

Section 4

Waste Management and Reduction Programs

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;
- Disaster Response;
- Collection of Discarded Electronics; and
- Management of Abandoned Manufactured Homes

In addressing this planning requirement, the local jurisdictions of Cabarrus 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 solid waste goals presented in Section 2 are also discussed in the following pages.

4.1 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.

4.1.1 Current Activities

Residential Source Reduction

Cabarrus 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 “Resource Roundup” which provides tips and information about specific source reduction opportunities such as junk mail reduction;
- A Christmas tree recycling program that allows residents to drop-off trees at the landfill;
- Educational events organized throughout the month of April to celebrate Earth Day that promotes reduction and recycling.

Other source reduction programs offered include grasscycling, backyard composting classes, xeriscaping, enviroshopping, and non-toxics use.

Since the last Plan Update, Cabarrus County has renewed the franchise agreement with Allied Waste Services and BFI Waste Systems, which included curbside recycling for all residents that subscribe to Allied Waste/BFI for residential refuse collection. The franchise agreement was extended to December 2012. Each customer was issued an 18 gallon bin that is picked-up on a weekly basis.

Table 4-1. Waste Reduction - Intended Actions

<u>Jurisdiction</u>	<u>Intended Action</u>
<i>Cabarrus County</i>	1. Continue to provide waste reduction information on the County web site. 2. Encourage County Departments to use fewer disposable items, purchase products that have a longer life expectancy, and print all documents double-sided as appropriate. 3. Continue to offer programs to schools, community organizations, and at community events throughout the year that target waste reduction.
<i>All Jurisdictions</i>	4. Continue public education on recycling, waste reduction, and the use of non-toxics. 5. Work collectively with local businesses and industries to further their waste reduction efforts.

Commercial, Institutional, Industrial (CII) and C&D Waste Reduction

Nearly all jurisdictions have taken steps to reduce in-house waste generation through increased use of electronic communication, promoting recycling in government offices, and other means. Cabarrus County offers technical assistance to CII establishments in the following ways:

- Identify recycling haulers;
- Provide recommendations on self-waste assessments; and
- Assist with the design of a collection system.

Since the last Plan Update, Cabarrus County has formed a partnership with City of Concord Environmental Service and the Cabarrus County School District to bring mixed-paper recycling to each school in the district. The program is sponsored in part by the NC Department of Pollution Prevention and Environmental Assistance (NC DPPEA) through a grant that funded the purchase of recycling bins for each of the district’s 2000 school classrooms.

4.1.2 Intended Actions

Table 4-1 lists the intended actions established by the jurisdictions of Cabarrus 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 C.

4.2 Collection

4.2.1 Current Activities

Table 4-2 provides a summary of curbside collection services offered in Cabarrus County for residential and commercial solid waste, recyclables, yard waste, and bulky waste.

Solid Waste Collection

Collection frequencies, providers, and methods vary among the municipal jurisdictions, but there are some similarities. One private firm, Allied Waste, is under contract with the County and the jurisdictions of Harrisburg and Midland to collect solid waste. In addition, in the unincorporated areas of Cabarrus County, residents can subscribe to Allied Waste or other private haulers for curbside solid waste collection. Alternatively, containers for municipal solid waste (MSW) are provided at the County’s convenience center located at the County operated C&D landfill. The final disposal site for solid waste from the residential sources of the County, jurisdictions, unincorporated areas, and the convenience center is the Charlotte Motor Speedway landfill (CMS).

The town of Mount Pleasant uses its own fleet of vehicles and personnel to collect solid waste. Waste Management is under contract with the City of Kannapolis for solid waste collection.

The majority of CII generated solid waste is collected by private haulers on the open market.

Town or County staff collects solid waste from small businesses or CII establishments as requested and self-hauls to a disposal facility.

Recyclables Collection

As noted in Table 4-2, all Cabarrus County jurisdictions provide curbside collection of residential recyclables using a private contractor, with the exception of Kannapolis. The City of Kannapolis is evaluating implementing a curbside recycling program. The Town of Midland implemented a curbside recycling program in April 2008. The County curbside recycling program was implemented in January 2008.

Recyclables are collected on a weekly basis by all jurisdictions that offer curbside pick-up. Alternatively, residents can drop-off recyclables at the convenience center at the County Household Hazardous Waste (HHW) facility, the convenience center at the Cabarrus County Landfill, or the drop-off center in Kannapolis.

Yard Waste

Curbside yard waste collection service is offered in three municipalities on a weekly or every other week basis depending on the season. Each of the three municipalities uses their own staff and equipment to collect yard waste. Cabarrus County accepts yard waste at the landfill but does not currently offer curbside pick-up.

The Town of Harrisburg collects loose leaves, grass clippings, and limbs on a weekly basis. Residents that have yard waste exceeding a full truckload (16'x6'x4') are charged \$100. The yard waste collected by the Town is disposed at the Highway 49 Reprocessing Center.

The City of Kannapolis is under contract with Waste Management to provide yard waste collection services. Loose leaves, limbs, and bagged yard waste is collected in season beginning mid-October and ending late winter on a bi-weekly basis. Yard waste is picked-up on a weekly basis during non-leaf season.

Bulky Waste	Provider
Request	Town
Fee (if less than a truck load)	Waste Management
Fee	No added fee
Request	Allied Waste
Fee (\$15 each additional item)	Town
Request	No added fee
Request	No Curbside Collection

Table 4-3. Collection - Intended Actions

<u>Jurisdiction</u>	<u>Intended Action</u>
City of Kannapolis (Cabarrus and Rowan Counties)	1. Evaluate implementing a curbside recycling collection service.

