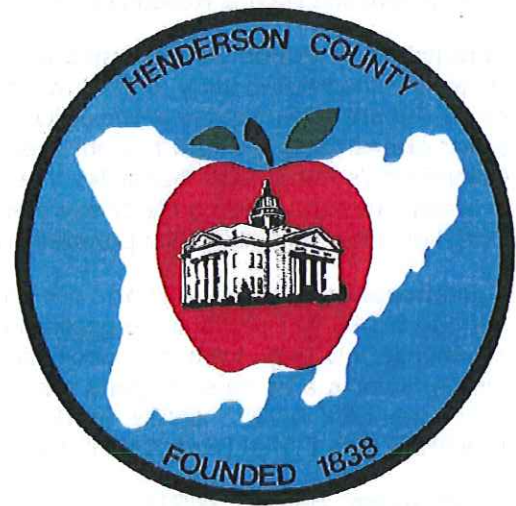


*July 1, 2012
to
July 1, 2022*

Henderson County Ten Year Solid Waste Management Plan / Three Year Update



June 2012



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Flat Rock • Fletcher • Hendersonville
Laurel Park • Mills River

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Executive Summary

McGill Associates, P.A., with the assistance of the Henderson County Engineering Department and the County's five (5) incorporated municipalities, has prepared this three-year update to the ten-year Solid Waste Management Plan in accordance with N.C. General Statute 130A-309.09A (b). Its purpose is to meet Henderson County's solid waste disposal and waste reduction needs as well as protect the public health and environment. The planning area includes Henderson County and the Cities/Towns of Flat Rock, Fletcher, Hendersonville, Laurel Park, and Mills River. The Town of Mills River and the Village of Flat Rock do not have a solid waste program and information pertaining to their respective solid waste totals is not known. Therefore, for the purposes of this Solid Waste Management Plan, the solid waste totals for these two communities will be included in the solid waste totals for the unincorporated areas of the County. The ten-year Solid Waste Management Plan update presents a look at recent and current solid waste disposal and waste reduction practices in the County and provides for the future management and reduction of solid waste.

From the County's baseline year (FY 1991-92) disposal rate of 1.14 tons per capita to the most recently recorded year (FY 2010-11), Henderson County has reduced its annual per capita rate to 0.89 tons per capita, a reduction of approximately 21%. As a comparison, the statewide per capita disposal rate was 0.99 for FY 2010-11. This reduced rate meets the County's goal of 20% reduction set in the 2009 Solid Waste Management Plan for FY 2013-14. Although the downturn in the economy is a significant factor in the reduced per capita disposal rate, this accomplishment is also a tribute to the hard work and dedication of all Solid Waste Department personnel of the County and its municipalities. The State's original goal of 40% reduction in waste disposal has not been met and it will be necessary for the County to aggressively continue to improve on waste reduction methods in order to continue the downward trend in waste disposal. It is the goal of the County to continue the reduction in the per capita disposal rate and reach 25% reduction by FY 2016-17 and 30% reduction by FY 2021-22, as compared to the baseline year (FY 1991-92) rate of 1.14 tons per person. This corresponds to per capita disposal rates of 0.85 and 0.80 tons by June 30, 2017 and 2022, respectively.

In order to realize its goals, the County must divert additional waste from being disposed in the landfill by various means, including but not limited to, education, source reduction, recycling, reuse, mulching, composting and the collection of household hazardous wastes and electronics. The required amount of waste to be diverted is calculated by comparing the projected waste disposal for the proposed rate versus the baseline disposal rate. To do this, the baseline rate of 1.14 tons per capita was applied to population projections for FY 2016-17 and FY 2021-22, resulting in the "no action" disposal tonnages of 135,033 and 145,504 tons respectively. Subtracting tonnages calculated based on proposed per capita rates for the same population projections from the baseline tonnage, Henderson County must divert 33,934 tons by FY 2016-17 and 43,396 tons by FY 2021-22. These proposed diversion tonnages do not account for the progress made by the County in the years between the baseline year and the present.

Another consideration is the possibility that the per capita disposal rate will remain unchanged from the most current (FY 2010-11) per capita disposal rate of 0.89 to the planning years FY 2016-17 and FY 2021-22. In this case, the County would dispose of 105,857 tons in

FY 2016-17 and 113,595 tons in FY 2021-22. This translates to diverting an additional 29,176 tons by June 30, 2017, and 31,909 tons by June 30, 2022 above the “no action” disposal amounts.

Henderson County's long-range vision is for a comprehensive waste management program that would provide disposal capacity, waste collection services, and waste reduction programs to all members of the community at an equitable price and educate the community to understand the economic and environmental benefits of waste reduction and proper waste disposal.

Introduction

This plan is provided to protect public health and the environment of Henderson County, at the same time meeting guidelines of the N.C. General Statute 130A-309.09A (b). Also, the plan will aid Henderson County in fulfilling visionary goals of public safety and environmental awareness, by disposing of all waste generated in Henderson County in the most effective and efficient manner achievable and by reducing the tonnage of disposed waste.

Through the diligent implementation of this comprehensive solid waste management plan, the Henderson County planning area provides for the management of solid waste and its reduction for the next ten years. The Planning area includes Henderson County and the following municipalities: the Town of Fletcher, the City of Hendersonville, the Town of Laurel Park, the Village of Flat Rock, and the Town of Mills River. The Village of Flat Rock and the Town of Mills River do not have solid waste management programs and therefore, their waste and recyclable materials are included in the totals for the unincorporated areas of the County.

Henderson County and the municipalities' goal is to establish a comprehensive, integrated, efficient, and effective waste management program to meet the needs of the community. The City of Hendersonville and the Town of Fletcher operate waste collection services for their residents. The Town of Laurel Park provides the same service through a contractor. All three municipalities contract for the weekly curbside collection of recyclables to all residents. The County operates the solid waste transfer station and convenience center located at the closed Stoney Mountain Road Landfill Facility in the central part of the County. The transfer station receives comingled MSW and Construction and Demolition Wastes. Recyclables such as White Goods (scrap metals), scrap tires, wood and yard waste and household recyclables are collected at the convenience center. All solid waste materials are transferred to approved landfill facilities for final disposal. The County employs an Environmental Programs Coordinator to direct public education programs that encourage reduction, reuse, and recycling. The Coordinator works with the Waste Reduction Partners and visits businesses and organizations to provide technical support for the development of internal programs leading to waste reduction.

The County's obligation to the community is to evaluate new methods of waste reduction, reuse, and recycling and to adopt new procedures when economically feasible. The community has benefited from the County's willingness to undertake this beneficial service. One of the most successful waste reduction methods adopted to date is the recycling program. All of the residents in the County have the option of curbside recycling and may use the convenience center located at the transfer station.

One of Henderson County's objectives is to create a community that understands the environmental benefits of recycling, waste reduction and proper waste disposal. In order to achieve these objectives, the County has established the following Planning Area Goals:

Planning Area Goals

- Goal 1.** Provide everyone in the community with waste disposal capacity, waste collection services, and waste reduction opportunities.
- Goal 2.** Increase the efficiency and cost-effectiveness of the solid waste program.
- Goal 3.** Meet the established local waste reduction goals.
- Goal 4.** Increase the tonnage of recyclable materials removed from the solid waste stream.
- Goal 5.** Decrease improper waste disposal.
- Goal 6.** Protect public health and environment.

Section 1 – Geographic and Waste Stream Evaluation

Geographic Area

This Solid Waste Management Plan covers Henderson County and its five (5) incorporated municipalities. The majority of Henderson County's residents live in unincorporated areas (see Table 1). Henderson County is continuing to transform to a more urban county through industrial and commercial growth within the municipalities and annexation by the municipalities. A map of the Henderson County Planning Area is included in Appendix A. The population data for Henderson County and its five (5) incorporated municipalities is shown in Table 1.

Table 1. Population Trends

Municipalities & County	Population 2000	Population 2011	2011 Percent of County Population
Flat Rock	306	3,127	2.9%
Fletcher	1,609	7,216	6.7%
Hendersonville	10,420	13,189	12.3%
Laurel Park	419	2,118	2.0%
Mills River	Unknown, Unincorporated	6,830	6.4%
Henderson County-unincorporated areas	76,419	74,615	69.6%
Total	89,173	107,165	100%

Source: Responses from questionnaires from municipalities & Census data

The Town of Mills River and the Village of Flat Rock do not have a solid waste program and information pertaining to their respective solid waste totals is not known. Therefore, for the purposes of this Solid Waste Management Plan, the solid waste totals for these two communities will be included in the unincorporated areas solid waste totals.

Waste Stream Evaluation

Henderson County comingles MSW and Construction and Demolition wastes at its transfer station, and therefore, information pertaining to each of these two waste streams is not available. Residential and commercial wastes are comingled as well. Information regarding recyclable commodities and yard waste is kept by the County. Table 2 provides a tabulation of the various waste stream sectors and the calculated percentage of each sector compared to the overall waste stream generated within the County. The tonnages are based on the data provided by Henderson County's scale records, by the municipalities participating in the Plan, and by Waste Management, Inc., the largest private hauler working in the County.

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

TYPE OF WASTE	TONS	% OF WASTE STREAM
Residential /Commercial Municipal Solid Wastes and Construction/Demolition Wastes Disposed In An Approved MSW Landfill	95,097.23	87.6%
Recyclable Commodities	6,456.92*	5.9%
Yard Wastes	6,995.26	6.4%
Total	108,549.41	100.0%

Source: County and Waste Management records

*Recyclable Commodities total tonnage adjustment: Data for the recyclable commodities collected by Waste Management in unincorporated Henderson County is not available. In those parts of the County where recycling data is available, the percentage of recyclable commodities removed from the solid waste stream (not including yard waste) is 6.8%. Waste Management collected approximately 19.6% of the disposed waste generated in the County (excluding Fletcher and Laurel Park). Using the same 6.8% recyclable recovery rate as observed in the remainder of the County, this would mean that approximately 1,300 tons per year of recyclable commodities are not reported. This total is included in the recyclable commodities total listed above.

Municipal Solid Waste (MSW) Stream

At this time, the County has not conducted a study of its own MSW waste stream composition. Therefore, for the purpose of this Plan, the percentages utilized in Table 3 are taken from the most recently prepared Quick Stream Analysis as provided by North Carolina Division of Pollution Prevention and Environmental Assistance (NC DPPEA). The State’s analysis indicates the most prevalent materials in the residential waste stream are paper, plastics, and organics.

Tonnages indicated in Table 3 are the estimated tonnage of each material based on the Quick Waste Stream Analysis percentages applied to the actual tonnage of waste generated in Henderson County. Henderson County does not track food waste independently. The tonnage of yard waste is included in the wood waste tonnage.

Table 3. Estimate of MSW Waste Composition for FY 2010-11

MATERIAL	STATE ESTIMATE (%)	ESTIMATED 2010-11 WASTE COMPOSITION (Tons)
Paper	27.0	25,676
Cardboard	16.4	15,596
Plastics	10.0	9,510
Yard Waste	0.5	475
Food Waste	20.0	19,020
Glass	7.4	7,037
Textiles	4.0	3,803
White Goods & Metals	3.0	2,853
Aluminum & steel cans	2.0	1,902
Wood Waste	9.5	10,936
Special Waste	0.2	190
Total	100%	95,097.23

Source: NC Solid Waste Management Annual Reports and NC DPPEA. Total tonnage of MSW disposed, yard waste, and MSW recyclables materials. Note that values are rounded and may not equal 100%.

The estimated waste composition data can be used to identify materials which could be targeted for recycling to reduce the overall waste disposal.

An examination of the major types of commercial and industrial firms that dispose of waste in the area helps to estimate the composition of non-residential waste. Table 4 lists major businesses and institutions with corresponding waste tonnage estimates and the primary type of waste materials disposed of. A review of the non-residential waste generators indicates that the most common non-residential materials disposed of are construction materials, wood waste, cardboard, cable, plastics, food containers, and food waste. Some of these materials currently being disposed of are potentially recyclable or reusable. Waste tonnages from FY 2010-11 for the non-residential waste generators totaled 5,713.78 tons. Table 4 provides a tabulation of the top ten non-residential waste generators within Henderson County, as reported during FY 2010-11.

