:

I hereby certify this is a true and correct copy of this Resolution, duly adopted by the Town of Montreat on the 14th day of June, 2012, as it appears of record in the official minutes.

Misty R. Gedlinske
Misty R. Gedlinske, Town Clerk



**TOWN OF WEAVERVILLE
RESOLUTION IN SUPPORT OF THE UPDATED BUNCOMBE
COUNTY SOLID WASTE MANAGEMENT PLAN**

WHEREAS, pursuant to NC General Statute 130A-309A(b), each unit of local government is required to develop a Ten Year Solid Waste Management Plan and update the Plan every three years; and,

WHEREAS, in Buncombe County, the original plan was adopted in 1997 and has been updated every third year since; and,

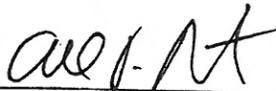
WHEREAS, this 2012 Plan Update, completed in cooperation with all six local municipal governments, was prepared in accordance with the latest Ten Year Solid Waste Management Plan Guide; and,

WHEREAS, the proposed plan presents a progressive vision for managing solid waste in Buncombe County through the development of intended actions for solid waste planning elements.

NOW, THEREFORE, BE IT RESOLVED that the Town Council of the Town of Weaverville does hereby endorse the efforts of Buncombe County and approves the "Solid Waste Management Plan 2012 Update.

Read, approved, and adopted this the 21st day of May, 2012.

Signed:



Allan P. Root, Mayor

Attest:



Shelby Shields, Town Clerk



Town of Woodfin

90 Elk Mountain Road
Woodfin, NC 28804
PH: (828) 253-4887
FX: (828) 253-4700

Resolution:

Passed May 15, 2012

Resolution to Approve the Buncombe County Solid Waste Management Plan for 2012-2022

WHEREAS, better planning for solid waste will protect public health and the environment, provide for an improved solid waste management system. Improve utilization of our natural resources, and control the cost of solid waste management, and;

WHEREAS, North Carolina General Statute 130 A-309.09A (b) requires each unit of local government, either individually or in cooperation with other units of local government, to develop a 10-year comprehensive solid waste management plan, and;

WHEREAS, the Town of Woodfin was actively involved with the plan's development and will be represented throughout the planning period, then;

NOW, THEREFORE BE IT RESOLVED that the Board of Aldermen of the Town of Woodfin hereby approves and adopts the Buncombe County Solid Waste Management Plan for the period between 2012 and 2022.

Ayes

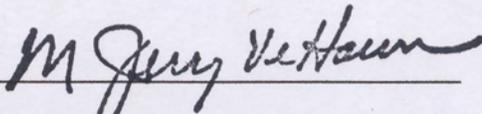
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Nays

N/A

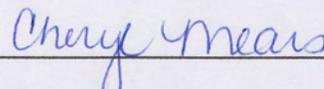
Abstains

N/A



M. Jerry VeHaun
Mayor of Woodfin

ATTEST: _____



Cheryl Mears
Town Clerk

Section 10 Ordinances

Local ordinances pertaining to solid waste management in Buncombe County are available at the following locations:

Buncombe County (Article II, Section 62):

www.buncombecounty.org/common/solidWaste/SolidWasteOrdinanceAmendment_09109.pdf

Asheville (Chapter 15):

http://library.municode.com/HTML/12499/level2/PTIICOOR_CH15SOWAMA.html

Biltmore Forest (Chapter 9):

http://biltmoreforesttownhall.homestead.com/Code_of_Ordinances_Dec_13_2011.pdf

Black Mountain (Title V, Chapter 50):

<http://www.townofblackmountain.org/ordinances.htm>

Montreat (Chapter G, Article II):

<http://www.townofmontreat.org/Ordinances.htm>

Weaverville (Chapter 22):

<http://www.weavervillenc.org/ordinances>

Woodfin (Not available on-line):

Woodfin Town Office, 90 Elk Mountain Rd, Woodfin, NC 28804 (828) 253-4887

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Appendix A

Public Comments on 2012 Plan Update

A draft of the Plan was placed in all Buncombe County Public Libraries for public review and comment. The draft Plan was also posted on Buncombe County's web site. Paid advertising notices of the opportunity to review the plan were placed in the Asheville Citizen-Times and Mountain Xpress (see notice in Section 2).

A public comment period spanned May 1 through May 14, 2012. An additional opportunity for public input was provided at a Public Meeting held on May 10, from 4:00 to 6:00 pm at the Veteran's Services Building at 199 College Street in Asheville.