Cabarrus County	2. Citizens will continue to be provided access to collection service information on the County hotline, web site, government channels, through bill-inserts, and the County's quarterly newsletter. 3. The County will continue to collect special wastes such as HHW, electronics, oil, batteries, tires, white goods, at the landfill on designated collection days. 4. If, for any reason, Allied Waste or Waste Management is unable to continue services with their respective jurisdictions, each company is responsible for finding a collection

Bulky Waste

Bulky waste collection is offered in three municipalities on a weekly or by-request basis at no cost to the residents. With enactment of the new Franchise Agreement with Allied Waste, curbside collection of bulky waste is now offered in Cabarrus County weekly at no cost, and residents can still drop-off bulky waste at the landfill for a fee.

Residents of the Town of Midland can use a private hauler or contact Allied Waste for bulky waste collection at a cost of \$35 for the first item and \$15 for each additional item.

4.2.2 Intended Actions

Table 4-3 lists the intended actions established by the jurisdictions of Cabarrus 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 C.

Recycling and Reuse

Cabarrus County's recycling program includes: curbside recycling for residents in the incorporated and unincorporated areas, 2 recycling convenience centers and 1 drop-off station used by residences and CII generators, backyard composting training, HHW management for residents, and electronics

recycling. In addition, educational information on recycling is provided through school and

organizational presentations, outreach through a quarterly newsletter, and local access cable television and other media. In addition to these services, the department hosts special recycling-related events periodically. The total tons of material recycled and waste disposed by each jurisdiction during FY 2008 is shown in Table 4-4.

The County, in partnership with the City of Concord, is currently evaluating the development of a materials recovery facility (MRF) or transfer station (TS) capable of reducing operating costs, managing the long-term disposal needs of the area and increasing diversion of materials from landfills. In addition, not only would the jurisdictions that are part of this Plan Update have access to the MRF or TS, neighboring counties and jurisdictions would be able to use the facility assuming it is beneficial to their needs.

4.3.1 Residential Recycling

The Cabarrus County recycling program consists of curbside recycling for residents in incorporated and unincorporated areas who subscribe with Allied Waste under terms of the County's franchise agreement and three recycling convenience centers throughout the county that collect glass, steel and aluminum cans, plastic, newspaper, magazines, catalogs, phone books, junk mail, office paper, and

**Table 4-4
Waste Disposed and Recycled by Cabarrus County Jurisdictions, FY 2008**

Jurisdiction	2008 Population ¹	Tons of Waste Disposed	Tons Recycled ³	Percentage of Waste Recycled 2008
Town of Harrisburg	6,100	2,895	274	9.5%
City of Kannapolis (Cabarrus County)	34,400	16,550	-	-
Midland	3,200	1,673	36	2.2%
Town of Mount Pleasant	1,600	676	-	-
Cabarrus County ²	170,400	320,186	2,683	0.8%
Overall	215,700	341,980	2,993	0.9%

Notes:

- From the State's Office of State Budget and Management
http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic_data/population_estimates.shtm
- Waste disposed and tons recycled shown in the table reflects residential, commercial, and C&D wastes collected through curbside collection, convenience centers, or accepted at the County landfill, including white goods, HHW, yard waste, and tires.
- Source: FY2008 Solid Waste Management Annual Reports/County Annual Waste Disposal Report

cardboard. Curbside recycling is collected on the same day as refuse collection. Table 4-5 lists the materials collected curbside by each jurisdiction.

The three convenience centers are located in Kannapolis, Concord, and at the County landfill. Four convenience centers were available to residents during the previous Plan Update, however, the recycling center in Midland closed on December 31, 2007.

The County operated convenience center at the landfill is open to the public Monday through Friday 8:00 a.m. to 5:00 p.m. and Saturday 8:00 a.m. to 2:00 p.m. The convenience center offers expanded materials collection. In addition to the materials listed for convenience centers, the landfill convenience center also accepts scrap metal, white goods, tires, used motor oil and filters, batteries, electronics, and yard waste.

The HHW collection facility, located in Concord, accepts household hazardous waste and electronics on the first Wednesday of every month from 8:00 a.m. to 4:00 p.m. and the third Saturday of every month from 8:00 a.m. to 1:00 p.m. The convenience center also accepts non-hazardous recyclable material every Tuesday and Thursday from 8:00 a.m. to 5:00 p.m. In addition to convenience center materials, the center accepts white goods, scrap metals, oil and filters, used antifreeze, batteries, printer cartridges, and undeveloped photographic film.

A latex paint swap shop is in use at the HHW facility. Approximately 8,343 gallons of paint were recovered in FY 2008.

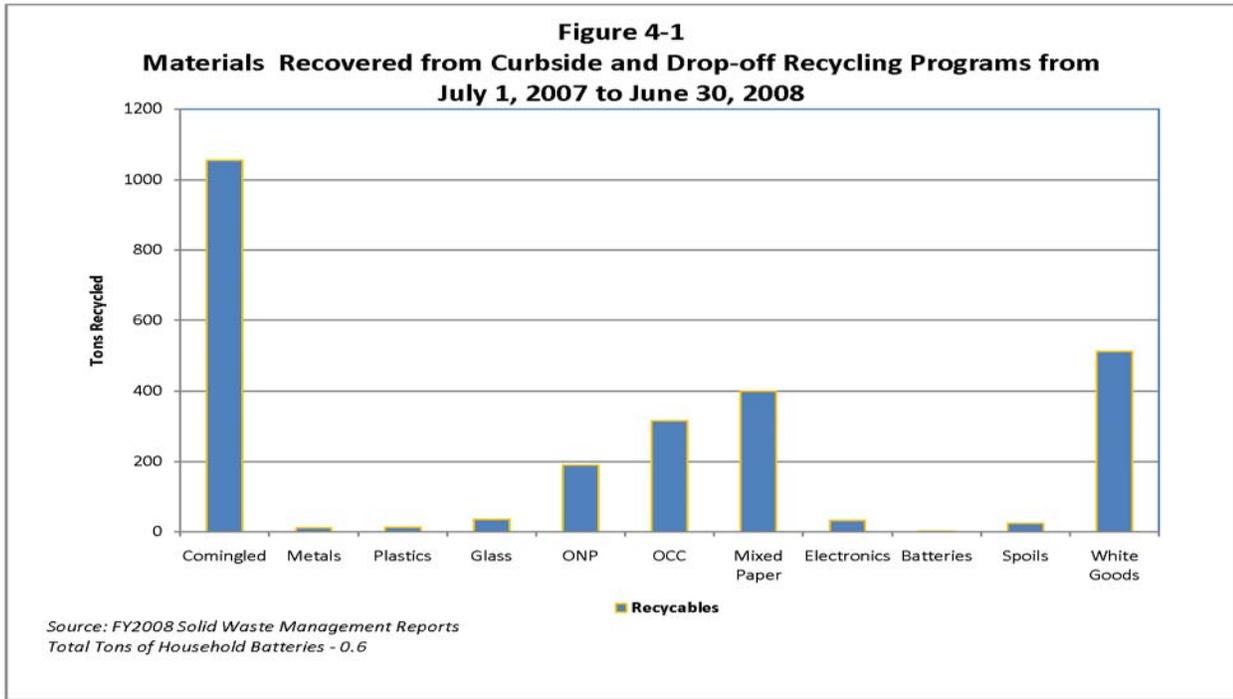
Tons of the type of materials recycled through the curbside and drop-off programs for FY 2008 are shown in Figure 4-1.