Table 4. Top Ten Non-Residential Waste Generators, FY 2010-11

GENERATOR 2010-11	TONS 10-11	MAJOR MATERIALS
Cooper Construction	1,787.29	Construction industry related wastes
Etowah Lions	1,524.60	Residential and Commercial MSW
U.S. Tire Co.	1,285.59	Scrap tire hauler
NCDOT	333.38	Roadside debris and demo materials
First Restoration Services	166.99	Repairs from emergency demolition
Flavor First Growers and Packers	133.17	Food processing wastes
Van Wingerton, Inc.	131.31	Wholesale nursery debris
J & L Roofing	127.42	Debris from roofing company
Carolina Specialties	116.26	Construction industry related wastes
Tennoca Construction Co.	107.77	Construction industry related wastes
TOTAL	5,713.78	

Source: information provided by Henderson County

The top ten generators produced approximately 5.3% of the total solid waste stream handled by the County during FY 2010-11. Through Henderson County's Commercial Recycling and Waste Reduction Partnership Program, several companies have found alternate uses for their waste products and are therefore no longer disposing of the waste in the County's solid waste facilities.

Construction/ Demolition (C/D) Waste Stream

Henderson County does not separate C/D wastes from MSW wastes and information pertaining to the C/D waste stream is not known. These materials are commingled and transferred to the Union County (South Carolina) Regional Landfill or by Waste Management, Inc. to the Palmetto Landfill (Wellford, South Carolina) for disposal. However, there are privately-owned C/D recyclers in the area that receive a portion of this waste stream. It is not known what percentage of the C/D waste stream in the County is diverted from landfill disposal. For the remainder of this Solid Waste Management Plan, C/D waste totals are included in the MSW totals.

Section 2 – Current Operations

Waste Collection

Three municipalities within the County provide solid waste collection services to their residents by in-house staff or by contracting with a private solid waste management company. The City of Hendersonville and the Town of Fletcher provide curbside MSW pick-up. The Town of Laurel Park contracts with GDS for waste collection services.

The City of Hendersonville provides waste collection services to small commercial users. The Towns of Fletcher and Laurel Park do not provide a commercial collections service. It is the responsibility of commercial users in these two communities to hire their own waste collection service.

All three municipalities provide curbside recyclables pick-up; however, Fletcher and Laurel Park contract this service with a private hauler. The County operates a convenience center at the transfer station for the drop-off of both recyclables and MSW wastes.

A summary of the waste collection activities by municipality is show below:

Flat Rock

- Does not provide collection of any type. Private haulers are available.

Fletcher

- Provides residential collection of waste. Recyclables are collected via a contracted hauler. The Town does not provide a service for non-residential users.
- Disposes of wastes at the Waste Management transfer station on Pond Road in Asheville.

Hendersonville

- Provides residential and commercial collection of waste. Recyclables are collected by the City.
- Disposes of wastes at the Henderson County transfer station at the closed Stoney Mountain Road landfill.

Laurel Park

- Contracts all waste collection with private hauler
- Operates yard waste collections
- Disposes of wastes at the Waste Management transfer station on Pond Road in Asheville.

Mills River

- Does not provide collection of any type. Private haulers are available.

Table 5 below summarizes collection activities in the five municipalities within the County. Henderson County does not perform any waste collection other than that collected at the convenience center.

Table 5. Solid Waste Collection Activities for Municipalities, FY 2010-11

NAME	PROVIDES COLLECTION	MUNICIPALITY CONTRACTS WITH PRIVATE HAULER	PRIVATE HAULERS ONLY
Flat Rock	No	No	Yes
Fletcher	Yes	No	No
Hendersonville	Yes	No	No
Laurel Park	Yes	Yes	No
Mills River	No	No	Yes

Source: Henderson County

Waste Disposal

Approximately 77.9% of disposed waste generated in Henderson County is transferred to the Union County Regional MSWLF, South Carolina MSW Landfill (Permit#442441-1101) for final disposal. The County uses Republic Services of North Carolina, LLC to transfer wastes from their transfer station to Union County. The remaining 22.1% is transferred to the Waste Management Transfer Station on Pond Road in Asheville, North Carolina, then transferred to the Palmetto Landfill (Permit #422404-1101) in Wellford, South Carolina for final disposal. MSW wastes collected from the City of Hendersonville and from unincorporated areas within the County are brought to the Henderson County transfer station located at the closed Stoney Mountain Road Landfill. Waste Management collects wastes from unincorporated areas within the County and disposes of these wastes at their transfer station on Pond Road. Wastes collected in the Towns of Fletcher and Laurel Park are hauled to the Waste Management Transfer Station on Pond Road. Henderson County closed its MSW Landfill in 1995 and its Construction/Demolition Landfill in June 2008. See Table 6 for a summary of MSW and C/D solid waste totals and disposal landfill.

Table 6. Summary of Solid Waste Disposal, FY 2010-11

	MSW and C/D Tonnage	Disposal Landfill
Henderson County Unincorporated Areas - Hauled to Henderson County Transfer Station	70,525.16	Union County, South Carolina
Henderson County Unincorporated Areas - Hauled to Waste Management Transfer Station on Pond Road	18,605.41	Palmetto Landfill, Wellford, South Carolina
Fletcher- Hauled to Waste Management Transfer Station on Pond Road	1,793.26	Palmetto Landfill, Wellford South Carolina
Hendersonville- Hauled to Henderson County Transfer Station	3,550.4	Union County, South Carolina
Laurel Park- Hauled to Waste Management Transfer Station on Pond Road	623	Palmetto Landfill, Wellford, South Carolina
MSW C/D Tonnage Summary	95,097.23	

Source: Henderson County solid waste questionnaire and Waste Management FY 10-11 Annual Report

The rate of waste disposal for Henderson County for FY 2010-11 was 0.89 tons/person. As a comparison, the statewide per capita disposal rate was 0.99 for FY 2010-11.

Waste Disposal Tax

North Carolina passed legislation in 2007 and modifications to legislation in 2008 requiring a \$2.00 per ton tax be placed on all municipal solid waste and construction/demolition waste being disposed in the State or transferred for disposal out of the State. This new program became effective July 1, 2008.

The owner/operator of the disposal or affected transfer facility is responsible for collecting and remitting the tax to the NC Department of Revenue. The net revenue from the tax proceeds is distributed by the State of North Carolina for solid waste projects associated with cleanup and recycling, with a portion distributed to NC municipalities on a per-capita basis.

Henderson County will pursue opportunities made possible by receipt of this revenue and increased recycling grant availability through State supported programs to improve and expand its solid waste management and recycling programs and will encourage and support all municipalities within the County to do the same.

More information on this disposal tax program can be found at the NC Department of Revenue's website at www.dornrc.com. A link can also be accessed to reports giving the actual distribution figures for specific jurisdictions. Click on Reports & Statistics to access this information.

Recycling

Henderson County and three of the municipalities within the County operate a recycling collections program. In FY 2010-11, a reported total of 12,152.18 tons was recycled. A breakdown of the recycled material is shown in Table 7. Please note that the make-up of the estimated 1,300 tons of recyclables collected by Waste Management, Inc. from unincorporated areas within the County is not known.

Table 7. Recycling in Tons, FY 2010-11

Material	Henderson County Unincorporated	Hendersonville	Fletcher	Laurel Park	Waste Management Inc. (Unincorporated areas only)	Total
Steel Cans						
Aluminum Cans			12.71			12.71
Glass			118.90			118.90
Mixed Paper	1,093.28		162.21			1,255.49
Mixed Plastic			24.38			24.38
Corrugated Cardboard						
Newspaper and Mags.						
White goods/metals	429.29		2			431.29
Refrigerant (Gas)	1.45					1.45
Electronics	120.99					120.99
Household Haz						
Tires	1,286.29		2.5			1,288.79
Wood						
Yard waste	2,418.06	3,537.2	1,040			6,995.26
Asphalt & Masonry						
Other (comingled recycling)	720.92	1,053		129.0	1,300	1,902.92
Totals	6,070.28	4,590.2	1,362.7	129.0	1,300	13,452.18

Source: Questioners, Henderson County, and Municipal Annual Solid Waste Management reports
 * County recycling includes convenience center, curbside pickup and other sources.

A detail summary of the recycling program for each entity is as follows:

Henderson County

- Recycled approximately 13,452.18 tons (overall County recycling) of material in FY 2010-11.

- Collects recycled material at the convenience center at the Transfer Station site.
- Employs dedicated Environmental Programs Coordinator to direct public education programs that encourage reduction, reuse, and recycling. The Coordinator works with the Waste Reduction Partners and visits businesses and organizations to provide technical support for the development of internal programs leading to waste reduction.
- The Henderson County Engineering Department and Solid Waste Division work with the Henderson County Environmental Advisory Committee on a regular basis. The Committee advises the County in regards to developing programs that will assist the County in reaching the waste reduction goals noted in this Plan.
- Conducts periodic Household Hazardous Waste collection events, on a monthly basis during daylight savings time and less frequently during the winter months.
- Established the Commercial Recycling and Waste Reduction Partnership Program to encourage workplace waste reduction, reuse, recycle, and purchasing recycled products.

A summary of the municipalities recycling programs is listed below:

Fletcher

- Contracts with private hauler to provide bi-weekly curbside recyclables pick-up
- The Town offers curbside weekly yard waste pick-up
- The Town actively pursues purchasing as many recycled products as possible
- Collected 1,362.7 tons in FY 2010-11

Hendersonville

- The City offers curbside recyclables pick-up
- The City provides recycling information to its residents through brochures, the City's website, and inclusion in the County's waste reduction and recycling programs
- Collected 4,590.2 tons in FY 2010-11

Laurel Park

- The Town contracts with a private hauler to pick up recyclables
- The Town offers curbside yard waste pick up on an as-needed basis
- The Town encourages residents to utilize the Henderson County convenience center at the transfer station for recyclables drop-off
- Collected 129 tons in FY 2010-11

Financial Assessment

The Solid Waste costs for each municipality and Henderson County have been summarized below. The costs are based on the last fiscal year completed prior to preparation of

the Three-Year-Update, which is FY 2010-11. Costs are given for collection, disposal, and waste reduction for each municipality and the County.

Henderson County

Henderson County operates their Solid Waste Division as an Enterprise Fund. The County collects tipping fees for all wastes transferred by the County. With these funds, the County operates the solid waste disposal program, which includes the transfer station and the convenience center at the closed Stoney Mountain Road Landfill. Additional funding is obtained through the sales of recyclable commodities and from the State scrap tire program and State Waste Disposal Tax. The solid waste costs shown below are Henderson County programs separated from municipal programs.

The total expenditures for the county-operated solid waste program during FY 2010-11 were \$2,812,076.52 and revenues were \$2,996,668.76. Henderson County has 107,165 citizens from approximately 54,710 households. The County does not provide collections and therefore this expenditure was \$0. Disposal costs, including transfer station and convenience center operations, were \$2,656,247.10. Waste reduction program costs, including recycling, reuse, mulching, household hazardous waste events, etc. total \$155,829.42. Henderson County managed 74,075.56 tons of comingled MSW and C&D wastes for disposal and 12,016.52 tons of recyclable material, yard waste, and land clearing debris in FY 2010-11. The total waste managed by the County Solid Waste Division was 86,092.08 tons. A summary of the county-operated solid waste program costs is shown in Table 8.

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

	COLLECTION	DISPOSAL	WASTE REDUCTION*	TOTAL
PROGRAM COST	0	\$2,656,247.10	\$155,829.42	\$2,812,076.52
COST PER TON	0	\$35.86	\$12.97	\$32.66
COST PER HOUSEHOLD	0	\$48.55	\$2.85	\$51.40

Source: Henderson County Solid Waste Department

* Waste reduction includes all reduction, reuse, recycling, mulching, composting, household hazardous waste and other programs.

According to the analysis, the cost of waste disposal is significantly higher than reducing waste on a per ton basis. It can be assumed that as participation in the waste reduction program increases, the cost per ton to reduce will decrease further, which will decrease the overall solid waste management costs. It is the benefit for all of the County residents to reduce, reuse, recycle as much as possible.

Town of Fletcher Description:

The Town of Fletcher collects MSW wastes from residential customers on a weekly basis. The Town contracts with a private company to collect residential recyclables on a bi-weekly basis. The Town of Fletcher does not collect Construction & Demolition waste. The Town has 7,216 citizens from approximately 2,807 households that disposed of 1,793.26 tons of MSW waste and produced 1,362.7 tons of recyclable material and 1,040 tons of yard waste in FY 2010-11. The total waste managed was 4,741.96 tons. The summary of solid waste costs for that fiscal year is shown below in Table 8A.

Table 8A. Town of Fletcher Solid Waste Program Costs, FY 2010-11

	COLLECTION	DISPOSAL	WASTE REDUCTION*	TOTAL
PROGRAM COST	\$163,404	\$85,899	\$111,400	\$360,703
COST PER TON	\$91.12	\$47.90	\$46.36	\$76.07
COST PER HOUSEHOLD	\$58.21	\$30.60	\$39.69	\$128.50

Source: Town questionnaire

*Waste reduction includes all reduction, reuse and recycling, mulching, composting, and other programs.