Public comments were submitted by the organization, agencies, and individuals listed below. The submitted comments are included in this appendix and have been addressed as appropriate in the Final Plan Update.

- David Brigman (Buncombe County Environmental Affairs Board Member) and Ashley Featherstone of the Western North Carolina Air Quality Agency.
- Marilyn Sobanski, Rainbow Recycling (Black Mountain area)

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Boyer, John

From: Ashley Featherstone [Ashley.Featherstone@buncombecounty.org]
Sent: Friday, April 27, 2012 5:07 PM
To: Boyer, John
Cc: David Brigman
Subject: FW: Solid Waste Management Plan - Review Period

Follow Up Flag: Follow up
Flag Status: Flagged

John,

David Brigman and I reviewed the Solid Waste Management Plan and had a couple of comments to provide. We are not sure if either of these are relevant, but wanted to pass them on just in case they might be.

First, we noticed on page 3-1, Table 3-1 mentions waste associated with "MSD Industrial." We assume that is sewage sludge or other waste from MSD. We wanted to make sure that you were aware that most of the sewage sludge from MSD of Buncombe County is combusted in their sewage sludge incinerator, which is permitted by our agency. Since sewage sludge is not considered solid waste, we did not think that should be mentioned under the incinerator section, but wanted to point that out just in case it was relevant.

Also, with regards to Section 8.2 where Animal Mortality Management is mentioned, this may not be relevant either, but there is an incinerator at the Western Animal Disease Diagnostic Laboratory in Arden that is operated as a division of the North Carolina Department of Agriculture. The Western Animal Disease Diagnostic Laboratory is a branch laboratory within this system that assists owners and their veterinarians in diagnosing diseases of livestock and poultry. The facility utilizes a pathological incinerator during their normal operations as a method for disposing of animal carcasses. It may not be relevant to the document since it looks like you are mainly addressing animal carcasses from natural disasters, but we wanted to let you know about it just in case. This incinerator is also permitted by our agency.

One other comment, I noticed that you mentioned Asheville Green Works and their former name Quality Forward on page 6-19, but when you also mentioned them on page 6-10 (last paragraph), you referred to them as Quality Forward and left out the new name (Asheville Green Works).

Thanks,
Ashley

Ashley Featherstone
Engineering Supervisor
WNC Regional Air Quality Agency
49 Mount Carmel Road
Asheville, NC 28806
Phone: 828.250.6778
Fax: 828.250.6222
<http://www.wncairquality.org>

All correspondence to and from this address may be subject to the N.C. Public Records Law and may be disclosed to third parties.

From: David Brigman
Sent: Wednesday, April 25, 2012 3:31 PM
To: Ashley Featherstone
Subject: FW: Solid Waste Management Plan - Review Period

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Notes & Suggestions for Draft 2012 SWMP Update
submitted by Marilyn Sobanski, Rainbow Recycling, Black Mountain

p. 34 of PDF (p.6-6, Table 6-4)

MISSPELLING

z Buncombe County totals account for waste collected by its' franchise hauler and recyclables collected via the blue bag program as well as residential waste from **unincorporated** Buncombe County who do not subscribe to the curbside collection program.

p.36 of PDF (p. 6-8)

INFO TO ADD

Bulbs from businesses and schools are not accepted. Residents can also take used bulbs to any Home Depot store. **Lowe's also accepts CFL's.**

p.37 of PDF (p. 6-9)

FYI

Several of the educational institutions in Buncombe County offer in-house recycling programs.

FYI: A number of the schools in the county have cartridge recycling programs (ex – Isaac Dickson, Francine Delaney, Blk Mtn Primary, Owen HS) as well. May be handled through the PTA or Green Club.

p.37 of PDF (p. 6-9)

NOTE: All but the first of the bulleted items are efforts of Rainbow Recycling (RR has also collected cartridges at its events and donated them to BM Primary)>

In the Black Mountain area, businesses, local artists, and community organizations such as Rainbow Recycling have offered and promoted reuse and recycling opportunities in a variety of ways, including:

- Black Mountain Primary Parent Teacher Association (PTA) recycling printer cartridges;
- Initiation and collection of compostable food scraps from food vendors at the Sourwood Festival for Community Garden composting (a Rainbow Recycling effort);
- Continued special recycling collections of packaging and other items (e.g. flower pots) with provision and promotion of local reuse;
- Redistribution of packaging from large businesses in Asheville to small businesses and artisans and galleries in Black Mountain; and
- Promotion and networking of local businesses, artisans and galleries for intercommunity reuse of packaging (arranged and facilitated by Rainbow Recycling).