**Table 4-5
Recyclables Collected through Residential Curbside Recycling Programs**

Jurisdiction	ONP	OCC	OMG	Junk Mail/OP	PB	AL	Steel	Glass	PB# 1-2	Other
Town of Harrisburg	✓	✓	✓	✓	✓	✓	✓	✓	✓	White Goods
City of Kannapolis (Cabarrus County)	No Curbside Collection									White Goods
Midland	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Town of Mount Pleasant	✓	✓	✓	✓	✓	✓	✓	✓	✓	White Goods
Cabarrus County	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Key:

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|---------------------------------------|----------------------------|--------------------|--------------------------|
| ONP = Newspaper | OCC = Corrugated Cardboard | PB = Phone Books | Glass = Glass containers |
| Junk Mail/OP = Junk mail/office paper | AL = Aluminum cans | Steel = Steel cans | OMG = Magazines |



4.3.2 CII Recycling and Reuse Programs

Jurisdictional-sponsored recycling programs that serve the CII sector include:

- Cabarrus County’s three multi-material recycling facilities accept several types of materials from business, including cardboard, computers, electronics, and scrap metal.
- Several jurisdictions allow certain small businesses to participate in their residential curbside collection program.
- In partnership with the City of Concord, Cabarrus County is providing mixed paper recycling for each school in the Cabarrus County School District. Each classroom has been provided one recycling container. In addition, roll out carts have also been distributed. City and County rear-loading compactor trucks collect from each school weekly.
- Cabarrus County offers free on-site waste assessments to businesses and assistance in establishing recycling programs.

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.

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 becomes effective October 1, 2009, prohibits the disposal of motor oil filters, rigid plastic containers, wooden pallets, and oyster shells in landfills. Businesses that generate these items will need to identify disposal alternatives, or in the case of wooden pallets, they can place them in a C&D landfill in addition to recycling.

A significant opportunity exists to enhance county-wide recycling by increasing participation in the CII sector. Counties that have established mandatory recycling ordinances for businesses, including Mecklenburg, Durham, and Fairfax (Virginia), have reported gains in recycling (see inset).

4.3.3 In-House Recycling Programs

In addition to the public program, the County operates an internal electronics, print cartridge, and office paper collection program. The County rear-loading truck is used for mixed paper collections and Allied Waste provides collection of commingled bottles under the County's franchise agreement. Traditional recyclables such as glass, plastic, and aluminum and steel cans are collected from all County offices on a weekly basis.

Furthermore, the County has a departmental supply online swap shop. Surplus supplies are provided to local non-profit agencies.

4.3.4 C&D Recycling

The County is examining the feasibility of recycling C&D wastes disposed at their landfill. County works with C&D producing companies to recycle and reuse materials and estimates that upwards of 25,000 tons of C&D wastes are diverted from local landfills. The County reported a reduction of approximately 16,000 tons of C&D waste disposed of at the County landfill from FY 2007 to FY 2008 based on the annual waste disposal reports.

4.3.5 House Bill 1134

House Bill 1134, which becomes 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. Cabarrus County has determined that abandoned manufactured homes are currently not a significant threat to public health and the environment in Cabarrus County, and therefore has chosen not to develop a plan at this time. The County will continue to evaluate this

Mandatory Recycling Programs

Some counties have improved waste reduction rates by establishing recycling ordinances. Some examples include:

Durham County, NC: In 1997 Durham passed an ordinance making it unlawful to place target recyclables in the garbage. The ordinance applies to all waste generators - residential, commercial, and industrial. Target recyclables currently include: aluminum and steel cans, glass bottles and jars, newspaper, and corrugated cardboard.

Mecklenburg County, NC: Effective in 2002, Mecklenburg County established an ordinance that requires businesses that generate 16 cubic yards or greater of trash per week (with some exceptions) to recycle corrugated cardboard and office paper.

Fairfax County, VA: All non-residential establishments must recycle mixed paper and cardboard. Establishments that meet certain criteria (e.g., having an annual total waste stream of 100 tons or more) must also recycle metal, used motor oil, glass, aluminum/tin cans, cloth, plastic, clean wood, and yard waste.

decision, and if conditions warrant, develop a written plan and include it as a component of the next Solid Waste Management Plan Update.

4.3.6 Intended Actions

Table 4-6 lists the intended actions established by the jurisdictions of Cabarrus 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 C.