City of Hendersonville Description:

The City of Hendersonville collects residential and commercial MSW wastes and recyclables on a weekly basis. The City does not collect Construction & Demolition waste. Hendersonville has 13,189 citizens from approximately 5,110 households that disposed of 3,550.4 tons of MSW waste and produced 1,053 tons of commingled recyclable material and 3,537.2 tons of yard waste in FY 2010-11. The total waste managed was 8,140.6 tons. The summary of solid waste costs for that year is shown below in Table 8B.

Table 8B. City of Hendersonville Solid Waste Program Costs, FY 2010-11

	COLLECTION	DISPOSAL	WASTE REDUCTION*	TOTAL
PROGRAM COST	\$581,394.13	\$187,817.15	\$510,816.6	\$1,280,027.88
COST PER TON	\$163.75	\$52.90	\$111.28	\$157.24
COST PER HOUSEHOLD	\$113.78	\$36.75	\$99.96	\$250.49

Source: Town questionnaire

*Waste reduction includes all reduction, reuse and recycling, mulching, composting, and other programs.

Town of Laurel Park Description:

The Town contracts with Waste Management, Inc. to collect MSW wastes from residential customers on a weekly basis. The Town of Laurel Park does not collect Construction & Demolition waste. The Town has 2,188 citizens from approximately 825** households that disposed of 623 tons of MSW waste and produced 129 tons of commingled recyclable material and 834 tons of yard waste in FY 2010-11. The total waste managed was 1,586 tons. The summary of solid waste costs for that fiscal year is shown below in Table 8C.

Table 8C. Town of Laurel Park Solid Waste Program Costs, FY 2010-11

	COLLECTION	DISPOSAL	WASTE REDUCTION*	TOTAL
PROGRAM COST	\$94,345	\$25,543	\$38,059	\$157,947
COST PER TON	\$151.44	\$41.00	\$377.52	\$99.59
COST PER HOUSEHOLD	\$114.36	\$30.96	\$46.13	\$191.45

Source: Town questionnaire

*Waste reduction includes all reduction, reuse and recycling, mulching, composting, and other programs.

**Estimate, based on State average household size

Table 9A includes a summary of the solid waste program costs by entity.

Table 9A. Summary of Solid Waste Program Cost, FY 2010-11

	Collection	Disposal	Waste Reduction	Total
Henderson County	\$0	\$2,656,247.10	\$155,829.42	\$2,812,076.52
Fletcher	\$163,404	\$85,899	\$111,400	\$360,703
Hendersonville	\$581,394.13	\$187,817.15	\$510,816.60	\$1,280,027.88
Laurel Park	\$94,345	\$25,543	\$38,059	\$157,947

Source: Henderson County solid waste questionnaire

Each County entity funds their solid waste program in a different way. Henderson County operates as an Enterprise Fund and finances their operations primarily through tipping fees. The municipalities generally use property taxes and/or household charges to cover their collection, transportation, and waste reduction costs. The various methods of Solid Waste Financing for those entities within the County where information is available are summarized in Table 9B.

Table 9B. Summary of Solid Waste Financing Methods, FY 2010-11

	Total SWM Budget	Tip Fee	Property Taxes General Fund	Household Charge	Grants
Henderson County	\$2,812,076.52	99%	0%	0%	1%
Fletcher	\$360,703	0%	100%	0%	0%
Hendersonville	\$1,280,027.88	0%	31%	64%	5%
Laurel Park	\$157,947	0%	100%	0%	0%

Source: Henderson County solid waste questionnaire

Section 3 – Local Waste Reduction Goals

Fifteen years have passed since the Ten-year Solid Waste Management Plan was first developed. The North Carolina Department of Environment and Natural resources, Division of Solid Waste Management recommended the goal of 40% waste reduction by June 30, 2006 from the County’s baseline year (FY 1991-92) disposal rate of 1.14 tons per capita. During the past Fiscal Year (FY 2010-11), the County achieved a per capita disposal rate of 0.89 tons. This equates to a 21.9% reduction in waste disposal from the FY 91-92 baseline year. The County experienced an increase in disposed waste between 1992 and 2007, with the majority of the reduction occurring in the past 3 years. Clearly, the downturn in the economy is a significant factor in the waste reduction recently experienced; however, the Henderson County Engineering Department and the Solid Waste Division along with the municipalities within the County have been aggressive in promoting waste reduction and recycling. This waste reduction accomplishment is a tribute to the hard work and dedication of all solid waste personnel of the County and its municipalities.

The challenge for Henderson County moving forward is to continue to achieve the excellent per capita disposal rate as the economy improves. The County has expressed the goal of a 25% reduction in FY 2016-17 and 30% reduction by FY 2021-22 in relation to the baseline year per capita rate. Utilizing the population projections provided by the State Demographics Office, this equates to a total waste disposal tonnage of approximately 101,099 tons in FY 2016-17 and 102,108 tons in FY 2021-22. A summary of the historic per capita disposal rates and tonnages and the projected disposal rates and tonnages is included in Table 10.

Table 10. Waste Disposal Tonnage and Population History and Projections

YEAR	POPULATION	WASTE DISPOSAL (Tons)	PER CAPITA DISPOSAL RATE
Baseline Year 1991/92	71,185	81,498	1.14
FY 92/93	72,252	77,761	1.08
FY 93/94	73,356	71,570	0.98
FY 94/95	75,096	75,896	1.01
FY 95/96	76,250	68,950	0.90
FY 96/97	77,558	87,522	1.13
FY 97/98	79,148	95,125	1.20
FY 98/99	80,562	87,636	1.09
FY 99/2000	82,396	94,280	1.14
FY 2000/01	89,173	95,443	1.07
FY 01/02	91,544	97,650	1.07
FY 02/03	92,988	104,249	1.12
FY 03/04	94,496	116,840	1.24
FY 04/05	96,124	119,866	1.25
FY 05/06	97,792	133,618	1.37
FY 06/07	100,107	123,284	1.23
FY 07/08	102,142	116,850	1.01
FY 08/09	105,395	102,155	0.97
FY 09/10	106,966	98,289	0.92

FY 10/11	107,165	95,097	0.89
	PROJECTED POPULATION	PROJECTED WASTE DISPOSAL	PER CAPITA DISPOSAL RATE
FY 2016/17	118,940	101,099 tons	0.85
FY 2021/22	127,635	102,108 tons	0.80

Source: Historical data from Henderson County Solid Waste Department and 2009 Solid Waste Management Plan.
Population projections from State Demographics Office.

Although the trend in the historic per capita disposal rate would indicate that it will be difficult for the County to meet its waste reduction goals if the economy rebounds, the County is optimistic through its efforts to aggressively pursue new recycling and reuse markets for the industrial, commercial, and construction and demolition waste, in conjunction with promoting residential recycling through education, that they can meet the local goal of 25% per capita waste reduction in FY 2016-17, and 30% in FY 2021-22 as compared to the baseline year of FY 1991-92 per capita rate. The targeted waste tonnage disposal and reduction goals are summarized in Table 11 below.

Table 11. Targeted Waste Reduction, FY 2016-17 and 2021-22

CALCULATIONS	FY 2016-17 (25% Reduction)	FY 2021-22 (30% Reduction)
1. Baseline year (FY 1991-92) per capita disposal rate: (Provided by NCDENR, Solid Waste Section)	1.14	1.14
2. Targeted per capita disposal rate (Subtract the percent Goal from 1.0, then multiply result by line 1)	0.85	0.80
3. Population Projections (County figure from NC Municipal Population booklet)	118,940	127,635
4. Projected tonnage for disposal at the baseline disposal rate (multiplied line 1 by line 3)	135,033 tons	145,504 tons
5. Targeted annual tonnage for disposal at targeted per capita disposal rate (multiplied line 2 by line 3)	101,099 tons	102,108 tons
6. Targeted annual tonnage to reduce for FY's (subtracted line 5 from line 4)	33,934 tons	43,396 tons

Source: Staff Calculations

Section 4 - Meeting the Waste Reduction Goals

This plan is designed to assist Henderson County in reducing its disposed waste tonnages by 33,934 tons by FY 2016-17 and by 43,396 tons in 2021-22. Table 12 summarizes the annual tonnages of waste targeted for reduction and disposal in FY 2016-17 and 2021-22 at the projected per capita disposal rates.

Table 12. Projected Annual Waste Targeted for Disposal and Targeted Annual Waste Reduction, as Compared to the Baseline Year Per Capita Disposal Rate

	FY 2016-17	FY 2021-22
Projected Annual Waste Tonnage Targeted for Disposal	101,099	102,108
Targeted Annual Waste Tonnage Reduction as compared to the baseline year per capita disposal rate	33,394	43,396

Source: Staff Calculations

The County does not track separate waste streams for MSW and C/D wastes, or for municipal, commercial, and industrial wastes. Therefore, to accomplish the waste reduction goals, Henderson County will target the materials noted in Table 3. These materials can be removed from the disposed waste totals by increasing the total tonnage of materials recycled and/or by reducing the disposed waste of those materials that cannot be recycled.

Rather than comparing waste reduction tonnages to the baseline year per capita disposal rate, a more useful approach is to project future reductions as compared to the current waste stream and current operational conditions. This will allow the County to determine the necessary waste reduction tonnages needed to meet the goals versus the most recent disposal information available, which is FY 2010-11. An across the board 4.5% reduction for FY 2016-17 and a 10% reduction for FY 2021-22, as compared to the current disposal stream, will meet the disposal goals set by the County. This corresponds to a waste reduction of 4,758 tons for FY 2016-17 and 11,487 tons for FY 2021-22, as compared to the current disposal rate. These waste reduction targets were applied to the materials listed in Table 3 resulting in the targeted reductions shown in Tables 13A & 13B for FY 2016-17 and FY 2021-22, respectively. The reductions noted in the tables will produce the targeted goals of 25% reduction by FY 2016-17 and 30% reduction by FY 2021-22, as compared to the baseline year per capita disposal rate of 1.14 tons.

Table 13A. Projected Waste Reduction by Materials, an additional 4.5% Reduction for FY 2016-17 as compared to the FY 2010-11 Disposal Rate

MATERIAL	STATE ESTIMATE (%)	PROJECTED 2016-17 WASTE DISPOSED AT CURRENT DISPOSAL RATE (Tons)	WASTE REDUCTION TARGET (4.5% Reduction vs. the FY 2010-11 Disposal Rate) (%)	PROJECTED FY 2016-17 WASTE DISPOSED AT WASTE REDUCTION TARGET RATE (Tons)	TARGETED WASTE REDUCTION TONNAGE (Tons)
Paper	27.0%	28,581	25.8%	27,295	1,286
Cardboard	16.4	17,360	15.7	16,579	781
Plastics	10.0	10,586	9.6	10,109	476
Yard Waste	0.5	529	0.5	506	24
Food Waste	20.0	21,171	19.1	20,219	953
Glass	7.4	7,833	7.1	7,481	353
Textiles	4.0	4,234	3.8	4,044	191
White Goods & Metals	3.0	3,176	2.9	3,033	143
Aluminum & steel cans	2.0	2,117	1.9	2,022	95
Wood Waste	9.5	10,056	9.1	9,604	453
Special Waste	0.2	212	0.2	202	10
Total Waste Disposed	100%	105,857	95.5%	101,099	4,758*

Source: NC Solid Waste Management Annual Reports and NC DPPEA. Total tonnage of MSW disposed, yard waste, and MSW recyclables materials. Values are rounded and may not equal total.

*Total waste reduction required for FY 2016-17, as compared to current waste stream and operational conditions

Table 13B. Projected Waste Reduction by Materials, an additional 10.0% Reduction for FY 2021-22 as compared to the FY 2010-11 Disposal Rate

MATERIAL	STATE ESTIMATE (%)	PROJECTED 2020-21 WASTE DISPOSED AT CURRENT DISPOSAL RATE (Tons)	WASTE REDUCTION TARGET (10.0% Reduction vs. the FY 2010-11 Disposal Rate) (%)	PROJECTED FY 2020-21 WASTE DISPOSED AT WASTE REDUCTION TARGET RATE (Tons)	TARGETED WASTE REDUCTION TONNAGE (Tons)
Paper	27.0%	30,371	24.3%	27,604	3,067
Cardboard	16.4	18,630	14.8	16,767	1,863
Plastics	10.0	11,360	9.0	10,224	1,136
Yard Waste	0.5	568	0.5	511	57
Food Waste	20.0	22,719	18.0	20,447	2,272
Glass	7.4	8,406	6.7	7,565	841
Textiles	4.0	4,544	3.6	4,089	454
White Goods & Metals	3.0	3,407	2.7	3,067	341
Aluminum & steel cans	2.0	2,272	1.8	2,045	227
Wood Waste	9.5	10,792	8.6	9,712	1,079
Special Waste	0.2	227	0.2	204	23
Total Waste Disposed	100%	113,595	90.0%	102,108	11,487*

Source: NC Solid Waste Management Annual Reports and NC DPPEA. Total tonnage of MSW disposed, yard waste, and MSW recyclables materials. Values are rounded and may not equal total.