NOTE: A special example of reuse: Local growers are invited to select flower pots (sizes, types) they can reuse at collection events held by Rainbow Recycling (separately or co-sponsored). The Black Mountain Beautification Committee also obtains pots for their work with several inmates of the Swannanoa Correctional Center for Women in their greenhouse where they grow plants and flowers for beautifying downtown Black Mountain.

p.38 of PDF (p. 6-10)

TO ADD in 6.3.4 Reuse Programs and Opportunities

Trash Inc, a creative reuse center in Asheville [www.trashincasheville.com], offers both opportunities for donating and obtaining an extensive variety of items for reuse. [Also has gallery & classroom space, activities for creating w/recycled materials.]

p. 47 of PDF (p. 6-19)

Rainbow Recycling, a local grassroots organization within the Black Mountain-Swannanoa Valley area, helps promote outreach and education efforts throughout the community by educating citizens through public events, presentations, news articles, and newsletters (www.rainbowrecycling.org).

ADD additional info here (or elsewhere)

Rainbow Recycling publishes a recycling-reuse guide [*what can be taken where*] for the Black Mountain area and for Buncombe County.

p. 47 of PDF (p. 6-19)

TO ADD in Education in the Schools

Evergreen Community Charter School has student-led trash audits. [Evergreen won the National Green Ribbon School award.]

p. 51 of PDF (p. 6-23)

Electronics are collected at the various Hard-to-Recycle Collections that include the rotating program (East, South, West Buncombe), and Asheville City Market (opening of season) and Greenlife Grocery (America Recycles Day, others intended).

Asheville Mall partnered with 5R Processors, Ltd. (WI) and Asheville GreenWorks in hosting a household electronics and select white goods collection on September 17, 2011. [*one this summer?*]

p. 52 of PDF (p. 6-24)

NOTE: Office supply stores have varied electronics recycling programs – Staples now takes all electronics.

Local independent retailers such as Charlotte Street Computers also offer computer and electronics recycling. E-cycleUs, formerly its subdivision, serves as a local processor for recycling this category of waste.

Appendix B

Progress Summary – Intended Actions

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Appendix B Progress Summary of Intended Actions

The NC solid waste management planning guidelines specify that each jurisdiction in the County is to supply information on the status of implementing "Intended Actions" listed in the previously submitted Plan. This table summarizes the status of intended actions from the 2009 Plan Update.

Jurisdiction	Intended Action - <u>Collection</u>	Implementation Status	Comments
Buncombe County	Citizens will continue to be provided access to collection service information on the County hotline, web site, and government channels and through bill-inserts and the County's quarterly newspaper.	Completed	This action has been accomplished and continues.
Buncombe County	The County will continue to collect special wastes such as HHW, electronics, oil, batteries, tires, white goods, at the landfill on designated collection days.	Completed	This action has been accomplished and continues.
Montreat	Expand the Town-offered refuse and recycling collection services to include the private (tax-exempt) lodges, conference center and Montreat College.	Completed	This action has been accomplished, however, Montreat College decided to use a private firm for collection.
Jurisdiction	Intended Action - <u>Waste Transfer</u>	Implemented Actions	Comments
	<i>No previously identified intended actions</i>		
Jurisdiction	Intended Action - <u>Incineration</u>	Implemented Actions	Comments
	<i>No previously identified intended actions</i>		
Jurisdiction	Intended Action - <u>Waste Disposal</u>	Implemented Actions	Comments
Buncombe County	Continue to monitor and record conditions at the Landfill as part of the landfill bioreactor project (EPA Project XI).	Completed	This action has been accomplished and continues.
Buncombe County	Begin using ground-up yard waste as alternative daily cover for the Subtitle D Landfill.	Completed	This action has been accomplished and continues.
Buncombe County	Complete construction of the landfill-gas-to-energy facility at the Subtitle D Landfill and explore revenue sources including energy sale, renewable energy credit sale, and greenhouse gas credit sale.	Completed	This action has been accomplished and the County is receiving revenue from energy and renewable energy credit sales.
Jurisdiction	Intended Action - <u>Waste Reduction</u>	Implemented Actions	Comments
Asheville	Promote the Back Yard Composting Program through sale of subsidized compost bins (pending 2009 DPPEA grant award) and other means.	Completed	This action has been accomplished and continues.
Asheville and Buncombe County	Provide education of waste reduction through Land of Sky Regional Council and Mobile Environmental Learning Center.	Completed	This action has been accomplished and continues.
Asheville and Buncombe County	The WRP Program, County and City solid waste staff, and others, will continue to work with businesses, industries, and institutions to further their waste reduction efforts.	Completed	This action has been accomplished and continues.
Buncombe County	County Departments will strive to use fewer disposable items, purchase products with longer life, and print all documents double-sided.	Completed	This action has been accomplished and continues.