Table 4-6. Recycling and Reuse - Intended Actions

Jurisdiction	Intended Action
<i>City of Kannapolis (Cabarrus/ Rowan)</i>	1. Consider implementation of a bin collection system to increase participation in the recycling program.
<i>Cabarrus County</i>	2. The County is attempting to establish a bottle and can recycling program in conjunction with Cabarrus County Schools. 3. The County’s Recycling Coordinator will continue to identify new recycled material markets and developing good relationships with all municipalities and CII waste generators. 4. Target rural areas who do not currently subscribe to curbside programs to increase recycling participation. 5. Revise educational flyers on an ongoing basis and encourage citizens to recycle all materials offered for collection through the County web site, government channels, periodic flyers, quarterly newsletters and public awareness days. 6. Continue to evaluate the feasibility of C&D recycling at the landfill. 7. Continue working with and encouraging C&D producing companies to recycle and reuse steel, wood, timbers, concrete, and brick. 8. Explore recycling alternatives for wooden pallets in lieu of ban 10-1-2009 on landfill disposal. 9. Initiate advertisement and promotional programs to capture a greater market share of recyclable materials at convenience centers and multi-material recycling centers and continue to evaluate recycling market development opportunities.
<i>All Jurisdictions</i>	10. Partner with the County to implement recycling at special events.

4.4 Composting and Mulching

4.4.1 Current Activities

As shown in Table 4-2, three jurisdictions offer curbside yard waste collection on a weekly or every-other-week basis depending on the season. The amounts collected and processed, the end-use, and the destination of the yard waste is shown in Table 4-7.

The County accepts yard waste from residents at the County landfill and charges fees based on the volume disposed. During the previous Plan Update, yard waste was grinded and available to residents for a fee. However, new guidelines from the DWM prohibit the distribution of mulch from yard waste. In addition, residents are allowed to drop-off Christmas trees for recycling beginning December 26 until the end of January at no cost.

A comprehensive backyard composting program was initiated by the County in 2003 in cooperation with the jurisdictions. The County offers composting classes two days in the fall and spring at the HHW facility. Residents that attend are provided with a free recycling bin and literature on how to compost yard and food waste. Composting classes are currently offered at no cost to residents; however, a cost may be implemented in the future to cover materials. The County also offers composting programs to schools, community organizations, and at community events throughout the year. In FY 2008, the County distributed 65 bins for composting.

The Town of Harrisburg currently does not have a composting program. However, contact

**Table 4-7
Municipal Yard Waste Program Summary, FY 2008**

Jurisdiction	Tons Processed	End Use	Destination
Town of Harrisburg	3,665	Mulched and/or Landfilled	Hwy 49 C&D Landfill
City of Kannapolis (Cabarrus County)	1,778	Composted/Mulched	City Owned Collection Site
Midland	-	-	-
Town of Mount Pleasant	218	Mulched and/or Landfilled	Town Owned Facility
Cabarrus County	4,000	Mulched and/or Landfilled	C&D Landfill
Total	9,661		

Source: FY2008 Solid Waste Management Annual Reports

information for Compost Central, a company in Mecklenburg County that specializes in composting and yard waste recycling, is provided on the Town’s website for interested residents.

Yard waste collected by the City of Kannapolis is disposed at a City owned collection site. Compost generated from the yard waste is given away annually at no cost to residents. Approximately 3,500 tons of compost is given away by the City of Kannapolis on a yearly basis while some of the compost is used for internal landscaping projects.

The Town of Mount Pleasant collects yard waste such as limbs and grass clippings on a weekly basis. In addition, during the non-leaf collection period the town will pickup leaves placed in transparent bags. Loose leaves are collected during leaf season beginning on October 1. Residents are notified by public notice on water bills when the loose leaf season ends. A majority of the yard waste collected goes to a Town-run facility where it is composted and used for internal landscaping projects.

There are currently two permitted LCID facilities in Cabarrus County that accept yard waste. These include the Cabarrus LCID landfill and the Tarheel Organic Reprocessing Facility located in Harrisburg. The yard waste is grinded and resold as mulch.

The Town of Midland does not offer curbside yard waste collection. However, burn permits are

available to residents.

Fats, oils, and greases (FOG) are a component of food waste that, when improperly disposed down drains clog sewer lines and cause backups. Currently, the HHW facility accepts yellow grease (cooking oil) for recycling.

4.4.2 Intended Actions

Table 4-8 lists the intended actions established by the jurisdictions of Cabarrus 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 C.

4.5 Incineration

4.5.1 Current Activities

Waste incineration is not practiced in Cabarrus County. 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. Cabarrus 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 2012.

Table 4-8. Composting and Mulching - Intended Actions

Jurisdiction	Intended Action
<i>Town of Midland</i>	1. Continue issuing burn permits to reduce yard wastes.
<i>Cabarrus County</i>	2. Partner with the jurisdictions to educate the public about FOG causing sewer blockages and restrictions and promote alternatives such as composting.
<i>All Municipalities</i>	3. Continue to provide education on composting/mulching opportunities through websites, community events, and government channels.

4.5.2 Intended Actions

There are no current intended actions established by the jurisdictions of Cabarrus County related to incineration. The amount of waste generated in the region is not currently considered sufficient to make an incineration or WTE facility economically feasible, at least compared to existing disposal technologies. Therefore, cost is an impediment to further pursuing incineration or WTE at this time.

generators haul a small amount of waste outside of the County, although most is disposed at the CMS landfill as shown in Table 4-9. There are no transfer stations within the County. In addition, the Uwharrie Environmental Materials Recovery Facility accepts mixed waste to be sorted and sent to recycling facilities.

4.6 Waste Transfer

4.6.1 Current Activities

Private hauling firms contracted by CII waste

The East Spencer Waste Transfer Facility discontinued operations in August 2008. Waste transferred from the facility was disposed at the CMS landfill.