*Total waste reduction required for FY 2020-21, as compared to current waste stream and operational conditions

Instead of an across the board reduction, the more likely scenario for waste reduction is that the County will target those materials that are easily handled, such as household recyclables, and/or those materials that are valuable in the recycling industry, such as white goods, cardboard, and other metals. As the economy improves, the County will need to improve upon the reductions noted in this Management Plan in order to meet its goals. It is not possible to predict the impact that the improving economy will have on waste disposal rates in the County; however, the County can improve upon the capture of the recyclable commodities that represented approximately 5.9% of the solid waste stream (not including yard wastes) in FY 2010-11, as noted in Table 2. Even a modest increase from 5.9% to 10% in recyclable materials removed from the solid waste stream would have resulted in an additional reduction of approximately 3,805 tons in FY 2010-11. This additional reduction can save the disposal of 4,044 tons in FY 2016-17 and 4,085 tons in FY 2021-22, if the County can improve from 6% to 10% in recyclable materials removal from disposal. Using the costs per ton noted in Table 8, this simple step could save the County \$92,567 in FY 2015-16 and \$93,505 in FY 2021-22! The reduction totals for increased recyclable material recovery is summarized in Table 13C.

Table 13C. Waste Reduction Estimates for Increased Recyclable Material Recovery

FY	Total Disposed Solid Waste Tonnages (Tons)	Tonnage Removed at Current Recyclables Recovery Rate of 6% (Tons)	Tonnages Removed at Recyclables Recovery Rate of 10% (Tons)	Reduced Tonnage With Increased Recyclables Recovery Rate (Tons)
FY 2010-11	95,097.23	5,705	9,510	3,805
FY 2016-17	101,099	6,066	10,110	4,044
FY 2021-22	102,108	6,126	10,211	4,085

Source: S.W. questionnaire and waste tonnage projections from Table 10.

Municipal Solid Waste/Construction & Demolition Waste Reductions

This plan proposes the diversion of 33,394 tons in FY 2016-17, and 43,396 tons in FY 2021-22 from the County’s waste stream, as compared to the baseline year (FY 1990-91) per capita disposal rate of 1.14 tons. Table 14 summarizes the waste reduction methods to be utilized to meet the local established goals. Specific activities planned are described in Section 6 of this Plan.

Table 14. Targeted Municipal Solid Waste Reductions, FY 2016-17 and FY 2021-22

Reduction Method	Targeted Materials	FY 2016-17 Tons	FY 2021-22 Tons
Source Reduction	Paper, Plastic, Styrofoam	5,009	6,509
Recycling	Cardboard, paper, plastics, glass, metals	16,697	21,698
Reuse	Clothing, furniture, appliances, households	3,339	4,339
Composting	Yard waste, organics	4,007	5,208
Mulching	Brush and other woody materials	4,007	5,208
Special Waste	Household hazardous waste	334	434
Totals		33,394	43,396

Source: Staff Calculations

Section 5 - Public Participation

A cooperation of representatives from Henderson County, the City of Hendersonville, the Town of Fletcher, and the Town of Laurel Park along with McGill Associates, P.A. developed and wrote this Plan.

A Henderson County Board of Commissioners meeting is scheduled for July 18, 2012 at 9:00 a.m. at the Henderson County Courthouse at 1 Historic Courthouse Square in Hendersonville, North Carolina. The 2012 Three-Year Update to the Solid Waste Management Plan will be discussed at this meeting. Copies of the Plan will be distributed to the County Commissioners approximately ten (10) days prior to the meeting to allow the Commissioners adequate time to review the 2012 Three-Year Update Draft. This meeting serves as the required public meeting to provide citizens of Henderson County an opportunity to comment and/or provide input to the plan. Drafts of the Plan were placed in the lobby at Historic Henderson County Courthouse and the main branch of the Henderson County Library. The meeting and hearing were announced in the *Hendersonville Times-News* and *Hendersonville Lighting*. The plan will be reviewed based on public comment. The plan will be submitted to the elected boards of the five municipalities within the County for approval. See Appendix B for the resolutions passed by the municipalities. A copy of the public meeting advertisement is attached as Appendix C.

The public will be invited to read the final version of the plan that will be placed in the lobby at the Henderson County Courthouse at 1 Historic Courthouse Square and the main branch of the Henderson County Library at 301 North Washington Street in Hendersonville.

Section 6 - Solid Waste Management Methods

Each solid waste management method as required by North Carolina G.S. 130 A-309.09A (b) is described below. Each section includes an assessment of the current program and a summary of the intended actions.

A. Source Reduction

Current Program:

Efforts for source reduction are primarily focused on public education and outreach. County employees are trained to present educational programs to schools and civic groups. They coordinate efforts with other waste related educational programs performed throughout the County. Presentations include information on reducing packaging, purchasing less hazardous alternatives, and backyard composting. The County employs a full time Environmental Programs Coordinator who directs public education programs and encourages waste reduction, reuse, and recycling. The Coordinator works with the Waste Reduction partners to visit businesses and organizations to provide technical support for the development of internal programs leading to waste reduction

The following are some of the items that are a focus of source reduction in the residential waste stream through educational outreach followed by the educational message in Parentheses:

- Household batteries (buy rechargeable batteries)
- Household hazardous waste (Promotion of buy safer alternatives, buy only what you need, and use up those items you purchase)
- Food scraps/ Compostables (Back yard composting)
- Packing media (Buy products with less packaging, “flexible packaging”)
- Styrofoam (Use natural/ recyclable packaging material)
- Disposable Dishware/Flatware (Do not use)

Intended Actions:

The source reduction program has been targeted to reduce future waste by 5,009 tons by FY2016-17 and 6,509 tons by FY 2021-22.

The County will continue to schedule periodic one-day HHW collection events, typically once per month during the summer months. The events will continue to be advertised by newspaper, radio, television, utility bills, brochures, and on the County's Internet home page. Brochures will continue to be distributed throughout libraries, schools, and the convenience center. The County continues to strongly support its existing educational program to educate citizens throughout the County about HHW and recycling

B. Collection of Solid Waste

Current Program:

Henderson County collects waste and recyclables at the convenience center at the closed Stoney Mountain Road Landfill at 802 Stoney Mountain Road. An attendant is located at the center during all operating hours. The current hours of operation are as follows:

Convenience Center Operations Monday- Saturday - 8:00 a.m. until 4:30 p.m.

Residential solid waste is accepted at the center in enclosed compactors and/or open top containers. A variety of recyclable materials are also accepted. The City of Hendersonville and the Towns of Fletcher and Laurel Park offer curbside collection of MSW waste and recyclables within their jurisdictions. Private haulers offer the curbside collection of MSW waste and recyclables to the residents of Henderson County living in unincorporated areas.

The County also accepts solid waste disposal at the Transfer Station located at the closed Stoney Mountain Road Landfill. All loads across the scales are assessed a disposal fee. Information pertaining to disposal guidelines, hours of operation, and disposal fees is included in Appendix D.

Intended Actions:

The County will continue to use the various methods of MSW and recyclables collection that are currently being offered. New private companies are looking at ways to recycle more and more materials, especially construction industry related materials.

C. Recycling and Reuse

Recycling:

Current Program:

Henderson County has been working since 2009 to maintain a stable recycling program. Currently, the County is recycling approximately 12.4% of the residential waste stream, including yard waste and wood waste that can be composted or mulched. Curbside collection of recyclables is available to the citizens of the City of Hendersonville, the Town of Fletcher, and the Town of Laurel Park and through private haulers for the remainder of the citizens in the County. The County also provides recycling drop-off at its newly refurbished convenience center, which is equipped with a variety of collection containers, including roll-offs and converted dumpsters. Collected items include: electronics, newspaper, cardboard, white goods, steel cans, aluminum cans, clear, brown, green glass, plastic milk and soda bottles, and mixed paper. Used oil, cooking oil, and anti-freeze are also collected at the convenience center. Convenience center staff educates and assists citizens with proper sorting. Educational information on recycling and contact information is also made available at the convenience center and at the County's website (www.hendersoncountync.org). See Appendix E for information pertaining to recycling in Henderson County

The total tonnage of materials recycled by Henderson County and the municipalities is shown in Table 7.

Henderson County markets most of its recyclables through American Recycling, L.L.C., in Greenville, South Carolina; however, the County continually looks for the best end user markets.

Materials collected curbside within the County include newspaper, catalogs, and phone books; aluminum cans; steel cans; clear, brown, and green glass; and plastic milk and soda bottles.

It is clear that there is a large amount of recyclables in the waste stream and participation in residential recycling could be increased. Maximizing recovery of recyclables will entail increasing participation and possibly increasing the types of materials accepted. Residents of unincorporated areas are provided access to curbside recycling through private haulers. These residents can also utilize the recycling bins at the convenience center.

The County offers the free use of recycling bins for community events through their Event Recycling Bin Loan Program. The County has 100 blue 32 gallon bins that are available on a first-come first-served basis. The County's Environmental Programs Coordinator will assist community groups wishing to participate in the loan program. See Appendix F for a summary of the bin loan program.

Intended Actions:

The County's recycling programs are targeted to reduce waste by 16,697 tons in FY 2016-17 and by 21,698 tons in FY 2021-22.

It is assumed that residents who currently use the convenience center will continue to recycle. Solid Waste staff has been monitoring recycling habits and have realized a steady increase in the number of people who recycle. Solid waste staff continually educates residents on how to properly separate materials.

Reuse:

Current Program:

Non-profit programs such as Good Will, Salvation Army and area churches collect and distribute most of the usable items in the County. Play-it Again Sports buys and sells used sporting equipment.

Alternative types of reuse programs need to be developed and promoted to reach people who do not use the thrift store or social, service type programs. More convenient methods may increase participation. Particular materials, such as appliances, can be targeted. Exchange of non-residential reusable items needs to be addressed.

Intended Actions:

Waste reuse is targeted to reduce disposal by 3,339 tons in FY 2016-17, and 4,339 tons in FY 2021-22. Current programs will be continued.

D. Composting and Mulching

Current Program:

Henderson County promotes source reduction through backyard composting. Information about setting up and operating home composting is available from the Solid Waste Division. Articles are published each spring in the *Hendersonville Times-News* featuring how to set up home composting.

Wood and yard waste is received at the Henderson County transfer station at approximately 5,955 tons/year. A local contractor is hired twice a year or on an as-needed basis to grind the material into mulch. The mulch is then given to a permitted composting yard for their use.

Intended Actions:

The future plan is for the County to develop its own composting operation. The materials would be either given out to residence or sold to residence for a small fee. Composting and mulching (combined) is targeted to reduce disposal by 8,014 tons in FY 2016-17 and 10,416 tons in FY 2021-22. Current programs will be continued.

E. Incineration with Energy Recovery

Current Program: Incineration with energy recovery is not part of the County's current program. The County considers it an inappropriate waste management option due to the local waste flow, public opinion, high carbon emissions of such a facility, and high capital/operating costs.

Intended Actions: None

F. Incineration without Energy Recovery

Current Program: Incineration without energy recovery is not part of the County's current program. The County considers it an inappropriate waste management option.

Intended Actions: None

G. Transfer of Solid Waste outside Geographic Area

Current Program: Henderson County does not operate an MSW or C/D landfill and therefore transfers all of the waste collected within the County to permitted landfills outside of the County. See Table 6 for a summary of the disposal landfills utilized by the County for the final disposal of wastes generated within the County.

Intended Actions: Henderson County will continue to transfer all solid waste generated within the County to a landfill outside of the County. The County will review their contract with Republic Services of North Carolina, LLC at the end date of the contract in early 2014 to ensure that the contract best serves the needs of the County.

H. Disposal of Solid Waste

Current Program: Henderson County closed their MSW landfill in 1995 and their C/D landfill in June 2008 and transfers out all of the wastes generated within the County. See Table 6 for a summary of the disposal landfills utilized by the County.

Intended Actions:

There are no plans to develop an MSW or C/D landfill within Henderson County.

I. Natural Disaster

In the event of a severe natural disaster, such as flooding or wind and/or ice damage, the designated staging area for waste generated in the disaster cleanup is located at the Stoney Mountain Road Solid Waste Facility at the existing yard waste area. Additionally, the old County Fairgrounds off of U.S. Hwy 176 is another permitted disaster debris site. Solid Waste Division staff will operate the staging area, screening loads for unacceptable materials and directing material separation for maximum recovery. Wood waste will be diverted to the County mulching program. Masonry waste may be ground for aggregate. MSW waste will be prepared for shipment to the contracted disposal facility as a first priority. Metals may be extracted for recycling if possible without impeding the shipment of the MSW wastes.