Jurisdiction	Intended Action - <u>Recycling and Reuse</u>	Implemented Actions	Comments
Asheville	Continue to provide recycling collection service information on the City's web site, government channel, fliers, service guides, press releases, newspaper, and community newsletters.	Completed	This action has been accomplished and continues.
Asheville	Consider developing additional educational and promotional materials for the recycling program.	Completed	This action has been accomplished and continues (e.g., magnets and vehicle wraps have been developed).
Asheville	Continue to explore opportunities to promote and increase efficiency and effectiveness of the City's recycling program.	Completed	This action has been accomplished and continues.
Buncombe County	Consider implementation of a bin collection system to increase participation in the recycling program.	Evaluated but did not implement	Blue bags must still be used for curbside collection in unincorporated parts of the County.
Buncombe County	Target rural areas who do not currently subscribe to curbside programs to increase recycling participation.	In progress	The County continues to explore options to increase participation in curbside collection of refuse and recycling.
Buncombe County	Revise educational fliers on an ongoing basis and encourage citizens to recycle all materials offered for collection through County web site, government channels, periodic fliers, quarterly newsletters and public awareness days.	Completed	This action has been accomplished and continues.
Buncombe County	Promote LOSRC's Waste Reduction Partners as a means to help find markets for reusable items.	Completed	This action has been accomplished and continues.
Buncombe County	Evaluate the feasibility of mattress recycling at the landfill.	Completed	This action has been accomplished. Mattress recycling was determined to be too labor intensive and costly at present.
Black Mountain	Continue distribution of recycling brochures and calendars to new residents to the area and continue to provide access to the collection service/recycling information on the town web site.	Completed	This action has been accomplished.
Black Mountain	Explore opportunities with Buncombe County to promote the possibility of a recycling drop-off center at the east end of the County or the possibility of a bi-monthly/recycling drop-off event.	Evaluated but did not implement	Due to the downturn in the economy and mis-use of the Town's cardboard drop-off facility, the Town evaluated but decided not to build a recycling drop-off center.
Montreat	Distribute recycling information via newsletters, brochures, and via the web site.	Completed	This action has been accomplished.
Jurisdiction	Intended Action - <u>Composting and Mulching</u>	Implemented Actions	Comments
Asheville and Buncombe County	Continue promotion of the Back Yard Composting Program and consider conducting additional bin distribution and composting education programs.	Completed	This action has been accomplished.
Jurisdiction	Intended Action - <u>Education</u>	Implemented Actions	Comments
Asheville and Buncombe County	Continue the current outreach programs to keep waste reduction in the forefront of the Asheville community's mind.	Completed	This action has been accomplished and continues.
Asheville and Buncombe County	Continue to provide annual funding to the MELC and use it to conduct environmental education activities at public functions, when feasible.	Completed	This action has been accomplished.
Buncombe County	Continue to post the County's quarterly newsletter "One Person's Trash" on the County web site and distribute fliers in utility bills detailing solid waste services offered.	Completed	This action has been accomplished and continues.
Buncombe County	Provide educational opportunities in the classroom as requested.	Completed	This action has been accomplished and continues through MELC.
Buncombe County	Provide assistance to any municipality that requests help with solid waste-related educational activities.	Completed	This action has been accomplished and continues.