**Table 4-9
Summary of MSW Transferred Outside Cabarrus County (tons)**

Facility Name	2004	2005	2006	2007	2008
BFI-Charlotte Motor Speedway (CMS) Landfill (NC)	150,130	159,831	168,278	180,439	160,981
Palmetto Landfill (SC)	0	0	0	257	9
Union County Landfill (SC)	0	0	0	0	12
Rowan County Landfill (NC)	20	199	850	1,895	631
Chambers Development Landfill (NC)	0	0	0	0	431
Uwharrie Environmental MRF/MWP Facility (NC)	148	142	139	71	88
Uwharrie Env. Reg. Landfill (NC)	94	0	153	0	10
East Spencer Transfer Facility	0	0	0	2,707	5,149
Total Out-of-County Disposal	262	341	1,142	4,930	1,181
Total In-County Disposal (at CMS Landfill)	150,130	159,831	168,278	183,146	166,130
Total MSW Disposal	150,392	160,172	169,420	188,076	167,311
Percent of Waste Transferred Out of County	0.2%	0.2%	0.7%	2.6%	0.7%

Notes:

1. Source: NCDENR DWM County Waste Disposal Reports (does not include C&D wastes).
2. In-County MSW disposed at the BFI-Charlotte Motor Speedway Landfill. In addition, MSW from the East Spencer Transfer Facility is disposed at the BFI-Charlotte Motor Speedway Landfill.

Table 4-10. Waste Transfer - Intended Actions

Jurisdiction	Intended Action
Cabarrus County	1. In cooperation with municipalities, evaluate the need for additional transfer stations based on waste flow and the location of future waste management sites.

In general, the County has transferred less than 1 percent of waste out-of-County from 2004 to 2008. It is anticipated that the amount of waste transferred out of the County will remain low for the next several years based on recent trends.

4.6.2 Intended Actions

Table 4-10 lists the intended actions established by the jurisdictions of Cabarrus County to meet their goals pertaining to waste transfer. A summary of progress made toward actions specified in the previous Plan Update is included in Appendix C.

4.7 Disposal

As of January 2008, there were ten permitted and active disposal facilities in Cabarrus County including one MSW landfill, two C&D landfills, two LCID facilities, two yard waste processing facilities, one medical waste disposal facility, and one tire and HHW facility. Table 4-11 lists these disposal facilities and their locations.

4.7.1 MSW Disposal

The County ceased using its landfill for municipal solid waste disposal after its closure in December 1997. MSW generated in the County, unincorporated areas, and the municipalities is disposed at the CMS Landfill. It is anticipated that MSW will continue to be disposed at the CMS landfill through the next Solid Waste Management Plan Update. Based on the average tons of MSW disposed per year, the CMS landfill currently has approximately 24 years of capacity remaining.

Figure 4-2 shows the amount of Cabarrus County-generated MSW disposed at the in-County CMS landfill, out-of-County, and out-of-State facilities for FY 2000 through 2008, based on County disposal reports provided by the State. The CMS Subtitle D Landfill has been accepting waste since March 6, 1992.

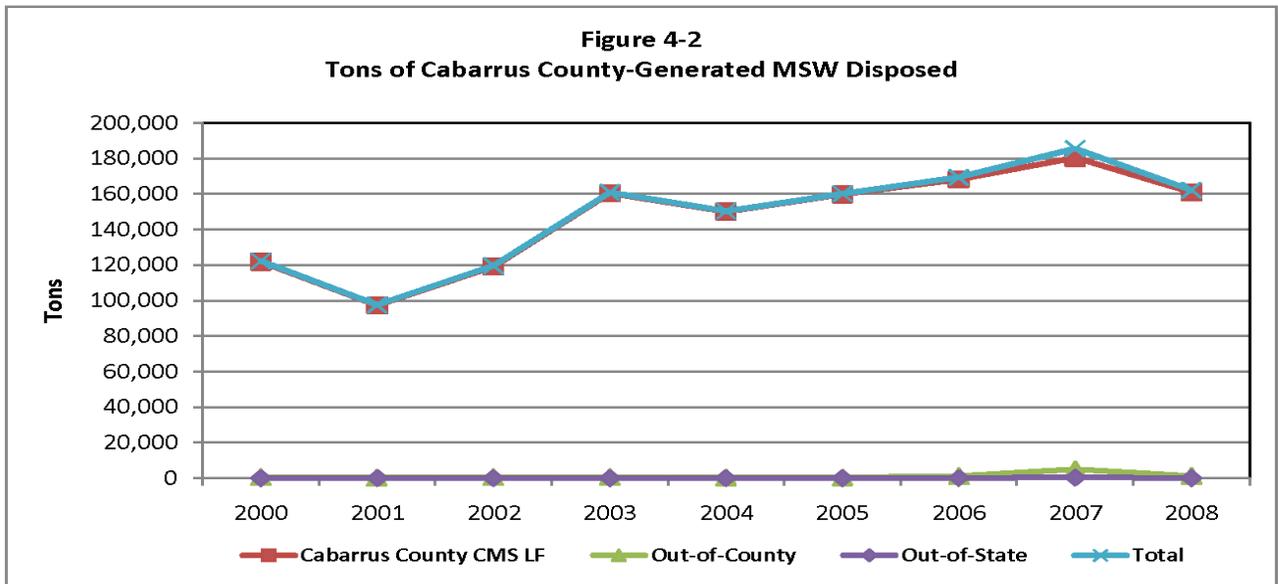


Table 4-11
Permitted Active Disposal Facilities in Cabarrus County

Waste	Permit #	Facility	Address	City
CD	1306-CDLF-2000	Highway 49 C&D Landfill and Recycling	2100 Speedrail Court	Harrisburg
CD	1302-CDLF-1998	Cabarrus County CDLF	4441 Irish Potato Road	Concord
HHW	1308-HHW-	Cabarrus County HHW Collection Facility	246 General Services Drive SW	Concord
LCID	13E-LCID-	Tarheel Organic Reprocessing Facility	8829 Rocky River Road	Harrisburg
LCID	13F-LCID-	Cabarrus LCID Landfill	5001 Morehead Road	Concord
Medical	1305TP-TP-	Stericycle	4403 Republic Court	Concord
MSW	1304-MSWLF-1992	BFI-Charlotte Motor Speedway Landfill	5105 Morehead Road	Concord
Tire	1303-TIRELF-1988	US Tire Disposal	6322 Poplar Trent Rd	Concord
YW	1307-COMPOST-	Tarheel Bark Company	8829 Rocky River Road	Harrisburg
YW	1309-COMPOST-	Highway 49 Reprocessing Facility	2100 Speedrail Court Road North	Harrisburg