J. Education

Community Education:

Current Program:

Several educational pamphlets describing the County's recycling program have been produced and distributed by Henderson County. Examples of these pamphlets are shown in Appendices E, F, and G. Educational presentations are provided to civic groups throughout the County by the Environmental Programs Coordinator. Citizens can contact the County's Solid Waste Division at (828) 697-4505 or the Environmental Programs Coordinator at (828) 694-6524 to obtain information on solid waste disposal and recycling issues.

Intended Actions:

The Henderson County Environmental Programs Coordinator in cooperation with the Waste Reduction Partners will continue to conduct waste reduction training programs for interested community members, schools and civic groups. Educational programs will be developed for the presentation to schools and civic groups. Topics that will be discussed include proper separation of recyclables, true cost of solid waste management, and cost advantages of source reduction. Beginning in 2013, the Environmental Programs Coordinator will instruct fourth graders in schools regarding solid waste and recycling issues.

K. Special Waste Management

Tires:

Current Program:

Tires that are removed from the rims and that are free of mud and water are collected free of charge at the Convenience Center. There is a charge for tires with rims and for oversize equipment tires. Money from the statewide tax pays for 100% of the tire recycling program.

Henderson County collected and recycled approximately 1,286.29 tons in 2010-11.

Intended Actions:

The operations of the County's scrap tire program will remain the same.

White Goods:

Current Program:

White goods are collected at the convenience center at the Stoney Mountain Road Landfill Facility. A private scrap metal recycler removes the white goods periodically, based on the volume at the site. The County recycled approximately 429.29 tons in FY 2010-11.

Intended Actions:

White Goods collection and recycling will remain the same.

Lead-acid Batteries:

Current Program:

Lead-acid batteries are collected by the County at the convenience center and at Household Hazardous Waste collection events. Approximately 920 pounds of lead-acid batteries and 1,550.25 pounds of dry cell batteries were collected in FY 2010-11 (1.24 tons total).

Intended Actions:

The County intends to continue to collect batteries at their convenience center and at HHW collection events.

Household Hazardous Waste:

Current Program:

Henderson County conducts periodic collection of household hazardous waste (HHW) at their new HHW collection location at the refurbished convenience center at the Stoney Mountain Road Facility. HHW collection events are once a month during the summer and less frequently during the remainder of the year. HHW events are well publicized in the local media. A private

hauler is contracted to collect and haul the HHW wastes to an approved disposal facility. The County collected 6.11 tons of Household Hazardous Waste in FY 2010-11. The County provides information to the public via their website (www.hendersoncountync.org) regarding safe alternatives to common household products. See Appendix G for a copy of this document.

Intended Actions:

The County will continue to conduct HHW collection events as well as educate the public regarding reducing the consumption of these products.

Abandoned Manufactured Homes Disposal:

Current Program:

The County adopted a Nuisance Ordinance in September 2006 regarding abandoned mobile homes, junked motor vehicles, and solid waste. Code enforcement staff will identify abandoned manufactured homes by complaint or by request. Staff will inspect the home for contents and remove mercury thermostats and switches. The thermostats will be housed at the HHW collection facility at the convenience center. A private company will either demolish the home on site or transport to a specific location for demolition. The private company will be responsible for recycling any available metal and properly disposing of non-recyclable items at the County transfer station or other approved locations. See Appendix H for a copy of the County's Nuisance Ordinance.

Intended Actions:

Continue to enforce the Nuisance Ordinance.

Electronics:

Current Program:

Henderson County collects electronics on an ongoing basis at the convenience center. The electronic material presently collected includes, but is not limited to, cathode ray tube monitors (CRT), televisions, hard drives, scanners, fax machines, copiers, and other miscellaneous electronic equipment. Electronics are periodically collected by an authorized recycler for processing. The County collected 120.99 tons of electronics in FY 2010-11.

Intended Actions:

The County will continue to collect these items as well as initiate the collection of additional electronic type devices as collection/processing services or markets become available. The County will continue to operate the electronics collection operation at the convenience center.

L. Prevention of Illegal Disposal and Management of Litter

Illegal Disposal-Operated Sites:

Current Program: The County adopted a Nuisance Ordinance in September 2006 regarding abandoned mobile homes, junked motor vehicles, and illegal solid waste disposal. A copy of the Ordinance is included in Appendix H. The ordinance is enforced by the County Zoning Department. If necessary, the Zoning Department will contact the Henderson County Solid Waste Division to assist with the cleanup of any illegal solid waste disposal.

Intended Actions: The County will continue to enforce the Nuisance Ordinance.

Litter Management and Promiscuous Dumping:

Current Program: Litter has been a problem in and along roadways across the County. The NCDOT operates the Adopt-A-Highway program for cleanup of those roadways. Also, Henderson County Solid Waste Division Staff conduct periodic cleanups along Stoney Mountain Road in the vicinity of the transfer station and convenience center. The County requires that all vehicles disposing of solid waste or recyclable loads at the transfer station or convenience center have tarps over their vehicles. The County strictly enforces this requirement. Tarps are available for purchase at the transfer station.

Intended Actions: The County will continue current litter clean-up operations

Summary of Intended Actions

The intended actions described on previous pages are listed chronologically in Table 15.

Table 15. Intended Actions Implementation Schedule

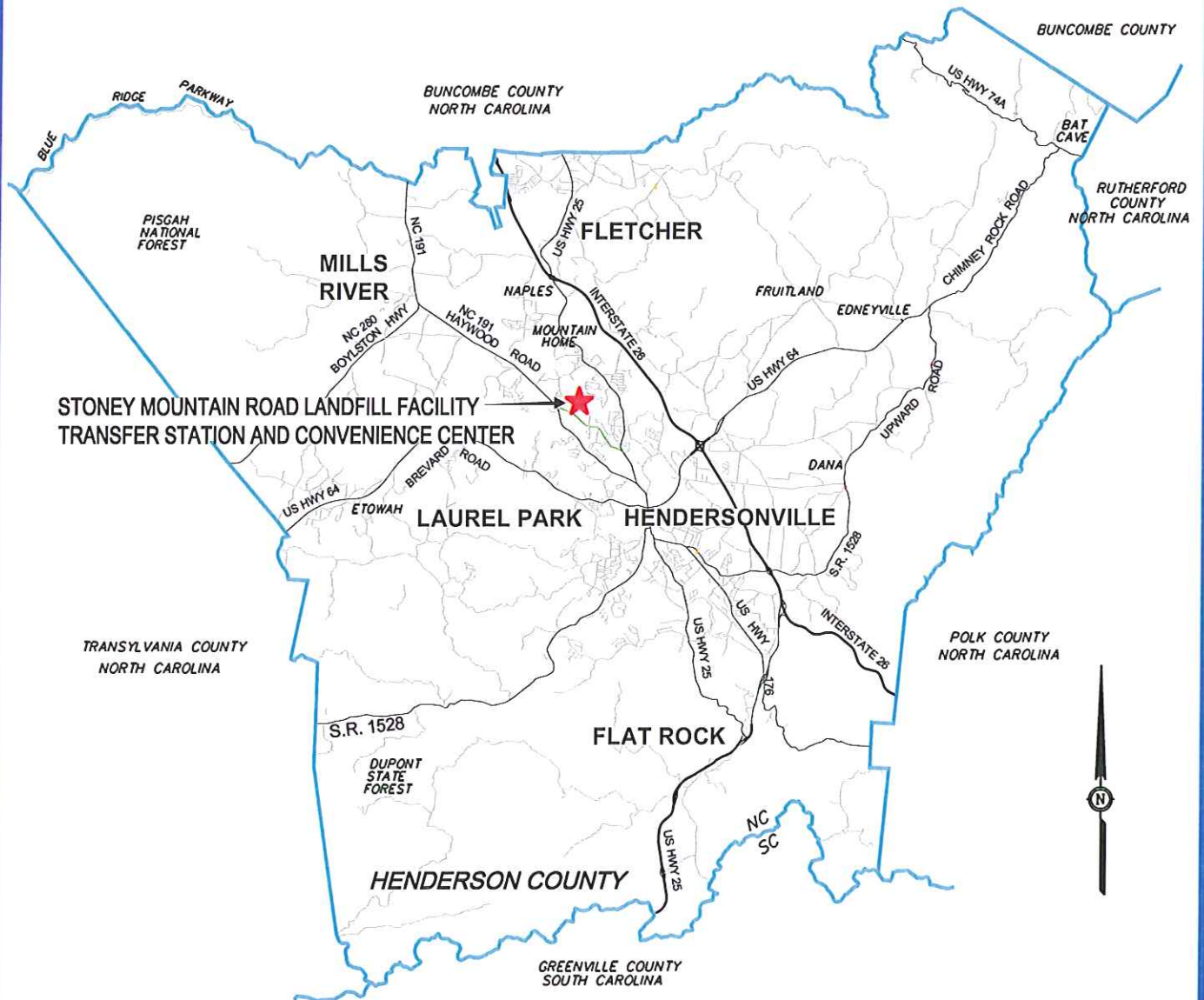
FISCAL YEAR	PROGRAM
2012-16	<ul style="list-style-type: none"> • Continue household hazardous waste collection events • Continue/expand composting programs • Research new markets for recyclables and reusable products • 2014: Review contract with Republic Services to consider renewal of the transfer/disposal contract • The Environmental Programs Coordinator will instruct fourth graders in schools regarding solid waste and recycling issues
2016-18	<ul style="list-style-type: none"> • Continue household hazardous waste collection events • Continue/expand composting programs • Research new markets for recyclables and reusable products
2019-22	<ul style="list-style-type: none"> • Continue biannual household hazardous waste collection events • Continue/expand composting programs • Research new markets for recyclables and reusable products

Source: Staff estimates

Appendix A

Map of Henderson County Planning Area

Solid Waste Management Plan



Henderson County Planning Area

Appendix B

Resolutions to Adopt the Plan

Appendix C

Public Meeting Advertisement

Public Meeting Notification

The Henderson County Engineering Department, the City of Hendersonville, the Town of Fletcher, the Town of Laurel Park, the Village of Flat Rock, and the Town of Mills River have prepared the Three-Year Update to the Henderson County Ten Year Solid Waste Management Plan, in accordance with North Carolina General Statute 130A-309.09A (b). Its purpose is to assist Henderson County in meeting their solid waste disposal and waste reduction goals as well as protecting the public health and environment.

A Henderson County Board of Commissioners meeting is scheduled for July 18, 2012 at 9:00 a.m. in the Henderson County Courthouse at 1 Historic Courthouse Square in Hendersonville. The 2012 Three-Year Update to the Solid Waste Management Plan will be discussed at this meeting. This meeting serves as the required public meeting to provide citizens of Henderson County an opportunity to comment and/or provide input to the Plan. Drafts of the Plan are available for public review in the lobby of the Historic Courthouse and at the main branch of the Henderson County Library at 301 North Washington Street.

Appendix D

Hours of Operations, Disposal Guidelines and Fees



Solid Waste and Environmental Programs Division

Hours of Operation

Hours: 8:00 - 4:30
Monday -Saturday (Transfer Station and Convenience Center)

You must arrive by 4:00 to self unload.

Hours: 8:00 - 5:00
Monday -Friday (Office)

Closed Some Holidays (see schedule below)

[2012 Holiday Schedule](#)

Transfer Station Location: 191 Transfer Station Drive (off Stoney Mountain Road), Hendersonville, NC 28791

Transfer Station Phone Number: (828) 697-4505

Essential Departmental Functions:The Solid Waste Division provides the County with a transfer station for waste disposal and tire disposal, and a drop-off site for recyclable materials, electronics, white goods (used appliances and metals), and wood waste. The Department is responsible for waste reduction, recycling and disposing of solid waste in order to protect the public's health, safety and welfare.

The Solid Waste Division also coordinates a recycling bin loan program for special events. [Please click here for information.](#)

Please see the [solid waste brochure](#) and [recycling brochure](#) for more information on solid waste disposal and recycling.

Please see the Henderson County [Solid Waste Ordinance](#) for information on Henderson County Solid Waste rules and regulations. Please also see the [Solid Waste Management Plan](#) for information on operations.

For North Carolina's rules and laws on Solid Waste Management, please visit the [NC Division of Waste Management's website](#)

Mission Statement

The mission of the Henderson County Solid Waste Division is to protect human health and the environment by providing environmentally sound, cost-effective waste disposal and recycling services, incentives, and public education

Staff

Name	Title	Telephone
Marcus A. Jones PE	Director of Engineering	(828) 694-6526
Natalie J. Berry PE	Assistant County Engineer	(828) 694-6523
Greg Wiggins	Operations Manager	(828) 694-7982
Megan Piner MPA	Environmental Programs Coordinator	(828) 694-6524

All Construction Demolition Material must be weighed. All Permitted Solid Waste Company and Companies With Charge Accounts, and Contractors Vehicles Must Be Weighed.