Appendix B
Progress Summary of Intended Actions

Jurisdiction	Intended Action - <u>Special Waste</u>	Implemented Actions	Comments
Buncombe County	Provide technical assistance to establish methods for special waste separation if requested.	Not implemented	WRP performs this task, upon requests.
Buncombe County	Promote tire collection services and provide information about these services on the County web site.	Completed	This action has been accomplished and continues.
Buncombe County	Continue to inform the public that the County's Solid Waste Facility takes white goods at no cost.	Completed	This action has been accomplished and continues.
Buncombe County	Continue to work with LOSRC, Cooperative Extension Service, auto dealers, repair shops, and parts stores to distribute educational pamphlets explaining correct disposal methods and disposal locations for used oil and batteries.	Completed	This action has been accomplished and continues.
Buncombe County	Continue to offer the HHW permanent collection program and participate in the regional cooperative efforts through the LOSRC.	Completed	This action has been accomplished and continues.
Jurisdiction	Intended Action - <u>Illegal Disposal/Litter</u>	Implemented Actions	Comments
	<i>No previously identified intended actions</i>		
Jurisdiction	Intended Action - <u>Purchasing of Recycled Products</u>	Implemented Actions	Comments
Buncombe County	Establish a policy to buy recycled paper and other "sustainable" products.	In progress	This action continues with efforts such as the County's sustainability plan.
Asheville	Establish a policy to buy recycled paper and other "sustainable" products. As described by the City's Sustainability Master Plan.	Completed	This action has been accomplished.
Jurisdiction	Intended Action - <u>Disaster Response</u>	Implemented Actions	Comments
	<i>No previously identified intended actions</i>		
Jurisdiction	Intended Action - <u>Collection of Discarded Electronics</u>	Implemented Actions	Comments
Black Mountain	Hold an annual Computer Recycling Event, pending availability of funds.	Completed	This action has been accomplished (and continues as part of the Eco Flea Market).
Asheville and Buncombe County	Continue to promote computer donation as a reuse method.	Completed	This action has been accomplished and continues.
Buncombe County	Continue to accept electronics at the Landfill on a weekly basis	Completed	This action has been accomplished and continues.
Jurisdiction	Intended Action - <u>Program Costs and Financing</u>	Implemented Actions	Comments
	<i>No previously identified intended actions</i>		

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Appendix C

Electronics Recycling Contract and Certification

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Household Hazardous Waste Disposal Service Agreement

This agreement, made and entered into this 6TH day of May, 2011, by and between **Buncombe County and Resource Recovery and Reduction Company, LLC** (hereinafter 3RC):

Whereas, 3RC operates a permitted solid waste facility, presently located at 1401 South Martin Luther King, Jr. Drive, Winston-Salem, North Carolina;

Whereas, Buncombe County determined that it is in the best interest of the residents of Buncombe County for 3RC to provide HHW disposal services to the residents of Buncombe County;

Now, inconsideration of the mutual promises and obligations herein set forth, the parties agree as follows:

1. **Household Hazardous Waste:** This term, or HHW, shall have that meaning set forth in CFR 40 of the Federal Regulations.
2. **Scope of Services:** 3RC shall provide recycling/disposal services to the residents of Buncombe County as outlined in Exhibit A, which include but are limited to, the following:
 - Price changes will be communicated in writing at least (30) days prior to the changes taking effect.
 - Lab-packing will be completed by 3RC.
 - 8-Hour Hazwopper refresher training will be provided by 3RC.
 - 3RC will continue to provide on-the-job training through frequent visits to Buncombe County.
 - 3RC will continue to be "on-call" for any problems, challenges, assistance that Buncombe County HHW employees may need.
 -
3. **Contract Period:**
 - The contract period will be for two years with an option on (2) two year renewals thereafter.
 - The contract shall commence on May 6, 2011.
4. **Insurance Requirements:**
 - 3RC shall be responsible for its work and every part thereof, and for all equipment, appliance and property of any and all description used in connection therewith. 3RC assumes all risk of direct and indirect damage or injury to the property of persons used or damage or injury to the property of persons used or employed on or in connection with the work

contracted for, and of all damage or injury to any person or property wherever located, resulting from any action, omission, commission or operation under the contract, or in connection in any way whatsoever with the contracted work.

- Workers' Compensation Insurance, in accordance with statutory requirements and Employer's Liability Insurance with limits of not less than \$100,000 for each occurrence.
- General Liability Insurance, including minimum limits of \$1,000,000 per occurrence combined single limit for bodily injury liability and property damage liability. This shall include premises and/or operations, independent contractors, products and/or completed operations, broad from property damage and explosion, collapse and underground damage coverage, sudden and accidental pollution losses, and a contractual liability endorsement.
- Automobile Liability Insurance, covering owned, non-owned, hired vehicles and trailers used in connection with the performance of services, providing bodily injury damage and property damage limits of not less than \$1,000,000 combined single limit/aggregate.
- Pollution Liability Insurance: Shall have minimum limits of \$1,000,000 per occurrence and \$3,000,000 aggregate and shall include non sudden accidental occurrences for contractor landfill.