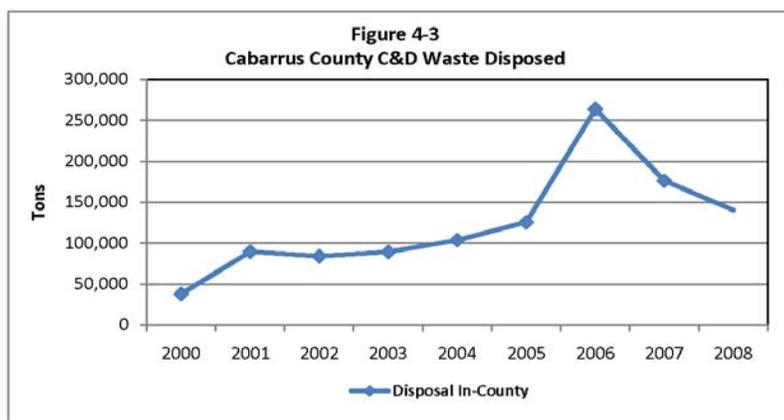
Source: NCDENR facility list by County at <http://wastenot.enr.state.nc.us/sw/swfacilitylist.asp>

4.7.2 C&D Disposal

There are currently two permitted and active C&D landfills in Cabarrus County, Highway 49 C&D Landfill and Recycling and the Cabarrus County landfill.

The County C&D expansion consisting of approximately 7.6 acres opened in December 2006. An additional C&D expansion is currently being evaluated by the County. At the current rate of disposal, the facility will reach capacity late-2010 to early-2011.

Figure 4-3 shows the amount of C&D waste from Cabarrus County sources that was distinguished from other MSW and disposed for FY 2000 through 2008.



4.7.3 LCID Disposal

North Carolina solid waste regulations preclude disposal of land clearing and inert debris (LCID), 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 currently two permitted and active LCID facilities in Cabarrus County.

As shown in Table 4-7, the municipalities reported collection of 9,661 tons of yard waste in FY 2008. It is unclear how much yard waste and vegetative matter from site clearing ended up in Cabarrus County LCID facilities since the State does not track this information.

In accordance with the County Emergency Operations Plan, the C&D landfill facility will accept and process disaster related debris in the event of a disaster. Inflow of disaster related debris will not impinge on normal day to day disposal activities.

Table 4-12. Waste Disposal - Intended Actions

<u>Jurisdiction</u>	<u>Intended Action</u>
<i>Cabarrus County</i>	1. Continue to evaluate long-term disposal capacity and alternatives in light of variations in waste generation.

4.7.4 Intended Actions

Table 4-12 lists the intended actions established by the jurisdictions of Cabarrus 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 C.

4.8 Education

4.8.1 Current Activities

The Cabarrus County jurisdictions 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 4-13 depicts the current education activities of the Cabarrus County jurisdictions.

Education for Residents

All Cabarrus County jurisdictions use their web sites to convey information regarding basic solid waste services including pickup schedules, procedures, acceptable materials, special waste pickups, fees, and contact information. Through print brochures, the “Resource Roundup” newsletter, and a web site table, the County offers a recycling guide offering facility locations and acceptable material lists. Furthermore, all municipal jurisdictions have established links to Cabarrus 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 quarterly newsletter developed by the County on waste reduction and recycling is available to residents through the County web site,

convenience centers, County government center, libraries, email, and some local businesses. Additional program-specific literature is produced and distributed as needed.

The County routinely provides information for residents on the local government public access television channel. Surveys are utilized at special events on HHW collection days to gauge community effectiveness and participation. Special events such as the County fair provide an additional platform for the distribution of educational information on waste reduction and recycling.

The County partnered with the City of Concord on an educational project which was partly funded by a 2009 grant from NC Department of Pollution Prevention and Environmental Assistance. The program aims to help residents more easily identify recycling options and to reduce confusion about which entity provides which service.

County staff is available to speak to schools, civic groups, neighborhood associations, or Scout troops about solid waste and recycling issues. Staff members welcome the opportunity to participate in school science fairs, career days, and Earth Day events. In addition, the specialists provide literature or advice to Girl and Boy Scouts working on environmental badges.

The City of Kannapolis provides residents with waste reduction and recycling information through the distribution of pamphlets, newspaper articles, mass mailings, and utility bills. Since the previous Plan Update, the City has hired a Community Outreach Coordinator to speak at community meetings and other events upon request. In addition, an Environmental Stewardship Committee was established in the spring of 2008 to

Table 4-13
Education Efforts Undertaken By Cabarrus County Jurisdictions

Jurisdiction	School	Radio/ TV	Newspaper	Mail/News- letter	Take- Home Items	Hotline	Web Site	Recycle Guys	Workshops	Internet Link to County Website	Events	Other
Town of Harrisburg					✓		✓			✓		Resident's Handbook, Utility Bills
City of Kannapolis (Cabarrus County)	✓		✓	✓	✓		✓			✓	✓	
Midland					✓		✓			✓		
Town of Mount Pleasant										✓		
Cabarrus County	✓	✓	✓	✓	✓	✓	✓	✓	✓	.	✓	RE-3 Campaign, Emails, Utility Bills

Source: 2008 Annual Reports submitted to N.C. DEM and information from municipal web sites.

assist with environmental issues, education, storm water, and curbside recycling.

The Town of Harrisburg will provide waste reduction and recycling information to residents on their water utility bill. The Town of Mount Pleasant provides pamphlets to residents that are available at Town Hall and online. Since the last Plan Update, Midland has discontinued circulating a quarterly newsletter that provided residents information on refuse collection and recycling due to economic conditions.

Education for CII Establishments

As discussed under the recycling planning element, Cabarrus County offers free on-site waste assessments to businesses and provides assistance in establishing recycling programs. The County also provides information specifically tailored to businesses on its web site such as oil filter recycling.