*Effective July 1, 2011

Fees

Municipal Solid Waste	\$57 / ton
Construction and Demolition Debris	\$57/ton
Clean, unpainted concrete and masonry debris	\$30/ton
Recyclables, bagged (Out of County)	\$30/ton
Recyclables (In County)	No Charge
Scrap tires eligible for free disposal	No charge
Electronics Recycling	No Charge
Scrap tires ineligible for free disposal	\$79.50/ton
Oversize equipment tires	\$156/ton
Tire stacking fee (optional)	\$0.30/tire or \$30/ton
Minimum scale fee	\$10/load

Directions to
The Solid Waste Facility:
(From Hendersonville)
Take Highway 25 North (Ashville Hwy)
Turn left onto Stoney Mountain Rd.

HOURS OF OPERATION:

- Transfer Station
Monday thru Saturday, 8:00 a.m. to 4:30 p.m.
(Only Self-unloading Vehicles are Allowed to "Weigh-in" after 4:00 p.m.)
- Scalehouse (828) 697-4715
Monday thru Saturday, 8:00 a.m. to 4:30 p.m.
(Only Self-unloading Vehicles are Allowed to "Weigh-in" after 4:00 p.m.)
- Gatehouse (828) 698-4451
Monday thru Saturday, 8:00 a.m. to 4:30 p.m.
(Only Self-unloading Vehicles are Allowed to "Weigh-in" after 4:00 p.m.)

Recycling Information (828) 694-6524

Henderson County Solid Waste Division

Disposal Guidelines for Residential Customers



For questions regarding collection services within city limits, please contact your city:

- HENDERSONVILLE—697-3084
- TOWN OF FLETCHER—654-9208
- TOWN OF LAUREL PARK—693-4840
- TOWN OF MILLS RIVER—890-2901
- VILLAGE OF FLAT ROCK—697-8100

Henderson County Solid Waste Division
802 Stoney Mountain Road
Hendersonville, NC 28791
697-4505

Office Hours: 8:00 a.m.–5:00 p.m.
(Monday through Friday)

www.hendersoncountync.org/solidwaste

The Henderson County Solid Waste Division Protects Human Health and the Environment by:

1. Regulating the storage, collection, transportation and disposal of solid waste in Henderson County.
2. Providing environmentally sound, cost-efficient solid waste disposal.
3. Providing for the safe operation at the County Solid Waste Facility.

Solid Waste is under the leadership of County Engineer, Marcus Jones

Transportation

Transporting of solid waste shall be encased by a tarpaulin, camper cover, metal cover, rigid cover, plastic or suitable material secured to prevent leakage or blowing of materials from the vehicle. This includes adequate coverage for bagged garbage. Please bag all solid waste. Loose waste results in more litter both on site and the surrounding areas.

Bulky waste consisting of large items such as large appliances, furniture, large auto parts, trees and other oversized waste must be secured on vehicle with rope or tie-down cords.

PROHIBITED: Wastes that may not be disposed of at the solid waste facility are:

- Burning or smoldering materials
- Hazardous waste (e.g., solvents, cleaners, chemicals)
- Lead-acid batteries (e.g., vehicle batteries)
- Liquids of any kind
- Radioactive materials
- Sharps not properly contained (e.g., needles, syringes)
- Wet sludge OF ANY KIND
- Medical waste (e.g., blood wastes contaminated from hospitals and other medical facilities)
- Friable asbestos (e.g., boiler insulation, ceiling insulation)
- Stumps

Construction/Demolition Materials
All C & D materials will be disposed of in transfer station area. FEES APPLY.

Proper preparation of leftover paint in cans:

Pour an adequate amount of sand or kitty litter into paint cans. Leave uncovered overnight. Paint will solidify and may be disposed of with other municipal solid waste.



Yard Waste

Yard waste consisting solely of vegetative matter resulting from landscaping maintenance such as leaves, grass clippings, limbs and trimmings may be disposed of in the wood waste area. Tree limbs must be no greater than 10 inches in diameter at the butt end nor longer than 4 feet in length. Fee applies.

Sharps (e.g., needles, syringes, etc.)

Sharps must be placed in an approved, sealed, puncture-proof container prior to disposal.

Wood Waste

Wood Waste consists of tree limbs no greater than 4 feet in length. Wooden pallets also accepted. No painted or treated wood of any kind. **NO STUMPS ALLOWED.** Fee applies.

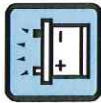
Non-friable Asbestos Only!

Asbestos materials that will not become airborne may be disposed of in the construction/demolition landfill. All building materials are disposed of in this area. Starting July 1, 2008 all C & D materials must be disposed of in transfer station. Tipping fee applies.

DISPOSAL GUIDELINES

Automobile Batteries

Any retailer that sells batteries will take used batteries in as trade towards a new purchase. If you are not purchasing a new battery, you may take your used automobile battery to any auto parts store. They may also be brought to Stoney Mountain free of charge.



Pesticides

Henderson County collects pesticides during Household Hazardous Waste Events. Please call the Solid Waste Division for details.

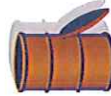
Tank Disposal

55-gallon drums: Several (8 or more) holes must be made in both ends to insure emptiness. Drums may then be disposed of in the transfer station at regular fees.



Propane Tanks

Completely empty; with valve REMOVED, may be disposed of at regular fees.



Recyclables

Recyclables such as plastic bottles, glass, and aluminum and steel cans along with mixed paper and cardboard must be sorted into appropriate bins. These are recycled free of charge at the Stoney Mountain Recycling Convenience Center.

Liquid Paint

Liquid paint is taken during Household Hazardous Waste events for \$1/gallon. Water-based paint may also be dried and placed in the regular trash.

Kerosene and Heating Oil Tanks

Tanks up to 275-gallon capacity need both ends cut off and center section flattened. Tanks over 275-gallon capacity should be cut into sections no larger than 4 feet by 8 feet and placed into transfer station at regular fees.



Oxygen and Acetylene Tanks

Must have valve removed. Dispose in transfer station at regular fees.

Automobile Gas Tanks

Several holes should be punctured to insure emptiness. Dispose of in transfer station at regular fees.

WARNING: Cutting any tank or barrel could be extremely dangerous and should be done by professionals only.

Tire Disposal

Tires must be removed from rims and be free of water and mud. Tires are to be placed in designated tire trailer located in the recycling center.



The following may be disposed of FREE OF CHARGE, in designated areas:

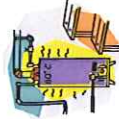


Water Heaters

Empty and dispose of in scrap metal area at no charge.

Electronics

Electronics may be brought to Stoney Mountain everyday or on Wednesday 9 am–12 pm if assistance is needed. All office and entertainment electronics may be brought in free of charge.



Batteries

All rechargeable and non-rechargeable batteries may be recycled free of charge at Stoney Mountain

Used Motor Oil and Anti-freeze

Dispose of in labeled barrel located in the recycling center. Containers must be placed in garbage bins. Household Disposal Only—No Commercial or Fleet Disposal.



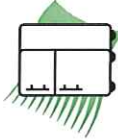
White Goods/Metals

Refrigerators, ranges, water heaters, freezers and other similar domestic/commercial large appliances and other metal materials are disposed of in the metal area.

NO MATTRESS SPRINGS OR

MICROWAVES ALLOWED. DOORS MUST BE REMOVED FROM REFRIGERATORS AND FREEZERS. ALL FOOD MUST BE REMOVED.

NO ELECTRONICS IN THIS AREA.



Recycling Center: HENDERSON COUNTY RESIDENTS ONLY.



You may dispose of bagged garbage FREE OF CHARGE with equal or more amounts of recyclables.

For more information pertaining to recyclable materials, please request a brochure at the gatehouse or contact the office at 697-4505. Environment al Program Coordinator - Alexis Baker - 828-694-6524

HENDERSON COUNTY
SOLID WASTE DEPARTMENT
802 Stoney Mountain Road
Hendersonville, NC 28791
Office: (828) 697-4505
Fax: (828) 698-5154

Fee Schedule

TIPPING FEE- \$57 00 PER TON (Vehicles with dual axle must be weighed)
Effective July 1, 2011

Municipal Solid Waste	\$57/ton
Construction and Demolition Debris	\$57/ton
Clean, unpainted concrete and masonry debris	\$30/ton
Yard Debris	\$57/ton
Debagged Leaves	No Charge
White Goods/Scrap Metal	No Charge
Minimum scale fee	\$10/load
Residential MSW with Equal quantity of separated Recyclables	No Charge
Recyclables	
Non-county Single Stream Recycling	\$30/ton
County Recycling	No Charge
Electronic Recycling including TV's and Computers	No Charge
Batteries	No Charge
Oil and Oil Filters	No Charge
Tires	
Scrap tires eligible for free disposal	No Charge
Scrap tires ineligible for free disposal	\$79.50/ton
Oversize equipment tires	\$156/ton
Tire stacking fee (optional)	\$0.30/tire or \$30/ton
Household Hazardous Waste (events only)	
Pesticides	No Charge
Liquid Paint	\$1.00/gallon

Appendix E
Recycling Information

THANK YOU FOR RECYCLING!

3 • Cardboard • Containers • Paper

Please place each item in the appropriately marked bin. Bins are marked:

1. CARDBOARD for corrugated boxes. Please **flatten** and place in opening of bin.

2. PAPER for newspaper and mixed paper. Place in same bin. No more separating these!

3. CONTAINERS for glass, plastic and cans. All plastic bottles, jars and jugs, all glass bottles and jars, **PLUS**, all aluminum and steel cans may be placed in this bin.

BAG FOR BAG: Bagged household residential garbage can be brought to Stoney Mountain free of charge with an equal amount of recycling.

The Recycling Center is located at:
Henderson County
Solid Waste Transfer Facility
(Convenience Center Drive)
802 Stoney Mountain Road
Hendersonville, NC 28791

(off Hwy 25 north from Hendersonville)

HOURS OF OPERATION:

8:00 am - 4:30 pm
Monday through Saturday
(except for *holiday closings*)

THE FOLLOWING MATERIALS ARE ACCEPTED FOR RECYCLING:

- aluminum and steel cans
- cardboard
- glass bottles and jars
- mixed paper
- newspaper
- plastic bottles, jars and jugs

ALSO ACCEPT:

- antifreeze
- tires
- used motor oil
- cooking oil

USED APPLIANCES, ELECTRONICS, AND

OTHER LARGE PIECES OF METALS ARE ACCEPTED FOR RECYCLING AT NO CHARGE.

For further information pertaining to recycling or solid waste disposal please call:

Megan Piner,

Environmental Programs Coordinator
828-694-6524

Or visit:

www.hendersoncountync.org

RECYCLING PROGRAM 3 R'S



REDUCE



REUSE



RECYCLE



HENDERSON COUNTY
ENVIRONMENTAL
PROGRAMS DIVISION



What is Recyclable in Henderson



1. **Plastic Bottles, Jars and Jugs:** Plastics should have a neck, or a mouth smaller than the base. No other plastics are acceptable.



2. **Aluminum and Steel:** This includes beverage and food cans, aluminum foil, and aluminum pie plates. Make sure that the aluminum foil and pie plates are clean.



3. **Glass:** All glass is recyclable except for lightbulbs, dinnerware, windows, vases or broken items.

4. **Mixed Paper:** All paper can be recycled except that with a waxy coating such as frozen food containers and paper juice or milk containers. No paper items used for food or beverages are accepted.

5. **Corrugated Cardboard:** Corrugated cardboard includes packing and shipping boxes. Please flatten before recycling.

Appendix F

Event Recycling Bin Loan Program



EVENT RECYCLING BIN LOAN PROGRAM



Henderson County coordinates a recycling bin loan program designed for use at community events, fairs, festivals, and block parties. Use is restricted to events held in Henderson County. The county has 100 blue 32 gallon bins available. They are available at no cost to municipalities, clubs, schools, churches, and other organizations on a "first-come, first-served" reservation basis. Any number can be reserved as *available*. To do so, please complete the reservation request form below. Once approved, the user will need to confirm/arrange pick-up and return drop-off times. Bins should be returned clean and in good working order. Bins are stored at the Henderson County Solid Waste Department at 802 Stoney Mountain Road. Location directions will be provided.

Megan Piner, Henderson County Environmental Programs Coordinator, is available to assist all users with planning & implementing successful recycling programs at their events. Questions? Contact Megan: 828-694-6524 or: mpiner@hendersoncountync.org

Please use this form to request recycling bins for your event.