5. Special Requirements

- Current, valid insurance policies shall be maintained for the duration of the project. There shall be a 30 day notice of cancellation or change
- It shall be the responsibility of 3RC to insure all subcontractors comply with the same insurance requirements as stated in this contract.

6. **Hold Harmless:** 3RC agrees to indemnify and hold harmless Buncombe County from all loss, liability, claims or expense arising from bodily injury, including death or property damage to any person or persons caused in whole or in part by the negligence or willful misconduct of 3RC except that same are caused by the negligence or misconduct of Buncombe County.

7. **Price.** In consideration of the services provided, Buncombe County shall pay 3RC according to the Price Schedule outlined in Exhibit A.

In Witness Whereof, the parties have caused this agreement to be executed by their duly authorized representative on the day and year set forth.

BUNCOMBE COUNTY:

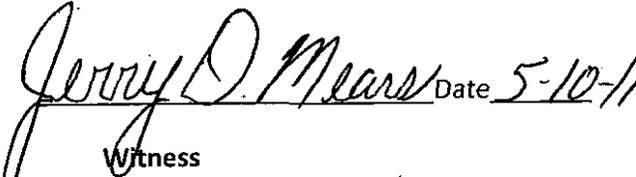
3RC: RESOURCE RECOVERY AND REDUCTION
COMPANY, LLC

 Date 5/10/11

Jon Creighton/Assistant County Manager

 Date 5/15/11

Michele E. Sawka/President

 Date 5-10-11
Witness

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CERTIFICATE OF REGISTRATION

This is to certify that

Electronic Recyclers International, Inc. (ERI)

293 NC 740 Hwy, Building 45, Badin, North Carolina 28009 USA

operates an

Environmental, Health and Safety Management System

which complies with the requirements of

e-Stewards Standard for Responsible Recycling and Reuse of Electronic Equipment®:2009

* This Environmental, Health and Safety Management System is also in compliance with ISO 14001:2004.

for the following scope of registration

The registration covers the Environmental, Health and Safety Management System for electronic recycling and asset management.

Certificate No.: CERT-0057901
File No.: 1621589
Issue Date: September 13, 2011

Original Certification Date: September 12, 2011
Current Certification Date: September 12, 2011
Certificate Expiry Date: September 11, 2014

Chris Jouppi
President,
QMI-SAI Canada Limited

Alex Ezrakhovich
General Manager,
SAI Global Certification Services Pty Ltd



e-Stewards®

Registered by:
SAI Global Certification Services Pty Ltd, 286 Sussex Street, Sydney NSW 2000 Australia with QMI-SAI Canada Limited, 20 Carlson Court, Suite 100,
Toronto, Ontario M9W 7K6 Canada (SAI GLOBAL). This registration is subject to the SAI Global Terms and Conditions for Certification. While all due care
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To verify that this certificate is current, please refer to the SAI Global On-Line Certification Register: www.qmi-saiglobal.com/qmi_companies/



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CERTIFICATE OF REGISTRATION

This is to certify that

Electronic Recyclers International, Inc. (ERI)

293 NC 740 Hwy, Building 45, Badin, North Carolina 28009 USA

operates an

Environmental, Health and Safety Management System

which complies with the requirements of

Responsible Recycling®:2008

for the following scope of registration

The registration covers the Environmental, Health and Safety Management System as it applies to electronic recycling and asset management.

Certificate No.: CERT-0057902

File No.: 1621589

Issue Date: September 13, 2011

Original Certification Date: September 12, 2011

Current Certification Date: September 12, 2011

Certificate Expiry Date: September 11, 2014

Chris Jouppi
President,
QMI-SAI Canada Limited

Alex Ezrakhovich
General Manager,
SAI Global Certification Services Pty Ltd

The organization has been audited by a certification body that is in conformance with ISO/IEC 17021 requirements and applicable ANAB requirements. The organization is found to be in conformance with all requirements of the Responsible Recycling® Standard.