As Cabarrus County does not have an ordinance requiring recycling of certain materials by the CII sector, education and outreach activities geared toward this sector are critical to improve on the overall recycling rate in Cabarrus County.

Education for Schools

The recycling coordinator visits local schools during the year to provide presentations on recycling and waste reduction.

As discussed under the reduction planning element, Cabarrus County has formed a partnership with City of Concord Environmental Service and the Cabarrus County School District to bring mixed-paper recycling to each school in the district. The program is sponsored in part by the NC Department of Pollution Prevention and Environmental Assistance through a grant that funded the purchase of recycling bins for each of the district's 2000 school classrooms.

4.8.2 Intended Actions

Table 4-14 lists the intended actions established by the jurisdictions of Cabarrus County to meet their

Table 4-14. Education and Outreach - Intended Actions

<u>Jurisdiction</u>	<u>Intended Action</u>
<i>City of Kannapolis (Cabarrus/Rowan)</i>	1. The Environmental Stewardship Committee will evaluate additional means of providing educational information to residents.
<i>Cabarrus County</i>	2. Continue to post the County’s quarterly newsletter “Resource Roundup” on the County web site and distribute flyers in utility bills detailing solid waste services. 3. Use various means to educate the public about Cabarrus County facilities that can be used to dispose or recycle special wastes (including HHW), recyclable materials, and other waste types. 4. Provide assistance to any municipality that requests help with solid waste-related educational activities. 5. Provide educational opportunities in the classroom as requested.
<i>All Municipalities</i>	6. Improve and expand information available on the web site.

goals pertaining to education and outreach. A summary of progress made toward actions specified in the previous Plan Update is included in Appendix C.

4.9 Special Wastes

4.9.1 Current Activities

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

Household Hazardous Waste

The HHW facility is located at 246 General Services Drive in Concord, NC and accepts HHW materials from residents twice per month on the first Wednesday of every month from 8:00 am to 1:00 pm and the third Saturday of every month from 8:00am to 1:00pm.

Seven hazardous waste management firms are under contract to remove, transport, and dispose of the HHW. During FY 2008, Cabarrus County collected approximately 32 tons of HHW at a cost of \$35,000. Materials accepted include: pesticides, herbicides, batteries, antifreeze, used motor oil and filters, degreasers, dry chemical fire extinguishers,

fluorescent bulbs, paints, solvents, mercury thermometers, and others.

White Goods

White goods are collected at the HHW facility on HHW collection days and twice a week on Tuesday and Thursday. In addition, the County accepts white goods at the landfill Monday through Saturday.

All of Cabarrus County’s municipalities offer white goods collection either directly or through their contracted hauler. Three provide this service on a by-request basis while the City of Kannapolis offers this service weekly.

During FY 2008, Cabarrus County was able to recover 512 tons of white goods that were brought to its multi-material recycling facilities by the jurisdictions, their contract haulers, and others.

Tires

Cabarrus County only accepts waste tires from County residents at the landfill. There is no fee for tire disposal; however, residents are limited to 5 tires per truck load. A private company removes, transports, and disposes of the tires collected at the landfill. CII-generators can deliver waste tires to

US Tire Disposal in Concord. During FY 2008, 60 tons of tires were collected.

Used Motor Oil and Antifreeze

Used motor oil, filters, and antifreeze are accepted at the HHW facility, while the landfill site accepts motor oil and filters. Private firms remove and dispose of the used oil, filters, and antifreeze. During FY 2008, 8,300 gallons of used oil, 2 barrels of filters, and 310 gallons of antifreeze were accepted by Cabarrus County.

Batteries

Lead-acid batteries are accepted at the HHW facility and the landfill. During FY 2008, 711 lead-acid batteries were accepted by Cabarrus County.

e-Waste

Collection, disposal, and recycling of electronics such as computers and televisions is discussed in Section 4.13.

Animal Carcasses

Overall, animal mortality is not a significant problem in Cabarrus County. Waste Management picks up animal carcasses as part of the contract with the City of Kannapolis.

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 Cabarrus County, the potential for needing to bury large numbers of animal carcasses are not anticipated.

4.9.2 Intended Actions

Table 4-15 lists the intended actions established by the jurisdictions of Cabarrus 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 C.

4.10 Illegal Disposal/Litter

4.10.1 Current Activities

Curbside solid waste services are available to nearly all Cabarrus County’s residents. The remaining 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. Some of the current programs addressing litter and illegal

Table 4-15. Special Wastes - Intended Actions

Jurisdiction	Intended Action
<i>Cabarrus County</i>	<ol style="list-style-type: none"> 1. Provide technical assistance to establish methods for special waste separation if requested. 2. Continue to inform the public that the County’s Solid Waste Facility takes white goods at no cost. 4. Continue to work with auto dealers, repair shops, and parts stores to distribute educational pamphlets explaining correct disposal methods and disposal locations for used oil and batteries. 5. Continue to offer the HHW collection program.

dumping include:

- ✓ NC DOT Adopt-A-Highway
- ✓ NC DOT Litter Sweep
- ✓ NC DOC Inmate Crews
- ✓ NC DOC Maintenance Crews

The County and jurisdictions consider illegal disposal a minor problem and use the Sheriff’s Department to investigate complaints with the exception of the City of Kannapolis. The City of Kannapolis has a moderate problem with illegal disposal and uses City personnel to investigate complaints. Civil penalties and corrective measures are implemented as necessary to discourage illegal disposal.

4.10.2 Intended Actions

Table 4-16 lists the intended actions established by the jurisdictions of Cabarrus County to meet their goals pertaining to illegal disposal and litter. A summary of progress made toward actions specified in the previous Plan Update is included in Appendix C.

4.11 Purchasing Recycled Products

4.11.1 Current Activities

The County encourages their governmental departments to purchase recycled products and has 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.