Name of Event/ Sponsoring Organization: _____

Your Name: _____

Phone number: _____ E-mail: _____

Mailing Address: _____

Event Location/Facility: _____

Event Date(s): _____

Estimated Attendance: _____

Number of units requested: _____

Pick-up date: _____ Time: _____

Return date: _____ Time: _____

Deposit Guarantee

These units may be borrowed with no money down by agreeing to guarantee a deposit. By signing below at pick-up, the user accepts full responsibility for the bins and agrees to pay the full replacement costs for any bins that are not returned, or are not returned intact. Replacement cost per bin is \$20, per lid is \$5.

Signature: _____ Date: _____



Office Use Only
Approval _____
Date _____
Units Returned _____

Appendix G

Safe Alternatives to Common Household Products

SAFE ALTERNATIVES TO COMMON HOUSEHOLD PRODUCTS

<u>Product</u>	<u>Alternatives</u>
Air freshener	Baking soda, potpourri, citrus powder, essential oils, or saucers of vinegar around the house to absorb odors.
Aluminum cleaner	Mix 2 tablespoons cream of tartar with one quart water in cookware. Bring solution to a boil and simmer 10 minutes.
Ammonia-based cleaner	White vinegar in a spray bottle.
Ant poison	(1) Clean counter tops with ½ vinegar and ½ water. (2) Place chopped Tansy or Pennyroyal leaves in the affected area.
Bleach cleaner	Use baking soda as a scouring powder or put ½ cup in with the laundry.
Brass/Copper cleaner	Make a paste out of lemon juice and baking soda. Should have the consistency of toothpaste. Rub with soft cloth. Rinse well.
Chemical fertilizers	Compost vegetable scraps and yard waste into a naturally rich soil additive.
Cleaners: general household	Use liquid castle soap. Use as directed.
Cockroach poison	Mixture of chopped bay leaves and cucumber skins.
Drain cleaners	Pour baking soda in drain followed by equal amount of vinegar. Cover 15 minutes. Then, pour boiling water down the drain. Use plunger or plumber's snake.
Fabric softener	Add ¼ cup baking soda or ¼ cup vinegar to rinse water.
Flea collars and sprays Flea poisons/dust	Brewer's Yeast in pet diet. (consult your Vet for proper amount) Place small light above a pan of water. Fleas will jump at light, land in water and drown.
Fly repellents	Mint plants set in windowsills help repel flies. USE A FLY SWATTER!
Floor cleaner	Mix ½ cup vinegar into 1 gallon of warm water.
Furniture cleaner/polish	Plain wood: Wipe surfaces with a damp (water) cloth and dry immediately. Oil finished: Mix thoroughly, 3 cups olive oil and 1 cup vinegar. Use clean dry cloth to apply to furniture. Water stains: toothpaste on damp cloth.
Glass/Window cleaner	Mix ½ cup vinegar and 1 quart warm water. Wipe with newspaper.
Houseplant insecticide	Mix 2 tablespoons dish washing liquid with 2 cups water. Spray on leaves.
Mothballs	Place cedar chips or blocks with clothes. Store in airtight containers.
Oven cleaners	(1) Sprinkle water on oven surface. Apply baking soda. Rub using a very fine steel wool. Wipe with damp sponge. (2) While oven is still warm, sprinkle water on spill than sprinkle salt. When cool, scrape spill and wash.
Paint	Use water-based or limestone-based (whitewash) instead of oil-based paint.
Rat poison	Screens over drains, mechanical-snap traps, ultrasonic wave emitting devices. Saucer of dehydrated mashed potatoes. (will cause fatal bloating)
Rust remover	Scrub with lemon juice mixed with salt.
Scouring powder	Dip a damp cloth in baking soda and rub surface.
Spot remover	Club Soda for stains from fruit juices, tea, gravy, ketchup, and mud. Immediate cold water for blood stains. Lemon juice for ink and perspiration. Beaten egg whites for leather.
Toilet bowl cleaner	Scrub well with baking soda.
Tub and tile cleaner	Mix ¼ cup baking soda, ½ cup white vinegar and warm water
Wine stain removal	Water or rubbing alcohol
For additional information on pest control, contact the Cooperative Extension Service @ 697-4851	

Appendix H

Henderson County Nuisance Ordinance

NUISANCE ORDINANCE

HENDERSON COUNTY NORTH CAROLINA



Effective: July 1, 2006
Enforcement: September 1, 2006

AN ORDINANCE TO PREVENT CERTAIN PUBLIC NUISANCES

<u>SECTION 1</u>	Purpose
<u>SECTION 2</u>	General Provisions
<u>SECTION 3</u>	Definitions
<u>SECTION 4</u>	Administration
<u>SECTION 5</u>	Investigation and Response to a Public Nuisance
<u>SECTION 6</u>	Costs and Reimbursements
<u>SECTION 7</u>	Appeals
<u>SECTION 8</u>	Disclaimer Of Liability
<u>SECTION 9</u>	Fees
<u>SECTION 10</u>	Penalties
<u>SECTION 11</u>	Separability
<u>SECTION 12</u>	Captions
<u>SECTION 13</u>	Effective Date

SECTION -1: PURPOSE.

126-1.01 Purpose. This Ordinance is enacted to protect the health, safety, and general welfare of the people of Henderson County pursuant to powers granted under NC General Statutes Sections 153A-132, 153A-136, and 153A-140, the Henderson County Code, and subsequent recodifications and/or amendments, and other applicable legislation, as may be adopted in the future.

126-1.02 Objectives. The principal objectives of this Ordinance are:

- A. To prevent injury and illness to occupants of property and the public and to remove public nuisances.
- B. To provide countywide standards for the abatement of public nuisances including, but not limited to solid waste, junked motor vehicles and abandoned manufactured homes.
- C. To establish responsibility of involved parties and assure that people are not unnecessarily exposed to dangers of public nuisances.
- D. To ensure proper actions are taken to abate public nuisances.

SECTION -2: GENERAL PROVISIONS

126-2.01 Jurisdiction. This Ordinance shall apply to all property located in the Henderson County Zoning Jurisdiction.

126-2.02 Exception. This ordinance shall not regulate property being actively used as a Bona Fide farm which is any tract of land containing at least three (3) acres which is used for dairying or for the raising of agricultural products, forest products, livestock or poultry and including facilities for the sale of such products from the premises where

produced provided that, a farm shall not be construed to include commercial poultry and swine production, cattle feeder lots and furbearing animal farms.

126-2.03 Prohibitions. The creation or maintenance of a public nuisance is prohibited. The following are hereby expressly declared to be public nuisances:

- A. Improper sewage disposal to such degree that sewage or effluent is discharging onto the surface of the ground, backing up into a structure, or discharging into a body of water.
- B. An unsecured opening caused by improperly abandoned cistern, well pit, sewage treatment system, unused or non-maintained swimming pool, mine shaft or tunnel.
- C. Failure to keep waste, refuse, or garbage in an enclosed building or properly contained in a closed, insect and rodent-proof container designed or reasonably adapted for such purpose.
- D. Accumulation of carcasses of animals, birds, or fish by failing to bury or otherwise dispose of in a sanitary manner within 24 hours after death.
- E. Significant outdoor storage of solid waste including but not limited to: decaying animal or vegetable matter, animal or human feces, trash, rubbish, garbage, rotting lumber, packing materials, scrap metal, pallets, fuel storage containers, tools, tires and wheels, furnaces, home appliances, furniture, plumbing fixtures, construction materials, amusement park devices, metal, pipes, rubber, glass bottles, machinery, wood, brick, cement block, all terrain vehicles, toys, bicycles, junk or any other substances in which flies, mosquitoes, other disease carrying insects, rodents or other vermin can harbor.
- F. Accumulations of rubbish or junk as to become dangerous or injurious to the health and safety of any individual or to the public.
- G. Any junked motor vehicles without a current Vehicle Restoration Permit and/or any abandoned manufactured home as defined below.
- H. Infestations of flies, fleas, cockroaches, lice, rats, mice, fly larvae, hookworm larvae or other insects, parasites or vermin.
- I. Breeding grounds which support mosquito larvae and mosquitoes capable of carrying West Nile Virus, La Crosse Encephalitis Virus, or any other disease causing microorganism.
- J. Use of a Recreational Vehicle as a primary residence without permitted electric, water, and sewerage connections.
- K. Recreational vehicles used to store solid waste.

126-2.04 Outdoor Storage.

- A. **Prohibited:** Outdoor storage shall not be allowed between any building and the right-of-way on the side of the property which is the “front” of the property for zoning purposes. Such storage shall not exceed one-third of the rear yard area, shall not be closer than ten feet to the side lot lines or an alley and shall be at least 15 feet from any street. Use of land for outdoor storage of items not related to the property’s use in relation to any zoning permit granted for the property shall not be permitted.
- B. **Permitted:** Outdoor storage by a business is allowed so long as a part of the business and in compliance with a valid zoning permit.

SECTION 3: DEFINITIONS. Definitions of words, phrases, and terms used in this Ordinance shall be those set forth in North Carolina Statutes Chapters 153A-132, Henderson County Code and this section.

1. **Abatement** means the proper removal and/or containment of substances or materials hazardous to humans and/or the environment. Abatement is part of remediation.
2. **Abandoned Manufactured Home** means a manufactured home that has not had legal power or was not properly connected to a permitted septic system and water supply in the last 6 months, not to be interpreted to include a manufactured home stored or parked in accordance with a valid zoning permit.
3. **Board of Commissioners** means the currently elected Henderson County Board of Commissioners and may be referred to as “the Board” or “the County Board”.
4. **Building** means any structure having a roof supported by enclosed walls and intended for shelter, housing or enclosure of persons, animals or chattels.
5. **County** means Henderson County.
6. **Department** means the County Department responsible for enforcing this ordinance and may be referred to as “the Department”.
7. **Junked Motor Vehicle** means a motor vehicle that does not display a current license plate or vehicle registration.
8. **Junk** means litter, debris, waste materials of any kind, dead animals, used or unserviceable automobile and machinery parts, used and non-functional furniture and appliances, and used and non-functional tools, equipment, and implements, but shall not include compost piles for normal, personal or non-commercial use, in their proper location.
9. **Manufactured Home** means a single-family residential dwelling built in accordance with the Federal Manufactured Housing Construction and Safety Standards Act 1974 (which became effective June 15, 1976), as amended. For purposes of this chapter, however, the term includes mobile homes.
10. **Occupant** means any person who occupies real property, whether with or without any right, title or interest in the property, and any person in possession or charge of such property, in the event the owner resides or is located elsewhere.
11. **Owner** means any person, persons, organization, or corporation that owns, in whole or in part, the land, structure, or other property or is the purchaser of the property under contract for deed.
12. **Park Model (Recreational Vehicle)** means a vehicle which is built on a single chassis, is 400 square feet or less when measured at the largest horizontal projection, is self-propelled or permanently towable by a light duty truck and is designed primarily not for use as a permanent dwelling but as temporary living quarters for recreation, camping, travel, and seasonal use. Recreational vehicles are not subject to the Manufactured Home Construction and Safety Standards.
13. **Personal property** means all property other than that defined in 13, 16, and 17 of this section that is subject to ownership.
14. **Property** means publicly or privately owned real property including parcels of land, buildings or structures.
15. **Property agent** means a person authorized by a property owner to act in transacting business matters or in managing the affairs of the property.

16. **Public nuisance** means any activity or failure to act that adversely affects the public and shall include, but is not limited to, any condition which poses an immediate and direct hazard to human health if left unheeded due to the existence of the condition itself or due to the immediate threat of transmission of disease through insects, animals, or other means of transmission or infections.
17. **Real property**, real estate, and land means not only the land itself, but also buildings, structures, improvements, and permanent fixtures on the land, and all rights and privileges belonging or in any way appertaining to the property. These terms also mean a manufactured home as defined in G.S. 143-143.9(6) if it is a residential structure; has the moving hitch, wheels, and axles removed; and is placed upon a permanent foundation either on land owned by the owner of the manufactured home or on land in which the owner of the manufactured home has a leasehold interest pursuant to a lease with a primary term of at least 20 years for the real property on which the manufactured home is affixed and where the lease expressly provides for disposition of the manufactured home upon termination of the lease. A manufactured home as defined in G.S. 143-143.9(6) that does not meet all of these conditions is considered tangible personal property.
18. **Vehicle Restoration Permit** means a permit that allows persons to actively restore an unlicensed and unregistered vehicle.
 1. Persons storing any motor vehicle for more than 30 days outside a fully enclosed permanent structure for the purpose of restoration shall obtain a Vehicle Restoration Permit from the Department.
 2. This permit shall allow for one restoration vehicle and up to one parts vehicle that must be compatible with the vehicle being restored.
 3. The permit allows for outdoor storage of the vehicle(s) for a period of up to six (6) months.
 4. A maximum of two (2) six (6) month extensions may be granted upon request, provided substantial progress can be proven in the restoration of the vehicle at each extension interval.
 5. Progress will be measured by receipts for the purchase of parts or services or visible reconstruction or deconstruction.
 6. At no time shall the vehicle become a public health nuisance by collecting water to breed mosquitoes, losing fluid to contaminate the soil or becoming a harborage for vermin.
 7. Upon the permit expiration date, the vehicle shall be removed or placed inside a fully enclosed building as required by this Ordinance.
 8. The permit shall be placed in the vehicle in a location viewable from outside the vehicle.