Responsible Recycling®

Registered by:
SAI Global Certification Services Pty Ltd, 286 Sussex Street, Sydney NSW 2000 Australia with QMI-SAI Canada Limited, 20 Carlson Court, Suite 100,
Toronto, Ontario M9W 7K6 Canada (SAI GLOBAL). This registration is subject to the SAI Global Terms and Conditions for Certification. While all due care
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CERTIFICATE OF REGISTRATION

This is to certify that

Electronic Recyclers International, Inc. (ERI)

293 NC 740 Hwy Building 45, Baden, North Carolina 28009 USA

operates an

Occupational Health & Safety Management System

which complies with the requirements of

OHSAS 18001:2007

for the following scope of registration

The Registration covers the Occupational Health and Safety Management System for the recycling of electronic waste.

Certificate No.: CERT-0057774
File No.: 1621589
Issue Date: August 9, 2011

Original Certification Date: August 8, 2011
Current Certification Date: August 8, 2011
Certificate Expiry Date: August 7, 2014

Chris Jouppi
President,
QMI-SAI Canada Limited

Alex Ezrakhovich
General Manager,
SAI Global Certification Services Pty Ltd



OHSAS 18001

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CERTIFICATE OF REGISTRATION

This is to certify that

Electronic Recyclers International, Inc. (ERI)

293 NC 740 Hwy Building 45, Baden, North Carolina 28009 USA

operates an

Environmental Management System

which complies with the requirements of

ISO 14001:2004

for the following scope of registration

The Registration covers the Environmental Management System for electronic recycling.

Certificate No.: CERT-0057773
File No.: 1621589
Issue Date: August 9, 2011

Original Certification Date: August 8, 2011
Current Certification Date: August 8, 2011
Certificate Expiry Date: August 7, 2014

Chris Jouppi
President,
QMI-SAI Canada Limited

Alex Ezrakhovich
General Manager,
SAI Global Certification Services Pty Ltd



ISO 14001



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CERTIFICATE OF REGISTRATION

This is to certify that

Electronic Recyclers International, Inc. (ERI)

2860 Southeast Avenue, Fresno, California 93725 USA

Refer to Attachment to Certificate of Registration dated August 15, 2011 for additional certified sites

operates a

Quality Management System

which complies with the requirements of

ISO 9001:2008

for the following scope of registration

**The Registration covers the Quality Management System for
electronic recycling and asset management.**

Certificate No.: CERT-0057763
File No.: 1618309
Issue Date: August 15, 2011

Original Certification Date: August 12, 2011
Current Certification Date: August 12, 2011
Certificate Expiry Date: August 11, 2014

Chris Jouppi
President,
QMI-SAI Canada Limited

Alex Ezrakhovich
General Manager,
SAI Global Certification Services Pty Ltd



ISO 9001



Registered by:
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Toronto, Ontario M9W 7K6 Canada (SAI GLOBAL). This registration is subject to the SAI Global Terms and Conditions for Certification. While all due care
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ATTACHMENT TO CERTIFICATE OF REGISTRATION

These sites are registered under Certificate No: CERT-0057763 issued on August 15, 2011

File No.		Effective Date
1618310	Electronic Recyclers International, Inc. (ERI) 3243 Southeast Avenue, Suite 108, Fresno, California 93725 USA	August 12, 2011
1618311	Electronic Recyclers International, Inc. (ERI) 3243 Southeast Avenue, Suite 104, Fresno, California 93725 USA	August 12, 2011
1618808	Electronic Recyclers International, Inc. (ERI) 2302 West Valley Highway, Suite 300, Auburn, Washington 98001 USA	August 12, 2011
1618884	Electronic Recyclers International, Inc. (ERI) 500 Enterprise Drive, Suite 400, Flower Mound, Texas 75028 USA	August 12, 2011
1618895	Electronic Recyclers International, Inc. (ERI) 6750 East 46th Avenue Drive, Suite 400, Denver, Colorado 80216 USA	August 12, 2011
1621587	Electronic Recyclers International, Inc. (ERI) 2540 Airwest Boulevard, Plainfield, Indiana 46168 USA	August 12, 2011
1621588	Electronic Recyclers International, Inc. (ERI) 89R Cross Street, Holliston, Massachusetts 01746 USA	August 12, 2011
1621589	Electronic Recyclers International, Inc. (ERI) 293 NC 740 Hwy Building 45, Badin, North Carolina 28009 USA	August 12, 2011

These registrations are dependent on Electronic Recyclers International, Inc. (ERI) (File No. 1618309) maintaining their scope of registration to ISO 9001:2008

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