Table 4-17. Purchasing Recycled Products Intended Actions

<u>Jurisdiction</u>	<u>Intended Action</u>
<i>All Jurisdictions</i>	1. Incorporate buy-recycled principles into current policies.

4.11.2 Intended Actions

Table 4-17 lists the intended actions established by the jurisdictions of Cabarrus County to meet their goals pertaining to purchasing recycled products. A summary of progress made toward actions specified in the previous Plan Update is included in Appendix C.

4.12 Disaster Response

4.12.1 Current Activities

Natural disasters including tornadoes, hurricanes, floods and earthquakes are unlikely for this region, yet ironically, significant quantities of vegetative and other debris were generated during flooding leftover from when Hurricane Ivan passed through in 2004. Ice storms also impart the possibility of large amounts of vegetative debris that must be managed.

The Emergency Management Division for the County handles all aspects of disaster response. In the event of a declared disaster, the County will apply for assistance through the Federal Emergency Management Administration (FEMA) under the Public Assistance (PA) Program. As discussed under the disposal planning element, the landfill will be used in the event of a disaster to process and manage debris. Copies of the County and City of Kannapolis Emergency Operation

Table 4-16. Illegal Disposal/Litter - Intended Actions

<u>Jurisdiction</u>	<u>Intended Action</u>
<i>Cabarrus County</i>	1. Continue working with law enforcement officers to enforce litter and illegal dumping laws. 2. Evaluate implementing a litter monitoring program should it be deemed a major problem in the future.

Plans are provided in Appendix D.

The County and municipalities should consider the value of participating in a FEMA pilot program that enhances the normal reimbursement allowed under the PA Program. The enhancements and program requirements include:

- Grants can be provided on the basis of estimates;
- The federal cost-share of 75 percent can be increased to 80 percent to those agencies having a FEMA-approved debris management plan and at least two pre-qualified debris and wreckage removal contractors identified prior to a disaster.
- Applicants may retain any revenue from the sale of disaster debris for recycling; and
- Regular time salaries can be reimbursed as well as overtime salaries for debris-related activities. Under the regular PA program, regular salaries are not allowed for reimbursement.

4.12.2 Intended Actions

Table 4-18 lists the intended actions established by the jurisdictions of Cabarrus County to meet their goals pertaining to disaster response. A summary of progress made toward actions specified in the previous Plan Update is included in Appendix C.

4.13 Electronics Management Plan

4.13.1 Existing and Proposed Programs

Cabarrus County accepts electronics from residents at the HHW and Landfill Convenience Centers. Businesses may also drop off electronics, but are charged a fee of 10 cents per pound. All electronic devices are accepted for reuse or recycling, including: computer systems, televisions, audio

equipment, telephones, video equipment, and any other, non-radioactive, electronic device.

Residents are charged a fee for televisions and computer monitors. A copy of the fee schedule is provided in Appendix F.

Cabarrus County and the City of Concord intend to partner in management of the increased volumes of electronics that will need management due to the ban on disposal beginning July 1, 2011, as required by Session Law 2010-67. This would be accomplished through shared capital and collection labor resources, as well as jointly marketing the program to residents, and utilizing one processing vendor for all materials. Collection events will supplement the above-addressed Convenience Centers for the spike in demand for recycling service.

4.13.2 Intended Actions and Impediments

Table 4-19 lists the intended actions by Cabarrus County to meet their goals related to management of discarded electronics. A summary of progress made toward actions specified in the previous Plan Update is included in Appendix C.

4.13.3 Public Awareness and Education

A multi-faceted and multi-jurisdictional public awareness program will be coordinated with the municipalities in the County and in partnership with the City of Concord. This will include, but not be limited to:

- Internet-based information, including placing information on local government web pages, direct e-mail, social networking sites, and referrals to other community - based and commercial reuse, recycling web-based sites and resources
- Direct mailings in utility bills and

Table 4-18. Disaster Response - Intended Actions

<u>Jurisdiction</u>	<u>Intended Action</u>
<i>City of Kannapolis (Cabarrus and Rowan Counties)</i>	1. Update Emergency Operations Plan as needed.
<i>Cabarrus County</i>	2. Update Emergency Operations Plan as needed.

Table 4-19. Collection of Discarded Electronics – Intended Actions

<u>Jurisdiction</u>	<u>Intended Action</u>
<i>Cabarrus County</i>	<ol style="list-style-type: none"> 1. Continue to promote computer donation as a reuse method. 2. Continue to accept electronics at the landfill and HHW facility convenience centers. 3. Establish a partnership with the City of Concord to expand collection options and to coordinate marketing, infrastructure expenses and processing. 4. Promote the program in coordination with the municipalities in the plan, and in partnership with the City of Concord.

- municipality newsletters.
- Use of local government cable TV
- Community organization and public school presentations
- Releases sent to local media
- Public Information phone numbers
- Information provided at recycling convenience centers
- Partnerships with retail and non-profit entities to reciprocally share information and to make referrals

4.13.4 Collection Reports

Tracking of and reporting on tonnages collected of televisions, computer equipment, and other electronic devices will be required of the selected vendor which will provide the processing and marketing of collected electronics.

4.13.5 Interactions with Other Units of Local Government

In addition to the aforementioned partnership with the City of Concord, consent to this plan has been sought from each of the municipalities in the plan area. The County will work with the municipalities in promoting the ban and the available reuse and recycling options. The County will also partner with each community to help coordinate collection opportunities for their residents.

4.13.6 Accounting for State Funds

Cabarrus County will establish a separate account for deposit and expenditure of all state funds received pursuant to Session Law 2010-67, and will comply with all generally accepted accounting principles.

4.14 Management of Abandoned Manufactured Homes

As discussed under the recycling and reuse planning element, House Bill 1134, which becomes 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. Cabarrus County has determined that abandoned manufactured homes are currently not a significant threat to public health and the environment in Cabarrus County, and therefore has chosen not to develop a plan at this time. The County will continue to evaluate this decision, and if conditions warrant, develop a written plan and include it as a component of the next Solid Waste Management Plan Update.