SECTION 4: ADMINISTRATION.

126-4.01 Henderson County Ordinances. Except where otherwise specified, this Ordinance is subject to all provisions of the Henderson County Code.

126-4.03 Declaration as a public nuisance.

A. It shall be the duty of the Department to determine whether or not a public nuisance exists.

B. For purposes of emergency response and notification to applicable authorities and posting for the public, a zoning enforcement officer may determine that a structure, property, or portion of a property constitutes a public nuisance pursuant to a memorandum of understanding with the Henderson County Department of Public Health.

126-4.04 Modifications to or dismissal of the public nuisance declaration.

A. The Department may modify conditions of the declaration or dismiss the declaration of a public nuisance.

B. Such modifications or dismissal shall occur only after the Department has confirmed that the violation no longer exists.

C. The Department will base its criteria for determining levels of contamination on the best health and safety information available at the time of the remediation and cannot be held liable for future discoveries.

D. For good cause shown, the owner or occupant may request authorization from the Department for an extension of time to complete abatement activities. The Department may grant such extension if the extension does not increase the risk to public or safety and is deemed appropriate by the Department. An extension will be no longer than 30 days and must show substantial improvement or the completion of that deadline will result in penalty.

126-4.05 Access to premises and records. The owner or occupant shall, upon the request of the Department and after proper identification, permit access to all parts of the site or structure as often as necessary, and at any reasonable time for the purposes of inspection, remediation and abatement, and shall exhibit and allow copying of any and all records necessary to ascertain compliance with this Ordinance. If the occupant will not permit entry upon the property, the Department shall complete the requirements of an Administrative Search Warrant in order to inspect the complaint.

126-4.06 Interference with the Department. No person shall in any way interfere with or hinder the Department in the performance of duties, or refuse the Department access to gather information necessary to ascertain compliance with this Ordinance.

SECTION 5: INVESTIGATION AND RESPONSE TO A PUBLIC NUISANCE.

126-5.01 Owner Notification. Upon declaration of a public nuisance, the Department shall give written notice of its determination and orders to abate the nuisance to the owner, occupant and property agent, if applicable. This notice shall be served in person, by regular mail, or by an officer authorized to serve a warrant and contain the following:

A. Property location by street address, parcel identification number, or other property description.

- B. Information identifying the nature of the public nuisance at the property.
- C. A summary of the owner's and occupant's responsibilities under this Ordinance.
- D. Specific orders for abatement or remediation of the public nuisance.
- E. A date for completion of the abatement not to exceed thirty days following the receipt of the notice unless a shorter time is required due to the Department's further determination that the immediate abatement is necessary to protect public and safety. In such cases, the reason for a shortened abatement period shall be specified.
- F. Information regarding a right of appeal as provided in Section 7 of this Ordinance and that, unless the threat to public is abated or removed in accordance with the terms of the notice, the Department will have the public nuisance abated or removed at the expense of the owner under the provisions of North Carolina Statutes 153A-132, this Ordinance, or other applicable state or local law.

126-5.02 Unknown or absent property owner. In the event the owner of the property is unknown or absent and has no known representative upon whom the notice can be served, the Department shall post a written or printed notice on the property stating that, unless the threat to the public is abated or removed within thirty days, the Department will have the public nuisance abated or removed at the expense of the owner under the provisions of North Carolina Statutes 153A-132, this Ordinance, or other applicable state or local law.

126-5.03 Public notification. The Department shall provide information in writing about the public nuisance declaration and potential hazard(s) to the following persons as applicable and appropriate:

- A. Child Protection Division in situations of potential child maltreatment or endangerment,
- B. Adult Protection Division in situations of potential vulnerable adult maltreatment or endangerment,
- C. Neighbors in close proximity likely to be affected by the conditions found at the site,
- D. The local municipal clerk,
- E. Local Law Enforcement Officer, or
- F. Other state and local authorities that may have public or environmental protection responsibilities.

126-5.04 Warning sign. The Department shall post a warning sign when deemed necessary to further protect the public and safety. The warning sign shall be posted on the entrance(s) of the structure or property and contain information sufficient to alert visitors or returning occupants to the site that it may be dangerous to enter and that entry is prohibited unless authorized by the Department or the law enforcement Department posting the sign. Any person other than the Department or its designated agent that removes a warning sign shall be in violation of this Ordinance. A draft sign is attached to this ordinance as Appendix A.

126-5.05 Department abates public nuisance. If the owner, property agent or occupant, fails or neglects to comply with the requirements in the notice provided under Section

5.01 of this Ordinance, then the Department shall abate or remediate the public nuisance described in the notice. The Department will recoup such costs as necessary to abate the public nuisance as provided in Section 6 of this Ordinance.

126-5.06 Vacating the public nuisance order. Upon Department verification of proper abatement, remediation or removal at the site, the Department shall issue written notice to those persons served notice under section 5.01 of this Ordinance that the public nuisance order is vacated. Notice shall also be provided, as applicable and appropriate, to those persons provided information under section 5.03 of this Ordinance.

SECTION 6: COSTS AND REIMBURSEMENTS.

126-6.01 Recovery of costs.

A. If the Department is required to remove, abate or remediate a public nuisance; the County shall make every reasonable effort to recover costs incurred in removal, abatement or remediation in a civil action. The cost of enforcement action under this Ordinance may be assessed and charged against the real property on which the public nuisance was located. The County shall extend the cost as assessed and charged against said real property.

B. When the estimated cost of abatement and remediation exceeds seventy-five percent of the County Assessor's market value of the structure, the County Manager or designee, is authorized to notify the property owner of the County's intent to remove and dispose of the affected property instead of proceeding with abatement and remediation. For motor vehicles, the County will use the Kelley Blue Book value or equivalent in determining market value.

C. Nothing herein precludes or limits the County from seeking recovery of costs through other methods allowed by federal or state law.

126-6.02 Subrogation Rights. Nothing in this Ordinance is intended to limit the subrogation rights of any party and the owner occupants. The County shall maintain the right to recover costs, referenced in this section, from persons contributing to the damage.

SECTION 7: APPEALS.

126-7.01 Right of Appeal. When a public nuisance is declared, an owner and/or an occupant of the affected property may appeal the declaration, including an order for abatement or remediation from the Department, by filing a written request with the Henderson County Zoning Board of Adjustment for an administrative hearing within ten calendar days of the date of service under sections 5.01. In the event of an unknown or absent property owner, the appeal must be requested within ten calendar days of the day of posting of the notice under section 5.02.

126-7.02 Hearing. If any owner or occupant makes a written request to the Zoning Board of Adjustment for hearing, such hearing shall be held before the Zoning Board of Adjustment.

126-7.03 Schedule. The hearing shall be held at the next available meeting after the request for a hearing was received.

126-7.04 Notice. The Department shall mail a notice to the appealing party of the time and place of the hearing at least ten calendar days prior to the hearing.

126-7.05 Witnesses and Evidence. All parties shall have full opportunity to respond to and present evidence and witnesses.

126-7.06 Standard of Proof. The appellant shall have the burden of proving its position by clear and convincing evidence.

126-7.07 Rules of Evidence. Hearings shall be informal and the rules of evidence as applied in the courts shall not apply. Irrelevant, immaterial and repetitious evidence shall be excluded.

126-7.08 Record of Hearing. The hearing shall be recorded and the minutes of the meeting shall be approved by the Zoning Board of Adjustment at their next scheduled meeting.

126-7.09 Notice of Decision. The decision of the Zoning Board of Adjustment shall be issued within ten calendar days following the hearing. Unless otherwise provided by law, the decision of the Zoning Board of Adjustment shall constitute the final decision.

126-7.10 Further Appellate Rights. Any party aggrieved by a final decision is entitled to judicial review of the decision. A petition for a writ of certiorari by the party must be filed with the Court of Appeals not more than thirty calendar days after the party receives the final decision from the County Zoning Board of Adjustment.

SECTION 8: DISCLAIMER OF LIABILITY. Liability on the part of, or a cause of action against, Henderson County or any officer, employee or agent thereof for any damages that may result from administration and enforcement of this Ordinance shall be limited as provided by North Carolina Statutes 153A-132.

SECTION 9: FEES. Fees for the Department complaint investigation, verification, administration, and enforcement of violations of this Ordinance shall be those established by resolution, as amended from time to time, of the Henderson County Board of Commissioners.

SECTION 10: PENALTIES.

126-10.01 Misdemeanor. Any person who violates this Ordinance, or who permits a violation to exist on the premises under his/her control, or fails to take action to abate the existence of the violation(s) within a specified time period, when ordered or notified to do so by the Department, shall be guilty of a misdemeanor, and upon conviction thereof shall be punished as provided by law. Each day of violation constitutes a separate

offense. Violation of this ordinance shall be prosecuted under Henderson County Code § 1-14 Violations and Penalties A. Criminal Penalties.

126-10.02 Civil Remedies. In the event of a violation or threat of violation of this Ordinance, the County Attorney may take appropriate action to enforce this Ordinance, including application for injunctive relief, action to compel performance, or other appropriate action in court, if necessary, to prevent, restrain, correct, or abate such violations or threatened violations. The County Attorney enforcing provisions of this Ordinance may seek costs and expenditures, including staff time and attorneys' fees. Violation of this ordinance shall be prosecuted under Henderson County Code § 1-14 Violations and Penalties B. Civil Penalties.

126-10.03 Citations. Whenever the Department discovers a violation of this Ordinance, a citation may be issued to the person charged with the violation, or in case of a corporation or municipality, to any officer or agent expressly or impliedly authorized to accept such issuance.

SECTION 11: SEPARABILITY. If any provision of this Ordinance is held invalid, that invalidity shall not affect other provisions or applications of this Ordinance.

SECTION 12: CAPTIONS. The captions printed in boldfaced type before the sections of this Ordinance are mere catch words to indicate the content of the section.

SECTION 13: EFFECTIVE DATE. After passage by the Henderson County Board of Commissioners, this Ordinance shall take effect on July 1, 2006 and enforcement efforts will begin September 1, 2006.

APPENDIX A

WARNING!

**THIS PROPERTY IS IN VIOLATION
OF THE HENDERSON COUNTY
PUBLIC NUISANCE ORDINANCE.**

**DUE TO THE AMOUNT OF OUTDOOR
STORAGE, THIS PROPERTY HAS
BEEN DETERMINED TO BE
UNSAFE.**

THIS PROPERTY IS IN VIOLATION AS:

- A HARBORAGE FOR VERMIN
- A SOLID WASTE VIOLATION
- A JUNKYARD BECAUSE OF JUNKED
CARS, ABANDONED MANUFACTURED
HOMES, OR OUTDOOR STORAGE
- AN ENVIRONMENTAL NUISANCE

§ 1-1. Henderson County Public Nuisance

VEHICLE RESTORATION PERMIT

Name

Address

Make / Model Vehicle V.I.N.#

1. Persons storing any motor vehicle for more than 30 days outside a fully enclosed permanent structure for the purpose of restoration shall obtain a Vehicle Restoration Permit from the Department.
2. This permit shall allow for one restoration vehicle and up to one parts vehicle that must be compatible to the vehicle being restored.
3. The permit allows for outdoor storage of the vehicle(s) for a period of up to six (6) months.
4. A maximum of two (2) six (6) month extensions may be granted upon request, provided substantial progress can be proven in the restoration of the vehicle at each extension interval.
5. Progress will be measured by receipts for the purchase of parts or services or visible reconstruction or deconstruction.
6. At no time shall the vehicle become a public health nuisance by collecting water to breed mosquitoes, losing fluid to contaminate the soil or becoming a harborage for vermin.
7. Upon the permit expiration date, the vehicle shall be removed or placed inside a fully enclosed building as required by this Ordinance.
8. The permit shall be placed in the vehicle in a location viewable from outside the vehicle.

I, the undersigned have read and understand the requirements of this permit

Signature: _____

Date: _____

(office use only)	
Date _____	Permit Fee: \$ _____
Permit # _____	Expiration Date: _____